

**VitalQIP<sup>®</sup> DNS/DHCP & IP Management  
Software**

**Web Client**  
Release 7.1  
User's Guide

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# About this document

## Purpose

Welcome to VitalQIP<sup>®</sup> – a powerful IP name and address management tool. VitalQIP simplifies the assignment and allocation of IP addresses and services, such as Dynamic Host Configuration Protocol (DHCP) and Domain Name System (DNS). This product is a comprehensive collection of management tools and user interfaces. Each management tool and user interface provides the ability to plan, manage, and locally administer IP addresses and services across LINUX, UNIX, and Windows 2003 platforms. VitalQIP works with directory services and RDBMS configurations.

## Reason for reissue

The following table lists the changes to the VitalQIP Web Client UI that required the *Web Client User's Guide* to be reissued.

**Table 1 Web Client User's Guide changes**

Issue	Feature Name	Description	Feature Impact
6	AfriNIC registry support	Support for AfriNIC registry added in VitalQIP 7.1 PR5.	<ul style="list-style-type: none"><li>• <a href="#">“Regional Internet Registries”</a>, on page 79</li><li>• <a href="#">Table 19, “Add pool fields”</a>, on page 147</li><li>• <a href="#">“AfriNIC reporting”</a>, on page 188</li></ul>
5	User's Guide	Enabled commenting in the PDF file. Fixes VQIP00012266.	N/A.
4	IPv4 Hierarchy Domains	Clarification was added to explain why neither domains without subnet association, nor ENUM zones appear in the IPv4 Hierarchy Domain tree. Fixes VQIP00017669.	<a href="#">“Domains”</a> , on page 221

Issue	Feature Name	Description	Feature Impact
3	Define a scope	VQIP00017469. Scope creation now proceeds regardless of the Check Before Assign field value. The dialog box that comes up after the scope is created indicates that a PING did not occur.	The following areas were impacted: <ul style="list-style-type: none"> <li>• Limitation removed in “Before you begin” paragraph in <a href="#">“To define a scope” (263)</a>.</li> <li>• Additional dialog box information added in <a href="#">Step 10</a> of the same topic,</li> </ul>
2	N/A	Issue number incremented for GA version uploaded to LED site.	None.
1	Web Client menu and toolbar	The VitalQIP Web Client tab format has changed. A toolbar for all Web Client functions has been added.	Section revised in Chapter 1. Refer to <a href="#">“User interface components” (13)</a> . References to toolbar access have been added to all chapters.
1	MyView	MyView personalized hierarchy has been added as a way to view all objects in an administrator’s Managed List, as well as Shared Views that can contain IPv6 infrastructure.	Section added to Chapter 1. Refer to <a href="#">“MyView Hierarchy” (7)</a> .
1	Administrator Security	Improvements have been made to administrator password management. Passwords may also be set to expire.	Administrator security is described in a new “Policies” chapter. Refer to <a href="#">“Administrator security” (26)</a> .
1	Change Password	A Change Password function has been added.	Additional login steps have been added if passwords have expired or user is logging in for the first time and the <b>Require New Admin Password</b> field is set to True. Refer to <a href="#">“To log into VitalQIP web client” (3)</a> . Change password is described in a new “Policies” chapter. Refer to <a href="#">“Change password” (30)</a> .
1	MyView Management	MyView setup is available as part of Address Allocation and Infrastructure Management. It allows master administrators to set up Shared Views and assign them to other administrators as part of their personalized MyView.	MyView Management is described in a new chapter. Refer to <a href="#">Chapter 3, “MyView Management”</a> .

Issue	Feature Name	Description	Feature Impact
1	Job Scheduler	Scheduling is available for reports, DNS pushes, and several IPv6 address management functions.	The Job Scheduler is described in a new chapter. Refer to <a href="#">Chapter 5, “Job scheduler”</a> . Additionally, sections were added where scheduling is available: <ul style="list-style-type: none"> <li>• <a href="#">“To schedule subnet configuration” (314)</a></li> <li>• <a href="#">“To generate DNS configuration and data files” (410)</a></li> <li>• <a href="#">“To schedule reports” (449)</a></li> </ul>
1	IPv4 Subnet Management	Similar IPv4 Subnet Management functionality to that available in the VitalQIP client has been added to the web client UI.	The Address management chapter has been split into two chapters, <a href="#">Chapter 8, “IPv4 address management”</a> and <a href="#">Chapter 9, “IPv6 Address Management”</a> . For information on IPv4 subnet management, refer to <a href="#">“Subnet management” (230)</a> .
1	Define IPv4 scopes/ranges	Object management supports the definition of address scopes/ranges.	The following topic was added to the IPv4 address management chapter: <ul style="list-style-type: none"> <li>• <a href="#">“To define a scope” (263)</a></li> </ul>
1	Reports	Several reports have been added to support MyView and IPv4 subnets, as well as an Administrator Audit report.	The following sections have been added to the Reports chapter: <ul style="list-style-type: none"> <li>• <a href="#">“Administrator reports” (509)</a></li> <li>• <a href="#">“IPv4 subnet reports” (514)</a></li> <li>• <a href="#">“MyView reports” (555)</a></li> </ul>
1	Recover block	The recover block function was added in VitalQIP 7.0, Build 504.	The following topic was added to the Block allocation chapter: <ul style="list-style-type: none"> <li>• <a href="#">“To recover a block” (214)</a></li> </ul>

### How to use this information product

This manual is organized as follows:

Chapter 1: VitalQIP web client user interface	This chapter provides background about logging in, the default MyView page, Web client navigation, and basic features of the Web client.
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Chapter 2: Policies	This chapter provides information on administrator security and changing the administrator password.
Chapter 3: MyView Management	This chapter provides information on how to set up MyViews.
Chapter 4: Infrastructure	This chapter provides information about rules, Internet Registries, and address templates.
Chapter 5: Job Scheduler	This chapter provides information on how to use the Job Scheduler for reports, DNS pushes, and some IPv4 and IPv6 address management functions.
Chapter 6: Pool Management	This chapter provides information about creating and maintaining pools.
Chapter 7: Block Allocation	This chapter provides information about allocating and maintaining seed blocks and address blocks.
Chapter 8: IPv4 Address Management	This chapter provides information about adding and maintaining objects in IPv4 subnets.
Chapter 9: IPv6 Address Management	This chapter provides information about adding and maintaining objects in IPv6 subnets.
Chapter 10: Node Management	This chapter provides information about adding and maintaining nodes.
Chapter 11: Network Services	This chapter provides information about DNS and DHCP generation.
Chapter 12: Attributes	This chapter provides information on creating Attributes.
Chapter 13: Reports	This chapter covers reports and how to generate them. Sample reports are also included.
Chapter 14: Troubleshooting	This chapter provides information on some possible problems that can occur when you use the VitalQIP Web Client, and potential solutions.
Appendix A: Northbound Interface	This appendix provides information on the APIs used to transport data between the Web GUI and VitalQIP.

## Conventions used

The following table lists the typographical conventions used throughout this manual.

**Table 2**      **Typographical conventions**

Convention	Meaning	Example
boldface	Names of items on screens. Names of commands and routines Names of buttons you should click. Uniform Resource Locators (URLs)	Select the <b>Client</b> check box. The <b>qip_getappllst</b> routine returns the entire list of existing applications. Click <b>OK</b> . The VitalQIP product site can be found at <a href="http://www.alcatel-lucent.com/wps/portal/products">http://www.alcatel-lucent.com/wps/portal/products</a> .
Helvetica bold	Names of keys on the keyboard to be pressed.	Press <b>Enter</b> to continue.
Letter Gothic	Output from commands, code listings, and log files	# Name: Share shared-network _200_200_200_0
Letter Gothic bold	Input that you should enter from your keyboard.	Run the following command: c:\setup.exe
<angle brackets>	Variables that you must substitute another value for.	<debugfile>.bak.log
italics	Manual and book titles. Directories, paths, file names, and e-mail addresses.	Refer to the <i>VitalQIP User's Guide</i> for more information. A symbolic link must be created from <i>/etc/named.conf</i> that points to <i>named.conf</i> .
bold italic	Emphasis	<b><i>Read-only</i></b> . The name of the service element.
click	Click the left button on your mouse once.	To delete the object, click <b>Delete</b> .
right-click	Click the right button on your mouse.	Right-click on a service.
double-click	Double-click the left button on your mouse.	Double-click the book icon.

## Related information

The following documents are referenced in this manual:

- *VitalQIP Administrator Reference Manual* (part number: 190-409-042R7.1)

This guide describes planning and configuring your network, information about the VitalQIP interface, advanced DNS and DHCP configurations, and troubleshooting.

- *VitalQIP Installation Guide* (part number: 190-409-043R7.1)  
This guide describes how to install the VitalQIP product.
- *VitalQIP Command Line Interface User's Guide* (part number: 190-409-044R7.1)  
This guide discusses and describes how to use the VitalQIP Command Line Interface.
- *VitalQIP User's Guide* (part number: 190-409-068R7.1)  
This guide describes how to set up and use the VitalQIP user interface.

### Product training support

Alcatel-Lucent University offers cost-effective educational programs that support the VitalQIP product. Our offerings also include courses on the underlying technology for the VitalQIP products (for example, DNS and DHCP). Our classes blend presentation, discussion, and hands-on exercises to reinforce learning. Students acquire in-depth knowledge and gain expertise by practicing with our products in a controlled, instructor-facilitated setting. If you have any questions, please contact us at 1-888-LUCENT8, Option 2, Option 2.

### Technical support

If you need assistance with VitalQIP, you can contact the Technical Assistance Center for your region. Contact information is provided in the following table.

**Table 3      Technical support information**

Region	Address	Contact information
North America	Alcatel-Lucent 400 Lapp Road Malvern, PA 19355 USA	Phone: 1-866-LUCENT8 (582-3688) Option 1, Option 2 Web: <a href="https://support.lucent.com">https://support.lucent.com</a>
Europe, Middle East, Africa, and China	Alcatel-Lucent Chiltern House Sterling Court Broad Lane Bracknell, RG12 9GU UK	Phone: 00 800 00 LUCENT or +353 1 692 4579 E-mail: <a href="mailto:emeacallcenter@alcatel-lucent.com">emeacallcenter@alcatel-lucent.com</a> Web: <a href="https://support.lucent.com">https://support.lucent.com</a>
Central and South America	Alcatel-Lucent Calle 10, No. 145 San Pedro de los Pinos, 01180 Ciudad de Mexico Mexico	Mexico 01 800 123 8705 or (52) 55 5278 7235 Brazil 0800 89 19325 or (55) 193707 7900 Argentina 0800 666 1687 Venezuela 0 800 1004136 Costa Rica 0800-012-2222 or 1800 58 58877 For other local CALA numbers, consult the web site <a href="https://support.lucent.com">https://support.lucent.com</a> or contact your local sales representative.

Region	Address	Contact information
Asia Pacific	Alcatel-Lucent Australia 68 Waterloo Rd North Ryde NSW 2113 Australia	Phone: 1800-458-236 (toll free from within Australia) (IDD) 800-5823-6888 (toll free from Asia Pacific - Hong Kong, Indonesia, South Korea, Malaysia, New Zealand, Philippines, Singapore, Taiwan, and Thailand) (613) 9614-8530 (toll call from any country) E-mail: <i>apactss@alcatel-lucent.com</i>

### How to order

Customers can order additional VitalQIP manuals online at [http://www.lucentdocs.com/cgi-bin/CIC\\_store.cgi](http://www.lucentdocs.com/cgi-bin/CIC_store.cgi). Select **VitalQIP** from the Product Line list and click **Go**.

### How to comment

To comment on this document, go to the [Online Comment Form \(http://www.lucent-info.com/comments/\)](http://www.lucent-info.com/comments/) or e-mail your comments to the Comments Hotline ([comments@alcatel-lucent.com](mailto:comments@alcatel-lucent.com)).



About this document

# 1 VitalQIP web client user interface

## Overview

---

### Purpose

This chapter is designed to assist you to do the following:

- Describe the features of the Login page
- Describe the features of the MyView page
- Describe the features of the GUI
- Identify the common features, buttons, fields, and icons of the GUI
- Describe the procedures to access the GUI

### Contents

This chapter covers these topics.

Background	2
To log into VitalQIP web client	3
To exit the VitalQIP web client	6
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To work with Shared Views	9
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To start or stop the Tomcat server	22
Multiple browser sessions for the VitalQIP Web GUI	24



# Background

---

## Introduction

Elements common to most VitalQIP web client pages, such as icons, navigation buttons and command buttons are described in this section. In addition, dialog boxes and tables are explained.



## To log into VitalQIP web client

---

### When to use

Use this procedure to log into the VitalQIP web client.

### Before you begin

Ensure the following are true before you begin.

- If you use proxies, make sure the address you use for VitalQIP is marked as an exception in your browser's proxy list.
- Be sure that pop-ups are enabled for VitalQIP, as the application uses this function to provide messages to the user.

English is the default language in the VitalQIP web client. If other languages are required, refer to “Character set and language configuration” in Chapter 17 of the *VitalQIP Administrator Reference Manual* for information on how to set up support for another language.

### Procedure

To log into the VitalQIP web client, follow these steps.

---

- 1 Open a web browser and enter the VitalQIP web client URL. The URL is typically in the following format: `http://<machine name or IP address>:<Tomcat web server port>/qip`.

**Important!** If the VitalQIP web client was installed with the Tomcat web server port assigned to the default port 80, the URL format is `http://<machine name or IP address>/qip`.

**Result:** The VitalQIP Login screen opens.

# VitalQIP® Software IP Management

A login form with a "User ID:" label and an input field, a "Password:" label and an input field, and a "Login" button. A language dropdown menu is set to "English". The form is overlaid on a background graphic of a globe and a network diagram.

- .....  
2 Enter the user ID that has been assigned to you in the **User ID** field.  
.....
- 3 Enter the password that has been assigned to you in the **Password** field.  
.....
- 4 *Optional.* Select a language only if a language other than English has been set up.  
.....
- 5 Click **Login**.

**Important!** If the **Allow Password Expiration** privilege for your administrator profile is enabled and your password has expired, or the **Require New Admin Password** field is enabled in the Administrator Security screen in the web client and you are logging in for the first time, you will be required to enter a new password. For further information on administrator security settings, refer to [“Administrator security”](#), on page 26.

6 Choose one of the following actions.

If ...	Then..
The Organization selection screen is displayed	<ol style="list-style-type: none"> <li>1. Select the organization you wish to use from the <b>Organization</b> drop-down list. <b>VitalQIP Organization</b> is the default.</li> <li>2. Click <b>Continue</b>.</li> </ol> <p><b>Result:</b> The VitalQIP web client UI opens.</p>
The Change password screen is displayed	<ol style="list-style-type: none"> <li>1. Click <b>OK</b> to close the dialog box with the message <b>Admin &lt;userID&gt; requires a new password</b>.</li> </ol> <p><b>Result:</b> The Change Password fields are displayed.</p> <div> <p>User ID: doctest</p> <p>Old Password: <input type="text"/></p> <p>New Password: <input type="text"/></p> <p>Retype Password: <input type="text"/></p> <p><b>Change Password</b></p> </div> <ol style="list-style-type: none"> <li>2. Enter your current password in the <b>Old Password</b> field.</li> <li>3. Enter your new password in the <b>New Password</b> field. Ensure that it complies with the password creation rules established in the Administrator Security function.</li> <li>4. Enter your new password again in the <b>Retype Password</b> field.</li> <li>5. Click <b>Change Password</b>.</li> </ol> <p><b>Result:</b> The <b>Organization</b> drop-down list is displayed. To continue logging in, refer to the instructions above.</p>

END OF STEPS



# To exit the VitalQIP web client

---

## When to use

Use this procedure to exit the VitalQIP web client.

## Procedure

To exit the VitalQIP web client, follow these steps.

---

- 1 Click the Exit IP Management icon () on the VitalQIP toolbar.

**Result:** A confirmation dialog box opens with the message **Are you sure you want to exit QIP?**

---

- 2 Click **OK**.

**Result:** The VitalQIP Software IP Management splash screen opens with the message **You are logged out. Please Login.**

---

- 3 To exit VitalQIP altogether, close the browser session.

**E N D O F S T E P S**

---



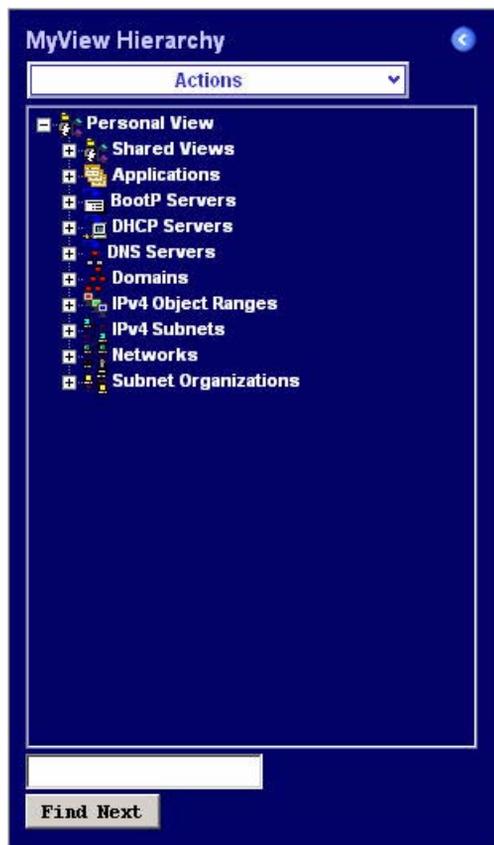
# MyView Hierarchy

---

## Overview

The MyView Hierarchy presents a customized hierarchical view of the data that you may access in the VitalQIP database. It contains all the items in your Managed List (as defined in your Administrator Profile), as well as Shared Views to which you have been assigned by a master or organization administrator (using the **MyView Management Hierarchy** function on the **Infrastructure** menu. For more information, refer to [“MyView administration”](#), on page 34).

**Important!** Access to the VitalQIP web client may be restricted to the **MyView** tab only, if the **Display MyView Tab Only** privilege is set to true in the Administrator Profile.



## Managed List infrastructure types

The following object types may be part of the MyView Hierarchy since they can be included in an administrator's Managed List, as well as in an Administrative Role (an administrator Managed List and Administrative Roles are created in the VitalQIP client):

- Network
- IPv4 Subnet
- Subnet Organization
- OSPF Area
- Server
- Domain
- IPv4 Address Range
- Object Range
- Application

**Important!** The MyView Hierarchy displays each server type in its own labeled section of the hierarchy, making it more convenient to check specific server properties and file generation times.

## Shared Views

Shared Views enable you to manage the following infrastructure elements that cannot be entered in a Managed List.

- Address Pools
- IPv6 seed blocks
- IPv6 address ranges
- IPv6 subnets
- Nodes (IPv4 and IPv6)
- Other Shared Views

## Label and order infrastructure

The order in which the infrastructure types are listed, as well as the labels for each type, may be changed. The **Order Infrastructure** and **Label Infrastructure** functions are available on the **Actions** menu. Refer to the following sections for further information:

- Order Infrastructure - [“To order infrastructure” \(56\)](#)
- Label Infrastructure - [“To label infrastructure” \(58\)](#)



## To work with Shared Views

---

### When to use

Use this procedure to work with a Shared View that has been assigned to your **Personal View**.

### Procedure

To work with a Shared View, follow these steps.

- 1 Click the **MyView** tab. Alternatively, click the MyView icon (👤) in the toolbar.

**Result:** The MyView Hierarchy opens.

- 2 Expand **Personal Views**.

**Result:** A list of assigned Shared Views opens.



3 Choose from the following actions.

If you want to ...	Then ...
Change the order in which the infrastructure types are listed	Mouse over the <b>Actions</b> menu and select <b>Order Infrastructure</b> . For more information, refer to <a href="#">“To order infrastructure”</a> , on page 56.
Change the label for an infrastructure type	Mouse over the <b>Actions</b> menu and select <b>Label Infrastructure</b> . For more information, refer to <a href="#">“To label infrastructure”</a> , on page 58.
Work with an infrastructure item	Expand the Shared View(s) until you find the infrastructure item you need to work with. Depending on what infrastructure types are assigned to the Shared View, you may access the functions that are listed in the following table.

**Table 4 Shared Views functions**

Infrastructure type	Functions available
Shared Views	<ul style="list-style-type: none"> <li>• Properties</li> <li>• Reports: MyView Audit (<a href="#">page 556</a>), MyView (<a href="#">page 561</a>)</li> </ul>
Address Pools/Seed Pools	<ul style="list-style-type: none"> <li>• Properties</li> <li>• Add Seed Block (<a href="#">page 151</a>)</li> <li>• Modify Pool (<a href="#">page 157</a>)</li> <li>• Delete Pool (<a href="#">page 157</a>)</li> <li>• Merge Pool (<a href="#">page 175</a>)</li> <li>• Add Child Pool (<a href="#">page 161</a>)</li> <li>• Allocate a Block (<a href="#">page 166</a>)</li> <li>• Explicit Allocation (<a href="#">page 168</a>)</li> <li>• Reports: Pool Audit (<a href="#">page 476</a>), Pool Block Status (<a href="#">page 480</a>), Pool Hierarchy (<a href="#">page 485</a>), Pool Info (<a href="#">page 490</a>), Pool Statistics (<a href="#">page 495</a>), Pool Usage (<a href="#">page 499</a>), Pool Free Space (<a href="#">page 504</a>)</li> </ul>

Infrastructure type	Functions available
IPv4/IPv6 Blocks	<ul style="list-style-type: none"> <li>• Block Properties</li> <li>• Modify Block (<a href="#">page 193</a>)</li> <li>• Expand Block (<a href="#">page 196</a>)</li> <li>• Move Block (<a href="#">page 198</a>)</li> <li>• Split Block (<a href="#">page 201</a>)</li> <li>• Merge Block (<a href="#">page 204</a>)</li> <li>• Renumber Block (<a href="#">page 207</a>)</li> <li>• Return to Parent (<a href="#">page 210</a>)</li> <li>• Free Block (<a href="#">page 213</a>)</li> <li>• Delete Block (<a href="#">page 216</a>)</li> <li>• Recover Block (<a href="#">page 214</a>)</li> <li>• Reports: Block Audit (<a href="#">page 457</a>), Block Hierarchy (<a href="#">page 463</a>), Block Utilization (<a href="#">page 468</a>)</li> </ul>
IPv6 Seed Blocks	<ul style="list-style-type: none"> <li>• Seed Block Properties</li> <li>• Add Address Range (<a href="#">page 306</a>)</li> <li>• Delete Seed Block (<a href="#">page 304</a>)</li> <li>• Add Subnets (<a href="#">page 311</a>)</li> <li>• Reports: IPv6 Address Audit (<a href="#">page 536</a>), IPv6 Subnet Audit (<a href="#">page 546</a>), IPv6 Subnets (<a href="#">page 551</a>)</li> </ul>
IPv6 Address Ranges	<ul style="list-style-type: none"> <li>• Address Range Properties</li> <li>• Modify Address Range (<a href="#">page 308</a>)</li> <li>• Delete Address Range (<a href="#">page 310</a>)</li> <li>• Add Subnets (<a href="#">page 311</a>)</li> <li>• Reports: IPv6 Address Audit (<a href="#">page 536</a>), IPv6 Subnet Audit (<a href="#">page 546</a>), IPv6 Subnets (<a href="#">page 551</a>)</li> </ul>
IPv6 Subnets	<ul style="list-style-type: none"> <li>• Subnet Properties</li> <li>• Modify Subnet Profile (<a href="#">page 318</a>)</li> <li>• Delete Subnet ( )</li> <li>• Split Subnet (<a href="#">page 320</a>)</li> <li>• Join Subnets (<a href="#">page 323</a>)</li> <li>• Renumber (<a href="#">page 325</a>)</li> <li>• Quick Add (<a href="#">page 327</a>)</li> <li>• Manage Addresses (<a href="#">page 332</a>)</li> <li>• Reports: IPv6 Address Audit (<a href="#">page 536</a>), IPv6 Subnet Audit (<a href="#">page 546</a>), Managed Addresses (<a href="#">page 541</a>), IPv6 Subnets (<a href="#">page 551</a>)</li> </ul>

Infrastructure type	Functions available
Nodes	<ul style="list-style-type: none"> <li>• Node Properties</li> <li>• Modify Node (<a href="#">page 355</a>)</li> <li>• Delete Node (<a href="#">page 359</a>)</li> <li>• Add Interface (<a href="#">page 360</a>)</li> <li>• Reports: Node Hierarchy (<a href="#">page 567</a>), IPv6 Address Audit (<a href="#">page 536</a>)</li> </ul>
Interfaces	<ul style="list-style-type: none"> <li>• Interface Properties</li> <li>• Modify Interface (<a href="#">page 363</a>)</li> <li>• Delete Interface (<a href="#">page 386</a>)</li> <li>• Add IPv6 Address (<a href="#">page 369</a>)</li> <li>• Add IPv4 Address (<a href="#">page 374</a>)</li> <li>• Move Interface (<a href="#">page 366</a>)</li> </ul>
IPv6 Addresses	<ul style="list-style-type: none"> <li>• IP Address Properties</li> <li>• Modify IP Address (<a href="#">page 382</a>)</li> <li>• Delete IP Address (<a href="#">page 384</a>)</li> <li>• Add Domain Name (<a href="#">page 387</a>)</li> <li>• Move to Subnet (<a href="#">page 382</a>)</li> <li>• Move to Interface (<a href="#">page 380</a>)</li> </ul>
Domain Names	<ul style="list-style-type: none"> <li>• Domain Name Properties</li> <li>• Modify Domain Name (<a href="#">page 390</a>)</li> <li>• Delete Domain Name (<a href="#">page 392</a>)</li> </ul>

END OF STEPS .....



## User interface components

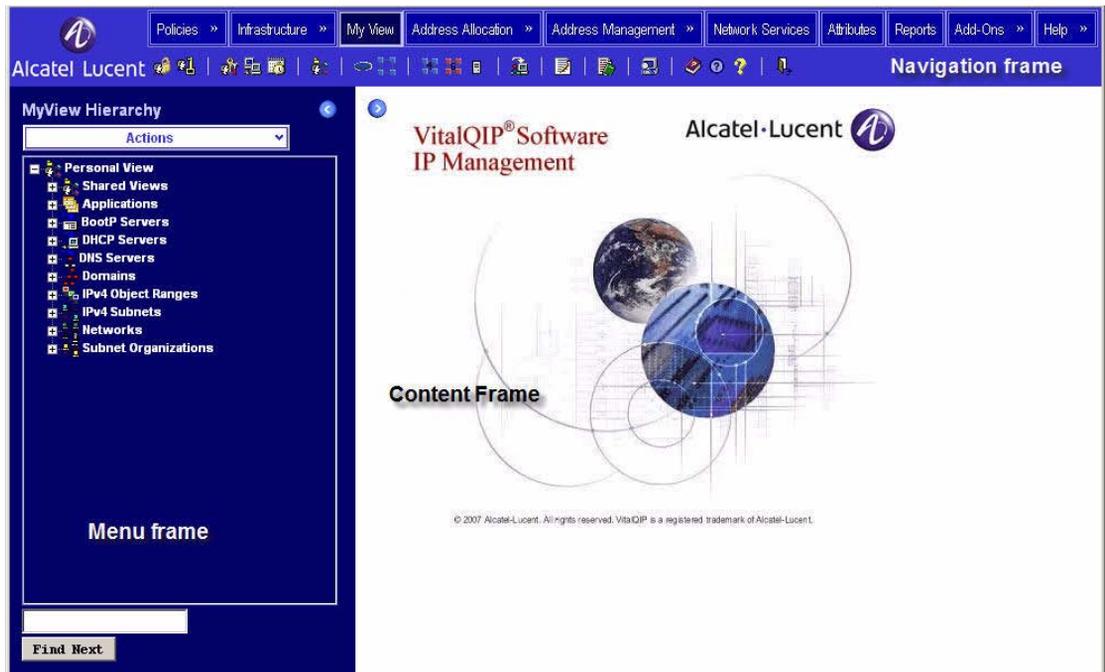
---

This section describes the VitalQIP web client interface components, as well as the buttons and icons that appear in the content frame.

### Web client page frames

The VitalQIP web client pages are comprised of a navigation frame at the top, a menu frame on the left, and a content frame on the right.

**Figure 1 VitalQIP web client page frames**



### Main Menu



The main menu is shown at the top of the navigation frame and provides access to all the application's features. The selected menu item is shown in dark blue. When you mouse over other menus, they are shown as dark blue as well.

**Important!** The **Add-Ons** menu only appears in the main menu if a licensed version of a pre-defined add-on has been installed or a customized add-on exists.

## Sub-menus



Sub-menus appear beneath each main menu item when it is selected. They represent the sub-sections of functionality for each main menu item. The selected sub-menu is shown in dark blue. When you mouse over other sub-menus, they are shown as dark blue as well.

## Toolbar



The toolbar appears underneath the main menu bar and contains icons that duplicate the commands on the main menu and sub-menus, so you can invoke the same functions with a single mouse click. After most toolbar icons are clicked, the corresponding main menu item is selected and displayed in dark blue. However, when icons that represent commands on the Help menu are invoked, separate browser windows open.

## Customized add-ons

VitalQIP 7.1 supports add-ons that have been pre-defined by Alcatel-Lucent, such as AutoDiscovery, as well as customized add-ons that the customer has added and maintained in the data file *Menu\_Customized.html.js*. A **Customized Add-Ons** sub-menu item may be added under the **Add-Ons** menu and a toolbar icon also inserted in the toolbar.

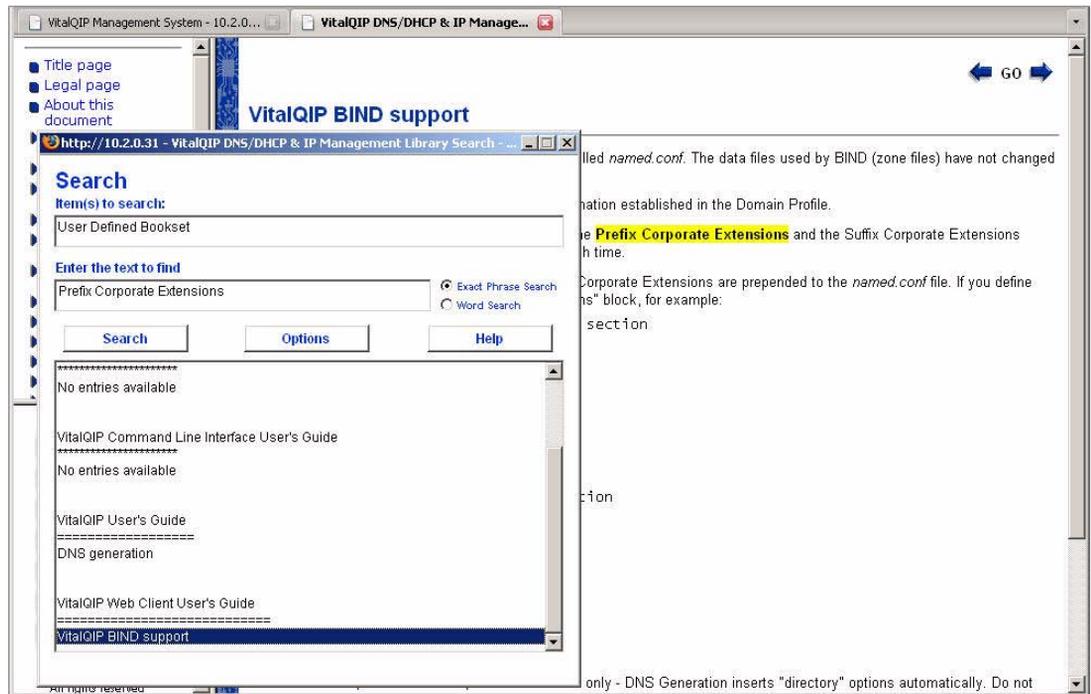


For information on adding access to a web-based application from within the VitalQIP web client, refer to Chapter 17, “Web Client Configuration” in the *VitalQIP Administrator Reference Manual*.

## Online Document



The Online document icon launches the VitalQIP Product Library. The library contains both HTML and PDF versions of the VitalQIP documentation. The Library also contains a useful Search function that allows you to locate matches for exact phrase or word instances across all or a user-specified set of HTML documents in the library.



## Online Help



The Online Help icon launches a list of help screens that are available for the function that is currently open in the web client UI. For example, if the Block Hierarchy is open, the Online Help icon launches a help screen containing a list of tasks related to using that feature.



## About VitalQIP



The About VitalQIP icon launches the VitalQIP Version Information screen, where you can determine which version of the product you have installed. This information may be useful whenever you need to contact Technical Support.



## Content frame icons

The following table describes buttons and icons that commonly occur in the VitalQIP web client content frames.

**Table 5** Content frame icons

Icon name	Description
Expand/contract buttons	 <p>Select expand/contract buttons to maximize or collapse a frame within the VitalQIP web client UI. To restore the prior configuration, select the icon again.</p>
List scrolling arrows	 <p>If data is displayed in a list, the  and  arrows allow the user to view</p>
Paged list drop-down	
Calendar	 <p>Opens a calendar window with the current date highlighted and the current time displayed.</p> 



## Hierarchy display

---

In the hierarchical view at any level, the maximum number of infrastructure objects (Pool, Block, IPv4 address, and IPv6 address) that a folder can hold is defined in the *qip.properties* file by the `foldersize` parameter. If no value is specified, 50 is the default value. Folders are displayed only if the total number of objects at the same level reaches or is greater than the `FolderSize` parameter.

For example, if there are 70 seed pools defined and the `FolderSize` is set to 30, then in the Pool hierarchy, instead of showing all 70 seed pools directly, three pool folders are generated and displayed (The first two folders contain 30 seed pools and the last one contains 10).

Refer to Chapter 17, “Web Client Configuration” in the *VitalQIP Administrator Reference Manual* for detailed information about this parameter.

### Expand/Contract icon description

The Expand (plus sign) and Contract (minus sign) icons appear to the left of a hierarchy item. Clicking on the icons allows you to toggle between displaying the information and hiding the information.

Expand                      Displays information associated with a specific value on the page.



Contract                    Hides fields that have been previously displayed with the Expand icon.



### Hierarchy Display

The following three functions are available from the **Actions** bar for hierarchy listings under most tabs:

 Refresh Hierarchy	<b>Refresh Hierarchy</b> retrieves the current data from the database and displays it in the hierarchy
 Refresh Selection	<b>Refresh Selection</b> refreshes the selected item with current data from the database and displays it in the hierarchy.
 Collapse All	<b>Collapse All</b> changes the hierarchy display so only the top-level items are visible in the hierarchy.



## Search hierarchy tree

---

Many areas of the VitalQIP Web GUI allow you to search the hierarchy from the initial page where it is displayed. This function only searches by the attribute displayed in the hierarchy tree (for example, you can use this to search the pool hierarchy by pool name, but you cannot use this function to search for pools with specific sets of properties).

This function only searches the following:

- Expanded branches of the hierarchy
- Branches of the hierarchy that have been expanded and then collapsed by the user by clicking on the minus sign

This function does not search the following:

- Branches of the hierarchy that have not been expanded
- Branches of the hierarchy that have been expanded, and then collapsed by using the **Refresh Hierarchy** function from the Actions menu
- The VitalQIP database

The search field displays at the bottom of the hierarchy, as shown in the following illustration.

**Figure 2** Search field



Type the name of the object for which you are searching in the field and click **Find Next**. If an object matches your search, it is highlighted, and its properties appear in the right-hand page of the screen. If you click **Find Next** again, the next match is highlighted until you reach the bottom of the hierarchy.

This search function finds all matches that contain the value you type in the search box, regardless of whether it starts the name of the object or is contained within it.



# Miscellaneous features

---

## Utility dialog boxes

Dialog boxes may be for user input as well as for displaying confirmation and error messages. User input is case-sensitive in dialog boxes.

There are three types of message dialog boxes. These are shown in the illustrations below:

**Figure 3 An information dialog box**



**Figure 4 A confirmation dialog box**



**Figure 5 An error dialog box**



**Cut, copy and paste**

The cut, copy and paste utility associated with the platform that you are using to run the VitalQIP GUI may be used to delete, duplicate, or move data from one text field to another text field. This typically works only for normal text fields for which data also could be accessed from the keyboard of your platform.

For all platforms, the left mouse button can be used to select the data to be manipulated before using **Cut**, **Copy**, or **Paste**.

For PCs, you may use the left mouse button to select the data, then you may use the control sequence shortcuts, **Ctrl-x** to cut, **Ctrl-c** to copy, and **Ctrl-v** to paste or use the right mouse button to access the cut, copy, and paste utility.

**Wildcard character in searches**

The wildcard character is an asterisk (\*). The wildcard can be used in place of zero or more characters when performing a search. It can be the first or only character in a search string.

**Required fields**

An asterisk (\*) preceding a field name indicates that data must be entered or a value must be selected for that field. Required fields also appear in boldfaced type.



## To start or stop the Tomcat server

---

### When to use

Use this procedure to start and stop the Tomcat server.

### Procedure for UNIX

To start or stop the Tomcat server on UNIX platforms, follow these steps.

---

1 Be sure your environment variables are set.

---

2 Go to \$QIPHOME:

- To start the Tomcat instance:  
./startTomcat.sh
- To stop the Tomcat instance:  
./stopTomcat.sh

On startup, Tomcat reads *\$QIPHOME/tomcat/conf/server.xml* for configuration information (port numbers, SSL, client connection and other operational parameters).

---

3 Check if the Tomcat server is running by entering the following command:

```
ps -ef|grep apache
```

A response similar to the following appears:

```
root 24707 1 0 11:22:26 pts/4 10:33 /opt1/qip70rsweb/jre/bin/java  
-Djava.util.logging.manager=org.apache.juli.Class
```

END OF STEPS

---

### Procedure for Windows

To start or stop the Tomcat server on Windows platforms, follow these steps.

---

1 Open the Windows Service Controller.

---

2 Start the service by right-clicking on **VitalQIP Apache Tomcat 5.5 Server** and selecting **Start**.

- .....
- 3 Stop the service by right-clicking on **VitalQIP Apache Tomcat 5.5 Server** and selecting **Stop**.

.....

END OF STEPS

.....



# Multiple browser sessions for the VitalQIP Web GUI

---

## When to use

Use this information when you want to open more than one Firefox browser session to login to the VitalQIP Web GUI. This procedure describes how to create a new profile in Firefox. If you use two Firefox browser sessions simultaneously with VitalQIP, each must have a unique profile.

## Procedure

Use this procedure to create two Firefox browser profiles:

---

- 1 Open a command prompt and enter the following:  
`firefox.exe -p`

---
- 2 Create a new profile by following the instructions provided.

---
- 3 Set the following variable use two profiles at the same time:  
`MOZ_NO_REMOTE=1`

---
- 4 Go to **Control panel > System > Advanced > Environment Variables > System Variables > New** and enter the following:  
Variable Name: `MOZ_NO_REMOTE`  
Variable Value: `1`

---
- 5 Click OK to close the open dialog boxes.

---
- 6 Make two shortcuts for Firefox. Each shortcut will be used to launch Firefox with a different Profile. The target in the shortcut properties will appear as follows:  
Target: `"C:\Program Files\Mozilla Firefox\firefox.exe" -p "profile name"`

You can now launch two separate Firefox sessions for use with the VitalQIP Web GUI.

END OF STEPS

---



# 2 Policies

## Overview

---

### Purpose

This chapter describes the functions on the Policies menu.

### Contents

This chapter covers these topics.

<a href="#">Administrator security</a>	26
<a href="#">To set up administrator security</a>	27
<a href="#">Change password</a>	30
<a href="#">To change a password</a>	31



## Administrator security

---

### Overview

To improve the security of the system, the VitalQIP web client includes additional administrator security options. These options allow:

- Password length and complexity enforcement
- Password not being the same as the Login ID (nor very similar - for example, not the mirror of the Login ID)
- Restricted password reuse
- Ability to disable accounts after a specified number of failed logins
- Password aging
- Require password for new administrator



## To set up administrator security

---

### When to use

Use this procedure to establish security settings for all administrators in the VitalQIP database.

### Before you begin

- Administrator Security settings can only be accessed by a master administrator.
- All changes made in the Administrator Security page affect every administrator unless the **Allow Password Expiration** privilege is turned off for specific administrators in their Administrator Profile.

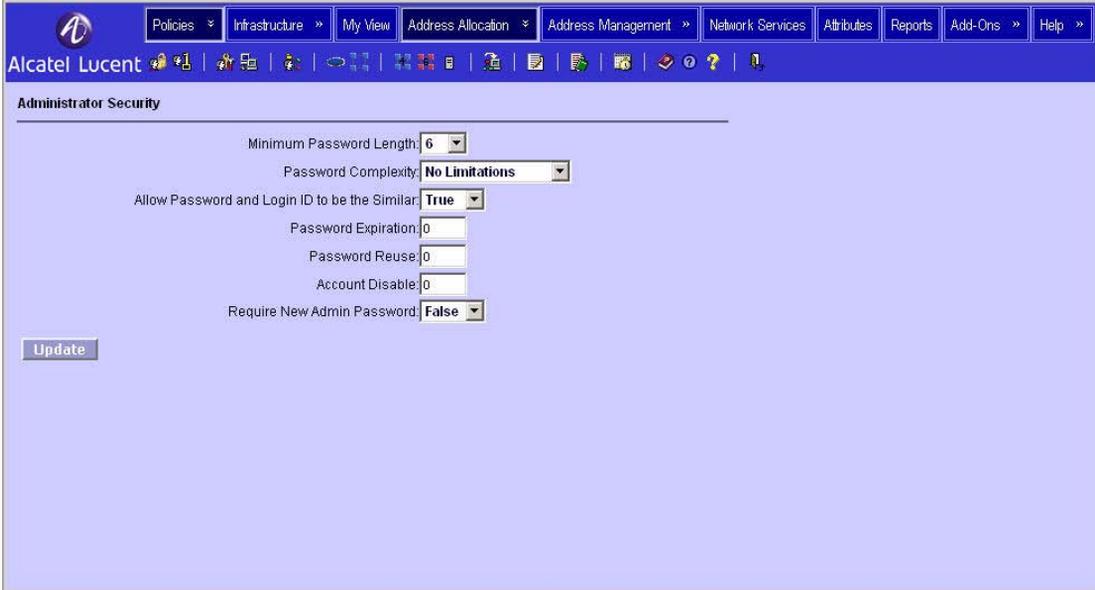
### Procedure

To establish security settings, follow these steps.

---

- 1 Mouse over the **Policies** tab and click **Administrator Security**. Alternatively, click the Administrator Security icon (  ) in the toolbar.

**Result:** The Administrator Security page opens.



The screenshot shows the 'Administrator Security' configuration page. The interface includes a navigation bar at the top with tabs for Policies, Infrastructure, My View, Address Allocation, Address Management, Network Services, Attributes, Reports, Add-Ons, and Help. Below the navigation bar is a toolbar with various icons. The main content area is titled 'Administrator Security' and contains the following settings:

- Minimum Password Length: 6
- Password Complexity: No Limitations
- Allow Password and Login ID to be the Similar: True
- Password Expiration: 0
- Password Reuse: 0
- Account Disable: 0
- Require New Admin Password: False

An 'Update' button is located at the bottom left of the configuration area.

- 2 Refer to the following table as you select the security settings you want to establish for the VitalQIP database.
-

**Table 6 Administrator Security options**

Field name	Description
Minimum Password Length	<b>Required.</b> The minimum length of an administrator's password. Valid values are from 6 to 25. The default value is 6.
Password Complexity	Select from the list of valid complexity settings. The default value is No Limitations. The settings are: <b>Alpha Only:</b> Password may only contain letters. <b>Numeric Only:</b> Password may only contain numbers. <b>No Limitations:</b> Password may contain any combination of letters, numbers, and special characters. <b>Alpha and Numeric:</b> Password must contain at least one letter and one number. Password may also contain special characters.
Allow Password and Login ID to be Similar	Controls whether a password can contain the login ID or the mirror image of the login ID. Values are True or False. True is the default. If this is set to False, the Login ID or the reverse of the Login ID cannot be any part of the password. <b>Example:</b> Assuming the Login ID is set to abcdef, the following list of passwords would not be allowed if this field were set to False: abcdef acbdefasdf asdfabcdef fedcba fedcbaasdf asdffedcba
Password Expiration	Indicates the numbers of days that a password remains valid before a user must change it. Zero means the password does not expire. The default value is 0. The maximum value is 999. <b>Important!</b> The <b>Allow Password Expiration</b> privilege in the Administrator Profile overrides this setting if it is set to False. Refer to Chapter 6 in the <i>VitalQIP User's Guide</i> .
Password Reuse	Indicates the numbers of unique passwords that an administrator must use before being able to reuse old passwords. Zero means that there is no reuse restriction. The default value is 0. The maximum value is 999.

Field name	Description
Account Disable	Indicates the number of failed login attempts for a specific account before the account is automatically disabled. Zero means that the account will never be disabled. The default value is 0. The maximum value is 999.
Require New Admin Password	<p>Determines whether new administrators are required to change their password the first time that they log into VitalQIP. The default is False.</p> <p><b>Important!</b> If an administrator's password is modified in the Administrator Profile (for example, after a profile has been locked), this field forces a new password to be entered at login when set to True.</p>

---

**3** Click **Update** to save the new security settings.

**Result:** A confirmation dialog box with the message **Administrator Security options saved successfully**.

---

**4** Click **OK**.

**Result:** The confirmation dialog box closes.

---

**5** To close the Administrator Security page, select another function from the VitalQIP web client menu.

END OF STEPS

---



## Change password

---

### Overview

The **Password Expiration** field in the Administrator Security function allows a master administrator to establish password aging for all administrators in the VitalQIP database. Additionally, new users may be forced to change passwords at their first login attempt if the **Require New Admin Password** field is set to True.

When a password has expired or a new administrator needs to set a new password, VitalQIP presents a change password screen to the user at the next login attempt. For more information, refer to [“To log into VitalQIP web client”, on page 3](#).



## To change a password

---

### When to use

Use this procedure to change your password within the web UI. To change your password if your current password has expired, or because the **Require New Admin Password** field is set to True and you are logging in for the first time, follow the procedures outlined in [“To log into VitalQIP web client”](#), on page 3.

### Before you begin

- Master administrators can place restrictions on length, complexity, and similarity to former passwords. These restrictions are configured in Administrator Security. For more information, refer to [“To set up administrator security”](#), on page 27.
- When a user ID, password, or organization is changed for a default administrator, the user ID, password, or organization may also need to be changed in the *<Administrator home directory>/cli.properties*, *QIPHOME/conf/cli.properties*, and the global section of *QIPHOME/qip.pcy* (if they were specified in any of these files). The user ID, password, or organization is not updated in these files automatically. Passwords entered in these files must be encrypted by using the `qip-crypt` command. Refer to the *VitalQIP Command Line Interface User's Guide* for information about `qip-crypt`.
- An Administrator Profile can become locked if an administrator fails to type the correct password after the number of times specified by the **Account Disable** field in Administrator Security. Another administrator must change the password in the Administrator Profile to unlock the administrator's account. Refer to “Create an administrator profile”, in Chapter 6 of the *VitalQIP User's Guide* for more information.

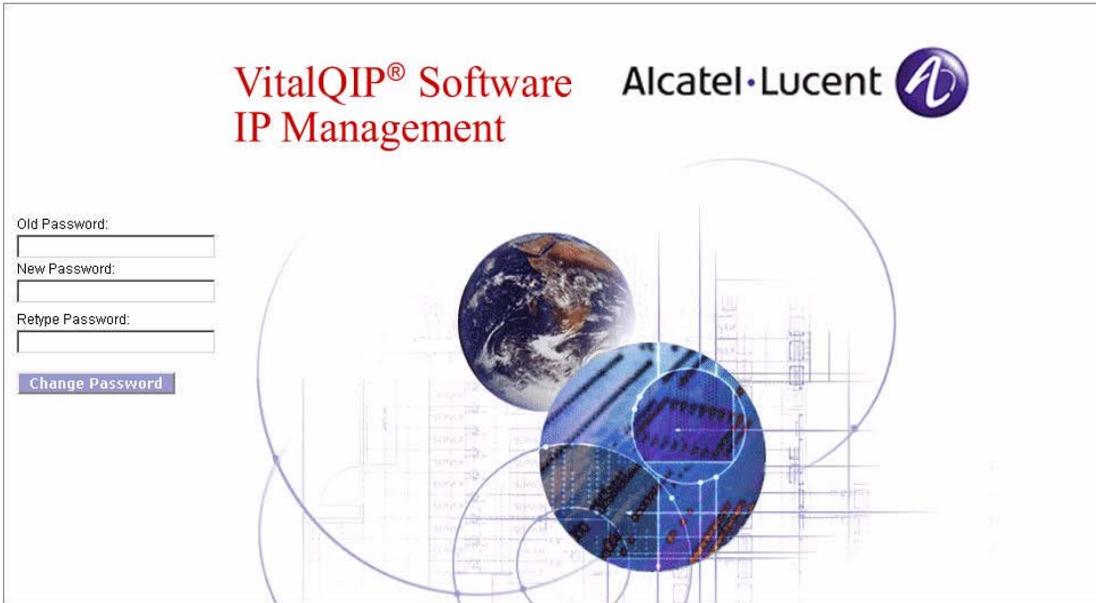
### Procedure

To change a password, follow these steps.

---

- 1 Mouse over the **Policies** tab and click **Change Password**. Alternatively, click the Change Password icon () in the toolbar.

**Result:** The Change Password window opens.



.....  
2 Enter your current password in the **Old Password** field and press **Tab**.

.....  
3 Enter a new password in the **New Password** field. Ensure that it complies with the password creation rules established in the Administrator Security function.

.....  
4 Enter your new password again in the **Retype Password** field.

.....  
5 Click **Change Password**.

**Result:** A confirmation dialog opens with the message **Administrator Password changed successfully**.

.....  
6 Click **OK**. To close the Change Password page, select another function from the VitalQIP web client menu.

.....  
E N D O F S T E P S  
.....



# 3 MyView Management

## Overview

---

### Purpose

This chapter describes how to use MyView Management.

### Contents

This chapter covers these topics.

MyView administration	34
To create a shared view	36
To add contents to a shared view	41
To modify a shared view	50
To delete a shared view	55
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# MyView administration

---

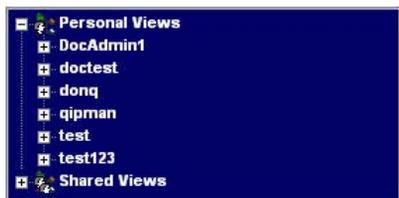
## Overview

With the possibility of millions of address pools, blocks, domains, resource records and infrastructure objects, the amount of data in the VitalQIP database can become quite unwieldy for administrators who need to perform their daily tasks efficiently. MyView Hierarchy Management enables a master or organization administrator to define and set up views of the system that have a narrower scope, views that can then be assigned to one or more normal administrators, and thereby allow them to focus on their daily activities and only the infrastructure items for which they are responsible.

## Personal Views

The MyView Hierarchy Management page is split into two areas: **Personal Views** and **Shared Views**.

Figure 6 Sample Personal Views



Each administrator defined in the VitalQIP database has a default Personal View that is created when an administrator logs into VitalQIP the first time. The Personal View has the same name as the login name entered in the Administrator Profile, and contains the infrastructure types that have been added to the Managed List or Administrative Roles in the **Access Information** tab of the Administrator Profile (in the VitalQIP client).

Figure 7 Sample Personal View infrastructure types



## Shared Views

Because the VitalQIP database may now contain many infrastructure types that cannot be added to a Managed List (for example, address pools, IPv6 seed blocks, IPv6 address ranges, IPv6 subnets, and nodes), a master or organization administrator can create “Shared Views” that contain these additional infrastructure types and assign them to normal administrators. Once assigned to an administrator, Shared Views appear in the Personal Views for that administrator and will appear in the MyView Hierarchy the next time he/she logs in.

**Figure 8 Personal Views containing Shared Views**



When creating a Shared View, the administrator specifies the following:

- Types of objects to be included.
- Static objects to be included.
- One or more dynamic criteria (at most eight) to select objects from the database – this includes a limited number of static attributes and User Defined Attributes (UDA).
- Other Shared Views to be included.
- Default order in which the Shared Views and infrastructure types are presented in the MyView Hierarchy. Administrators can later change the default order with the **Order Infrastructure** function on the **Actions** menu.

A user is allowed to traverse all the way down the hierarchy of objects within the Shared View, but not traverse up beyond the object included in the Shared View (for example, if Pool\_1 is included in the view, the user can access all the pools under Pool\_1, but not the parent of Pool\_1 or above, nor the siblings of Pool\_1).

## Permissions for the new object types

The master administrator can prevent normal administrators from adding new root level instances to the tree (for example, a seed pool, an IPv6 seed block, or a node) by setting the **Maintain Pools**, **Maintain Seed Pools**, **Access V6 Address Management**, and **Access Node Management** privileges to false in the Administrator Profile.

Only master administrator and organization administrators are allowed to maintain or view Address Templates, Internet Registries, Subnet Profile Templates and Reverse Zone Templates.



# To create a shared view

---

## When to use

Use this procedure to create a shared view.

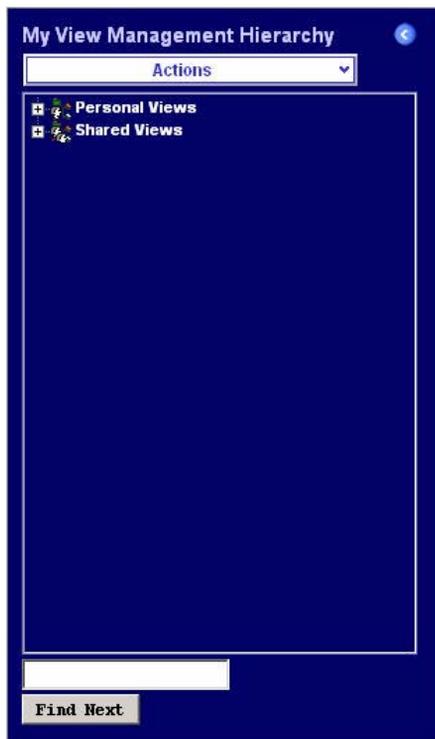
## Procedure

To create a shared view, follow these steps.

---

- 1 Mouse over the **Infrastructure** tab and click **MyView Management**. Alternatively, click the MyView Management icon (🌐) in the toolbar.

**Result:** The MyView Management Hierarchy opens.

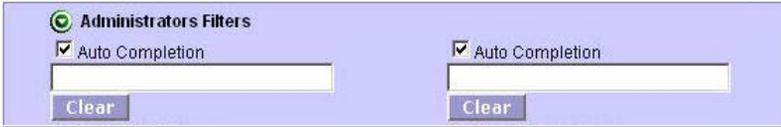


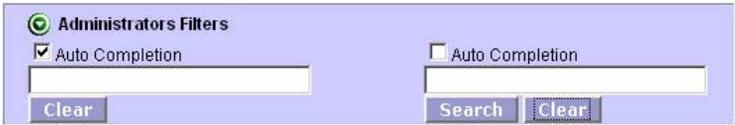
- 2 Mouse over the **Actions** menu and select **Create a Shared View**.

**Result:** The Properties page opens.

- 3 **Required.** Enter a name of up to 64 alphanumeric characters for the shared view in the **Shared View Name** field.
- 4 Enter a description of up to 255 alphanumeric characters for the shared view in the **Description** field.
- 5 Choose one of the following actions.

If you want to ...	Then..
Assign administrators	<ol style="list-style-type: none"> <li>1. Select the administrators you want to assign to the shared view from the <b>Available Administrators</b> list. To select multiple administrators, use <b>Ctrl</b> or <b>Shift</b> as you click on administrator IDs.</li> <li>2. Click <b>Add</b>.</li> </ol> <p><b>Result:</b> The selected administrators appear in the <b>Assigned Administrators</b> list.</p>

If you want to ...	Then..
<p>Filter administrator IDs <i>automatically</i> before assigning them</p>	<ol style="list-style-type: none"> <li>Expand the <b>Administrators Filters</b> section. <b>Result:</b> The Filter fields appear with the <b>Auto Completion</b> check box checked.</li> </ol>  <ol style="list-style-type: none"> <li>Enter your search criteria in the Search field above the <b>Available Administrators</b> list. <b>Result:</b> The Administrator IDs in the <b>Available Administrators</b> list are automatically filtered as you type. To cancel a search criterion, click <b>Clear</b>.</li> <li>Select the administrators you want to assign to the shared view from the <b>Available Administrators</b> list. To select multiple administrators, use <b>Ctrl</b> or <b>Shift</b> as you click on administrator IDs.</li> <li>Click <b>Add</b>. <b>Result:</b> The selected administrators appear in the <b>Assigned Administrators</b> list.</li> </ol>
<p>Filter administrator IDs <i>manually</i> before assigning them</p>	<ol style="list-style-type: none"> <li>Expand the <b>Administrators Filters</b> section. <b>Result:</b> The Filter fields appear with the <b>Auto Completion</b> check box checked.</li> <li>Uncheck the <b>Auto Completion</b> check box above the <b>Available Administrators</b> list. <b>Result:</b> A <b>Search</b> button appears.</li> </ol>  <ol style="list-style-type: none"> <li>Enter your search criteria. To cancel a search criterion, click <b>Clear</b>.</li> <li>Select the administrators you want to assign to the shared view from the <b>Available Administrators</b> list. To select multiple administrators, use <b>Ctrl</b> or <b>Shift</b> as you click on administrator IDs.</li> <li>Click <b>Add</b>. <b>Result:</b> The selected administrators appear in the <b>Assigned Administrators</b> list.</li> </ol>

If you want to ...	Then..
Remove administrator IDs from the shared view	<ol style="list-style-type: none"> <li>1. Select the administrator you want to remove from the shared view from the <b>Assigned Administrators</b> list.</li> <li>2. Click <b>Remove</b>.</li> </ol> <p><b>Result:</b> The selected administrator is removed from the <b>Assigned Administrators</b> list.</p> <ol style="list-style-type: none"> <li>3. Repeat the above steps to remove other administrators from the list.</li> </ol>
Filter administrator IDs <i>automatically</i> before removing them	<ol style="list-style-type: none"> <li>1. Expand the <b>Administrators Filters</b> section.</li> </ol> <p><b>Result:</b> The Filter fields appear with the <b>Auto Completion</b> check box checked.</p> <ol style="list-style-type: none"> <li>2. Enter your search criteria in the Search field above the <b>Assigned Administrators</b> list.</li> </ol> <p><b>Result:</b> The Administrator IDs in the <b>Assigned Administrators</b> list are automatically filtered as you type.</p> <p>To cancel a search criterion, click <b>Clear</b>.</p> <ol style="list-style-type: none"> <li>3. Select the administrator you want to remove from the shared view from the <b>Assigned Administrators</b> list.</li> <li>4. Click <b>Remove</b>.</li> </ol> <p><b>Result:</b> The selected administrator is removed from the <b>Assigned Administrators</b> list.</p> <ol style="list-style-type: none"> <li>5. Repeat the above steps to remove other administrators from the list.</li> </ol>
Filter administrator IDs <i>manually</i> before removing them	<ol style="list-style-type: none"> <li>1. Expand the <b>Administrators Filters</b> section.</li> </ol> <p><b>Result:</b> The Filter fields appear with the <b>Auto Completion</b> check box checked.</p> <ol style="list-style-type: none"> <li>2. Uncheck the <b>Auto Completion</b> check box above the <b>Assigned Administrators</b> list.</li> </ol> <p><b>Result:</b> A <b>Search</b> button appears.</p>  <p>The screenshot shows a purple header for 'Administrators Filters'. On the left, the 'Auto Completion' checkbox is checked, and there is a 'Clear' button below it. On the right, the 'Auto Completion' checkbox is unchecked, and there is a 'Search' button and a 'Clear' button below it.</p> <ol style="list-style-type: none"> <li>3. Enter your search criteria.</li> </ol> <p>To cancel a search criterion, click <b>Clear</b>.</p> <ol style="list-style-type: none"> <li>4. Select the administrators you want to remove from the shared view from the <b>Assigned Administrators</b> list. To select multiple administrators, use <b>Ctrl</b> or <b>Shift</b> as you click on administrator IDs.</li> <li>5. Click <b>Add</b>.</li> </ol> <p><b>Result:</b> The selected administrator is removed from the <b>Assigned Administrators</b> list.</p> <ol style="list-style-type: none"> <li>6. Repeat the above steps to remove other administrators from the list.</li> </ol>
Add attributes assigned to a shared view	<ol style="list-style-type: none"> <li>1. Expand the <b>Attributes</b> section, if necessary.</li> <li>2. Enter attribute values as needed.</li> </ol>

.....  
6 Click **Submit**.

**Result:** The shared view is created and a confirmation dialog opens with the message **Shared View successfully created**.

.....  
7 Click **OK** to confirm.

**Result:** The Properties page is refreshed with a summary of the properties and a new set of buttons.

.....  
E N D O F S T E P S  
.....



## To add contents to a shared view

---

### When to use

Use this procedure to add content to a shared view.

### Procedure

To add content to a shared view, follow these steps.

---

- 1 Mouse over the **Infrastructure** tab and click **MyView Management**. Alternatively, click the MyView Management icon () in the toolbar.

**Result:** The MyView Management Hierarchy opens.

---

- 2 Expand **Shared Views**.

**Result:** A list of shared views appears.

---

- 3 Select the view to which you want to add content.

**Result:** The Properties page opens.

**Properties**

**Properties**

Shared View Name:	DocView1
Created By:	qipman
Created Date:	2007-05-23 11:21:17.27
Modified By:	qipman
Modified Date:	2007-05-23 12:39:39.586
Description:	

[Modify Shared View](#) [Add Contents](#) [Delete Shared View](#)

[Order Infrastructure](#) [Label Infrastructure](#) [Reports](#)

---

**4** Click **Add Contents**.

**Result:** The Manage Shared View - Add Contents page opens.

Manage Shared View - Add Contents

Add Static Items  Add Dynamic Criteria

Infrastructure Type: **Address Pools**

**Properties**

**Add New Criteria**

**User Defined Attributes**

**Add New Criteria**

**Search** **Reset**

**Submit** **Cancel**

- 
- 5 Decide whether to add content individually or dynamically.
    - To add content item by item, click the **Add Static Items** option.
    - To add content dynamically, click the **Add Dynamic Criteria** option.

---

  - 6 Select an infrastructure type from the **Infrastructure Type** drop-down list. The following infrastructure types are available:
    - Address Pools
    - IPv6 Seed Blocks
    - IPv6 Address Ranges
    - IPv6 Subnets
    - Nodes (if selected, choose either the **IPv4 Criteria** or the **IPv6 Criteria** option)
    - Shared Views

---

  - 7 To search for or preview infrastructure properties, click **Add New Criteria** in the **Properties** section. You may enter up to ten criteria.

**Result:** Properties criteria fields open.

The screenshot shows a 'Properties' dialog box with a table for defining search criteria. The table has three columns: 'Property Name', 'Operator', and 'Property Value'. The 'Property Name' column has a dropdown menu with 'Address Pool Name' selected. To the right of the table is a 'Remove' button. Below the table is an 'Add New Criteria' button.

Property names vary depending on the infrastructure type selected. The following table details the properties available for each infrastructure type.

**Table 7 Infrastructure type properties**

Infrastructure type	Property name	Search values
<b>Address Pools</b>		
	Address Pool Name	String, wildcard
	Parent Pool Name	String, wildcard
	Registry	String, wildcard
	Contact	E-mail address, wildcard
	Address Pool Type	Seed Pool, Child Pool
	IPv4 Allocation Rule	String, wildcard
	IPv6 Allocation Rule	String, wildcard
<b>IPv6 Seed Blocks</b>		
	Length	Boolean operators: =, >, >=, <, <=
		Pull-down values: 9 to 128
	Address Block	IPv6 address, wildcard
<b>IPv6 Address Ranges</b>		
	Name	String, wildcard
	Start Address	IPv6 address, wildcard
	Length	Boolean operators: =, >, >=, <, <=
		Pull-down values: 9 to 128
<b>IPv6 Subnets</b>		
	Name	String, wildcard
	Start Address	IPv6 address, wildcard

<b>Infrastructure type</b>	<b>Property name</b>	<b>Search values</b>
	Length	Boolean operators: =, >, >=, <, <= Pull-down values: 9 to 128
<b>Nodes</b>		
<b>IPv4 attributes</b>		
	IP Object Name	String, wildcard
	IPv4 Object MAC Address	String, wildcard
	IPv4 Address	IPv4 address, wildcard
<b>IPv6 attributes</b>		
	Node Type	A list of Workstation, X-terminal, PC, Printer, Server, Wiring_HUB, Router, Bridge, Terminal Server, Switch, Legacy_System, Gateway, Test_Equipment, Undefined, Others, Partially_Managed, and user-defined object classes.
	Node Name	String, wildcard
	Node Unique ID	String, wildcard
	Node Description	String, wildcard
	Interface Name	String, wildcard
	Interface MAC Address	String, wildcard
	IPv6 Address Name	String, wildcard
	IPv6 Address	IPv6 address, wildcard
	Domain Name	String, wildcard

Infrastructure type	Property name	Search values
<b>Shared Views</b>		
	MyView Name	String, wildcard <b>Important!</b> If the <b>Add Dynamic Criteria</b> option is selected, be careful not to create a circular relationship between shared views (for example where <code>view1</code> contains <code>view2</code> , and where <code>view2</code> contains <code>view1</code> ): for performance reasons, the UI does not check for such relationships. If the <b>Add Static Items</b> option is selected, the UI does check for circular relationships, and returns an error message if you try to create such a relationship. You can also prevent circular relationship checks with the <code>CircularMyViewCheck</code> policy. Refer to Chapter 3 in the <i>Administrator Reference Manual</i> for more information.

8 Enter the desired property criterion for the selected infrastructure type. If you decide not to use the criterion you entered, click **Remove**.

9 If required, click **Add New Criteria** to select another property criterion.

10 To search for or preview User Defined Attributes that have been assigned to the infrastructure type selected in step 6, click **Add New Criteria** in the **User Defined Attributes** section. You may enter up to five attribute criteria.

**Result:** The User Defined Attributes criteria fields open.

11 Select an **Attribute Group** as necessary from the drop-down list. Possible values are:

- A previously defined attribute group that has been assigned to the selected infrastructure type. For more information, refer to [“To add an attribute or attribute group to an infrastructure object”](#), on page 439.

- **<NONE>**. The default value. Indicates that you wish to exclude Attribute Groups from the search criteria.
- **<IGNORE>**. Indicates that you do not require an attribute to be in an Attribute Group or not.
- **<ANY>**. Indicates that all pre-defined Attribute Groups may be included in the search criteria.

12 Select an **Attribute Name** from the drop-down list. Possible values are:

- A previously defined attribute that has been assigned to the selected infrastructure type. For more information, refer to [“To add an attribute or attribute group to an infrastructure object”, on page 439](#).
- **<ALL>**. Consider all attributes assigned to the selected infrastructure type in the search.

If you decide not to use the criterion you entered, click **Remove**.

13 Choose one of the following actions.

If ...	Then ...
<p><b>Add Static Items</b> option is selected</p>	<p>1. Click <b>Search</b>.</p> <p><b>Result:</b> The <b>Search Results</b> section opens. If search results list as folders, you may select specific folders or expand them and select individual objects as you wish.</p> <div style="border: 1px solid black; padding: 5px; background-color: #e6e6fa;"> <p><b>Search Results</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 2001:db8::/64</li> <li><input type="checkbox"/> 2234:5678::/64</li> </ul> </div>

If ...	Then ...
<p><b>Add Dynamic Criteria</b> option is selected</p>	<p>1. Click <b>Preview</b>.</p> <p><b>Result:</b> The <b>Search Results</b> section opens.</p>  <p>The screenshot shows a light blue rectangular area titled "Search Results". Inside this area, there is a white box containing two lines of text: "2001:db8::64" and "2234:5678::64". Each line has a small square icon to its left, representing a checkbox.</p>

14 Choose one of the following actions.

If ...	Then ...
<p><b>Add Static Items</b> option is selected, and you are satisfied with the results of your search criteria</p>	<p>1. Place check marks in the items that you want to include in the shared view.</p> <p>2. Click <b>Submit</b>.</p> <p><b>Result:</b> A confirmation dialog opens with the message <b>Infrastructure Objects successfully added</b>.</p> <p>3. Click <b>OK</b>.</p> <p><b>Result:</b> The MyView Management Hierarchy is updated.</p>
<p><b>Add Dynamic Criteria</b> option is selected, and you are satisfied with the results of the preview</p>	<p>1. Click <b>Submit</b>.</p> <p><b>Result:</b> A confirmation dialog opens with the message <b>Infrastructure Objects successfully added</b>.</p> <p>2. Click <b>OK</b>.</p> <p><b>Result:</b> The MyView Management Hierarchy is updated.</p>
<p><b>Add Static Items</b> option or <b>Add Dynamic Criteria</b> option is selected, and you are <i>not</i> satisfied with the results of your search criteria</p>	<p>1. Click <b>Reset</b>.</p> <p><b>Result:</b> All search criteria fields are closed and the contents of the <b>Search Results</b> section are erased.</p> <p>2. Repeat steps 7 to 13.</p>

- .....
- 15** If at any time you wish to leave this function without selecting criteria, click **Cancel**.

**Result:** The Properties page for the selected view opens.

.....

E N D O F S T E P S

.....



## To modify a shared view

---

### When to use

Use this procedure if you want to add/delete administrators who can access a shared view.

### Procedure

To modify a shared view, follow these steps.

- 
- 1 Mouse over the **Infrastructure** tab and click **MyView Management**. Alternatively, click the MyView Management icon () in the toolbar.

**Result:** The MyView Management Hierarchy opens.

---

- 2 Expand **Shared Views**.

**Result:** A list of shared views appears.

---

- 3 Select the view that you want to modify.

**Result:** The Properties page opens.

---

- 4 Click **Modify Shared View**.

**Result:** The Properties page expands.

**Properties**

**Properties- REQUIRED**

\*Shared View Name:

Description:

**Assignment**

**Administrators Filters**

**Available Administrators**

DocAdmin1  
DocAdmin2  
qipman  
test  
test123

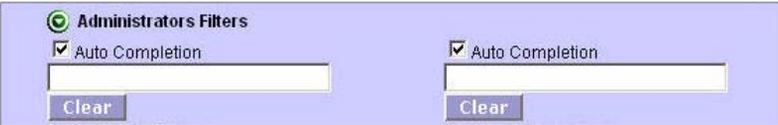
**Assigned Administrators**

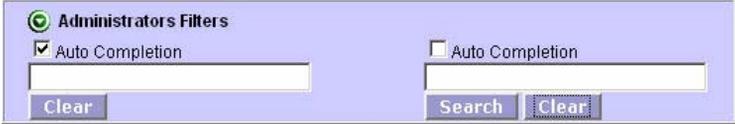
Add  
Remove

Submit Cancel

5 Choose one of the following actions.

If you want to ...	Then ...
Revise the name of the shared view	Enter a new name of up to 64 alphanumeric characters in the <b>Shared View Name</b> field.
Revise the Description for the shared view	Enter a new description of up to 255 alphanumeric characters for the shared view in the <b>Description</b> field.
Assign administrators	<ol style="list-style-type: none"> <li>Select the administrators you want to assign to the shared view from the <b>Available Administrators</b> list. To select multiple administrators, use <b>Ctrl</b> or <b>Shift</b> as you click on administrator IDs.</li> <li>Click <b>Add</b>.</li> </ol> <p><b>Result:</b> The selected administrators appear in the <b>Assigned Administrators</b> list.</p>

If you want to ...	Then ...
<p>Filter administrator IDs <i>automatically</i> before assigning them</p>	<ol style="list-style-type: none"> <li>Expand the <b>Administrators Filters</b> section. <b>Result:</b> The Filter fields appear with the <b>Auto Completion</b> check box checked.</li> </ol>  <ol style="list-style-type: none"> <li>Enter your search criteria in the Search field above the <b>Available Administrators</b> list. <b>Result:</b> The Administrator IDs in the <b>Available Administrators</b> list are automatically filtered as you type. To cancel a search criterion, click <b>Clear</b>.</li> <li>Select the administrators you want to assign to the shared view from the <b>Available Administrators</b> list. To select multiple administrators, use <b>Ctrl</b> or <b>Shift</b> as you click on administrator IDs.</li> <li>Click <b>Add</b>. <b>Result:</b> The selected administrators appear in the <b>Assigned Administrators</b> list.</li> </ol>
<p>Filter administrator IDs <i>manually</i> before assigning them</p>	<ol style="list-style-type: none"> <li>Expand the <b>Administrators Filters</b> section. <b>Result:</b> The Filter fields appear with the <b>Auto Completion</b> check box checked.</li> <li>Uncheck the <b>Auto Completion</b> check box above the <b>Available Administrators</b> list. <b>Result:</b> A <b>Search</b> button appears.</li> </ol>  <ol style="list-style-type: none"> <li>Enter your search criteria. To cancel a search criterion, click <b>Clear</b>.</li> <li>Select the administrators you want to assign to the shared view from the <b>Available Administrators</b> list. To select multiple administrators, use <b>Ctrl</b> or <b>Shift</b> as you click on administrator IDs.</li> <li>Click <b>Add</b>. <b>Result:</b> The selected administrators appear in the <b>Assigned Administrators</b> list.</li> </ol>

If you want to ...	Then ...
Remove administrator IDs from the shared view	<ol style="list-style-type: none"> <li>1. Select the administrator you want to remove from the shared view from the <b>Assigned Administrators</b> list.</li> <li>2. Click <b>Remove</b>.</li> </ol> <p><b>Result:</b> The selected administrator is removed from the <b>Assigned Administrators</b> list.</p> <ol style="list-style-type: none"> <li>3. Repeat the above steps to remove other administrators from the list.</li> </ol>
Filter administrator IDs <i>automatically</i> before removing them	<ol style="list-style-type: none"> <li>1. Expand the <b>Administrators Filters</b> section.</li> </ol> <p><b>Result:</b> The Filter fields appear with the <b>Auto Completion</b> check box checked.</p> <ol style="list-style-type: none"> <li>2. Enter your search criteria in the Search field above the <b>Assigned Administrators</b> list.</li> </ol> <p><b>Result:</b> The Administrator IDs in the <b>Assigned Administrators</b> list are automatically filtered as you type.</p> <p>To cancel a search criterion, click <b>Clear</b>.</p> <ol style="list-style-type: none"> <li>3. Select the administrator you want to remove from the shared view from the <b>Assigned Administrators</b> list.</li> <li>4. Click <b>Remove</b>.</li> </ol> <p><b>Result:</b> The selected administrator is removed from the <b>Assigned Administrators</b> list.</p> <ol style="list-style-type: none"> <li>5. Repeat the above steps to remove other administrators from the list.</li> </ol>
Filter administrator IDs <i>manually</i> before removing them	<ol style="list-style-type: none"> <li>1. Expand the <b>Administrators Filters</b> section.</li> </ol> <p><b>Result:</b> The Filter fields appear with the <b>Auto Completion</b> check box checked.</p> <ol style="list-style-type: none"> <li>2. Uncheck the <b>Auto Completion</b> check box above the <b>Assigned Administrators</b> list.</li> </ol> <p><b>Result:</b> A <b>Search</b> button appears.</p>  <p>The screenshot shows a purple header for 'Administrators Filters'. Below it, there are two identical filter sections. The left section has the 'Auto Completion' checkbox checked. The right section has the 'Auto Completion' checkbox unchecked, and a 'Search' button is visible next to its search field. Both sections have a 'Clear' button below the search field.</p> <ol style="list-style-type: none"> <li>3. Enter your search criteria.</li> </ol> <p>To cancel a search criterion, click <b>Clear</b>.</p> <ol style="list-style-type: none"> <li>4. Select the administrators you want to remove from the shared view from the <b>Assigned Administrators</b> list. To select multiple administrators, use <b>Ctrl</b> or <b>Shift</b> as you click on administrator IDs.</li> <li>5. Click <b>Add</b>.</li> </ol> <p><b>Result:</b> The selected administrator is removed from the <b>Assigned Administrators</b> list.</p> <ol style="list-style-type: none"> <li>6. Repeat the above steps to remove other administrators from the list.</li> </ol>
Modify attributes assigned to a shared view	<ol style="list-style-type: none"> <li>1. Expand the <b>Attributes</b> section, if necessary.</li> <li>2. Enter revised attribute values.</li> </ol>

.....  
6 Click **Submit**.

**Result:** The shared view is created and a confirmation dialog opens with the message  
**Shared View successfully modified.**

.....  
7 Click **OK** to confirm.

**Result:** The Properties page is refreshed with a summary of the properties.

.....  
E N D O F S T E P S  
.....



## To delete a shared view

---

### When to use

Use this procedure to delete a shared view.

### Procedure

To delete a shared view, follow these steps.

- 
- 1 Mouse over the **Infrastructure** tab and click **MyView Management**. Alternatively, click the MyView Management icon  in the toolbar.  
**Result:** The MyView Management Hierarchy opens.

---

  - 2 Expand **Shared Views**.  
**Result:** A list of shared views appears.

---

  - 3 Select the view that you want to delete.  
**Result:** The Properties page opens.

---

  - 4 Click **Delete Shared View**.  
**Result:** A confirmation dialog opens with the message **You are about to delete Shared View - <ViewName>**.

---

  - 5 Click **OK** to continue.  
**Result:** A confirmation dialog opens with the message **Shared View successfully deleted** and the MyView Management Hierarchy is refreshed.

---

  - 6 Click **OK**.  
**Result:** The VitalQIP IP Management Software splash screen is displayed.

END OF STEPS

---



## To order infrastructure

---

### When to use

To set up the order in which infrastructure appears in a shared view.

### Before you begin

Once the order is established, this will be the default order in the MyView page. Users can personalize their MyView infrastructure, however.

### Before you begin

When a shared view is added to another shared view, the shared view is listed before infrastructure types by default. This design allows the user to navigate the views in the MyView Management Hierarchy without having to traverse through infrastructure types.

### Procedure

To order the infrastructure, follow these steps.

---

- 1 Mouse over the **Infrastructure** tab and click **MyView Management**. Alternatively, click the MyView Management icon  in the toolbar.

**Result:** The MyView Management Hierarchy opens.

---

- 2 Expand **Shared Views**.

**Result:** A list of shared views opens.

---

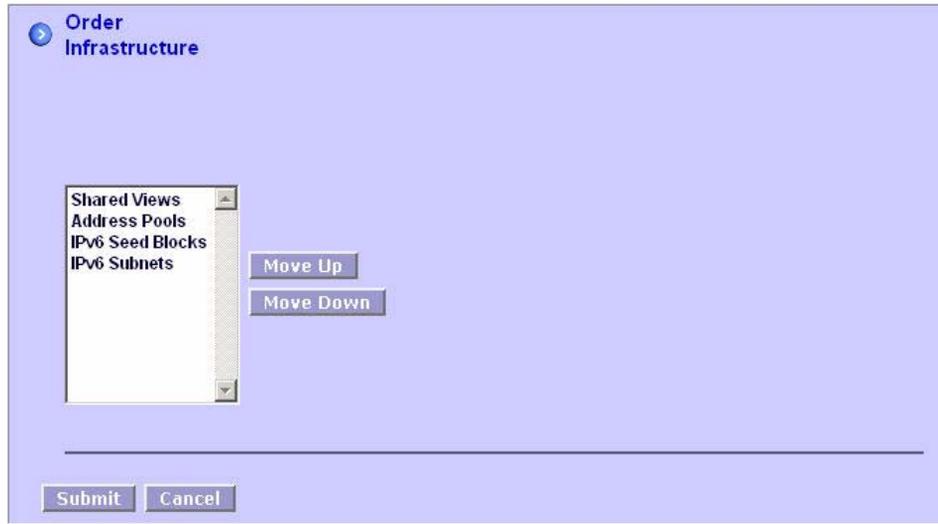
- 3 Select the view for which you want to reorganize the infrastructure is ordered.

**Result:** The Properties page opens.

---

- 4 Click **Order Infrastructure**.

**Result:** The Order Infrastructure page opens.



5 Choose one of the following actions.

If you want to ...	Then ...
Move an infrastructure type up the hierarchy order	<ol style="list-style-type: none"> <li>1. Highlight the infrastructure type you wish to move.</li> <li>2. Click <b>Move Up</b> until the infrastructure type is positioned where you want it.</li> <li>3. Click <b>Submit</b>.</li> </ol> <p><b>Result:</b> The MyView Management Hierarchy is updated and the Properties page opens.</p>
Move an infrastructure type down the hierarchy order	<ol style="list-style-type: none"> <li>1. Highlight the infrastructure type you wish to move.</li> <li>2. Click <b>Move Down</b> until the infrastructure type is positioned where you want it.</li> <li>3. Click <b>Submit</b>.</li> </ol> <p><b>Result:</b> The MyView Management Hierarchy is updated and the Properties page opens.</p>

END OF STEPS



## To label infrastructure

---

### When to use

To modify infrastructure labels.

### Before you begin

Once the labels are established, these will be the default labels in the MyView page. Users can personalize their MyView infrastructure, however.

### Procedure

To change the label on infrastructure items, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **MyView Management**. Alternatively, click the MyView Management icon (🔧) in the toolbar.

**Result:** The MyView Management Hierarchy opens.

- 2 Expand **Shared Views**.

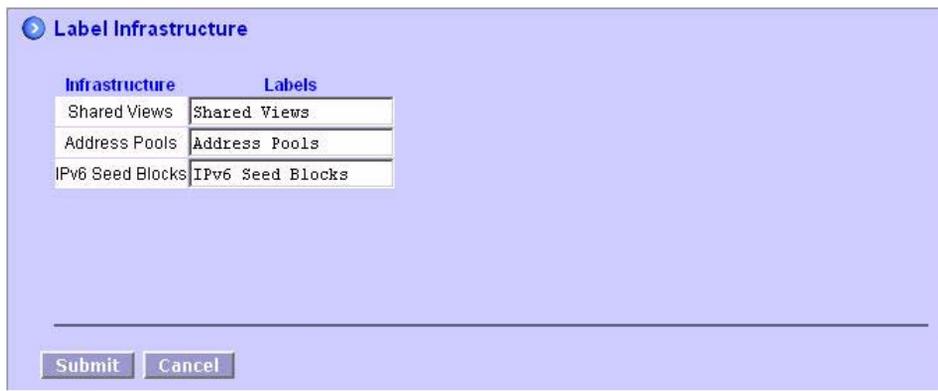
**Result:** A list of shared views opens.

- 3 Select the view for which you want to label the infrastructure.

**Result:** The Properties page opens.

- 4 Click **Label Infrastructure**.

**Result:** The Label Infrastructure page opens.



.....  
5 Select the label you wish to modify and enter a new label.

.....  
6 Repeat as needed for other infrastructure types.

.....  
7 Click **Submit**.

**Result:** The MyView Management Hierarchy is updated and the Properties page opens.

.....  
E N D O F S T E P S



# To modify selection criteria

---

## When to use

Use this procedure to modify selection criteria for infrastructure types that were dynamically selected.

## Procedure

To modify the selection criteria for an infrastructure type that was dynamically selected to a shared view, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **MyView Management**. Alternatively, click the MyView Management icon (  ) in the toolbar.

**Result:** The MyView Management Hierarchy opens.

- 2 Expand **Shared Views**.

**Result:** A list of shared views appears.

- 3 Expand the shared view that you want to modify.

**Result:** The list of infrastructure types opens.



- 4 Expand the infrastructure type whose dynamic criteria you wish to modify.

**Result:** The **Static** and **Dynamic Criteria** labels open.

- 5 Expand **Dynamic Criteria** and select the criteria you wish to modify.

**Result:** The Properties page for the selected infrastructure type opens.

The screenshot shows a web interface titled "Properties" for the "IPv6 Subnets" infrastructure type. It features a section for "User Defined Attributes" with a table containing one row. The table has columns for "Attribute Group", "Attribute Name", and "Attribute Value". The values in the row are "<NONE>", "HQ Views", and "\*". Below the table are "Modify" and "Delete" buttons.

Attribute Group	Attribute Name	Attribute Value
<NONE>	HQ Views	*

- 6 Click **Modify**.

**Result:** The Manage Shared View - Modify Contents page opens.

**Manage Shared View - Modify Contents**

Infrastructure Type: **IPv6 Subnets**

**Properties**

Add New Criteria

**User Defined Attributes**

Attribute Group	Attribute Name	Attribute Value	
<NONE>	HQ Views	*	Remove

Add New Criteria

Preview    Reset

Submit    Cancel

7 Add or remove criteria from the **Properties** and **User Defined Attributes** sections as needed. For further information, refer to [“To add contents to a shared view”](#), on page 41.

8 Click **Submit** to save your modified criteria.

**Result:** A confirmation dialog opens with the message **Dynamic Criteria successfully modified**.

9 Click **OK**.

**Result:** The Dynamic Criteria Properties page for the selected infrastructure type opens.

END OF STEPS



## To delete selection criteria for a shared view

---

### When to use

Use this procedure to delete static or dynamic selection criteria for a shared view.

### Before you begin

When a normal administrator traverses a shared view for a particular infrastructure type, he or she sees the combination of static entries and dynamic criteria (without duplication) for that infrastructure type.

### Procedure

To delete static or dynamic selection criteria for a shared view, follow these steps.

---

- 1 Mouse over the **Infrastructure** tab and click **MyView Management**. Alternatively, click the MyView Management icon  in the toolbar.

**Result:** The MyView Management Hierarchy opens.

---

- 2 Expand **Shared Views**.

**Result:** A list of shared views appears.

---

- 3 Expand the shared view that you want to modify.

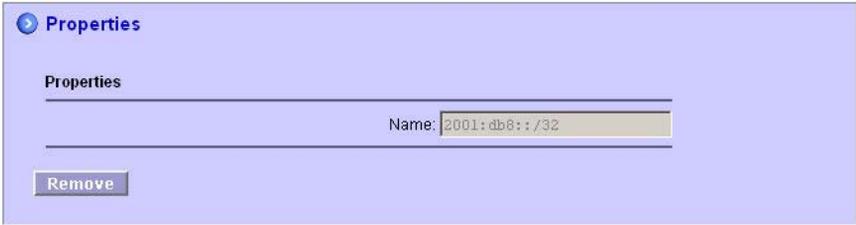
**Result:** The list of infrastructure types opens.

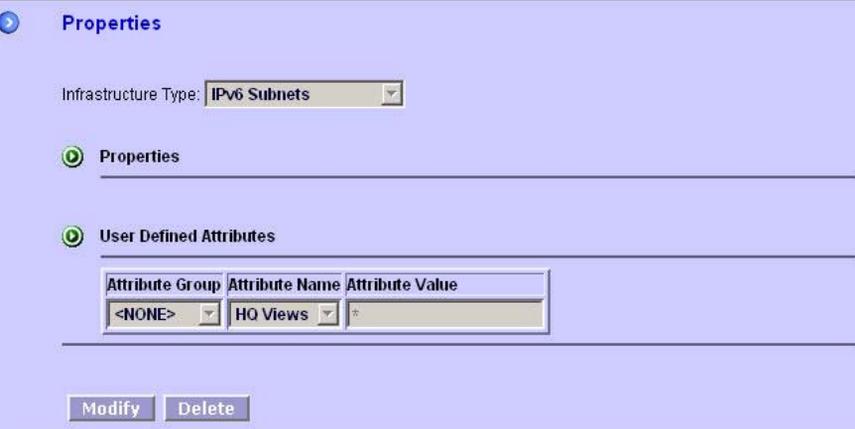


- 
- 4 Expand the infrastructure type whose criteria you wish to delete.

**Result:** The **Static** and **Dynamic Criteria** labels open.

5 Choose one of the following actions.

If you want to ...	Then ...
Delete a Static selection	<ol style="list-style-type: none"><li>1. Expand the Static label that contains the selection you wish to remove.</li><li>2. Select the static selection. <b>Result:</b> The Properties page for the static selection opens.</li></ol>  <ol style="list-style-type: none"><li>3. Click <b>Remove</b>. <b>Result:</b> A confirmation dialog box opens with the message <b>You are about to delete Static Item - &lt;infrastructure_item&gt;</b>.</li><li>4. Click <b>OK</b>. <b>Result:</b> The MyView Management Hierarchy is refreshed and a confirmation dialog box opens with the message <b>Static Item successfully deleted</b>.</li><li>5. Click <b>OK</b>. <b>Result:</b> The VitalQIP IP Management Software splash screen is displayed.</li></ol>

If you want to ...	Then ...
Delete a Dynamic Criteria selection	<p>1. Expand the Dynamic Criteria label that contains the item you wish to remove.</p> <p>2. Select the dynamic criteria selection.</p> <p><b>Result:</b> The Properties page for the selected dynamic criteria opens.</p>  <p>3. Click <b>Delete</b>.</p> <p><b>Result:</b> A confirmation dialog box opens with the message <b>You are about to delete Dynamic Criteria - &lt;criteria_items&gt;</b>.</p> <p>4. Click <b>OK</b>.</p> <p><b>Result:</b> The MyView Management Hierarchy is refreshed and a confirmation dialog box opens with the message <b>Dynamic Criteria successfully deleted</b>.</p> <p>5. Click <b>OK</b>.</p> <p><b>Result:</b> The VitalQIP IP Management Software splash screen is displayed.</p>

.....  
 END OF STEPS



# 4 Address allocation and management infrastructure

## Overview

---

### Purpose

This chapter describes how to use allocation rules, Internet Registries, and templates in VitalQIP.

### Contents

This chapter covers these topics.

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# Rules

## Rules overview

---

Rules allow you to automate the process of allocating blocks. Rules control how a pool obtains space from its parent and what to do with that space after it has been allocated. If a pool is running out of space, rules also determine how that pool obtains additional space.

Rules that create a block of Used address space allow subnets to be created. Such rules can have an address template associated with them which will define what objects can be created during a block allocation.

### **Administrator privileges**

Only a Master type administrator or a Normal type administrator with Organization access and Access Address Allocation and Maintain Rules privilege set to **True** is allowed to add, modify, or delete a rule.



## Site rules

---

### Overview

When you specify a Rule Type of `Site`, then any pool you create using this rule is a unique site. You can optionally specify address templates or subnet profile templates to be used for each range in your site.

When you create a Site rule, VitalQIP finds the specified Parent Pool and creates a new child pool with the Site parameters you specify. Any rule assigned to the site is associated with the new child pool. The rule is processed to retrieve a block of the requested size from the parent pool.

If the block allocation is successful, a network is created in VitalQIP with the same start address and size of the block.

VitalQIP looks at the subnet offsets and sizes you specify for the site. Beginning at the start address of the initial block, an explicit block allocation is performed against the initial block that was allocated for each of the subnet offsets you specify in the site parameters. The explicit block allocation also creates a subnet in VitalQIP corresponding to the block.

If any records in the site also have a subnet profile template or an object template associated with them, these templates are processed when the subnet is created. Blocks and pools are useful tools for managing IP address space. However, by themselves, they do not automate the process of provisioning.

VitalQIP addresses this problem by allowing an administrator to define rules for each pool. Rules govern how a pool obtains space from its parent and what to do with that space once allocated. This capability allows the administrators to automate allocations that are typical for their organization. Unusual allocations can then be managed by exception.



## To add a rule

---

### When to use

Use this procedure to add a rule.

### Procedure

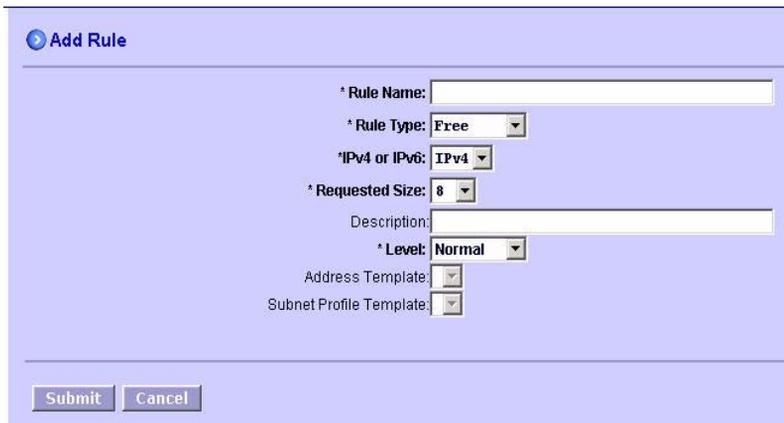
To add a rule, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Mouse over the **Actions** menu and select **Add Rule**.

**Result:** The Add Rule page opens.



- 3 Enter values for the fields, as described in the following table.

**Table 8** Add Rule fields

Field	Description
Rule Name	<i>Required.</i> Enter a unique name of up to 32 alphanumeric characters for the rule.

Field	Description
Rule Type	<p><b>Required.</b> This field defines the type of rule. Select one of the following values:</p> <p><b>Used</b> – triggers the RIR Reporting mechanism if the seed pool is associated with an Internet registry and the rule size is larger or equal to the minimum IPv4 or IPv6 block size for their respective rules. A Used Rule also allows the user to specify the following:</p> <ul style="list-style-type: none"> <li>• Which Subnet Templates to use for the subnet to be created</li> <li>• Which Address Templates to use for the IP objects to be created during the allocation process</li> </ul> <p><b>Reserved</b> – indicates that when a block is allocated using this rule, the block cannot be assigned to a pool until its status is changed.</p> <p><b>Free</b> – indicates that when a block is allocated using this rule, the block is available for assignment to a pool.</p> <p><b>Site</b> – suballocates the address block further to a specified pool. The subnets corresponding to these sub-blocks are then created in VitalQIP.</p>
IPv4 or IPv6	<p><b>Required.</b> Select the type of address pool to which this rule applies.</p>
Requested Size	<p><b>Required.</b> Determines the CIDR size of the block that is requested by this rule. Select from the available values of 8 through 32 for IPv4 or 9 through 128 for IPv6.</p>
Description	<p><b>Optional.</b> Text description of the rule’s function.</p>
Level	<p><b>Required.</b> Limits what rule is available to an administrator for block allocation. Administrators can only process rules that are at or below their specified level (defined in the VitalQIP Administrator Profile). Select one of the following:</p> <p><b>Normal</b> – administrators who have the ability to allocate blocks can process rules.</p> <p><b>Advanced</b> – rules can only be processed by Master, Organization, and Normal administrator with a rule level set to Advanced or Expert.</p> <p><b>Expert</b> – Master, Organization, and Normal administrators with a rule level set to Expert can process rules.</p>
Address Template	<p><b>Optional.</b> The name of an address template to be associated with the rule. Only <b>Used</b> rules can have address templates associated with them.</p>
Subnet Profile Template	<p><b>Optional.</b> Select the subnet profile template to be assigned to the rule. Only a <b>Used</b> rule can have a subnet profile template assigned to it.</p>

Field	Description
<b>Site Information</b>	The following fields only display if the Rule Type is set to <b>Site</b> .
Size	The CIDR size of the sub-block to be created. This field must be no larger than the total address block length.
Status	Select an option from the drop-down list. Allowable values are: <ul style="list-style-type: none"> <li>• Used</li> <li>• Reserved</li> </ul>
Address Template	The template to be used for creating IP objects in the subnet to be created.
Subnet Profile Template	The template for the creating the subnet profile of the subnet to be created.

- .....
- 4 For site rules only, value the fields for each site rule and click **Add**.

**Result:** The site rule is added to the site information at the bottom of the page. You can add multiple site rules as necessary. You must enter information for at least one site.

- .....
- 5 Click **Submit**.

**Result:** The rule is saved. You can see the rule by expanding the rule hierarchy on the left side of the screen. The new rule appears under its address type and its rule type.

.....

END OF STEPS



# To modify a rule

---

## When to use

Use this procedure to modify a rule.

## Procedure

To modify a rule, follow these steps.

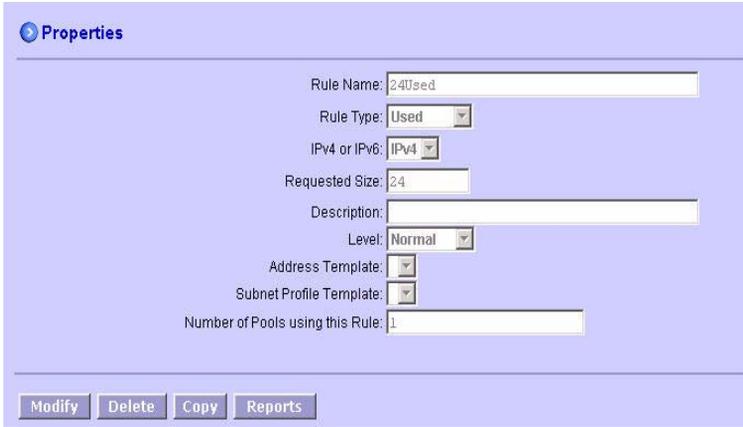
- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand **Allocation Rules** until you see the rule you want to modify.

- 3 Click a rule.

**Result:** The Rule Properties page opens.



The screenshot shows the 'Properties' page for a rule. The page has a light blue background and a title bar with a blue arrow icon and the word 'Properties'. The main content area contains several fields and dropdown menus:

- Rule Name: 24Used
- Rule Type: Used
- IPv4 or IPv6: IPv4
- Requested Size: 24
- Description: (empty text box)
- Level: Normal
- Address Template: (dropdown menu)
- Subnet Profile Template: (dropdown menu)
- Number of Pools using this Rule: 1

At the bottom of the page, there are four buttons: 'Modify', 'Delete', 'Copy', and 'Reports'.

- 4 Click **Modify**.

**Result:** The Modify Rule page opens.

Modify Rule

\* Rule Name: 24Used

\* Rule Type: Used

\* IPv4 or IPv6: IPv4

\* Requested Size: 24

Description:

\* Level: Normal

Address Template:

Subnet Profile Template:

Submit Cancel

- 5 Make any changes as needed. Refer to [Table 8, “Add Rule fields”](#), on page 71 for information on the fields and options.

- 6 Click **Submit**.

**Result:** The rule is modified.

END OF STEPS



# To copy a rule

---

## When to use

Use this procedure to copy a rule.

## Procedure

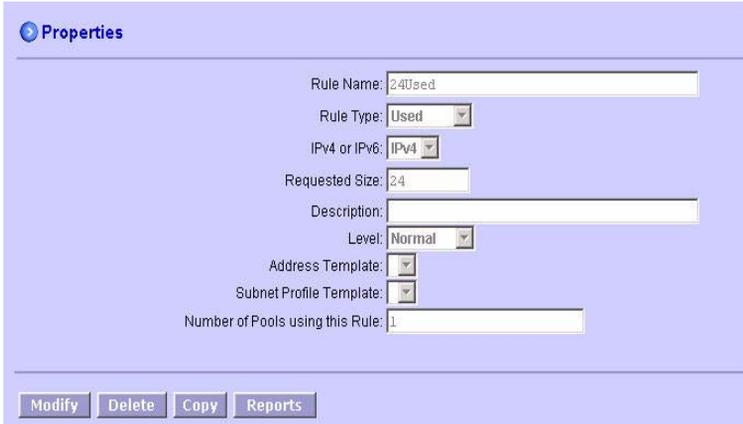
To copy a rule, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand the list of rules and click the rule you want to copy.

**Result:** The Rule Properties page opens.



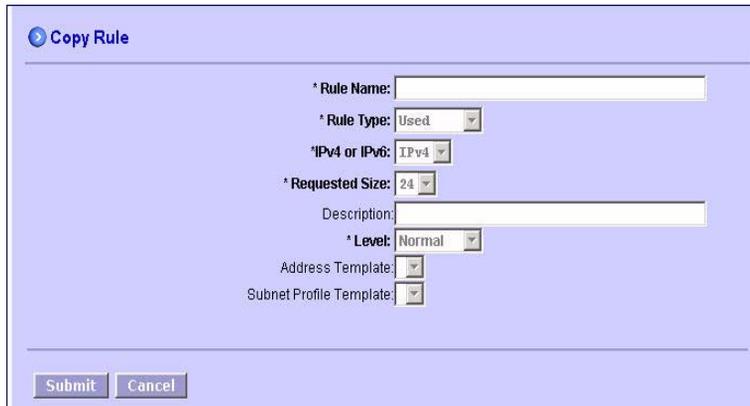
The screenshot shows the 'Properties' page for a rule. The page has a light blue background and a title bar with a blue arrow icon and the word 'Properties'. Below the title bar, there are several fields and dropdown menus:

- Rule Name: 24Used
- Rule Type: Used (dropdown)
- IPv4 or IPv6: IPv4 (dropdown)
- Requested Size: 24
- Description: (empty text field)
- Level: Normal (dropdown)
- Address Template: (dropdown)
- Subnet Profile Template: (dropdown)
- Number of Pools using this Rule: 1

At the bottom of the page, there are four buttons: 'Modify', 'Delete', 'Copy', and 'Reports'.

- 3 Click **Copy**.

**Result:** The Copy Rule page opens. All the fields in the screen contain the values from the original rule, except for the **Rule Name** field, which is blank.



- 
- 4 Enter a *unique* rule name in the **Rule Name** field. This is the name of the new rule you are creating. Make any other changes to the values on the screen.
- 
- 5 Click **Submit**.

**Result:** A new rule with the name and values you specified is created.

END OF STEPS

---



## To delete a rule

---

### When to use

Use this procedure to delete a rule.

### Before you begin

You can delete any rule that is not currently assigned to a pool. You must assign pools associated with the rule to a different rule first. Run one of the Pool reports to determine which pools are using the rule you want to delete.

### Procedure

To delete a rule, follow these steps.

- 
- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon .

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 
- 2 Expand the list of rules and click the one you want to delete.

**Result:** The Rule Properties page opens.

- 
- 3 Click **Delete**.

**Result:** A dialog box opens with the message **You are about to delete <rulename>. Are you sure you want to proceed?**

- 
- 4 Click **OK**.

**Result:** The rule is deleted and the a confirmation dialog box opens with the message **Rule Deleted**.

- 
- 5 Click **OK**.

**Result:** The rule that was deleted is removed from the infrastructure hierarchy.

END OF STEPS

---



# Internet Registries

## Regional Internet Registries

---

### Overview

These Regional Internet Registries (RIR) are supported in VitalQIP:

- ARIN
- APNIC
- RIPE
- AFRINIC

Regional Internet Registries such as ARIN, RIPE and APNIC require Local Internet Registries such as Internet Service Providers (ISPs) to register all the allocations and assignments of IP addresses that are greater than /29 for IPv4 or /48 for IPv6. Registration is made in the “WhoIs” database of the RIR. VitalQIP sends the required registration format for the various types of address assignments to the RIR using email. The registration is done after the necessary approvals are received from the RIR granting the usage of an address space.

The registration guidelines vary between the RIRs, especially between ARIN and other RIRs, for the IPv4 address assignments. In ARIN, the ISPs are expected to follow the Shared WhoIS Project (SWIP) reporting guidelines that are unlike the other RIRs. There is enough similarity in the reporting guidelines between RIPE and APNIC, especially since the APNIC WhoIs database is based on RIPVE v3 database software. For IPv6 addresses, the allocation and assignment policies (<http://www.iana.org/ipaddress/ipv6-allocation-policy-26jun02>) are uniform among all RIRs, but the registration procedures vary.



# To add a maintainer

---

## When to use

When you register a block of addresses, you must specify a maintainer. The maintainer is the person responsible for tracking which addresses in the block are used. You must specify a maintainer when obtaining addresses from an Internet registry. It is a requirement for all Internet registries.

## Before you begin

You must define at least one maintainer for each Internet Registry you use. You can specify the same person for multiple registries, or different ones for each.

## Procedure

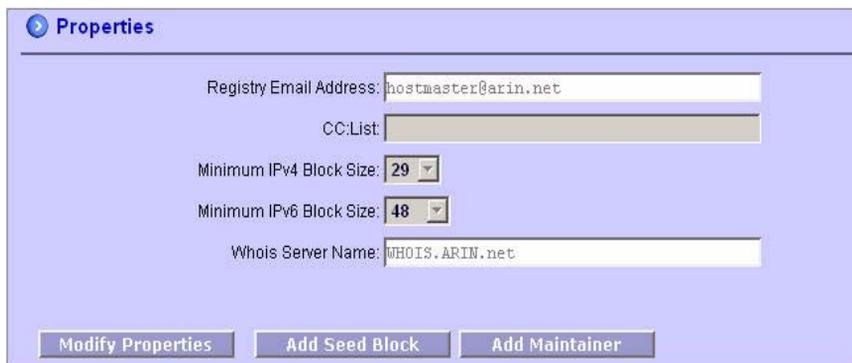
To add a maintainer, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon .

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand **Internet Registries** and then click on the registry to which you want to add a maintainer.

**Result:** The Internet Registry Properties page opens.



- 3 Click **Add Maintainer**.

**Result:** The Add Maintainers page opens.

- 4 Enter values in the fields on this page, as described in the following table.

**Table 9** Maintainer fields

Field	Description
Maintainer ID	<i>Required.</i> Enter the name or other identifier for the maintainer. Alphanumeric, up to 10-characters.
Email Address	<i>Required.</i> Enter the email address of the maintainer (up to 255 characters).
Prefix	<i>Optional.</i> Enter the prefix of the network name in the RIR report. Alphanumeric, up to 32 characters. For APNIC and RIPE, the first character must be alphabetic.
Description	<i>Optional.</i> Enter a text description for the maintainer, such as job responsibilities, or organizations the person manages. Alphanumeric, up to 256 characters.
Encryption Type	<i>Required for APNIC and RIPE.</i> Select one of the following from the drop-down list. <b>None</b> - RIPE only <b>Cryptic PW</b> – Encryption method used at RIPE and APNIC. <b>MD5-PW</b> – Encryption method used at RIPE and APNIC.
Password	<i>Required for APNIC, RIPE and AFRINIC.</i>

- 5 Click **Add** when you are finished.

**Result:** The maintainer is added to the VitalQIP database and a confirmation dialog box opens with the message **Maintainer saved!**

.....  
**6** Click **OK** to close the confirmation dialog box.

.....  
E N D O F S T E P S  
.....



## To modify a maintainer

---

### When to use

Use this procedure to modify a maintainer assigned to an Internet Registry.

### Procedure

To modify a maintainer, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand **Internet Registries** and then expand the registry where you want to modify a maintainer.

**Result:** A list of Maintainer IDs displays below the registry.

- 3 Select the **Maintainer ID** you want to modify and click **Modify**.

**Result:** The Manage Maintainers page opens.



**Manage Maintainers**

\*Maintainer ID:

\*Email Address:

Prefix:

Description:

- 4 Modify field values as needed. Refer to [Table 9, “Maintainer fields”](#), on page 81 for field descriptions.

.....  
5 Click **Submit** when you are finished.

**Result:** The maintainer is modified in the VitalQIP database and a confirmation dialog opens with the message **Maintainer saved!**

.....  
6 Click **OK** to close the dialog box.

.....  
E N D O F S T E P S  
.....



## To delete a maintainer

---

### When to use

Use this procedure to delete a maintainer assigned to an Internet Registry.

**Important!** You cannot delete a maintainer associated with a seed block.

### Procedure

To delete a maintainer, follow these steps.

- 
- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 
- 2 Expand **Internet Registries** and then expand the registry where you want to delete a maintainer.

**Result:** A list of Maintainer IDs displays below the registry.

- 
- 3 Click the Maintainer ID you want to delete.

**Result:** The Manage Maintainers page opens.

- 
- 4 Click **Delete**.

**Result:** A dialog box opens with the message **Delete the Maintainer?**

- 
- 5 Click **OK**.

**Result:** A confirmation dialog box opens with the message **Maintainer deleted!**

- 
- 6 Click **OK**.

**Result:** The dialog box closes and the IP Management splash screen opens.

END OF STEPS

---



# To modify Internet Registry properties

---

## When to use

Use this procedure to change your site's settings for each Internet Registry.

## Before you begin

Do not change the default settings supplied with VitalQIP unless you are doing internal testing.

## Procedure

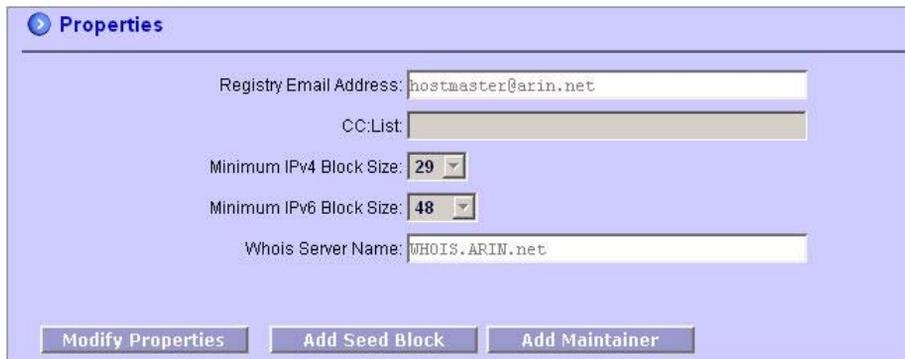
To modify Internet Registry Properties, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand **Internet Registries** and click on the Internet Registry you want to modify.

**Result:** The Internet Registry Properties page opens.



- 3 Click **Modify Properties**.

**Result:** The Modify Internet Registry Properties page opens.

- 4 Enter values in the fields, as described in the following table.

**Table 10 Internet Registry properties**

Field	Description
Registry Email Address	The email address where reports are sent. The initial default should not be changed except for testing purposes.
CC: List	Additional email addresses where reports are sent.
Minimum IPV4 Block Size	Minimum IPV4 Block Size used for reporting purposes (defaults to /29).
Minimum IPV6 Block Size	Minimum IPV6 Block Size used for reporting purposes (default to /48).
Whois Server Name	The default server name for for the Internet registry. This specifies what server to check for “WHOIS” database block information and this field is the FQDN of the Whois Server. The initial default should not be changed except for testing purposes.
Source	Source of data for the Internet Registry. Only displays for RIPE and APNIC.

- 5 Click **Submit** when you are finished.

**Result:** The Internet registry is modified in the VitalQIP database.

END OF STEPS



## Seed block maintenance

---

### Overview

Each Internet Registry allows you to add, modify and delete seed blocks associated with it. Refer to [“To associate seed blocks with a seed pool”](#), on page 151 for information on block maintenance.



# Templates

## Templates overview

---

VitalQIP allows users to configure address templates for use with allocation rules so objects can be automatically created when a block is allocated and when a subnet is consequently created in VitalQIP.

VitalQIP offers several templates to assist in the allocation process.

- An address template is offered that automatically creates objects when a block is created.
- A reverse zone template is offered that automatically configures a reverse zone when a network is created.
- A subnet profile template is offered that automatically configure subnet profile when a subnet is created in VitalQIP.

### Administrator privileges

Only a Master type administrator, or a Normal type administrator with Organization access and Access Address Allocation and Maintain Address Templates can add, modify, or delete Address Templates, Subnet Profile Templates, and Reverse Zone Templates.

### Static address templates

Static address templates can only contain static object definitions. For a static object definition, you must supply a **Start Offset**, an **End Offset**, and an **Object Class**. You cannot specify a DHCP server when you create a static address template.

### Dynamic address templates

Dynamic address templates are only available in the organization in which they are created. A dynamic address template can have both static and dynamic object definitions.

For a dynamic object definition, you must supply a **Start Offset**, an **End Offset**, an **Object Class**, and a **DHCP Server** to be associated with the dynamic scope when it is created. You can optionally supply a **DHCP Scope Policy Template** and/or a **User Class**.



## How address templates work

---

### Overview

Address templates are associated with rules. When a block is allocated using a rule with an address template associated with it, the address template is read to determine what objects can be created. An address template can only be associated with a Used rule type. This is the only rule type that creates VitalQIP subnets, and is therefore the only type that can use an address template.

The address template defines what objects can be created during a block allocation. You have the option of not creating all the objects and may enter a smaller number than the template allows. You cannot increase the number of objects to be created, however. During the allocation process, you are prompted to specify how many objects should be created for each object definition in the address template. The default value is to create all the objects listed in the **Number of Objects to be Created** fields.

For static objects, you are prompted to specify the name of the object. You do not have to enter a name. You can leave the <DEFAULT> value as the name of the object. This tells VitalQIP to use the VitalQIP naming policies when creating the object. For more on VitalQIP naming policies, refer to Chapter 3, “Object Policies and Profiles” of the *VitalQIP 7.1 User’s Guide*.



## To add an address template

---

### When to use

A managed range is a range of IP addresses in a subnet that is designated for a specific object class. When managed ranges are defined in an address template, they can be automatically assigned IP addresses during the block allocation process. Use this procedure to create an address template.

### Procedure

To add an address template, follow these steps.

---

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

---

- 2 Mouse over **Actions**, and select **Add Address Template**.

**Result:** The Add Address Template page opens.

**Add Address Template**

Address Template Name:

IPv4 or IPv6: **IPv4**

Description:

**New Managed Range:**

Address Type: **Dynamic**

Object Class: **Workstation**

Domain Name:  ...

DHCP Server: **doctest\_dhcp.example.com**

DHCP Option Template: **general**

DHCP Scope Policy Template:

Lease Time: **7776000**

User Class:

Vendor Class:

**Select Offset Option:**

Start Offset:  End Offset:

Start Offset:  Number of Objects:

Number of Objects Starting at Next Available Address:

**Add** **Modify** **Delete**

**Managed Range(s):**

Select	Start Offset	End Offset	Number of Objects	Address Type	Object Class	Domain Name	DHCP Server	DHCP Option Template	DHCP Scope Policy Template	Lease Time

3 Fill in the fields after reviewing the following table.

**Table 11 Address template information fields**

Field	Description
Address Template Name	<i>Required.</i> Enter up to 32 alphanumeric characters as the template's name.
Description	<i>Optional.</i> Enter up to 255 alphanumeric characters of descriptive information.

Field	Description
<b>New Managed Range</b>	
Address Type	<p><b>Required.</b> Establishes which object types are created. The values are:</p> <ul style="list-style-type: none"> <li>• <b>Static</b> – only static objects are created. This is the only value for IPv6 addresses.</li> <li>• <b>Dynamic</b> – only dynamic objects are created.</li> <li>• <b>Reserved</b> – only reserved objects are created.</li> </ul>
Object Class	<p><b>Required.</b> Determines how objects are assigned in a managed range. For a definition of the available object classes, refer to <a href="#">Table 12, “Object classes”, on page 93</a>.</p>
Domain Name	<p><b>Required.</b> Specifies the domain associated with the address template. Refer to <a href="#">“To search for a domain”, on page 97</a> for additional information about specifying a domain.</p>
Interface Name	<p><b>IPv6 only.</b> Enter up to 64 characters for the interface name (on each of the Nodes), with which the IP Address will be associated.</p>
The following fields only display if the Address Type is set to Dynamic:	
DHCP Server	<p><b>Required.</b> If the <b>Object Type</b> field is set to <b>Dynamic</b>. Select a DHCP server to be associated with the managed range.</p> <p><b>Important!</b> Normal Administrators must have access to the list of DHCP servers in their VitalQIP Administrator profile to select from this field.</p>
DHCP Option Template	<p><b>Required.</b> If the <b>Object Type</b> field is set to <b>Dynamic</b>, select a DHCP Option Template to be associated with the managed range.</p>
DHCP Scope Policy Template	<p><b>Optional.</b> If the <b>Object Type</b> field is set to <b>Dynamic</b>, you can select a DHCP Scope Policy Template to be associated with the managed range.</p>
Lease Time	<p><b>Optional.</b> If the <b>Object Type</b> field is set to <b>Dynamic</b>, you can enter the amount of time in seconds that the lease can exist for the objects in the managed range.</p>
User Class	<p><b>Optional.</b> If the <b>Object Type</b> field is set to <b>Dynamic</b>, you can select a user class to be associated with the managed range.</p>
Vendor Class	<p><b>Optional.</b> Select a vendor class to be associated with the managed range.</p>

**Table 12 Object classes**

Object class	Description
Workstation	General-purpose computer used by one person at a time and offers higher performance than normally found in a personal computer.

<b>Object class</b>	<b>Description</b>
X-terminal	Intelligent terminal, which operates as an X server directly connected to Ethernet.
PC	Personal computer.
Printer	Device that prints text or graphics on paper.
Server	Computer that provides a service(s) for other computers connected to it via a network.
Wiring_Hub	Hub at a point where a wiring system in a building or a room is connected to a main concentrator.
Router	Device in a network that handles message transfers between computers.
Bridge	Device that forwards traffic between network segments based on data link layer information.
Terminal_Server	Hardware device or server that provides terminals (PCs, printers, and so on) with a common connection point to a local or wide area network.
Switch	Packet or circuit switch.
Legacy_System	Database management system running on mainframes or minicomputers.
Gateway	Device that enables data to flow between different networks.
Test_Equipment	Equipment used for testing.
Undefined	Unknown devices.
Others	Something other than object types listed here.
External	Created by dynamic DNS updates from some product to a DNS server managed by VitalQIP.
Dynamic_Allocation	Dynamically allocated object.
Partially_Managed	<p>Allows an object to be managed by VitalQIP administrators and externally modified by Windows 2000/2003 administrators.</p> <p><b>Important!</b> For more information on External and Partially_Managed objects, refer to the “Support for External Objects and Resource Records” in Chapter 23, “Advanced DNS Configurations” in the <i>VitalQIP 7.1 Administrator Reference Manual</i>.</p>

## Managed Ranges

Use the following fields to define the managed ranges for the address template. You can define managed ranges in one of following ways:

- By Start Offset and End Offset
- By Start Offset and number of objects in the range
- By the number of objects in the offset, regardless of where it starts.

4 Select the radio button next to the method you want to use to define a managed range.

5 On the same line where you selected the radio button, enter values in the appropriate fields, as described in the following table.

**Table 13 Address template managed ranges**

Field	Description
Start Offset	Enter a number that establishes the start address in the subnet where the objects are created. This field, along with the <b>End Offset</b> field, establishes the range of objects to be created. Both the start and end offsets are referenced from the beginning of the subnet.
End Offset	Enter a number that establishes the end address in the subnet where objects are created. This field, along with the <b>Start Offset</b> field, establishes the range of objects to be created. Both the start and end offsets are referenced from the beginning of the subnet.
Number of Objects	Enter the number of objects contained in the managed range. If you use this field, the end offset of the range is calculated based on this number.
Number of Objects Starting at Next Available Address	Enter the number of objects starting at the next available address.

6 After you enter values for a managed range, click **Add**.

**Result:** The managed range is added to the **Managed Range(s)** list.

To remove an entry from the list, select the entry and click **Delete**.

7 To add additional ranges to the template, repeat [Step 4](#) through [Step 6](#).

8 Click **Submit** when you have finished.

**Result:** A confirmation dialog box opens with the message **Address Template Saved**.

.....  
9 Click **OK**.

**Result:** The address template appears in the hierarchy and the Address Template Properties page opens.

.....  
E N D O F S T E P S  
.....



## To search for a domain

---

### When to use

Use this procedure to search for a domain.

### Procedure

To search for the domain that is associated with a template, follow these steps.

---

- 1 Click the ellipsis button (⋮) that appears next to the **Domain** field.

**Result:** The Domain Search dialog box opens.



The screenshot shows a dialog box titled "Domain Search". At the top left is a blue arrow icon. Below it is a text input field labeled "Domain Name:" with a "Search" button to its right. Below the input field, it says "Search Results: (0 matches)". A large, empty list box occupies the center of the dialog. At the bottom, there are navigation arrows (left and right), a "Page Size: 20" dropdown menu, and "Select" and "Cancel" buttons.

- 2 In the **Domain Name** field, enter the first few letters of the domain name and the wildcard character (\*) as needed. If you leave this field blank, a list of *all* domains is returned.
- 3 Click **Search**.  
**Result:** The results appear in the **Search Results** list.
- 4 In the **Search Results** list, highlight a domain.

.....  
5 Click **Select**.

**Result:** The Domain Search dialog box closes and the domain you selected is added to the **Domain Name** field.

.....  
E N D O F S T E P S  
.....



## To modify an address template

---

### When to use

Use this procedure to modify an address template.

### Procedure

To modify an address template, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand the list of address templates until the one you want to modify is visible.

- 3 Click the address template you want to modify.

**Result:** The Address Template Properties page opens.



Address Template Properties

Template Name:

Description:

Number of Rules using this template:

Modify Delete

Copy Rule Associations

- 4 Click **Modify**.

**Result:** The Modify Address Template page opens.

**Modify Address Template**

\* Address Template Name:   
 Description:

**New Managed Range:**

\* Address Type:   
 \* Object Class:   
 Domain Name:   
 DHCP Server:   
 DHCP Option Template:   
 DHCP Scope Policy Template:   
 Lease Time:   
 User Class:   
 Vendor Class:

**Select Offset Option:**

Start Offset:  End Offset:   
 Start Offset:  Number of Objects:   
 Number of Objects Starting at Next Available address

**Managed Range(s):**

Select	Start Offset	End Offset	Number of Objects	Address Type	Object Class	Domain Name	DHCP Server	DHCP Option Template	DHCP Scope Policy Template	Lease Time	User Class	Vendor Class
<input type="checkbox"/>	1	1	1	Static	Router							
<input type="checkbox"/>			50	Static	Workstation							
<input type="checkbox"/>			1	Static	Printer							

5 Modify the template by changing the values in the appropriate fields. Refer to [Table 11, “Address template information fields”, on page 92](#) and [Table 13, “Address template managed ranges”, on page 95](#) for information on valuing these fields.

6 When you are done, click **Submit**.

**Result:** Your changes are saved and Subnet Template Saved dialog box opens.

7 Click **OK** to close the dialog box.

END OF STEPS



## To copy an address template

---

### When to use

Use this procedure to copy an address template.

### Procedure

To copy an address template, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand the list of address templates until the one you want to copy is visible.

- 3 Click the address template you want to copy.

**Result:** The Address Template Properties page opens.



Address Template Properties

Template Name:

Description:

Number of Rules using this template:

Modify Delete

Copy Rule Associations

- 4 Click **Copy**.

**Result:** The Copy Address Template page opens.

**Copy Address Template**

\* Address Template Name:

\* IPv4 or IPv6:

Description:

**New Managed Range:**

\* Address Type:

\* Object Class:

\* Domain Name:

DHCP Server:

DHCP Option Template:

DHCP Scope Policy Template:

Lease Time:

User Class:

Vendor Class:

**Select Offset Option:**

Start Offset:  End Offset:

Start Offset:  Number of Objects:

Number of Objects Starting at Next Available Address:

**Managed Range(s):**

Select	Start Offset	End Offset	Number of Objects	Address Type	Object Class	Domain Name	DHCP Server	DHCP Option Template	DHCP Scope Policy Template	Lease Time	User Class	Vendor Class
<input type="checkbox"/>			21	Dynamic	Workstation	lucent.com	vqalnx642.lucent.com	general		7776000		

5 Enter a *unique* name for the new address template. You cannot modify any other fields. After you copy the template, you can modify it if you want to make additional changes. Refer to “[To modify an address template](#)”, on page 99 for information on modifying a template.

6 Click **Submit** when you have finished.

END OF STEPS



## To associate an address template with a rule

---

### When to use

You can associate an address template with any “Used” allocation rule. You can make this association when you create or modify a rule, or when you create or modify an address template.

### Procedure

To associate an address template with a rule, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand the list of address templates until the one you want to associate with a rule is visible.

- 3 Click the address template you want to associate with a rule.

**Result:** The Address Template Properties page opens.



- 4 Click **Rule Associations**.

**Result:** The Associate Address Template to Rules page opens.

**Important!** This page lists all “Used” rules that are not associated with an address template as well as those rules that are large enough to handle the template size.

- 5 Select the rule or rules you want to associate with the address template by clicking the checkbox.

**Associate Address Template to Rules**

Template Name:

IPv4 or IPv6:

Existing Rules			Associated Rules		
Select	Rule Name	Requested Size	Select	Rule Name	Requested Size
<input type="checkbox"/>	24Used-Seg3	24	<input type="checkbox"/>	23Used-Seg3	23

- 6 Click **Add**. The rule moves to the Associated Rules column of the screen and is now associated with this address template.

To disassociate a rule from this address template, click the checkbox next to any rule (or rules) in the Associated Rules column and click **Delete**.

- 7 Click **Submit** to complete associating the address template with the rule.

END OF STEPS



## To delete an address template

---

### When to use

Use this procedure to delete an address template.

### Before you begin

You cannot delete an address template if it is attached to a rule. You need to run a Rule Summary report and note which rules are using the template. Modify each rule to use another template before you return to the Maintain Address Template function and delete the template. The rule must be modified and the address template removed before deleting the address template.

### Procedure

To delete an address template, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand the list of address templates until the one you want to delete is visible.
- 3 Click the address template you want to delete. The Address Template Properties page opens.



- 4 Click **Delete**. A dialog box opens with the message **You are about to delete address template 'nnnnnn'**. **Are you sure you want to proceed?**

.....  
5 Click **OK**.

**Result:** The address template is deleted and a confirmation dialog box opens with the message **Address Template Deleted**.

.....  
6 Click **OK**.

**Result:** The address template that was deleted is removed from the infrastructure hierarchy.

.....  
E N D O F S T E P S  
.....



## Reverse zone templates

---

### Overview

VitalQIP allows users to configure reverse zone templates that automatically configure a reverse zone when a network is created. The reverse zone template contains a list of primary and secondary DNS servers. When the reverse zone template is selected during the allocation process, all primary and secondary DNS servers assigned to the reverse zone template are assigned to the reverse zone.

### How reverse zone templates work

Reverse zone templates are associated with pools. When a block is allocated to a pool, VitalQIP traverses up the pool hierarchy to find the first pool with a reverse zone template. VitalQIP then uses the first pool with reverse zone template to configure reverse zones when a network is created.



## To add a reverse zone template

---

### When to use

Use this procedure to add a reverse zone template.

### Procedure

To add reverse zone template, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Mouse over the **Actions** menu and select **Add Reverse Zone Template**.

**Result:** The Add Reverse Zone Template page opens.



- 3 Fill in the fields after reviewing the following table.

**Table 14** Add reverse zone template fields

Field	Description
Template Name	<i>Required.</i> Enter the name of the reverse zone template.
Description	<i>Optional.</i> You can enter a description for the reverse zone template.

Field	Description
Primary DNS Server	<b>Required.</b> Select the primary DNS server to be assigned to the template.
Secondary DNS Server	<b>Optional.</b> Select the secondary DNS server to be assigned to the template.

4 Add and delete DNS servers to the template, as follows:

- To add a DNS server to the template, select a primary and/or secondary server and click **Add**. The DNS server appears in the **DNS Servers in Template** list.

- To delete DNS servers from the **DNS Servers in Template** list, select a DNS server by clicking the checkbox next to it and then click **Delete**. The DNS server is removed from the **DNS Servers in Template** list.

5 Repeat Step 3 as needed.

6 Click **Submit** when you are finished.

**Result:** The Reverse Zone Template Saved dialog box opens.

7 Click **OK** to close the dialog box.

**Result:** The template you added appears in the Infrastructure Hierarchy.

END OF STEPS



# To modify a reverse zone template

---

## When to use

Use this procedure to modify a reverse zone template.

## Procedure

To modify a reverse zone template, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand the list of reverse zone templates until the one you want to modify is visible.

- 3 Click the reverse zone template you want to modify.

**Result:** The Reverse Zone Template Properties page opens.



Reverse Zone Template Properties

Template Name:

Description:

Number of Pools using this template:

- 4 Click **Modify**.

**Result:** The Modify Reverse Zone Template page opens.

**Modify Reverse Zone Template**

\* Reverse Zone Template Name:

Description:

**DNS Servers In Template:**

**New DNS Servers**

Primary DNS Server:

Secondary DNS Server:

Select	Primary DNS Server	Secondary DNS Server
<input type="checkbox"/>	vqalnx642.lucent.com	

5 Make the necessary changes. Refer to [Table 14, “Add reverse zone template fields”, on page 108](#) [Add reverse zone template fields](#) for descriptions of the fields.

6 DNS servers can be added and deleted from the reverse zone template:

- To add a DNS server to the template, select a primary and/or secondary server and click **Add**. The DNS server appears in the **DNS Servers in Template** list.
- To delete DNS servers from the **DNS Servers in Template** list, select a DNS server by clicking the checkbox next to it and then click **Delete**. The DNS server is removed from the **DNS Servers in Template** list.

7 Click **Submit** when you are finished.

**Result:** The Reverse Zone Template Saved dialog box opens.

8 Click **OK** to close the dialog box.

END OF STEPS



## To copy a reverse zone template

---

### When to use

Use this procedure to copy a reverse zone template.

### Procedure

To copy a reverse zone template, follow these steps.

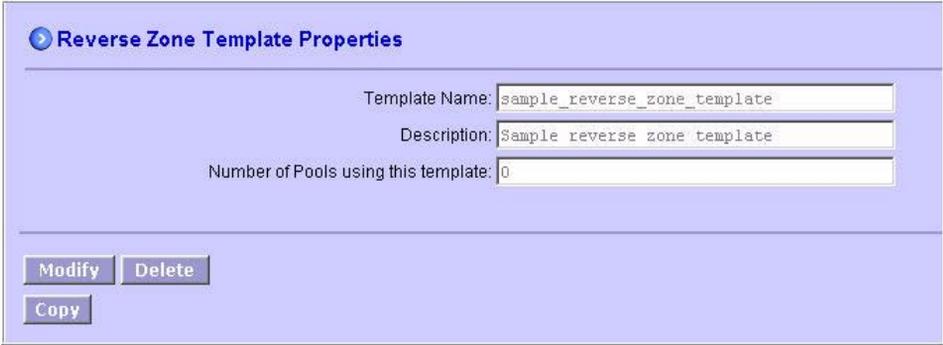
- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand the list of reverse zone templates until the one you want to copy is visible.

- 3 Click the reverse zone template you want to modify.

**Result:** The Reverse Zone Template Properties page opens.



Reverse Zone Template Properties

Template Name:

Description:

Number of Pools using this template:

- 4 Click **Copy**.

**Result:** The Copy Reverse Zone Template page opens.

- 5 Make the necessary changes. Refer to the following table for descriptions of the fields.

**Table 15 Copy Reverse Zone Template Fields**

Field	Description
Reverse ZoneTemplate Name	<i>Required.</i> Enter the name of the new reverse zone template.
Description	<i>Optional.</i> You can enter a description for the reverse zone template.
Primary DNS Server	<i>Required.</i> Select the primary DNS server to be assigned to the template.
Secondary DNS Server	<i>Optional.</i> Select the secondary DNS server to be assigned to the template.

- 6 DNS servers can be added and deleted from the reverse zone template:
- To add a DNS server to the template, select a primary and/or secondary server and click **Add**. The DNS server appears in the **DNS Servers in Template** list.
  - To delete DNS servers from the **DNS Servers in Template** list, select a DNS server by clicking the checkbox next to it and then click **Delete**. The DNS server is removed from the **DNS Servers in Template** list.

**Important!** If there is only one DNS server assigned to the reverse zone template, you cannot delete it until you assign an additional DNS server.

.....  
7 Click **Submit** when you are finished.

**Result:** The Reverse Zone Template Copied dialog box opens.

.....  
8 Click **OK** to close the dialog box.

.....  
E N D O F S T E P S  
.....



## To delete a reverse zone template

---

### When to use

Use this procedure to delete a reverse zone template.

### Before you begin

A reverse zone template cannot be deleted if it is associated with a pool.

### Procedure

To delete an object template, follow these steps.

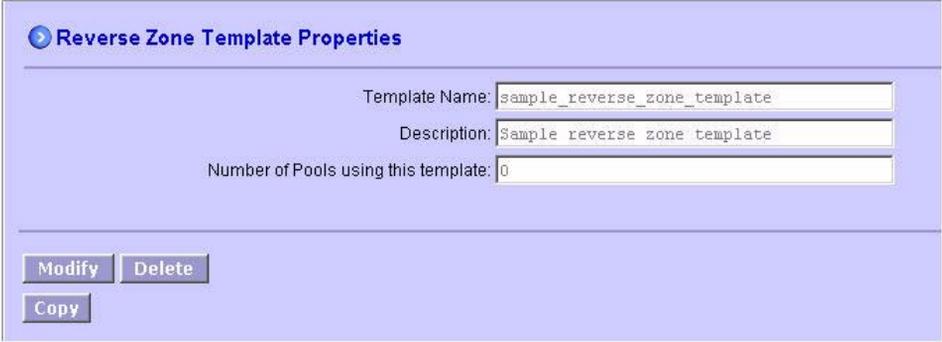
- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand the list of reverse zone templates until the one you want to delete is visible.

- 3 Click the reverse zone template you want to delete.

**Result:** The Reverse Zone Template Properties page opens.



**Reverse Zone Template Properties**

Template Name:

Description:

Number of Pools using this template:

- 4 Click **Delete**.

**Result:** A dialog box opens with the message **You are about to delete reverse zone template <templatename>. Are you sure you want to proceed?**

.....  
5 Click **OK**.

**Result:** The reverse zone template is deleted, and a confirmation dialog box opens with the message **Reverse Zone Template Deleted**.

.....  
6 Click **OK**.

**Result:** The reverse zone template that was deleted is removed from the infrastructure hierarchy.

.....  
E N D O F S T E P S  
.....



## Subnet profile templates

---

### Overview

VitalQIP allows users to configure subnet profile templates. A subnet profile template is used to configure a Subnet Profile in VitalQIP when VitalQIP creates a subnet.

### How subnet profile templates work

Subnet profile templates are associated with rules. When a rule with a subnet profile template associated with it is used during the allocation process, VitalQIP uses the subnet profile template to configure the Subnet Profile in VitalQIP.



## To add a subnet profile template

---

### When to use

Use this procedure to create a subnet profile template.

### Procedure

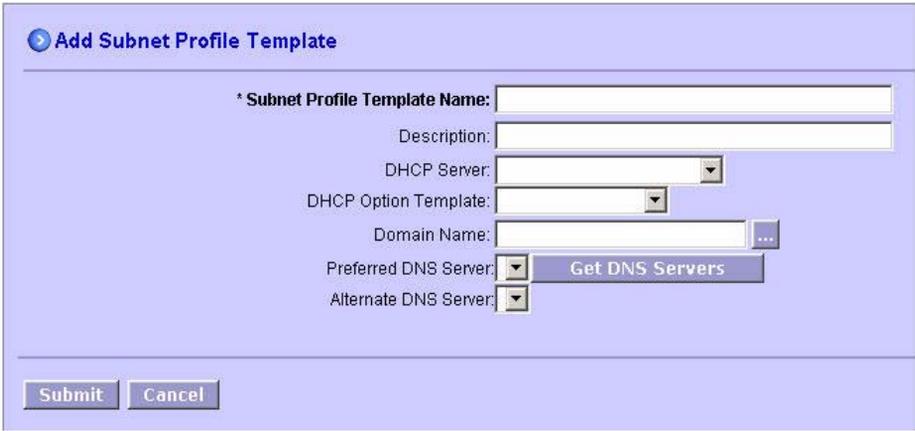
To add a subnet profile template, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Mouse over the **Actions** menu and select **Add Subnet Profile Template**.

**Result:** The Add Subnet Profile Template page opens.



- 3 Fill in the fields after reviewing the following table.

**Important!** Note that either the **DHCP Server** or **Domain Name** and **Primary DNS Server** fields must be populated.

**Table 16** Subnet Profile Template fields

Field	Description
Subnet Profile Name	<i>Required.</i> Enter the name of the subnet profile template.

Field	Description
Description	<i>Optional.</i> A description can be entered for the template.
DHCP Server	<i>Optional.</i> A DHCP server can be assigned to the template.
DHCP Template	<i>Optional.</i> A DHCP template can be assigned to the subnet profile template. Additional information on DHCP templates can be found in Chapter 2, “DHCP Policies and Profiles” of the <i>VitalQIP 7.1 User’s Guide</i> .
Domain Name	<i>Optional.</i> A domain can be added to the subnet profile template by searching for a domain. You must specify a domain if you are specifying preferred or alternate DNS servers. Refer to <a href="#">“To search for a domain”, on page 97</a> for additional information about specifying a domain.
Preferred DNS Server	<i>Optional.</i> A primary DNS server can be selected. This field and the <b>Alternate DNS Server</b> field can be refreshed with a DNS server list for a specific domain. To do so, ensure a domain is entered in the <b>Domain</b> field and click <b>Get DNS Server List</b> .
Alternate DNS Server	<i>Optional.</i> An alternate server can be selected.

- 
- 4 Click **Submit** when you are finished.

**Result:** A dialog box opens with the message **Subnet Profile Template Saved**.

- 
- 5 Click **OK** to close the dialog box.

**Result:** The subnet profile template appears in the Infrastructure Hierarchy.

END OF STEPS

---



## To modify a subnet profile template

---

### When to use

Use this procedure to modify a subnet profile template.

### Procedure

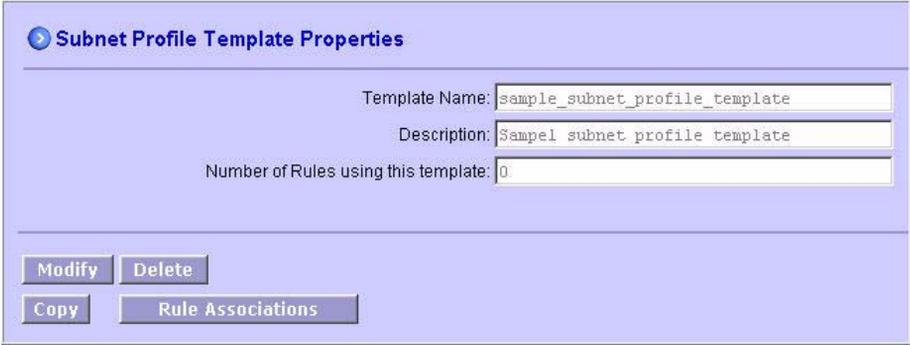
To modify a subnet profile template, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand the list of subnet profile templates until the one you want to modify is visible.

**Result:** The Subnet Profile Template Properties page opens.



The screenshot shows a dialog box titled "Subnet Profile Template Properties". It contains three text input fields: "Template Name" with the value "sample\_subnet\_profile\_template", "Description" with the value "Sampel subnet profile template", and "Number of Rules using this template:" with the value "0". Below the input fields are four buttons: "Modify", "Delete", "Copy", and "Rule Associations".

- 3 Click **Modify**.

**Result:** The Modify Subnet Profile Template page opens.

**Modify Subnet Profile Template**

\* Subnet Profile Template Name:

Description:

DHCP Server:

DHCP Option Template:

Domain Name:  ...

Preferred DNS Server:

Alternate DNS Server:

- 4 Make any changes to the subnet profile template. Refer to [Table 16, “Subnet Profile Template fields”](#), on page 118 for information about subnet profile template fields.

- 5 Click **Submit** when you are done.

**Result:** A dialog box opens with the message Subnet Profile Template Saved.

- 6 Click **OK** to close the dialog box.

END OF STEPS



## To copy a subnet profile template

---

### When to use

Use this procedure to copy a subnet profile template.

### Procedure

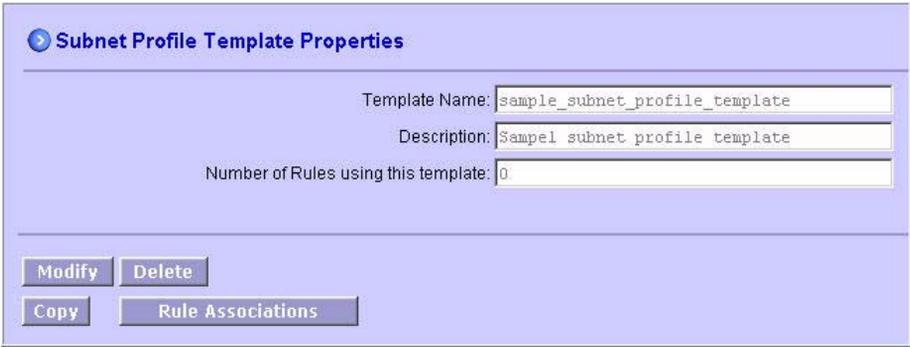
To copy a subnet profile template, follow these steps.

- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand the list of subnet profile templates and click the one you want to copy.

**Result:** The Subnet Profile Template Properties page opens.



Subnet Profile Template Properties

Template Name:

Description:

Number of Rules using this template:

Modify Delete

Copy Rule Associations

- 3 Click **Copy**.

**Result:** The Copy Subnet Profile Template page opens.

- .....
- 4 Make any changes to the subnet profile template. Refer to [Table 16, “Subnet Profile Template fields”](#), on page 118 for information about subnet profile template fields.

- .....
- 5 Click **Submit** when you are done.

**Result:** A dialog box opens with the message **Subnet Profile Template Copied**.

- .....
- 6 Click **OK** to close the dialog box.

.....

END OF STEPS

.....



## To associate a subnet profile template with a rule

---

### When to use

You can associate a subnet profile template with any “Used” allocation rule. You can make this association when you create or modify a rule, or when you create or modify an address template.

### Procedure

To associate a subnet profile template with a rule, follow these steps.

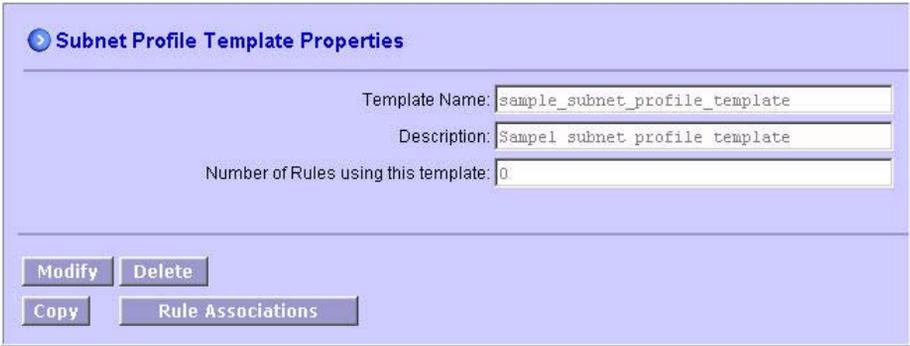
- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand the list of subnet profile templates until the one you want to associate with a rule is visible.

- 3 Click the subnet profile template you want to associate with a rule.

**Result:** The Subnet Profile Template Properties page opens.



Subnet Profile Template Properties

Template Name:

Description:

Number of Rules using this template:

- 4 Click **Rule Associations**.

**Result:** The Associate Subnet Profile Template to Rules page opens.

**Associate Subnet Profile Template to Rules**

Template Name:

IPv4 or IPv6:

Existing Rules			Associated Rules		
Select	Rule Name	Requested Size	Select	Rule Name	Requested Size
<input type="checkbox"/>	samplerule1	21			

The **Existing Rules** column lists all “Used” rules that are not associated with a subnet profile template.

- 5 Select the rule or rules you want to associate with the subnet profile template by clicking the appropriate checkbox.
- 6 Click **Add**. The rules you selected appear in the **Associated Rules** column.

**Associate Subnet Profile Template to Rules**

Template Name:

IPv4 or IPv6:

Existing Rules			Associated Rules		
Select	Rule Name	Requested Size	Select	Rule Name	Requested Size
<input type="checkbox"/>	samplerule1	21	<input type="checkbox"/>	samplerule1	21

To disassociate a subnet profile template from a rule, select the checkbox next to the rule name in the **Associated Rules** column, and click **Delete**.

**Result:** The rule appears in the **Existing Rules** column.

- 
- 7 Click **Save** when you are done.

**Result:** The rule associations are saved with the subnet profile template and a confirmation dialog box opens with the message **Successfully modified association of template to rules**.

- 
- 8 Click **OK** to close the dialog box.

END OF STEPS

---



## To delete a subnet profile template

---

### When to use

Use this procedure to delete a subnet profile template.

### Before you begin

If a subnet profile template is associated with a rule (via the Maintain Rule screen), the template cannot be deleted.

### Procedure

To delete a subnet profile template, follow these steps.

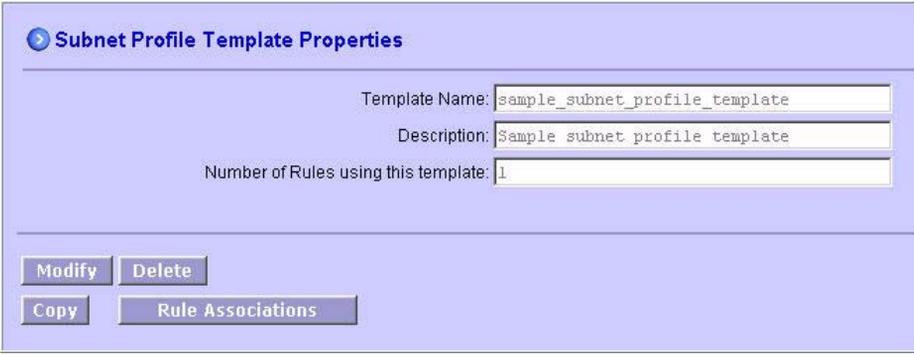
- 1 Mouse over the **Infrastructure** tab and click **Address Allocation and Infrastructure Management**. Alternatively, click the Address Allocation and Infrastructure Management icon ().

**Result:** The Address Allocation and Infrastructure Management Hierarchy opens.

- 2 Expand the list of subnet profile templates until the one you want to delete is visible.

- 3 Click the subnet profile template you want to delete.

**Result:** The Subnet Template Properties page opens.



**Subnet Profile Template Properties**

Template Name:

Description:

Number of Rules using this template:

- 4 Click **Delete**.

**Result:** A dialog box opens with the message **You are about to delete subnet profile template <templatename>. Are you sure you want to proceed?**

.....  
5 Click **OK**.

**Result:** A confirmation dialog box opens with the message **Subnet Profile Template Deleted**.

.....  
6 Click **OK**.

**Result:** The Subnet Profile Template that was deleted is removed from the infrastructure hierarchy.

.....  
E N D O F S T E P S  
.....



# 5 Job scheduler

## Overview

---

### Purpose

This chapter describes how to use the Job Scheduler.

### Contents

This chapter covers these topics.

<a href="#">Job scheduler overview</a>	130
<a href="#">To view scheduled jobs</a>	132
<a href="#">To search for another administrator's jobs</a>	140



## Job scheduler overview

---

### Overview

The Job Scheduler feature is designed to avoid the user having to wait an indeterminately long time for a request to complete, and to allow for jobs to be scheduled to run at a later time. All jobs are run as the VitalQIP Administrator who scheduled the job.

The Job Scheduler is supported in the following areas of the VitalQIP web client:

**Table 17 Job Scheduler support**

Menu	Function	Reference
IPv6 Address Management	Add V6 Subnets.	Refer to <a href="#">“To add subnets” (311)</a> and <a href="#">“To schedule subnet configuration” (314)</a> .
	Split V6 Subnets	Refer to <a href="#">“To split subnets” (320)</a> and <a href="#">“To schedule subnet configuration” (314)</a> .
	Block Renumbering	Refer to <a href="#">“To renumber a block” (207)</a> (Block Allocation), <a href="#">“To renumber subnets” (325)</a> (IPv6 Address Management), and <a href="#">“To schedule subnet configuration” (314)</a> .
Network Services	DNS Push (Web UI only)	Refer to <a href="#">“To generate DNS configuration and data files” (410)</a> .
Reports	All reports	Refer to descriptions of each report in Chapter 13 and <a href="#">“To schedule reports” (449)</a> .

Users have a choice of either running the job immediately (**In Foreground**), or scheduling the job to run in background (**In Background**) or at a later time (**Scheduled At**). In the latter two cases, the user must check back at a later time in the Job Scheduler to verify that the job has completed.

### Policy file configuration

#### Retain records

Scheduled job information is retained in the database, allowing future jobs to be preserved across server restarts. The results of past jobs are also retained to allow the user to see job status information and/or error conditions. The number of days to retain records is set by the `retentionDays` policy in the Job Scheduler section of the `qip.pcy` file.

**Concurrent jobs**

While multiple jobs can be run concurrently, users should take care not to run many simultaneous resource-intensive jobs. The exact number of supported concurrent jobs can be configured with the **jobThreads** policy in the Job Scheduler section of the *qip.pcy* file.



# To view scheduled jobs

---

## When to use

Use this procedure to check the status of scheduled jobs. You can specify various filter criteria to narrow the list of displayed jobs.

## Before you begin

Search results are restricted by the organization the user is logged into.

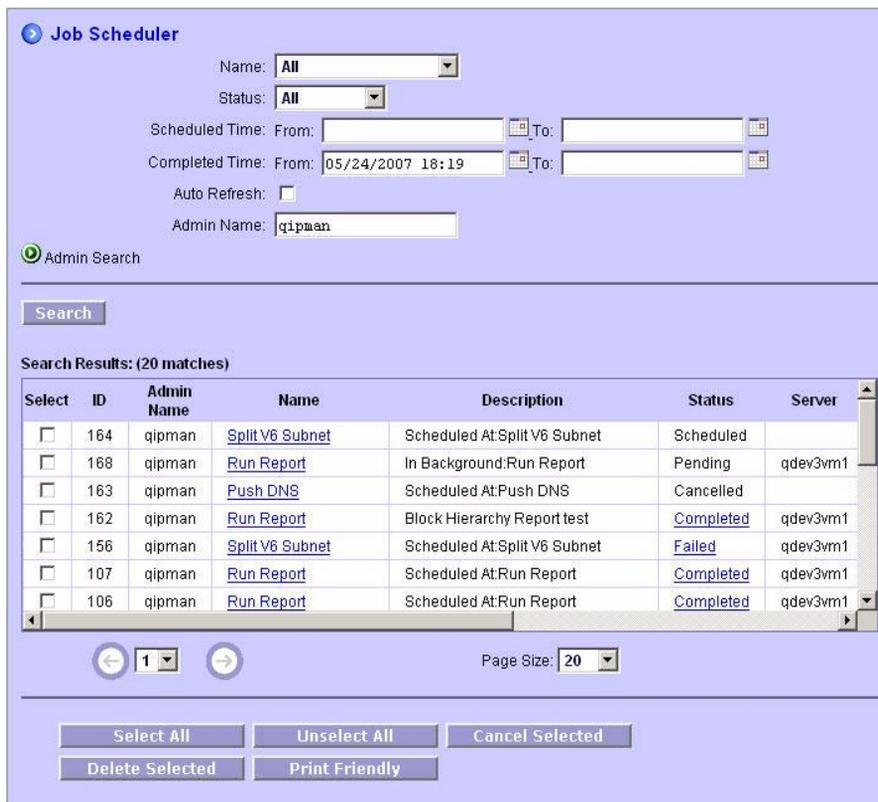
## Procedure

To check scheduled job status, follow these steps.

---

- 1 Mouse over the **Infrastructure** tab and click **Job Scheduler**. Alternatively, click the Job Scheduler icon (  ) in the toolbar.

**Result:** The Job Scheduler page opens. The job scheduler defaults to showing all jobs for the current user of all status types over the last two weeks.



The screenshot shows the 'Job Scheduler' web interface. At the top, there are filter controls: 'Name' set to 'All', 'Status' set to 'All', and 'Scheduled Time' and 'Completed Time' range selectors. The 'Admin Name' field contains 'qipman'. Below the filters is a 'Search' button and a 'Search Results: (20 matches)' section. A table displays the search results with columns for 'Select', 'ID', 'Admin Name', 'Name', 'Description', 'Status', and 'Server'. The table contains 7 rows of job entries. At the bottom of the interface, there are navigation buttons: 'Select All', 'Unselect All', 'Cancel Selected', 'Delete Selected', and 'Print Friendly', along with a 'Page Size' dropdown set to 20.

Select	ID	Admin Name	Name	Description	Status	Server
<input type="checkbox"/>	164	qipman	<a href="#">Split V6 Subnet</a>	Scheduled At:Split V6 Subnet	Scheduled	
<input type="checkbox"/>	168	qipman	<a href="#">Run Report</a>	In Background:Run Report	Pending	qdev3vm1
<input type="checkbox"/>	163	qipman	<a href="#">Push DNS</a>	Scheduled At:Push DNS	Cancelled	
<input type="checkbox"/>	162	qipman	<a href="#">Run Report</a>	Block Hierarchy Report test	<a href="#">Completed</a>	qdev3vm1
<input type="checkbox"/>	156	qipman	<a href="#">Split V6 Subnet</a>	Scheduled At:Split V6 Subnet	<a href="#">Failed</a>	qdev3vm1
<input type="checkbox"/>	107	qipman	<a href="#">Run Report</a>	Scheduled At:Run Report	<a href="#">Completed</a>	qdev3vm1
<input type="checkbox"/>	106	qipman	<a href="#">Run Report</a>	Scheduled At:Run Report	<a href="#">Completed</a>	qdev3vm1

**Important!** If no jobs are currently saved in the VitalQIP database for the current user, a dialog box opens with the message **The search returned no results**. Click **OK** to close it.

- 2 To refine your job list, refer to the following table as you modify field values.

**Table 18 Job Scheduler fields**

Field	Description
Name	Select a job category from the drop-down list of the following job types: <ul style="list-style-type: none"> <li>• <b>All</b></li> <li>• <b>Add V6 Subnets</b></li> <li>• <b>Push DNS</b></li> <li>• <b>Renumber V6 Subnet</b></li> <li>• <b>Split V6 Subnet</b></li> <li>• <b>Run Report</b></li> <li>• <b>Renumber Block</b></li> </ul> The default value is <b>All</b> .
Status	Select a status category from the drop-down list of status choices: <ul style="list-style-type: none"> <li>• <b>All</b></li> <li>• <b>Running</b></li> <li>• <b>Pending</b></li> <li>• <b>Scheduled</b></li> <li>• <b>Completed</b></li> <li>• <b>Failed</b></li> <li>• <b>Cancelled</b></li> </ul> The default value is <b>All</b> .

Field	Description
Scheduled Time: From	<p>Filters for jobs that were scheduled or were started after the specified time. To specify a date and time, follow these steps.</p> <ol style="list-style-type: none"> <li>1. Click the Calendar icon ().</li> </ol> <p><b>Result:</b> The Calendar widget opens with the current date and time.</p>  <ol style="list-style-type: none"> <li>2. Choose from the following actions. <ol style="list-style-type: none"> <li>a. To choose a different time, click in the hour and minute fields and enter a new time in 24-hour format.</li> <li>b. To choose a different month, choose a later month from the month drop-down list.</li> <li>c. To choose a different year, click  to enter a future year or  to return to a prior year.</li> <li>d. To choose a different day, click another day in the month.</li> </ol> </li> </ol> <p><b>Result:</b> After a different day is clicked, the calendar widget closes and a date and time are displayed.</p>
Scheduled Time: To	<p>Filters for jobs that were scheduled or were started before the specified time.</p> <p>To specify a date and time, click the Calendar icon () and follow the steps above.</p>
Completed Time: From	<p>Filters on jobs that have completed after the specified time, or do not filter if no time specified. Jobs that have not yet completed are not filtered. Defaults to two weeks before the current date.</p> <p>To specify a date and time, click the Calendar icon () and follow the steps above.</p>
Completed Time: To	<p>Specifies a filter for jobs that have completed before the specified date and time.</p> <p>To specify a date and time, click the Calendar icon () and follow the steps above.</p>
Auto Refresh	<p>Specifies whether the page should refresh automatically. If checked, the list of jobs automatically refreshes every 15 seconds. This is not configurable by the user.</p>

Field	Description
Admin Name	<p>Filters on which user's jobs are displayed. This field is disabled if the user is not a master or organization administrator, since normal administrators may only view their own jobs. The default value is the current user. This field also displays the results of an Admin Search. For more information, refer to <a href="#">“To search for another administrator's jobs”</a>, on page 140.</p> <ul style="list-style-type: none"> <li>To view all users' jobs, clear this field.</li> <li>To view a different user's jobs, you may also enter the user ID of the administrator rather than use the Admin Search function.</li> </ul>

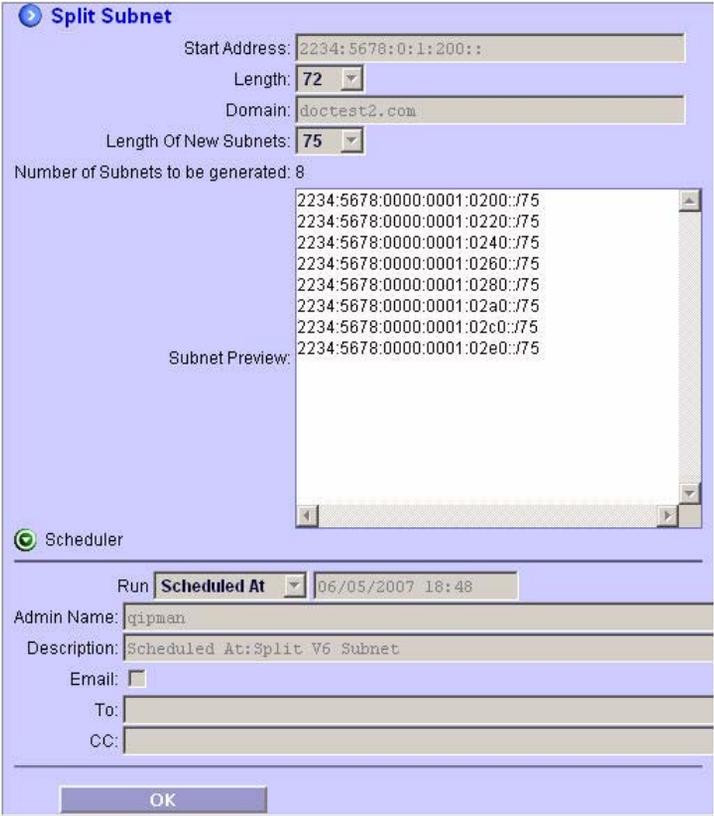
### 3 Click **Search**.

**Result:** If matches exist for your job search criteria, the **Search Results** list is refreshed. If no matches exist, a dialog box opens with the message **The search returned no results**. Click **OK** to close it.

The screenshot shows the Job Scheduler interface. At the top, there are search filters: Name (All), Status (Failed), Scheduled Time (From: , To: ), Completed Time (From: 05/24/2007 18:39, To: ), Auto Refresh (unchecked), and Admin Name (qipman). Below the filters is a Search button. The search results are displayed in a table with 6 matches. The table has columns for Select, ID, Admin Name, Name, Description, Status, and Server. Below the table is a pagination bar with a page size of 20 and buttons for navigation. At the bottom, there are buttons for Select All, Unselect All, Cancel Selected, Delete Selected, and Print Friendly.

Select	ID	Admin Name	Name	Description	Status	Server
<input type="checkbox"/>	168	qipman	<a href="#">Run Report</a>	In Background:Run Report	Failed	qdev3vm1
<input type="checkbox"/>	156	qipman	<a href="#">Split V6 Subnet</a>	Scheduled At:Split V6 Subnet	Failed	qdev3vm1
<input type="checkbox"/>	157	qipman	<a href="#">Renumber V6 Subnet</a>	In Background:Renumber V6 Sub...	Failed	qdev3vm1
<input type="checkbox"/>	154	qipman	<a href="#">Add V6 Subnets</a>	Scheduled At:Add V6 Subnets	Failed	qdev3vm1
<input type="checkbox"/>	153	qipman	<a href="#">Add V6 Subnets</a>	Scheduled At:Add V6 Subnets	Failed	qdev3vm1
<input type="checkbox"/>	152	qipman	<a href="#">Renumber V6 Subnet</a>	In Background:Renumber V6 Sub...	Failed	qdev3vm1

4 Choose from one of the following actions.

If you want to...	Then...
Review the job information	<p>1. Click the link in the Search Results <b>Name</b> column.</p> <p><b>Result:</b> A detailed job information page opens. All fields are read-only.</p>  <p>2. Click <b>OK</b>.</p> <p><b>Result:</b> The detailed job information page closes and the Job Scheduler page appears.</p>

If you want to...	Then...
Review a failed job	<p>1. Click the <b>Failed</b> link in the Search Results <b>Status</b> column.</p> <p><b>Result:</b> An error page opens.</p>  <p>2. Click <b>Details</b>.</p> <p><b>Result:</b> A stack trace of the error opens.</p> <p>3. Click <b>OK</b>.</p> <p><b>Result:</b> The error page closes and the Job Scheduler page appears.</p>
Review a completed subnet action or DNS push	<p>1. Locate the job you wish to review in the <b>Search Results</b> list. The <b>Name</b> entry should read <b>Add V6 Subnets, Renumber V6 Subnets, Split V6 Subnets</b>, or <b>Push DNS</b>.</p> <p>2. Click the <b>Completed</b> link in the <b>Status</b> column.</p> <p><b>Result:</b> A dialog box opens.</p>  <p>3. Click <b>OK</b>.</p> <p><b>Result:</b> The dialog box closes and the Job Scheduler page appears.</p>

If you want to...	Then...																																								
<p>Review a completed report</p>	<ol style="list-style-type: none"> <li>1. Locate the job you wish to review in the <b>Search Results</b> list. The <b>Name</b> entry should read <b>Run Report</b>.</li> <li>2. Click the <b>Completed</b> link in the <b>Status</b> column.</li> </ol> <p><b>Result:</b> The report opens in another browser window.</p> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;"><b>Administrator Audit Report</b></p> <hr/> <p><b>Date:</b> 05/07/2007 20:36  <b>User Name:</b> c3man  <b>Organization:</b> All Organizations  <b>Administrator:</b> c3man  <b>Entities Selected:</b> IPMS Subunit  <b>From Date:</b> 05/06/2007 20:35  <b>To Date:</b> 05/07/2007 20:35  <b>Sort Order:</b> Ascending</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Event Time</th> <th>Action</th> <th>User</th> <th>Entity Name</th> <th>Parameters (Name, Old Value -&gt; New Value)</th> </tr> </thead> <tbody> <tr> <td>05/07/2007 18:10</td> <td>Event</td> <td>ipman</td> <td>2031-4568-0 T-841227</td> <td></td> </tr> <tr> <td>05/07/2007 18:10</td> <td>Event</td> <td>ipman</td> <td>2031-4568-0 T-841227</td> <td></td> </tr> <tr> <td>05/07/2007 18:10</td> <td>Event</td> <td>ipman</td> <td>2031-4568-0 T-841227</td> <td></td> </tr> <tr> <td>05/07/2007 18:10</td> <td>Event</td> <td>ipman</td> <td>2031-4568-0 T-841228</td> <td></td> </tr> <tr> <td>05/07/2007 18:10</td> <td>Event</td> <td>ipman</td> <td>2031-4568-0 T-841228</td> <td></td> </tr> <tr> <td>05/07/2007 18:10</td> <td>Event</td> <td>ipman</td> <td>2031-4568-0 T-841228</td> <td></td> </tr> <tr> <td>05/07/2007 18:10</td> <td>Event</td> <td>ipman</td> <td>2031-4568-0 T-841228</td> <td></td> </tr> </tbody> </table> <p style="font-size: small;">There are 7 records in this report.</p> <p style="text-align: right; font-size: x-small;">Page 1 of 1</p> <p style="font-size: x-small;">05/07/2007 20:36</p> </div> <ol style="list-style-type: none"> <li>3. Review the report. For information on the content of specific reports, refer to the relevant section describing the report in <a href="#">Chapter 13, "Reports"</a>.</li> <li>4. Close the report window when you have finished working with it.</li> </ol> <p><b>Result:</b> The Job Scheduler opens.</p>	Event Time	Action	User	Entity Name	Parameters (Name, Old Value -> New Value)	05/07/2007 18:10	Event	ipman	2031-4568-0 T-841227		05/07/2007 18:10	Event	ipman	2031-4568-0 T-841227		05/07/2007 18:10	Event	ipman	2031-4568-0 T-841227		05/07/2007 18:10	Event	ipman	2031-4568-0 T-841228		05/07/2007 18:10	Event	ipman	2031-4568-0 T-841228		05/07/2007 18:10	Event	ipman	2031-4568-0 T-841228		05/07/2007 18:10	Event	ipman	2031-4568-0 T-841228	
Event Time	Action	User	Entity Name	Parameters (Name, Old Value -> New Value)																																					
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05/07/2007 18:10	Event	ipman	2031-4568-0 T-841228																																						
05/07/2007 18:10	Event	ipman	2031-4568-0 T-841228																																						
<p>Cancel scheduled job(s)</p>	<ol style="list-style-type: none"> <li>1. Place a check mark in the job(s) you wish to cancel.</li> <li>2. Click <b>Cancel Selected</b>.</li> </ol> <p><b>Result:</b> A dialog box opens with the message <b>Job(s) cancelled successfully</b>.</p> <p><b>Important!</b> You should only use the <b>Select All</b> button when the <b>Search Results</b> list contains <i>only</i> jobs with a status of Scheduled. Otherwise, an error message opens with the message <b>Could not cancel selected jobs!</b></p> <ol style="list-style-type: none"> <li>3. Click <b>OK</b>.</li> </ol> <p><b>Result:</b> The Job Scheduler opens.</p>																																								
<p>Delete job(s)</p>	<ol style="list-style-type: none"> <li>1. Place a check mark in the job(s) you wish to delete. You may use the <b>Select All</b> button to select every job in the list. Click <b>Unselect All</b> to deselect all checked jobs.</li> <li>2. Click <b>Delete Selected</b>.</li> </ol> <p><b>Result:</b> A dialog box opens with the message <b>Job(s) deleted successfully</b>.</p> <ol style="list-style-type: none"> <li>3. Click <b>OK</b>.</li> </ol> <p><b>Result:</b> The Job Scheduler opens.</p>																																								

If you want to...	Then...
Print the list of jobs	<ol style="list-style-type: none"> <li>1. Click <b>Print Friendly</b>.</li> </ol> <p><b>Result:</b> The Job Scheduler opens with all jobs displayed in an easily printable format.</p> <p>The view has the same content as the Job Scheduler page except that the information is read-only and is not paginated. A maximum of 1000 rows can be displayed.</p> <ol style="list-style-type: none"> <li>2. Print the list. Since there are many columns, you should choose to print in landscape format for best results.</li> <li>3. Click <b>OK</b>.</li> </ol> <p><b>Result:</b> The Job Scheduler opens.</p>

- 5 To close the Job Scheduler page, select another function from the VitalQIP web client menu.

.....  
 E N D O F S T E P S  
 .....



## To search for another administrator's jobs

---

### When to use

Use this procedure to search for scheduled jobs belonging to another administrator.

### Procedure

To search for another administrator's scheduled jobs, follow these steps.

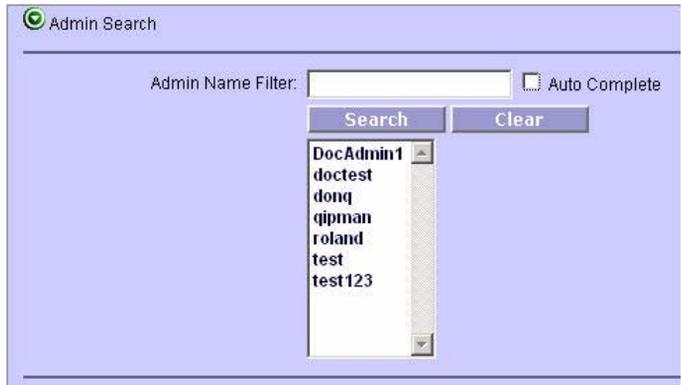
- 1 Mouse over the **Infrastructure** tab and click **Job Scheduler**. Alternatively, click the Job Scheduler icon (  ) in the toolbar.

**Result:** The Job Scheduler page opens. If there are no jobs scheduled, a dialog box opens with the message **The search returned no results**. Click **OK** to close it.

- 2 Enter job scheduler criteria as required in the **Job Scheduler** section. Refer to [Table 18, "Job Scheduler fields"](#), on page 133 for information on the fields.

- 3 Expand the **Admin Search** section.

**Result:** The **Admin Name Filter** field opens.



4 Choose one of the following actions.

If you want to ...	Then..
Filter administrator IDs <i>manually</i>	<ol style="list-style-type: none"> <li>1. Enter your search criteria in the <b>Admin Name Filter</b> field. You may use the wildcard character (*) as needed. To clear the <b>Admin Name Filter</b>, click <b>Clear</b>.</li> <li>2. Click <b>Search</b> (in the <b>Admin Search</b> section). <b>Result:</b> The results of your search criteria are displayed in the administrator ID list.</li> <li>3. Select the administrator whose job list you wish to view. <b>Result:</b> The administrator ID appears in the <b>Admin Name</b> field.</li> </ol>
Filter administrator IDs <i>automatically</i>	<ol style="list-style-type: none"> <li>1. Check the <b>Auto Complete</b> check box. <b>Result:</b> The <b>Search</b> button above the list of administrator IDs is grayed out.</li> <li>2. Enter your search criteria in the <b>Admin Name Filter</b> field. You may use the wildcard character (*) as needed. To clear the <b>Admin Name Filter</b>, click <b>Clear</b>. <b>Result:</b> The results of your search criteria are displayed in the administrator ID list as you enter text.</li> <li>3. Select the administrator whose job list you wish to view. <b>Result:</b> The administrator ID appears in the <b>Admin Name</b> field.</li> </ol>

5 Click **Search** (above the **Search Results** list).

**Result:** If matches exist for your job search criteria, the **Search Results** list is populated. If no matches exist, a dialog box opens with the message **The search returned no results**. Click **OK** to close it.

6 For information on other actions you may take, refer to step 4 in [“To view scheduled jobs”](#), on page 132.

END OF STEPS





# 6 Pool management

## Overview

---

### Purpose

VitalQIP uses pools to manage large areas of address space. This chapter contains information on designing a pool hierarchy, creating, pools, and managing pools. In addition, you can find information on using rules to manage the allocation process.

### Contents

This chapter covers these topics.

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## Pool hierarchy design

The first decision you must make is how to structure your pool hierarchy. Pools should mirror your organizational or administrative structure. To structure your pool hierarchy, follow these guidelines:

- Define at least one seed pool to represent the top level within the organizational hierarchy.
- Use mid-level pools that reflect how IP addresses are allocated by the involved organizations. For a large corporation, pools for regional or divisional allocation might be appropriate. For ISPs, pools for large customers or Service Types should be defined.
- Define the lowest level pools that reflect how the actual subnets are deployed. For a large company, a lowest level pool might be appropriate for a department, branch, or small campus. For an ISP, a lowest level pool might be appropriate for a small customer.



## Seed pools

---

### Overview

A seed pool is the top (or root) pool in the VitalQIP hierarchy. All address space that you manage with VitalQIP must be manually entered into a seed pool. Because a seed pool has no parent, it does not have a rule associated with it (since rules are designed to tell child pools how to request space from a parent pool).

The addresses within the seed pool can be internal or supplied by a regional Internet registry (such as ARIN, RIPE, APNIC and AFRINIC). If the address source is internal, it means that address space added to the seed pool is managed internally by the customer and no reporting to Internet registries occurs. If the address space is supplied by an Internet registry, VitalQIP sends reports to the Internet registry as the address space is allocated or freed.

### Administrator privileges

Only an administrator with a Master type administrator or a Normal type administrator with Organization Access and Maintain Seed Pool privilege set to **True** is allowed to add, modify, or delete a seed pool. You can define a seed pool without providing an initial block address in case you are designing your infrastructure while waiting for an address from an Internet registry. You can later enter a seed block with the Add Seed Block function.



# To add a seed pool

---

## When to use

Use this procedure to add a seed pool.

## Procedure

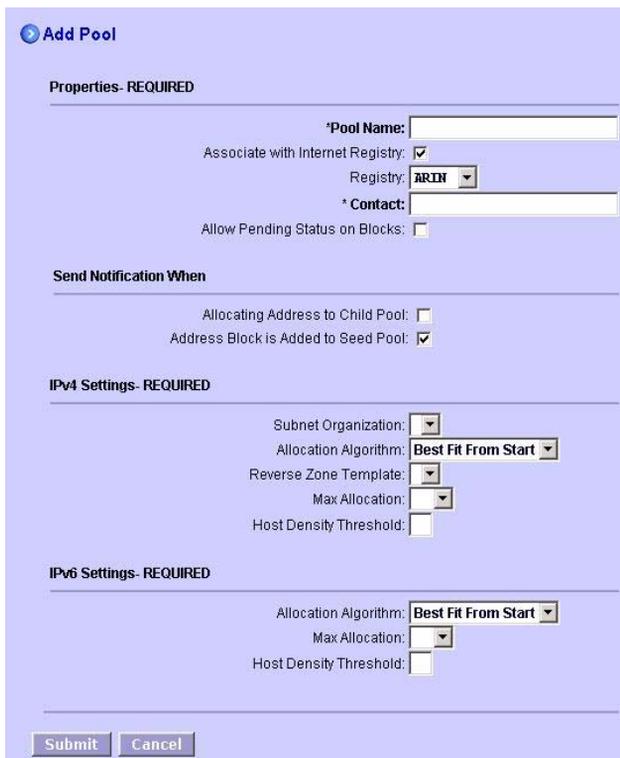
To add a seed pool, follow these steps.

- 1 Mouse over **Address Allocation** and click **Pool Hierarchy**. Alternatively, click the Pool Hierarchy icon ().

**Result:** The Pool Hierarchy opens.

- 2 Mouse over the **Actions** menu and select **Add Seed Pool**.

**Result:** The Add Pool page opens.



**Add Pool**

**Properties- REQUIRED**

\*Pool Name:

Associate with Internet Registry:

Registry:

\* Contact:

Allow Pending Status on Blocks:

**Send Notification When**

Allocating Address to Child Pool:

Address Block is Added to Seed Pool:

**IPv4 Settings- REQUIRED**

Subnet Organization:

Allocation Algorithm:

Reverse Zone Template:

Max Allocation:

Host Density Threshold:

**IPv6 Settings- REQUIRED**

Allocation Algorithm:

Max Allocation:

Host Density Threshold:

- 3 Review the following table and fill in the fields as necessary.

**Table 19** Add pool fields

Field	Description
<b>Properties</b>	
Pool Name	<b>Required.</b> Enter up to 64 alphanumeric characters to define the name of the pool. Seed pool names must be unique across the organization. Child pool names must be unique among its sibling pools.
Associate with Internet Registry	<b>Optional for seed pools only.</b> If this box is checked, the Registry field appears immediately below it. This field is not modifiable after the seed pool is created.
Registry	<b>Optional.</b> Select the Internet registry from the drop-down list from which this seed pool is obtaining addresses. The list contains the following values: <ul style="list-style-type: none"> <li>• <b>ARIN</b> (default)</li> <li>• <b>RIPE</b></li> <li>• <b>APNIC</b></li> <li>• <b>AFRINIC</b></li> </ul> This field is only available if the <b>Associate with Internet Registry</b> field is checked. This field is not modifiable after the pool is created.
Contact	<b>Required.</b> Enter the email address of the administrator who receives notifications about activity in the seed pool (for example, whenever blocks are allocated). Email messages are sent based on the <b>Send Notification When</b> checkboxes described below. Multiple email addresses are permitted, separated from each other by a semicolon (;).  <b>Important!</b> A default value may be set for this field using the <code>poolcontact</code> parameter in the <code>qip.properties</code> file. Refer to Chapter 3 of the <i>VitalQIP Administrator Reference Manual</i> for details on this parameter.
Request Address from Parent Pool	<b>Optional.</b> If checked, this pool requests additional addresses from the parent if it cannot meet a request from its child. Not applicable for seed pools.
Allow Pending Status on Blocks	<b>Optional.</b> Applicable for seed pools only. Not applicable if the pool is not associated with an Internet registry.
Change Pending Block to Free Status When	This field only displays if <b>Allow Pending Status on Blocks</b> is checked. If it is displayed, it is required. Allowable values are: <ul style="list-style-type: none"> <li>• Free After Days</li> <li>• Free after removal from Whois DB</li> <li>• Free After Days or After Removal from Whois DB</li> <li>• Free After Days and After Removal from Whois DB</li> </ul>

Field	Description
Change Pending Block to Free Status After	Required if <b>Change Pending Block to Free Status When</b> contains a value that requires you to specify a number of days. Select a value from 1 to 30 from the drop-down list.
<b>Send notification when</b>	
Allocating Address to Child Pool	<i>Optional.</i> Check this box if you want the contact person to receive email when this pool allocates an address to a child pool.
Address Block is Added to Seed Pool	<i>Optional.</i> Check this box if you want the contact person to receive email when an address block is added to a seed pool.
Requesting Address from Parent Pool	<i>Optional.</i> Check this box if you want the contact person to receive email when an address request is made to the parent pool from this pool. Not applicable for seed pools.
<b>IPV4/IPV6 settings</b>	
Subnet Organization	<i>Optional.</i> Available for IPv4 pools only. Associates the pool with a subnet organization. You can select an existing subnet organization from the drop-down list, which contains the available subnet organizations in VitalQIP.
Allocation Algorithm	<p>This field cannot be modified after the pool has been created. Select one of the following from the drop-down list:</p> <ul style="list-style-type: none"> <li>• <b>Best Fit from Start</b> - Allocate the smallest block possible using the block closest to the parent block's starting address.</li> <li>• <b>Best Fit from End</b> - Allocate the smallest block possible using block closest to the parent block's ending address.</li> <li>• <b>Sparse Allocation</b> - Allocate the block using left bit manipulation. The requested block size must be larger or equal to the minimum sparse allocation size defined in parent pool.</li> </ul> <p>The user cannot modify this field if the allocation algorithm for this seed pool is sparse allocation.</p>
Sparse Allocation:Minimum Size	<i>Required if Sparse Allocation is selected for this pool. Optional otherwise.</i> Minimum Block size, applicable only if the Allocation Algorithm selected is <b>Sparse Allocation</b> . For IPv4, select a value from 8 to 32 from the drop-down list. For IPv6, select a value from 8 to 64 from the drop-down list.
Allocation Rule	<i>Optional for child pools.</i> Not available for seed pools. Select an Allocation Rule from the drop-down list. Rules are unique to your enterprise. Only IPv4 or IPv6 rules display depending on the address type of this pool.

Field	Description
Reverse Zone Template	<i>Optional.</i> Available for IPv4 pools only. Select the template for creating the reverse zone when a Network/Subnet is created (specifies primary and secondary DNS servers). Select the reverse zone template to be assigned to the seed pool.
Max Allocation	<i>Optional.</i> Allocation requests from the child pools cannot exceed this size.
Host Density Threshold	<i>Optional.</i> When the Host Density (HD) ratio reaches this ratio, the user will be notified. HD is calculated as follows: HD = log (number of allocated objects) / log (maximum number of allocatable objects)

4 Click **Submit**.

**Result:** A dialog box opens with the message **Pool saved**.

5 Click **OK**.

**Result:** The seed pool appears in the Pool Hierarchy and a dialog box opens with the message **Do you want to add Seed Block to this Pool-<poolname>?**

6 Choose one of the following actions.

If you want to ...	Then ...
Add a seed block to the seed pool	Click <b>OK</b> . The Add Seed Block page opens. For information on adding a seed block, refer to <a href="#">“To associate seed blocks with a seed pool”</a> , on page 151.
Add a seed block at some other time	Click <b>Cancel</b> . The Pool Properties page for the Seed Pool you just added opens.

END OF STEPS



## Seed blocks

---

### Overview

After you successfully add a seed pool, VitalQIP prompts you to add a seed block. Seed blocks are the blocks of address space that are manually added to a seed pool. A seed block can only be added to a seed pool. It initially has a status of Free. Seed blocks can be added when a seed pool is created, or by using the **Add Seed Block** function in the Maintain Seed Pool screen.

Some address blocks may already be created in the system as part of the Internet Registry setup. If that is the case, a list displays of “available” address blocks (not associated with an address pool) within the Internet Registry that are not associated with the pool. You can choose one of the available address blocks to add to the pool, or create a new address block. If there are no available address blocks, the Add Seed Block page opens.



## To associate seed blocks with a seed pool

---

Use the following procedure to associate seed blocks that were added in the Internet Registry Properties page without being assigned to a seed pool.

### Before you begin

The only differences between a seed block and a regular block are:

- Seed blocks are manually added to VitalQIP.
- When you delete a Free seed block or delete a seed pool with a Free seed block, the seed block is removed from the database. The regular blocks cannot be added to a pool - they must be allocated using the “allocate block” function.

### Procedure

If unassociated seed blocks already exist in the database when you decide to add blocks to a seed pool, the Associate Seed Blocks with Pool page opens. This occurs under the following circumstances:

- After you create a seed pool and click OK in response to the message **Do you want to add Seed Block to this Pool-<poolname>?**
- After you click **Add Seed Block** in the Pool Properties page.

**Associate Seed Blocks with Pool**

Address Pool:

Registry:

**Available Seed Block List**

Select	Address Type	Start Address	Length	Maintainer
<input type="checkbox"/>	IPv4	14.0.20.0	24	cliff-arin-001
<input type="checkbox"/>	IPv4	14.0.21.0	24	cliff-arin-001
<input type="checkbox"/>	IPv4	14.0.22.0	24	cliff-arin-001

Associate Selected Blocks to Pool    Add New Block    Cancel

To associate an available seed block with a seed pool, follow these steps.

---

- 1 Click the **Select** checkbox next to each block you want to add to the seed pool.

---

2 Click **Associate Selected Blocks to Pool**.

**Result:** The blocks are added to the seed pool and appear in the Pool Hierarchy.

**Important!** If you decide that you would rather add a seed block that does not exist to the selected seed pool, click **Add New Block**. The Add Block page opens. Refer to [“To add a seed block to a pool”](#), on page 153.

END OF STEPS

---



## To add a seed block to a pool

---

### When to use

Use this procedure to add a seed block to a seed pool.

### Before you begin

The only differences between a seed block and a regular block are:

- Seed blocks are manually added to VitalQIP.
- When you delete a Free seed block or delete a seed pool with a Free seed block, the seed block is removed from the database. The regular blocks cannot be added to a pool - they must be allocated using the “allocate block” function.

### Procedure

To add a seed block to a seed pool, follow these steps.

---

- 1 Mouse over **Address Allocation** and click **Pool Hierarchy**. Alternatively, click the Pool Hierarchy icon ().

**Result:** The Pool Hierarchy opens.

---

- 2 Expand the list of seed pools and select the seed pool to which you want to add a block.

**Result:** The Pool Properties page opens.

---

- 3 Click **Add Seed Block**.

**Result:** If there are associated seed blocks, the Associate Seed Blocks with Pool page opens. Refer to [“To associate seed blocks with a seed pool”, on page 151](#). If there are no unassociated seed blocks, the Add Seed Block page opens.

**Add Seed Block**

**Block Information**

'Address Type: IPv4

'Start Address: [Empty]

'Length: 8

'Address Pool: NEWDOCS

'Maintainer: admin1\_ARIN

Host Density Threshold: [Empty] %

**SWIP Report Type**

ARIN-Reallocate:

ARIN-Reassign-Detailed:

ARIN-Reassign-Simple:

Do Not Generate Report:

**User Defined Attributes**

[Empty]

Submit Cancel

4 Review [Table 26, “Block allocation fields”, on page 192](#), and fill in the **Block Information** section fields.

5 Click **Submit**.

**Result:** A dialog box opens with the message **Seed block added -<blockname>**.

6 Click **OK**.

**Result:** The seed block appears in the Pool Hierarchy.

END OF STEPS



## To modify a pool

---

### When to use

Use this procedure to modify a pool.

### Procedure

To modify a pool, follow these steps.

- 1 Mouse over **Address Allocation** and click **Pool Hierarchy**. Alternatively, click the Pool Hierarchy icon (.

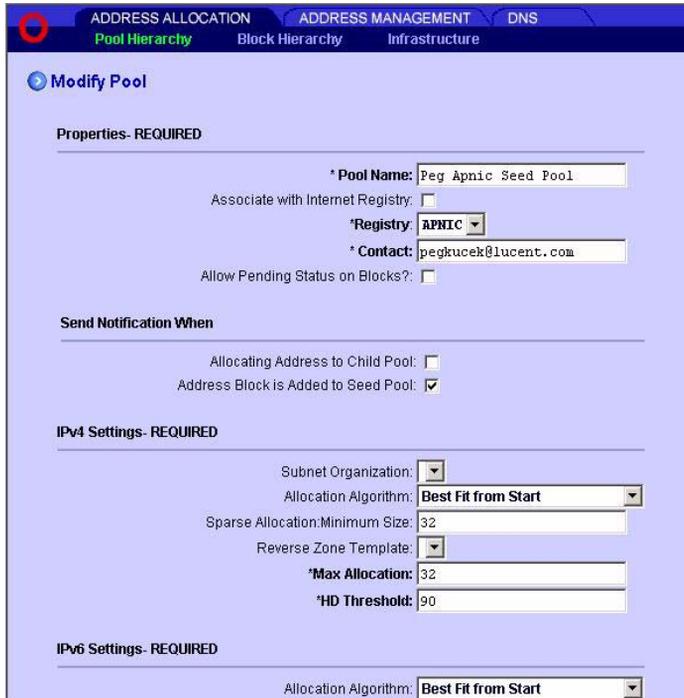
**Result:** The Pool Hierarchy opens.

- 2 Expand the list of pools and select the pool you want to modify.

**Result:** The Pool Properties page opens.

- 3 Click **Modify Pool**.

**Result:** The Modify Pool page opens.



ADDRESS ALLOCATION ADDRESS MANAGEMENT DNS

Pool Hierarchy Block Hierarchy Infrastructure

Modify Pool

Properties- REQUIRED

\* Pool Name: Peg Apnic Seed Pool

Associate with Internet Registry:

\* Registry: APNIC

\* Contact: pegkucek@lucent.com

Allow Pending Status on Blocks?:

Send Notification When

Allocating Address to Child Pool:

Address Block is Added to Seed Pool:

IPv4 Settings- REQUIRED

Subnet Organization:

Allocation Algorithm: Best Fit from Start

Sparse Allocation: Minimum Size: 32

Reverse Zone Template:

\* Max Allocation: 32

\* HD Threshold: 90

IPv6 Settings- REQUIRED

Allocation Algorithm: Best Fit from Start

Make any changes to the pool's properties. Refer to [Table 19, "Add pool fields"](#), on page 147 for descriptions of these fields.

**Important!** Not all fields are modifiable for all types of pools. The user can change the **Allocation Algorithm** from **Best fit from start** to **Best fit from end** and vice versa. However, the user cannot to modify the allocation algorithm if it is set to **Sparse allocation**.

---

4 Click **Submit**.

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E N D O F S T E P S  
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## To delete a pool

---

### When to use

Use this procedure to delete a pool.

### Before you begin

If you delete blocks that were originally reported to ARIN without sending any SWIP reports, remember that later you will have to send SWIP reports manually to ARIN to have the WHOIS database updated.

### Procedure

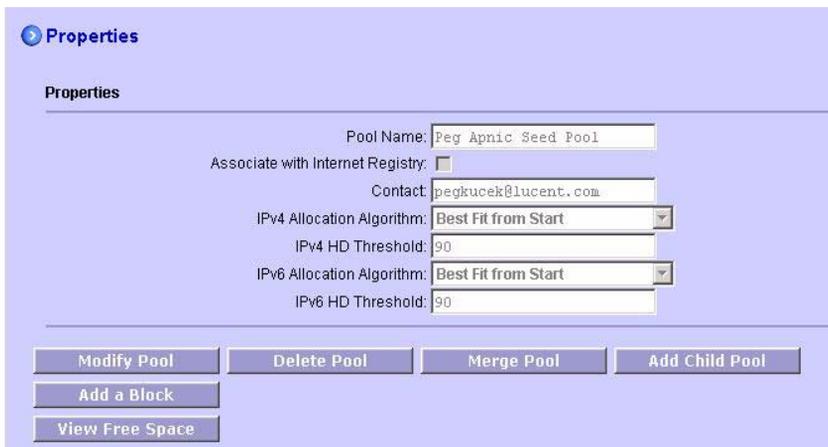
To delete a pool, follow these steps.

- 1 Mouse over **Address Allocation** and click **Pool Hierarchy**. Alternatively, click the Pool Hierarchy icon (.

**Result:** The Pool Hierarchy opens.

- 2 Expand the list of pools and click the one you want to delete.

**Result:** The Properties page for that pool opens.



- 3 Click **Delete**.

**Result:** A dialog box opens with the message **Are you sure you want to delete <poolname> pool?**

.....  
4 Click **OK**.

**Result:** If there are no child pools, the pool is deleted.

**Important!** Deleting a pool removes the pool and all children of the pool. You can only delete a pool if all blocks under the pool (anywhere in the hierarchy) have a status of Free.

.....  
E N D O F S T E P S  
.....



# Pools

---

## Overview

VitalQIP groups address blocks together into “buckets” known as pools. Pools conform to a tree structure, starting at the root pool, known as the seed pool. Pools are created below the seed pools and can be layered as deep as you need them. Typically, pool hierarchies are from three to six layers. Address blocks are added to pools either by performing a block allocation (or explicit allocation) against the pool or by performing an allocation against a pool below the pool in the pool hierarchy.

## Administrator privileges

A Master administrator can perform any operation for pools and blocks. A Normal administrator with Organization Access and Access Address Allocation privilege set to True, can do various operations as shown in the following table:

**Table 20 Administrator privileges for pools**

If value is True	Then the administrator has this capability
Maintain Address Template	Add/modify/delete address template
Maintain Blocks	<p>Allocate a block, explicit allocation and all block management actions</p> <p>If Maintain Blocks is set to True, the following sub-privileges can be set for each administrator:</p> <ul style="list-style-type: none"> <li>• <b>Allocate Block</b> (default is true) <ul style="list-style-type: none"> <li>• <b>Run Level - Normal</b> (default) Allocate blocks using Normal level of rules</li> <li>• <b>Run Level - Advanced</b> Allocate blocks using both Advanced and Normal level of rules</li> <li>• <b>Run Level - Expert</b> Allocate blocks using all level of rules</li> </ul> </li> <li>• <b>Expand Blocks</b> (default is true)</li> <li>• <b>Explicitly Create Blocks</b> (default is true)</li> <li>• <b>Free Blocks</b> (default is true)</li> <li>• <b>Move Blocks</b> (default is true)</li> <li>• <b>Renumber Blocks</b> (default is true)</li> <li>• <b>Split/Merge Block</b> (default is true)</li> </ul>
Maintain Pools	Add/modify/delete child pools
Maintain Reverse Zone Template	Add/modify/delete/copy reverse zone templates
Maintain Rules	Add/modify/delete/copy rules
Maintain Seed Pool	Add/modify/delete seed pools and seed blocks
Maintain Subnet Profile Template	Add/modify/delete/copy subnet profile templates

<b>If value is True</b>	<b>Then the administrator has this capability</b>
Rule Override	Use different rule (other than the one assigned in the child pool) to allocate a block
Write new infrastructure to managed list	Create new infrastructure including networks and subnets. Only for IPv4 blocks.



## To add a child pool

---

### When to use

Use this procedure to add a child pool.

### Procedure

To add a child pool to a seed pool, use the following steps:

- 
- 1 Mouse over **Address Allocation** and click **Pool Hierarchy**. Alternatively, click the Pool Hierarchy icon ().

**Result:** The Pool Hierarchy opens.

- 
- 2 Select the seed pool to which you are adding the child pool.

- 
- 3 Click **Add Child Pool**.

**Result:** The Add Pool page opens.

**Add Pool**

Parent Pool: tes5t

**Properties- REQUIRED**

\*Pool Name:

\* Contact:

Request Address from Parent Pool:

**Send Notification When**

Requesting Address from Parent Pool:

Allocating Address to Child Pool:

**IPv4 Settings- REQUIRED**

Subnet Organization:

Allocation Algorithm: **Best Fit From Start**

Allocation Rule:

Inherit Reverse Zone Template from Parent Pool:

Max Allocation:

Host Density Threshold:

**IPv6 Settings- REQUIRED**

Allocation Algorithm: **Best Fit From Start**

Allocation Rule:

Max Allocation:

Host Density Threshold:

4 Refer to [Table 19, “Add pool fields”](#), on page 147 as you fill in the values of the fields.

5 Click **Submit** to save your changes.

END OF STEPS



## To quickly allocate a child pool

---

### When to use

This procedure allows you quickly allocate an address block and optionally add a child pool.

### Procedure

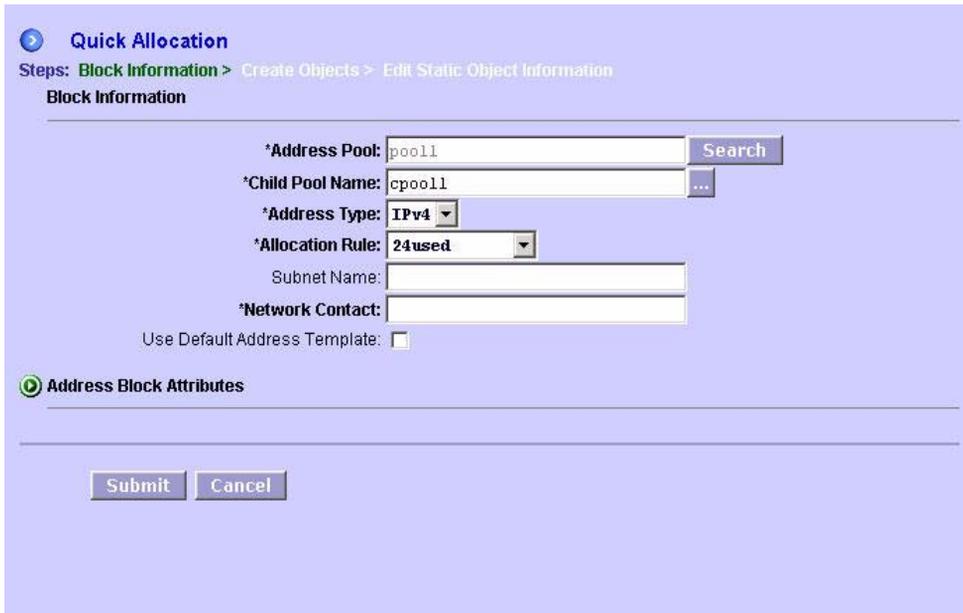
To quickly allocate blocks, use the following steps:

- 1 Mouse over **Address Allocation** and click **Pool Hierarchy**. Alternatively, click the Pool Hierarchy icon ().

**Result:** The Pool Hierarchy opens.

- 2 From the **Actions** menu, select **Quick Allocation**.

**Result:** The Quick Allocation page opens:



- 3 Review the following table and fill in the Quick Allocate fields:

**Important!** Not all fields display on this screen depending on the type of block you are allocating.

**Table 21 Quick allocate fields**

<b>Field</b>	<b>Description</b>
Address Pool	<p><b>Required.</b> Contains the name of the address pool to which this block is being allocated.</p> <ul style="list-style-type: none"> <li>• If a pool's properties page is displayed when you select <b>Quick Allocation</b>, this field is valued with the pool name and is not modifiable.</li> <li>• If no pool's property page is displayed you select <b>Quick Allocation</b>, this field is blank. You must click the <b>Search</b> button to search for and select a pool.</li> </ul>
Child Pool Name	<p><b>Required.</b> Select an existing child pool under this parent by clicking the ... button, or type in a pool name. If the pool does not exist, it will be created.</p>
Pool Contact	<p><b>Required.</b> If you use the search feature to select an existing child pool, this field is automatically populated with the pool contact and is not displayed. If you enter a new pool name, you must enter a valid pool contact in this field.</p> <p><b>Important!</b> A default value may be set for this field using the <code>pool contact</code> parameter in the <code>qip.properties</code> file. Refer to Chapter 3 of the <i>VitalQIP Administrator Reference Manual</i> for details on this parameter.</p>
Address Type	<p><b>Required.</b> Select a value from the drop-down list. Allowable values are as follows:</p> <ul style="list-style-type: none"> <li>• IPv4 (default)</li> <li>• IPv6</li> </ul>
Allocation Rule	<p><b>Required.</b> Select an allocation rule from the drop-down list.</p>
Subnet Name	<p><b>Optional.</b> If the allocation rule is <i>Used</i>, this field displays. It allows you to assign a name to the subnet in VitalQIP.</p>
Network Contact	<p><b>Required for IPv4 addresses only.</b> If the allocation rule is <i>Used</i>, this field displays. You must enter a valid network contact</p>
Use Default Address Template	<p><b>Optional</b> if the allocation rule is <i>Used</i> and the rule has been associated with an address template, this checkbox displays. If this box is checked, (default), the address template creates infrastructure using the default addresses and names. If the box is unchecked, you are prompted to view and optionally edit the infrastructure to be created.</p>

---

**4 Click **Submit**.**

**Result:** Results vary depending on the options you have selected.

- If you have allocated a block with a Used status an address template, and you unchecked the **Use Default Address Template** checkbox, you are prompted to confirm the block's infrastructure. Refer to [“Templates”, on page 89](#) for information about setting up a block's infrastructure.
- If you have allocated a block using any other combination values, you see a dialog box telling you the allocation was successful the number of objects created, if you used a rule, and what the associated address template is.

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E N D O F S T E P S



# To allocate a block to a child pool using its allocation rule

---

## When to use

Each child pool has an allocation rule associated with it when it is created. This rule determines the default settings for the size of each block allocated to it as well as other attributes. Use this procedure to allocate a block to a child pool using its allocation rule.

## Procedure

To allocate a block to a child pool using its default allocation rule, follow these steps.

- 1 Mouse over **Address Allocation** and click **Pool Hierarchy**. Alternatively, click the Pool Hierarchy icon (  ).

**Result:** The Pool Hierarchy opens.

- 2 Select the child pool to which you want to allocate a block.

- 3 Click **Allocate a Block**.

**Result:** The Allocate Block to Existing Pool page opens.



- 4 Review the following table and fill in the Allocate Block to Existing Pool fields:

**Table 22 Allocate block to existing pool fields**

Field	Description
Address Pool	<i>Read only.</i> Contains the name of the address pool to which this block is being allocated.
Address Type	<i>Read only.</i> Contains the type of IP addresses in this block. Allowable values are either IPv4 or IPv6.
Allocation Rule	<i>Required.</i> Select the allocation rule you want to use for this block. The default allocation rule initially appears selected in the drop-down list.
Subnet Name	<i>Optional.</i> Enter the name of the subnet to which you are allocating this block.
Network Contact	<i>Required for IPv4 blocks. Unavailable for IPv6 blocks.</i> Enter the network contact's email address for the block you are allocating.

---

5 Click **Submit**.

**Result:** The block is allocated.

The allocated block has properties based on the type of rule you used. For all blocks, the block size is the same size specified in the allocation rule.

**Used rule**

- The block status is Used.
- RIR reporting GUI displays if allocation size is larger than or equal to the minimum block size (IPv4 or IPv6) defined in Internet Registry properties.

**Free rule**

- Block status is Free.

**Reserved rule**

- Block status is Reserved

**Site rule**

- Main block size is the same size specified in the allocation rule
- Main block status is Origin
- Sub-blocks' size and status (Used or Reserved) are the same as defined in the site information of the site rule.

.....  
 E N D O F S T E P S



## To allocate a block explicitly

---

### When to use

Use explicit block allocation when you want to allocate a block of a specific size with a specific start address. When you allocate a block explicitly, you do not specify an allocation rule.

- You can optionally allocate a block explicitly to a child pool. Child pools always have an allocation rule associated with them, but explicit allocation allows you to specify a start address or size that differs from the rule.
- For IPv4 blocks, you have the option to enter other attributes such as subnet creation option, subnet name, address template, and subnet profile template.

### Procedure

Follow these steps to explicitly allocate a block:

- 
- 1 Mouse over **Address Allocation** and click **Pool Hierarchy**. Alternatively, click the Pool Hierarchy icon ().

**Result:** The Pool Hierarchy opens.

- 
- 2 Select the child pool to which you want to allocate a block.

- 
- 3 Click **Explicit Allocation**.

**Result:** The Explicitly Allocate Block page opens.

**Explicitly Allocate Block**

Steps: **Block And Pool Information** >

**Block And Pool Information**

'Address Pool: RECOVERMYCHILD

'Address Type: IPv4

'Block Status: Used

'Start Address:

'Length: 8

'Subnet Creation Option: Create New if Necessary

Address Template:

Subnet Name:

Subnet Profile Template:

'Network Contact:

Use Rule Size:

**User Defined Attributes**

Submit Cancel

- 4 Review the following table and enter values in the fields as appropriate.

**Table 23 Explicitly allocate block fields**

Field	Description
Address Pool	<i>Read only.</i> Contains the name of the address pool to which this block is being allocated.
Address Type	<i>Read only.</i> Contains the type of IP addresses in this block. Allowable values are either IPv4 or IPv6.
Block Status	<i>Required.</i> Status of the Blocks. Allowable values are: <ul style="list-style-type: none"> <li>• <b>Allocated</b></li> <li>• <b>Used</b></li> <li>• <b>Free</b></li> <li>• <b>Reserved</b></li> <li>• <b>Site</b></li> </ul>
Start Address	<i>Required.</i> Enter a valid IP address in either IPv4 or IPv6 format as specified in the Address Type field.
Length	<i>Required.</i> Select a length from the drop-down list. For IPv4, select a value from 8 to 32. For IPv6, select a value from 9 to 128.

Field	Description
Subnet Creation Option	<p><b>Required only if the Block status is Used.</b> This option determines how the block is associated with the existing/new subnet in VitalQIP. Select a value from the drop-down list. Allowable values are:</p> <ul style="list-style-type: none"> <li>• <b>Create New</b> – Attempt to create a subnet at the address and size of the block. If the subnet already exists, the process fails. If the subnet is created, all post allocation processing will be performed.</li> <li>• <b>Link to existing</b> – Requires that a subnet exist in VitalQIP at the address and size of the allocated block. If such a subnet does not exist, the process fails. If the subnet is found, the block is associated with this subnet. Since the subnet already exists, VitalQIP does not perform other post allocation processing on the subnet (for example, the Address Template is not processed, the domain is ignored, and so on).</li> <li>• <b>Create New if necessary</b> – Check if a VitalQIP subnet exists, and if it does, links the block with the subnet. If the subnet does not exist, VitalQIP creates it and performs all post allocation processing.</li> <li>• <b>Do not Create or Link</b> – Subnets are not created or linked to in the Address Management module. VitalQIP attempts the creation of individual objects or IP Addresses in Address Management in either of these cases.</li> </ul>
Address Template	<b>Optional.</b> Select an address template from the drop-down list. Valid for Used status only.
Subnet Name	<b>Optional.</b> If you are creating a new subnet, you can enter the name in this field.
Subnet Profile Template	<b>Optional.</b> Select a subnet profile template from the drop-down list. Valid for Used status only.
Network Contact	<b>Required only for IPv4 Used blocks.</b> Enter the e-mail address of the network administrator responsible for this block.
Use Rule Size	<b>Optional.</b> If this field is selected, then the default rule size for the pool is used when the Pools make address requests to their parent pools.

---

5 Click **Submit**.

**Result:** The block is allocated.

END OF STEPS

---



## To search for a pool or a block

---

### When to use

Use this procedure to search for a specific pool or block.

### Before you begin

Always try to limit the search criteria whenever possible. Searching for all pools in a large database could take a long time to return results.

### Procedure

To find the location of a specific pool, follow these steps.

- 1 From either the Pool Hierarchy or the Block Hierarchy, mouse over the **Actions** menu and select **Search**. You can search pools only, or you can search both pools and blocks.

**Result:** The Search Criteria page opens.

**Search Criteria**

**Address Pool**

Address Pool:

**Address Block**

Address Type:

Length:

Address Block:

Block Status:  Origin  Used  
 Free  Pending  
 Allocated  Reserved

**Address Pool Attributes**

Number Of Attributes:

Attribute Group	Attribute Name	Attribute Value
<NONE>	Org Number	<input type="text"/>

**Address Block Attributes**

Number Of Attributes:

Attribute Group	Attribute Name	Attribute Value
<NONE>	<input type="text"/>	<input type="text"/>

**Search Results**

Page Size:

2 Enter search criteria as needed. The Search fields are described in the following table.

**Table 24 Search fields**

Field	Description
Address Pool	<b>Required.</b> Enter the name of the pool for which you are searching. This field is case-sensitive. You can enter a partial name by using the asterisk (*) as a wildcard, or you can search all pools by entering only an asterisk.
Address Type	<b>Optional.</b> You can select IPv4 or IPv6 from the drop-down list. If you do not select either, then all address types are shown.
Length	<b>Optional.</b> Select a length from the drop-down list. For IPv4, allowable values are 8 to 32. For IPv6, allowable values are 9 to 128.
Address Block	<b>Optional.</b> Enter the IP address of the address block for which you are searching. You can enter a partial address by using the asterisk (*) as a wildcard.
Block Status	<b>Optional.</b> Click a checkbox to limit your search to only blocks with that status. If no block statuses are checked, the search looks for all blocks.
<b>Address pool attributes</b>	
Number of Attributes	<b>Optional.</b> Select the number of address pool attributes to include in the search. If you select 0, then the following two fields do not display.
Attribute Group	<b>Required if visible.</b> If specified, the search is limited to this pool attribute group. You can specify any attribute groups currently associated with the Pool or one of two pre-defined entries: <ul style="list-style-type: none"> <li>• <b>&lt;NONE&gt;</b> – Select this entry to exclude Pool Attribute Group from this search criteria row.</li> <li>• <b>&lt;IGNORE&gt;</b> – Select this entry if, for this search criteria row, you do not care if a UDA is in a group or not.</li> <li>• <b>&lt;ANY&gt;</b> – Select this entry to include all Pool Attribute Group(s) in this search criteria row.</li> </ul>
Attribute Name	<b>Required if visible.</b> If specified, the search is limited to this pool attribute value. Values in this column are based on the value in the <b>Attribute Group</b> column. The available values are: <ul style="list-style-type: none"> <li>• All Attributes that do not attach to any Attribute Group, plus the pre-defined entry <b>&lt;ALL&gt;</b> – if Attribute Group is set to <b>&lt;NONE&gt;</b>.</li> <li>• All Attributes of Pool, plus the pre-defined entry <b>&lt;ALL&gt;</b> – if Attribute Group is set to <b>&lt;IGNORE&gt;</b>.</li> <li>• All Attributes attached to the specified Attribute Group, plus the pre-defined entry <b>&lt;ALL&gt;</b> – if an Attribute Group is selected.</li> <li>• All Attributes attached to at least one Attribute Group, plus the pre-defined entry <b>&lt;ALL&gt;</b> – if Attribute Group is set to <b>&lt;ANY&gt;</b>.</li> </ul>

Field	Description
Attribute Value	Full or partial name (with wildcard) of the attribute. To search for an attribute with a null value, enter two double quotes (“”).
<b>Address block attributes</b>	
Number of Attributes	<i>Optional.</i> Select the number of address block attributes to include in the search. If you select 0, the following two fields do not display.
Attribute Group	<i>Required if visible.</i> If specified, the search is limited to this block attribute group. You can specify any attribute group(s) currently associated with the block or one of two pre-defined entries: <ul style="list-style-type: none"> <li>• <b>&lt;NONE&gt;</b> – Select this entry to exclude Block Attribute Group from this search criteria row.</li> <li>• <b>&lt;IGNORE&gt;</b> – Select this entry if, for this search criteria row, you do not care if a UDA is in a group or not.</li> <li>• <b>&lt;ANY&gt;</b> – Select this entry to include all Block Attribute Group(s) in this search criteria row.</li> </ul>
Attribute Name	<i>Required if visible.</i> If specified, the search is limited to this block attribute value. Values in this column are based on the value in the <b>Attribute Group</b> column. The available values are: <ul style="list-style-type: none"> <li>• All Attributes that do not attach to any Attribute Group, plus the pre-defined entry <b>&lt;ALL&gt;</b> – if Attribute Group is set to <b>&lt;NONE&gt;</b>.</li> <li>• All Attributes of Block, plus the pre-defined entry <b>&lt;ALL&gt;</b> – if Attribute Group is set to <b>&lt;IGNORE&gt;</b>.</li> <li>• All Attributes attached to the specified Attribute Group, plus the pre-defined entry <b>&lt;ALL&gt;</b> – if an Attribute Group is selected.</li> <li>• All Attributes attached to at least one Attribute Group, plus the pre-defined entry <b>&lt;ALL&gt;</b>.</li> </ul>
Attribute Value	Full or partial name (with wildcard) of the attribute. To search for an attribute with a null value, enter two double quotes (“”).

3 Click **Search**.

**Result:** The results appear in the **Search Results** list.

4 Click the pool or block whose hierarchy you want to view, then click **Show Hierarchy**.

**Important!** If there are multiple pages of matching objects, use the arrows or the drop-down list to select another page of search results.

**Result:** The object’s hierarchy appears.

.....  
 E N D O F S T E P S .....



## Merge pools

---

### Overview

You can use the Merge Pools function to merge two pools together, as long as they are at the same level in the pool hierarchy and have the same parent. The function moves all the blocks contained in the selected source pool and places them in the destination pool. All child pools of the source pool become children of the destination pool. The source pool is then removed.

When two pools are merged, Attribute values in the source pool (which is eventually removed) are not used in the operation, and Attribute values in the target pool remain.



## To merge pools

---

### When to use

Use this procedure to merge a pool with another pool in the Pool Hierarchy.

### Before you begin

- Only a Master type administrator or a Normal type administrator with Organization Access and Maintain Pools privilege set to **True** (for merging child pools) or Maintain Seed Pool privilege set to **True** (for merging seed pools) is allowed to merge pools.
- When merging pools, both the source and target pools must belong to the same Internet registry.

### Procedure

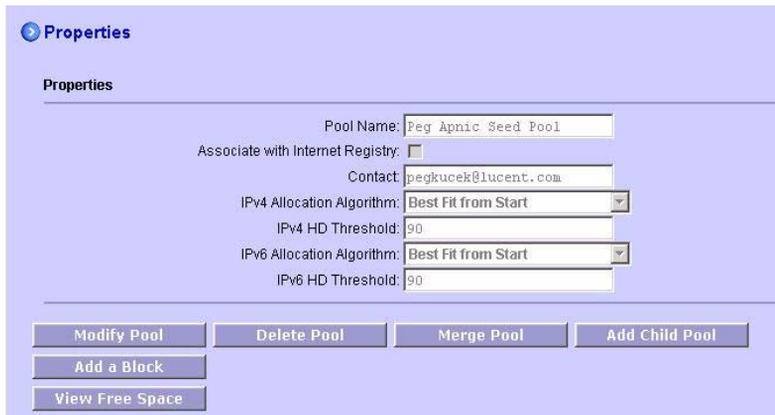
To merge pools, follow these steps.

- 1 Mouse over **Address Allocation** and click **Pool Hierarchy**. Alternatively, click the Pool Hierarchy icon ().

**Result:** The Pool Hierarchy opens.

- 2 Expand the list of pools and select the pool you want to be the source pool.

**Result:** The Properties page for that pool opens.



The screenshot shows the 'Properties' page for a pool. The page has a light blue header with a 'Properties' title and a back arrow. Below the header, the 'Properties' section contains several fields: 'Pool Name' (text input with 'Peg Apnic Seed Pool'), 'Associate with Internet Registry' (checkbox), 'Contact' (text input with 'pegkucek@lucent.com'), 'IPv4 Allocation Algorithm' (dropdown menu with 'Best Fit from Start'), 'IPv4 HD Threshold' (text input with '90'), 'IPv6 Allocation Algorithm' (dropdown menu with 'Best Fit from Start'), and 'IPv6 HD Threshold' (text input with '90'). At the bottom of the page, there are six buttons: 'Modify Pool', 'Delete Pool', 'Merge Pool', 'Add Child Pool', 'Add a Block', and 'View Free Space'.

- 3 Click **Merge Pool**.

**Result:** The Merge Pool page opens.

**Merge Pool**

Source Pool:

\*Target Pool:

- 
- 4 Enter the name of the target pool you want to merge with the source pool. If you want to see a list of all available pools, enter an asterisk. Click **Search** to see a list of available pools.

**Merge Pool**

Source Pool:

\*Target Pool:

DEFAULT\_SEED\_POOL:VitalQIP Organization  
 child1  
 dave-957  
 jess1  
 jess2  
 jess2  
 jess3  
 jimseed1  
 pearlSeedPoolPv4-2  
 pearlSeedPoolPv4-3  
 pearlSeedPoolPv4v6-5  
 pearlSeedPoolPv6-4

- 
- 5 Click the name of the pool you want to combine with the source pool, and click **Submit**.

**Result:** The pools are merged.

END OF STEPS

---



## Subnet organizations

---

### Overview

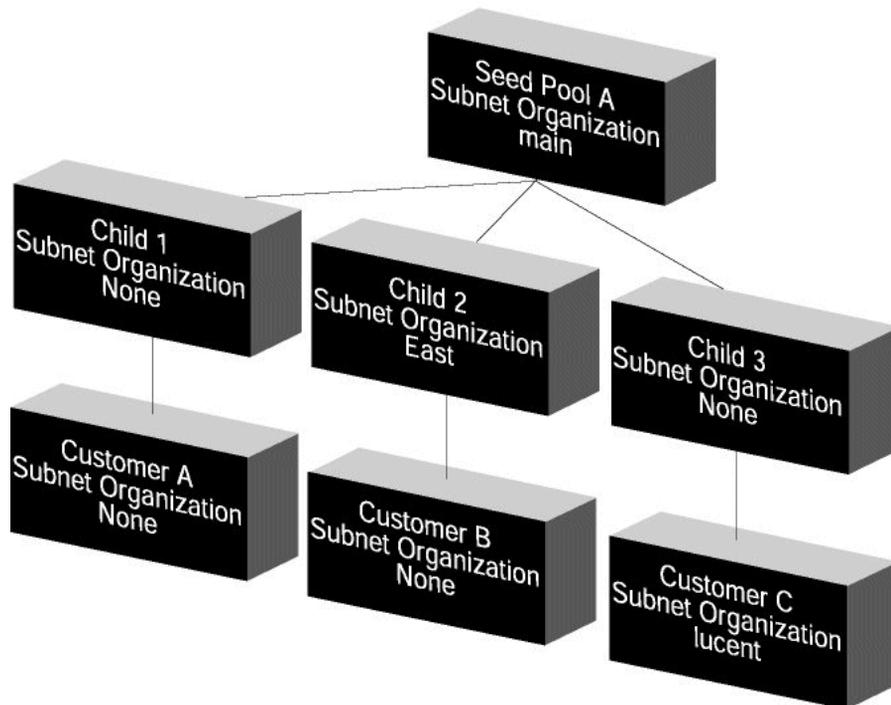
You can use the pool hierarchy to create a subnet in VitalQIP.

**Important!** Subnet organizations can only be created from the VitalQIP thick client. They cannot be created within the Web GUI.

At the time the subnet is created, VitalQIP can also be configured to put the subnet into a subnet organization. You can assign any pool to a subnet organization, but typically, you would assign a pool to a subnet organization somewhere higher up the pool hierarchy above the pool where the block is being allocated.

To demonstrate, assume the pool hierarchy shown:

**Figure 9 Subnet organizations in pool hierarchy**



In this example, assume the pools Customer A, Customer B, and Customer C are all associated with Contiguous Used rules and associate all blocks assigned to them with VitalQIP subnets.

When a block is allocated to Customer A, the subnet created will be placed into the “main” subnet organization. This can be determined by following the pool hierarchy upward until a subnet organization is found. Since Customer A does not have a subnet organization associated with it, VitalQIP looks at its parent pool, which is Child 1. Child 1 does not have a subnet organization associated with it, so the process continues up to Seed Pool A. Seed Pool A has the “main” subnet organization associated with it, so this is where the subnet for Customer A is placed.

Using a similar process, Customer B would assign subnets to the “East” subnet organization (associated with Child 2). Customer C assigns subnets to the “lucent” subnet organization since it is associated with that organization. No parent flow is necessary.

A subnet does not have to be placed in a subnet organization. If there is no pool higher up in the hierarchy associated with a subnet organization, the subnet will still be created but will not be placed into a subnet organization. For example, if the “main” subnet organization were removed from the Seed Pool A profile, blocks assigned to Customer A would not be placed into a subnet organization.

**Important!** Subnets cannot belong to more than one subnet organization.



# 7 Block allocation

## Overview

---

### Purpose

This chapter discusses the way VitalQIP uses blocks and how blocks are allocated. It also discusses block maintenance and an automated process to allocate blocks.

You can access block maintenance from either the block hierarchy or the pool hierarchy in the VitalQIP Web GUI.

### Contents

This chapter covers these topics.

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## The block allocation process

Block allocation is the process of assigning an additional block to a pool. VitalQIP assigns the address space based on the configuration of rules and pools in the hierarchy.

### Administrator privileges

Only an administrator with a VitalQIP **Rule Override** privilege set to **True** is allowed to select a rule other than the rule associated with the existing pool. If your VitalQIP **Rule Override** privilege is set to **False**, the **Rule Name** field in the Allocate Block to Existing Pool screen is set to Read Only.



# SWIP reporting

---

## Introduction

VitalQIP contains optional support for registering address space with ARIN. The configuration parameters for ARIN are available at the seed pool level. Each seed pool can be configured differently (one seed pool might use ARIN and another may not).

## Enable ARIN support

ARIN support is turned on by selecting **ARIN** as the **Registry Name** in the Add Seed Block page. Refer to [“To associate seed blocks with a seed pool”, on page 151](#) for information on the fields that support ARIN.

## What is ARIN

ARIN maintains a database (WHOIS) of all registered IP address blocks and information about who is using this address space. When an ISP allocates address space to another company, it registers this allocation by sending a SWIP report to ARIN.

## VitalQIP's support of ARIN

If a seed pool is configured with ARIN support turned on, any block allocation that creates a VitalQIP subnet anywhere below the seed pool in the hierarchy will generate a SWIP report. Based on the SWIP report type that the administrator chooses, VitalQIP prompts for various pieces of information needed in the SWIP report. This information will be formatted into the selected SWIP template and emailed to the **ARIN Email** address specified on the seed pool.

**Important!** VitalQIP does not generate SWIP reports for block allocations that are smaller than a /29 because ARIN does not wish to be notified about such block sizes. If you allocate a block that is smaller than a /29 in a seed pool where ARIN reporting is enabled, you will see the SWIP Reporting screen during the Allocation process. In such circumstances, it is recommended that you leave the SWIP template information empty, and click **Allocate** to proceed. If any information is entered, it will be ignored.

For IPv4 address blocks, ARIN SWIP templates that are supported in VitalQIP include:

- ARIN-REALLOCATE-3.2.2
- ARIN-REASSIGN-SIMPLE-3.2.1
- ARIN-REASSIGN-DETAILED-3.2.2

For IPv6 address blocks, ARIN SWIP templates that are supported in VitalQIP include:

- ARIN-IPv6-REALLOCATE-3.2.3
- ARIN-IPv6-REASSIGN-3.2.3

For more information on these SWIP templates, please access [www.arin.net](http://www.arin.net). A sample SWIP Reporting screen with ARIN-REASSIGN-SIMPLE-3.2.1 selected is shown as follows.

**Modify Block**

**Block Information**

\*Address Type: IPv4

\*Start Address: 28.0.0.0

\*Length: 8

Address Pool: Arin Seed Pool

\*Maintainer: arin maint v4

\*Status: Origin

Host Density Threshold: 77 %

**SWIP Report Type:**

ARIN-Reallocate:

ARIN-Reassign-Detailed:

ARIN-Reassign-Simple:

Do Not Generate Report:

**User Defined Attributes**

Submit Cancel

Whenever a SWIP report is sent after a block has been allocated, VitalQIP stores the following as part of the block information:

- The type of SWIP report that was generated.
- The value of the **network name** field (a unique name that includes the **Network Prefix** value defined in the Seed Pool function. Refer to [“To add a seed pool”](#), on page 146).

### SWIP reporting after Freeing a Block

Whenever a Free Block operation is performed on a block that contains a valid SWIP type and **network name**, a corresponding Free SWIP report is sent *automatically*.

- For a block allocated with an ARIN-REASSIGN-SIMPLE-3.2.1 template, it is freed by sending another ARIN-REASSIGN-SIMPLE-3.2.1 template and specifying R for Registration Action in the template.
- For a block allocated with an ARIN-REASSIGN-DETAILED-3.2.2 template or an ARIN-REALLOCATE-3.2.2 template, it is freed by sending an ARIN-NET-MOD-3.2.0 template and specifying R for Registration Action in the template.

For further information on freeing a block, refer to [“The free block function”](#), on page 211.



# APNIC reporting

---

## Introduction

VitalQIP contains optional support for registering address space with APNIC and RIPE. The configuration parameters for APNIC are available at the seed block level. Each seed block can be configured differently (one seed pool might use APNIC and another may not).

## Enable APNIC support

APNIC support is turned on by selecting **APNIC** as the **Registry Name** in the Add Seed Block page. Refer to [Table 26, “Block allocation fields”, on page 192](#) for information on the fields that support APNIC.

## What is APNIC

APNIC maintains a database (WHOIS) of all registered IP address blocks and information about who is using this address space in Asian Pacific. When an ISP allocates address space to another company, it registers this allocation by sending an APNIC report to Whois.

## VitalQIP’s support of APNIC

If a seed pool is configured with APNIC support turned on, any block allocation that creates a VitalQIP subnet anywhere below the seed pool in the hierarchy will generate an inetnum report associated with the maintainer ID specified on the seed pool. VitalQIP does not generate inetnum reports for block allocations that are smaller than the minimum block size specified on the seed pool because APNIC does not wish to be notified about such block sizes. If you allocate a block that is smaller than the specified minimum block size in a seed pool where inetnum reporting is enabled, you will see the APNIC Reporting screen during the Allocation process. In such circumstances, it is recommended that you leave the inetnum template information empty, and click **Allocate** to proceed. If any information is entered, it will be ignored.

For information on the APNIC inetnum report, please access [www.apnic.net](http://www.apnic.net).

**Important!** Administrators for the **admin-c** and **tech-c** fields must be defined before inetnum report can be generated.

Whenever an APNIC inetnum report is sent after a block has been allocated, VitalQIP stores the following as part of the block information:

- The type of APNIC inetnum report that was generated.
- The value of the **network name** field.

For IPv4 address blocks, the status for inetnum report is one of the following:

- ALLOCATED PORTABLE
- ALLOCATED NON-PORTABLE
- ASSIGNED PORTABLE

- ASSIGNED NON-PORTABLE

For IPv6 address blocks, the status for inet6num report is one of the following:

- ALLOCATED PORTABLE
- ALLOCATED NON-PORTABLE
- ASSIGNED PORTABLE
- ASSIGNED NON-PORTABLE

#### **Inetnum reporting after freeing a block**

Whenever a Free Block operation is performed on a block that contains a valid inetnum report type and network name, a corresponding Free inetnum report is sent *automatically*. For further information on freeing a block, refer to [“The free block function”](#), on page 211.



# RIPE reporting

---

## Introduction

VitalQIP contains optional support for registering address space with RIPE. The configuration parameters for RIPE are available at the seed block level. Each seed block can be configured differently (one seed block might use RIPE and another may not).

## Enable RIPE support

RIPE support is turned on by selecting **RIPE** as the **Address Source** in the Add Seed Pool screen. Refer to “[To add a seed pool](#)”, on page 146 for information on the additional fields that support RIPE.

## What is RIPE

RIPE maintains a database (WHOIS) of all registered IP address blocks and information about who is using this address space in Europe and the Middle-East. When an ISP allocates address space to another company, it registers this allocation by sending an RIPE report to Whois.

## VitalQIP’s support of RIPE

If a seed pool is configured with RIPE support turned on, any block allocation that creates a VitalQIP subnet anywhere below the seed pool in the hierarchy will generate an inetnum report associated with a maintainer ID specified on the seed pool. VitalQIP will prompt for various pieces of information needed in the inetnum report. This information will be formatted into the selected inetnum report and emailed to the **RIPE Email** address specified on the seed pool.

**Important!** VitalQIP does not generate inetnum reports for block allocations that are smaller than the minimum block size specified on the seed pool because RIPE does not wish to be notified about such block sizes. If you allocate a block that is smaller than the minimum block size specified on the seed pool in a seed pool where inetnum reporting is enabled, you will see the RIPE Reporting screen during the Allocation process. In such circumstances, Alcatel-Lucent recommends that you leave the inetnum template information empty, and click **Allocate** to proceed. If any information is entered, it will be ignored.

**Important!** Administrators for the **admin-c** and **tech-c** fields must be defined before inetnum report can be sent.

For information on the RIPE inetnum report, please access [www.ripe.net](http://www.ripe.net). The **Whois Report Information** section of the RIPE inetnum report screen is a freeform interface. It does not place any restrictions on the field lengths or the values entered into the fields. In some cases, some fields are not applicable if other fields have a value. Some fields also may have length or content limitations although VitalQIP does not enforce any restrictions. This is by design since the format of the RIPE inetnum report is subject to change by RIPE. When the RIPE inetnum report email is generated, any non-applicable fields are ignored.

Whenever a RIPE inetnum report is sent after a block has been allocated, VitalQIP stores the following as part of the block information:

- The type of RIPE inetnum report that was generated.
- The value of the **network name** field.

For IPv4 address blocks, the status for inetnum report, is one of the following:

- ALLOCATED PA
- ALLOCATED PI
- ALLOCATED UNASSIGNED
- ASSIGNED PA
- ASSIGNED PI

For IPv6 address blocks, the status for inet6num report is one of the following:

- ALLOCATED-BY-LIR
- ASSIGNED

### **Inetnum reporting after freeing a block**

Whenever a Free Block operation is performed on a block that contains a valid inetnum report type and network name, a corresponding Free inetnum report is sent *automatically*. For further information on freeing a block, refer to [“The free block function”](#), on page 211.



# AfriNIC reporting

---

## Introduction

VitalQIP contains optional support for registering address space with AfriNIC. The configuration parameters for AfriNIC are available at the seed block level. Each seed block can be configured differently (one seed block might use AfriNIC and another may not).

## Enable AfriNIC support

AfriNIC support is turned on by selecting AfriNIC as the Address Source in the Add Seed Pool screen. Refer to “[To add a seed pool](#)”, on page 146 for information on the additional fields that support AfriNIC.

## What is AfriNIC

AfriNIC maintains a database (WHOIS) of all registered IP address blocks and information about who is using this address space in Africa. When an ISP allocates address space to another company, it registers this allocation by sending an AfriNIC report to Whois.

## VitalQIP’s support of AfriNIC

If a seed pool is configured with AfriNIC support turned on, any block allocation that creates a VitalQIP subnet anywhere below the seed pool in the hierarchy will generate an inetnum report associated with a maintainer ID specified on the seed pool. VitalQIP will prompt for various pieces of information needed in the inetnum report. This information will be formatted into the selected inetnum report and emailed to the **AfriNIC Email** address specified on the seed pool.

**Important!** VitalQIP does not generate inetnum reports for block allocations that are smaller than the minimum block size specified on the seed pool because AfriNIC does not wish to be notified about such block sizes. If you allocate a block that is smaller than the minimum block size specified on the seed pool in a seed pool where inetnum reporting is enabled, you will see the AfriNIC Reporting screen during the Allocation process. In such circumstances, Alcatel-Lucent recommends that you leave the inetnum template information empty, and click **Allocate** to proceed. Select **Do Not generate Report** and click **Cancel**. If any information is entered, it will be ignored.

For information on the AfriNIC inetnum report, please access [www.AfriNIC.net](http://www.AfriNIC.net).

**Important!** Administrators for the **admin-c** and **tech-c** fields must be defined before inetnum report can be sent.

The **Whois Report Information** section of the AfriNIC inetnum report screen is a freeform interface. It does not place any restrictions on the field lengths or the values entered into the fields. In some cases, some fields are not applicable if other fields have a value. Some fields also may have length or content limitations although VitalQIP does not enforce any

restrictions. This is by design since the format of the AfriNIC inetnum report is subject to change by AfriNIC. When the AfriNIC inetnum report email is generated, any non-applicable fields are ignored.

Whenever a AfriNIC inetnum report is sent after a block has been allocated, VitalQIP stores the following as part of the block information:

- The type of AfriNIC inetnum report that was generated.
- The value of the **network name** field.

For IPv4 address blocks, the status for inetnum report, is one of the following:

- ALLOCATED PA
- ALLOCATED PI
- ALLOCATED UNSPECIFIED
- ASSIGNED PA
- ASSIGNED PI
- LIR-PARTITIONED PA
- LIR-PARTITIONED PI
- SUB-ALLOCATED PA
- ASSIGNED ANYCAST
- EARLY-REGISTRATION
- NOT-SET

For IPv6 address blocks, the status for inet6num report is one of the following:

- ALLOCATED-BY-LIR
- ALLOCATED-BY-RIR
- ASSIGNED
- ASSIGNED ANYCAST

### Support for AfriNIC report template changes

Because AfriNIC report templates can change between VitalQIP releases, free text fields are available that allow for you to add values to the AfriNIC report. The information in these fields is placed verbatim in the RIR email that is sent.

Values are entered in the following format:

```
tag: value
```

For example:

```
testtag: testvalue
another test tag: my test value
```

All tags and values entered must be valid and supported by RIR. If tags and value are not supported by the RIR, a syntax error is returned from RIR.

The following table shows the available free text fields associated with each report template.

**Table 25    AffriNIC report templates and associated free text fields**

<b>SWIP report template</b>	<b>Associated free text fields</b>
INETNUM for IPv4	Reporting Customized Information Org Customized Information Admin Contact Customized Information Technical Customized Information
INETNUM for IPv6	Reporting Customized Information Admin Contact Customized Information Technical Customized Information



## To add a seed block

---

### When to use

Use this procedure to add a seed block to a seed pool.

### Before you begin

You can also access this function from the **Pool Hierarchy**.

### Procedure

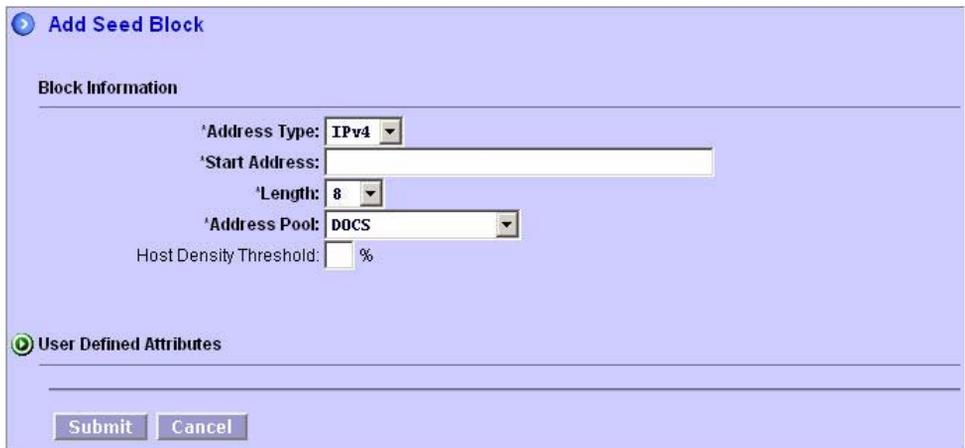
To add a seed block to a seed pool, follow these steps.

- 1 Mouse over **Address Allocation** and click **Block Hierarchy**. Alternatively, click the Block Hierarchy icon (  ).

**Result:** The **Block Hierarchy** opens.

- 2 Mouse over the **Actions** menu and select **Add Seed Block**.

**Result:** The Add Seed Block page opens.



- 3 Review , and fill in the Add Block fields.

**Table 26 Block allocation fields**

<b>Field</b>	<b>Description</b>
Address Type	<i>Required.</i> Select IPv4 or IPv6 from the drop-down list. Read only when modifying a block.
Start Address	<i>Required.</i> Enter a valid IP address in either IPv4 or IPv6 format as specified in the Address Type field. Read only when modifying a block.
Length	<i>Required.</i> Select a length from the drop-down list. Read only when modifying a block.
Address Pool	<i>Required.</i> Select the address pool from the drop-down list to which you are allocating this block. Read only when modifying a block.
Maintainer	<p><i>Required for seed blocks.</i> Does not display, but defaults to the maintainer for the seed pool for other blocks. Select the name of the person responsible for this block from the drop-down list. Read only when modifying a non-seed pool block.</p> <p><b>Important!</b> A default value may be set for this field using the <code>blocknetworkcontact</code> parameter in the <code>qip.properties</code> file. Refer to Chapter 3 of the <i>VitalQIP Administrator Reference Manual</i> for details on this parameter.</p>
Status	<i>Required for non-seed blocks.</i> Is always set to Free for other blocks. Select a status for the block from the drop-down list.
Host Density Threshold	<p><i>Optional.</i> When the Host Density (HD) ratio reaches this ratio, the user will be notified. HD is calculated as follows:</p> $HD = \log(\text{number of allocated objects}) / \log(\text{maximum number of allocatable objects})$
Report Type	<i>Optional.</i> Only displays when the address pool is registered with an Internet registry (ARIN, RIPE or APNIC). Select the type of report you want VitalQIP to generate when this block is added or deleted.



## To modify a block

---

### When to use

Use this procedure to modify a block.

### Before you begin

You can also access this function from the Pool Hierarchy.

### Procedure

To modify a block, follow these steps.

- 1 Mouse over **Address Allocation** and click **Block Hierarchy**. Alternatively, click the Block Hierarchy icon (  ).

**Result:** The **Block Hierarchy** opens.

- 2 Expand the list of blocks until the one you want to modify is visible.

- 3 Select the block you want to modify.

**Result:** The Block Properties page opens.



**Block Properties**

Address Type: **IPv4**

Start Address: 192.0.2.0

Length: 24

Address Pool: DOCS\_ARIN

Maintainer: admin2\_ARIN

Status: **Free**

Host Density Threshold: 80 %

Modify Block	Expand Block	Move Block
Split Block	Merge Block	ReNUMBER Block
Return to Parent	Free Block	Delete Block
Recover Block	Reports	

- 4 Click **Modify Block**.

**Result:** The Modify Block page opens.

**Modify Block**

**Block Information**

\*Address Type: IPv4

\*Start Address: 9.0.0.0

\*Length: 8

Address Pool: NEWDOCTEST

\*Maintainer: admin1\_ARIN

\*Status: Free

Host Density Threshold: %

**SWIP Report Type:**

ARIN-Reallocate:

ARIN-Reassign-Detailed:

ARIN-Reassign-Simple:

Do Not Generate Report:

**User Defined Attributes**

Submit Cancel

- 5 Modify the Block Property fields as necessary.

For seed blocks, you can modify the **Block Status** (from Free to Reserved and vice versa), **Host Density Threshold** and report types. At least one report type must be entered. For a child block, you can modify **Block Status** from Free to Reserved and vice versa.

Refer to [Table 26, “Block allocation fields”, on page 192](#) and modify the fields as needed.

- 6 Click **Submit**.

**Result:** A dialog box opens with the message **Modify Block completed**.

- 7 Click **OK**.

**Result:** The dialog box closes and the Block Properties page opens.

END OF STEPS



## Block expansion

---

### Overview

Block expansion allows a block to acquire contiguous space from the parent pool. Expansion is limited to double the original size (for example, /48 can be expanded to /47).

Block expansion can be performed on all levels of blocks except for the seed block. The block does not have to be the highest level block within a pool.

Expansion is allowed for all the allocation algorithms, but works best with sparse allocation.

For block expansion, the address can be borrowed from the parent pool, if the pool does not have free address space to expand the block.

Expansion is allowed for the block status values Used, Free, and Reserved.

If the block is Used, and if the subnet was created in VitalQIP (identified by the presence of the associated subnet name) then VitalQIP also expands the size of corresponding subnet.



## To expand a block

---

### When to use

Use this procedure to expand a block.

### Before you begin

- If a block has “allocated” status, it cannot be expanded. The expansion request must come from the same block located in the child pool.
- When a block is expanded, if there is a free block that exists that is going to be consumed in the expansion, Attribute values in the free block are not used in the operation, and Attribute values in the block to be expanded remain.
- You can also access this function from the Pool Hierarchy.

### Procedure

To expand a block, follow these steps.

- 
- 1 Mouse over **Address Allocation** and click **Block Hierarchy**. Alternatively, click the Block Hierarchy icon ().

**Result:** The **Block Hierarchy** opens.

---

- 2 Expand the list of blocks until the one you want to expand is visible.
- 

- 3 Select the block you want to expand.

**Result:** The Block Properties page opens.

---

- 4 Click **Expand Block**.

**Result:** A dialog box opens with the message **Are you sure you want to double the size of the selected Block?**

---

- 5 Click **OK**.

**Result:** The block is expanded.

END OF STEPS

---



## Move block function

---

### Overview

Moving a block moves the selected block, all of its children in the block hierarchy, and all of the child pools that contain segments of this block to the destination pool. The source pool is deleted after the move is complete.

To move a block, the following conditions must be met:

- The source and destination pools must be siblings
- The block must be highest level block in the pool
- All address space in any child pool that contains a portion of the block to be moved must only contain address space of the block to be moved.



## To move a block

---

### When to use

Use this procedure to move a block.

### Before you begin

You can also access this function from the Pool Hierarchy.

### Procedure

To move a block, follow these steps.

- 1 Mouse over **Address Allocation** and click **Block Hierarchy**. Alternatively, click the Block Hierarchy icon (  ).

**Result:** The **Block Hierarchy** opens.

- 2 Expand the list of blocks until the one you want to move is visible.

- 3 Select the block you want to move.

**Result:** The Block Properties page opens.

- 4 Click **Move Block**.

**Result:** The Move Block page opens.



- 5 Select a destination pool from the drop-down list and click **Submit**.

**Result:** A dialog box opens with the message **Are you sure you want to move the Block to the destination Pool?**

- 6 Click **OK**.

**Result:** A dialog box opens with the message **Move Block completed**.

.....  
7 Click **OK**.

**Result:** The Block Hierarchy is updated and the Block Properties page for the moved block opens.

.....  
E N D O F S T E P S  
.....



## The split block function

---

### Overview

The Split Block function allows you to create multiple smaller blocks from a specified block. The Split Block function is allowed only on address blocks with a Used status, and with no prior RIR reporting done on them.

If the original Block was the highest level Block within the Pool, VitalQIP changes the status of the original Address Block status to Origin and creates new Address Blocks under it.

If the original Block was the not the highest level Block within the Pool, VitalQIP deletes the original Address Block and creates new Address Blocks in its place.

It also splits the corresponding subnet in the IPv4 address module.

There is no RIR reporting following the Split Block operation.



## To split a block

---

### When to use

Use this procedure to split a block. At most the address block can be advanced 8 bits. For example, for a size /32 IPv6 block, you can split it to 256 size /40 IPv6 blocks.

### Before you begin

You can also access this function from the Pool Hierarchy.

### Procedure

To split a block, follow these steps.

- 1 Mouse over **Address Allocation** and click **Block Hierarchy**. Alternatively, click the Block Hierarchy icon (  ).

**Result:** The **Block Hierarchy** opens.

- 2 Expand the list of blocks until the one you want to split is visible.

- 3 Select the block you want to split.

**Result:** The Block Properties page opens.

- 4 Click **Split Block**.

**Result:** The Split Block page opens.



- 
- 5 Select a new prefix length from the drop-down list. This specifies the length of new Address Blocks.

**Result:** The New Address Block List is populated with the list of address blocks that will be generated when the request is submitted.

**Split Block**

Original Address Block: 12.0.0.0 / 24 (Used, UDA Child Pool 2 - 1)

\*New Prefix Length: 25

New Address Block List:

- 12.0.0.0/25
- 12.0.0.128/25

Submit Cancel

- 
- 6 Click **Submit**.

**Result:** A dialog box opens with the message **Are you sure you want to split selected block?**

- 
- 7 Click **OK**.

**Result:** The block is split.

END OF STEPS

---



## The merge block function

---

### Overview

Merge Block combines the current block with its contiguous block.

Merging blocks is allowed for the following block status values:

- Used
- Reserved
- Free

Used blocks you are merging cannot have prior RIR reporting.

Both blocks being merged must be siblings within the same pool (If they are in different pools, you can use the Move Block operation to get the blocks into the same pool). Both blocks being merged cannot have Free status (free blocks should be merged by the “Free Space Consolidation” function). If two blocks are being merged with differing status values the resulting status is as follows:

- Used + any status = Used
- Reserved + Free = Reserved

If an IPv4 block is Used, and if the subnet was created in VitalQIP, the size of the corresponding subnet in VitalQIP is also expanded.

There is no RIR reporting after merging blocks.

When two blocks are merged, Attribute values in the source block (which is eventually removed) are not used in the operation, and Attribute values in the target block remain.



## To merge a block

---

### When to use

Use this procedure to merge a block.

### Before you begin

You can also access this function from the Pool Hierarchy.

### Procedure

To merge a block, follow these steps.

- 1 Mouse over **Address Allocation** and click **Block Hierarchy**. Alternatively, click the Block Hierarchy icon ()

**Result:** The **Block Hierarchy** opens.

- 2 Expand the list of blocks until one of the blocks you want to merge is visible.

- 3 Select the block you want to merge.

**Result:** The Block Properties page opens.

- 4 Click **Merge Block**.

**Result:** The Merge Block page opens.



- 5 Select the block with which you want to merge this block from the drop-down list and click **Submit**.

**Result:** A dialog box opens with the message **Are you sure you want to merge selected Blocks?**

.....  
**6** Click **OK**.

**Result:** The blocks are merged.

.....  
E N D . O F . S T E P S  
.....



## The renumber block function

---

### Overview

The renumber function allows the user to change the prefix of the Address Block, without having to change the IP address component to the right of the prefix (that is, the InterfaceId). The Renumber Block function is allowed only on IPv6 Address Blocks with Used status, and with no prior RIR reporting done on them. The target Block must already exist in Free or Reserved status within the same pool as the source block.

The user selects the Source Block from the hierarchy and clicks on the Renumber Block action. The GUI will present the candidate Blocks (blocks of the same size with Free status, within the same pool,) that can be the potential targets.

There is no RIR reporting after the Renumber operation.



## To renumber a block

---

### When to use

Use this procedure to renumber an IPv6 block.

### Procedure

To renumber a block, follow these steps.

---

- 1 Mouse over **Address Allocation** and click **Block Hierarchy**. Alternatively, click the Block Hierarchy icon ().

**Result:** The **Block Hierarchy** opens.

---

- 2 Expand the list of blocks until the block you want to renumber is visible.
- 

- 3 Select the block you want to renumber.

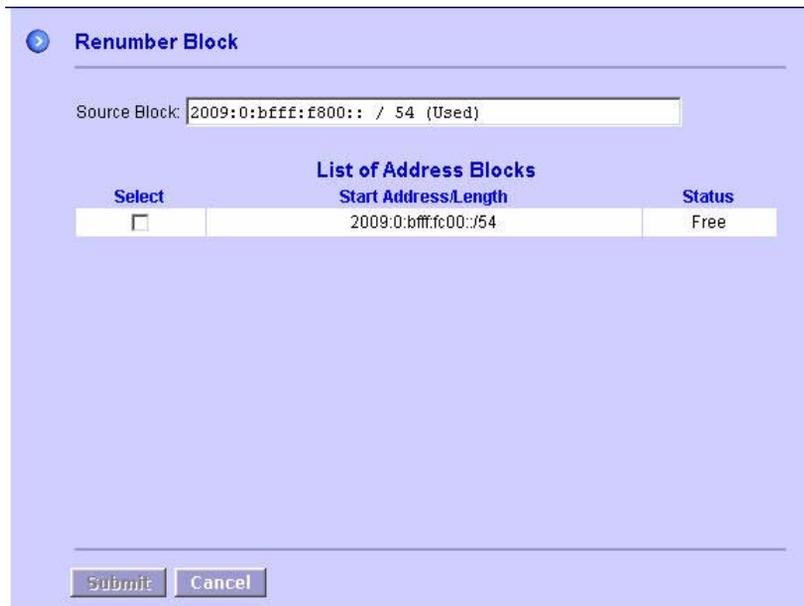
**Important!** The block must have a status of Used and cannot have had RIR reporting associated with it.

**Result:** The Block Properties page opens.

---

- 4 Click **Renumber Block**.

**Result:** The Renumber Block page opens. A list of blocks of the same size with a status of free status, within the same pool displays. These are the blocks that can be the potential targets.



.....

5 Select an address block as the target and click **Submit**.

**Result:** A dialog box opens with the message **Are sure you want to renumber the current Block?**

.....

6 Click **OK**.

**Result:** The block is renumbered.

.....

END OF STEPS

.....



## The return child block to parent function

---

### Overview

This function allows you to return a child block to its parent. You can perform this function if the block status is free, and the block is the highest level block in its pool. The block is removed from the current pool and the corresponding block in the parent pool (that had a status of Allocated) is marked as Free.



## To return a block to its parent

---

### When to use

Use this procedure to return a block to its parent.

### Before you begin

The block must be the highest level block in its pool and must have a status of Free or the **Return to Parent** button will not be active.

### Before you begin

You can also access this function from the Pool Hierarchy.

### Procedure

To return a block to its parent, follow these steps.

- 
- 1 Mouse over **Address Allocation** and click **Block Hierarchy**. Alternatively, click the Block Hierarchy icon ().

**Result:** The **Block Hierarchy** opens.

- 
- 2 Expand the list of blocks until the block you want to return to its parent pool is visible.

- 
- 3 Select the block you want to return to its parent.

**Result:** The Block Properties page opens.

- 
- 4 Click **Return to Parent**.

**Result:** A dialog box opens with the message **Are you sure you want to return the selected Block to parent Pool?**

- 
- 5 Click **OK**.

**Result:** The block is returned to its parent pool.

---

END OF STEPS

---



## The free block function

---

### Overview

You can only free Used blocks. If a registry report was generated during block allocation, a new one must be generated and sent. For IPv4 blocks, the corresponding subnet in VitalQIP must also be deleted. Once the block is marked Free, VitalQIP runs a Free Space Consolidation routine that consolidates separate contiguous blocks into one larger block, and potentially consolidates all the child blocks into the parent block.

### Pending status

The transition of a block from Used to Free might not happen immediately: based on the option set at the pool level (the **Support Pending** field), the block might be set to Pending status for some duration determined by the pool level option. During that period, you may also undo the effects of the Free block function by using the Recover block function (refer to [“To recover a block”](#), on page 214).

### Status check of Pending blocks

A scheduled process checks the status of Pending blocks and frees them (it sets the status to Free as necessary). The default schedule for this job to check and free Pending blocks is set to once a day at 1:00 AM. To modify the schedule, open `$QIPHOME/web/conf/schedule.properties` in a text editor and modify the following parameter:  
`schedule.free_pending_block_run_time`

**Important!** The password in `schedule.properties` must be entered as an encrypted string when you set up this job.

At least 6 (and optionally 7) time elements, separated by spaces are used to indicate the time. In order from left to right, the values are defined as follows:

1. Seconds: 0-59 (\* indicates every second)
2. Minutes: 0-59 (\* indicates every minute)
3. Hours: 0-23 (\* indicates every hour)
4. Day of month: 1-31 (\* indicates every day of the month)
5. Month: 1-12 or JAN-DEC (\* indicates every month)
6. Day of week: 1-7 or SUN-SAT (\* indicates every day of the week)
7. Year: 1970-2099

The following is an example of a job entry in `schedule.properties`:

```
schedule.run_free_pending_block_job=true
schedule.free_pending_block_run_time=0 0,30 6-22 * * ?
```

This job runs every half hour from 6:00AM to 10:00PM every day.

## **block,checkpending CLI**

The `block,checkpending` CLI allows you to query the **whois** database and set Pending blocks to Free if the criteria are matched.

The following is an example of the CLI used to change all Pending blocks to Free under the VitalQIP Organization if the criteria are matched:

```
./qip-cli -c block,checkpending -o "VitalQIP Organization"  
--level=organization
```

## **DEBUG**

If the scheduled jobs are not running, turn on **DEBUG** in `$QIPHOME/web/conf/log4j.properties` so you can troubleshoot the problem. For example,  
`log4j.threshold = DEBUG`  
`log4j.logger.localized.com.lucent.qip.schedule=DEBUG`

## **VitalQIP database updates**

Along with freeing the address block, VitalQIP also removes the IPv4 Subnet and all the IP addresses within the subnet. The DNS entries associated with these IP addresses are also deleted. If the address is the only IP address on an interface when the IP address is removed, the interface is removed. Similarly, if the interface being removed is the only one on the node, the node is removed.



## To free a block

---

### When to use

Use this procedure to free a block.

### Before you begin

- If the block being freed is the highest level block in the pool, it may be returned to its parent. A dialog box appears with the message **Return the Free Block to Parent?**
- You can also access this function from the Pool Hierarchy.

### Procedure

To free a block, follow these steps.

- 
- 1 Mouse over **Address Allocation** and click **Block Hierarchy**. Alternatively, click the Block Hierarchy icon ().

**Result:** The Block Hierarchy opens.

---

- 2 Expand the list of blocks until the block you want to free is visible.
- 

- 3 Select the block you want to free.

**Result:** The Block Properties page opens.

---

- 4 Click **Free Block**.

**Result:** A dialog box opens with the message **Are you sure you want to free the selected Block?**

---

- 5 Click **OK**.

**Result:** The block is freed.

END OF STEPS

---



## To recover a block

---

### When to use

Use this procedure to undo the effects of the Free block function. The recover block function allows you to recover a block after it is freed but still in a Pending state. This occurs because of registry reporting and settings in the seed pool **Allow Pending Status on Blocks** field.

### Before you begin

You can also access this function from the Pool Hierarchy.

### Procedure

To recover a block, follow these steps.

- 
- 1 Mouse over **Address Allocation** and click **Block Hierarchy**. Alternatively, click the Block Hierarchy icon ().

**Result:** The **Block Hierarchy** opens.

- 
- 2 Expand the list of blocks until the Pending block you want to recover is visible.

- 
- 3 Select the block you want to recover.

**Result:** The Block Properties page opens.

- 
- 4 Click **Recover Block**.

**Result:** A dialog box opens with the message **Are you sure you want to recover the Selected block?**

- 
- 5 Click **OK**.

**Result:** A dialog box opens with the message **Recover Block completed!**

- 
- 6 Click **OK**.

**Result:** The RIR Report Information page opens.

**RIR Report Information**

**Address Block Information:**

Address Block/Length: 24.0.16.0/20  
Address Pool: RECOVERMYCHILD  
Internet Registry: ARIN  
Report Type: ARIN-Reassign-Simple  
Maintainer: admin1\_ARIN

**ARIN-Reassign-Simple:**

Submit Cancel

- 
- 7 Fill in the report fields and click **Submit**.

**Result:** A dialog box opens with the message **RIR Reporting generated succeeded**.

- 
- 8 Click **OK**.

**Result:** The block status reverts to Used in the Block Hierarchy and its properties are displayed in the Block Properties page, where the **Status** field reads **Used**. Additionally, a new RIR report is sent to the Internet Registry.

END OF STEPS

---



## To delete a block

---

### When to use

Use the delete block function to delete a block.

### Before you begin

- You can only delete a seed block with a Free status. If you select a block other than a seed block, the **Delete Block** button is inactive.
- All address spaces within that block (everywhere in the hierarchy) must be free.
- You can also access this function from the Pool Hierarchy.

### Procedure

To delete a block, follow these steps.

- 
- 1 Mouse over **Address Allocation** and click **Block Hierarchy**. Alternatively, click the Block Hierarchy icon ().

**Result:** The **Block Hierarchy** opens.

- 
- 2 Expand the list of blocks until the block you want to delete is visible.

- 
- 3 Select the block you want to delete.

**Result:** The Block Properties page opens.

- 
- 4 Click **Delete Block**.

**Result:** A dialog box opens with the message **Are you sure you want to delete the selected Seed Block?**

- 
- 5 Click **OK**.

**Result:** A dialog box opens with the message **Seed Block deleted**.

- 
- 6 Click **OK**

**Result:** The Block Hierarchy is updated and the IP Management splash screen opens.

END OF STEPS

---



# 8 IPv4 address management

## Overview

---

### Purpose

This chapter describes the functions used to manage the network space for IPv4 addresses.

### Contents

This chapter covers these topics.

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# IPv4 address management

## IPv4 address management overview

---

Address management uses a hierarchy that displays the allocation of subnets by network, domain, subnet, or subnet organization.

Pv4 address management allows you to add, delete, move or modify objects defined within an IPv4 subnet. It also allows you to define address scopes/ranges.



# IPv4 Hierarchy

---

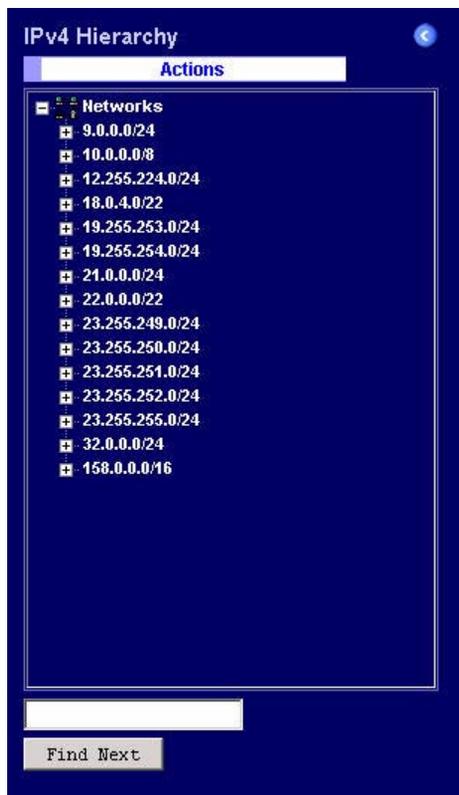
## Overview

When you mouse over the Address Management tab and select IPv4, the IPv4 Hierarchy displays. The IPv4 hierarchy allows you to display subnets by their associated networks, domains, or subnet organizations.

## Networks

The initial display shows a Networks icon. The Actions menu allows you to change the display to domains, subnet organizations or subnets. You can expand any of these hierarchies to view all subnets defined for the item you have selected.

**Figure 10** IPv4 Hierarchy - Network View



## Subnets

When you expand a network, a Subnet icon displays below it. If you expand that icon, all subnets defined for that network display.

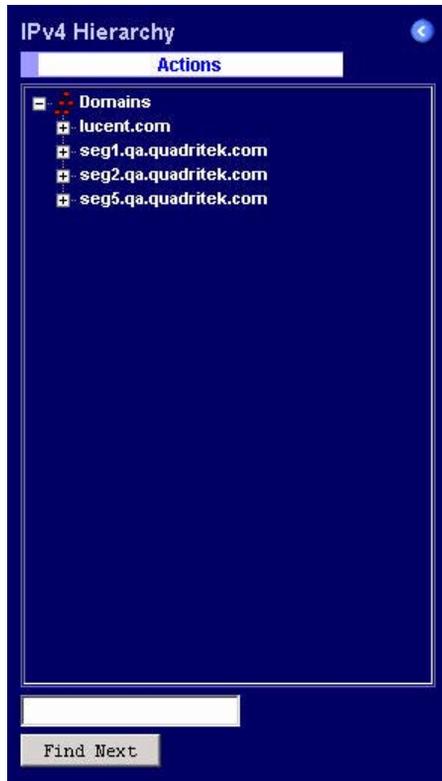
Figure 11 IPv4 Hierarchy - Networks and Subnets



## Domains

To see networks and subnets that are defined for a specific domain, you can mouse over **Actions** and select **Domains**. You can then expand the Domains icon to see all domains defined for the organization.

Figure 12 IPv4 Hierarchy - Domains



When you expand a domain, all networks defined for that domain display in the tree beneath the domain, with the exception of the instances described below. When you then expand a network, all subnets defined for the network display in the tree below the network.

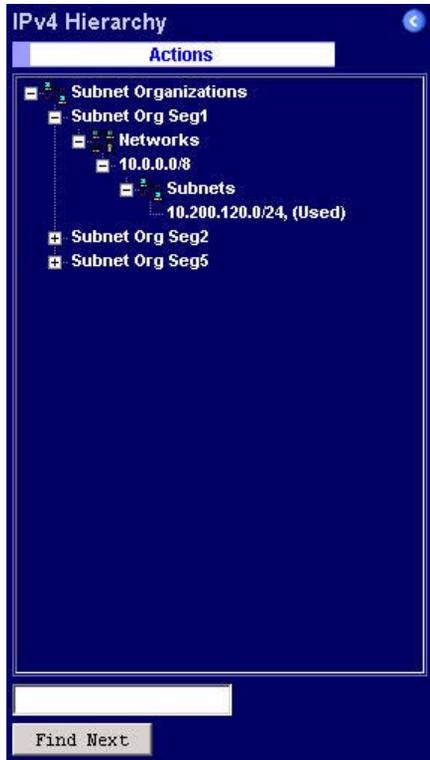
Subnets do not appear in the IPv4 Hierarchy Domain tree under the following circumstances:

- The IPv4 domain tree exists to show which networks have subnets associated with a particular domain. Domains that do not have a subnet association will *not* appear in the IPv4 Hierarchy Domain tree.
- ENUM zones, despite being stored as domains in the database, are different in that they exist to group phone numbers and have no real network/subnet association. These zones, as well as other domains without subnet associations, can be found under the MyView Hierarchy Domain tree.

### Subnet Organizations

You can also see subnet organizations for your organization. Mouse over **Actions** and select **Subnet Organization**. A list of subnet organizations displays. You can expand each subnet organization to see the networks and subnets defined within it.

Figure 13 IPv4 Hierarchy - Subnet Organizations



## To use the Quick Add function

---

### When to use

Use this procedure to add an object to the subnet. This function allows you to add any type of object to any free address in the subnet.

### Procedure

To add an object, follow these steps.

- 1 Mouse over the **Address Management** tab and click **IPv4**. Alternatively, click the IPv4 Management icon (  ) in the toolbar.

**Result:** The IPv4 Hierarchy opens.

- 2 Mouse over **Actions** and select **Quick Add**.

**Result:** The Quick Add page opens.



The screenshot shows the 'Quick Add' form with the following fields and controls:

- Object Class:** A dropdown menu with 'Workstation' selected.
- Object Name:** A text input field with a 'Generate' button to its right.
- IP Address:** A text input field.
- Domain:** A dropdown menu with 'Use Subnet Default' selected and a 'Select' button to its right.
- Mac Address:** A text input field.
- Alias(es):** A text input field.
- At the bottom, there are two buttons: 'Submit' and 'Edit Full Object Profile'.

- 3 Review the following table and fill in the fields as necessary.

**Table 27 Quick Add fields**

Field	Description
Object Class	<i>Required.</i> Select a value from the drop-down list. For a definition of the allowable values, refer to <a href="#">Table 12</a> , “Object classes”, on page 93.

Field	Description
Object Name	<b>Required.</b> Enter the name of the object you are adding or click <b>Generate</b> to have the system generate a name. This field can contain up to 63 characters. The first and last characters of this field must be alphanumeric.
IP Address	<b>Required.</b> Enter the IP address of the object you are adding.
Domain	<b>Required.</b> Select the domain of the object you are adding. Click <b>Select</b> to populate the drop-down list with all applicable domains, and select a domain from the list or select <b>Use Subnet Default</b> . You can also select <b>&lt;None&gt;</b> .
MAC Address	<b>Optional.</b> Enter the MAC address of the object you are adding.
Alias(es)	<b>Optional.</b> Enter the aliases of the object you are adding. <b>Important!</b> Multiple aliases must be separated by a space.

4 Choose one of the following actions.

If you want to ...	Then
Add the object without editing it	<ol style="list-style-type: none"> <li>Click <b>Submit</b>.</li> </ol> <p><b>Result:</b> The object is added and the Object added:&lt;objectname&gt; - &lt;ipaddress&gt; confirmation dialog opens.</p> <ol style="list-style-type: none"> <li>Click <b>OK</b> to close the dialog box.</li> </ol>
Add the object and edit its profile	<ol style="list-style-type: none"> <li>Click <b>Edit Full Object Profile</b>.</li> </ol> <p><b>Result:</b> The object is added and the Object added:&lt;objectname&gt; - &lt;ipaddress&gt; confirmation dialog opens.</p> <ol style="list-style-type: none"> <li>Click <b>OK</b> to close the dialog box.</li> </ol> <p><b>Result:</b> The object profile opens.</p> <ol style="list-style-type: none"> <li>Edit the object profile, as described in <a href="#">“Object profile”, on page 268</a>.</li> </ol>

END OF STEPS



## To use the Quick Delete function

---

### When to use

Use this procedure to delete an object.

### Procedure

To delete an object, follow these steps.

- 1 Mouse over the **Address Management** tab and click **IPv4**. Alternatively, click the IPv4 Management icon (  ) in the toolbar.

**Result:** The IPv4 Hierarchy opens.

- 2 Mouse over **Actions** and select **Quick Delete**. The Quick Delete page opens.



- 3 Enter either the Object Name or the IP Address of the object you want to delete.
  - If you enter an IP address, it must be an exact match of an existing IP address.
  - If you enter an object name:
    - You may enter an exact match.
    - You may enter one or more alphanumeric characters followed by the wildcard character (\*). Click **Submit** to return a list of matching object names. You can then place a check in the **Select** checkbox for those objects you wish to delete.

- 4 Click **Submit**. A dialog box asks you if you are sure you want to delete the object or objects.

- 5 Click **OK**.

**Result:** A dialog box opens to confirm that the object was deleted.

- 
- 6** Click **OK** to close the dialog box.

END OF STEPS

---



# To use the Quick Move function

---

## When to use

Use this procedure to move an object.

## Procedure

To move an object, follow these steps.

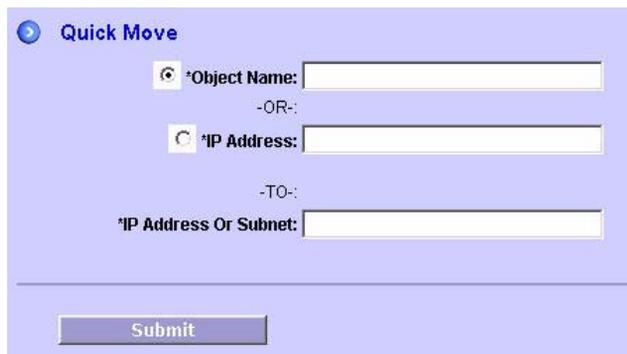
- 
- 1 Mouse over the **Address Management** tab and click **IPv4**. Alternatively, click the IPv4 Management icon (  ) in the toolbar.

**Result:** The IPv4 Hierarchy opens.

---

- 2 Mouse over **Actions** and select **Quick Move**.

**Result:** The Quick Move page opens.



The screenshot shows a web form titled "Quick Move" with a blue header. It contains three input fields: "Object Name:" with a radio button, "IP Address:" with a radio button, and "IP Address Or Subnet:". Between the first two fields is the text "-OR:", and between the second and third is "-TO:". A "Submit" button is located at the bottom of the form.

- 
- 3 Enter either the **Object Name** or the **IP Address** of the object you want to move.
    - If you enter an IP address, it must be an exact match of an existing IP address.
    - If you enter an object name:
      - You may enter an exact match.
      - You may enter one or more alphanumeric characters followed by the wildcard character (\*). Click **Submit** to return a list of matching object names. You can then place a check in the **Select** checkbox for the object you wish to move.

**Important!** You can only move one object. If you select more than one, you receive an error message telling you that you can only move one object.

---

- 4 Enter either the **IP Address** or **Subnet** to which you are moving the object.

.....  
5 Click **Submit**.

**Result:** A dialog box asks if you are sure you want to move the object.

.....  
6 Click **OK**.

**Result:** The object is moved and the confirmation dialog opens with the message **Moved from :<ipaddress> to:<ipaddress>**.

.....  
7 Click **OK** to close the dialog box.

.....  
E N D O F S T E P S  
.....



# Subnet management

## Subnet management overview

---

This section describes the following aspects of subnet management:

- Add a subnet
- View subnet properties
- Modify subnet properties
- Delete a subnet
- Split a subnet
- Join subnets

### Subnet management

In contrast with previous releases of the web client, VitalQIP 7.1 supports the management of IPv4 subnets: you can add, modify, and delete subnets, as well as split and join them. The add subnet function is available when network properties are displayed, whereas other subnet functions are available when subnet properties are displayed.

### Reports

The following reports are accessible from the Subnet properties page:

- Subnet Audit Report
- IPv4 Subnets Report

The following reports are accessible from the Network properties page:

- IPv4 Subnets Report
- Subnet Usage Report

The following report is accessible from the Domain and Subnet Organization properties page:

- IPv4 Subnets Report

These reports are described in [Chapter 13, “Reports”](#).



## To add a subnet

---

### When to use

Use this procedure to create a subnet in the web client. You can also add a subnet with the Network\Reverse Zone function in the VitalQIP UI.

### Procedure

To add a subnet, follow these steps.

---

- 1 Mouse over the **Address Management** tab and click **IPv4**. Alternatively, click the IPv4 Management icon (  ) in the toolbar.

**Result:** The IPv4 Hierarchy opens in the Network view (refer to [Figure 10, “IPv4 Hierarchy - Network View”](#), on page 220).

---

- 2 Expand **Networks** and select the network to which you want to add a subnet.

**Result:** The Network properties page opens.



Network Properties - 192.0.2.0/24

Network Name: DocTest

Contact Email: doctest@example.com

Add Subnet Reports

3 Click **Add subnet**.

**Result:** The Add Subnet page opens.

**Add Subnet**

Length: 24

Domain Name: ...

Hosts per Subnet: 254

Subnet Mask: 255.255.255.0

Address Template:

Check Before Assign: None

Show Used Only:

**Subnet Warning**

Visual:

Email:

% Full:

**Subnet Preview**

Auto Calculate  User Defined

Start Address:

Number of Subnets: 1

Calculate Validate

**Search Results**

Submit Cancel

4 Define the subnet properties, as described in the following table.

**Table 28 Subnet property fields**

Field	Description
Length	Defines the length of the new subnet. Although the default length is the size of the network, you may select a different value from the drop-down list up to a value of 32.
Domain Name	<p><b>Optional.</b> The initial domain name defaults to empty. Use the domain search function to select a domain for the subnet. To search domains, click ... and add one from the <b>Search Results</b> list. Click <b>Set Default</b> to make the domain the default domain for the subnet. Other subnets in this network can have a different default domain. To search for a domain, follow these steps.</p> <ol style="list-style-type: none"> <li>1. Click ... to open the Domain Search window.</li> <li>2. Enter search criteria in the <b>Search Text</b> field and click <b>Search</b>. Leave the field blank to return all domains in the database. You may also use the wildcard (*) as needed.</li> <li>3. You may associate multiple domains with the subnet. Select a domain from the <b>Existing List</b> and click  to add the selected domain to the <b>Selected List</b>. Repeat as needed. To remove a domain from the <b>Selected List</b>, click .</li> <li>4. The first subnet in the list is the default domain. To select a different domain as the default, select the domain you want to be the default and click <b>Set Default</b>. The domain moves to the top of the <b>Selected List</b>.</li> </ol> <p><b>Important!</b> You may also change the default domain, by selecting a different domain from the <b>Domain Name</b> drop-down list after the Domain Search window is closed.</p> <ol style="list-style-type: none"> <li>5. Click <b>OK</b>.</li> </ol> <p><b>Result:</b> The domain appears in the <b>Domain Name</b> field.</p> <p>For further information on searching for a domain, refer to <a href="#">“To search for a domain”, on page 97</a>.</p>
Hosts per Subnet	<b>Read-only.</b> Displays the number of hosts in the subnet. This is determined by the value selected in the <b>Length</b> field.
Subnet Mask	<b>Read-only.</b> Displays the subnet mask for the subnet. This is determined by the value selected in the <b>Length</b> field.
Address Template	<p><b>Optional.</b> Select an address template from the drop-down list. Objects are created as specified in the selected template in a manner similar to that used in block allocation. Any domains specified in the address template are also associated with the subnet, in addition to those in the <b>Selected List</b>. For more information on address templates, refer to <a href="#">“Templates”, on page 89</a>.</p> <p><b>Important!</b> If you select an address template, the <b>Check Before Assign</b> field is disabled.</p>
Check Before Assign	The options are <b>Ping</b> or <b>None</b> . If Ping is selected, VitalQIP will later ping the address when each object is created. If no reply is received to the Ping, the address is free to be assigned. Otherwise, a warning message opens which states that the address is currently in use. It also asks if the user still wishes to allocate it. The message opens only when an object is being added in the VitalQIP client and is not caused by DHCP handing out leases.
Show Used Only	When turned on, this field creates a default in the Object Management window to display all objects that do not have a status of “Unused”.

Field	Description
Visual	In the <b>Subnet Warning</b> section, select <b>Visual</b> to have a warning displayed if the percentage of allocated IP addresses is greater than the percentage defined in the <b>% Full</b> field. Allocated addresses include used, reserved, dynamically allocated, planned, or any form of Bootp or DHCP address.
Email	In the <b>Subnet Warning</b> section, select <b>Email</b> to have an e-mail sent to all administrators assigned to manage the subnet if the percentage of allocated IP addresses is greater than the percentage defined in the <b>% Full</b> field. Allocated addresses include used, reserved, dynamically allocated, planned, or any form of Bootp or DHCP address.  <b>Important!</b> The e-mail address is defined in the Administrator Profile in the VitalQIP client.
% Full	When the number of objects put into service for a subnet reaches the threshold defined in the <b>% Full</b> field (from 0% to 99% full), a visual and/or e-mail warning is issued, based on the values of the <b>Visual</b> and <b>Email</b> check boxes.

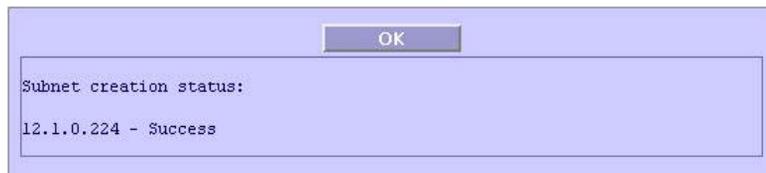
.....

**5** Choose one of the following actions to preview, validate, or select subnets to be created:

If you want to ...	Then ...
Calculate subnets automatically	<ol style="list-style-type: none"> <li>1. Click the <b>Auto Calculate</b> option button.</li> <li>2. Click <b>Calculate</b>.</li> </ol> <p><b>Result:</b> The <b>Search Results</b> list is populated with a foldered list of all possible subnets for the network and length/mask.</p> <ol style="list-style-type: none"> <li>3. Select at least one subnet you wish to validate.</li> <li>4. <i>Optional.</i> Click <b>Validate</b> to determine if the subnets are in use and if you have the privileges to create them.</li> </ol> <p><b>Result:</b> Any subnet that fails validation is deselected in the <b>Search Results</b> list.</p> <ol style="list-style-type: none"> <li>5. Click <b>Submit</b>.</li> </ol> <p><b>Important!</b> If the calculation returns more than 65,536 subnets, a warning opens to determine whether you want to continue. Click <b>Yes</b> to continue, or click <b>No</b> to abort.</p>

If you want to ...	Then ...
Create your own subnets	<ol style="list-style-type: none"> <li>1. Click the <b>User Defined</b> option button.</li> <li>2. Enter a starting address in the <b>Start Address</b> field.</li> <li>3. Enter the number of subnets you wish to create in the <b>Number of Subnets</b> field.</li> <li>4. <i>Optional.</i> Click <b>Calculate</b>. In the <b>Search Results</b> list, select the subnets you wish to validate.</li> <li>5. <i>Optional.</i> Click <b>Validate</b> to determine if the subnets are in use and if you have the privileges to create them. Any subnet that fails validation is deselected in the <b>Search Results</b> list.</li> <li>6. Click <b>Submit</b>.</li> </ol> <p><b>Important!</b> You do not need to use Calculate and Validate functions. VitalQIP attempts to create the subnets you requested. If a subnet already exists, the confirmation dialog box shown below would display entries with a subnet creation status of <b>Failed</b>.</p>

- 6 When the subnets have been created, a confirmation dialog similar to the following opens.



- 7 Click **OK** to confirm.

**Result:** The subnet is added to the hierarchy. Expand **Subnets** to confirm.

END OF STEPS



## To view subnet properties

---

### When to use

Use this procedure to access the Subnet Properties page, which is your starting point for managing objects in a subnet, as well as a variety of subnet operations.

### Procedure

To view the Subnet Properties page, follow these steps.

- 
- 1 Mouse over the **Address Management** tab and click **IPv4**. Alternatively, click the IPv4 Management icon (  ) in the toolbar.

**Result:** The IPv4 Hierarchy opens in the Network view.

- 
- 2 Mouse over the Actions menu and select **Subnets**.

**Result:** The Subnets view opens.

- 
- 3 Expand the Subnets view.

**Result:** A list of all subnets in the database opens.

- 
- 4 Click the subnet whose properties you want to view.

**Result:** The Subnet Properties page opens.

**Subnet Properties - 192.0.2.0/27**

Subnet Name:

Status:

Subnet Usage:

Network Address:

Network Name:

Subnet Organization:

OSPF Area:

Dynamic Object Allocation

Total:       Used:       %Utilized:

---

Manage Objects	Search Object	Add Next Object	Define Scope
Modify Properties	Split Subnet	Join Subnet	Delete Subnet
Reports			

From this page, you can select one of the following functions:

- Manage objects - refer to [“To manage objects” \(255\)](#)
- Search objects - refer to [“To search for an object” \(258\)](#)
- Add next object - refer to [“To add an object to the next available address in a subnet” \(261\)](#)
- Define a scope - refer to [“To define a scope” \(263\)](#)
- Modify subnet properties - refer to [“To modify subnet properties” \(238\)](#)
- Split a subnet - refer to [“To split a subnet” \(248\)](#)
- Join subnets - refer to [“To join subnets” \(250\)](#)
- Create subnet audit, subnet usage, and subnet information reports - refer to [“To delete a subnet” \(252\)](#)
- Delete a subnet - refer to [“To delete a subnet” \(252\)](#)
- Create subnet reports - refer to [“To produce an IPv4 Subnet Audit report” \(517\)](#) and [“To produce an IPv4 Subnet Usage report” \(527\)](#)

The following sections describe these functions in detail.

.....  
 E N D O F S T E P S



## To modify subnet properties

---

### When to use

The **Subnet Profile** function allows you to define the settings for a subnet. These settings apply to all objects defined in this subnet. Additionally, defining a DHCP/Bootp and/or a DHCP Subnet Policy Template in the VitalQIP thick client and attaching such templates to the Subnet Profile allows all clients on a particular subnet to have the same configuration. The DHCP/Bootp templates and Policy Templates are described in Chapter 2 of the *VitalQIP User's Guide*.

### Before you begin

- When an object is added in a subnet, it is assigned to the location and contact selected at the subnet level by default, unless it is overridden within the Object Profile for that object. For further information, refer to [“To assign location and contact information to an object”, on page 278](#).
- If you define object ranges in a subnet, the following rules apply.
  - Objects do not have to exist prior to the time the range is being defined.
  - The range must fall entirely within one existing subnet.
  - If the subnet is deleted, the object range is deleted.
  - If the subnet size changes due to being split or joined to another subnet, the object range is re-assigned to a subnet that completely contains the range. If no such subnet exists, the object range is deleted.
  - Multiple ranges can be defined within one subnet.
  - Multiple ranges can be assigned to a single administrator.
  - An administrator with permissions on an object range does not necessarily have permissions on the subnet itself. The administrator can see the associated subnet in the hierarchy, but must have write permissions for a subnet to create an object range in that subnet. If the administrator has permissions to assign an object in that object range or associated subnet, the object can be assigned to a sub-administrator.

### Procedure

To modify a subnet profile, follow these steps.

---

- 1 Mouse over the **Address Management** tab and click **IPv4**. Alternatively, click the IPv4 Management icon () in the toolbar.

**Result:** The IPv4 Hierarchy opens in the Network view.

---

- 2 Mouse over the Actions menu and select **Subnets**.

**Result:** The Subnets view opens.

.....  
3 Expand the Subnets view.  
**Result:** A list of all subnets in the database opens.

.....  
4 Click the subnet whose properties you want to modify.  
**Result:** The Subnet Properties page opens.

.....  
5 Click **Modify Properties**.  
**Result:** The Subnet Profile page opens.

**Subnet Profile**

**Subnet Profile**

Subnet Name:

Subnet Address:

Subnet Mask:

Subnet Usage:

Domain Name:  ...

Preferred DNS Server:

Alternate DNS Server: ...

Preferred Time Server:

Alternate Time Server: ...

DHCP Server Name:  ...

DHCP Option Template:  ...

DHCP Subnet Policy Template:  ...

TFTP server:

Primary Application:

Default Router:  **Select**

Hardware Type:

Comments:

MAC Pool: ...

Shared Network:

Primary Interface:

---

Check Before Assign:

Show Used Only:

Subnet Warning:  Visual  Email

% Full

---

Dynamic Object Allocation

Total  Used  %Utilized

**Policies**

**Location/Contact**

**Object Ranges**

**UDF**

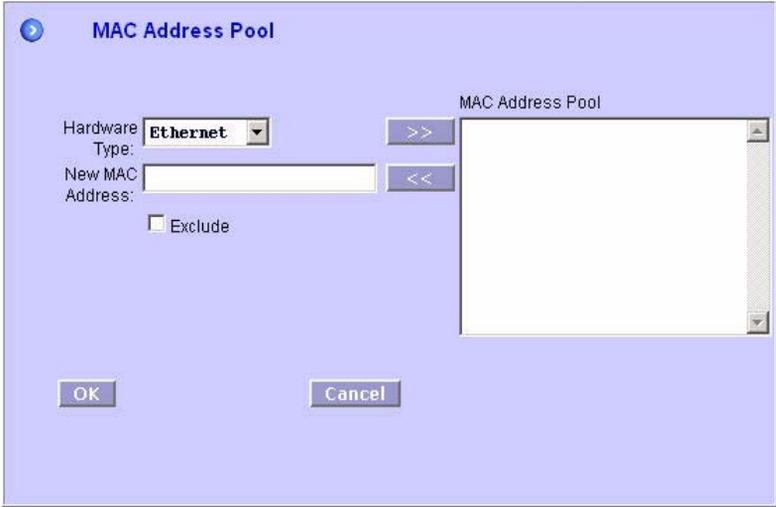
**Submit** **Cancel**

6 Fill in fields in the **Subnet Profile** as needed. For more information on a field, refer to the following table.

**Table 29 Subnet profile fields**

Field	Description
Subnet Name	Enter the name (up to 255 characters) for this subnet. This field can be left blank.
Subnet Address	<i>Display only.</i> The subnet address for this subnet displays in this field.
Subnet Mask	<i>Display only.</i> The subnet mask for this subnet displays in this field.
Subnet Usage	<i>Display only.</i> This value indicates the percentage of the IP addresses for this subnet that are currently in use.
Domain Name	<p>Either select one of the subnet's default domains from the drop-down list, or click ... to search for an existing domain. To search for a domain, follow these steps.</p> <ol style="list-style-type: none"> <li>1. Click ....</li> </ol> <p><b>Result:</b> The Domain Search window opens.</p> <ol style="list-style-type: none"> <li>2. Enter search criteria in the <b>Search Text</b> field and click <b>Search</b>. Leave the field blank to return all domains in the database. You may also use the wildcard (*) as needed.</li> <li>3. Select a domain from the <b>Existing List</b> and click  to add the selected domain to the <b>Selected List</b>. Repeat as needed. To remove a domain from the <b>Selected List</b>, click .</li> <li>4. Click <b>Set Default</b> to make one of the domains you selected the default domain for the subnet.</li> <li>5. Click <b>OK</b>.</li> </ol> <p><b>Result:</b> The domain appears in the <b>Domain Name</b> field.</p>
Preferred DNS Server	Assign the preferred DNS server for the objects within the subnet by selecting a DNS server from the drop-down list.
Alternate DNS Server	<p>Assign the alternate DNS server for the objects within the subnet. Click ... to display a list of DNS servers that can be assigned to the subnet. Select a server from the <b>Selected List</b> and click <b>OK</b>.</p> <p>To add a server to the list of DNS servers, select a server in the <b>Available List</b> and click .</p> <p>To remove a server from the <b>Selected List</b>, select the server and click .</p>
Preferred Time Server	Assign the preferred Time server of the domain for the subnet. Select a server from the drop-down list.
Alternate Time Server	<p>Assign the alternate Time server for the objects within the subnet. Click ... to display a list of servers that can be assigned. Select a server from the <b>Selected List</b> and click <b>OK</b>.</p> <p>To add a server to this list, select a server in the <b>Available List</b> and click .</p> <p>To remove a server from the <b>Selected List</b>, select the server and click .</p>
DHCP Server Name	Select the DHCP server assigned to the subnet (if any) from the drop-down list. Select <b>Same as in SubnetOrg Profile</b> if the subnet is managed by a subnet organization and you wish to use settings associated with a DHCP server previously assigned to that subnet organization.

Field	Description
DHCP Option Template	<p>Assign a DHCP template to the subnet from the drop-down list. The DHCP template is associated with all objects in the subnet that are tagged with DHCP, unless an object has had a different template assigned to it. Assigning a DHCP Template at the subnet level is optional. If no DHCP template is assigned to the subnet, either the template associated with the DHCP server or with an object is used.</p> <p>Select <b>Same as in SubnetOrg Profile</b> if the subnet is managed by a subnet organization and you wish to use settings associated with a DHCP Option Template previously assigned to that subnet organization.</p>
DHCP Subnet Policy Template	<p>If you want to assign a previously defined subnet policy template to the current subnet, select one from the drop-down list. For more information on subnet policy templates, refer to “DHCP policy templates”, in Chapter 2 of the <i>VitalQIP User’s Guide</i>.</p>
Tftp Server	<p>By default, this is the Bootp server, unless another server has been defined as the Tftp server. Select a server from the drop-down list.</p>
Primary Application	<p>Assigns an application for this subnet. Select the primary application from the drop-down list.</p>
Default Router	<p>Assign a <b>Default Router</b> (or routers) for the subnet in this field. The objects in this subnet inherit all the routers you assign. The routers can be overridden in the Object Profile, <b>Router</b> tab or within a DHCP Template.</p> <p><b>Important!</b> The <b>Always Append Router</b> policy automatically adds router objects to the default routers list if set to True. Refer to the “General policies” table in Chapter 3 of the <i>VitalQIP User’s Guide</i>.</p> <p>By default, this is either the router defined in the Global Allocation Policies for the subnet organization, or the first router that has been defined in the subnet. The default router is important for Bootp and DHCP. To assign a router, follow these steps.</p> <ol style="list-style-type: none"> <li>1. Click <b>Select</b> to display the <b>Existing Router List</b>.</li> </ol> <div> </div> <ol style="list-style-type: none"> <li>2. Select a router from the list and click <b>&gt;&gt;</b>.</li> </ol> <p><b>Result:</b> The router is added to the <b>Selected Router List</b>. To remove a router from the <b>Selected Router List</b>, click <b>&lt;&lt;</b>.</p>
Hardware Type	<p>Select the hardware type for the objects within the subnet: Ethernet, IEEE802, Token Ring, Pronet, Chaos, Arcnet, or AX.25.</p>
Comments	<p>Add any comments you wish to add about the subnet.</p>

Field	Description
MAC Pool	<p>This function is only used when the “RegisteredClientsOnly” policy is set to True in the <i>dhcpd.pcy</i> file (refer to “DHCP server policies”, in Chapter 2 of the <i>VitalQIP User’s Guide</i> for more information). To add a MAC address to the pool for this subnet, follow these steps.</p> <ol style="list-style-type: none"> <li>1. Click ... next to the <b>MAC Pool</b> field.</li> </ol> <p><b>Result:</b> The MAC Address Pool window opens.</p>  <ol style="list-style-type: none"> <li>2. Select a <b>Hardware Type</b>.</li> <li>3. Enter a <b>New MAC Address</b>.</li> </ol> <p><b>Important!</b> You can use the wildcard character (*) to specify a portion of a MAC address.</p> <ol style="list-style-type: none"> <li>4. Click  to add the new MAC address to the <b>MAC Address Pool</b> for this subnet.</li> </ol> <p>You can also unassign a MAC address by selecting it from the list and clicking .</p> <p><b>Important!</b> Duplicate MAC addresses are not allowed in the same subnet, even if the <b>Allow Duplicate MAC Addresses</b> global policy (described in “General policies”, in Chapter 3 of the <i>VitalQIP User’s Guide</i>) is set to True. You receive an error message if you try to add or modify the object and its MAC address is being used by another object in the same subnet.</p>
Shared Network	<p>To use the Secondary Addressing feature of DHCP, you must specify one subnet as primary. To do this, define the subnet as being part of a <b>Shared Network</b> by selecting a network from the drop-down list, or by selecting <b>Add New</b> and entering a network name in the field that appears. If this is a shared network, the <b>Primary Interface</b> check box is enabled.</p> <p><b>Important!</b> You must define at least one dynamic address on the subnet that is defined as the primary interface, and perform a DHCP generation.</p>

Field	Description
Primary Interface	To distinguish this subnet as the primary subnet in the shared network, check the <b>Primary Interface</b> check box. When checked, this subnet acts as the primary subnet for all those subnets defined in this physical LAN segment. If you check <b>Primary Interface</b> in multiple Subnet Profiles, the last one selected becomes the Primary Interface.
Dynamic Object Allocation	<b>Total</b> displays the number of dynamic objects on the subnet. <b>Used</b> displays the number of dynamic objects that are in use. <b>%Utilized</b> indicates the percentage utilization of dynamic objects defined on the subnet.

7 Expand other sections to complete the modification of the subnet profile.

### Subnet-level policies

The Dynamic DNS section of Global Policies in the VitalQIP UI contains an **Allow DHCP Clients to Modify Dynamic Object Resource Records** policy that defaults to False. This policy should be set to True if Microsoft DHCP clients are to be able to send secure updates to a Windows DNS server. The policy can be enabled at the Global Policies level where the setting would apply to *all* subnets, or it can be enabled at the subnet profile level where the policy would apply to a specific subnet only.

To set the **Allow DHCP Clients to Modify Dynamic Object Resource Records** policy at the subnet level, follow these steps.

8 Expand the **Policies** section.



9 Choose one of the following actions.

If you want to ...	Then ...
Leave the <b>Allow DHCP Clients to Modify Dynamic Object Resource Records</b> policy at the same setting it has in Global Policies.	Select <b>Same as in Global Policies</b> in the <b>Subnet Level</b> drop-down field.
Override a True setting in Global Policies	Select <b>False</b> in the <b>Subnet Level</b> drop-down field.
Override a False setting in Global Policies	Select <b>True</b> in the <b>Subnet Level</b> drop-down field.

## Location and contact information

The **Location/Contact** section allows you to specify where the subnet is located and who the contact is.

To enter location and/or contact information for the subnet profile, follow these steps.

- 10 Expand the **Location/Contact** section.

The screenshot shows a web form titled "Location/Contact" with a green checkmark icon in the top left. The form is divided into two sections: "Location" and "Contact".

**Location Section:**

- A "Select" button is positioned to the right of the "Location" label.
- Input fields are provided for "Street 1:", "Street 2:", "City:", "State:", "Zip:", and "Country:".

**Contact Section:**

- A "Select" button is positioned to the right of the "Contact" label.
- Input fields are provided for "Contact Last Name:", "Contact First Name:", "Contact Telephone:", "Contact Pager:", and "Contact Email:".

- 11 To select a location, click **Select** in the **Location** section.

**Result:** A list of previously defined locations appears.

- 12 Select the desired location.

**Result:** The **Location** fields are populated by the selected data.

- 13 Click **Collapse**.

- 14 To select a contact, click **Select** in the **Contact** section.

**Result:** A list of previously defined contacts appears.

- 15 Select the desired contact.

**Result:** The **Contact** fields are populated by the selected data.

---

16 Click **Collapse**.

**Important!** To clear data from location or contact fields, click **Select** in the **Location** or **Contact** section and select the blank first entry.

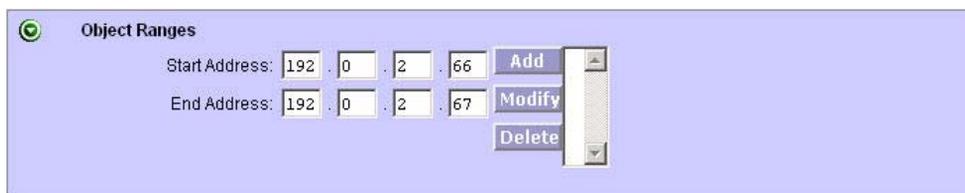
### Object ranges

A subnet can be subdivided into object ranges so that administrators can be assigned to administer only a specific set of objects rather than the whole subnet itself. Object ranges can then be assigned to managed lists in the Administrator and Administrative Roles functions in the VitalQIP UI.

To define a subnet object range, follow these steps.

---

17 Expand the **Object Ranges** section.



The screenshot shows a light blue panel titled "Object Ranges" with a green checkmark icon. Below the title, there are two rows of input fields. The first row is labeled "Start Address:" and contains four input boxes with values "192", "0", "2", and "66", followed by a blue "Add" button. The second row is labeled "End Address:" and contains four input boxes with values "192", "0", "2", and "67", followed by blue "Modify" and "Delete" buttons. A vertical scrollbar is visible to the right of the buttons.

---

18 Enter valid subnet addresses in the **Start Address** and **End Address** fields. The **Start Address** and **End Address** default to the subnet's first and last address.

---

19 Click **Add** and the range appears in the **Ranges** list.

---

20 Repeat steps 15 and 16 as necessary.

---

21 To delete an object range, highlight the appropriate object range in the **Existing Object Ranges** list, and click **Delete**.

---

22 To modify an object range, highlight the appropriate object range in the **Existing Object Ranges** list, modify the **Start Address** and/or **End Address** fields and click **Modify**.

### User defined fields

The **User-Defined Fields** section allows you to provide values for fields that have already been established for subnets. User-defined fields are set up through the **User-Defined Fields** function on the **Policies** menu in the VitalQIP UI.

To add a value for a user-defined field in a subnet, follow these steps.

- 23 Expand the **User-Defined Fields** section.



- 24 Highlight the field for which you wish to provide a value.

- 25 Enter a value in the **UDF Value** field.

- 26 Click **Modify**.

**Result:** The new value appears beside the UDF you selected.

- 27 Repeat steps 21 to 23 as necessary.

- 28 To edit or delete a value, highlight a field and use standard edit keys to modify or delete text. Click **Modify** to save the change to the **UDF Field** list.

- 29 Choose one of the following actions.

If you want to ...	Then ...
Save your changes to the subnet profile	1. Click <b>Submit</b> . <b>Result:</b> A confirmation dialog opens with the message <b>Subnet modified: &lt;##.##.##.##&gt;</b> . 2. Click <b>OK</b> . <b>Result:</b> The Subnet Properties page for the modified subnet opens.
Cancel any changes you made to the subnet profile	Click <b>Cancel</b> . <b>Result:</b> The Subnet Properties page opens.

END OF STEPS



## To split a subnet

---

### When to use

Use this procedure to split a subnet into smaller subnets. You can specify the new subnet length and preview the result.

### Before you begin

- If you split one or more subnets, the default router for the group may change.
- The split subnet function is disabled if the subnet was created as a result of the block allocation process.

### Procedure

To a split subnet, follow these steps.

- 
- 1 Mouse over the **Address Management** tab and click **IPv4**. Alternatively, click the IPv4 Management icon (  ) in the toolbar.

**Result:** The IPv4 Hierarchy opens in the Network view.

---

- 2 Mouse over the Actions menu and select **Subnets**.

**Result:** The Subnets view opens.

---

- 3 Expand the Subnets view.

**Result:** A list of all subnets in the database opens.

---

- 4 Select the subnet that you want to split.

**Result:** The Subnet Properties page opens.

---

- 5 Click **Split Subnet**.

**Result:** The Split Subnet page opens.

- 6 Select the required length from the **New Subnet Length** drop-down list.

**Result:** The **Number of Subnets to be generated** field indicates how many subnets will be created, whereas **Subnet Preview** displays a scrollable list of the actual subnets that will result from the split.

- 7 Click **Submit**.

**Result:** A warning dialog box opens with the message **When splitting subnets, some properties associated with the subnet may be lost. Continue?**

- 8 Choose one of the following actions.

If you want to ...	Then ...
Continue with the subnet split	<ol style="list-style-type: none"> <li>Click <b>OK</b>.</li> </ol> <p><b>Result:</b> A confirmation dialog opens with the message <b>Successfully split subnet &lt;##.##.##.##&gt; to new length &lt;#&gt;</b>.</p> <ol style="list-style-type: none"> <li>Click <b>OK</b>.</li> </ol> <p><b>Result:</b> The list of subnets is updated and the VitalQIP Software IP Management splash screen opens.</p>
Cancel the subnet split	<p>Click <b>Cancel</b>.</p> <p><b>Result:</b> The VitalQIP Software IP Management splash screen opens.</p>

END OF STEPS



# To join subnets

---

## When to use

Use this procedure to join (or reduce) the number of subnet addresses on your network and use the space more efficiently.

## Before you begin

- If you join subnets, the default router for the resultant subnet may change.
- Subnets cannot be joined if two objects in the “destination” subnets have the same MAC address (because duplicate MAC addresses cannot exist in the same subnet).
- The join subnet function is disabled if the selected subnet was created as a result of the block allocation process.
- The target subnet should exist and be the same length (or size) as the source subnet. If no target subnet exists, a dialog box opens with the message **There is no matching subnet to join with <sourcesubnet>**.

## Procedure

To join subnets, follow these steps.

---

- 1 Mouse over the **Address Management** tab and click **IPv4**. Alternatively, click the IPv4 Management icon (  ) in the toolbar.  
**Result:** The IPv4 Hierarchy opens in the Network view.

---
- 2 Mouse over the Actions menu and select **Subnets**.  
**Result:** The Subnets view opens.

---
- 3 Expand the Subnets view.  
**Result:** A list of all subnets in the database opens.

---
- 4 Select the subnet that you want to join.  
**Result:** The Subnet Properties page opens.

---
- 5 Click **Join Subnet**.  
**Result:** The Join Subnet page opens with the source and target subnet displayed (only one possible target subnet exists for each source subnet). The resulting subnet has the attributes of the target subnet. Any IP addresses present in the original subnet are moved under the newly created subnet at the same time as the original subnets are deleted.

6 Click **Submit**.

**Result:** A warning dialog box opens with the message **When joining subnets, some properties associated with the subnets may be lost. Continue?**

7 Choose one of the following actions.

If you want to ...	Then ...
Continue with the subnet join	<ol style="list-style-type: none"> <li>1. Click <b>OK</b>.</li> </ol> <p><b>Result:</b> A confirmation dialog opens with the message <b>Successfully joined subnet &lt;###.##.##.##&gt; into subnet &lt;###.##.##.##/#&gt;</b>.</p> <ol style="list-style-type: none"> <li>2. Click <b>OK</b>.</li> </ol> <p><b>Result:</b> The list of subnets is updated and the VitalQIP Software IP Management splash screen opens.</p>
Cancel the subnet join	<p>Click <b>Cancel</b>.</p> <p><b>Result:</b> The VitalQIP Software IP Management splash screen opens.</p>

END OF STEPS



## To delete a subnet

---

### When to use

Use this procedure to delete a subnet.

### Before you begin

- If any objects exist in the subnet you want to delete, they will also be deleted.
- Subnets that were created by the block allocation process cannot be deleted.

### Procedure

To delete a subnet, follow these steps.

---

- 1 Mouse over the **Address Management** tab and click **IPv4**. Alternatively, click the IPv4 Management icon (  ) in the toolbar.

**Result:** The IPv4 Hierarchy opens in the Network view.

---

- 2 Mouse over the **Actions** menu and select **Subnets**.

**Result:** The Subnets view opens.

---

- 3 Expand the Subnets view.

**Result:** A list of all subnets in the database opens.

---

- 4 Select the subnet you want to delete.

**Result:** The Subnet Properties page opens.

---

- 5 Click **Delete Subnet**.

**Result:** A warning dialog opens with the message **Objects associated with selected subnet(s) will be deleted as well. Continue?**

---

- 6 Click **OK**.

**Result:** The subnet is deleted and a confirmation dialog opens with the message **Subnet deleted: ##.##.##.##**

.....  
7 Click **OK**.

**Result:** The subnet is removed from the IPv4 hierarchy and the VitalQIP Software IP Management splash screen opens.

.....  
E N D O F S T E P S  
.....



# Object management

## Object management overview

---

### **Object profile**

The object profile is available within the Address Management function. The object profile allows you to add data to an object beyond what is available when you use the Quick Add function.

You access the object profile by selecting a subnet in the hierarchy page (in either IPv4 or IPv6), which displays the Subnet Properties page where you can access objects and their profiles in the subnet. This section describes the functions available to you within the object profile.



## To manage objects

---

### When to use

Use this procedure to view, modify and add objects within the subnet.

### Before you begin

VitalQIP validates data to prevent CNAME conflicts in the same organization by default. If a CNAME conflict occurs, an error message displays, and you cannot add or modify the profile. You can disable this feature by setting the **Validate CNAME Records** policy in the VitalQIP client Global Policies to False. Refer to the *VitalQIP User's Guide* for more information on the policy. When you add or modify an object, validation checks are made against:

- Object aliases
- Object resource records
- Domain resource records
- Reverse zone resource records

### Procedure

To access the Manage Objects function, follow these steps.

- 1 Mouse over the **Address Management** tab and click **IPv4**. Alternatively, click the IPv4 Management icon (  ) in the toolbar.

**Result:** The IPv4 Hierarchy opens.

- 2 Select the domain (if applicable) and network so the subnet whose properties you want to view is visible.

- 3 Click the subnet.

**Result:** The Subnet Properties page opens.

- 4 Click **Manage Objects**.

**Result:** The Manage Objects page opens.

**Manage Objects**  
**Address Assignment List For Subnet**

Subnet: 13.0.0.0/24

Subnet Name:

View Objects of Status: **ALL**

Select	IP Address	Object Name	Object Class	Status	Domain Name
<input type="checkbox"/>	13.0.0.1			Unused	
<input type="checkbox"/>	13.0.0.2			Unused	
<input type="checkbox"/>	13.0.0.3			Unused	
<input type="checkbox"/>	13.0.0.4			Unused	
<input type="checkbox"/>	13.0.0.5			Unused	
<input type="checkbox"/>	13.0.0.6			Unused	
<input type="checkbox"/>	13.0.0.7			Unused	
<input type="checkbox"/>	13.0.0.8			Unused	
<input type="checkbox"/>	13.0.0.9			Unused	
<input type="checkbox"/>	13.0.0.10			Unused	

Page Size: 10

Select All      Unselect All

Delete Selected      Refresh

The top of this page displays the subnet address and subnet name (if one has been assigned). The remaining fields are described in the following table.

**Table 30      Address assignment list fields**

Field	Description
View Objects of Status	<p>This drop-down list limits the address list to objects with the status you select, as follows.</p> <ul style="list-style-type: none"> <li>• All</li> <li>• Scheduled Move</li> <li>• Unused</li> <li>• Used</li> <li>• Static</li> <li>• Dynamic</li> <li>• Reserved</li> <li>• Manual Bootp</li> <li>• Automatic Bootp</li> <li>• Manual DHCP</li> <li>• Automatic DHCP</li> <li>• Dynamic DHCP</li> </ul> <p>Select a status and click <b>Refresh</b> to see the updated list.</p>

Field	Description
Select	This checkbox allows you to select one or more objects in the list to be deleted. After you have selected the objects, you can click <b>Delete Selected</b> to delete them.
IP Address	This clickable field contains the IP address of the object. Click on this address to see the object profile for the object.
Object Name	This field contains the name of the object assigned to it when it was created. You can change this name if you modify this object's profile. This field can contain up to 63 characters. The first and last characters of this field must be alphanumeric.
Object Class	This field contains the class of the object assigned when it was created. You can change this class if you modify this object's profile.
Status	This field contains the status of the object assigned to it when it was created. You can change this status if you view this object's profile. The status is "Unused" if no object is created for this IP address yet.
Domain Name	This field contains the domain name of the object assigned to it when it was created. You can change this domain name if you modify this object's profile.

.....

5 To delete objects, click the **Select** checkbox next to each object you want to delete, and then click **Delete Selected**. To select all addresses, click **Select All**.

.....

6 To select an object to modify, click the object's IP address.

**Result:** The object profile opens for that object. Refer to [Table 32, "Object fields"](#), on [page 270](#) for detailed information on the fields in the object profile.

.....

7 To add an object, click an IP address that is not assigned to an object,

**Result:** The object profile opens. Enter values in the fields in the object profile. Refer to [Table 32, "Object fields"](#), on [page 270](#) for detailed information on those fields.

.....

END OF STEPS



## To search for an object

---

### When to use

Use this procedure to search for a specific object in a subnet.

### Procedure

To search for a specific object, follow these steps.

---

- 1 Mouse over the **Address Management** tab and click **IPv4**. Alternatively, click the IPv4 Management icon (  ) in the toolbar.

**Result:** The IPv4 Hierarchy opens.

---

- 2 Expand the hierarchy so the subnet whose properties you want to view is visible.
- 

- 3 Click the subnet.

**Result:** The Subnet Properties page opens.

---

- 4 Click **Search Object**.

**Result:** The Object Search page opens.

- .....
- 5 In the **Type** field, select whether you are searching for a **Name**, an **IP Address**, or a **MAC Address** from the drop-down list.
- .....
- 6 Enter text in the **Search String** field based on the type of object for which you are searching. Allowable values are as follows:
    - **Name** – Enter freeform text. You may use the wildcard character (\*) for 0 or more characters.
    - **Address** – Enter a valid IP address. If you enter an invalid IP address, you receive an error message.
    - **MAC Address** – Enter a 12 or 16 hexadecimal character MAC Address. If you use colon separators, the entire MAC address must have colons separating each two hexadecimal characters. If you enter an invalid MAC address, you receive an error message.
- .....
- 7 After entering values in the fields on the Object Search page, click **Search**.
 

**Result:** If only one object matches your search, the object profile displays. If more than one object matches your search, the Object Search page displays a list of IP addresses that matched the search criteria.

**Object Search**

Search For Objects in Subnet: 202.202.202.0/26 ()

Type: **Name**

Search String: \*

**Search**

**Search Results**

IP Address	Object Name
<a href="#">202.202.202.1</a>	<a href="#">rtp000002rts.lucent.com</a>
<a href="#">202.202.202.3</a>	<a href="#">wsp000008wss.lucent.com</a>
<a href="#">202.202.202.4</a>	<a href="#">wsp000009wss.lucent.com</a>
<a href="#">202.202.202.6</a>	<a href="#">wsp000011wss.lucent.com</a>
<a href="#">202.202.202.27</a>	<a href="#">wsp000010wss.lucent.com</a>
<a href="#">202.202.202.48</a>	<a href="#">udp000003uds.lucent.com</a>
<a href="#">202.202.202.49</a>	<a href="#">udp000002uds.lucent.com</a>
<a href="#">202.202.202.50</a>	<a href="#">udp000001uds.lucent.com</a>
<a href="#">202.202.202.51</a>	<a href="#">udp000004uds.lucent.com</a>
<a href="#">202.202.202.52</a>	<a href="#">udp000005uds.lucent.com</a>

- 8 Click the IP Address or the object name of the object whose object profile you want to view. The object profile displays. For detailed information about the object profile, refer to “Object profile”, on page 268.

END OF STEPS



## To add an object to the next available address in a subnet

---

### When to use

Use this procedure to assign an object, such as a workstation or router, to the next available IP address in a subnet.

### Procedure

To use the Add Next Object function, follow these steps.

- 1 Mouse over the **Address Management** tab and click **IPv4**. Alternatively, click the IPv4 Management icon (  ) in the toolbar.

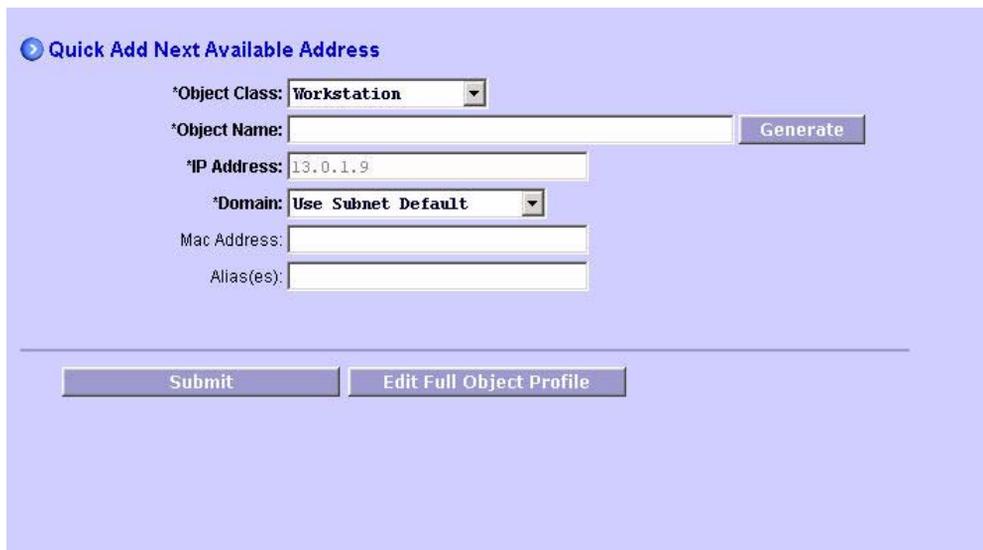
**Result:** The IPv4 Hierarchy opens.

- 2 Select the domain (if applicable) and network so the subnet whose properties you want to view is visible.

- 3 Click the subnet.

**Result:** The Subnet Properties page opens.

- 4 Click **Add Next Object**. The Quick Add Next Available Address page opens. The IP address is initially filled-in and is not editable.



The screenshot shows a web form titled "Quick Add Next Available Address" with a blue header. The form contains several input fields and buttons:

- \*Object Class:** A dropdown menu with "Workstation" selected.
- \*Object Name:** An empty text input field.
- \*IP Address:** A text input field containing "13.0.1.9".
- \*Domain:** A dropdown menu with "Use Subnet Default" selected.
- Mac Address:** An empty text input field.
- Alias(es):** An empty text input field.

At the bottom of the form, there are two buttons: "Submit" and "Edit Full Object Profile". A "Generate" button is located to the right of the \*Object Name field.

- .....
- 5 Enter an object name or click **Generate** to automatically fill in the **Object Name** field.
- .....
- 6 Refer to [Table 27, “Quick Add fields”, on page 224](#) for detailed information on the fields on this page.
- .....
- 7 Choose one of the following actions.

If you want to ...	Then ...
Add the object without editing it	1. Click <b>Submit</b> . <b>Result:</b> The object is added and the Object added:<objectname> - <ipaddress> confirmation dialog opens. 2. Click <b>OK</b> to close the dialog box.
Add the object and edit its profile	1. Click <b>Edit Full Object Profile</b> . <b>Result:</b> The object is added and the Object added:<objectname> - <ipaddress> confirmation dialog opens. 2. Click <b>OK</b> to close the dialog box. <b>Result:</b> The object profile opens. 3. Edit the object profile, as described in <a href="#">“Object profile”, on page 268</a> .

.....

END OF STEPS

.....



## To define a scope

---

### When to use

Use this procedure to define a scope.

### Before you begin

- Multiple managed ranges may be specified but only one address type (Static, Dynamic, or Reserved) is allowed per scope.
- All IP addresses to be included in the scope must be unused. The scope is not created if any IP address in the range is already used, or overlaps with another range.
- A selected subnet should be associated with at least one domain.
- To define a scope, an administrator needs to have permission for the network and subnet.

### Procedure

To define a scope, follow these steps.

---

- 1 Mouse over the **Address Management** tab and click **IPv4**. Alternatively, click the IPv4 Management icon (  ) in the toolbar.

**Result:** The IPv4 Hierarchy opens in the Network view.

---

- 2 Mouse over the **Actions** menu and select **Subnets**.

**Result:** The Subnets view opens.

---

- 3 Expand the Subnets view and click the subnet whose properties you want to view.

**Result:** The Subnet Properties page opens.

---

- 4 Click **Define Scope**.

**Result:** The Define Scope/Range page opens.

---

Define Scope/Range - 192.0.2.96/27

**Object Range**

\* Start Address: 192 0 2 96

Number of Objects:

Select	Start Address	Number of Objects

**Object Scope/Range Definition:**

\* Address Type:

\* Object Class:

\* Domain Name:  ...

DHCP Server:

DHCP Option Template:

DHCP Scope Policy Template:

Lease Time:

User Class:

Vendor Class:

5 **Required.** In the **Start Address** field, enter an unused start address for the scope. The default value is the subnet address, so this must be changed. VitalQIP checks the following when the scope is created:

- The start address is not the same as the subnet address
- The start address is smaller than the maximum IP address allowed on the subnet
- There is no overlap if multiple ranges are specified
- Addresses in the specified range(s) do not already exist in the database.

6 In the **Number of Objects** field, enter the number of objects to be added to the scope. The default is blank.

7 Click **Add**.

**Result:** The scope appears in the scope list.

Define Scope/Range - 192.0.2.96/27

Object Range

\* Start Address: 192 0 2 96

Number of Objects:

Add Delete

Select	Start Address	Number of Objects
<input type="checkbox"/>	192.0.2.97	3

- 8 If required, add more scopes of the same address type and object class and click **Add**.

**Result:** The scopes are added to the scope list.

If you need to remove scopes from the list, check the **Select** check box beside the scopes you wish to remove and click **Delete**.

**Result:** The scopes are removed from the scope list.

- 9 When you have finished adding scope(s) to the scope list, define the scope(s) in the **Object Scope/Range Definition** section, as described in the following table.

**Table 31 Object Scope/Range Definition fields**

Field	Description
Address Type	<b>Required.</b> Select the type of address to be defined in the scope. The options are: <ul style="list-style-type: none"> <li>• Static</li> <li>• Dynamic</li> <li>• Reserved</li> </ul> The default is Dynamic.
Object Class	<b>Required.</b> Select an object class from the drop-down list. The list includes Workstation, X-Terminal, PC, Printer, Server, Wiring_HUB, Router, Bridge, Terminal_Server, Switch, Legacy_System, Gateway, Test_Equipment, Undefined, Others, and Partially_Managed. The default is Workstation.

Field	Description
Domain Name	<p><b>Required.</b> Enter the domain that is associated with the subnet. To search for domains associated with the subnet, follow these steps,</p> <ol style="list-style-type: none"> <li>1. Click .</li> </ol> <p><b>Result:</b> The Domain Search dialog box opens.</p> <p>In the <b>Domain Name</b> field, enter the first few letters of the domain name and use the wildcard (*) as needed, or leave the field blank to return all domains in the subnet.</p> <ol style="list-style-type: none"> <li>2. Click <b>Search</b>.</li> </ol> <p><b>Result:</b> The results appear in the <b>Search Results</b> list.</p> <ol style="list-style-type: none"> <li>3. Highlight the domain you want to associate with the scope.</li> <li>4. Click <b>Select</b>.</li> </ol> <p><b>Result:</b> The Domain Search dialog box closes and the domain you selected appears in the <b>Domain Name</b> field.</p>
DHCP Server	<p><b>Required if Address Type is Dynamic.</b> Select a DHCP Server to be used for dynamic scopes from the drop-down list. The default is the first DHCP Server in the alphabetized list.</p>
DHCP Option Template	<p><b>Required if Address Type is Dynamic.</b> Select a DHCP option template to be associated with this scope of addresses from the drop-down list. The default is the first DHCP option template in the alphabetized list. For further information on DHCP option templates, refer to Chapter 2 in the <i>VitalQIP User's Guide</i>.</p>
DHCP Scope Policy Template	<p>Select a DHCP scope policy template to be associated with this scope of addresses. The default is blank. For further information on DHCP scope policy templates, refer to Chapter 2 in the <i>VitalQIP User's Guide</i>.</p>
Lease Time	<p>Displays the lease time of dynamic objects. This value is derived from the DHCP Server Profile. The default is typically set to 776000 seconds (or 3 months). Possible values are -1 for an infinite lease, or between 3600 and 2147483647.</p>
User Class	<p>Select a User Class to be associated with this scope of addresses. The default is blank.</p>
Vendor Class	<p>Select a Vendor Class to be associated with this scope of addresses. The default is blank.</p>

10 Click **Submit**.

**Result:** A confirmation dialog box opens with the message **Define Scope/Range was Successful!**

**Important!** If the **Check Before Assign** field (in Subnet Properties) was set to **Ping**, the message reads **Define Scope/Range was Successful! Note: The objects were however not pinged prior to creation.**

.....  
**11** Click **OK**.

**Result:** The dialog box closes and the Subnet Properties page opens.

.....  
**12** Use the Manage Objects function to manage the scope further. Refer to [“To manage objects”](#), on page 255 and [“To enter object information”](#), on page 269.

.....  
E N D O F S T E P S  
.....



# Object profile

---

## Overview

The object profile allows you to add and modify an object's information about the object, alias, hardware information, location, and user-defined fields.

You access the object profile when you add an object from the Subnet Profile page, when you select an existing object from the Manage Objects page, and when you use the Quick Add function. Refer to [“To add an object to the next available address in a subnet”](#), on page 261, [“To manage objects”](#), on page 255 and [“To use the Quick Add function”](#), on page 224 for details about these functions.

At this point, you can add or modify the fields in the Object Profile. **Cancel** exits the object profile and returns you to your prior starting point.

**Important!** Do not click **Submit** until you have finished filling in fields in all sections of the Object Profile.

## Description

The object profile is divided into the following sections:

- Object
- Alias
- Asset
- General
- DHCP
- UDF (User-Defined Fields)
- Routers
- Mail servers
- Policies

Each part of the object profile is described in the following sections.

**Important!** Not all sections of the Object Profile display for all object types. Refer to each section for specific information.



## To enter object information

---

### When to use

Use this procedure to add network information for an object in an object profile.

### Procedure

To enter network information for an object, follow these steps.

---

- 1 Open an object profile, using any of the following methods:
  - **Quick Add -> Edit Full Object Profile**
  - **Global Search**
  - **Subnet Properties -> Manage Objects**
  - **Subnet Properties -> Search Object**
  - **Subnet Properties -> Add Next Object -> Edit Full Object Profile**

**Result:** The object you selected opens in the Object Profile page.

**Modify Object Profile**

**Object**

\*IP Address: 10.0.3.143

Subnet Name: test@

Subnet Address: 10.0.3.128

Subnet Mask: 255.255.255.128

\*Object Class: Workstation

\*Object Name: wsp001471wss **Generate**

Domain Name: doctest2.com

Dynamic Configuration: Dynamic-DHCP

Object Description:

Application: <None>

Mac Address:

Time To Live TTL: 0

---

Name Services:   A (Host IPv4)  
 PTR (Pointer)

---

Dynamic DNS Updates:  A (Host IPv4)  
 PTR (Pointer)  
 CName  
 MX

**Alias**

- .....
- 2 Enter network information in the Object section fields, as described in the following table.

**Table 32 Object fields**

<b>Field</b>	<b>Description</b>
IP Address	<i>Read only.</i> This field is filled in automatically.
Subnet Name	<i>Read only.</i> Name assigned to the subnet when it was created. This field can be blank (null).
Subnet Address	<i>Read only.</i> Address of the subnet
Subnet Mask	<i>Read only.</i> Subnet mask.

Field	Description
Object Class	<p><b>Required.</b> Select a value from the drop-down list. The list of values shown is delivered with VitalQIP, however this list is customizable. Therefore the list may contain additional values, or may not contain some values shown in the following list For more information about defining object classes, refer to the <i>VitalQIP User's Guide</i>. Allowable values are as follows:</p> <p><b>Workstation</b> – defines object as a general-purpose computer used by one person at a time and offers higher performance than normally found in a personal computer.</p> <p><b>X-terminal</b> – defines object as an intelligent terminal, which operates as an X server directly connected to Ethernet.</p> <p><b>PC</b> – defines object as a personal computer.</p> <p><b>Printer</b> – defines object as a device that prints text or graphics on paper.</p> <p><b>Server</b> – defines object as a computer that provides a service(s) for other computers connected to it via a network.</p> <p><b>Wiring_Hub</b> – defines object as a hub at a point where a wiring system in a building or a room is connected to a main concentrator.</p> <p><b>Router</b> – defines object as a device in a network that handles message transfers between computers.</p> <p><b>Bridge</b> – defines object as a device that forwards traffic between network segments based on data link layer information.</p> <p><b>Terminal_Server</b> – defines object as a hardware device or server that provides terminals (PCs, printers, and so on) with a common connection point to a local or wide area network.</p> <p><b>Switch</b> – defines object as a packet or circuit switch.</p> <p><b>Legacy_System</b> – defines object as a database management system running on mainframes or minicomputers.</p> <p><b>Gateway</b> – defines object as a device that enables data to flow between different networks.</p> <p><b>Test_Equipment</b> – defines object as equipment used for testing.</p> <p><b>Undefined</b> – defines object as an unknown device.</p> <p><b>Others</b> – defines object as something other than object types listed here.</p> <p><b>External</b> – defines object as being created by dynamic DNS updates from some product to a DNS server managed by VitalQIP.</p> <p><b>Partially_Managed</b> – allows an object to be managed by VitalQIP administrators and externally modified by Windows 2000/2003 administrators.</p>
Object Name	<p><b>Required.</b> This field can be automatically filled in by clicking <b>Generate</b> if your VitalQIP system uses Object Naming Policies, as discussed in Chapter 3 of the <i>VitalQIP 7.1 User's Guide</i>. If this field is not filled in automatically, enter a name for the object (alphanumeric, maximum 32 characters; hyphens and underscores are allowed). The same name cannot be applied to more than one object unless the Unique Name Warning in the Administrator Profile is set to False. An object can never share the same name as a domain, however.</p> <p><b>Important!</b> You cannot change the name of an object that is attached to a server unless you are the Master administrator, or have permissions for the server.</p>

Field	Description
Domain Name	<p><i>Optional.</i> Defaults to the subnet default. To search for a different subnet domain, follow these steps,</p> <ol style="list-style-type: none"> <li>1. Click .</li> </ol> <p><b>Result:</b> The Domain Search dialog box opens.</p> <p>In the <b>Domain Name</b> field, enter the first few letters of the domain name and use the wildcard (*) as needed, or leave the field blank to return all domains in the subnet.</p> <ol style="list-style-type: none"> <li>2. Click <b>Search</b>.</li> </ol> <p><b>Result:</b> The results appear in the <b>Search Results</b> list.</p> <ol style="list-style-type: none"> <li>3. Highlight the domain you want to associate with the scope.</li> <li>4. Click <b>Select</b>.</li> </ol> <p><b>Result:</b> The Domain Search dialog box closes and the domain you selected appears in the <b>Domain Name</b> field.</p>
Dynamic Configuration	<p><i>Optional.</i> Allowable values are:</p> <ul style="list-style-type: none"> <li>• <b>None</b> Default. Allocates this address without using the Bootp or DHCP protocol. No Bootp or DHCP servers or files are involved. Select <b>None</b> to add Static objects.</li> <li>• <b>M-BOOTP</b> Manual Bootp. Allocates the address using the Bootp protocol where the MAC address is defined. This option adds the DHCP section to the page. For additional information on assigning Manual Bootp information, refer to <a href="#">“To set up a manual Bootp object”</a>, on page 282.</li> <li>• <b>A-BOOTP</b> Automatic Bootp. Allocates the address using the Bootp protocol where the MAC address is not known. This option adds the DHCP section to the page.</li> <li>• <b>M-DHCP</b> Manual DHCP. Allocates this address using the DHCP protocol where the MAC address is defined. This option adds the DHCP section to the page.</li> <li>• <b>A-DHCP</b> Automatic DHCP. Allocates the address using the DHCP protocol, from a DHCP template with an infinite lease. This option adds the DHCP section to the page.</li> <li>• <b>D-DHCP</b> Dynamic DHCP. Defines the address using the DHCP protocol, from a DHCP template for a specific lease time. This option adds the DHCP section to the page.</li> </ul>
Object Description	<p><i>Optional.</i> Enter a text description of the object.</p>
Application	<p><i>Optional.</i> Defaults to None. Specify the name of the application you want to assign to the IP address or addresses. The application field associates objects with a particular application or use. Objects can then be managed by an administrator based on a defined application. Select an application from the drop-down list of existing applications.</p>
Mac Address	<p><b>Required</b> if Dynamic Configuration is set to <b>M-BOOTP</b>. <i>Optional</i> otherwise. Enter a valid MAC address. This MAC address must be unique for all objects in a specific network.</p>
Time to Live TTL	<p>The amount of time (in seconds) this information lives on the DNS server.</p>

Field	Description
Group Name	<p>If the object is selected to be a “Router”, you can select a Group Name this router belongs to, or enter a new router group. Using a router group allows you to group all the interfaces of a router to a single entity. (Each port on a router has a different IP address, but you can map them all to one router group.) Creating a router group creates a record in the DNS files to allow forward and reverse lookups on the router group name and associated IP addresses.</p> <p><b>Important!</b> Router groups can also be used to configure multi-homed objects within VitalQIP, but the objects must be defined as routers.</p>
Name Services	<p>Defines which Resource Records are written to the DNS server. These options are defaulted via the definition in the Dynamic DNS global policies (Static DNS Mask and Dynamic DNS Mask), but can be overridden by the <b>Name Services</b> check boxes that you select here. When a push occurs (Network Services function), the values that are checked are written to the server. You can check either or both of the following values, or you can leave both blank:</p> <ul style="list-style-type: none"> <li>• <b>A (Host IPV4)</b></li> <li>• <b>PTR (Pointer)</b></li> </ul>
Dynamic DNS Updates	<p>Select the type of records you want dynamically updated when this object is created or deleted. These options are set as defaults via the definition in the Dynamic DNS global policies (Static DNS Mask and Dynamic DNS Mask), but can be overridden by the Dynamic DNS Updates check boxes that you select here.</p> <p>You can check any combination of the following values, or you can leave them all blank:</p> <ul style="list-style-type: none"> <li>• <b>A (Host IPV4)</b></li> <li>• <b>PTR (Pointer)</b></li> <li>• <b>CNAME</b></li> <li>• <b>MX</b></li> </ul>

- 
- 3 Click **Submit** if you have finished entering all information for the object, or continue to another section of the object profile.

END OF STEPS

---



## To create an alias for an object

---

### When to use

Use this procedure to specify an alias for an object.

### Before you begin

- You cannot create an alias name that has the same name as a domain or an object.
- VitalQIP validates data to prevent CNAME conflicts in the same organization by default. If a CNAME conflict occurs, an error message displays, and you cannot add or modify the profile. You can disable this feature by setting the **Validate CNAME Records** policy in the VitalQIP client Global Policies to False. For more information on this policy, refer to the General policies table in Chapter 3 of the *VitalQIP User's Guide*. When you add or modify CNAME records, validation checks are made against:
  - Object names
  - Domain names
  - Any Object Profile resource records
  - Any Domain Profile resource records
  - Any Reverse Zone resource records
  - ENUM NAPTR resource records
  - IPv6 node names
  - Mail servers

### Procedure

To create an alias for an object, follow these steps.

---

- 1 Click on the collapsed icon () beside **Alias**.

**Result:** The **Alias** section opens.

- 
- 2 Enter an alias (of up to 63 alphanumeric characters) in the **Aliases** field. Hyphens and underscores are allowed.

For further information on how VitalQIP processes alias names, refer to the Alias example in Chapter 7 of the *VitalQIP 7.1 User's Guide*.

- 
- 3 Click the add icon ( >> ) to add the new alias to the list of current aliases.

- 
- 4 Repeat step 3 as often as necessary.

Click the remove icon ( << ) to delete an alias from the list of current aliases.

- 
- 5 Click **Submit** if you have finished entering all information for the object, or continue to another section of the object profile.

---

END OF STEPS



## To assign asset information to an object

---

### When to use

Use this procedure to add asset information for an object. Asset information is generally referred to as additional hardware/object information you want to track.

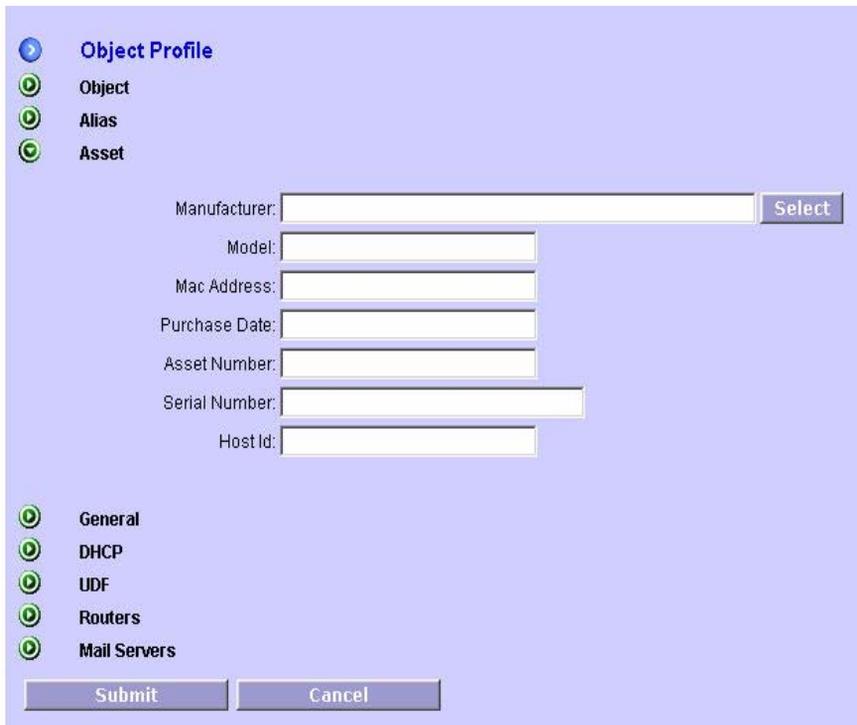
### Procedure

To add asset information for an object, follow these steps.

---

- 1 Click on the collapsed icon (  ) beside **Asset**.

**Result:** The **Asset** section opens.



The screenshot shows a web interface with a light blue background. On the left, there is a vertical menu with several items, each preceded by a green circular icon with a white arrow pointing right. The items are: 'Object Profile' (with a blue arrow icon), 'Object', 'Alias', 'Asset', 'General', 'DHCP', 'UDF', 'Routers', and 'Mail Servers'. The 'Asset' item is currently selected and expanded, showing a form with the following fields: 'Manufacturer:' (with a 'Select' button to its right), 'Model:', 'Mac Address:', 'Purchase Date:', 'Asset Number:', 'Serial Number:', and 'Host Id:'. At the bottom of the form, there are two buttons: 'Submit' and 'Cancel'.

- 2 Enter values in the fields, as described in the following table.
-

**Table 33** Asset fields

Field	Description
Manufacturer	Click <b>Select</b> and the Manufacturer's List window opens. Select a manufacturer from the list. If there are Models associated with the manufacturers, they are listed in this window as well. Select a model from the list.
Model	<b>Read only.</b> Defaults from the Model list in the Manufacturer window.
Mac Address	Type the MAC address of the equipment.
Purchase Date	Enter the date this asset was purchased.
Asset Number	If there is a specific Asset Number assigned to this object, enter that number here. This is a 25-character alphanumeric value.
Serial Number	Enter the Asset Serial Number. This is a 30-character alphanumeric value.
Host Id	Enter the Asset Host ID number. This is a 16-character alphanumeric value.

- .....
- 3** Click **Submit** if you have finished entering all information for the object, or continue to another section of the object profile.

.....

END OF STEPS

.....



# To assign location and contact information to an object

---

## When to use

Use this procedure to assign location and contact information for an object.

## Before you begin

The Location and Contact information defaults to displaying whatever is stored in the Subnet Profile when a new object is added, unless you specify a different location and contact for the object in the General section. Refer to Chapter 3 of the *VitalQIP 7.1 User's Guide* for details on how to create location and contact profiles.

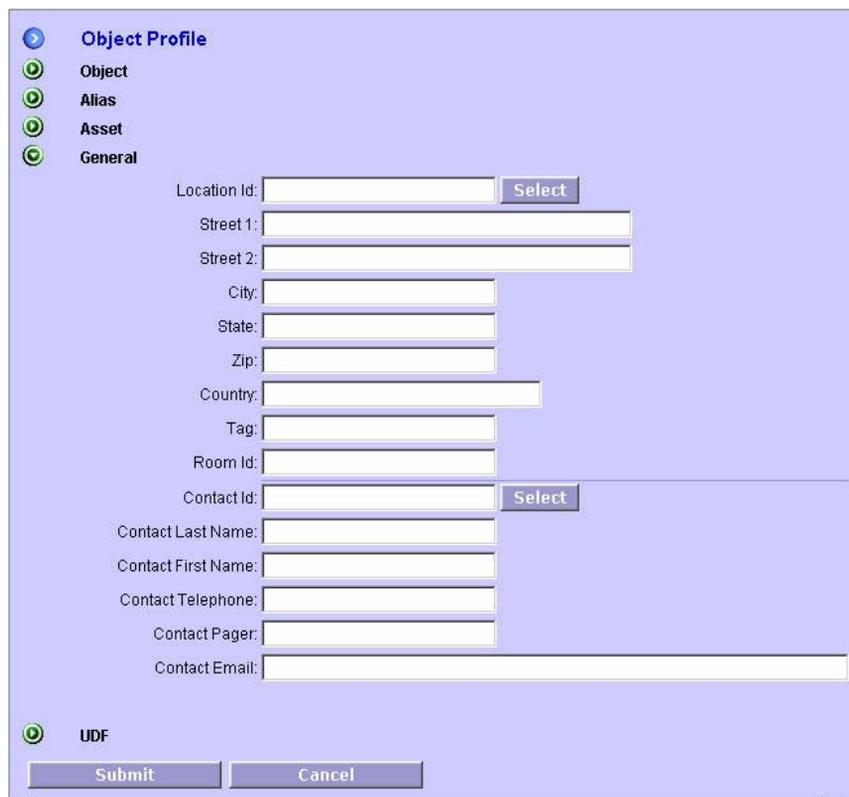
## Procedure

To assign location and contact information to an object, follow these steps.

---

- 1 Click on the collapsed icon (  ) beside **General**.

**Result:** The **General** section opens.



The screenshot shows the 'Object Profile' configuration window. On the left, a vertical list of sections is shown: 'Object Profile' (expanded), 'Object', 'Alias', 'Asset', and 'General' (selected with a green circle). The 'General' section contains the following fields:

- Location Id:
- Street 1:
- Street 2:
- City:
- State:
- Zip:
- Country:
- Tag:
- Room Id:
- Contact Id:
- Contact Last Name:
- Contact First Name:
- Contact Telephone:
- Contact Pager:
- Contact Email:

At the bottom left, there is a 'UDF' section with a green circle icon. At the bottom center, there are two buttons: 'Submit' and 'Cancel'.

- .....
- 2 Click **Select** to see a list of available location IDs. Select the location you want to apply to an object from the drop-down list.

**Result:** The address fields display the information you associated with the location.

.....

- 3 Enter a **Tag** and a **Room ID** if appropriate. You may enter up to 15 alphanumeric characters.
- .....

- 4 Click **Select** next to the **Contact Id** field. A drop-down list displays a list of contacts.
- .....

- 5 Select a contact from the list.

**Result:** The contact's information displays in the remaining contact fields.

.....

- 6 Click **Submit** if you have finished entering all information for the object, or continue to another section of the object profile.

.....

END OF STEPS

.....



## To associate a DHCP server with an object

---

### When to use

Use this procedure to assign DHCP settings to an object.

### Before you begin

The DHCP section is only available if you selected Automatic Bootp, Manual DHCP, Automatic DHCP or Dynamic DHCP from the **Dynamic Configuration** field.

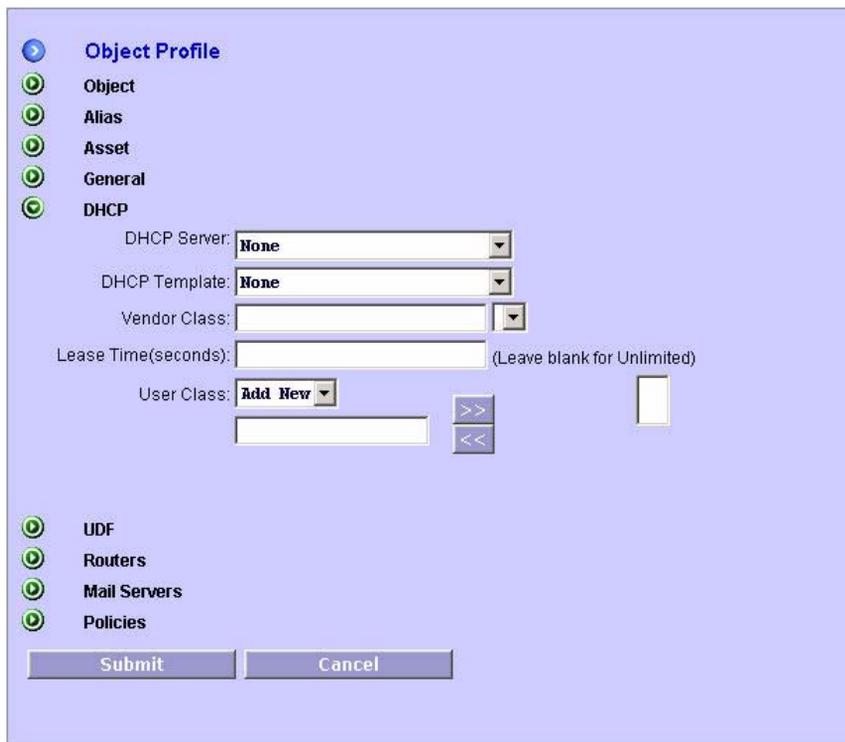
### Procedure

To assign DHCP settings to an object, follow these steps.

---

- 1 Click on the collapsed icon (  ) beside **DHCP**.

**Result:** The **DHCP** section opens.



The screenshot shows a configuration window with a sidebar on the left containing several sections: Object Profile (expanded), Object, Alias, Asset, General, DHCP (expanded), UDF, Routers, Mail Servers, and Policies. The DHCP section is active, displaying the following fields: DHCP Server (dropdown menu with 'None' selected), DHCP Template (dropdown menu with 'None' selected), Vendor Class (dropdown menu), Lease Time(seconds) (text input field with '(Leave blank for Unlimited)' to its right), and User Class (dropdown menu with 'Add New' selected, next to a text input field and '>>' and '<<' buttons). At the bottom of the window are 'Submit' and 'Cancel' buttons.

- 2 Fill in the fields, as described in the following table.
-

**Table 34 DHCP fields**

Field	Description
DHCP Server	You must assign a DHCP Server to this object when the <b>Dynamic Configuration</b> field is set to <b>Automatic Bootp</b> , <b>Automatic DHCP</b> , <b>Dynamic DHCP</b> or <b>Manual DHCP</b> . The field defaults to the <b>Same as in Subnet Profile</b> . Select a DHCP server from the drop-down list.
DHCP Template	Assign a DHCP Option Template to this object. The field defaults to the <b>Same as in Subnet Profile</b> . Select a DHCP option from the drop-down list.
Vendor Class	The Vendor Class allows you to define specific categories of vendor options; for example, you could assign a Vendor Class to an object assigned to a contractor that would specify a shorter lease time. Select a Vendor Class from the <b>Vendor Class</b> drop-down list or enter a new vendor class of up to 16 alphanumeric characters.
Lease Time	<b>Dynamic DHCP only.</b> If you want the lease time to be limited, enter the lease time for the object in seconds. If a lease time is defined in the DHCP template, that value overrides this field.
User Class	<p>The User Class allows you to define specific categories of users' options; for example, you could assign a User Class for mobile computing that specifies a shorter lease time. Select a User Class from the <b>User Class</b> drop-down list or enter a new user class of up to 19 alphanumeric characters.</p> <ul style="list-style-type: none"> <li>• Click  to add the new user class to the list of current user classes.</li> <li>• Click  to delete a user class from the list of current user classes.</li> </ul>

- 
- 3** Click **Submit** if you have finished entering all information for the object, or continue to another section of the object profile.

.....  
 END OF STEPS  
 .....



# To set up a manual Bootp object

---

## When to use

Use this procedure to set up a manual Bootp object.

## Before you begin

The fields for setting up a Manual Bootp object are only available if you selected “Manual-Bootp” as the value for the **Dynamic Configuration** field in the **Object** section.

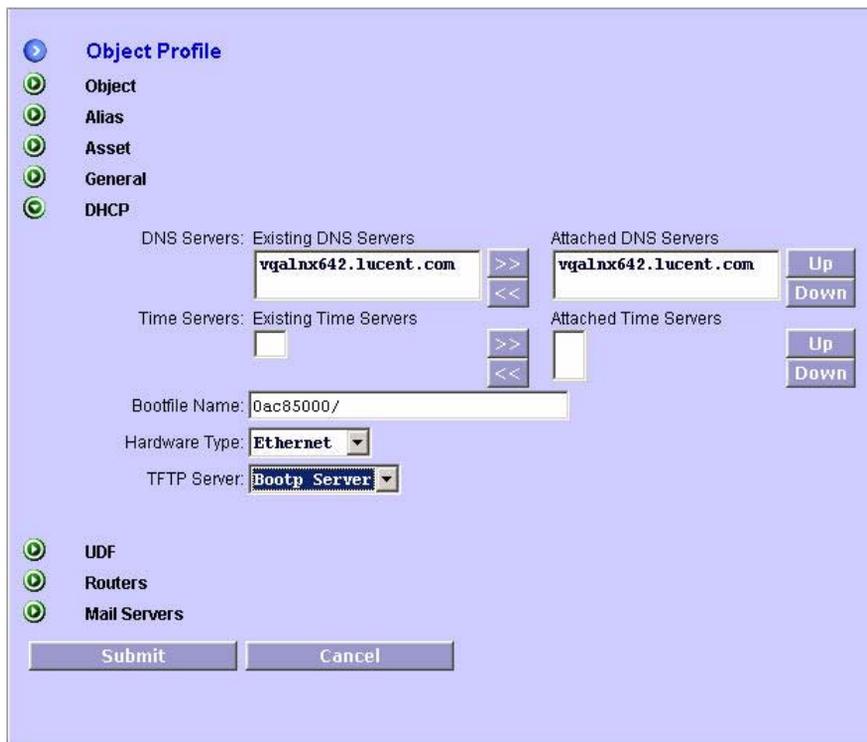
## Procedure

To set up a manual Bootp object, follow these steps.

---

- 1 Click on the collapsed icon (  ) beside **DHCP**.

**Result:** The **DHCP** section opens.



The screenshot shows a configuration window with a sidebar on the left containing several sections: Object Profile, Object, Alias, Asset, General, DHCP, UDF, Routers, and Mail Servers. The DHCP section is selected and expanded. The main area contains the following fields and controls:

- DNS Servers:** Existing DNS Servers:  [ >> ] [ << ]
- Attached DNS Servers:**  [ Up ] [ Down ]
- Time Servers:** Existing Time Servers:  [ >> ] [ << ]
- Attached Time Servers:**  [ Up ] [ Down ]
- Bootfile Name:**
- Hardware Type:**
- TFTP Server:**

At the bottom of the window are two buttons: **Submit** and **Cancel**.

- 
- 2 Select the DNS servers associated with this object. Select a server from the **Existing DNS Servers List** and click  to add the selected DNS server to the list of **Attached DNS Servers**. Use **Up** and **Down** to order the DNS servers.

To remove a server from the Attached DNS Servers list, highlight the server and click .

---

- 3 Select the Time servers associated with this object. Select a server from the **Existing Time Servers List** and click  to add the selected Time server to the list of **Attached Time Servers**. Use **Up** and **Down** to order the Time servers.

To remove a server from the Attached Time Servers list, highlight the server and click .

---

- 4 The **Bootfile Name** is entered automatically as *<subnet name (hex)>/object name* (or as the model type, if the model type matches the manufacturer, or if there is only one model type for this manufacturer and it contains the tag “before”). Change it as necessary.
- 

- 5 Select the **Hardware Type** for the object from the drop-down list.
- 

- 6 By default, the **Tftp Server** is the same as the Bootp server. If you wish to select a different Tftp server, select a different server from the drop-down list.
- 

- 7 Click **Submit** if you have finished entering all information for the object, or continue to another section of the object profile.
- 

END OF STEPS

---



## To assign a user-defined field to an object

---

### When to use

Use this procedure to assign a user-defined field and value to an object.

### Before you begin

All user-Defined Fields must be established in the **Policies->User-Defined Fields** option of the VitalQIP client interface before you can assign them to an object.

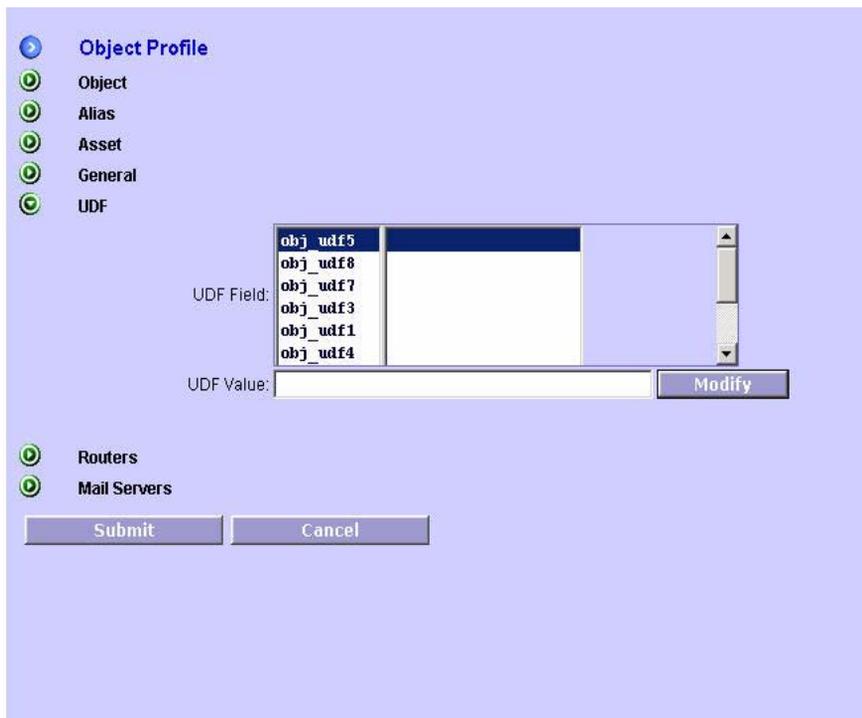
### Procedure

To assign a user-defined field and value to an object, follow these steps.

---

- 1 Click on the collapsed icon (  ) beside **UDF**.

**Result:** The **UDF** section opens.



- 2 To assign a user-defined field with an object, select the user-defined field from the **UDF Field** list and enter a value in the **UDF Value** field.

**Important!** If you are editing an object that already has a UDF assigned to it, the value appears in the **UDF Value** field when you select the UDF from the list.

---

**3** Click **Modify** when you are finished entering a value for the UDF.

**Result:** The new value is displayed in the UDF value list.

---

**4** Repeat [Step 2](#) and [Step 3](#) until you are finished assigning values to UDFs for this object.

---

**5** Click **Submit** if you have finished entering all information for the object, or continue to another section of the object profile.

.....  
E N D O F S T E P S  
.....



## To associate a router with an object

---

### When to use

Use this procedure to associate a router with an object.

### Before you begin

The **Router** section of the object profile only displays if the object is not a router.

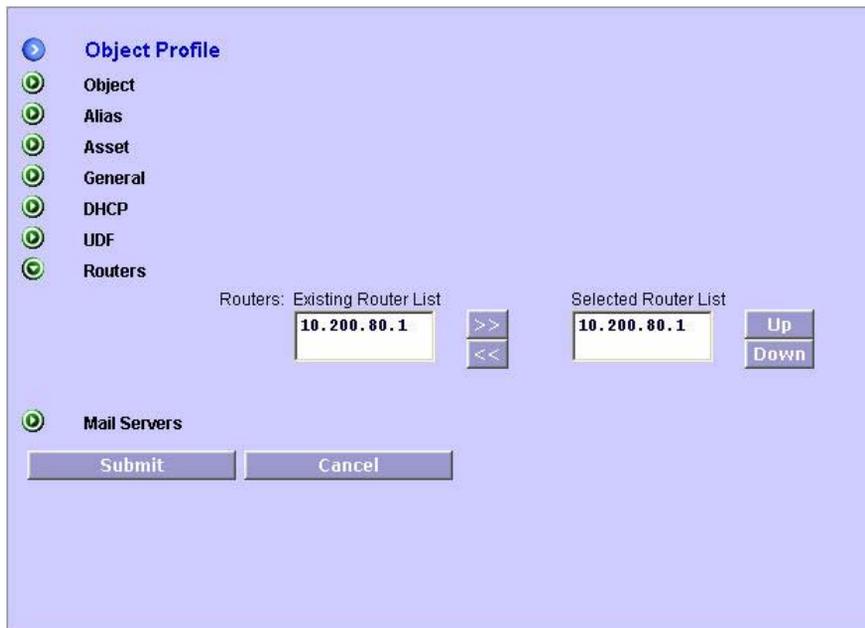
### Procedure

To associate a router with an object, follow these steps.

---

- 1 Click on the collapsed icon (  ) beside **Router**.

**Result:** The **Router** section opens.



- 2 Select a router IP address from the **Existing Router List** and click  to add the selected router to the **Selected Router List**. Use **Up** and **Down** to order the routers.

To remove a router from the **Selected Router List**, highlight the router and click .

- .....
- 3 Click **Submit** if you have finished entering all information for the object, or continue to another section of the object profile.

.....  
E N D O F S T E P S  
.....



## To assign mail forwarding options to an object

---

### When to use

Use this procedure to allow an object to forward mail to another defined mail host. The function creates an MX record.

### Before you begin

- This section appears for all Object Classes *except* Printer, Terminal\_Server, Gateway, Router, Bridge, Switch, and Wiring\_HUB.

**Important!** To define proper MX resource records within VitalQIP, the mail host or mail server objects must be created before you specify them here. For example, the DNS records could appear as follows:

```
lucent.com
mailhost IN A 10.200.130.20
mailforwarder IN A 10.200.130.21
```

After mail host or mail server objects have been defined, you can assign one to an object in the **Mail Servers** section of the object profile.

- VitalQIP validates data to prevent CNAME conflicts in the same organization by default. If a CNAME conflict occurs, an error message displays, and you cannot add or modify the profile. You can disable this feature by setting the **Validate CNAME Records** policy in the VitalQIP client Global Policies to False. For more information on this policy, refer to the General policies table in Chapter 3 of the *VitalQIP User's Guide*. When you add or modify a mail server, validation checks are made against:
  - Object names
  - Domain names
  - Any Object Profile resource records
  - Any Domain Profile resource records
  - Any Reverse Zone resource records
  - ENUM NAPTR resource records
  - IPv6 node names
  - Mail servers

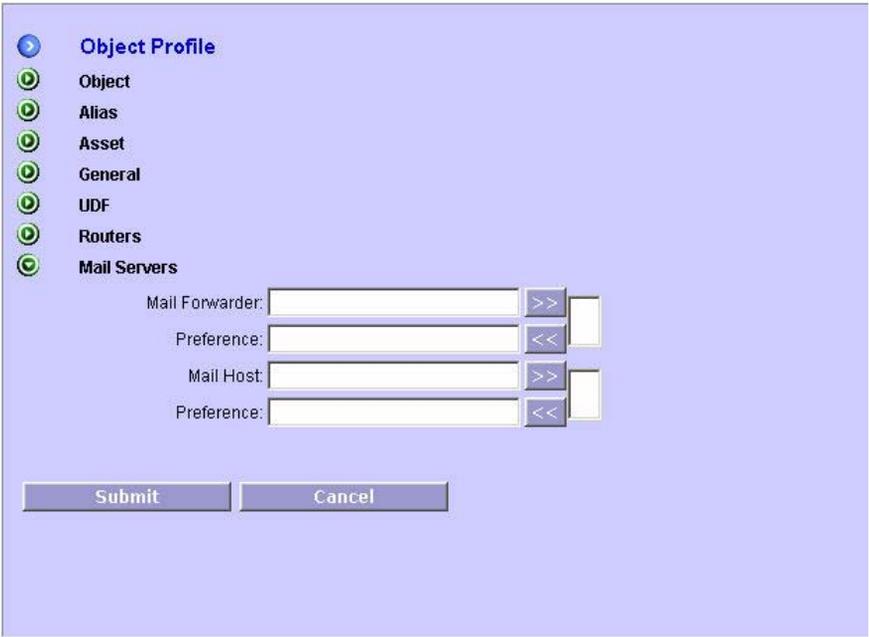
### Procedure

To associate a mail server with this object, follow these steps.

---

- 1 Click on the collapsed icon () beside **Mail Servers**.

**Result:** The **Mail Servers** section opens.



- 2 Refer to the following table as you enter a **Mail Forwarder** and **Preference**. Click **>>** to add the mail forwarder and preference to the list.

To remove a mail forwarder and preference from the list, highlight the mail forwarder you no longer wish to associate with an object and click **<<**.

Add additional forwarders as necessary.

- 3 Refer to the following table as you enter a **Mail Host** and **Preference**. Click **>>** to add the mail host and preference to the list.

To remove a mail host and preference from the list, highlight the mail host you no longer wish to associate with an object and click **<<**.

Add additional mail hosts as necessary.

**Table 35 Mail server fields**

Field	Description
Mail Forwarder	To add a mail forwarder, enter the hostname (if the domain name is the same as the object) or the fully qualified domain name of the Mail Forwarder in this field. Establishing this name will allow mail to be forwarded on to its final destination.

Field	Description
Preference	Type a preference value in this field. This is an unsigned 16 bit number (between 0 and 65535) that adds a parameter to prevent mail routing loops. It determines an order in which a mailer should use them. Mailers will attempt delivery to mail exchangers with the lowest preference values first. For example, you can assign the “best” mail exchanger with a preference value “0”.
Mail Host	You can define the object as a Mail Host for one or more domains and/or objects. This defines a host that will process the mail and will deliver it to the individual it is addressed to, or sent through a gateway it to another mail transport.
Preference	Enter a preference value in this field. The lower the preference value, the higher the priority. This is an unsigned 16 bit number (between 0 and 65535) that adds a parameter to prevent mail routing loops. Mailers will attempt delivery to mail exchangers with the lowest preference values first. For example, you can assign the “best” mail exchanger with a preference value of “0”.

- 
- 4 Click **Submit** if you have finished entering all information for the object, or continue to another section of the object profile.

.....  
 E N D O F S T E P S  
 .....



## To assign policies to an object

---

### When to use

Use this procedure to assign a policy to Automatic Bootp, Dynamic DHCP, Manual DHCP or Automatic DHCP objects.

### Procedure

To assign the policy for Windows 2000 DHCP clients to modify dynamic object resources, follow these steps.

---

- 1 Click on the collapsed icon (  ) beside **Policies**.

**Result:** The **Policies** section opens.



- 2 Choose one of the following options from the **Object Level** drop-down list. The default is Same as in Subnet Profile.
  - **True** – Permits a Windows 2000 DHCP client to take ownership of its dynamic object resource records to update its DNS records.
  - **False** – Prohibits a Windows 2000 DHCP client from taking ownership of its resource records. This setting gives VitalQIP control and ownership of these records within DNS.
  - **Same As in Subnet Profile** – Uses the policy set on the subnet profile.

- .....
- 3 Click **Submit** if you have finished entering all information for the object, or continue to another section of the object profile.

.....  
E N D O F S T E P S  
.....



## To assign an object to a node

---

### When to use

Use this procedure to assign the current object to a node.

### Procedure

To assign the current object to a node, follow these steps.

---

- 1 Click on the collapsed icon (  ) beside **Node Management**.

**Result:** The **Node Management** section opens.



- 2 Click **Add to Node Management** if you want this object assigned to an IPv6 node.
- 3 Click **Submit** if you have finished entering all information for the object, or continue to another section of the object profile.

**Important!** If you check this box, clicking **Submit** opens the Add IP Address page, where you can select a node to which you want to add this object. Refer to [“To add an IPv4 Address to an interface”, on page 374](#) for detailed information about this function.

END OF STEPS

---



## To perform a global search

---

### When to use

Use this procedure to search the entire organization for an item by its name or address.

### Before you begin

You can use the wildcard character (\*) as part of the search string for all searches.

### Procedure

To search for an item, follow these steps.

- 1 Click the **Address Management** tab.  
**Result:** The IPv4 Hierarchy opens.
- 2 Mouse over **Actions** and select **Global Search**.  
**Result:** The Global Search page opens.

Global Search

Type: Name

Range: All

Search String:

Search

Search Results

---

- 3 Review the following table and fill in the fields you need to complete for your search.

**Table 36 Global search fields**

Field	Description
Type	Select whether you are searching for a Name, an Address, a MAC Address, or a User-Defined Field from the drop-down list.
Range	Select the range for which you are searching. The values for this field vary depending on the value in the <b>Type</b> field. This field is not available for MAC Address.
UDF Field Name	This field is only active if the <b>Type</b> is set to User-Defined Field. Select the name of any user-defined field from the drop-down list, or select <b>All</b> to search all user-defined fields.
Search String	Enter text in this field based on the type of item for which you are searching. Allowable values are as follows: <b>Name</b> – Enter freeform text. You may use the wildcard character for 0 or more characters. <b>Address</b> – Enter a valid IP address. You can use the wildcard character, but each octet must be complete. For example 135.106.* is a valid search address. If you enter an invalid IP address, no matches are returned. <b>MAC Address</b> – Enter a 12 or 16 hexadecimal character MAC Address to search for an exact MAC address. You can use the wildcard character for 0 or more characters, therefore if you use a wildcard, there is no minimum number of characters. If you enter an invalid MAC address, no matches are returned. <b>User-Defined Field</b> – Enter freeform text. You may use the wildcard character for 0 or more characters.

- 4 After entering values in the fields on the Global Search page, click **Search**.

**Result:** If only one object matches your search, the object profile displays. If more than one item matches your search, the Global Search results list (on the lower half of the screen) displays the results.

**Global Search**

Type: **Name**  
 Range: **All**

Search String: \*

**Search**

**Search Results**

Type	Address	Name
Domain		<a href="#">indiecoar.com</a>
Domain		<a href="#">lucent.com</a>
Domain		<a href="#">testdomain.com</a>
Network	<a href="#">135.114.0.0</a>	<a href="#">testnetwork</a>
Network	<a href="#">200.200.200.0</a>	<a href="#">sss-net</a>
OSPF Area		OsPArEa
Subnet Organization		snorgy1
Subnet	<a href="#">135.106.0.0</a>	<a href="#">anotherchildpool</a>
Subnet	<a href="#">187.187.32.0</a>	<a href="#">please</a>
Subnet	<a href="#">200.200.200.0</a>	<a href="#">sub sue 00</a>
Object	<a href="#">135.114.0.2</a>	<a href="#">wsp000005wss</a>

- 5 Click the **Address** hyperlink or the **Name** hyperlink of the item whose properties you want to view. The following items have Properties pages: Domain, Network, Subnet, and Object. Type of Alias Name also takes you to the Object Profile.

For detailed information about the object profile, refer to “Object profile”, on page 268.

For detailed information about the network and subnet properties, refer to “To view subnet properties”, on page 236.

END OF STEPS



# 9 IPv6 Address Management

## Overview

---

### Purpose

A description of the purpose of this chapter or lesson (required).

### Contents

This chapter covers these topics.

IPv6 address management	299
IPv6 address structure	300
IPv6 hierarchy	301
To add a seed block	302
To delete a seed block	304
To add an address range	306
To modify an address range	308
To delete an address range	310
To add subnets	311
To schedule subnet configuration	314
To modify subnets	318
To split subnets	320
To join subnets	323
To renumber subnets	325
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## IPv6 address management

---

### Overview

In contrast to IPv4, IPv6 uses 128-bit addresses. IPv6's 128-bit address system creates 340,282,366,920,938,463,463,374,607,431,768,211,456 or  $3.4 \times 10^{38}$  unique addresses.

The huge number of addresses that IPv6 provides should be ample for the estimated billions of new Internet appliances - such as mobile phones and personal digital assistants (PDAs) - that will require IP addresses in the future.

IPv6's new capabilities should provide better quality of service. For example, packet-queuing mechanisms will control the flow of traffic on the network.

Certain packets of data - audio or video files, for example - can be labeled so that they are prioritized over other data and users receive real-time service.

The goal of IPsec is to provide security services for IPv4 and IPv6. All IPv6 hosts are required to support IPsec.

IPv6's autoconfiguration feature - known as autodiscovery - should allow systems to connect to an IPv6 network more easily than to an IPv4 network.



# IPv6 address structure

---

## Overview

IPv6 addresses are comprised of eight sections, with each section separated from the next by a colon. Each section is represented with a 4-character hexadecimal value. An example IPv6 address follows:

```
2001:fece:ba23:cd1f:dcb1:1010:9234:4088
```

While each section can have a maximum of four characters, only one character is required. Allowable characters are 0 to 9 and a to f. Alphabetic characters are not case-sensitive.

## Abbreviation of IPv6 addresses

Some IPv6 addresses can have several sections that contain only zeros, such as the following example:

```
fec0:1:0:0:0:0:0:1234
```

Instead of writing out several sections that contain only a zero, there is a special notation available to abbreviate this type of address. The zeros can be replaced with two colons. The sections containing the zeros must be contiguous, and the two colons can only be used once in any address. The above address can be abbreviated as follows:

```
fec0:1::1234
```

The number of visible sections, plus the number of sections containing zeros must comprise a total of eight sections.

## IPv6 and IPv4 addresses on the same network

Some non-VitalQIP networks contain both IPv4 and IPv6 addresses. In this type of network environment IPv4 addresses are mapped to IPv6 addresses. The addresses used are IPv6, but the last four sections of these addresses contains a valid IPv4 address. An example address is as follows:

```
fe:a90::10.1.2.3
```

In the previous example, the last four sections of the address are a valid IPv4 address, but the entire address is a valid IPv6 address.



## IPv6 hierarchy

---

### Overview

Address management uses a hierarchy that displays the allocation of addresses hierarchically under existing seed pools.

IPv6 address management allows you to add, delete, move or modify IPv6 address ranges or subnets.



## To add a seed block

---

### When to use

Use this procedure to add a seed block. Seed blocks should be added in IPv6 Address Management when you do not want to associate an address block with any registry or when you do not want to perform automatic allocation of address blocks using rules. If you want to do either of those things, allocate the seed block in the Address Allocation module.

### Procedure

- 
- 1 Mouse over the **Address Management** tab and click **IPv6**. Alternatively, click the IPv6 Management icon (  ) in the toolbar.

**Result:** The IPv6 Hierarchy opens.

- 
- 2 Mouse over the **Actions** menu and select **Add Seed Block**.

**Result:** The Add Seed Block page opens.



- 
- 3 Enter a valid IPv6 address in the **Start Address** field.
  - 4 Select a value for the **Length** field from the drop-down list. Allowable values are from 8 to 64.
  - 5 Click **Submit**.

**Result:** A dialog box opens with the message **Seed Block Added - <IP\_Address/length>**.

.....  
**6** Click **OK**.

**Result:** The seed block is added to the IPv6 Address Hierarchy and the Seed Block Properties page for the block opens.

.....  
E N D O F S T E P S  
.....



## To delete a seed block

---

### When to use

Use this procedure to delete a seed block created in Address Management.

### Before you begin

- If a seed block is created in address allocation, you cannot delete it.
- You also cannot delete a seed block that contains subnets.

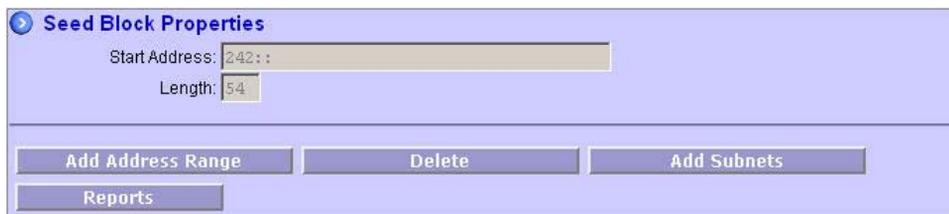
### Procedure

- 1 Mouse over the **Address Management** tab and click **IPv6**. Alternatively, click the IPv6 Management icon (  ) in the toolbar.

**Result:** The IPv6 Hierarchy opens.

- 2 Expand the list of seed blocks and select the one you want to delete.

**Result:** The Seed Block Properties page opens.



- 3 Click **Delete**.

**Result:** A dialog box opens with the message **Are you sure you want to delete the selected Seed Block?**

- 4 Click **OK**.

**Result:** A dialog box opens with the message **Seed Block Deleted**.

.....  
5 Click OK.

**Result:** The IPv6 Address Hierarchy is updated and the IP Management splash screen opens.

.....  
E N D O F S T E P S  
.....



## To add an address range

---

### When to use

An address range is a Lucent-defined object. It is a way of visually grouping subnets within a seed block. It is defined by its prefix and length and provides a shortcut to allow administrators to visually organize subnets in whichever way they organize, group and manage the address space. There is no business logic associated with an address range and hence it is optional to use them.

Characteristics of the address range include the following:

- Address ranges are defined as a single IPv6 address prefix and length.
- Address space represented by the address range can be of any length from /9 to /128.
- Address ranges have unique prefixes and lengths.
- Address ranges are optional. The user can create subnets directly under the seed block.
- Address ranges are not hierarchical. A subnet appears in the address range with the greatest prefix length.
- Since address ranges are only for visually grouping addresses, when an address range is deleted, the subnets contained within it are not deleted.
- Address ranges can be added to seed blocks created by either address management or in address allocation.

### Procedure

To add an address range, use these steps:

---

- 1 Mouse over the **Address Management** tab and click **IPv6**. Alternatively, click the IPv6 Management icon () in the toolbar.  
**Result:** The IPv6 Hierarchy opens.
- 2 Expand the list of seed blocks and select the one to which you want to add an address range.  
**Result:** The Seed Block Properties page opens.
- 3 Click **Add Address Range**.  
**Result:** The Add Address Range page opens.

.....

4 Enter a name in the **Name** field. This value can be alphanumeric, and up to 64-characters long.

.....

5 Enter a valid IP address in the **Address** field.

.....

6 Select a value from the drop-down list for the **Length** field. Allowable values are from 9 to 128.

.....

7 Optionally, enter a text description in the **Description** field.

.....

8 Click **Submit**.

**Result:** A dialog box opens with the message **Address Range created successfully!**

.....

9 Click **OK**.

**Result:** The IPv6 Address Hierarchy is updated and the Address Range Properties page opens.

.....

END OF STEPS



## To modify an address range

---

### When to use

Use the following procedure to modify an address range.

### Procedure

To modify an address range, follow these steps.

- 1 Mouse over the **Address Management** tab and click **IPv6**. Alternatively, click the IPv6 Management icon (  ) in the toolbar.

**Result:** The IPv6 Hierarchy opens.

- 2 Expand the seed block and address ranges until the address range you want to modify is visible.

- 3 Select the address range you want to modify.

**Result:** The Address Range Properties page opens.



The screenshot shows the 'Address Range Properties' dialog box. It has a title bar with a blue arrow icon and the text 'Address Range Properties'. Below the title bar, there are four input fields: 'Name' with the value 'Test address range dbl', 'Start Address' with the value '2006:2001:0000:0000:0000:0000:0000:0000', 'Length' with a dropdown menu showing '40', and 'Description' which is empty. Below these fields, there are four buttons: 'Modify', 'Delete', 'Add Subnets', and 'Reports'.

- 4 Click **Modify**.

**Result:** The Modify Address Range page opens.

**Modify Address Range**

\*Name: Test address range dbl

Start Address: 2006:2001:0000:0000:0000:0000:0000

Length: 40

Description:

Submit Cancel

- 
- 5 Modify the **Name** or **Description** fields. These are the only fields you can modify in address range after it is created. Refer to [“To add an address range”, on page 306](#) for descriptions of these fields.
- 
- 6 When you have finished modifying the address range, click **Submit**.
- Result:** A dialog box opens with the message: **Address Range Modified successfully!**
- 
- 7 Click **OK**.
- Result:** The IPv6 Address Hierarchy is updated and the Address Range Properties page opens.

END OF STEPS

---



## To delete an address range

---

### When to use

Use the following procedure to delete subnets from an address range.

### Procedure

To delete subnets to an address range, follow these steps.

- 1 Mouse over the **Address Management** tab and click **IPv6**. Alternatively, click the IPv6 Management icon (  ) in the toolbar.  
**Result:** The IPv6 Hierarchy opens.
- 2 Expand the seed block and address ranges until the address range you want to delete is visible.
- 3 Select the address range you want to delete.  
**Result:** The Address Range Properties page opens.
- 4 Click **Delete**.  
**Result:** A dialog box opens with the message **Are you sure you want to delete the selected address range?**
- 5 Click **OK**.  
**Result:** A dialog box opens with the message **Address Range Deleted successfully!**
- 6 Click **OK**.  
**Result:** The address range is removed from the IPv6 Address Hierarchy and the IP Management splash screen opens. Subnets that previously appeared in the hierarchy under that address range now appear in the next most specific address range.

END OF STEPS

---



## To add subnets

---

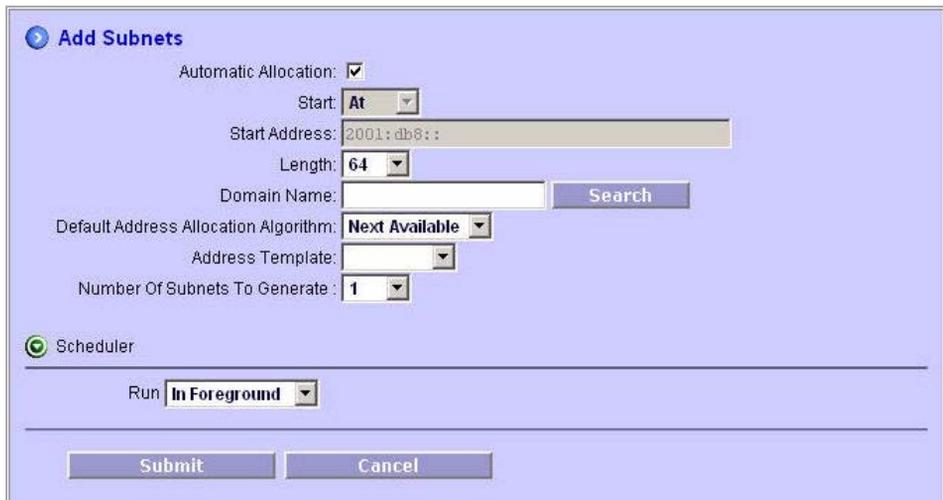
### When to use

Use the following procedure to add subnets to a seed pool or address range.

### Procedure

To add subnets, follow these steps.

- 1 Mouse over the **Address Management** tab and click **IPv6**. Alternatively, click the IPv6 Management icon (  ) in the toolbar.  
**Result:** The IPv6 Hierarchy opens.
- 2 Expand the seed block and address ranges until either the seed pool or the address range to which you want to add subnets is visible.
- 3 Select the seed pool or address range to which you want to add a subnet.  
**Result:** The Seed Pool Properties page or the Address Range Properties page opens.
- 4 Click **Add Subnets**.  
**Result:** The Add Subnets page opens.



**Add Subnets**

Automatic Allocation:

Start: **At**

Start Address: 2001:db8::

Length: **64**

Domain Name:  **Search**

Default Address Allocation Algorithm: **Next Available**

Address Template:

Number Of Subnets To Generate: **1**

**Scheduler**

Run **In Foreground**

**Submit** **Cancel**

- 5 Review the following table and fill in the fields as necessary.

**Table 37 Add subnet fields**

Field	Description
Automatic Allocation	<p><i>Optional.</i> If this box is checked, the Start and Start Address fields are not editable. VitalQIP uses the Best From Start (BFS) contiguous address blocks algorithm and generates contiguous addresses. If the contiguous space is not available, it allocates the next best address that is available.</p> <p>If this box is not checked, you are using explicit allocation, and you must value the Start and Start Address fields.</p>
Start	<p><i>Optional.</i> Only available if the Automatic Allocation box is not checked. Select a value from the drop-down list.</p> <ul style="list-style-type: none"> <li>• <b>At</b> - Subnet starts at this address.</li> <li>• <b>After</b> - Subnet starts after this address.</li> </ul>
Start Address	<p><i>Required</i> if the Automatic Allocation box is not checked. Enter a valid IPv6 address. Defaults to the starting address of the current address range or seed block.</p>
Length	<p><i>Optional.</i> Length of the new subnet. Select a value from the drop-down list. Allowable values are 9 to 128. Defaults to 64.</p>
Domain Name	<p><i>Optional.</i> The Default Domain name for all nodes created in this subnet. Enter the name of the domain you want to use. If you want to search for a list of domains, refer to <a href="#">“To search for a domain”</a>, on page 334 for information on this function.</p>
Default Address Allocation Algorithm	<p><i>Optional.</i> Used when creating IP addresses within this subnet. Select a value from the drop-down list. Allowable values are as follows:</p> <ul style="list-style-type: none"> <li>• <b>Next Available</b> (default)</li> <li>• <b>Last Available</b></li> <li>• <b>Random</b></li> <li>• <b>Specific</b></li> </ul>
Address Template	<p><i>Optional.</i> Select an address template from the drop-down list to specify nodes to automatically create when this subnet is created.</p>
Number of Subnets to Generate	<p><i>Required.</i> Number of subnets to be created. Allowable values are from 1 to 256. The default is 1.</p>

---

6 Choose when to add subnets in the **Scheduler** section. Refer to [“To schedule subnet configuration”](#), on page 314 for more information.

---

7 Click **Submit**.

**Result:** Choose from the following results.

If...	Then...
The job is scheduled in foreground	The report opens.
The job is scheduled in background or at a later time.	The Job Scheduler page opens. Refer to <a href="#">“To view scheduled jobs”</a> , on page 132 for more information.

---

END OF STEPS

---



## To schedule subnet configuration

---

### When to use

Use this procedure to schedule jobs when you need to perform the following actions:

- Add subnets
- Split subnets
- Renumber blocks in a subnet.

### Procedure

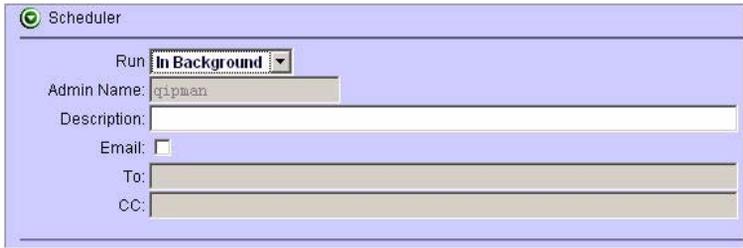
To schedule a job if you are adding, splitting, or renumbering a subnet, follow these steps.

---

1 Expand the **Scheduler** section, if necessary.

---

2 Choose one of the following actions.

If you want to...	Then ...
Run the job immediately	Ensure that <b>In Foreground</b> is selected in the <b>Run</b> drop-down list.
Run the job in background	<ol style="list-style-type: none"><li>1. Select <b>In Background</b> from the <b>Run</b> drop-down list.</li></ol> <p><b>Result:</b> The Scheduler section expands to display additional fields.</p>  <p>The <b>Admin</b> field displays the login ID of the administrator who is scheduling the job.</p> <ol style="list-style-type: none"><li>2. Enter a description of the job in the <b>Description</b> field. If you do not enter a description, a description of <code>&lt;Job Name&gt;:&lt;Run Mode&gt;</code> is used. You may enter up to 255 characters.</li><li>3. If you want an e-mail to be sent when the job completes, place a check in the <b>Email</b> check box.</li></ol> <p><b>Result:</b> The <b>To</b> and <b>CC</b> fields are enabled.</p> <ol style="list-style-type: none"><li>4. Enter an e-mail address of up to 255 characters in the <b>To</b> field. If an e-mail address has been entered in the <b>Contact Profile</b> for the administrator, it appears by default.</li><li>5. If desired, enter a <b>CC</b> e-mail address.</li></ol>

If you want to...	Then ...
<p>Schedule the job for a later time</p>	<ol style="list-style-type: none"> <li> <p>Select <b>Scheduled At</b> from the <b>Run</b> drop-down list.</p> <p><b>Result:</b> The Scheduler section expands to display additional fields, including a calendar icon.</p>  </li> <li> <p>The <b>Admin</b> field displays the login ID of the administrator who is scheduling the job.</p> <p>Click the Calendar icon ().</p> <p><b>Result:</b> The Calendar widget opens with the scheduled date default of 10 days from the current date.</p>  </li> <li> <p>Choose from the following actions.</p> <ol style="list-style-type: none"> <li>To choose a different time, click in the hour and minute fields and enter a new time in 24-hour format.</li> <li>To choose a different month, choose a later month from the month drop-down list.</li> <li>To choose a different year, click <b>&gt;</b> to enter a future year or <b>&lt;</b> to return to a prior year.</li> <li>To choose a different day, click another day in the month.</li> </ol> <p><b>Result:</b> After a different day is clicked, the calendar widget closes and a new run date and/or time are displayed.</p> </li> <li> <p>Enter a description of the job in the <b>Description</b> field. If you do not enter a description, a description of <code>&lt;Job Name&gt; :&lt;Run Mode&gt;</code> is used. You may enter up to 255 characters.</p> </li> </ol>

If you want to...	Then ...
<p>Schedule the job for a later time</p>	<p>1. Select <b>Scheduled At</b> from the <b>Run</b> drop-down list.</p> <p><b>Result:</b> The Scheduler section expands to display additional fields, including a calendar icon.</p>  <p>The <b>Admin</b> field displays the login ID of the administrator who is scheduling the job.</p> <p>2. Click the Calendar icon ().</p> <p><b>Result:</b> The Calendar widget opens with the scheduled date default of 10 days from the current date.</p>  <p>3. Choose from the following actions.</p> <ol style="list-style-type: none"> <li>To choose a different time, click in the hour and minute fields and enter a new time in 24-hour format.</li> <li>To choose a different month, choose a later month from the month drop-down list.</li> <li>To choose a different year, click  to enter a future year or  to return to a prior year.</li> <li>To choose a different day, click another day in the month.</li> </ol> <p><b>Result:</b> After a different day is clicked, the calendar widget closes and a new run date and/or time are displayed.</p> <p>4. Enter a description of the job in the <b>Description</b> field. If you do not enter a description, a description of <code>&lt;Job Name&gt; : &lt;Run Mode&gt;</code> is used. You may enter up to 255 characters.</p>

If you want to...	Then ...
	<p>5. If you want an e-mail to be sent when the job completes, place a check in the <b>Email</b> check box.</p> <p><b>Result:</b> The <b>To</b> and <b>CC</b> fields are enabled.</p> <p>6. Enter an e-mail address of up to 255 characters in the <b>To</b> field. If an e-mail address has been entered in the <b>Contact Profile</b> for the administrator, it appears by default.</p> <p>7. If desired, enter a <b>CC</b> e-mail address.</p>

3 Click **Submit**.

**Result:** The result depends on which Run option you chose and which subnet function you were performing. Refer to:

- [“To add subnets” \(311\)](#)
- [“To split subnets” \(320\)](#)
- [“To renumber subnets” \(325\)](#)

END OF STEPS



## To modify subnets

---

### When to use

Use the following procedure to modify subnets.

### Procedure

To modify subnets, follow these steps.

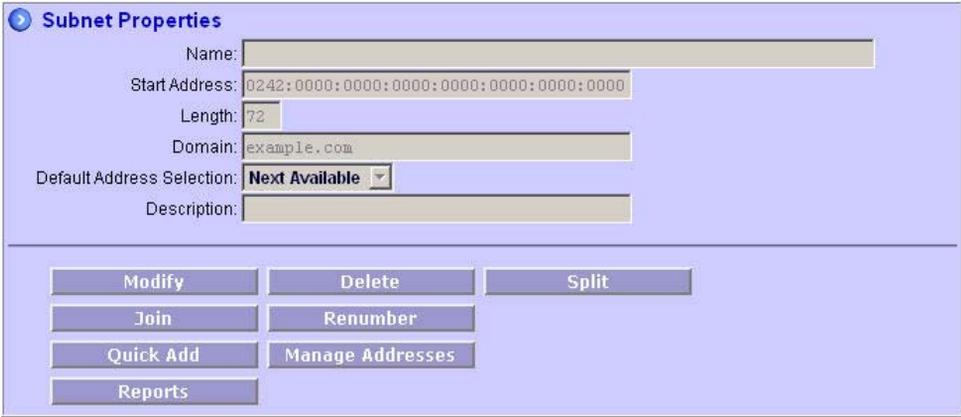
- 1 Mouse over the **Address Management** tab and click **IPv6**. Alternatively, click the IPv6 Management icon (  ) in the toolbar.

**Result:** The IPv6 Hierarchy opens.

- 2 Expand the seed block and address ranges until the subnet you want to modify is visible.

- 3 Select the subnet you want to modify.

**Result:** The Subnet Properties page opens.



**Subnet Properties**

Name:

Start Address:

Length:

Domain:

Default Address Selection:

Description:

- 4 Click **Modify**.

**Result:** The Modify Subnet Profile page opens.

**Modify Subnet Profile**

Name:

Start Address: 0242:0000:0000:0000:0000:0000:0000:0000

Length: 72

Domain:

Default Address Selection:

Description:

- 
- 5 You can modify the Domain Name, Default Address Selection, Description, and any Attributes associated with the subnet. Refer to [Table 37, “Add subnet fields”, on page 312](#) for a detailed description of these fields.
- 
- 6 Click **Submit** when you are finished.
- Result:** A dialog box opens with the message **Subnet modified**. The IPv6 Hierarchy is updated.
- 
- 7 Click **OK**.
- Result:** The Subnet Properties page opens.

END OF STEPS

---



# To split subnets

---

## When to use

Use the following procedure to split a subnet.

## Procedure

To split a subnet, follow these steps.

- 
- 1 Mouse over the **Address Management** tab and click **IPv6**. Alternatively, click the IPv6 Management icon () in the toolbar.

**Result:** The IPv6 Hierarchy opens.

- 
- 2 Expand the seed block and address ranges until the subnet you want to split is visible.

- 
- 3 Select the subnet you want to split.

**Result:** The Subnet Properties page opens.

- 
- 4 Click **Split**.

**Result:** The Split Subnet page opens.

- 5 Select a value from the **Length of New Subnets** drop-down list. This drop-down list contains only values smaller than the subnet you are currently splitting.

**Result:** The value next to **Number of Subnets to Be Generated** and the list of subnet addresses in **Subnet Preview** change to reflect the length you selected.

- 6 Choose when to split the subnet in the **Scheduler** section. Refer to [“To schedule subnet configuration”, on page 314](#) for more information.

- 7 Click **Submit**.

**Result:** Choose from the following results.

If...	Then...
The job is scheduled in foreground	<ol style="list-style-type: none"> <li>1. A confirmation box opens with the message <b>Subnet split successfully</b>.</li> <li>2. Click <b>OK</b>.</li> </ol> <p><b>Result:</b> The subnets appear in the IPv6 Address Hierarchy.</p>

If...	Then...
<p>The job is scheduled in background or at a later time</p>	<ol style="list-style-type: none"> <li>1. A confirmation box opens with the message <b>Job is scheduled. Job ID is &lt;###&gt;. Continue to the job scheduler page?</b></li> <li>2. If you wish to review the job scheduler page, click <b>OK</b>.</li> </ol> <p><b>Result:</b> The Job Scheduler page opens. Refer to <a href="#">“To view scheduled jobs”</a>, on page 132 for more information.</p> <ol style="list-style-type: none"> <li>3. If you would rather perform another task, click <b>Cancel</b>.</li> </ol> <p><b>Result:</b> The IP Management splash screen is displayed.</p>

.....  
 E N D O F S T E P S



## To join subnets

---

### When to use

Use the following procedure to join subnets.

### Procedure

To join subnets, follow these steps.

- 1 Mouse over the **Address Management** tab and click **IPv6**. Alternatively, click the IPv6 Management icon (  ) in the toolbar.

**Result:** The IPv6 Hierarchy opens.

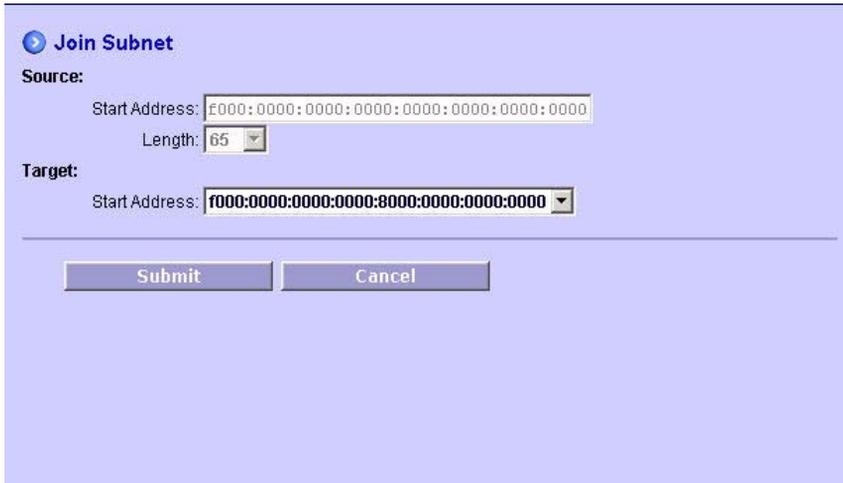
- 2 Expand the seed block and address ranges until the subnet you want to join with another is visible.

- 3 Select the subnet you want to join to another.

**Result:** The Subnet Properties page opens.

- 4 Click **Join**.

**Result:** The Join Subnet page opens.



- 5 Select a start address from the **Target** drop-down list. This drop-down list contains only subnets adjacent to the source subnet.

**Important!** If there is no adjacent subnet available, a dialog is displayed indicating that there are no available subnets to join with, and the Subnet Properties page is redisplayed.

---

**6** Click **Submit**.

**Result:** A dialog box opens with the message **Subnets joined successfully!** and the IPv6 Hierarchy is updated.

---

**7** Click **OK**.

**Result:** The Subnet Properties page opens.

END OF STEPS

---



## To renumber subnets

---

### When to use

Renumber a subnet to change the start address of the subnet. All the IP addresses within the subnet are moved to the same relative position after the new prefix.

### Procedure

To renumber subnets, follow these steps.

- 1 Mouse over the **Address Management** tab and click **IPv6**. Alternatively, click the IPv6 Management icon  in the toolbar.

**Result:** The IPv6 Hierarchy opens.

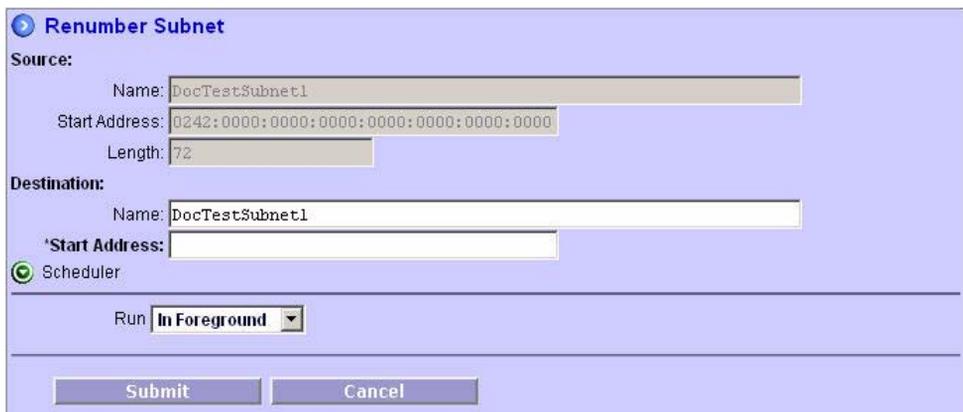
- 2 Expand the seed block and address ranges until the subnet you want to renumber is visible.

- 3 Select the subnet you want to renumber.

**Result:** The Subnet Properties page opens.

- 4 Click **Renumber**.

**Result:** The Renumber Subnet page opens.



**Renumber Subnet**

**Source:**

Name: DocTestSubnet1

Start Address: 0242:0000:0000:0000:0000:0000:0000

Length: 72

**Destination:**

Name: DocTestSubnet1

\*Start Address:

 Scheduler

Run: In Foreground

Submit Cancel

- 5 Enter a name in the **Name** field. This field is optional, and defaults to the name of the source subnet.

- .....
- 6 Enter a valid, available IPv6 address in the **Start Address** field. This field is required.
- .....
- 7 Choose when to renumber the subnet in the **Scheduler** section. Refer to [“To schedule subnet configuration”](#), on page 314 for more information.
- .....
- 8 Click **Submit**.

**Result:** Choose from the following results.

If...	Then...
The job is scheduled in foreground	1. A confirmation box opens with the message <b>Subnet Renumbered Successfully</b> . 2. Click <b>OK</b> . <b>Result:</b> The Subnet Properties page is displayed, and the renumbered subnets appear in the IPv6 Address Hierarchy.
The job is scheduled in background or at a later time	1. A confirmation box opens with the message <b>Job is scheduled. Job ID is &lt;###&gt;. Continue to the job scheduler page?</b> 2. If you wish to review the job scheduler page, click <b>OK</b> . <b>Result:</b> The Job Scheduler page opens. Refer to <a href="#">“To view scheduled jobs”</a> , on page 132 for more information. 3. If you would rather perform another task, click <b>Cancel</b> . <b>Result:</b> The IP Management splash screen is displayed.

**Important!** The subnet will have the same length after it is renumbered.

.....

END OF STEPS



## To add a node to a subnet

---

### When to use

Use the following procedure to add a node to a subnet.

### Procedure

To add a node to a subnet, follow these steps.

- 1 Mouse over the **Address Management** tab and click **IPv6**. Alternatively, click the IPv6 Management icon (  ) in the toolbar.

**Result:** The IPv6 Hierarchy opens.

- 2 Expand the seed block and address ranges until the subnet to which you want to add a node is visible.

- 3 Select the subnet to which you want to add a node.

**Result:** The Subnet Properties page opens.

- 4 Click **Quick Add**.

**Result:** The Quick Add page opens.

**Quick Add**

**Node:**

Type: **Workstation**

Name:  **Generate**

Domain:  **Search**

Unique ID:

Description:

---

**Node User Defined Attributes**

**Interface:**

Name:

Mac Address:

**IP Address:**

Subnet Start Address:  **Search**

Address Selection: **Next Available**

IP Address:

---

**IP Address User Defined Attributes**

**Domain Name:**

Publish In Forward Zone:

Publish In Reverse Zone:

**Submit** **Cancel**

5 Review the following table and fill in the fields as required.

**Table 38 Quick Add fields**

<b>Field</b>	<b>Description</b>
<b>Node</b>	
Type	<p><b>Required.</b> The type of node you are adding. The list of values shown is delivered with VitalQIP, although this list is customizable. The list may therefore contain additional values, or may not contain some values shown in the following list. For more information about defining object classes, refer to Chapter 3 in the <i>VitalQIP User's Guide</i>. Allowable values are as follows:</p> <ul style="list-style-type: none"> <li>• <b>Workstation</b></li> <li>• <b>X-terminal</b></li> <li>• <b>PC</b></li> <li>• <b>Printer</b></li> <li>• <b>Server</b></li> <li>• <b>Wiring_Hub</b></li> <li>• <b>Router</b></li> <li>• <b>Bridge</b></li> <li>• <b>Terminal_Server</b></li> <li>• <b>Switch</b></li> <li>• <b>Legacy_System</b></li> <li>• <b>Gateway</b></li> <li>• <b>Test_Equipment</b></li> <li>• <b>Undefined</b></li> <li>• <b>Others</b></li> <li>• <b>Partially_Managed</b></li> </ul>
Name	Name of the node you are adding. You must enter a value in this field, the <b>Domain</b> field, or both. You can click <b>Generate</b> to automatically generate a node name.
Domain	Domain to which this node is assigned. You can use <b>Search</b> to search for a domain. The domain in this field when you first enter it is the default domain for the appropriate subnet. You must enter a value in this field or the <b>Name</b> field, or both.
Unique ID	Unique ID assigned to the node. If you do not provide a unique IP address, the system assigns one.
Description	Text description assigned to the node.
<b>Interface</b>	
Name	<b>Required.</b> Name of the interface assigned to the node.
Mac Address	MAC address of the interface card assigned to the node.

Field	Description
<b>IP Address</b>	
Subnet Start Address	<p><b>Required.</b> Enter the subnet address that contains the IP address you want to assign to this interface.</p> <p>You can use <b>Search</b> to open the Subnet Selection window to select a subnet. If you select a subnet from the Subnet Selection window, this field is populated from that value. When you access this screen from the subnet in the IPv6 Hierarchy as described above, the current subnet start address appears in this field.</p> <p>If you choose <b>Existing</b> from the Address Selection field, this field is not editable and <b>Search</b> is unavailable.</p>
Address Selection	<p><b>Required.</b> Determines how the address assigned to this interface is determined. Select a value from the drop-down list. Allowable values are as follows:</p> <ul style="list-style-type: none"> <li>• Next Available</li> <li>• Last Available</li> <li>• Random</li> <li>• Specific</li> </ul> <p>If you select <b>Specific</b>, you can enter a specific IP address in the <b>IP Address</b> field. If you select <b>Existing</b>, the <b>Subnet Start Address</b>, <b>Name</b> and <b>IP Address</b> fields are unavailable, and you must select an existing IP Address using <b>Search</b> (next to the <b>Name</b> field). If you navigated to this screen from a subnet, as described above, the default value is the one defined in the subnet.</p>
IP Address	<p><b>Optional.</b> The IP address you want to add to the interface. You can only enter an IP address if you chose <b>Specific</b> in the <b>Address Selection</b> field.</p>
<b>Domain Attributes</b>	
Publish in Forward Zone	<p>This checkbox determines if an IPv6 AAAA record for the IPv6 Address is published in a forward zone. The AAAA record is then published in the forward zone for DNS lookups. The default for this value is provided by the Publish AAAA record global policy. For more information about defining AAAA records, refer to the <i>VitalQIP User's Guide</i>.</p>
Publish in Reverse Zone	<p>This checkbox determines if a PTR record for the IPv6 Address is published in a reverse zone. . The PTR record is then published in the reverse zone for DNS lookups. The default for this value is provided by the Publish AAAA record global policy. For more information about defining AAAA records, refer to the <i>VitalQIP User's Guide</i>.</p>

.....  
6 Enter appropriate values for any Attributes.

.....  
7 Click **Submit**.

**Result:** A dialog box opens with the message **Node added successfully!**

.....  
8 Click **OK**.

**Result:** The Manage Addresses in a Subnet page opens. Refer to [“To manage addresses in a subnet”](#), on page 332

.....  
E N D O F S T E P S  
.....



# To manage addresses in a subnet

---

## When to use

Use the following procedure to manage addresses in a subnet.

## Procedure

To manage addresses in a subnet, follow these steps.

- 1 Mouse over the **Address Management** tab and click **IPv6**. Alternatively, click the IPv6 Management icon (  ) in the toolbar.

**Result:** The IPv6 Hierarchy opens.

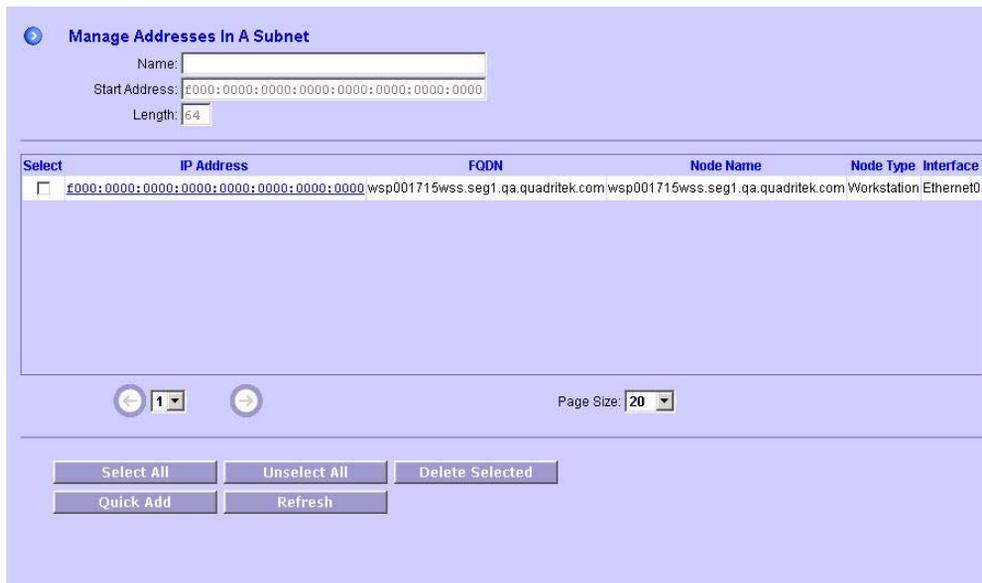
- 2 Expand the seed block and address ranges until the subnet containing the addresses you want to manage is visible.

- 3 Select the subnet whose addresses you want to manage.

**Result:** The Subnet Properties page opens.

- 4 Click **Manage Addresses**.

**Result:** The Manage Addresses In A Subnet page opens.



All managed addresses for this subnet (that is, those with a node assigned to them) are displayed on this page.

### Delete address from subnet

- .....
- 5 To delete one or more addresses, click the checkbox in the Select column next to the addresses you want to delete, and then click **Delete Selected**.

**Result:** A dialog box opens with the message **Are you sure you want to delete the selected addresses?**

- .....
- 6 Click **OK**. The addresses are deleted.

- .....
- 7 Click **Refresh** to see an updated list of addresses.

### Manage address in subnet

- .....
- 8 To change the properties of an address in a subnet, click the IP address.

**Result:** A new window opens with the IP address properties. The user can click the **Modify** button to modify the IP Address properties on this new window. The Node Properties page opens. Refer to [“To modify a node”, on page 355](#) for details about this screen.

.....  
E N D O F S T E P S  
.....



## To search for a domain

---

### When to use

Use this procedure to search for a domain when you are adding subnets.

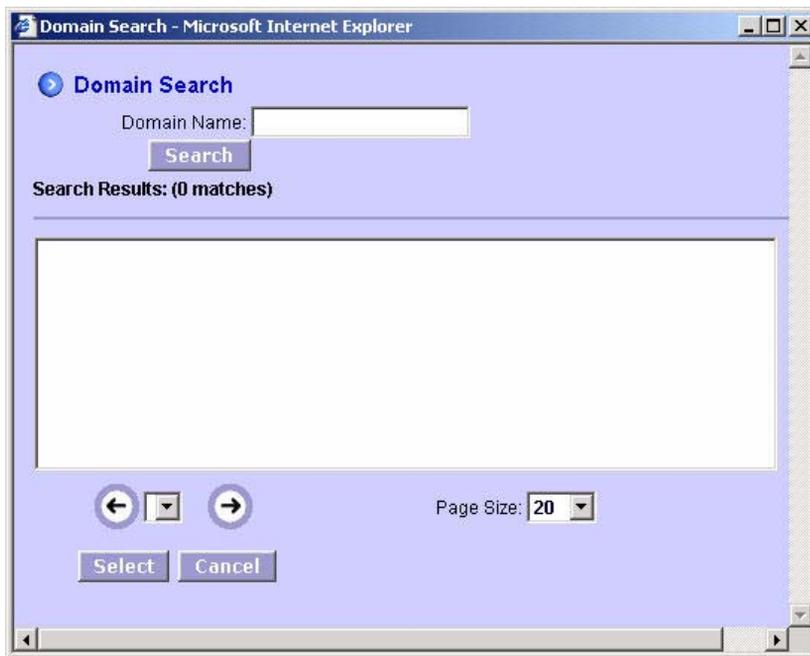
### Procedure

To search for the domain that is associated with a subnet, follow these steps.

---

- 1 Click the **Search** button that appears next to the **Domain** field.

**Result:** The Domain Search dialog box opens.



- 2 In the **Domain Name** field, enter the first few letters of the domain name. Use the wildcard character (\*) as needed. If you enter only the wildcard character, a list of *all* domains is returned.
- 

- 3 Click **Search**.

**Result:** The results appear in the **Search Results** list.

.....  
4 In the **Search Results** list, highlight a domain.  
.....

5 Click **Select**.

**Result:** The Domain Search dialog box closes and the domain you selected is added to the **Domain Name** field.

.....  
E N D O F S T E P S  
.....





# 10 Node management

## Overview

---

### Purpose

This chapter describes the functions used to manage IPv6 nodes in VitalQIP.

### Contents

This chapter covers these topics.

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## Node management

---

### Overview

VitalQIP displays hardware on your network as nodes. A node can be a router, server, laptop computer or any other piece of hardware connected to your network.

A node's physical connection to the network, a Network Interface Card (NIC), is displayed as an interface. Nodes that have more than one NIC card, such as routers, can have an interface for each connection. Interfaces can have MAC addresses defined by the NIC card's manufacturer.

An interface's logical connection to the network is as an IP address. An interface can have multiple IP addresses that share the same physical connection to the network. For example a single NIC card can have an IPv4 address, a link local IPv6 address and a globally routable IPv6 address.

VitalQIP allows administrators to define and track nodes in the Node Management portion of the GUI.



## To search for a node

---

### When to use

Use the Node Search function to add nodes to the node hierarchy for further management.

When you initially select the Node Search function, there are no nodes displayed in the node hierarchy. You must search for nodes to be able to access them. You can enter any combination of the available search fields.

The search results depend on the information entered. For example, you enter a value in the IP Address field, the results are a listing of IP addresses. If you enter a value in the Name field, the results are a listing of domain names.

Once the search results are displayed, you can select an item to add to the hierarchy. For example, when you select an IP Address in the search results and click **Add to Hierarchy**, the node corresponding to this IP address is added to the hierarchy, and the node is expanded in the hierarchy to the IP address selected. If the node is already in the hierarchy, the hierarchy is simply expanded. The search attributes are grouped in collapsible pagels by Node, Interface, and IP Address.

### Procedure

To search for a node, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

**Node Search**

**Node**

Type:

Name:

Search On Domain Name

Unique ID:

Description:

**Interface**

Name:

Mac Address:

**IP Address**

Name:

IP Address:

**Node Attributes**

Number Of Attributes:

Attribute Group	Attribute Name	Attribute Value
<input type="text" value="&lt;NONE&gt;"/>	<input type="text" value="test2"/>	<input type="text"/>

**Interface Attributes**

Number Of Attributes:

Attribute Group	Attribute Name	Attribute Value
<input type="text" value="&lt;NONE&gt;"/>	<input type="text"/>	<input type="text"/>

**IP Address Attributes**

Number Of Attributes:

Attribute Group	Attribute Name	Attribute Value
<input type="text" value="&lt;NONE&gt;"/>	<input type="text"/>	<input type="text"/>

- 2 Enter the value or values you want to use to search for a node. You can enter values in all or some sections of the Node Search page. You can also leave all fields blank, however this returns all nodes defined in the system.

**Important!** You can use the asterisk (\*) as a wildcard in any text field on this screen. You can use the asterisk at the beginning, middle or end of a string.

Review the following table for a description of the fields.

**Table 39 Node search fields**

<b>Field</b>	<b>Description</b>
<b>Node</b>	
Type	<p>The type of node for which you are searching. Select a value from the drop-down list. The list of values shown is delivered with VitalQIP, however this list is customizable. Therefore the list may contain additional values, or may not contain some values shown in the following list.</p> <ul style="list-style-type: none"> <li>• Workstation</li> <li>• X-terminal</li> <li>• PC</li> <li>• Printer</li> <li>• Server</li> <li>• Wiring_Hub</li> <li>• Router</li> <li>• Bridge</li> <li>• Terminal_Server</li> <li>• Switch</li> <li>• Legacy_System</li> <li>• Gateway</li> <li>• Test_Equipment</li> <li>• Undefined</li> <li>• Others</li> <li>• Partially_Managed</li> </ul>
Name	Name of the node for which you are searching.
Search On Domain Name	If selected, the search is performed on the domain name, . If cleared, the search is performed on the node name.
Unique ID	Unique ID assigned to the node.
Description	Text description assigned to the node.
<b>Interface</b>	
Name	Name of the interface assigned to the node.
MAC Address	MAC address of the interface card assigned to the node.
<b>IP Address</b>	
Name	Name of the IP address assigned to the node.
IP Address	IPv6 address assigned to the node.

Field	Description
<b>Node Attributes</b>	
Number of Attributes	Number of Node Attributes you want to use as a search parameter. Select a value from the drop-down list. Allowable values are from 0 (default) to 5. The number in this field corresponds to the number of lines that appear immediately below it. Use the following lines to specify attributes to use in your search.
Attribute Group	This field does not display if the Number of Attributes field is set to 0. Select an attribute group from the drop-down list. The allowable values consist of <NONE> and any attribute groups defined at your site.
Attribute Name	This field does not display if the Number of Attributes field is set to 0. Select an attribute name from the drop-down list. The allowable values consist of <ALL> and any attributes defined at your site. The list is limited to those items specified in the Attribute Group field.
Attribute Value	This field does not display if the Number of Attributes field is set to 0. Enter a value associated with the attribute you are using in your search.
<b>Interface Attributes</b>	
Number of Attributes	Number of Interface Attributes you want to use as a search parameter. Select a value from the drop-down list. Allowable values are from 0 (default) to 5. The number in this field corresponds to the number of lines that appear immediately below it. Use the following lines to specify attributes to use in your search.
Attribute Group	This field does not display if the Number of Attributes field is set to 0. Select an attribute group from the drop-down list. The allowable values consist of <NONE> and any attribute groups defined at your site.
Attribute Name	This field does not display if the Number of Attributes field is set to 0. Select an attribute name from the drop-down list. The allowable values consist of <ALL> and any attributes defined at your site. The list is limited to those items specified in the Attribute Group field.
Attribute Value	This field does not display if the Number of Attributes field is set to 0. Enter a value associated with the attribute you are using in your search.

Field	Description
<b>IP Address Attributes</b>	
Number of Attributes	Displays the number of <b>IP Address Attributes</b> you want use as a search parameter. Select a value from the drop-down list. Allowable values are from 0 (default) to 5. The number in this field corresponds to the number of lines that appear immediately below it. Use the following lines to specify attributes to use in your search.
Attribute Group	This field does not display if the <b>Number of Attributes</b> field is set to 0. Select an attribute group from the drop-down list. The allowable values consist of <b>&lt;NONE&gt;</b> and any attribute groups defined at your site.
Attribute Name	This field does not display if the <b>Number of Attributes</b> field is set to 0. Select an attribute name from the drop-down list. The allowable values consist of <b>&lt;ALL&gt;</b> and any attributes defined at your site. The list is limited to those items specified in the <b>Attribute Group</b> field.
Attribute Value	This field does not display if the <b>Number of Attributes</b> field is set to 0. Enter a value associated with the attribute you are using in your search.

3 Click **Search**.

**Result:** A list of matching nodes is displayed at the bottom of the Node Search page.

Search

Search Results: (3 matches)

Select	Node Type	Node Name	Unique ID	Description	Interface Name	Mac Address	IP Address Name	IPv6 Address	FQDN
<input type="checkbox"/>	Workstation	das	7747	description					
<input type="checkbox"/>	Workstation	das	6547	description					
<input type="checkbox"/>	Workstation	das.tomain.qa.quadritek.com	47	description					

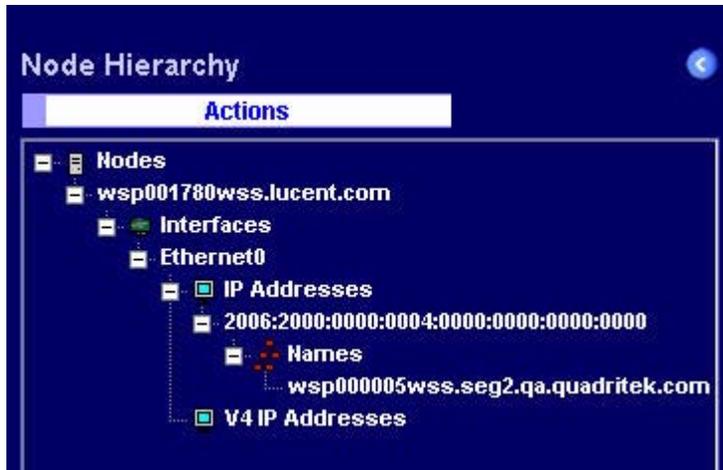
Page Size: 20

Add To Hierarchy | Select All | Unselect All

- 
- 4 Click the checkbox in the Select column for the node whose hierarchy you want to view. You can click the **Select All** button to select all nodes displayed on this page of results. You can click the **Deselect All** button to clear all the checkboxes displayed on this page of results.
- 

- 5 Click **Add to Hierarchy**.

**Result:** The node's hierarchy is displayed on the left side of the screen.



END OF STEPS

---



## To search for an IPv4 object

---

### When to use

Use the IPv4 Object Search function to find IPv4 objects in the node hierarchy.

**Important!** Only IPv4 addresses that are currently associated to an interface in Node Management are returned.

### Procedure

To search for an IPv4 object, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

---

- 2 Mouse over the **Actions** menu and select **IPv4 Object Search**.

**Result:** The IPv4 Object Search page opens.

- 3 Enter the value or values you want to use to search for an object. You can enter values in all or some sections of the IPv4 Object Search page. You can also leave all fields blank, however this returns all nodes associated with an IPv4 address that are defined in the system.

**Important!** You can use the asterisk (\*) as a wildcard in any text field on this screen. You can use the asterisk at the beginning, middle or end of a string.

Review the following table for a description of the fields.

**Table 40 IPv4 object search fields**

Field	Description
Name	Name of the object for which you are searching.
IP Address	IP address assigned to the object.

Field	Description
MAC Address	MAC address of the interface card assigned to the node.
User-Defined Field	This value consists of two fields. The first is a drop-down list that allows you to select from all user-defined fields, or to specify one. The second field allows you to enter a value assigned to the user-defined field you have selected.

---

**4** Click **Search**.

**Result:** A list of matching nodes is displayed at the bottom of the IPv4 Object Search page.

---

**5** Click the check boxes in the **Select** column for the nodes whose hierarchies you want to view. Click **Select All** to select all objects displayed on this page of results.

---

**6** Click **Add to Hierarchy**.

**Result:** The selected node's hierarchy is added to the Node Hierarchy.

END OF STEPS

---



## To add a node

---

### When to use

Use this procedure to add a node. When you add a node using this procedure, VitalQIP takes you through the process of adding a node, adding an interface to the node, and then adding an address to the interface. You have the option of adding all components, or initially can add just the node, and add its subcomponents later.

### Before you begin

VitalQIP validates data to prevent CNAME conflicts in the same organization by default. If a CNAME conflict occurs, an error message displays, and you cannot add or modify the profile. You can disable this feature by setting the **Validate CNAME Records** policy in the VitalQIP client Global Policies to False. When you add or modify an IPv6 node, validation checks are made against:

- Object aliases
- Object resource records
- Domain resource records
- Reverse zone resource records

### Procedure

To add a node, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

---

- 2 Mouse over the **Actions** menu and select **Add Node**.

**Result:** The Add Node page opens.

**Add Node**

**Node:**

\*Type:

Name:

Domain:

Unique ID:

Description:

**User Defined Attributes**

---

- 3 Enter the values you want to add a node. Review the following table for a description of the fields.

**Table 41 Add node fields**

Field	Description
Type	<p><b>Required.</b> Type of node for which you are searching. Allowable values are site-specific. The following values are supplied at the time VitalQIP is installed. Your list may be different if it has been customized at your site:</p> <ul style="list-style-type: none"> <li>• Workstation</li> <li>• X-terminal</li> <li>• PC</li> <li>• Printer</li> <li>• Server</li> <li>• Wiring_Hub</li> <li>• Router</li> <li>• Bridge</li> <li>• Terminal_Server</li> <li>• Switch</li> <li>• Legacy_System</li> <li>• Gateway</li> <li>• Test_Equipment</li> <li>• Undefined</li> <li>• Others</li> <li>• Partially_Managed</li> </ul>

Field	Description
Name	Enter the name of the node. Click <b>Generate</b> to have the database provide one for you. You must enter a value in this field or in the <b>Domain</b> field or both.
Domain	Enter the domain to which this node is assigned. Click <b>Search</b> to search for a domain. You must enter a value in this field or the <b>Name</b> field, or both.
Unique ID	<i>Optional.</i> Unique ID assigned to the node. If you leave this field blank, the system assigns a value. This must be unique within the organization.
Description	<i>Optional.</i> Text description assigned to the node.

4 Click **Submit**.

**Result:** A dialog box opens with the message **Node Created**.

5 Click **OK**.

**Result:** The Node Properties page opens.

END OF STEPS



# To quickly add a node and all subcomponents

---

## When to use

Use this procedure to add a node, interface and IP address all on one screen. When you add a node using this procedure, you must add all components at once. If you want to add a node without adding an interface and IP address, refer to [“To add a node”](#), on page 349.

## Procedure

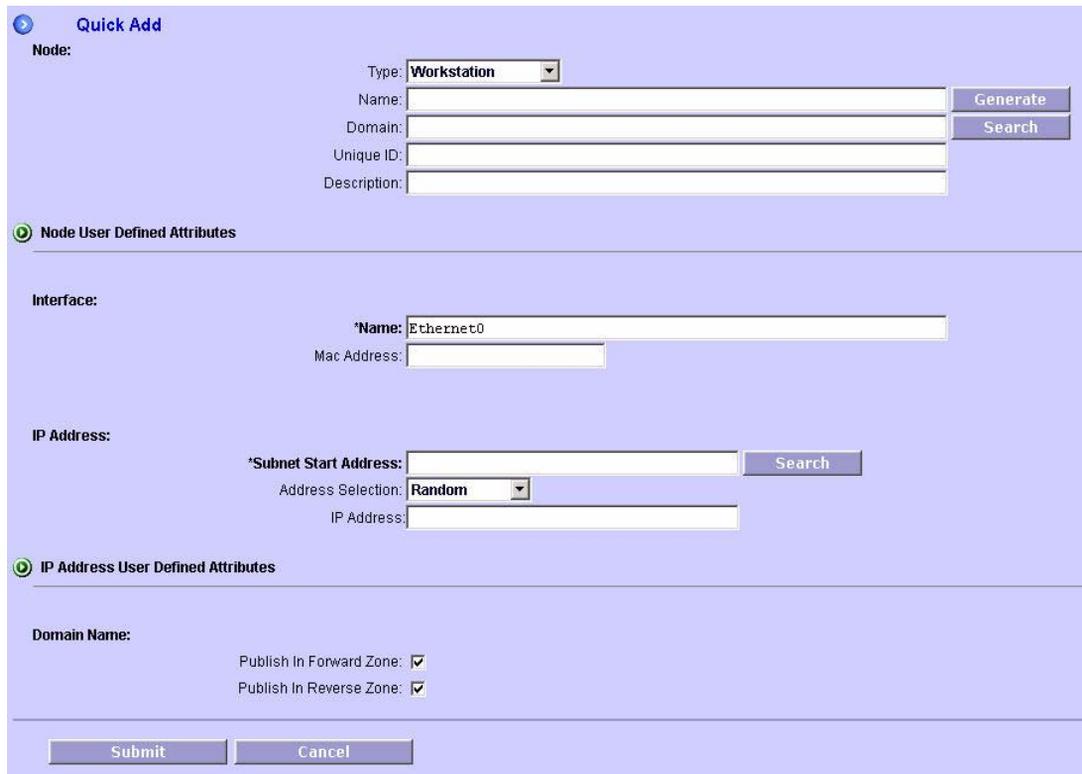
To quickly add a node, follow these steps.

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon (  ) in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

- 2 Mouse over the **Actions** menu and select **Quick Add**.

**Result:** The Quick Add page opens.



**Quick Add**

**Node:**

Type:

Name:

Domain:

Unique ID:

Description:

**Node User Defined Attributes**

---

**Interface:**

\*Name:

Mac Address:

**IP Address:**

\*Subnet Start Address:

Address Selection:

IP Address:

**IP Address User Defined Attributes**

**Domain Name:**

Publish In Forward Zone:

Publish In Reverse Zone:

- 3 Enter the values you want to add a node. Review the following table for a description of the fields.

**Table 42 Quick add node fields**

Field	Description
<b>Node</b>	
Type	<p><b>Required.</b> Type of node you are adding. Allowable values are site-specific. The following values are supplied at the time VitalQIP is installed. Your list may be different if it has been customized at your site:</p> <ul style="list-style-type: none"> <li>• Workstation</li> <li>• X-terminal</li> <li>• PC</li> <li>• Printer</li> <li>• Server</li> <li>• Wiring_Hub</li> <li>• Router</li> <li>• Bridge</li> <li>• Terminal_Server</li> <li>• Switch</li> <li>• Legacy_System</li> <li>• Gateway</li> <li>• Test_Equipment</li> <li>• Undefined</li> <li>• Others</li> <li>• Partially_Managed</li> </ul>
Name	Name of the node you are adding. You must enter a value in this field, the <b>Domain</b> field, or both. Click <b>Generate</b> to automatically generate a node name.
Domain	Domain to which this node is assigned. Click <b>Search</b> to search for a domain. You must enter a value in this field or the <b>Name</b> field, or both.
Unique ID	Unique ID assigned to the node. If you leave this field blank, the system assigns a value. This value must be unique within the organization.
Description	Text description assigned to the node.
<b>Interface</b>	
Name	<b>Required.</b> Name of the interface assigned to the node.
MAC Address	MAC address of the interface card assigned to the node.

Field	Description
<b>IP Address</b>	
Subnet Start Address	<b>Required.</b> Enter the subnet address that contains the IP address you want to assign to this interface. Click <b>Search</b> to open the subnet selection window to select a subnet. If you select a subnet from the Subnet Selection window, this field is populated from that value.
Address Selection	<b>Required.</b> Determines how the address assigned to this interface is determined. Select a value from the drop-down list. Allowable values are as follows: <ul style="list-style-type: none"> <li>• <b>Next Available</b></li> <li>• <b>Last Available</b></li> <li>• <b>Random</b></li> <li>• <b>Specific</b></li> </ul> If you select <b>Specific</b> , you can enter a specific IP address in the IP address field.
IP Address	<b>Optional.</b> The IPv6 address you want to add to the interface. You can only enter an IP address if you chose <b>Specific</b> in the Address Selection field.
<b>Domain Attributes</b>	
Publish in Forward Zone	This checkbox determines if an IPv6 AAAA record for the IPv6 Address is published in a forward zone. The AAAA record is then published in the forward zone for DNS lookups.
Publish in Reverse Zone	This checkbox determines if a PTR record for the IPv6 Address is published in a reverse zone. . The PTR record is then published in the reverse zone for DNS lookups.

.....

4 Enter appropriate values for any Attributes.

.....

5 Click **Submit**.

**Result:** A dialog box opens with the message **Node added successfully!**

.....

6 Click **OK**.

**Result:** The Node Properties page opens.

.....

END OF STEPS



## To modify a node

---

### When to use

Use this procedure to modify a node's properties. Before you can modify a node, you must first search for it and display it in the Node Hierarchy. Refer to [“To search for a node”, on page 340](#) for information on searching for nodes.

**Important!** A node must be displayed in the node hierarchy before you can modify it.

### Procedure

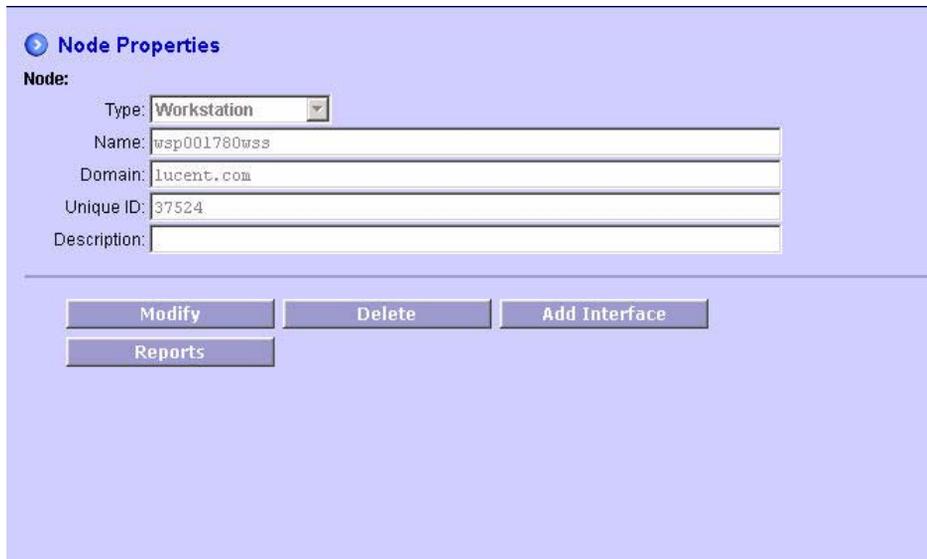
To modify a node, follow these steps.

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon (  ) in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

- 2 Select a node from the Node Hierarchy.

**Result:** The Node Properties page opens.



**Node Properties**

**Node:**

Type: Workstation

Name: wsp001780wss

Domain: lucent.com

Unique ID: 37524

Description:

Modify Delete Add Interface Reports

- 3 Click **Modify**.

**Result:** The Modify Node page opens.

**Modify Node**

**Node:**

\* Type:

Name:

Domain:

Unique ID:

Description:

**User Defined Attributes**

---

- 4 Modify node information on the Node Modify page. Review the following table for a description of the fields.

**Table 43**    **Modify node fields**

Field	Description
Type	Type of node. Allowable values are site-specific. The following values are supplied at the time VitalQIP is installed. Your list may be different if it has been customized at your site: <ul style="list-style-type: none"> <li>• Workstation</li> <li>• X-terminal</li> <li>• PC</li> <li>• Printer</li> <li>• Server</li> <li>• Wiring_Hub</li> <li>• Router</li> <li>• Bridge</li> <li>• Terminal_Server</li> <li>• Switch</li> <li>• Legacy_System</li> <li>• Gateway</li> <li>• Test_Equipment</li> <li>• Undefined</li> <li>• Others</li> <li>• Partially_Managed</li> </ul>
Name	Name of the node.
Domain	Domain where the node resides.
Unique ID	<i>Optional.</i> Unique ID assigned to the node. If you leave this field blank, the system assigns a value. This value must be unique within the organization.
Description	Text description assigned to the node.

.....

**5**    If the node has Attributes associated with it, you can modify those as well.

.....

**6**    When you are finished making changes, click **Submit**.

**Result:** A dialog box opens with the message **Node Modified**.

.....  
7 Click **OK**.

**Result:** The Node Properties page opens with the modified values as applicable.

.....  
E N D O F S T E P S  
.....



## To delete a node

---

### When to use

Use this procedure to delete a node. Before you can delete a node, you must first search for it and display it in the Node Hierarchy. Refer to [“To search for a node”, on page 340](#) for information on searching for nodes.

**Important!** A node must be displayed in the node hierarchy before you can delete it.

### Procedure

To delete a node, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

---

- 2 Select a node from the Node Hierarchy.

**Result:** The Node Properties page opens.

---

- 3 Click **Delete**.

**Result:** A dialog box opens with the message **This action will delete the Node. ALL the interfaces on the Node and ALL the IP Addresses on these interfaces and their associated DNS records. Are you sure you want to proceed?**

---

- 4 Click **OK**.

**Result:** A dialog box opens with the message **Node Deleted**.

---

- 5 Click **OK**.

**Result:** The node is deleted and removed from the Node Hierarchy:

END OF STEPS

---



## To add an interface to a node

---

### When to use

Use this procedure to add an interface to a node. Before you can add an interface to a node, you must first search for it and display it in the Node Hierarchy. Refer to “[To search for a node](#)”, on [page 340](#) for information on searching for nodes.

**Important!** A node must be displayed in the node hierarchy before you can add an interface to it.

### Procedure

To add an interface to a node, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

---

- 2 Select a node from the Node Hierarchy.

**Result:** The Node Properties page opens.

---

- 3 Click **Add Interface**.

**Result:** The Add Interface page opens.

**Add Interface**

**Node:**

Type: Workstation

Name: wsp001780wss

Domain: lucent.com

Unique ID: 37524

Description:

**Interface:**

\*Name: Ethernet1

Mac Address:

**Interface User Defined Attributes**

Submit Cancel

- 4 Modify interface information on the Node Modify page.

**Important!** Node fields are read only on this page. Review [Table 43, “Modify node fields”](#), on page 357 for a description of the node fields.

Review the following table for a description of the interface fields.

**Table 44 Interface fields**

Field	Description
Name	<b>Required.</b> Name of the interface assigned to the node. VitalQIP generates a default name, which you can change. This name must be unique within this node.
MAC Address	<b>Optional.</b> MAC address of the interface card assigned to the node.

- 5 Click **Submit**.

A dialog box opens with the message **Interface Created**.

.....  
6 Click **OK**.

**Result:** The Node is displayed on the Node Hierarchy with the new interface and the Interface Properties page is displayed.

.....  
E N D O F S T E P S  
.....



## To modify an interface

---

### When to use

Use this procedure to modify an interface. Before you can modify an interface, you must first search for the node that contains it, and display it in the Node Hierarchy. Refer to “[To search for a node](#)”, on page 340 for information on searching for nodes.

**Important!** An interface must be displayed in the node hierarchy before you can modify it.

### Procedure

To modify an interface, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

---

- 2 Select a node from the Node Hierarchy.
- 

- 3 Expand the node until the interface you want to modify is visible.
- 

- 4 Click the interface name.

**Result:** The Interface Properties page opens.

**Interface Properties**

**Node:**

Type:

Name:

Domain:

Unique ID:

Description:

**Interface:**

Name:

Mac Address:

---

5 Click **Modify**.

**Result:** The Modify Interface page opens.

**Modify Interface**

**Node:**

\*Type:

Name:

Domain:

Unique ID:

Description:

**Node User Defined Attributes**

---

**Interface:**

\*Name:

Mac Address:

**Interface User Defined Attributes**

---

.....  
6 Review [Table 44, “Interface fields”](#), on page 361 for information about these fields.

.....  
7 Click **Submit** when you are finished modifying fields.

**Result:** A dialog box opens with the message **Interface Modified**.

.....  
8 Click **OK**.

**Result:** The Interface Properties page displays the modified information.

.....  
E N D O F S T E P S  
.....



## To move an interface to another node

---

### When to use

Use this procedure to move an interface to another node. Before you can move an interface, you must first search for the node that contains it, and display it in the Node Hierarchy. Refer to [“To search for a node”, on page 340](#) for information on searching for nodes.

**Important!** An interface must be displayed in the node hierarchy before you can move it.

### Procedure

To move an interface to a different node, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

---

- 2 Select a node from the Node Hierarchy.
- 

- 3 Expand the node until the interface you want to move is visible.
- 

- 4 Click the interface name.

**Result:** The Interface Properties page opens.

**Interface Properties**

**Node:**

Type:

Name:

Domain:

Unique ID:

Description:

**Interface:**

Name:

Mac Address:

- 5 Click **Move**.

**Result:** The Move Interface page opens.

**Move Interface**

**Source:**

Interface Name:

Node Name:

Unique ID:

**Destination:**

Node Name:

\*Unique ID:

- 6 Enter a value in the **Node Name** field by using the **Search** button to select a node name from a list of available nodes. This field is optional.

**Important!** Selecting a node from the list of available nodes automatically populates the Unique ID field.

---

**7** Enter a node's unique ID in the **Unique ID** field. This field is required. If you have selected a Node Name in the previous step, this field contains the unique ID for that node.

---

**8** Click **Submit**.

A dialog box opens with the message **Interface Moved Successfully!**

---

**9** Click **OK**.

**Result:** The hierarchy is updated to reflect the move, and the newly moved interface properties are displayed.

E N D O F S T E P S

---



## To add an IPv6 address to an interface

---

### When to use

Use this procedure to add an IPv6 address to an interface. Before you can add an IPv6 address to an interface, you must first search for the node that contains it, and display it in the Node Hierarchy. Refer to [“To search for a node”, on page 340](#) for information on searching for nodes.

**Important!** A interface must be displayed in the node hierarchy before you can add an IP address to it.

### Procedure

To add an IP address to an interface, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

---

- 2 Select a node from the Node Hierarchy.
- 

- 3 Expand the node until the interface to which you want to add an address is visible.
- 

- 4 Click the interface name.

**Result:** The Interface Properties page opens.

**Interface Properties**

**Node:**

Type: Workstation

Name: wsp00008lwss

Domain: seg1.qa.quadritek.com

Unique ID: 220

Description:

**Interface:**

Name: interface a

Mac Address:

---

Modify Delete Add IPv6 Address

Add IPv4 Address Move

5 Click **Add IPv6 Address**.

**Result:** The Add IP Address page opens.

**Add IP Address**

**Node:**

Type: Workstation

Name: wsp001780wss

Domain: lucent.com

Unique ID: 37524

Description:

**Interface:**

Interface Name: Ethernet0

Mac Address: 1a:2b:01:02:03:0

**IP Address:**

\*Subnet Start Address: Search

\*Address Selection: Next Available

Name: Search

IP Address:

**User Defined Attributes**

Submit Cancel

- 
- 6 Add IP address information on the Add IP Address page.

**Important!** Node fields and Interface fields are read only on this page. Review [Table 43, “Modify node fields”, on page 357](#) for a description of the node fields. Review [Table 44, “Interface fields”, on page 361](#) for a description of interface fields.

- 
- 7 Review the following table for a description of the IP Address fields.

**Table 45 IP Address fields**

Field	Description
Subnet Start Address	<p><b>Required.</b> Enter the subnet address that contains the IP address you want to assign to this interface.</p> <p>You can use <b>Search</b> to open the subnet selection window to select a subnet. If you select a subnet from the Subnet Selection window, this field is populated from that value.</p> <p>If you select <b>Specific</b> from the Address Selection field, you can enter a specific IP address in the IP address field. If you select <b>Existing</b> from the Address Selection field, the Subnet Start Address, Name and IP Address fields are unavailable, and you must select an existing IP Address using the <b>Search</b> button next to the Name field.</p>
Address Selection	<p><b>Required.</b> Determines how the address assigned to this interface is determined. Select a value from the drop-down list. Allowable values are as follows:</p> <ul style="list-style-type: none"> <li>• <b>Next Available</b></li> <li>• <b>Last Available</b></li> <li>• <b>Random</b></li> <li>• <b>Existing</b></li> <li>• <b>Specific</b></li> </ul> <p>If you select <b>Specific</b>, you can enter a specific IP address in the IP address field. If you select <b>Existing</b>, the Subnet Start Address, Name and IP Address fields are unavailable, and you must select an existing IP Address using the Search button next to the Name field. Adding an existing address to a interface means that the IP address will exist on more than one interface. Examples of this configuration include TCP load balancers and multicast groups.</p>
Name	<p><b>Optional.</b> Name associated with an IP address. The Search buttons is unavailable unless you select <b>Existing</b> in the Address Selection field. The name of an IP address is particularly useful for identifying multicast groups.</p>
IP Address	<p><b>Optional.</b> The IP address you want to add to the interface. You can only enter an IP address if you chose <b>Specific</b> in the Address Selection field.</p>

8 Click **Submit**.

**Result:** A dialog box opens with the message **Address Created**.

.....  
9 Click **OK**.

**Result:** The interface is displayed on the Node Hierarchy with the new IP address and the IP address properties are displayed in the right-hand page.

.....  
E N D O F S T E P S  
.....



## To add an IPv4 Address to an interface

---

### When to use

Use this procedure to add an IPv4 address to an interface. Before you can add an IPv4 address to an interface, you must first search for the node that contains it, and display it in the Node Hierarchy. Refer to [Table , “To search for a node”, on page 340](#) for information on searching for nodes.

**Important!** A interface must be displayed in the node hierarchy before you can add an IP address to it.

### Procedure

To add an IP address to an interface, follow these steps.

- 1 Select a node from the Node Hierarchy.
- 2 Expand the node until the interface to which you want to add an address is visible.
- 3 Click the interface name.

**Result:** The Interface Properties page opens.

**Interface Properties**

**Node:**

Type:

Name:

Domain:

Unique ID:

Description:

**Interface:**

Name:

Mac Address:

---

4 Click **Add IPv4 Address**.

**Result:** The Add IP Address page opens.

**Add IP Address**

**Node:**

Type:

Name:

Domain:

Unique ID:

Description:

**Interface:**

Name:

Mac Address:

**IP Address:**

IP Address:

Subnet Name:

Subnet Address:

Subnet Mask:

Object Class:

Object Name:

Domain Name:

Dynamic Configuration:

Object Description:

Application:

Mac Address:

Time To Live TTL:

**Important!** Node fields and Interface fields are read only on this page. Review [Table 43, “Modify node fields”, on page 357](#) for a description of the node fields. Review [Table 44, “Interface fields”, on page 361](#) for a description of interface fields.

---

5 Enter an IP address in the **IP Address** field or click **Search** to find an IPv4 IP address with the same object class as the current node. Only addresses that are not associated with an interface are returned.

**Important!** The remaining IP Address fields on this screen are read only, and take on the value associated with the IP address you enter.

.....  
**6** Click **Submit** to add the IPv4 address to the interface.

.....  
E N D O F S T E P S  
.....



## To modify an IP address associated with an interface

---

### When to use

Use this procedure to modify IP address fields associated with an interface.

**Important!** You cannot change the IP address of an interface. You must delete it and add a new one.

Before you can modify IP address fields associated with an interface, you must first search for the node that contains it, and display it in the Node Hierarchy. Refer to [“To search for a node”](#), on page 340 for information on searching for nodes.

**Important!** An interface must be displayed in the node hierarchy before you can modify an IP address associated with it.

### Procedure

To modify an IP address associated with an interface, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

---

- 2 Select a node from the Node Hierarchy.
- 

- 3 Expand the node until the interface containing the IP address you want to modify is visible.
- 

- 4 Expand the interface until the IP address you want to modify is visible.
- 

- 5 Click the IP address.

**Result:** The IP Address Properties page opens.

**IP Address Properties**

**Node:**

Type: **Workstation** (dropdown)

Name:

Domain:

Unique ID:

Description:

**Interface:**

Name:

Mac Address:

**IP Address:**

Subnet Start Address:

Name:

IP Address:

6 Click **Modify**.

**Result:** The Modify IP Address page opens.

**Modify IP Address**

**Node:**

Type: **Workstation** (dropdown)

Name:

Domain:

Unique ID:

Description:

**Node User Defined Attributes**

---

**Interface:**

Name:

Mac Address:

**IP Address:**

Subnet Start Address:

Name:

IP Address:

**IP Address User Defined Attributes**

---

- .....
- 7 For IPv6 addresses, refer to [Table 45, “IP Address fields”](#), on page 372 for a detailed explanation of the fields on this screen.

.....

  - 8 For IPv4 addresses, you can modify Node and Interface information. Refer to [Table 27, “Quick Add fields”](#), on page 224 for a detailed explanation of fields on this screen.

.....

  - 9 When you have modified the fields associated with this IP address, click **Submit**.  
**Result:** A dialog box opens with the message **IP Address Modified**.

.....

  - 10 Click **OK**.  
**Result:** The IP address has been modified and the IP address’ properties are displayed in the right-hand page.

.....

END OF STEPS

.....



## To move an IP address to a different interface

---

### When to use

Use this procedure to reassign an IP address from one interface to another.

Before you can move an IP address to a different interface, you must first search for the node that contains it, and display it in the Node Hierarchy. Refer to [“To search for a node”, on page 340](#) for information on searching for nodes.

**Important!** An interface must be displayed in the node hierarchy before you can move an IP address associated with it to a different interface.

### Procedure

To move an IP address to a different interface, follow these steps.

- 
- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

---

- 2 Select a node from the Node Hierarchy.
- 

- 3 Expand the node until the interface containing the IP address you want to move is visible.
- 

- 4 Expand the interface until the IP address you want to move is visible.
- 

- 5 Click the IP address.

**Result:** The IP Address Properties page opens:

---

- 6 Click **Move to Interface**.

**Result:** The Move IP Address To Interface page opens.

7 Enter values in the **Destination** fields based on the descriptions in the following table:

**Table 46 Move IP Address To Interface fields**

Field	Description
Node Name	<i>Optional.</i> Name of the node containing the interface to which you want to move this IP address. <b>Important!</b> You can only use <b>Search</b> to enter a node name in this field. If you do, the following two required fields are automatically filled in.
NodeUnique ID	<i>Required.</i> Unique ID assigned to the node. Automatically filled in if you use <b>Search</b> to find the node name.
Interface Name	<i>Required.</i> Name of the interface to which you are reassigning this IP address. Automatically filled in if you use <b>Search</b> button to find the node name.

8 When you have entered values in the fields, click **Submit**.

**Result:** A dialog box opens with the message **IP Address moved successfully!**

9 Click **OK**.

**Result:** The Node Hierarchy is updated to reflect the move and the IP Address Properties page opens.

END OF STEPS



## To move an IP address to a different subnet

---

### When to use

Use this procedure to reassign an IPv6 address on an interface from one subnet to another.

Before you can move an IP address to a different subnet, you must first search for the node that contains the address, and display it in the Node Hierarchy. Refer to [“To search for a node”, on page 340](#) for information on searching for nodes.

**Important!** An interface must be displayed in the node hierarchy before you can modify it.

### Procedure

To move an IPv6 address to a different interface, follow these steps.

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon (  ) in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

- 2 Select a node from the Node Hierarchy.

- 3 Expand the node until the interface containing the IPv6 address you want to move is visible.

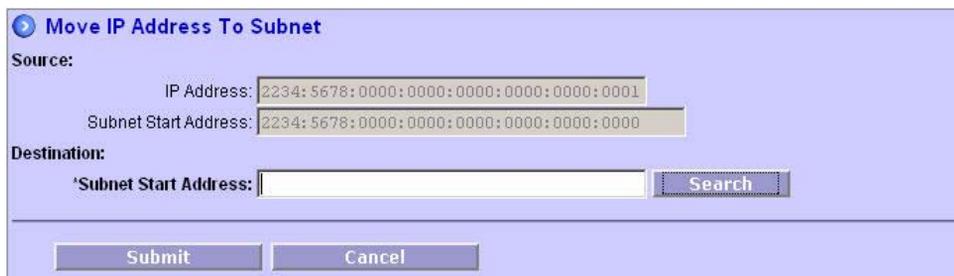
- 4 Expand the interface until the IP address you want to move is visible.

- 5 Click the IP address.

**Result:** The IP Address Properties page opens:

- 6 Click **Move to Subnet**.

**Result:** The Move IP Address To Subnet page opens.



.....  
7 Value the destination **Subnet Start Address** field.

**Important!** You can use the **Search** button to select a subnet for this field.

.....  
8 Click **Submit**.

**Result:** A dialog box opens with the message **IP Address moved successfully!**

.....  
9 Click **OK**.

**Result:** The Node Hierarchy is updated to indicate the IP address has been moved and the IP Address Properties page opens.

.....  
E N D O F S T E P S  
.....



## To delete an IP address from an interface

---

### When to use

Use this procedure to delete an IP address from an interface.

**Important!** You cannot change an interfaces's IP address. You must delete it and add a new one.

Before you can delete an IP address from an interface, you must first search for the node that contains it, and display it in the Node Hierarchy. Refer to [“To search for a node”, on page 340](#) for information on searching for nodes.

**Important!** An interface must be displayed in the node hierarchy before you can delete an IP address from it.

### Procedure

To delete an IP address associated with an interface, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

---

- 2 Select a node from the Node Hierarchy.
- 

- 3 Expand the node until the interface you want to modify is visible.
- 

- 4 Expand the interface until the interface from which you want to delete an IP address is visible.
- 

- 5 Click the IP address.

**Result:** The IP Address Properties page opens:

---

- 6 Click **Delete**.

**Result:** A dialog box opens with the message **Are you sure you want to delete the selected IP Address?**

---

- 7 Click **OK**.

**Result:** A dialog box opens with the message **IP Address deleted**.

---

.....  
**8** Click **OK**.

**Result:** The IP Management splash screen opens.

.....  
E N D O F S T E P S  
.....



## To delete an interface

---

### When to use

Use this procedure to delete an interface. Before you can delete an interface, you must first search for the node that contains it, and display it in the Node Hierarchy. Refer to “[To search for a node](#)”, on page 340 for information on searching for nodes.

**Important!** An interface must be displayed in the node hierarchy before you can delete it.

### Procedure

To delete an interface, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

---

- 2 Select a node from the Node Hierarchy.
- 

- 3 Expand the node until the interface you want to delete is visible.
- 

- 4 Click the interface name.

**Result:** The Interface Properties page opens.

---

- 5 Click **Delete**.

**Result:** A dialog box opens with the message **Are you sure you want to delete the selected interface?**

---

- 6 Click **OK**.

**Result:** A dialog box opens with the message **Interface deleted**.

---

- 7 Click **OK**.

**Result:** The Node Hierarchy is updated and the IP Management splash screen opens.

END OF STEPS

---



## To add a domain name to an IPv6 address

---

### When to use

Use this procedure to add a domain name to an interface's IPv6 address. Before you can add a domain name to an IPv6 address, you must first search for the node that contains it, and display it in the Node Hierarchy. Refer to [“To search for a node”, on page 340](#) for information on searching for nodes.

**Important!** An interface must be displayed in the node hierarchy before you can move it.

### Procedure

To add a domain name to an interface's IPv6 address, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

---

- 2 Select a node from the Node Hierarchy.
- 

- 3 Expand the node until the interface to which you want to add a domain name is visible.
- 

- 4 Expand the interface until the IP address to which you want to add a domain is visible.
- 

- 5 Click the IP address.

**Result:** The IP Address Properties page opens.

---

- 6 Click **Add Domain Name**.

**Result:** The Add Domain Name page opens.

**Add Domain Name**

**Node:**

Type: **Server**

Name: **rmhModel**

Domain: **www.xn--stargte-ixa.com**

Unique ID: **851**

Description: **rob test**

**Interface:**

Name: **Ethernet0**

Mac Address: **0013202FBCB5**

**IP Address:**

Subnet Start Address: **2001:db8:0:1::f**

Name: **rmhModel.example.com**

IP Address: **2001:0db8:0000:0001:0000:0000:0000:000f**

**Domain Name:**

Host Name: **rmhModel**

Domain: **www.xn--stargte-ixa.com**

**Search**

TTL:

Publish In Forward Zone:

Publish In Reverse Zone:

**Submit** **Cancel**

**Important!** The Node, Interface and IP Address fields on this screen are read-only.

7 Enter a value in the **Host Name** field. You must enter a value in this field, the **Domain** field or both.

8 Enter a domain name in the **Domain** field. You must enter a value in this field, the **Host Name** field, or both.

**Important!** Click **Search** to find a list of available domains.

9 Enter a Time To Live value in the **TTL** field for this domain name. This field is optional. A blank value indicates that it uses the default.

10 If you want to publish a forward zone record for this domain name in DNS, click the **Publish in Forward Zone** checkbox.

11 If you want to publish a reverse zone record for this domain name in DNS, click the **Publish in Reverse Zone** checkbox.

.....  
**12** Click **Submit**.

**Result:** A dialog box opens with the message **Domain Name created**.

.....  
**13** Click **OK**.

**Result:** The domain is added to the IP address in the Node Hierarchy and the Domain Name Properties page opens.

.....  
E N D O F S T E P S .....



## To modify a domain name on an IPv6 address

---

### When to use

Use this procedure to modify a domain name associated with an interface's IPv6 address. Before you can modify a domain name on an IPv6 address, you must first search for the node that contains the domain name, and display it in the Node Hierarchy. Refer to [“To search for a node”, on page 340](#) for information on searching for nodes.

**Important!** An IP address must be displayed in the node hierarchy before you can modify a domain name associated with it.

### Procedure

To add a domain name to an interface's IPv6 address, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.  
**Result:** The Node Hierarchy opens with the Node Search page.
- 2 Select a node from the Node Hierarchy.
- 3 Expand the node until the interface containing the domain name you want to modify is visible.
- 4 Expand the interface until the IP address to containing the domain name you want to modify is visible.
- 5 Click the domain name.  
**Result:** The Domain Name Properties page opens.
- 6 Click **Modify**.

**Modify Domain Name**

**Node:**

Type: Server

Name: rmhNode1

Domain: www.xn--stargte-ixa.com

Unique ID: 851

Description: rob test

**Interface:**

Name: Ethernet0

Mac Address: 0013202FBCB5

**IP Address:**

Subnet Start Address: 2001:db8:0:1::f

Name: rmhNode1.example.com

IP Address: 2001:0db8:0000:0001:0000:0000:0000:000f

**Domain Name:**

Host Name: rmhNode1

Domain: example.com

TTL:

Publish In Forward Zone:

Publish In Reverse Zone:

Submit Cancel

7 Modify fields as required. Refer to “To add a domain name to an IPv6 address”, on page 387 for a detailed explanation of the fields on this screen.

8 Click **Submit**.

**Result:** A dialog box opens with the message **Domain Name modified**.

9 Click **OK**.

**Result:** The Node Hierarchy is updated and the Domain Name Properties page opens.

END OF STEPS



## To delete a domain name from an IPv6 address

---

### When to use

Use this procedure to delete a domain name from an interface's IPv6 address. Before you can delete a domain name from an IPv6 address, you must first search for the node that contains the IPv6 address, and display it in the Node Hierarchy. Refer to [“To search for a node”, on page 340](#) for information on searching for nodes.

**Important!** An interface must be displayed in the node hierarchy before you can modify it.

### Procedure

To move an interface's IP address to a different domain, follow these steps.

---

- 1 Mouse over the **Address Management** tab and select **Node**. Alternatively, click the Node Management icon () in the toolbar.

**Result:** The Node Hierarchy opens with the Node Search page.

---

- 2 Select a node from the Node Hierarchy.
- 

- 3 Expand the node until the interface containing the IPv6 address from which you want to delete a domain is visible.
- 

- 4 Expand the interface until the domain name you want to delete from an interface address is visible.
- 

- 5 Click the domain name.

**Result:** The Domain Name Properties page opens:

---

- 6 Click **Delete**.

**Result:** A dialog box opens with the message **Are you sure you want to delete the selected Domain Name?**

---

- 7 Click **OK**.

**Result:** A dialog box opens with the message **Domain Name deleted** and the domain name is removed from the Node Hierarchy.

.....  
**8** Click **OK**.

**Result:** The IP Management splash screen opens.

.....  
E N D . O F . S T E P S  
.....





# 11 Network Services

## Overview

---

### Purpose

This chapter describes the VitalQIP network services functions, which are used to configure, view, and update the policy, data, and configuration files for services like DNS and DHCP.

### Contents

This chapter covers these topics.

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## Network services overview

---

The **Network Services** function allows you to configure, view, and update the policy, data and configuration files of Network Services, such as DNS and DHCP. Data and configuration files define the behavior of DNS and DHCP servers through the transmission, or “push” of data to the servers when a **Network Services** function is performed. The information that is transmitted is determined by both the setup of the Infrastructure and the subnet information. All Infrastructure must be set up prior to using the Network Services (NS) functions. Minimally, you should have defined the Domain and Network, defined and configured the Bootp, DHCP, and DNS servers, and modified the DHCP/Bootp template for your system.

Once you have set up the infrastructure and configured the subnets, you can create the necessary files and records required to operate DNS and DHCP with VitalQIP. The VitalQIP Network Services allows you to update and configure the following:

- DNS Configuration and Domain Zone files, and Reverse Zone files
- DHCP Configuration and Policy files
- Bootp services
- NIS services
- Local host services
- Active leases for a DHCP server or a specific subnet of a DHCP server



# DHCP generation

## DHCP file generation overview

---

This function enables you to generate the DHCP configuration and data files appropriate to the type of DHCP server selected. You can only generate DHCP files for DHCP servers. (Note that the server may be a Bootp server as well, depending on the server vendor.)

When a DHCP Generation is performed, the DHCP configuration files are generated, based on your Server Type described in the following table.

**Table 47**     **Generated DHCP configuration files**

Server Type	Files
Lucent DHCP	<i>dhcpd.conf</i> , <i>dhcpd.pcy</i> , <i>x.ddns.conf</i> (Refer to the note below), and <i>dhcp.db</i>
IBM for AIX	<i>dhcpsd.cnf</i>
Bootp	<i>bootptab</i>
Microsoft 2000/2003	Data is written to the Registry

**Important!** “x” is 1, 2, 3... representing the Organization ID number. By default, if only one organization defined, the generated file is *1.ddns.conf*. The *1.ddns.conf* file lists the configured domains and the primary and secondary DNS servers to dynamically update.



## VitalQIP push logic

---

The VitalQIP “push” logic for the Lucent DHCP server is as follows:

- For D-DHCP, A-DHCP, M-DHCP, and A-BOOTP objects: If the DHCP template associated with the object uses **Same as Subnet Profile** for routers (gateways), DNS servers, or TFTP servers, then the *dhcpd.conf* file is generated with the values from the subnet, whether or not those values have been overridden at the object level. There is no DHCP template option for **Same as Object Profile** for these three DHCP options. If they are **User Defined**, then the user-defined value(s) are pushed. Otherwise, the values associated with the subnet are used.
- For M-BOOTP objects: The values for routers, time-servers, and DNS servers are taken from the object. For these objects, the values from the subnet are copied to the object when the object is created, and then can be further modified in the M-BOOTP setup window/tab in the Object Profile.

When an administrator attempts to “push” DHCP configuration files to a DHCP server, a “Privilege Denied” error message appears if a failover server has been configured and has not been assigned to the administrator. To resolve this problem, use the thick client to add the failover server to the administrator’s Managed List in the Administrator Profile.



## Control debug levels for Lucent DHCP servers

---

The DHCP Generation screen provides a way to push requests to Lucent DHCP 5.4 servers to reinitialize the debug log, or change the debug level, or stop the debug logging all together, all without restarting the server.

The primary intent of this functionality is to provide a means for generating additional log data to assist in troubleshooting DHCP server problems without restarting the server, as was previously required by Lucent servers, to change the debug level or clear the debug log. The debug level selected with this new functionality does not affect the debug level defined for the server in the Server Profile. The debug level specified therefore only applies until the next DHCP file generation, or until superseded by a subsequent enhanced debug request: the selected debug level does not get saved as the server's debug level, and the level of debugging in the debug log can be reset with the next File Generation/push.

A file named *\$QIPHOME/etc/qdhcp\_logaction.txt* is pushed to the Lucent DHCP server by VitalQIP, instructing the server how to respond to the receipt of the control/signal.



## To generate DHCP configuration files

---

### When to use

Use this procedure to generate DHCP configuration files.

### Procedure

To generate DHCP configuration files, follow these steps.

- 1 Click the **Network Services** tab. Alternatively, click the Network Services icon  in the toolbar.

**Result:** The Network Services Generation page opens.

- 2 Expand the list of DHCP servers and click the one that you want to perform a DHCP push.

**Result:** The DHCP Properties page opens.



**DHCP Properties**

Server: doctest\_dhcp.example.com

IP Address:

Server Type: LUCENT\_DHCP\_5.4

Last Scheduled File Generation Time:

Next Scheduled File Generation Time:

Push Directory: /opt/qip/dhcp

**Push To Server**      **View Active Leases**

The fields on this screen are read only. They indicate the properties of the DHCP server you have selected. You can change these values using the VitalQIP GUI.

- 3 Click **Push To Server**.

**Result:** The Generate DHCP Configuration File page opens.

The DHCP server information appears in the upper portion of this page. The fields on the remaining portion of this page are as follows.

**Table 48 DHCP configuration setup fields**

Field	Description
Generate to Directory	<b>Read only.</b> Name of the directory where the configuration files will be generated.
Destination	<b>Required.</b> Check the radio button to specify where you want the files to go. Allowable values are: <ul style="list-style-type: none"> <li>• <b>Server</b> – Perform DHCP generation (default).</li> <li>• <b>Debug</b> – Change the Debug options for this server. This option is only available if the server is a Lucent DHCP 5.4 server.</li> </ul>

Field	Description
Debug	<p>If Destination is set to <b>Debug</b>, you can select one of the following options for this server:</p> <ul style="list-style-type: none"> <li>• <b>Change Debug Level</b></li> <li>• <b>Clear Debug Log</b></li> <li>• <b>Stop Debug Log</b></li> </ul>
Debug Level	<p>If Debug is set to <b>Change Debug Level</b>, you can select one of the following options for the debug level for this server:</p> <ul style="list-style-type: none"> <li>• <b>LevelCritical</b> – The default value. A critical error is one that shuts down the program. Only critical messages are logged.</li> <li>• <b>LevelError</b> – An error has occurred, but the program should continue. Critical messages are included.</li> <li>• <b>LevelWarning</b> – The program has encountered an unexpected issue but continues. Errors and critical messages are included with these warnings.</li> <li>• <b>LevelInfo</b> – These are informational messages about the program events and flow. These messages include critical messages, errors, and warnings.</li> <li>• <b>LevelDebug</b> – Indicates that all levels should be logged.</li> </ul> <p><b>Important!</b> The current debug level for the server is the one that is initially selected when you open the Generate DHCP Configuration File page.</p>

---

4 Click **Submit**.

**Result:** The DHCP generation is performed, or the Debug level is set.

END OF STEPS

---



## To view active DHCP leases

---

### When to use

Use this procedure to view active DHCP leases.

### Before you begin

Lease Information is retrieved directly from the DHCP server's lease database, not the VitalQIP database.

### Procedure

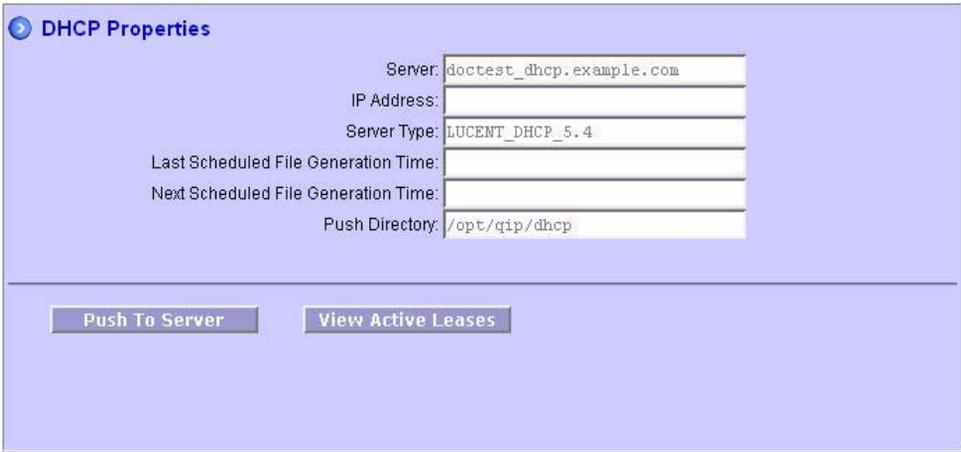
To view active DHCP leases, follow these steps.

- 1 Click the **Network Services** tab. Alternatively, click the Network Services icon  in the toolbar.

**Result:** The Network Services Generation page opens.

- 2 Expand the list of DHCP servers and click the one whose active leases you want to view.

**Result:** The DHCP Properties page opens.



**DHCP Properties**

Server: doctest\_dhcp.example.com

IP Address:

Server Type: LUCENT\_DHCP\_5.4

Last Scheduled File Generation Time:

Next Scheduled File Generation Time:

Push Directory: /opt/qip/dhcp

**Push To Server**      **View Active Leases**

The fields on this screen are read only. They indicate the properties of the DHCP server you have selected. You can change these values using the VitalQIP GUI.

- 3 Click **View Active Leases**.

**Result:** The View Active Leases page opens.

- 
- 4 Select the appropriate radio button for the type of leases you want to view.
- **All** – Displays both active and expired leases
  - **Active** – Displays only those leases that are active
  - **Expired** – Displays only those leases that have expired.
- 
- 5 Relay Agent information options are those associated with DHCP Option 82. Select the appropriate radio button to display **Relay Agent Information**.
- **Parsed** – Include the Relay Agent information in the active lease view
  - **Unparsed** – Do not include the Relay Agent information in the active lease view.
- 
- 6 Click **Submit**.

**Result:** The list of leases displays.

The items listed in the Active Leases Information window are listed in ascending IP address order. The Object and Domain Name which appear in the listing are generated as follows:

- If the Object Name or Domain Name exists in the DHCP database, that name is used.
- If the Object Name or Domain Name does not exist in the DHCP database, the system uses the name stored within VitalQIP if the object is defined. However, the Object Name and/or Domain Name are prefixed with an asterisk (\*) to indicate that the name was taken from VitalQIP.

- If the Object Name or Domain Name does not exist in the DHCP database, and there is no Object Name or Domain Name within VitalQIP (for example, the object has not been defined), the Object Name and/or Domain Name are blank.

.....  
E N D O F S T E P S



# DNS generation

## DNS file generation overview

---

Each DNS Server contains Resource Records (RRs), which provide the data that make the DNS system work. The DNS Generation function creates those records and other records required by DNS.

For BIND 8.X and 9.X, DNS generation determines the maximum serial number for the zones being generated across all primary DNS servers for the zones defined in VitalQIP.

The process determines the serial number for the zone on the server on which the DNS generation is being performed. This is obtained by querying the server. If the SOA cannot be queried from the server, the SOA is obtained from the zone file or log file.

The serial number is obtained from all primary servers for the zone that are defined within VitalQIP by querying the SOA for the zone on the server.

If the generation type is **Update**, the maximum serial number for the zone on all the primary DNS servers will be incremented and updated within the VitalQIP database. If the generation type is **Configuration & Data**, the largest serial number is updated within the VitalQIP database. The incremented value will be written to the DNS configuration files being created.

With the generation type **Update**, files are written before touching the running process. The SOA is incremented when the files are written. Lucent 4.X and BIND-9 DNS use `rndc` commands to reload and the server is never stopped. All other server types are restarted (except AD-integrated Microsoft DNS, where VitalQIP uses `dnscmd` to make the server reload its zones).

The generation type **Configuration & Data** generates the configuration files and the data files for the DNS server without telling the server to reload its files.

**Important!** **Update** and **Configuration & Data** are not valid generation types for Microsoft DNS.

Modifying an object affects the domains and the reverse zones. If only a few objects have been modified, you can update only the configuration and data files of those zones that contain changes. The **Changed Zones Only** option allows you to update configuration and data files of only those zones that have changed since the last time you performed a DNS generation. On Lucent DNS 4.X servers, the **Selected Zones Only** option allows you to select specific zones in the DNS Server List.



## DNS configuration files

---

When you perform a DNS Generation with the Type “Configuration & Data” and Destination “Local”, the files described in the following table are created on the GUI client.

The **Configuration & Data** files are created and updated. The following table describes the files included for the DNS servers:

**Table 49** Configuration and data files for DNS servers

File name	Definition
<i>named.conf</i> (BIND 8.X and 9.X)	Generates the <i>named</i> directory, cache, and so on. The “Corporate Extension” information defined in the InfrastructureServer option is added to the beginning of this file.
<i>boot</i> (Microsoft only)	In Windows 2000/2003, the <code>dns</code> cmd directives in the “Prefix Corporate Extension” and “Suffix Corporate Extension” parameters are executed at push time.
<i>db.127.0.0</i>	Generates the SOA, NS and A records for the 127.0.0 network.
<i>db.cache</i>	Generates NS and A records for the root “.”, if it is the root server. It also puts all NS and A records for the primary and secondary servers of the root domain.
<i>db.root</i>	Generates the SOA, and NS records for the root domain.
<i>db.domainname</i>	Generates all RRs for the domain. The domain extension goes to the bottom of this file.
<i>db.reverse zone</i>	Generates all RRs for the reverse zone.



## VitalQIP BIND support

---

In BIND 8.X and 9.X, the main configuration file is called *named.conf*. The data files used by BIND (zone files) have not changed between the 8.X and 9.X versions.

**Important!** The data files also contain RR information established in the Domain Profile.

For Windows 2000 DNS, all extensions defined in the **Prefix Corporate Extensions** and the **Suffix Corporate Extensions** parameters of the Server Profile are executed at push time.

For BIND 8.X and 9.X, all extensions defined in the **Corporate Extensions** are prepended to the *named.conf* file. If you define global server options, they must appear in an “options” block, for example:

```
//Sample Corporate Extensions Options section
options {
max-transfer-time-in 60;
forward only;
forwarders {
123.123.123.111;
123.123.123.222;
};
multiple-cnames yes;
};
//Sample Corporate Extensions ACL section
acl "permitted-servers" {
127.0.0.1;
123.123.123.55;
123.123.123.110;
123.123.123.234;
};
.
.
.
```

Lucent DNS 3.X, Lucent DNS 4.X, BIND 8.X and 9.X only - DNS Generation inserts “directory” options automatically. Do not include the “directory” options in your “options” block.

**Important!** You must ensure the BIND DNS Server version in the Server Profile matches the version specified for that DNS server at installation/upgrade time. If not, the DNS server does not function properly.



## To generate DNS configuration and data files

---

### When to use

Use this procedure to generate and view or push DNS configuration and data files on a local server, or on a remote DNS server.

### Before you begin

When two pushes to the same DNS server occur simultaneously, one of those pushes is locked out in order to prevent the configuration files from being corrupted. An error message is displayed to this effect.

### Procedure

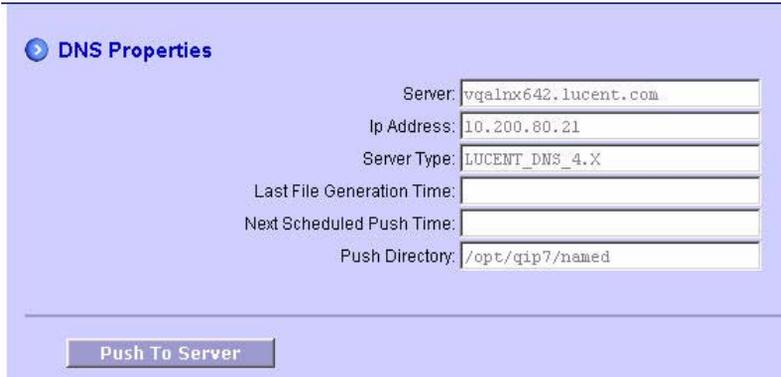
To generate and push DNS configuration and data files on a local server, or on a remote DNS server, follow these steps.

- 
- 1 Click the **Network Services** tab. Alternatively, click the Network Services icon  in the toolbar.

**Result:** The Network Services Generation page opens.

- 
- 2 Expand the list of DNS servers and click the one that you want to perform a DNS generation.

**Result:** The DNS Properties page opens.



The fields on this screen are read only. They indicate the properties of the DHCP server you have selected. You can change these values using the VitalQIP GUI.

- 
- 3 Click **Push To Server**.

**Result:** The Generate DNS Configuration File page opens.

The DNS server information appears in the upper portion of this page.

- 4 Refer to the following table as you determine what files you want to update.

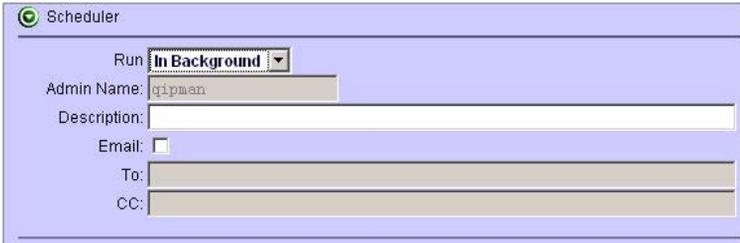
**Table 50 DNS configuration setup fields**

Field	Description
Generate to Directory	<i>Read only.</i> Name of the directory where the configuration files will be generated.

Field	Description
Type	<ul style="list-style-type: none"> <li>• <b>Configuration &amp; Data</b> – generates the DNS configuration and data files without incrementing the SOA serial number or reloading the server.</li> <li>• <b>Update</b> – generates the DNS configuration and data files. It also increments the SOA serial number. If the push is to a server, it also reloads the server.</li> </ul> <p>If you have selected a Windows 2000 DNS server, the above options are not displayed. Instead, you can select one of the following:</p> <ul style="list-style-type: none"> <li>• <b>All Records</b> – generates the Windows 2000 DNS configuration and data files, including incrementing the SOA serial number and reloading the server.</li> <li>• <b>Changed Records Only</b> – generates files for only changed records. You must perform at least one full push (All records/All zones) before you can perform a Changed Records Only push. If a zone has not been “pushed” previously, the file generation fails. An error message will be displayed explaining the possible problems.</li> </ul>
Target Zones	<ul style="list-style-type: none"> <li>• <b>All Zones</b> – updates all zones.</li> <li>• <b>Changed Zones Only</b> – updates only those zones that have changed since the last push.</li> <li>• <b>Selected Zones Only</b> – <i>Lucent DNS 4.X servers only</i>. Updates only the zones you have selected in the DNS Server List.</li> </ul>

5 Choose when to generate files in the **Scheduler** section. Choose one of the following actions.

If you want to...	Then ...
Run the job immediately	Ensure that <b>In Foreground</b> is selected in the <b>Run</b> drop-down list.

If you want to...	Then ...
<p>Run the job in background</p>	<ol style="list-style-type: none"> <li>1. Select <b>In Background</b> from the <b>Run</b> drop-down list.</li> </ol> <p><b>Result:</b> The Scheduler section expands to display additional fields.</p>  <p>The <b>Admin</b> field displays the login ID of the administrator who is scheduling the job,</p> <ol style="list-style-type: none"> <li>2. Enter a description of the job in the <b>Description</b> field. If you do not enter a description, a description of <code>&lt;Job Name&gt; : &lt;Run Mode&gt;</code> is used. You may enter up to 255 characters.</li> <li>3. If you want an e-mail to be sent when the job completes, place a check in the <b>Email</b> check box.</li> </ol> <p><b>Result:</b> The <b>To</b> and <b>CC</b> fields are enabled.</p> <ol style="list-style-type: none"> <li>4. Enter an e-mail address of up to 255 characters in the <b>To</b> field. If an e-mail address has been entered in the <b>Contact Profile</b> for the administrator, it appears by default.</li> <li>5. If desired, enter a <b>CC</b> e-mail address.</li> </ol>

If you want to...	Then ...
<p>Schedule the job for a later time</p>	<p>1. Select <b>Scheduled At</b> from the <b>Run</b> drop-down list.</p> <p><b>Result:</b> The Scheduler section expands to display additional fields, including a calendar icon.</p>  <p>The <b>Admin</b> field displays the login ID of the administrator who is scheduling the job,</p> <p>2. Click the Calendar icon ().</p> <p><b>Result:</b> The Calendar widget opens with the current date and time.</p>  <p>3. Choose from the following actions.</p> <ol style="list-style-type: none"> <li>To choose a different time, click in the hour and minute fields and enter a new time in 24-hour format.</li> <li>To choose a different month, choose a later month from the month drop-down list.</li> <li>To choose a different year, click  to enter a future year or  to return to a prior year.</li> <li>To choose a different day, click another day in the month.</li> </ol> <p><b>Result:</b> After a different day is clicked, the calendar widget closes and a new run date and/or time are displayed.</p> <p>4. Enter a description of the job in the <b>Description</b> field. If you do not enter a description, a description of <code>&lt;Job Name&gt; : &lt;Run Mode&gt;</code> is used. You may enter up to 255 characters.</p>

If you want to...	Then ...
	<p>5. If you want an e-mail to be sent when the job completes, place a check in the <b>Email</b> check box.</p> <p><b>Result:</b> The <b>To</b> and <b>CC</b> fields are enabled.</p> <p>6. Enter an e-mail address of up to 255 characters in the To field. If an e-mail address has been entered in the <b>Contact Profile</b> for the administrator, it appears by default.</p> <p>7. If desired, enter a CC e-mail address.</p>

6 Click **Submit**.

**Result:** Choose from the following results.

If...	Then...
<p>The job is scheduled in foreground</p>	<p>1. A confirmation box opens with the following messages:</p> <ul style="list-style-type: none"> <li>– If <b>Configuration and Data</b> was selected: <b>DNS &lt;servername&gt; successfully configured.</b></li> <li>– If <b>Update</b> was selected: <b>DNS &lt;servername&gt; successfully updated.</b></li> </ul> <p>2. Click <b>OK</b>.</p> <p><b>Result:</b> The DNS Properties page is displayed.</p>
<p>The job is scheduled in background or at a later time.</p>	<p>1. A confirmation box opens with the message <b>Job is scheduled. Job ID is &lt;###&gt;. Continue to the job scheduler page?</b></p> <p>2. If you wish to review the job scheduler page, click <b>OK</b>.</p> <p><b>Result:</b> The Job Scheduler page opens. Refer to for more information.</p> <p>3. If you would rather perform another task, click <b>Cancel</b>.</p> <p><b>Result:</b> The DNS Properties page is displayed.</p>



# Local host generation

## Local host file generation overview

---

If you use Local Host files as part of your naming service, VitalQIP can update those with the **Local Host Generation** option. This option creates files, hosts for all domains, networks, OSPF Areas, Subnet Organizations, Subnets or Corporations.

Local Host Generation generates the */etc/hosts* file.

**Important!** This only applies to objects created within VitalQIP. It excludes Resource Records and extensions since they are free-form text fields.



## To generate local host records

---

### When to use

Use this procedure to generate local host records.

### Procedure

To generate Local Host files, follow these steps..

- 1 Click the **Network Services** tab. Alternatively, click the Network Services icon  in the toolbar.

**Result:** The Network Services Generation page opens.

- 2 Expand the list of Localhost servers and click the one that you want to generate a localhost file.

**Result:** The Local Host Properties page opens.



**LOCAL HOST Properties**

Server: localhost.lucent.com

Ip Address: 10.0.0.5

Server Type: LOCAL\_HOST

Last File Generation Time:

Next Scheduled Push Time:

Push Directory: c:\temp

Push To Server

The fields on this screen are read only. They indicate the properties of the Localhost server you have selected. You can change these values using the VitalQIP GUI.

- 3 Click **Push To Server**.

**Result:** The Localhost file is created in the Push directory on the server.

END OF STEPS

---



# NIS generation

## NIS file generation overview

---

If you use NIS as part of your naming service, VitalQIP can update those files with the **NIS Generation** option. NIS Generation creates files, hosts, netmasks and ethers for all domains, networks, OSPF Areas, Subnet Organizations, Subnets or Corporations.

NIS Generation generates the following three files:

- Hosts
- ethers
- netmasks

**Important!** This only applies to objects created within VitalQIP. It excludes Resource Records and extensions since they are free-form text fields.



## To generate NIS files

---

### When to use

Use this procedure to generate NIS records.

### Procedure

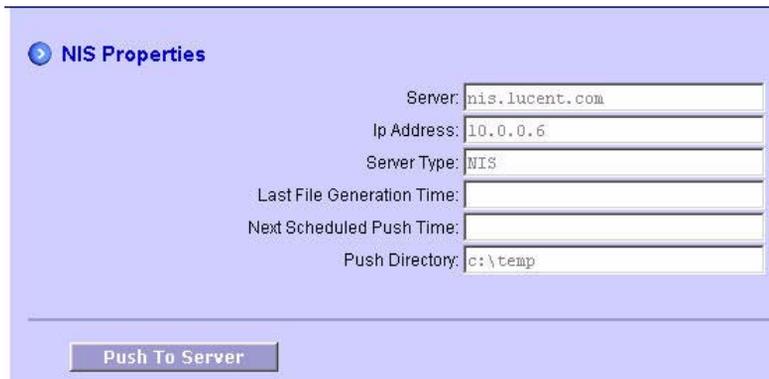
To generate NIS files, follow these steps.

- 1 Click the **Network Services** tab. Alternatively, click the Network Services icon  in the toolbar.

**Result:** The Network Services Generation page opens.

- 2 Expand the list of NIS servers and click the one that you want to generate an NIS file.

**Result:** The NIS Properties page opens.



**NIS Properties**

Server: nis.lucent.com

Ip Address: 10.0.0.6

Server Type: NIS

Last File Generation Time:

Next Scheduled Push Time:

Push Directory: c:\temp

Push To Server

The fields on this screen are read only. They indicate the properties of the NIS server you have selected. You can change these values using the VitalQIP GUI.

- 3 Click **Push To Server**.

**Result:** The NIS file is created in the Push directory on the server.

END OF STEPS

---





# 12 Attributes

## Overview

---

### Purpose

This chapter describes how to create and use attributes.

### Contents

This chapter covers these topics.

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## Attributes overview

---

Attributes allow you to specify values you want to associate with elements such as pools, blocks, and nodes in the VitalQIP database. You can use these values to tie Address Allocation, Address Management and the DNS and DHCP infrastructure into your corporate processes. For example, you can associate an employee's badge number or cost center with a subnet.

There are three components to attributes: the attributes themselves and attribute groups.

- Attributes are the individual pieces of information you want to associate with items in the VitalQIP database. Examples could be Employee Badge Number, Manager's Name, Product Name or Department.
- Attribute groups are a way to organize attribute names. Examples could be Employee Information, Products, or Departments. An attribute does not have to be assigned to an attribute group, or can be assigned to more than one attribute groups.
- Infrastructure objects, such as pools, blocks and nodes are defined on the attributes section. You can associate an Attribute with any defined infrastructure object.

You define attributes and groups in the Attributes section of the VitalQIP Web Client. You associate them with various elements of the database when you define those elements. For example, you can define an attribute here and associate it with the infrastructure object pool, but to associate it with a specific pool, you must edit that pool's properties.



## To create an attribute

---

### When to use

Use this procedure to create an attribute.

### Procedure

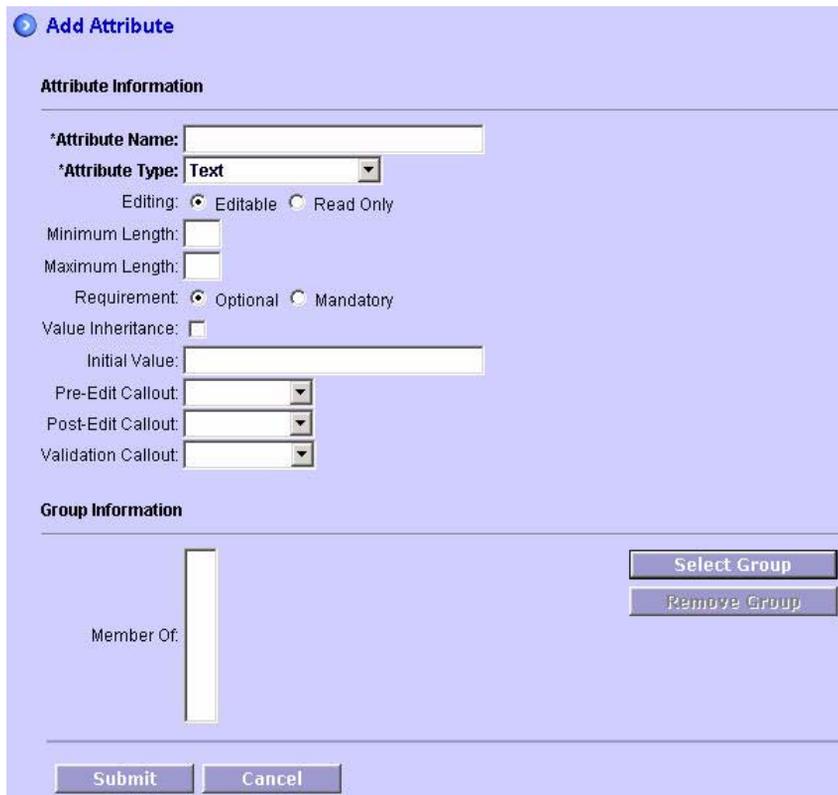
To create an attribute, use the following steps:

- 1 Click the **Attributes** tab. Alternatively, click the Attributes icon () in the toolbar.

**Result:** The Attributes Hierarchy opens.

- 2 Mouse over **Actions** and select **Add Attribute**.

**Result:** The Add Attribute page opens.



**Add Attribute**

**Attribute Information**

\*Attribute Name:

\*Attribute Type:

Editing:  Editable  Read Only

Minimum Length:

Maximum Length:

Requirement:  Optional  Mandatory

Value Inheritance:

Initial Value:

Pre-Edit Callout:

Post-Edit Callout:

Validation Callout:

**Group Information**

Member Of:

Select Group

Remove Group

Submit Cancel

**Important!** The fields on this page vary depending on the value you select for the Attribute Type.

3 Review the following table and enter values in the attribute fields.

**Table 51 Add attribute fields**

Field	Description
Attribute Name	<b>Required.</b> Defines the name of the attribute. This field is alphanumeric and up to 30-characters long. This field must be unique within an organization. It is case-insensitive (that is, you cannot have an attribute called <b>userid</b> and another called <b>Userid</b> ).
Attribute Type	<b>Required.</b> Select an attribute type from the drop-down list. Values are: <ul style="list-style-type: none"> <li>• <b>Text</b> (default)</li> <li>• <b>Boolean</b></li> <li>• <b>IPv4 Address</b></li> <li>• <b>IPv6 Address</b></li> <li>• <b>Multi-lined Text</b></li> <li>• <b>Numeric</b></li> <li>• <b>Static Dropdown List</b></li> </ul>
Editing	<b>Required.</b> Defines whether the Attribute is editable when it is displayed in a properties or properties-like screen associated with an element, such as a pool, block, or node.. Select the appropriate radio button: <ul style="list-style-type: none"> <li>• <b>Editable</b> (default)</li> <li>• <b>Read only.</b> If this value is selected, the value can be entered either in the Attribute Value field or set by a Pre-Edit callout.</li> </ul>
Minimum Length	<b>Optional.</b> Defines the minimum length of the value for the Attribute. This field is numeric and has a range of 1 to 999. This field only appears when the Attribute Type is Text.
Maximum Length	<b>Optional.</b> Defines the maximum length of the value for the Attribute. This field is numeric and has a range of 1 to 999. This field only appears when the Attribute Type is Text.
Minimum Value	<b>Optional.</b> Defines the minimum value of the Attribute. This field is numeric and has a range of -2147483647 to 2147483647. This field only appears when the Attribute Type is Numeric. It must be less than the Maximum Value.
Maximum Value	<b>Optional.</b> Defines the maximum value of the Attribute. This field is numeric and has a range -2147483647 to 2147483647. This field only appears when the Attribute Type is Numeric. It must be greater than the Minimum Value.

Field	Description
Requirement	<p>Defines whether the Attribute is required or not. This field only appears when Editing is set to Editable. Select the appropriate radio button:</p> <ul style="list-style-type: none"> <li>• <b>Optional</b> (default)</li> <li>• <b>Mandatory</b></li> </ul>
Value Inheritance	<p>If checked, when associating the Attribute with elements of Database (for example, Pool, Block), specifies that the initial value of the Attribute is inherited from its parent item. For example, an Attribute in a block can inherit its initial value from the same Attribute in the block's parent Pool. Default is unchecked.</p>
Initial Value	<p>Defines the initial value for this field. This field only appears when Editing is set to Editable.</p>
Attribute Value	<p>Defines the value for this field. This field only appears when Editing is set to Read-only.</p>
Pre-Edit Callout	<p><b>Optional.</b> Select a callout from the drop-down list. This field contains a string for a callout function which is executed prior to a user editing the Attribute value.</p> <p><b>Important!</b> If a Pre-Edit Callout is selected that will populate an Attribute's initial value and Value Inheritance is activated, then the value associated with the Value Inheritance feature overwrites the value populated by the Pre-Edit Callout.</p>
Post-Edit Callout	<p><b>Optional.</b> Select a callout from the drop-down list. This field contains a string for a callout function that is executed prior to saving the Attribute value in the database. If both Pre-Edit Callout and Post-Edit Callout are selected, the value returned from Post-Edit Callout is saved to the database.</p>
Validation Callout	<p><b>Optional.</b> Select a callout from the drop-down list. This field contains a string for a validation callout function. The validation callout function is executed prior to saving the Attribute value. An error is returned if the function returns false. If there is an error, the user will need to modify the Attribute value to comply with the validation.</p>

Field	Description
<b>Static Dropdown List Information</b>	
New Value	<p>If the Attribute Type is set to <b>Static Dropdown List</b>, then this field and the <b>Add</b>, <b>Remove</b>, and <b>Set Default</b> buttons all display.</p> <ul style="list-style-type: none"> <li>To add a value to an Attribute's drop-down list, type the value in this field and click <b>Add</b>. The value appears in the right-hand column.</li> </ul> <p><b>Important!</b> Values are case-insensitive. If you add multiple values such as <code>user id</code> and <code>User id</code>, only one value is saved to the database.</p> <ul style="list-style-type: none"> <li>To remove a value from an Attribute's drop-down list, click a value in the right-hand column and then click <b>Remove</b>.</li> <li>To make a value in the list the default value, click a value in the right-hand column and then click <b>Set Default</b>.</li> <li>Also, the <b>Unset Default</b> button is displayed when Requirement is set to Optional. For an optional attribute, if the default value is set (that is, the <b>Default Value</b> indicator is visible next to the first item), you can unset it by clicking this button.</li> </ul>
<b>Group Information</b>	
Member Of	<p>If you want to add this Attribute to one or more existing attribute groups, click <b>Select Group</b>. From the list of groups that displays, select the groups to which you want to assign this Attribute, and then click <b>Submit</b>.</p> <p>If you want to remove an attribute from one or more groups, click the group name in this field, and then click <b>Remove Group</b>.</p>

.....

4 When you are finished, click **Submit** to add the Attribute.

.....

END OF STEPS

.....



## To modify an attribute

---

### When to use

Use this procedure to modify an attribute.

### Procedure

To modify an attribute, follow these steps.

---

- 1 Click the **Attributes** tab. Alternatively, click the Attributes icon () in the toolbar.

**Result:** The Attributes Hierarchy opens.

---

- 2 Expand the list of attributes until the one you want to modify is visible.
- 

- 3 Click the attribute.

**Result:** The **Attribute Properties** page opens.

**Attribute Properties**

**Attribute Information**

\*Attribute Name:

\*Attribute Type:

Requirement:  Optional  Mandatory

Value Inheritance:

Pre-Edit Callout:

Post-Edit Callout:

Validation Callout:

**Static Dropdown List Information**

New Value:

123	<<-- Default Value
456	<input type="button" value="Set Default"/>
789	<input type="button" value="Unset Default"/>

**Group Information**

Member Of:

**Important!** The fields on this page vary depending on how the attribute is defined.

4 Click **Modify Attribute**.

**Result:** The Modify Attribute page appears.

**Modify Attribute**

**Attribute Information**

\*Attribute Name:

\*Attribute Type:

Requirement:  Optional  Mandatory

Value Inheritance:

Pre-Edit Callout:

Post-Edit Callout:

Validation Callout:

**Static Dropdown List Information**

New Value:

<<< Default Value

**Group Information**

Member Of:

- 5 Modify fields as necessary for this attribute. Refer to [Table 51, “Add attribute fields”](#), on page 424 for details on the attribute fields.

**Important!** You cannot modify the **Attribute Name** or **Attribute Type**. All other fields are modifiable.

- 6 Click **Submit** when you are finished.

**Result:** The attribute is modified.

END OF STEPS



## To delete an attribute

---

### When to use

Use this procedure to delete an attribute.

### Before you begin

To delete an attribute or a group, the attribute or the group must not be assigned to any infrastructure object.

### Procedure

To delete an attribute, follow these steps.

- 
- 1 Click the **Attributes** tab. Alternatively, click the Attributes icon () in the toolbar.

**Result:** The Attributes Hierarchy opens.

- 
- 2 Expand the list of attributes until the one you want to delete is visible.

- 
- 3 Click the attribute.

**Result:** The **Attribute Properties** page opens.

- 
- 4 Click **Delete Attribute**.

**Result:** A dialog box opens with the message **Are you sure you want to delete the selected Attribute?**

- 
- 5 Click **OK**.

**Result:** The attribute is deleted.

---

END OF STEPS

---



## To add an attribute group

---

### When to use

Use this procedure to create an attribute group.

### Procedure

To create an attribute group, use the following steps:

- 1 Click the **Attributes** tab. Alternatively, click the Attributes icon () in the toolbar.

**Result:** The Attributes Hierarchy opens.

- 2 Mouse over **Actions** and select **Add Attribute Group**.

**Result:** The Add Attribute Group page opens.



- 3 Type a name in the **Attribute Group Name** field. This field is alphanumeric and can be up to 255 characters long.

- 4 Click **Select Attribute** to add an attribute to this attribute group. (To add the group without adding any attributes to it, continue to [Step 6](#).)

**Result:** A list of available attributes opens.



- 
- 5 Click the attribute you want to add to the attribute group and then click **Select**.

**Result:** The attribute is added to the group.

- 
- 6 Click **Submit**.

**Result:** The attribute group is created.

END OF STEPS

---



## To add an attribute to an attribute group

---

### When to use

Use this procedure to add an attribute to an attribute group.

### Procedure

To add an attribute to an attribute group, follow these steps.

- 1 Click the **Attributes** tab. Alternatively, click the Attributes icon  in the toolbar.

**Result:** The Attributes Hierarchy opens.

- 2 Expand the list of attribute groups until the one you to which you want to add an attribute is visible.

- 3 Click the attribute group.

**Result:** The Attribute Group Properties page.



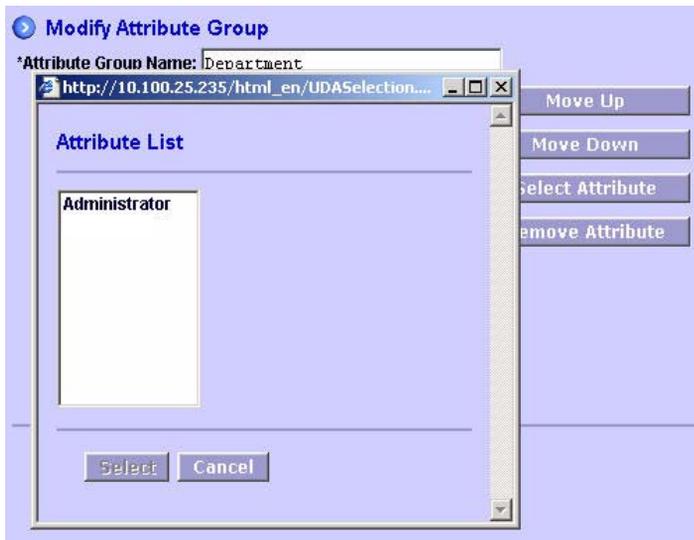
- 4 Click **Modify Group**.

**Result:** The Modify Attribute Group page opens.



- 5 Click **Select Attribute** to add an attribute to this attribute group.

**Result:** A list of available attributes opens.



- 6 Click as many attributes as you want to add to the attribute group and then click **Select**. The attribute is added to the group.

END OF STEPS



## To delete an attribute from an attribute group

---

### When to use

Use this procedure to delete an attribute from an attribute group.

### Procedure

To delete an attribute from an attribute group, follow these steps.

- 1 Click the **Attributes** tab. Alternatively, click the Attributes icon (  ) in the toolbar.

**Result:** The Attributes Hierarchy opens.

- 2 Expand the list of attribute groups until the one you from which you want to delete an attribute is visible.

- 3 Click the attribute group.

**Result:** The Attribute Group Properties page opens.



- 4 Click **Modify Group**.

**Result:** The Modify Attribute Group page opens.

**Modify Attribute Group**

\*Attribute Group Name: Department

Attributes List:

- Cost Code
- Administrator

Move Up

Move Down

Select Attribute

Remove Attribute

Submit Cancel

- 
- 5 Click the attribute you want to remove from the attribute group and then click **Remove Attribute**.

**Result:** The attribute is removed from the group.

END OF STEPS

---



## To resequence attributes in an attribute group

---

### When to use

Use this procedure to change the sequence of attributes in an attribute group.

### Procedure

To change the sequence of attributes in an attribute group, use the following steps:

- 1 Click the **Attributes** tab. Alternatively, click the Attributes icon () in the toolbar.

**Result:** The Attributes Hierarchy opens.

- 2 Expand the list of attribute groups until the one whose attributes you want to resequence is visible.

- 3 Click the attribute group.

**Result:** The Attribute Group Properties page opens.



- 4 Click **Modify Group**.

**Result:** The Modify Attribute Group page opens.

Modify Attribute Group

\*Attribute Group Name: Department

Attributes List

Cost Code  
Administrator

Move Up  
Move Down  
Select Attribute  
Remove Attribute

Submit Cancel

- .....
- 5 Select an attribute in the attribute list whose position you want to change, and click **Move Up** or **Move Down** until you have moved it to its new location in the list.
- .....
- 6 Click **Submit**. The attribute group is modified to reflect the new sequence of attributes.

.....

END OF STEPS

.....



## To add an attribute or attribute group to an infrastructure object

---

### When to use

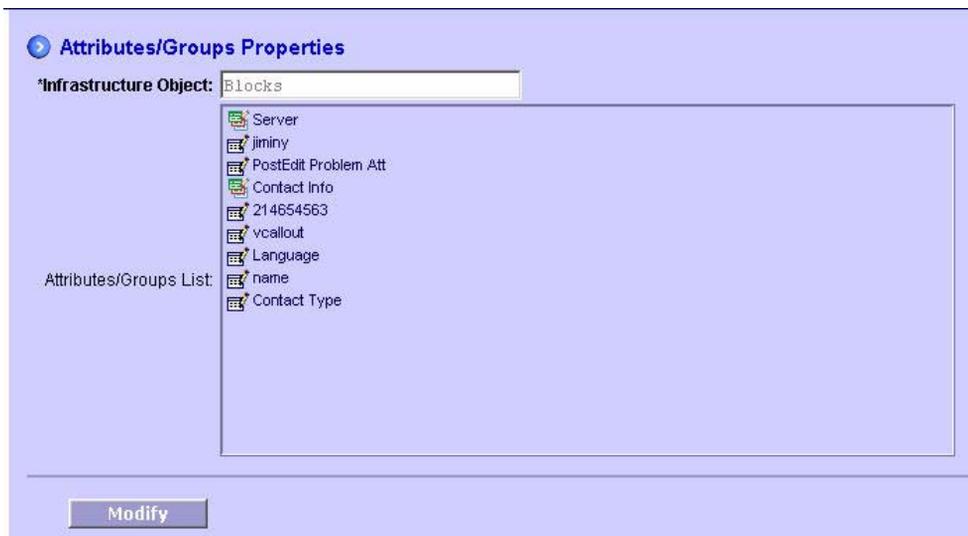
Use this procedure to add an attribute or attribute group to an infrastructure object. Infrastructure objects are Blocks, Interfaces, IPv6 Addresses, IPv6 Subnets, Nodes, and Pools.

### Procedure

To add an attribute or attribute group, use the following steps:

- 1 Click the **Attributes** tab. Alternatively, click the Attributes icon (  ) in the toolbar.  
**Result:** The Attributes Hierarchy opens.
- 2 Expand the list of infrastructure objects until the one to which you want to add an attribute is visible.
- 3 Click the infrastructure object (for example a pool or block) to which you want to add an attribute or attribute group.

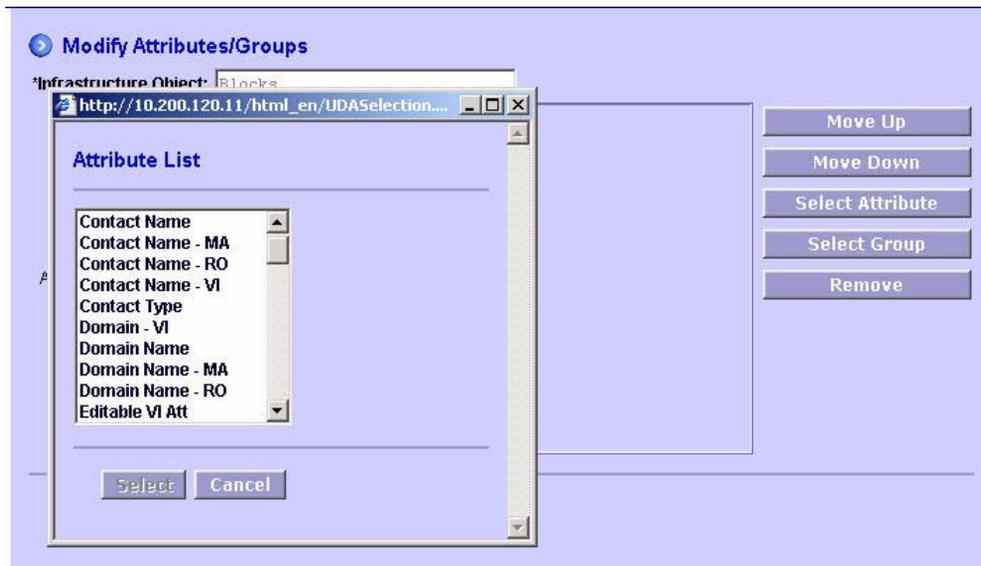
**Result:** The Attributes/Group Properties page opens.



- 4 Click **Modify**.  
**Result:** The Modify Attributes/Groups page opens.



- 5 Click **Select Attribute**. A list of available attributes displays.



**Important!** To add an attribute group, click **Select Group** to see a list of available attribute groups.

- 6 Click an attribute and then click **Select**. The attribute or attribute group is assigned to the infrastructure object.

.....  
7 Click **Submit**.

**Result:** A dialog box opens with the message **Attribute Modified <Attribute Group>**.

.....  
8 Click **OK**.

**Result:** The updated Attribute Group Properties page is displayed.

.....  
E N D O F S T E P S  
.....



# To delete an attribute or attribute group from an infrastructure object

---

## When to use

Use this procedure to delete an attribute or attribute group from an infrastructure object such as a pool or block

## Procedure

To delete an attribute or attribute group from an infrastructure object, use the following steps:

---

- 1 Click the **Attributes** tab. Alternatively, click the Attributes icon (  ) in the toolbar.

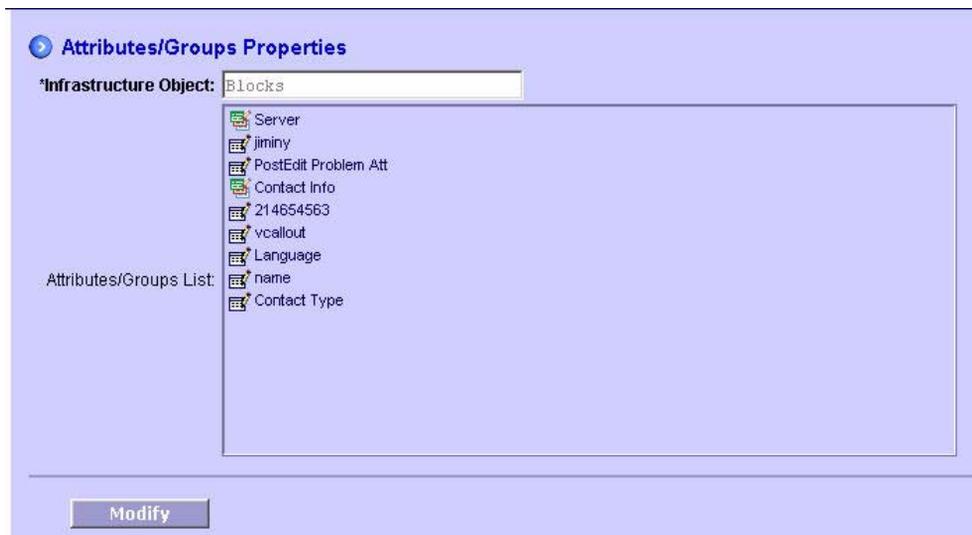
**Result:** The Attributes Hierarchy opens.

---

- 2 Expand the list of infrastructure objects until the one from which you want to delete an attribute is visible.
- 

- 3 Click the infrastructure object (for example a pool or block) from which you want to delete an attribute or attribute group.

**Result:** The Attributes/Group Properties page opens.



- 4 Click **Modify**.

**Result:** The Modify Attributes/Groups page opens.



- 5 Click the attribute or group you want to delete and then click **Remove**. The attribute or attribute group is removed from the infrastructure object.

**Important!** This function only removes an attribute or attribute group from an infrastructure object. It does not delete it from the database.

- 6 Click **Submit**.

**Result:** A dialog box opens with the message **Attributes/Groups List Modified**.

- 7 Click **OK**.

**Result:** The updated Attributes/Groups Properties page is displayed.

END OF STEPS





# 13 Reports

## Overview

---

### Purpose

This chapter describes the different types of reports VitalQIP can produce for pools, blocks, IPv4 subnets, IPv6 addresses, IPv6 subnets, nodes, MyViews and rules.

### Contents

This chapter covers these topics.

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## Reports overview

---

Reports provide the user with information to manage pools, blocks, IPv4 subnets, IPv6 addresses, IPv6 subnets, nodes, views, and allocation rules. Each report can be formatted and saved as a file, as well as displayed on the screen.

You can produce reports from the following locations:

- From the Reports tab.
- From the Reports icon in the toolbar.
- From the Properties page of an item selected in the hierarchy.

**Important!** Report availability is based on administrator privileges. If an administrator does not have access privileges for certain functions, related reports are not displayed.

### Types of reports

VitalQIP provides the following reports.

**Table 52 Report types**

Report type	Description
Pool	Provides options to display information on pools, status of blocks within pools, hierarchy information, statistics (used and free space). The user can produce pool reports for seed pools or child pools.
Block	Provides options to display information on blocks. Reports include Hierarchy and Block Utilization.
Address Management	Provides options to display information about IP addresses. Reports include IPv4 Subnets, IPv6 Subnets, IPv6 Managed Addresses, and Node Hierarchy.
MyView	Lists all the objects and their properties for a selected view.
Rule	Provides a summary of every rule.

Report type	Description
Audit	<p>Lists changes that have occurred during a specified period to various elements of VitalQIP. Audit reports are available for the following elements in VitalQIP:</p> <ul style="list-style-type: none"> <li>Address Blocks</li> <li>Address Pools</li> <li>IPv4 Subnets</li> <li>IPv6 Addresses</li> <li>IPv6 Subnets</li> <li>MyViews</li> <li>Rules</li> </ul> <p>Additionally, the Administrator Audit Report allows administrators to combine any of the above elements in one report. The Administrator Audit Report allows a master administrator to audit the activities of any administrator.</p>

### Auditing parameter in qip.pcy

Audit reports are only available if auditing is enabled for your system. By default, auditing is enabled when VitalQIP is installed. Auditing is controlled by the `Auditing` policy in the Global section of the `qip.pcy` file. Refer to Chapter 3 in the *VitalQIP Administrator Reference Manual* for further information.

**Important!** The `Auditing` policy controls only address allocation and IPv6 address management. Because IPv4 subnet management is controlled by auditing rules in the VitalQIP client, IPv4 subnet reports and an Administrator Audit report of an IPv4 subnet are available when auditing is not enabled.



## To schedule reports

---

### When to use

Use this procedure to schedule report generation.

### Procedure

To schedule the generation of a report, follow these steps.

---

- 1 Select the report you want to run.

**Result:** The report setup window opens. For further information on setting up reports, refer to the descriptions of specific reports in this chapter.

---

- 2 Expand the **Scheduler** section, if necessary.
- 

- 3 Choose one of the following actions.

If you want to...	Then ...
Run the job immediately	Ensure that <b>In Foreground</b> is selected in the <b>Run</b> drop-down list.

If you want to...	Then ...
Run the job in background	<p>1. Select <b>In Background</b> from the <b>Run</b> drop-down list.</p> <p><b>Result:</b> The Scheduler section expands to display additional fields.</p>  <p>The <b>Admin</b> field displays the login ID of the administrator who is scheduling the job.</p> <p>2. Enter a description of the job in the <b>Description</b> field. If you do not enter a description, a description of <code>&lt;Job Name&gt;:&lt;Run Mode&gt;</code> is used. You may enter up to 255 characters.</p> <p>3. If you want an e-mail to be sent when the job completes, place a check in the <b>Email</b> check box.</p> <p><b>Result:</b> The <b>To</b> and <b>CC</b> fields are enabled.</p> <p>4. Enter one or more e-mail addresses (comma separated) in the <b>To</b> field. If an e-mail address has been entered in the <b>Contact Profile</b> for the administrator, it appears by default. The field limit is 255 characters.</p> <p>5. If desired, enter one or more e-mail addresses in the <b>CC</b> field.</p>

If you want to...	Then ...																																										
Schedule the job for a later time	<p>1. Select <b>Scheduled At</b> from the <b>Run</b> drop-down list.</p> <p><b>Result:</b> The Scheduler section expands to display additional fields, including a calendar icon.</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Scheduler</b></p> <hr/> <p>Run <b>Scheduled At</b> 06/23/2007 19:23 </p> <p>Admin Name <input type="text" value="qipman"/></p> <p>Description <input type="text"/></p> <p>Email <input type="checkbox"/></p> <p>To: <input type="text" value="rwedgwood@alcatel-lucent.com"/></p> <p>CC <input type="text"/></p> </div> <p>The <b>Admin</b> field displays the login ID of the administrator who is scheduling the job.</p> <p>2. Click the Calendar icon ()</p> <p><b>Result:</b> The Calendar widget opens with the scheduled date default of 10 days from the current date.</p> <div style="border: 1px solid black; padding: 5px;"> <p>May <span style="float: right;">&lt; 2007 &gt;</span></p> <p>May 2007</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Mo</th> <th>Tu</th> <th>We</th> <th>Th</th> <th>Fr</th> <th>Sa</th> <th>Su</th> </tr> </thead> <tbody> <tr> <td></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> <td>12</td> <td>13</td> </tr> <tr> <td>14</td> <td>15</td> <td>16</td> <td>17</td> <td>18</td> <td>19</td> <td>20</td> </tr> <tr> <td>21</td> <td>22</td> <td>23</td> <td>24</td> <td>25</td> <td>26</td> <td>27</td> </tr> <tr> <td>28</td> <td>29</td> <td>30</td> <td>31</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p style="text-align: center;">13 : 30</p> </div> <p>3. Choose from the following actions.</p> <ol style="list-style-type: none"> <li>To choose a different time, click in the hour and minute fields and enter a new time in 24-hour format.</li> <li>To choose a different month, choose a later month from the month drop-down list.</li> <li>To choose a different year, click <b>&gt;</b> to enter a future year or <b>&lt;</b> to return to a prior year.</li> <li>To choose a different day, click another day in the month.</li> </ol> <p><b>Result:</b> After a different day is clicked, the calendar widget closes and a new run date and/or time are displayed.</p> <p>4. Enter a description of the job in the <b>Description</b> field. If you do not enter a description, a description of <code>&lt;Job Name&gt; :&lt;Run Mode&gt;</code> is used. You may enter up to 255 characters.</p>	Mo	Tu	We	Th	Fr	Sa	Su		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Mo	Tu	We	Th	Fr	Sa	Su																																					
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21	22	23	24	25	26	27																																					
28	29	30	31																																								

If you want to...	Then ...
	<p>5. If you want an e-mail to be sent when the job completes, place a check in the <b>Email</b> check box.</p> <p><b>Result:</b> The <b>To</b> and <b>CC</b> fields are enabled.</p> <p>6. Enter one or more e-mail addresses (comma separated) in the <b>To</b> field. If an e-mail address has been entered in the <b>Contact Profile</b> for the administrator, it appears by default. The field limit is 255 characters.</p> <p>7. If desired, enter one or more e-mail addresses in the <b>CC</b> field.</p>

---

**4** Click **Submit**.

**Result:** The result depends on which Run option you chose and which report you were generating. For further information on generating reports, refer to the descriptions of specific reports in this chapter.

END OF STEPS

---



# Address block reports

## Address block reports overview

---

The following reports are available from the properties page for IPv4 and IPv6 blocks, as well as in the **Address Block** section of the Reports hierarchy.

- Block Audit Report
- Block Hierarchy Report
- Block Utilization Report

When accessed from the Reports hierarchy, you need to enter search criteria to locate the block on which to report. For information on what criteria you may enter, refer to [“To search for a block”](#), on page 454.



## To search for a block

---

### When to use

Use this procedure to search for a block on which you want to produce one of the address block reports.

### Procedure

To search for a block, follow these steps.

---

- 1 Select an address block report and click **Search**.

**Result:** The Pool/Block Search Criteria window opens.

**Search Criteria**

Address Pool

Address Pool:

Address Block

Address Type:

Length:

Address Block:

Block Status:  Origin  Used  
 Free  Pending  
 Allocated  Reserved

Address Block Attributes

Search Results

Page Size:

- 2 Review the following table and fill in the fields you need to complete your search.

**Table 53 Pool/Block search fields**

<b>Field</b>	<b>Description</b>
Address Pool	<b>Required.</b> Enter the name of the pool for which you are searching. This field is case-sensitive. You can enter a partial name by using the asterisk (*) as a wildcard, or you can leave the field blank to search all pools.
Address Type	Select <b>IPv4</b> or <b>IPv6</b> from the drop-down list.
Length	<b>Optional.</b> Select a length from the drop-down list. To return any address length, select <b>Any</b> . Otherwise, choose the exact length for which you are searching.
Address Block	<b>Optional.</b> Enter the IP address of the address block for which you are searching. You can enter a partial address by using the asterisk (*) as a wildcard.
Block Status	<b>Optional.</b> Click a checkbox to limit your search to only blocks with that status. If all block statuses are checked, the search looks for all blocks.
Attribute Value	Enter the full or partial name (with wildcard) of the attribute. To search for an attribute with a null value, enter two double quotes (“ ”).
<b>Address block attributes</b>	
Number of Attributes	<b>Optional.</b> Select the number of address block attributes to include in the search. If you select 0, the following two fields do not display.
Attribute Group	<b>Required if visible.</b> If specified, the search is limited to this block attribute group. You can specify any attribute groups currently associated with the Pool or one of two pre-defined entries: <ul style="list-style-type: none"> <li>• <b>&lt;NONE&gt;</b> – Select this entry to exclude Block Attribute Group from this search criteria row.</li> <li>• <b>&lt;IGNORE&gt;</b> – Select this entry if, for this search criteria row, you do not care if a UDA is in a group or not.</li> <li>• <b>&lt;ANY&gt;</b> – Select this entry to include all Block Attribute Group(s) in this search criteria row.</li> </ul>
Attribute Name	<b>Required if visible.</b> If specified, the search is limited to this block attribute value. Values in this column are based on the value in the <b>Attribute Group</b> column. The available values are: <ul style="list-style-type: none"> <li>• All Attributes that do not attach to any Attribute Group, plus the pre-defined entry <b>&lt;ALL&gt;</b> – if Attribute Group is set to <b>&lt;NONE&gt;</b>.</li> <li>• All Attributes of Block, plus the pre-defined entry <b>&lt;ALL&gt;</b> – if Attribute Group is set to <b>&lt;IGNORE&gt;</b>.</li> <li>• All Attributes attached to the specified Attribute Group, plus the pre-defined entry <b>&lt;ALL&gt;</b> – if an Attribute Group is selected.</li> <li>• All Attributes attached to at least one Attribute Group, plus the pre-defined entry <b>&lt;ALL&gt;</b> – if Attribute Group is set to <b>&lt;ANY&gt;</b>.</li> </ul>

Field	Description
Attribute Value	Full or partial name (with wildcard) of the attribute. To search for an attribute with a null value, enter two double quotes (“”).

.....

**3** Click **Search**.

**Result:** The results appear in the **Search Results** list.

.....

END OF STEPS

.....



## To produce a Block Audit report

---

### When to use

Use this procedure to produce Block Audit reports. Instructions are provided for access from the Reports hierarchy or from the Block Properties page.

### From the menu or toolbar

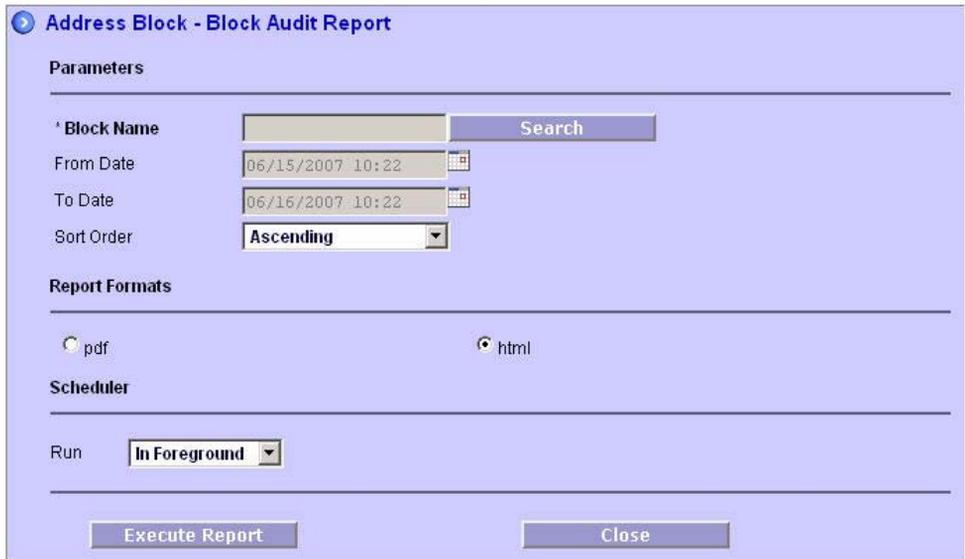
To produce a Block Audit report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ().

**Result:** The Reports hierarchy opens.

- 2 In the **Address Block** section, click **Audit**.

**Result:** The Block Audit Report page opens.



- 3 Click **Search**.

**Result:** The Pool/Block Search Criteria window opens. Refer to [“To search for a block”](#), on page 454 for further information.

- 4 Highlight the block you wish to audit and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected block appears in the **Block Name** field.

.....  
5 The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.

.....  
6 The report defaults to data sorted in **Ascending** order. Select **Descending** order if required.

.....  
7 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

.....  
8 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on [page 449](#) for more information.

.....  
9 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on [page 132](#) for more information.

.....  
E N D O F S T E P S  
.....

### From the Block Properties page

To produce a Block Audit report on a block in the hierarchy, follow these steps.

.....  
1 Select the block on which you want to report.

**Result:** The Block Properties page opens.

**Block Properties**

Address Type: **IPv4** ▾

Start Address: 192.0.2.0

Length: 24

Address Pool: DOCS\_ARIN

Maintainer: admin2\_ARIN

Status: **Free** ▾

Host Density Threshold: 80 %

---

2 Click **Reports**.

**Result:** The Configured Reports page opens.

**Configured Reports**

Reports

Name	Description
<a href="#">Audit</a>	Block Audit Report
<a href="#">Hierarchy</a>	Block Hierarchy Report
<a href="#">Utilization</a>	Block Utilization Report

3 Click the **Audit** link.

**Result:** The Block Audit Report page opens in the Report Execution window.

**Address Block - Block Audit Report**

**Parameters**

\* Block Name: 9.0.0.0/8

From Date: 06/15/2007 10:25

To Date: 06/16/2007 10:25

Sort Order: Ascending

**Report Formats**

pdf  html

**Scheduler**

Run: In Foreground

Execute Report Close

- .....
- 4 The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.
  - .....
  - 5 The report defaults to data sorted in **Ascending** order. Select **Descending** order if required.
  - .....
  - 6 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
  - .....
  - 7 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.
  - .....
  - 8 Click **Execute Report**.
 

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

.....

END OF STEPS

.....

## Report format

The Block Audit report appears as shown in [Figure 14](#). Fields on this report are similar for all audit reports.

**Figure 14 Sample Block Audit report**

Block Audit Report				
Date:	06/14/2007 22:42			
User Name:	olpman			
Organization:	Cathy			
Block Name:	21.0.0.0/8 (Orig: RECOVERTEST)			
From Date:	06/13/2007 22:40			
To Date:	06/14/2007 22:40			
Sort Order:	Ascending			
Date/Time	Action	User	Entity Name	Parameters (Name: Old Value -> New Value)
06/14/2007 20:29	Insert	olpman	21.0.0.0/8	
06/14/2007 20:32	Update	olpman	21.0.0.0/8	SeedBlock_blockStatus: FREE -> ORIGIN
06/14/2007 20:32	Update	olpman	21.0.0.0/8	SeedBlock_blockStatus: FREE -> ORIGIN
There are 3 records on this report.				
06/14/2007 22:42				
Page 1 of 1				

The following table describes the fields on the report.

**Table 54 Block Audit report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the item is located
Block Name	Item that is the subject of this report.
Internet Registry	Internet registry (ARIN, APNIC or RIPE) to which the element is associated. This field is blank if the element is not associated with an Internet registry. <b>Important!</b> This field only displays for block and pool audit reports.
Block Name	Address of the block, followed by the prefix that indicates its length. <b>Important!</b> This field only displays for block reports.
From Date	Starting date for the audit report date range.
To Date	Ending date for the audit report date range.
Sort order	Indicates whether data is sorted in Ascending or Descending order.

Field	Description
<b>Column headings</b>	
Date/Time	Date and time that the action occurred.
Action	Action that triggered the audit entry.
User	User who performed the action.
Entity Name	Component affected by the user.
Parameters (Name: Old Value > New Value)	The specific value change that occurred, showing the previous and revised values.



## To produce a Block Hierarchy report

---

### When to use

This report provides the hierarchy structure within a selected block. Instructions are provided for access from the Reports hierarchy or from the Block Properties page.

### From the menu or toolbar

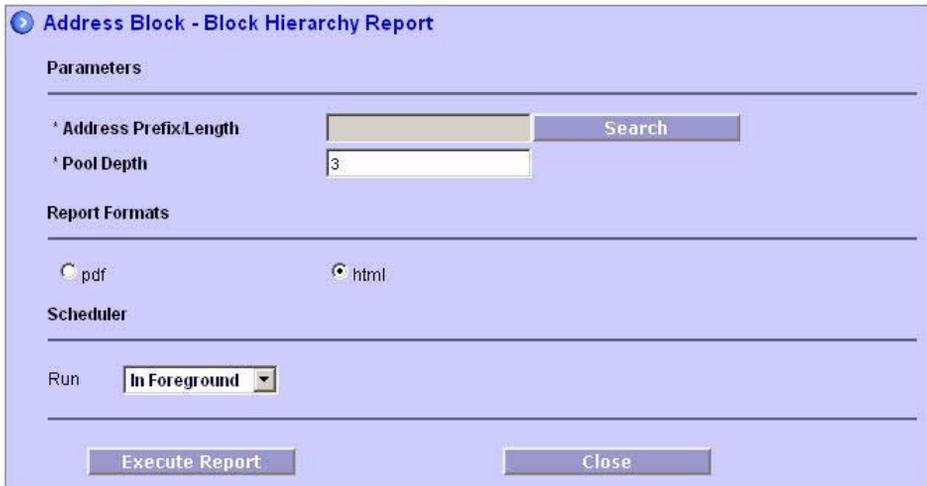
To produce a Block Hierarchy report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ().

**Result:** The Reports hierarchy opens.

- 2 In the **Address Block** section, click **Hierarchy**.

**Result:** The Block Hierarchy Report page opens.



- 3 Click **Search**.

**Result:** The Pool/Block Search Criteria window opens. Refer to [“To search for a block”](#), on page 454 for further information.

- 4 Highlight the block for which you wish to review hierarchy information and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected block appears in the **Block Name** field.

---

5 **Required.** Enter the level of the pool hierarchy for which you want hierarchy information.

---

6 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

---

7 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on page 449 for more information.

---

8 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on page 132 for more information.

---

END OF STEPS

## From the Block Properties page

To produce a Block Hierarchy report on a block in the hierarchy, follow these steps.

---

1 Select the block on which you want to report.

**Result:** The Block Properties page opens.

---

2 Click **Reports**.

**Result:** The Configured Reports page opens.



- 3 Click the **Hierarchy** link.

**Result:** The Block Hierarchy Report page opens in the Report Execution window.

- 4 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

- 5 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on [page 449](#) for more information.

- 6 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on [page 132](#) for more information.

END OF STEPS

### Report format

The Block Hierarchy report appears as shown in [Figure 15](#).

**Figure 15 Sample address block hierarchy report**

<b>Address Block Hierarchy Report</b>	
<b>Date:</b>	06/18/2007 13:29
<b>Organization:</b>	VitalQIP Organization
<b>User Name:</b>	qipman
<b>Pool Name:</b>	RECOVERNOW
<b>Pool Depth:</b>	3
<b>Address Prefix/Length:</b>	24.0.0.0/8 (Origin, RECOVERNOW)
<b>Address Block Hierarchy:</b>	
24.0.0.0/8 (Origin, RECOVERNOW)	
24.0.0.0/32 (Allocated, RECOVERNOW)	
24.0.0.0/32 (Used, RECOVERMYCHILD)	
24.0.0.1/32 (Free, RECOVERNOW)	
24.0.0.2/31 (Free, RECOVERNOW)	
24.0.0.4/30 (Free, RECOVERNOW)	
24.0.0.8/29 (Free, RECOVERNOW)	
24.0.0.16/28 (Free, RECOVERNOW)	
24.0.0.32/27 (Free, RECOVERNOW)	
24.0.0.64/26 (Free, RECOVERNOW)	
24.0.0.128/25 (Free, RECOVERNOW)	
24.0.1.0/24 (Free, RECOVERNOW)	
24.0.2.0/23 (Free, RECOVERNOW)	
24.0.4.0/22 (Free, RECOVERNOW)	
24.0.8.0/21 (Free, RECOVERNOW)	
24.0.16.0/20 (Allocated, RECOVERNOW)	
24.0.16.0/20 (Used, RECOVERMYCHILD)	
24.0.32.0/19 (Free, RECOVERNOW)	
24.0.64.0/18 (Free, RECOVERNOW)	
24.0.128.0/17 (Free, RECOVERNOW)	

The following table describes the fields on the report.

**Table 55 Address block hierarchy report fields**

<b>Field</b>	<b>Description</b>
Date	Date and time the report was produced.
Organization	Organization where the block is located.
User Name	User who produced the report.
Pool Name	Pool that is the subject of this report.
Pool Depth	The level of the pool hierarchy that this report covers.
Address Prefix/Lengths	Address of the block, followed by the prefix that indicates its length.

Field	Description
<b>Column headings</b>	
Address Prefix/Lengths	Address of each block, followed by the prefix that indicates its length.
Block Status	Status of each block.
Pool Name	Name of the pool in which this block is located.



## To produce a Block Utilization report

---

### When to use

This report provides a list of all Used and Reserved blocks within a selected block. Instructions are provided for access from the Reports hierarchy or from the Block Properties page.

### From the menu or toolbar

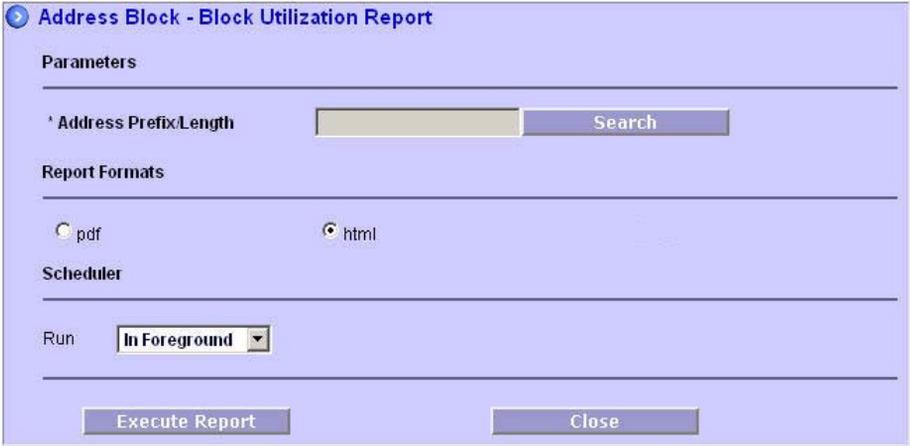
To produce a Block Utilization report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ()

**Result:** The Reports hierarchy opens.

- 2 In the **Address Block** section, click **Utilization**.

**Result:** The Block Utilization Report page opens.



- 3 Click **Search**.

**Result:** The Pool/Block Search Criteria window opens. Refer to [“To search for a block”](#), on page 454 for further information.

- 4 Highlight the block for which you wish to review usage and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected block appears in the **Block Name** field.

.....  
5 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

.....  
6 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

.....  
7 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

.....  
E N D O F S T E P S  
.....

### From the Block Properties page

To produce a Block Utilization report, follow these steps.

.....  
1 In the hierarchy, click the name of the block for which you want the report.

**Result:** The Block Properties page opens.

.....  
2 Click **Reports**.

**Result:** The Configured Reports page opens.



.....  
3 Click the **Utilization** link.

**Result:** The Block Utilization Report page opens in the Report Execution window.

**Address Block - Block Utilization Report**

**Parameters**

\* Address Prefix:Length 9.0.0.0/8

**Report Formats**

pdf  html

**Scheduler**

Run **In Foreground**

**Execute Report** **Close**

4 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

5 Choose when to run the report in the **Scheduler** section. Refer to “[To schedule reports](#)”, on [page 449](#) for more information.

6 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to “[To view scheduled jobs](#)”, on [page 132](#) for more information.

END OF STEPS

## Report format

The Block Utilization report appears as shown in [Figure 16](#).

**Figure 16 Sample Block Utilization report**

<b>Address Block Utilization Report</b>		
<b>Date:</b>	06/18/2007 13:55	
<b>User Name:</b>	qjpmn	
<b>Organization:</b>	VitalQIP Organization	
<b>Pool Name:</b>	RECOVERNOW	
<b>Address Prefix/Length:</b>	129.111.0.0/28 (Origin: RECOVERNOW)	
<b>% Available</b>	93.75%	
<b>Address Prefix/Length</b>	<b>Block Status:</b>	<b>Pool Name</b>
<b>Used Address Blocks</b>		
129.111.0.0/32	Used	RECOVERTESTCHILD
There are 1 records		
<b>Reserved Address Blocks</b>		
No matching records to report.		
06/18/2007 13:55		
Page 1 of 1		

The following table describes the fields on the report.

**Table 56 Address block utilization report fields**

<b>Field</b>	<b>Description</b>
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the block is located
Pool Name	Pool that contains the block that is the subject of this report.
Address Prefix/Lengths	Address of the block, followed by the prefix that indicates its length.
% Available	The percentage of free space available in the block.
<b>Column headings</b>	
The following column headings appear for used address blocks and reserved address blocks.	
Address Prefix/Lengths	Address of each block, followed by the prefix that indicates its length.

<b>Field</b>	<b>Description</b>
Block Status	Status of each block.
Pool Name	Name of the pool in which this block is located.



# Address pool reports

## Address pool reports overview

---

The following reports are available from the properties page for Seed Pools and Pools, as well as in the **Address Pool** section of the Reports hierarchy.

- Pool Audit Report
- Pool Block Status Report
- Pool Hierarchy Report
- Pool Info Report
- Pool Statistics Report
- Pool Usage Report
- Pool Free Space Report

When accessed from the Reports hierarchy, you need to enter search criteria to locate the pool on which to report. For information on what criteria you may enter, refer to [“To search for a pool”, on page 474](#).



## To search for a pool

---

### When to use

Use this procedure to search for a pool on which you want to produce one of the address pool reports.

### Procedure

To search for a pool, follow these steps.

---

- 1 Select an address pool report and click **Search**.

**Result:** The Pool/Block Search Criteria window opens.



The screenshot shows a dialog box titled "Search Criteria" with a blue header. It contains three sections: "Address Pool" with a radio button and a text input field; "Address Block" with a radio button; and "Address Block Attributes" with a radio button. Below these is a "Search" button. The "Search Results" section is empty and contains a vertical scrollbar. At the bottom, there are navigation arrows, a "Page Size" dropdown menu set to "20", and "Select" and "Cancel" buttons.

- 2 **Required.** Enter the name of the pool for which you are searching in the **Address Pool** field. This field is case-sensitive. You can enter a partial name followed by an asterisk (\*) as a wildcard, or just leave the field blank to search all pools.

.....  
**3** Click **Search**.

**Result:** The results appear in the **Search Results** list.

.....  
E N D O F S T E P S  
.....



# To produce a Pool Audit report

---

## When to use

Use this procedure to produce Pool Audit reports. Instructions are provided for access from the Reports hierarchy or from the Pool Properties page.

## From the menu or toolbar

To produce a Pool Audit report, follow these steps.

---

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ().

**Result:** The Reports hierarchy opens.

---

- 2 In the **Address Pool** section, click **Audit**.

**Result:** The Pool Audit Report page opens.



- 3 Click **Search**.

**Result:** The Pool/Block Search Criteria window opens. Refer to [“To search for a pool”](#), on page 474 for further information.

---

- 4 Highlight the pool you wish to audit and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected block appears in the **Pool Name** field.

- 
- 5 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

- 
- 6 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

- 
- 7 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

END OF STEPS

---

### From the Pool Properties page

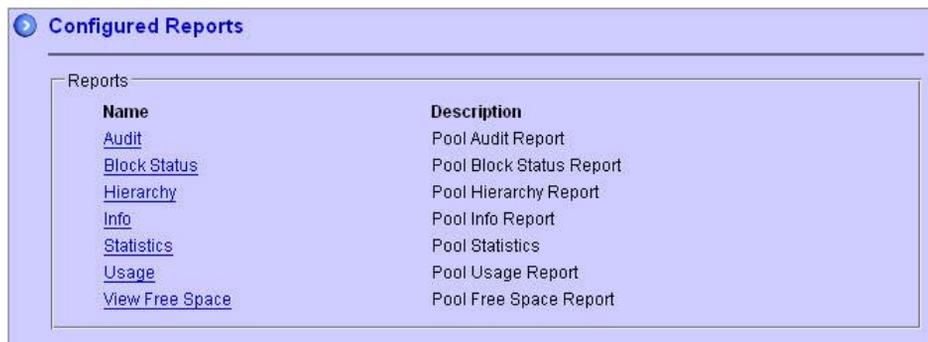
To produce a Pool Audit report, follow these steps.

- 
- 1 In the hierarchy, click the name of the pool for which you want the report.

**Result:** The Pool Properties page opens.

- 
- 2 Click **Reports**.

**Result:** The Configured Reports page opens.



The screenshot shows a web interface titled "Configured Reports". Below the title is a section labeled "Reports" containing a table with two columns: "Name" and "Description". The table lists several report types, each with a link to its configuration page.

Name	Description
<a href="#">Audit</a>	Pool Audit Report
<a href="#">Block Status</a>	Pool Block Status Report
<a href="#">Hierarchy</a>	Pool Hierarchy Report
<a href="#">Info</a>	Pool Info Report
<a href="#">Statistics</a>	Pool Statistics
<a href="#">Usage</a>	Pool Usage Report
<a href="#">View Free Space</a>	Pool Free Space Report

- 3 Click the **Audit** link.

**Result:** The Pool Audit Report page opens in the Report Execution window.

**Address Pool - Pool Audit Report**

**Parameters**

\* Pool Name DOCS

From Date 06/10/2007 16:35

To Date 06/11/2007 16:35

Sort Order Ascending

**Report Formats**

pdf  html

**Scheduler**

Run In Foreground

Execute Report Close

- 4 The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.
- 5 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
- 6 Choose when to run the report in the **Scheduler** section. Refer to “[To schedule reports](#)”, on [page 449](#) for more information.
- 7 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to “[To view scheduled jobs](#)”, on [page 132](#) for more information.

END OF STEPS

## Report format

The Pool Audit report appears as shown in [Figure 17](#).



# To produce a Pool Block Status report

---

## When to use

This report provides a list of blocks sorted by status within a selected pool. Instructions are provided for access from the Reports hierarchy or from the Pool Properties page.

## From the menu or toolbar

To produce a Pool Block Status report, follow these steps.

---

- 1 Click the **Reports** tab. Alternatively, click the Reports icon (🇺🇸).

**Result:** The Reports hierarchy opens.

---

- 2 In the **Address Pool** section, click **Block Status**.

**Result:** The Pool Block Status Report page opens.

**Address Pool - Pool Block Status Report**

Parameters

' Pool Name  Search

' Block Status   
 Allocated   
 Free   
 Origin   
 Pending   
 Reserved

' Pool Depth   
 3

Report Formats

pdf  html

Scheduler

Run   
 In Foreground

Execute Report Close

- 3 Click **Search**.

**Result:** The Pool/Block Search Criteria window opens. Refer to [“To search for a pool”](#), on page 474 for further information.

- 
- 4 Highlight the pool whose status you want to review and click **Select**.  
**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.  
**Result:** The Search window closes and the selected pool appears in the **Pool Name** field.

---

  - 5 Select the statuses of the blocks you want to see. You can select multiple block statuses by holding the **Ctrl** or **Shift** keys as you click the different status types.

---

  - 6 Enter the level of the pool hierarchy for which you want status information. The default level is set to 3.

---

  - 7 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

---

  - 8 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

---

  - 9 Click **Execute Report**.  
**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

END OF STEPS

---

#### From the Pool Properties page

To produce a Pool Block Status report, follow these steps.

- 
- 1 In the hierarchy, click the name of the pool for which you want the report.  
**Result:** The Pool Properties page opens.

---

  - 2 Click **Reports**.  
**Result:** The Configured Reports page opens.

Configured Reports	
Reports	
Name	Description
<a href="#">Audit</a>	Pool Audit Report
<a href="#">Block Status</a>	Pool Block Status Report
<a href="#">Hierarchy</a>	Pool Hierarchy Report
<a href="#">Info</a>	Pool Info Report
<a href="#">Statistics</a>	Pool Statistics
<a href="#">Usage</a>	Pool Usage Report
<a href="#">View Free Space</a>	Pool Free Space Report

3 Click the **Block Status** link.

**Result:** The Pool Block Status Report page opens in the Report Execution window.

**Address Pool - Pool Block Status Report**

**Parameters**

\* Pool Name: SJM\_SEED\_POOL

\* Block Status:  Allocated  Free  Origin  Pending  Reserved

\* Pool Depth: 3

**Report Formats**

pdf  html

**Scheduler**

Run:

4 Select the statuses of the blocks you want to see. You can select multiple block statuses by holding the **Ctrl** or **Shift** keys as you click the different status types.

5 Enter the level of the pool hierarchy for which you want pool status information. The default level is set to 3.

- 6 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
- 7 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on page 449 for more information.
- 8 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on page 132 for more information.

END OF STEPS

## Report format

The Pool Block Status report appears as shown in [Figure 18](#).

**Figure 18 Sample Pool Block Status report**

Block Status Report		
Date:	6/1/06 9:34 AM	
User Name:	qipman	
Organization:	Cliff Organization	
Pool Name:	cliff-12455	
Pool Depth:	3	
Block Status	Allocated,Free,Origin,Reserved,Selected,Used	
Address Prefix/Length	Status	Pool Name
2001:1006::/48	Allocated	cliff-12455
2001:1006:1::/48	Free	cliff-12455
2001:1006:2::/47	Free	cliff-12455
2001:1006:4::/46	Free	cliff-12455
2001:1006:8::/45	Free	cliff-12455
2001:1006:10::/44	Free	cliff-12455
2001:1006:20::/43	Free	cliff-12455
2001:1006:40::/42	Free	cliff-12455
2001:1006:80::/41	Free	cliff-12455
2001:1006:100::/40	Free	cliff-12455
2001:1006:200::/39	Free	cliff-12455
2001:1006:400::/38	Free	cliff-12455
2001:1006:800::/37	Free	cliff-12455
2001:1006:1000::/36	Free	cliff-12455
2001:1006:2000::/35	Free	cliff-12455
2001:1006:4000::/34	Free	cliff-12455
2001:1006:8000::/33	Free	cliff-12455
2001:1006::/32	Origin	cliff-12455
2001:1006::/48	Used	cliff-12455-c1

The following table describes the fields on the report.

**Table 58 Pool Block Status report fields**

<b>Field</b>	<b>Description</b>
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the pool is located
Pool Name	Pool that is the subject of this report.
Pool Depth	The level of the pool hierarchy that this report covers.
Block Status	List of all the block statuses specified when the report was produced.
<b>Column headings</b>	
Address Prefix/Length	Address of the block, followed by the prefix that indicates its length.
Status	Status of the block. The only statuses that appear in this column are the ones specified when the report was produced.
Pool Name	Pool where the block is located. Pools display down to the level specified in the pool depth field when the report was produced.



## To produce a Pool Hierarchy report

---

### When to use

This report provides the hierarchy information within a selected pool, allowing you to see the structure of the pools and blocks within them. Instructions are provided for access from the Reports hierarchy or from the Pool Properties page.

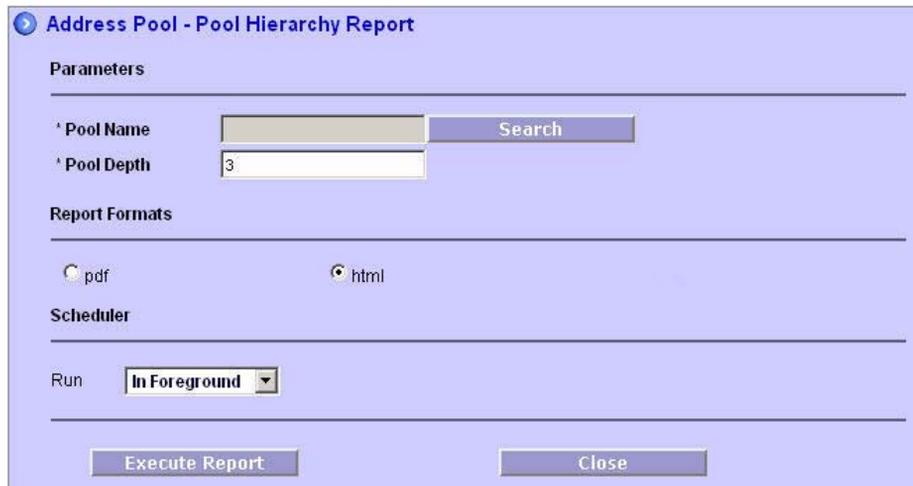
### From the menu or toolbar

To produce a Pool Hierarchy Status report, follow these steps.

---

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ().  
**Result:** The Reports hierarchy opens.
- 

- 2 In the **Address Pool** section, click **Pool Hierarchy**.  
**Result:** The Pool Hierarchy Report page opens.



- 3 Click **Search**.  
**Result:** The Pool/Block Search Criteria window opens. Refer to [“To search for a pool”](#), on page 474 for further information.
  - 4 Highlight the pool whose hierarchy you wish to review and click **Select**.
-

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected pool appears in the **Pool Name** field.

---

5 Enter the level of the pool hierarchy for which you want pool hierarchy information. The default level is set to 3.

---

6 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

---

7 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

---

8 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

---

END OF STEPS

---

### From the Pool Properties page

To produce a Pool Hierarchy report, follow these steps.

---

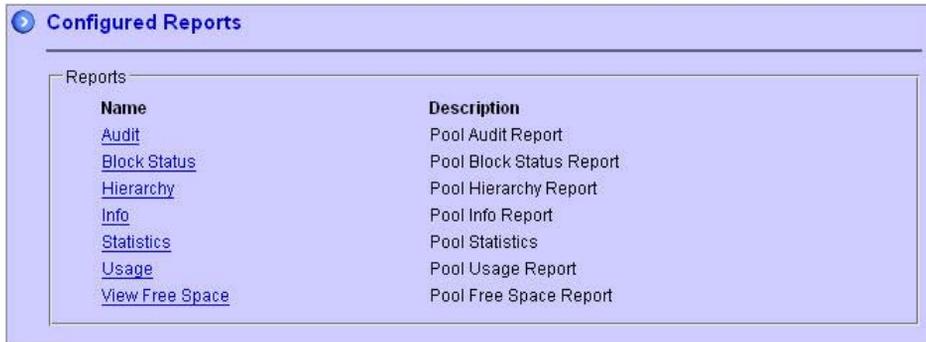
1 In the hierarchy, click the name of the pool for which you want the report.

**Result:** The Pool Properties page opens.

---

2 Click **Reports**.

**Result:** The Configured Reports page opens.



- 3 Click the **Hierarchy** link.

**Result:** The Pool Hierarchy Report page opens in the Report Execution window.

**Address Pool - Pool Hierarchy Report**

**Parameters**

\* Pool Name: SJM\_SEED\_POOL

\* Pool Depth:

**Report Formats**

pdf       html

**Scheduler**

Run:

- 4 Enter the level of the pool hierarchy for which you want pool hierarchy information. The default level is set to 3.

- 5 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

- 6 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

7 Click **Execute Report**.

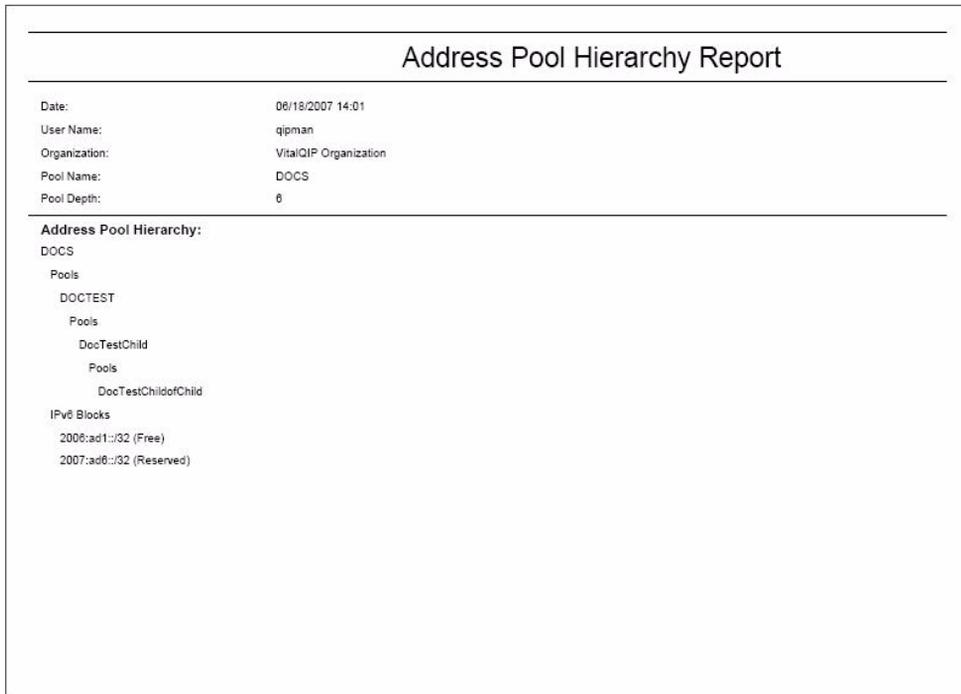
**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to “[To view scheduled jobs](#)”, on page 132 for more information.

.....  
E N D O F S T E P S  
.....

**Report format**

The Pool Hierarchy report appears, as shown in [Figure 19](#).

**Figure 19 Sample Pool Hierarchy report**



The following table describes the fields on the report.

**Table 59 Pool Hierarchy report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.

<b>Field</b>	<b>Description</b>
Organization	Organization where the pool is located
Pool Name	Pool that is the subject of this report.
Pool Depth	The level of the pool hierarchy that this report covers.
<b>Hierarchy headings</b>	
Address Pool Hierarchy	Name of the pool whose hierarchy is being shown
Pools	Name of each pool under the hierarchy. Each level of indentation indicates another level of the hierarchy.
IPv4 Blocks/IPv6 Blocks	Address of each block contained in the pool and the block status.



# To produce a Pool Info report

---

## When to use

This report provides the general information about a selected pool. Instructions are provided for access from the Reports hierarchy or from the Pool Properties page.

## From the menu or toolbar

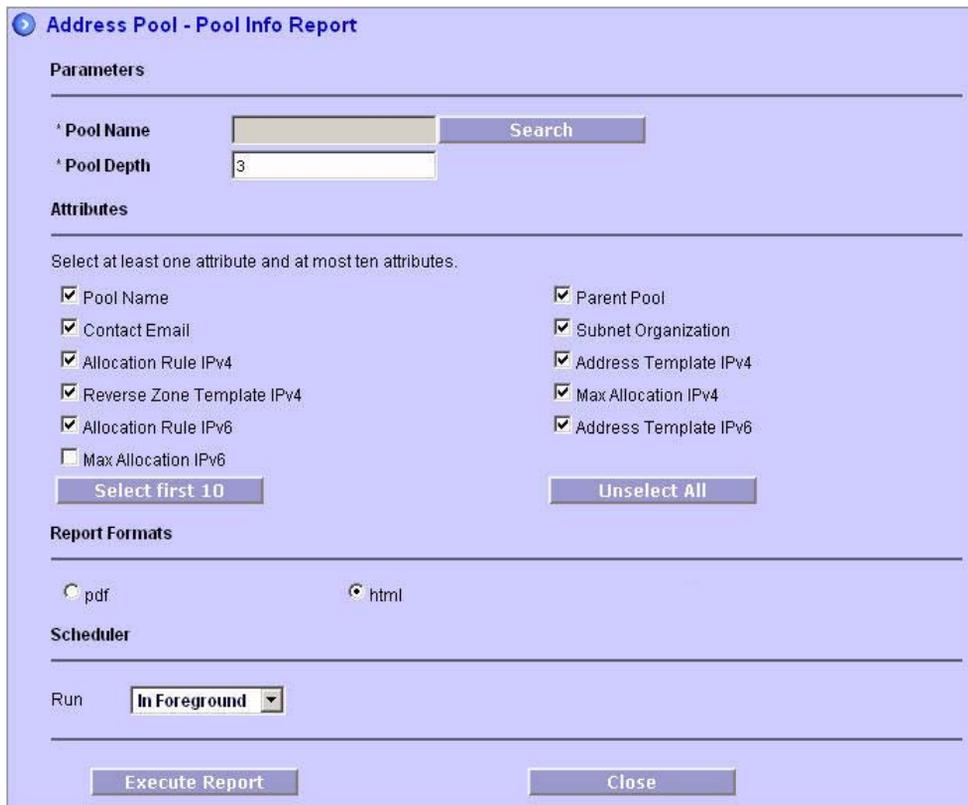
To produce a Pool Info report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ()

**Result:** The Reports hierarchy opens.

- 2 In the **Address Pool** section, click **Info**.

**Result:** The Pool Info Report page opens.



**Address Pool - Pool Info Report**

**Parameters**

Pool Name  Search

Pool Depth

**Attributes**

Select at least one attribute and at most ten attributes.

<input checked="" type="checkbox"/> Pool Name	<input checked="" type="checkbox"/> Parent Pool
<input checked="" type="checkbox"/> Contact Email	<input checked="" type="checkbox"/> Subnet Organization
<input checked="" type="checkbox"/> Allocation Rule IPv4	<input checked="" type="checkbox"/> Address Template IPv4
<input checked="" type="checkbox"/> Reverse Zone Template IPv4	<input checked="" type="checkbox"/> Max Allocation IPv4
<input checked="" type="checkbox"/> Allocation Rule IPv6	<input checked="" type="checkbox"/> Address Template IPv6
<input type="checkbox"/> Max Allocation IPv6	

Select first 10 Unselect All

**Report Formats**

pdf  html

**Scheduler**

Run

Execute Report Close

---

3 Click **Search**.

**Result:** The Pool/Block Search Criteria window opens. Refer to [“To search for a pool”](#), on page 474 for further information.

---

4 Highlight the pool whose information you wish to review and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected pool appears in the **Pool Name** field.

---

5 Enter the level of the pool hierarchy for which you want pool information. The default level is set to 3.

---

6 Check at least one, but no more than 10 attributes that you want to appear on the report. Click **Select first 10** to select all but the last attribute. Click **Unselect All** to undo any checks you may have made.

---

7 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

---

8 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on page 449 for more information.

---

9 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on page 132 for more information.

---

END OF STEPS

---

### From the Pool Properties page

To produce a Pool Info report, follow these steps.

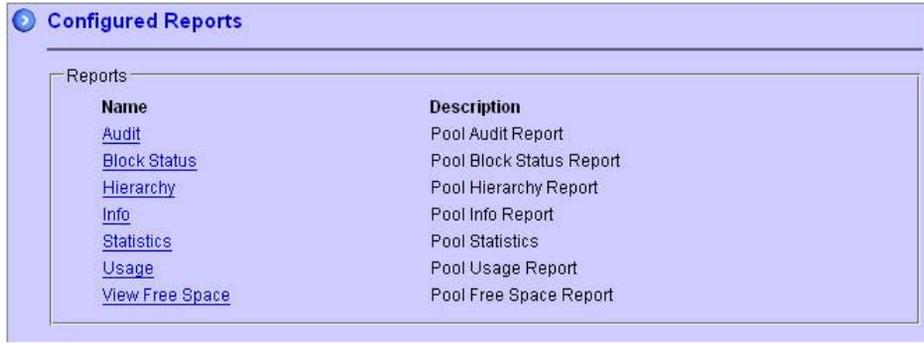
---

1 In the hierarchy, click the name of the pool for which you want the report.

**Result:** The Pool Properties page opens.

2 Click **Reports**.

**Result:** The Configured Reports page opens.



3 Click the **Info** link.

**Result:** The Pool Info Report page opens in the Report Execution window.



- 4 Enter the level of the pool hierarchy for which you want pool hierarchy information. The default level is set to 3.
- 5 Check at least one, but no more than 10 attributes that you want to appear on the report. Click **Select first 10** to select all but the last attribute. Click **Unselect All** to undo any checks you may have made.
- 6 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
- 7 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on page 449 for more information.
- 8 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on page 132 for more information.

END OF STEPS

## Report format

The Info report appears as shown in [Figure 20](#).

**Important!** The following sample contains a subset of all the available column headings.

**Figure 20 Sample Pool Info report**

Pool Info Report									
Date:	06/18/2007 14:04								
User Name:	qjman								
Organization:	Viasoft Organization								
Pool Name:	DOCS								
Pool Depth:	0								
Pool Name	Parent Pool	Contact Email	Subnet Organization	Allocation Rule IPv4	Address Template IPv4	Reverse Zone Template	Max Allocation IPv4	Allocation Rule IPv6	Address Template IPv6
DOCS		doctest@sample.com					25		
DOCTEST	DOCS	twesigwec@sample.com	DOCTESTSUBORG				0	Doctest	Doctest
DoctestChild	DOCTEST	twesigwec@sample.com					0		
DoctestAndChild	DoctestChild	twesigwec@sample.com	DOCTESTSUBORG	CREATE/27			16		
There are 4 records in this report.									
06/18/2007 14:04									
Page 1 of 1									

The following table describes the fields on the report.

**Table 60 Pool information report fields**

<b>Field</b>	<b>Description</b>
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the pool is located
Pool Name	Pool that is the subject of this report.
Pool Depth	The level of the pool hierarchy that this report covers.
<b>Column headings</b>	
Table headings match the attributes you selected when you produced this report. You can select up to 10 attributes.	
Pool Name	Name of the child pool, down to the level specified.
Contact Email	Contact specified for the pool.
Allocation Rule IPv4	Rule used when allocating an IPv4 pool, if applicable.
Reverse Zone Template IPv4	Reverse zone template for the pool, if applicable.
Allocation Rule IPv6	Rule used when allocating an IPv6 pool, if applicable.
Max Allocation IPv6	Largest allocation request that will be granted to a child pool.
Parent Pool	For child pools, the name of the parent pool.
Subnet Organization	Name of the subnet organization, if defined, for the pool.
Address Template IPv4	Template used when creating the IPv4 pool, if applicable.
Max Allocation IPv4	Largest allocation request taht will be granted to a child pool.
Address Template IPv6	Template used when creating the IPv6 pool, if applicable.



## To produce a Pool Statistics report

---

### When to use

This report provides usage statistics information for a selected pool. Instructions are provided for access from the Reports hierarchy or from the Pool Properties page.

### From the menu or toolbar

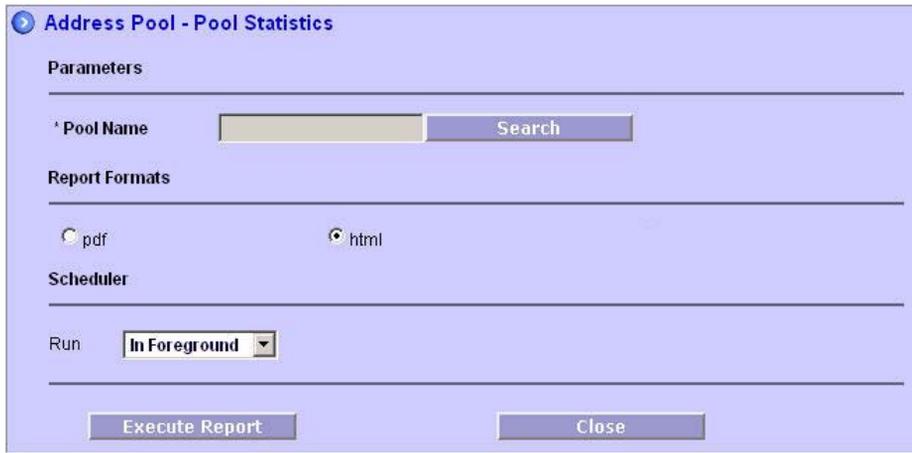
To produce a Pool Statistics report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ().

**Result:** The Reports hierarchy opens.

- 2 In the **Address Pool** section, click **Statistics**.

**Result:** The Pool Statistics Report page opens.



- 3 Click **Search**.

**Result:** The Pool/Block Search Criteria window opens. Refer to [“To search for a pool”](#), on page 474 for further information.

- 4 Highlight the pool whose statistics you wish to review and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected pool appears in the **Pool Name** field.

.....  
5 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

.....  
6 Choose when to run the report in the **Scheduler** section. Refer to “[To schedule reports](#)”, on page 449 for more information.

.....  
7 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to “[To view scheduled jobs](#)”, on page 132 for more information.

.....  
E N D O F S T E P S  
.....

## From the Pool Properties page

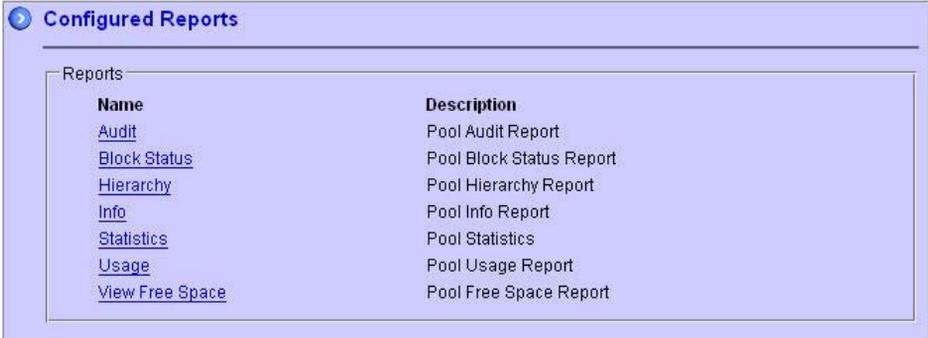
To produce a Pool Statistics report, follow these steps.

.....  
1 In the hierarchy, click the name of the pool for which you want the report.

**Result:** The Pool Properties page opens.

.....  
2 Click **Reports**.

**Result:** The Configured Reports page opens.



The screenshot shows a web interface titled "Configured Reports". Below the title is a section labeled "Reports" containing a table with two columns: "Name" and "Description". The table lists several report types, each with a link to its configuration page.

Name	Description
<a href="#">Audit</a>	Pool Audit Report
<a href="#">Block Status</a>	Pool Block Status Report
<a href="#">Hierarchy</a>	Pool Hierarchy Report
<a href="#">Info</a>	Pool Info Report
<a href="#">Statistics</a>	Pool Statistics
<a href="#">Usage</a>	Pool Usage Report
<a href="#">View Free Space</a>	Pool Free Space Report

- 3 Click the **Statistics** link.

**Result:** The Pool Statistics Report page opens in the Report Execution window.

**Address Pool - Pool Statistics**

**Parameters**

\* Pool Name SJM\_CHILD\_POOL\_1\_2

**Report Formats**

pdf  html

**Scheduler**

Run **In Foreground**

**Execute Report** **Close**

- 4 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
- 5 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.
- 6 Click **Execute Report**.

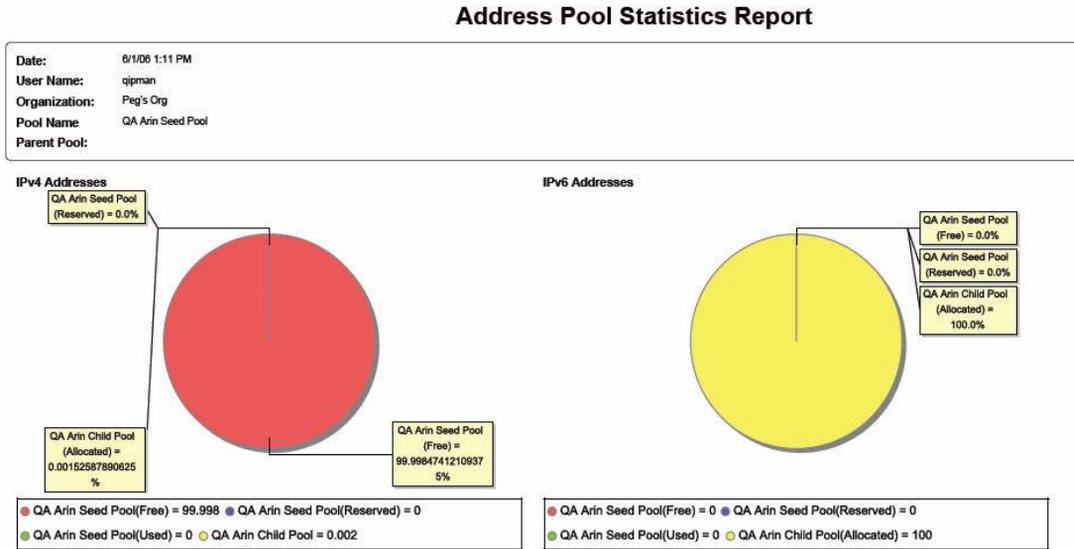
**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

END OF STEPS

## Report format

The Pool Statistics report appears as shown in [Figure 21](#). The charts on this report show the usage statistics for all IPv4 and IPv6 addresses. Each pie chart has both a label on the chart and a legend below it that show the proportion of Free, Reserved and Used blocks, and blocks allocated to child pools.

**Figure 21 Sample Pool Statistics report**



The following table describes the fields on the report.

**Table 61 Pool Statistics report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the pool is located
Pool Name	Pool that is the subject of this report.
Parent Pool	Name of the parent pool for this pool. Blank indicates that the pool is a seed pool.



## To produce a Pool Usage report

---

### When to use

This report provides the address usage information within a selected pool. Instructions are provided for access from the Reports hierarchy or from the Pool Properties page.

### From the menu or toolbar

To produce a Pool Usage report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon (🌐).

**Result:** The Reports hierarchy opens.

- 2 In the **Address Pool** section, click **Usage**.

**Result:** The Pool Usage Report page opens.

- 3 Click **Search**.

**Result:** The Pool/Block Search Criteria window opens. Refer to [“To search for a pool”](#), on page 474 for further information.

- 4 Highlight the pool whose usage you wish to review and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected pool appears in the **Pool Name** field.

---

5 Enter the level of the pool hierarchy for which you want pool usage information. The default level is set to 3.

---

6 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

---

7 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

---

8 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

---

END OF STEPS

### From the Pool Properties page

To produce a Pool Usage report, follow these steps.

---

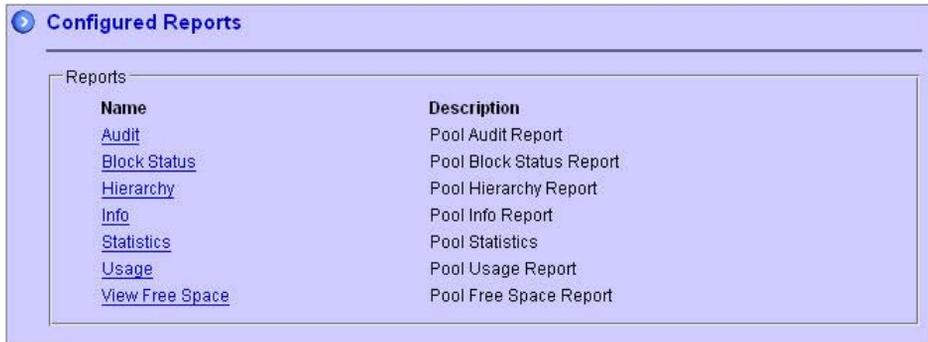
1 In the hierarchy, click the name of the pool for which you want the report.

**Result:** The Pool Properties page opens.

---

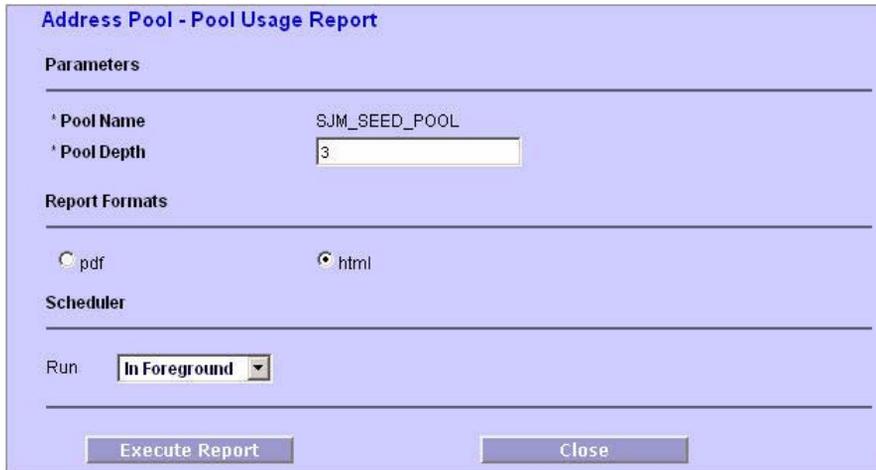
2 Click **Reports**.

**Result:** The Configured Reports page opens.



- 3 Click the **Usage** link.

**Result:** The Pool Usage Report page opens in the Report Execution window.



- 4 Enter the level of the pool hierarchy for which you want pool usage information. The default level is set to 3.
- 5 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
- 6 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

7 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on page 132 for more information.

.....  
 E N D O F S T E P S  
 .....

**Report format**

The Pool Usage report appears as shown in [Figure 22](#).

**Figure 22 Sample Pool Usage report**

**Address Pool Usage Report**

<b>Date:</b>		10/4/08 3:01 PM	
<b>User Name:</b>		qloman	
<b>Organization:</b>		daves	
<b>Pool Name:</b>		pool1	
<b>Internet Registry:</b>		ARIN	
<b>Pool Depth:</b>		3	

Pool Name			Parent Pool			
IPv4/v6	Percent Free	Largest Free Block	Algorithm	Allocation Rule	HD Threshold	
pool1						
IPv4	44.82%	24.128.0.0/8	BFD			
IPv6	89.89%	2400::/32	BFD			
cpool1						
IPv4	9.88%	12.0.0.0/12	BFD			
IPv6	89.08%	1400::1:0/44	BFD			
cpool2						
IPv4	0%		BFD			
IPv6	N/A	N/A	N/A	N/A	N/A	

The following table describes the fields on the report.

**Table 62 Pool Usage report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the pool is located
Pool Name	Pool that is the subject of this report.
Internet Registry	Internet registry with which this pool is registered. Blank indicates the pool is not assigned to an Internet registry.
Pool Depth	The level of the pool hierarchy that this report covers.
<b>Column headings</b>	

Field	Description
Pool Name	Name of each pool or child pool down to the pool depth specified when the report was produced.
IPv4/v6	For each pool, there is line with IPv4 statistics and IPv6 statistics.
Percent Free	Indicates the amount of free space available in the pool.
Largest Free Block	Address of the largest free block in the pool.
Parent Pool	Name of the parent pool for the pool statistics on a given line. Blank indicates that the pool is a seed pool.
Algorithm	Allocation algorithm used when creating the pool. Allowable values are: BFS: Best fit from start BFE: Best fit from end SPL: Sparse allocation
Allocation Rule	Name of the allocation rule, if applicable, that was used when creating the pool.
HD Threshold	When the Host Density (HD) ratio reaches this ratio, the user is notified. HD is calculated as follows: $HD = \log(\text{number of allocated objects}) / \log(\text{maximum number of allocatable objects})$



# To produce a Pool Free Space report

---

## When to use

This report provides free space information within a selected pool. Instructions are provided for access from the Reports hierarchy or from the Pool Properties page.

## From the menu or toolbar

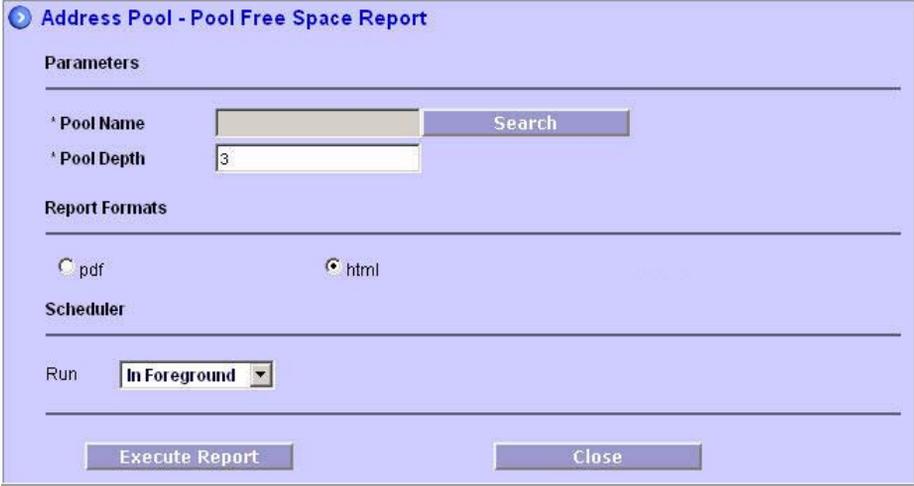
To produce a Pool Free Space report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ()

**Result:** The Reports hierarchy opens.

- 2 In the **Address Pool** section, click **Free Space**.

**Result:** The Pool Free Space Report page opens.



- 3 Click **Search**.

**Result:** The Pool/Block Search Criteria window opens. Refer to [“To search for a pool”](#), on page 474 for further information.

- 4 Highlight the pool whose free space you wish to review and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected pool appears in the **Pool Name** field.

---

**5** Enter the level of the pool hierarchy for which you want pool free space information. The default level is set to 3.

---

**6** The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

---

**7** Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

---

**8** Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

---

END OF STEPS

---

### From the Pool Properties page

To produce a Pool Free Space report, follow these steps.

---

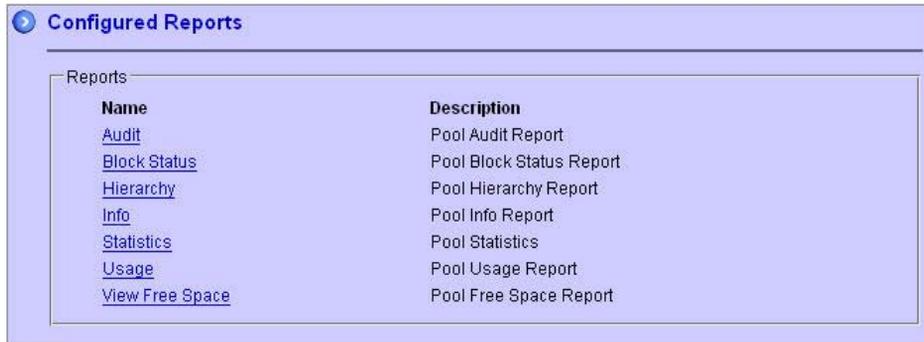
**1** In the hierarchy, click the name of the pool for which you want the report.

**Result:** The Pool Properties page opens.

---

**2** Click **Reports**.

**Result:** The Configured Reports page opens.



3 Click the **View Free Space** link.

**Result:** The Pool Free Space Report page opens in the Report Execution window.



4 Enter the level of the pool hierarchy for which you want pool free space information. The default level is set to 3.

5 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

6 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

7 Click **Execute Report**.

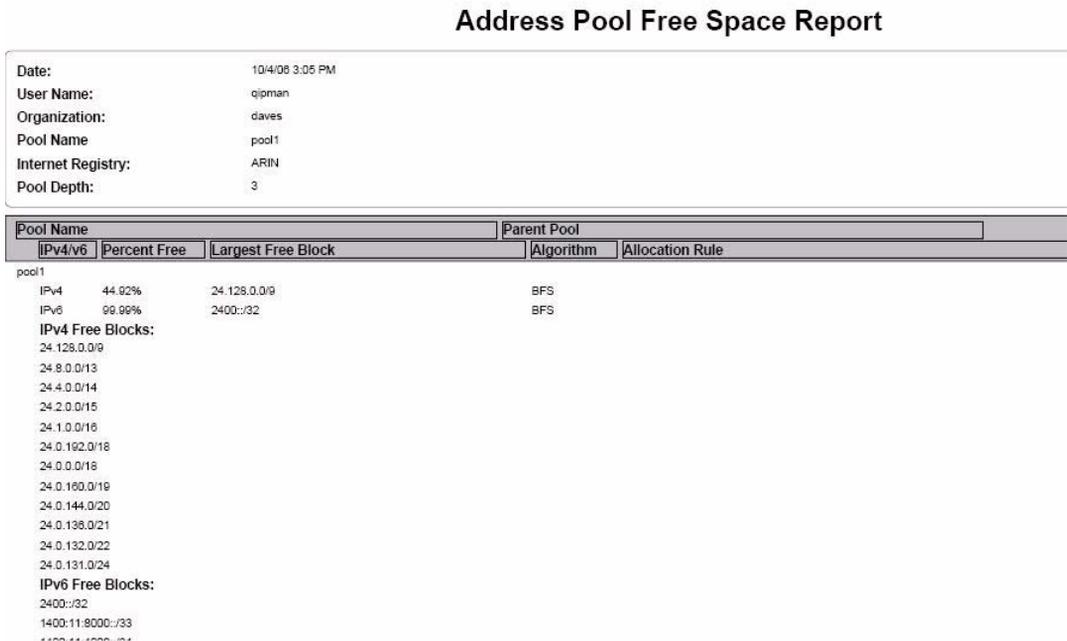
**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to “[To view scheduled jobs](#)”, on page 132 for more information.

.....  
 E N D O F S T E P S  
 .....

**Report format**

The Pool Free Space report appears as shown in [Figure 23](#).

**Figure 23 Sample Pool Free Space report**



The following table describes the fields on the report.

**Table 63 Pool Free Space report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the pool is located

<b>Field</b>	<b>Description</b>
Pool Name	Pool that is the subject of this report.
Internet Registry	Internet registry with which this pool is registered. Blank indicates the pool is not assigned to an Internet registry.
Pool Depth	The level of the pool hierarchy that this report covers.
<b>Column headings</b>	
Pool Name	Name of each pool or child pool down to the pool depth specified when the report was produced.
IPv4/v6	For each pool, there is a line with IPv4 statistics and IPv6 statistics.
Percent Free	Indicates the amount of free space available in the pool.
Largest Free Block	Address of the largest free block in the pool.
Parent Pool	Name of the parent pool for the pool statistics on a given line. Blank indicates that the pool is a seed pool.
Algorithm	Allocation algorithm used when the pool was created. Values are: BFS: Best fit from start BFE: Best fit from end SPL: Sparse allocation
Allocation Rule	Name of the allocation rule, if applicable, that was used when the pool was created.



# Administrator reports

## Administrator report overview

---

The following report is available from the **Administrator** section of the Reports hierarchy.

- Administrator Audit Report

The Administrator Audit Report allows administrators to combine any of the following elements in one report.

- Address Block
- Address Pool
- Interface
- IPv4 Subnet
- IPv6 Address
- IPv6 Subnet
- MyView
- Node
- Rule

**Important!** The elements available are dependent on privilege settings in the Administrator Profile in the VitalQIP client.



# To produce an Administrator Audit report

---

## When to use

Use this procedure to produce an Administrator Audit report. The Administrator Audit Report allows a master administrator to audit the activities of any administrator.

## Procedure

To produce an Administrator Audit report, follow these steps.

---

- 1 Click the **Reports** tab. Alternatively, click the Reports icon (🌐).

**Result:** The Reports hierarchy opens.

---

- 2 In the **Administrator** section, click **Audit**.

**Result:** The Administrator Audit report opens.

The screenshot shows a configuration window titled "Administrator - Administrator Audit Report". It contains several sections: "Parameters" with fields for "Administrator" (a dropdown menu), "Entries Selected" (a list box containing "Address Block", "Address Pool", "Interface", "IPv4 Subnet", and "IPv6 Address"), "From Date" (06/03/2007 17:22), "To Date" (06/04/2007 17:22), and "Sort Order" (Ascending). "Report Formats" has radio buttons for "pdf" and "html" (selected). "Scheduler" has a "Run" dropdown set to "In Foreground". At the bottom are "Execute Report" and "Close" buttons.

- 3 Select the ID of the administrator you wish to audit from the **Administrator** drop-down list. If you are a normal administrator, only your User ID is listed.

- 
- 4 Select the object types you wish to audit from the **Entries Selected** list. You can select multiple object types by holding down the **Ctrl** or **Shift** keys as you click.

---

  - 5 The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.

---

  - 6 The report defaults to data sorted in **Ascending** order. Select **Descending** order if required.

---

  - 7 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

---

  - 8 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on [page 449](#) for more information.

---

  - 9 Click **Execute Report**.  
**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on [page 132](#) for more information.

END OF STEPS

---

### Report format

The Administrator Audit report appears as shown in [Figure 24](#).

**Figure 24 Sample Administrator Audit report**

Administrator Audit Report				
Date:	4/27/07 3:38 PM			
User Name:	qpman			
Organization:	QIP_MUSIC_COM			
Administrator:	qpman			
Entries Selected:	IPv4 Subnet			
From Date:	4/3/06 3:38 PM			
To Date:	4/27/07 3:38 PM			
Sort Order:	Ascending			
Date/Time	Action	User	Entity Name	Parameters (Name: Old Value -> New Value)
4/26/07 5:26 PM	insert	qpman	10.1.0.0	
4/26/07 5:26 PM	insert	qpman	21.0.0.0	
4/26/07 5:26 PM	insert	qpman	22.0.0.0	
4/26/07 5:26 PM	insert	qpman	21.0.16.0	
4/26/07 5:26 PM	insert	qpman	21.0.48.0	
4/26/07 5:26 PM	insert	qpman	21.0.64.0	
4/26/07 5:26 PM	insert	qpman	22.0.16.0	
4/26/07 5:26 PM	insert	qpman	22.0.32.0	
There are 8 records on this report.				
4/27/07 3:39 PM <span style="float: right;">Page 1 of 1</span>				

The following table describes the fields on the report.

**Table 64 Pool Audit report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the block is located
Administrator	Administrator that is the subject of this report.
From Date	Starting date for the audit report date range.
To Date	Ending date for the audit report date range.
Sort Order	Indicates whether data is sorted in Ascending or Descending order.
<b>Column headings</b>	
Date/Time	Date and time that the action occurred.
Action	Action that triggered the audit entry.
User	User who performed the action.
Entity Name	Component affected by the user.

<b>Field</b>	<b>Description</b>
Parameters (Name: Old Value > New Value)	The specific value change that occurred, showing the previous and revised values.



# IPv4 subnet reports

## IPv4 subnet reports overview

---

The following reports are available from the properties page for IPv4 subnets, as well as in the **IPv4 Subnet** section of the Reports hierarchy. These reports may also be available from the MyView Hierarchy if Domains, Networks, IPv4 Subnets, OSPF Area, and Subnet Organizations are listed.

- Subnet Audit Report
- IPv4 Subnets Report
- Subnet Usage Report

When accessed from the Reports hierarchy, you need to enter search criteria to locate the item on which to report. For information on what criteria you may enter, refer to [“To search for an IPv4 hierarchy item”, on page 515](#).



## To search for an IPv4 hierarchy item

---

### When to use

Use this procedure to search for an item in the IPv4 hierarchy on which you wish to produce one of the IPv4 subnet reports.

### Before you begin

You can use the wildcard character (\*) as part of the search string for all searches.

### Procedure

To search for an item in the IPv4 hierarchy, follow these steps.

---

- 1 Select one of the IPv4 subnet reports in the Reports hierarchy and click **Search**.

**Result:** The Global Search page opens.

- 2 Review the following table and fill in the fields you need to complete for your search.

**Table 65 Global search fields**

Field	Description
Type	Select whether you are searching for a <b>Name</b> , an <b>Address</b> , or a <b>User-Defined Field</b> from the drop-down list.
Range	Displays the range for which you are searching. The values for this field vary depending on the type of report selected, or the value selected in the <b>Scope</b> field.

Field	Description
UDF Field Name	This field is only active if the <b>Type</b> is set to <b>User-Defined Field</b> . Select the name of any user-defined field from the drop-down list, or select <b>All</b> to search all user-defined fields.
Search String	Enter text in this field based on the type of item for which you are searching. Allowable values are as follows: <b>Name</b> – Enter freeform text. You may use the wildcard character for 0 or more characters. <b>Address</b> – Enter a valid IP address. You can use the wildcard character, but each octet must be complete. For example 135.106.* is a valid search address. If you enter an invalid IP address, no matches are returned. <b>User-Defined Field</b> – Enter freeform text. You may use the wildcard character for 0 or more characters.

.....

**3** Click **Search**.

**Result:** The results appear in the **Search Results** list.

.....

END OF STEPS



## To produce an IPv4 Subnet Audit report

---

### When to use

Use this procedure to produce an IPv4 Subnet Audit report. Instructions are provided for access from the Reports hierarchy or from the IPv4 Subnet Properties page.

### From the menu or toolbar

To produce a Subnet Audit report, follow these steps.

---

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ().

**Result:** The Reports hierarchy opens.

---

- 2 In the **IPv4 Subnet** section, click **Audit**.

**Result:** The Subnet Audit Report page opens.



**IPv4 Subnet - Subnet Audit Report**

**Parameters**

Subnet Address  Search

From Date

To Date

Sort Order

**Report Formats**

pdf  html

**Scheduler**

Run

Execute Report Close

- 3 Click **Search**.

**Result:** The Global Search window opens. Refer to [“To search for an IPv4 hierarchy item”](#), on page 515 for further information.

---

- 4 Highlight the subnet you wish to audit and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected subnet appears in the **Subnet Address** field.

.....  
5 The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.

.....  
6 The report defaults to data sorted in **Ascending** order. Select **Descending** order if required.

.....  
7 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

.....  
8 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on [page 449](#) for more information.

.....  
9 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on [page 132](#) for more information.

.....  
E N D O F S T E P S  
.....

### From the Subnet Properties page

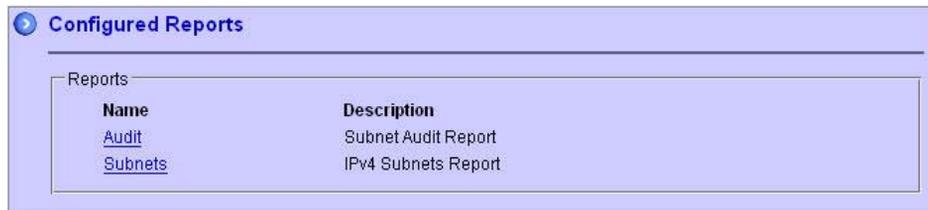
To produce a Subnet Audit report on a subnet in the IPv4 hierarchy, follow these steps.

.....  
1 Select the subnet on which you want to report.

**Result:** The Subnet Properties page opens.

.....  
2 Click **Reports**.

**Result:** The Configured Reports page opens.



- 3 Click the **Audit** link.

**Result:** The Subnet Audit Report page opens in the Report Execution window.

**IPv4 Subnet - Subnet Audit Report**

**Parameters**

Subnet Address: 192.0.2.0

From Date: 06/11/2007 12:46

To Date: 06/12/2007 12:46

Sort Order: Ascending

**Report Formats**

pdf  html

**Scheduler**

Run: In Foreground

Execute Report Close

- 4 The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.
- 5 The report defaults to data sorted in **Ascending** order. Select **Descending** order if required.
- 6 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
- 7 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on page 449 for more information.

8 Click **Execute Report**.

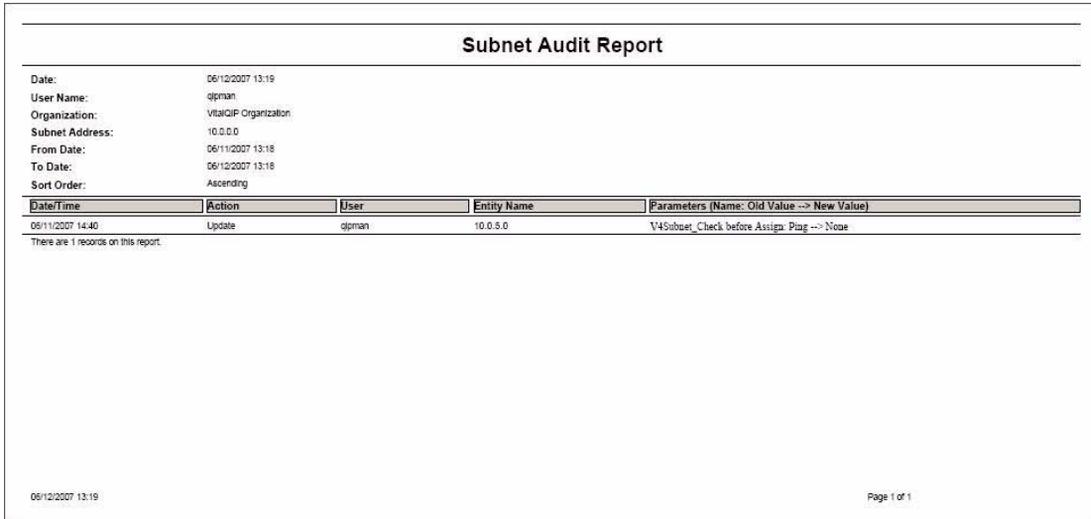
**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to “[To view scheduled jobs](#)”, on page 132 for more information.

.....  
E N D O F S T E P S  
.....

**Report format**

The Subnet Audit report appears as shown in [Figure 25](#). Fields on this report are similar for all audit reports.

**Figure 25 Sample Subnet Audit report**



The following table describes the fields on the report.

**Table 66 Subnet Audit report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the item is located
Subnet Address	The subnet that is the subject of this report.
From Date	Starting date for the audit report date range.

<b>Field</b>	<b>Description</b>
To Date	Ending date for the audit report date range.
Sort order	Indicates whether data is sorted in Ascending or Descending order.
<b>Column headings</b>	
Date/Time	Date and time that the action occurred.
Action	Action that triggered the audit entry.
User	User who performed the action.
Entity Name	Component affected by the user.
Parameters (Name: Old Value > New Value)	The specific value change that occurred, showing the previous and revised values.



## To produce an IPv4 Subnets report

---

### When to use

Use this procedure to produce an IPv4 Subnets report. Instructions are provided for access from the Reports hierarchy or from the Network, Domain, OSPF Area, Subnet Organization, and Subnet Properties pages.

### From the menu or toolbar

To produce an IPv4 Subnets report, follow these steps.

---

- 1 Click the **Reports** tab. Alternatively, click the Reports icon (🌐).

**Result:** The Reports hierarchy opens.

---

- 2 In the **IPv4 Subnet** section, click **Subnets**.

**Result:** The IPv4 Subnets Report page opens.

The screenshot shows a dialog box titled "IPv4 Subnet - IPv4 Subnets Report". It contains several sections:

- Parameters:**
  - Scope:** A dropdown menu set to "Network".
  - Scope Value:** A text input field containing "192.0.2.0" and a "Search" button to its right.
  - Object Type:** A list box with "Workstation" selected. Other options include "X-terminal", "PC", "Printer", and "Server".
  - Address Status:** A list box with "Static" selected. Other options include "Dynamic", "Reserved", "Manual Bootp", and "Automatic Bootp".
- Report Formats:** Two radio buttons: "pdf" (unselected) and "html" (selected).
- Scheduler:** A "Run" dropdown menu set to "In Foreground".

At the bottom of the dialog are two buttons: "Execute Report" and "Close".

- 
- 3 Select a scope type from the **Scope** drop-down list. Possible choices are:
- Domain
  - Network
  - OSPF Area
  - Subnet Organization
  - Subnet
- 
- 4 Click **Search**.
- Result:** The Global Search window opens. Refer to [“To search for an IPv4 hierarchy item”](#), on page 515 for further information.
- 
- 5 Highlight the subnet you wish to audit and click **Select**.
- Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.
- Result:** The Search window closes and the selected subnet appears in the **Scope Value** field.
- 
- 6 Select the object types you wish to review from the **Object Type** list. You can select multiple object types by holding down the **Ctrl** or **Shift** keys as you click.
- 
- 7 Select the address type you wish to review from the **Address Status** list. You can select multiple types of address by holding down the **Ctrl** or **Shift** keys as you click.
- 
- 8 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
- 
- 9 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on page 449 for more information.
- 
- 10 Click **Execute Report**.
- Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on page 132 for more information.

---

END OF STEPS

---

## From a Properties page

To produce an IPv4 Subnets report on an item in the IPv4 (or MyView) hierarchy, follow these steps.

- 1 Select the item on which you want to report.

**Result:** The Properties page for the selected item opens.

- 2 Click **Reports**.

**Result:** The Configured Reports page opens.

- 3 Click the **Subnets** link.

**Result:** The IPv4 Subnets Report page opens in the Report Execution window.

The screenshot shows a dialog box titled "IPv4 Subnet - IPv4 Subnets Report". It contains several sections:

- Parameters:**
  - Subnet:** 10.0.0.0
  - Object Type:** A dropdown menu with options: Workstation, X-terminal, PC, Printer, Server.
  - Address Status:** A dropdown menu with options: Static, Dynamic, Reserved, Manual Bootp, Automatic Bootp.
- Report Formats:** Radio buttons for pdf (selected) and html.
- Scheduler:** A "Run" dropdown menu set to "In Foreground".
- Buttons:** "Execute Report" and "Close".

- 
- 4 Select the object types you wish to review from the **Object Type** list. You can select multiple object types by holding down the **Ctrl** or **Shift** keys as you click.

---

  - 5 Select the address type you wish to review from the **Address Status** list. You can select multiple types of address by holding down the **Ctrl** or **Shift** keys as you click.

---

  - 6 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

---

  - 7 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

---

  - 8 Click **Execute Report**.  
**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

---

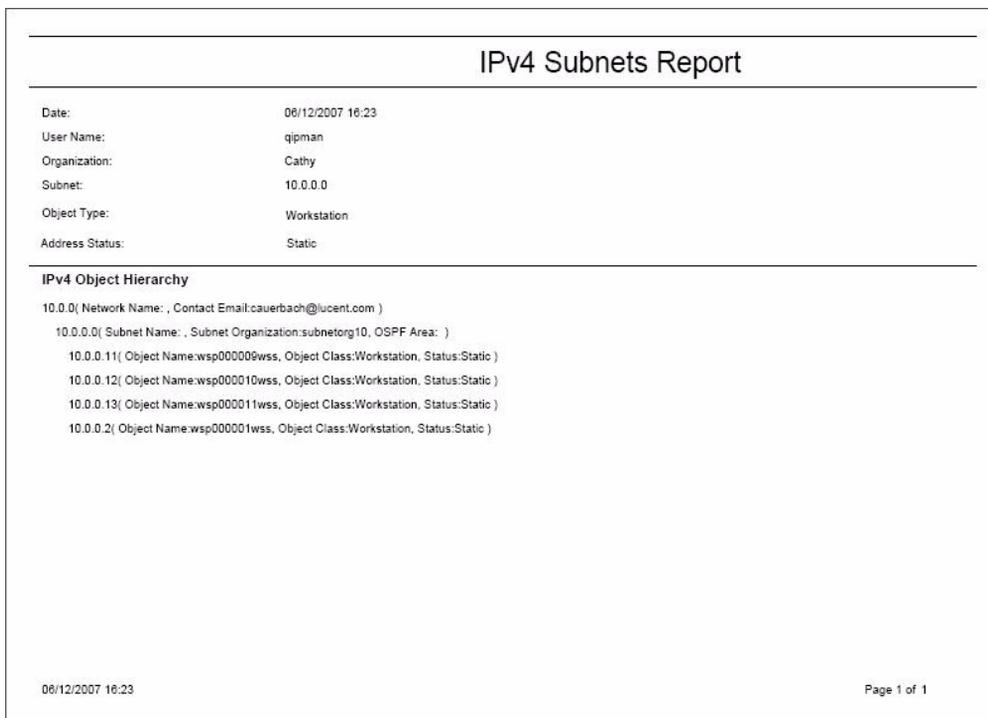
END OF STEPS

---

### Report format

When invoked from the Subnet properties page, the IPv4 Subnets report appears as shown in [Figure 26](#).

**Figure 26 Sample IPv4 Subnets report**



The following table describes the fields on the report.

**Table 67 IPv4 Subnets report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the item is located
Subnet	The subnet that is the subject of this report. <b>Important!</b> This is actually the scope where the subnets/objects are queried. When you invoke this report from the Network Properties page for example, you see Network instead of Subnet in the report. Similarly for Domain, OSPF Area, and Subnet Organization.
Object Type	The types of object selected for this report.
Address Status	The status of the addresses selected for this report.



## To produce an IPv4 Subnet Usage report

---

### When to use

Use this report to produce an IPv4 Subnet Usage report. Instructions are provided for access from the Reports hierarchy or from the Network Properties page.

### From the menu or toolbar

To produce an IPv4 Subnets Usage report, follow these steps.

---

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ().

**Result:** The Reports hierarchy opens.

---

- 2 In the **IPv4 Subnet** section, click **Usage**.

**Result:** The IPv4 Subnet Usage Report page opens.



- 3 Click **Search**.

**Result:** The Global Search window opens. Refer to [“To search for an IPv4 hierarchy item”](#), on page 515 for further information.

---

- 4 Highlight the network on which you wish to report and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected network appears in the **Network** field.

---

5 Select **Free** or **Used** from the **Status** drop-down list.

- If **Free** is selected, the report lists subnets that can be created for the specified CIDR length and includes the count of free subnets as well as the percentage of free space that the subnets on the list will use up.
  - If **Used** is selected, all subnets that are not free (that is, cannot be created) are listed.
- 

6 Select the CIDR length from the **CIDR** drop-down list.

**Important!** CIDR is applicable only for Free status. Even though CIDR is shown for Used status, it is not used for generation of the report.

---

7 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

---

8 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on page 449 for more information.

---

9 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on page 132 for more information.

---

END OF STEPS

---

### From a Network Properties page

To produce an IPv4 Subnet Usage report on a network listed in the IPv4 (or MyView) hierarchy, follow these steps.

---

1 Select the network on which you want to report.

**Result:** The Properties page for the selected item opens.

---

2 Click **Reports**.

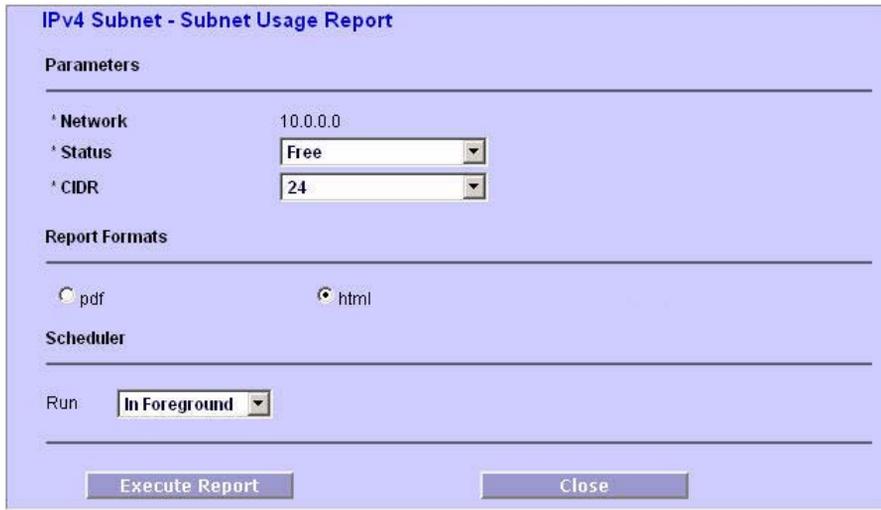
**Result:** The Configured Reports page opens.

---



- 3 Click the **Usage** link.

**Result:** The Subnet Usage Report page opens in the Report Execution window.



- 4 Select **Free** or **Used** from the **Status** drop-down list.
- If **Free** is selected, the report lists subnets that can be created for the specified CIDR length and includes the count of free subnets as well as the percentage of free space that the subnets on the list will use up.
  - If **Used** is selected, all subnets that are not free (that is, cannot be created) are listed.
- 5 Select the desired CIDR length from the **CIDR** drop-down list.
- 6 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
- 7 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

8 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on page 132 for more information.

END OF STEPS

**Report format**

The Subnet Usage report appears as shown in [Figure 27](#) and [Figure 28](#).

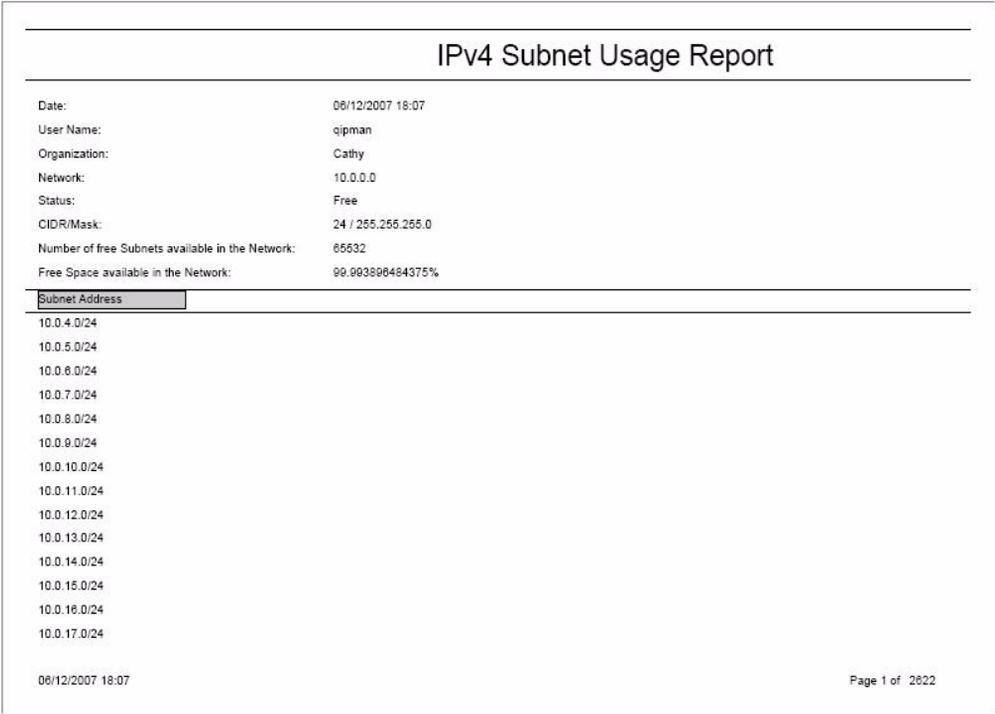
**Figure 27 Sample Subnet Usage report - Used Status**

Subnet Address	Subnet Name	Subnet Org	OSPF Area	% of Network Address Space
10.0.0.0		subnetorg10		0.00152567890625
10.0.1.0		subnetorg10		0.00152567890625
10.0.2.0		subnetorg10		0.00152567890625
10.0.3.0		subnetorg10		0.00152567890625

There are 4 records on this report.

06/12/2007 17:20 Page 1 of 1

Figure 28 Sample Subnet Usage report - Free Status



The following table describes the fields on the report.

Table 68 IPv4 Subnets report fields

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the item is located
Network	The network that is the subject of this report.
Status	Indicates whether subnets are <b>In Use</b> or <b>Free</b> .
CIDR/Mask	<i>Appears if status is Free.</i> Indicates the CIDR length and Mask of the subnets in this report.
Number of free Subnets available in the Network	<i>Appears if status is Free.</i> Displays the number of free subnets that are available for the stated CIDR length.
Free Space available in the Network	<i>Appears if status is Free.</i> Indicates the percentage of the total free space that the subnets on the report will use up.

<b>Field</b>	<b>Description</b>
<b>Column heading (if Status is Free or In Use)</b>	
Subnet Address	The address of the subnet that has a status of Used.
<b>Column headings (If Status is in Use</b>	
Subnet Name	The name of the subnet that has a status of Used.
Subnet Org	The subnet organization in which the used subnet is located.
OSPF Area	The OSPF Area in which the used subnet is located.
% of Network Address Space	Indicates the total address space in the used subnet as a percentage of the total address space in the network.



# IPv6 address reports

## IPv6 address reports overview

---

The following reports are available from the properties page for IPv6 addresses, as well as in the **IPv6 Addresses** section of the Reports hierarchy. These reports may also be available from the MyView Hierarchy if IPv6 Addresses are listed.

- IPv6 Address Audit Report
- Managed Addresses Report

When accessed from the Reports hierarchy, you need to enter search criteria to locate the item on which to report. For information on what criteria you may enter, refer to [“To search for an IPv6 hierarchy item”, on page 534](#).



## To search for an IPv6 hierarchy item

---

### When to use

Use this procedure to search for an IPv6 address or subnet when you wish to produce one of the IPv6 subnet or address reports.

### Before you begin

You can use the wildcard character (\*) as part of the search string for all searches.

### Procedure

To search for an item in the IPv6 hierarchy, follow these steps.

---

- 1 Select one of the IPv6 address or IPv6 subnet reports in the Reports hierarchy and click **Search**.

**Result:** The Subnet Search page opens.

**Subnet Search**

**Subnet Information**

Name:

Start Address:

Length:

**Search**

**Search Results:**

Page Size:

**Select** **Cancel**

- 2 Review the following table and fill in the fields you need to complete for your search.
-

**Table 69 Subnet search fields**

<b>Field</b>	<b>Description</b>
Name	<i>Optional.</i> Enter the IPv6 subnet name.
Start Address	<i>Optional.</i> Enter a valid IPv6 address.
Length	Select the length of the subnet for which you are searching from the drop-down list.

---

**3 Click Search.**

**Result:** The results appear in the **Search Results** list.

END OF STEPS

---



# To produce an IPv6 Address Audit report

---

## When to use

Use this procedure to produce an IPv6 Address Audit report. Instructions are provided for access from the Reports hierarchy or from the IPv6 or Node Hierarchy (or MyView Hierarchy if IPv6 seed blocks, subnets, nodes, and address ranges are present).

## From the menu or toolbar

To produce an IPv6 Address Audit report, follow these steps.

---

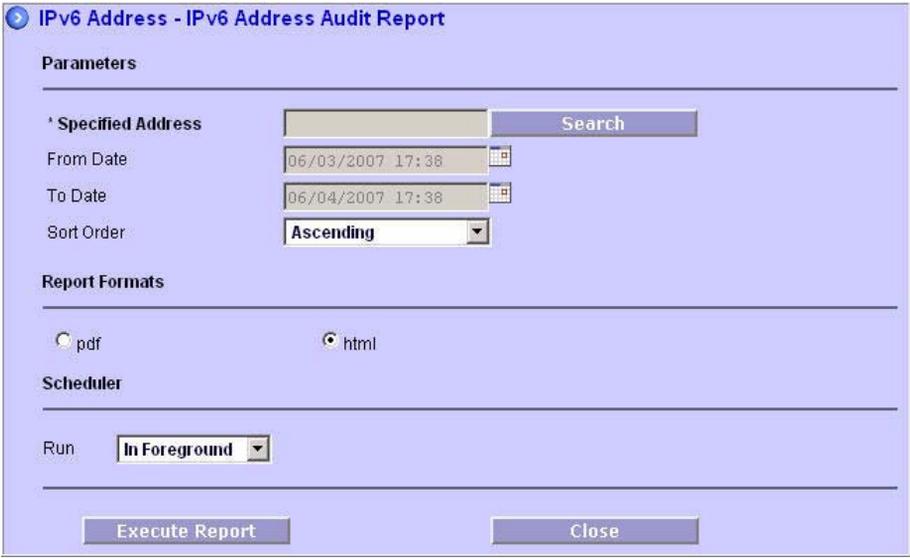
- 1 Click the **Reports** tab. Alternatively, click the Reports icon ()

**Result:** The Reports hierarchy opens.

---

- 2 In the **IPv6 Address** section, click **Audit**.

**Result:** The IPv6 Address Audit Report page opens.



The screenshot shows a dialog box titled "IPv6 Address - IPv6 Address Audit Report". It contains several sections: "Parameters" with fields for "Specified Address" (with a "Search" button), "From Date" (06/03/2007 17:38), "To Date" (06/04/2007 17:38), and "Sort Order" (Ascending); "Report Formats" with radio buttons for "pdf" and "html" (selected); and "Scheduler" with a "Run" dropdown set to "In Foreground". At the bottom are "Execute Report" and "Close" buttons.

- 3 Click **Search**.

**Result:** The Subnet Search window opens. Refer to [“To search for an IPv6 hierarchy item”](#), on page 534 for further information.

---

- 4 Highlight the address you wish to audit and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected address appears in the **Specified Address** field.

.....  
5 The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.

.....  
6 The report defaults to data sorted in **Ascending** order. Select **Descending** order if required.

.....  
7 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

.....  
8 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on [page 449](#) for more information.

.....  
9 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on [page 132](#) for more information.

.....  
E N D O F S T E P S  
.....

### From a hierarchy Properties page

To produce an IPv6 Address Audit report on an address in the IPv6 (or MyView) hierarchy, follow these steps.

.....  
1 Select the IPv6 item (seed block, address range, or subnet) on which you want to report.

**Result:** The Properties page opens.

.....  
2 Click **Reports**.

**Result:** The Configured Reports page opens.

Configured Reports	
Reports	
Name	Description
<a href="#">IPv6 Address Audit</a>	IPv6 Address Audit Report
<a href="#">IPv6 Subnet Audit</a>	IPv6 Subnet Audit Report
<a href="#">Managed Addresses</a>	Managed Addresses Report
<a href="#">Subnets</a>	IPv6 Subnets Report

- Click the **IPv6 Address Audit** link.

**Result:** The IPv6 Address Audit Report page opens in the Report Execution window.

### IPv6 Subnet - IPv6 Address Audit Report

**Parameters**

\* Subnet: 2234:5678:0000:0000:0000:0000:0000:0000

From Date: 06/12/2007 13:58

To Date: 06/13/2007 13:58

Sort Order: Ascending

**Report Formats**

pdf  html

**Scheduler**

Run: In Foreground

Execute Report Close

- The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.
- The report defaults to data sorted in **Ascending** order. Select **Descending** order if required.
- The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
- Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on page 449 for more information.

8 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on page 132 for more information.

.....  
 E N D O F S T E P S  
 .....

**Report format**

The IPv6 Address Audit report appears as shown in [Figure 29](#).

**Figure 29 Sample IPv6 Address Audit report**

IPv6 Address Audit Report				
Date:	06/13/2007 14:47			
User Name:	qjman			
Organization:	Cathy			
Subnet:	1000:			
From Date:	06/12/2007 14:45			
To Date:	06/13/2007 14:45			
Sort Order:	Ascending			
Date/Time	Action	User	Entity Name	Parameters (Name: Old Value -> New Value)
06/13/2007 14:43	Update	qjman	1000:0000:0000:0000:0000:0000:0000:0000:001	IPAddress_name: None -> DocNode1
06/13/2007 14:43	Update	qjman	1000:0000:0000:0000:0000:0000:0000:0000:001	IPAddress_name: None -> DocNode1
There are 2 records on this report.				
06/13/2007 14:47				
Page 1 of 1				

The following table describes the fields on the report.

**Table 70 IPv6 Address Audit report fields**

<b>Field</b>	<b>Description</b>
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the item is located
Subnet	The subnet that is the subject of this report.
From Date	Starting date for the audit report date range.
To Date	Ending date for the audit report date range.
Sort order	Indicates whether data is sorted in Ascending or Descending order.
<b>Column headings</b>	
Date/Time	Date and time that the action occurred.
Action	Action that triggered the audit entry.
User	User who performed the action.
Entity Name	Component affected by the user.
Parameters (Name: Old Value > New Value)	The specific value change that occurred, showing the previous and revised values.

END OF STEPS .....



## To produce an IPv6 Managed Addresses report

---

### When to use

This report provides address information within a selected subnet. Instructions are provided for access from the Reports hierarchy or from the IPv6 Hierarchy (or MyView Hierarchy if IPv6 seed blocks, subnets, and address ranges are present).

### From the menu or toolbar

To produce an IPv6 Managed Addresses report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon (🌐).  
**Result:** The Reports hierarchy opens.

- 2 In the **IPv6 Address** section, click **Managed Addresses**.  
**Result:** The IPv6 Managed Addresses Report page opens.

- 3 Click **Search**.  
**Result:** The Subnet Search window opens. Refer to [“To search for an IPv6 hierarchy item”, on page 534](#) for further information.
- 4 Highlight the address on which you wish to report and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected address appears in the **Specified Address** field.

.....  
5 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

.....  
6 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

.....  
7 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

.....  
E N D O F S T E P S  
.....

## From a hierarchy Properties page

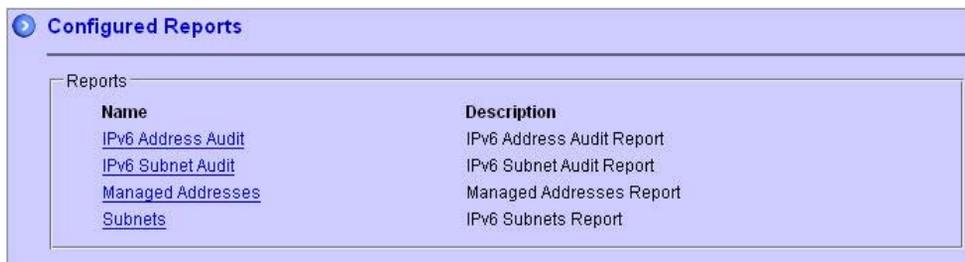
To produce an IPv6 Managed Addresses report on an address in the IPv6 (or MyView) hierarchy, follow these steps.

.....  
1 Select the IPv6 item (seed block, address range, or subnet) on which you want to report.

**Result:** The Properties page opens.

.....  
2 Click **Reports**.

**Result:** The Configured Reports page opens.



The screenshot shows a window titled "Configured Reports" with a sub-header "Reports". Below the sub-header is a table with two columns: "Name" and "Description". The table lists four reports: "IPv6 Address Audit", "IPv6 Subnet Audit", "Managed Addresses", and "Subnets".

Name	Description
<a href="#">IPv6 Address Audit</a>	IPv6 Address Audit Report
<a href="#">IPv6 Subnet Audit</a>	IPv6 Subnet Audit Report
<a href="#">Managed Addresses</a>	Managed Addresses Report
<a href="#">Subnets</a>	IPv6 Subnets Report

- 3 Click the **Managed Addresses** link.

**Result:** The IPv6 Managed Addresses Report page opens in the Report Execution window.

The screenshot shows a configuration window titled "IPv6 Subnet - Managed Addresses Report". It is divided into three sections: "Parameters", "Report Formats", and "Scheduler".

- Parameters:** A text field labeled "Subnet Address" contains the value "2001:0db8:0000:0001:0000:0000:0000:002e".
- Report Formats:** Two radio buttons are present: "pdf" (unselected) and "html" (selected).
- Scheduler:** A dropdown menu labeled "Run" is set to "In Foreground".

At the bottom of the window, there are two buttons: "Execute Report" and "Close".

- 4 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
- 5 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on page 449 for more information.

- 6 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on page 132 for more information.

END OF STEPS

## Report format

The IPv6 Managed Addresses report appears as shown in [Figure 30](#).

**Figure 30 IPv6 Managed Addresses report**

IPv6 Managed Addresses Report			
Date:	8/15/06 1:59 PM		
User Name:	qlpman		
Organization:	peg's.org		
Subnet Address:	2006:5000::1000:0		
Subnet Name:			
IP Address	FQDN	Node Name/Class	Interface
2006:5000::161b:1c3	lucent.com	lucent.com/Router	Ethernet0
2006:5000::1200:dd8a	lucent.com	lucent.com/Printer	Ethernet0
2006:5000::1459:9b1c	lucent.com	lucent.com/Workstation	Ethernet0
2006:5000::19ff:c443	lucent.com	lucent.com/Workstation	Ethernet0

The following table describes the fields on the report.

**Table 71 IPv6 Managed Addresses report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the subnet is located.
Subnet Address	IP address of the subnet that is the subject of this report.
Subnet Name	Name of the subnet, if one is assigned.
<b>Column headings</b>	
IP Address	IPv6 address that is assigned to an object or node within the subnet.
FQDN	Fully qualified domain name to which the subnet is allocated.
Node Name/Class	Name of the node and its user class.
Interface	Name of any interfaces associated with the node.



# IPv6 subnet reports

## IPv6 subnet reports overview

---

The following reports are available from the properties page for IPv6 subnets, as well as in the **IPv6 Subnet** section of the Reports hierarchy. These reports may also be available from the MyView Hierarchy if IPv6 Subnets are listed.

- Subnet Audit Report
- IPv6 Subnets Report

When accessed from the Reports hierarchy, you need to enter search criteria to locate the item on which to report. For information on what criteria you may enter, refer to [“To search for an IPv6 hierarchy item”](#), on page 534.



# To produce an IPv6 Subnet Audit report

---

## When to use

Use this procedure to produce an IPv6 Subnet Audit report. Instructions are provided for access from the Reports hierarchy or from the IPv6 Hierarchy (or MyView Hierarchy if IPv6 seed blocks, subnets, and address ranges are present).

## From the menu or toolbar

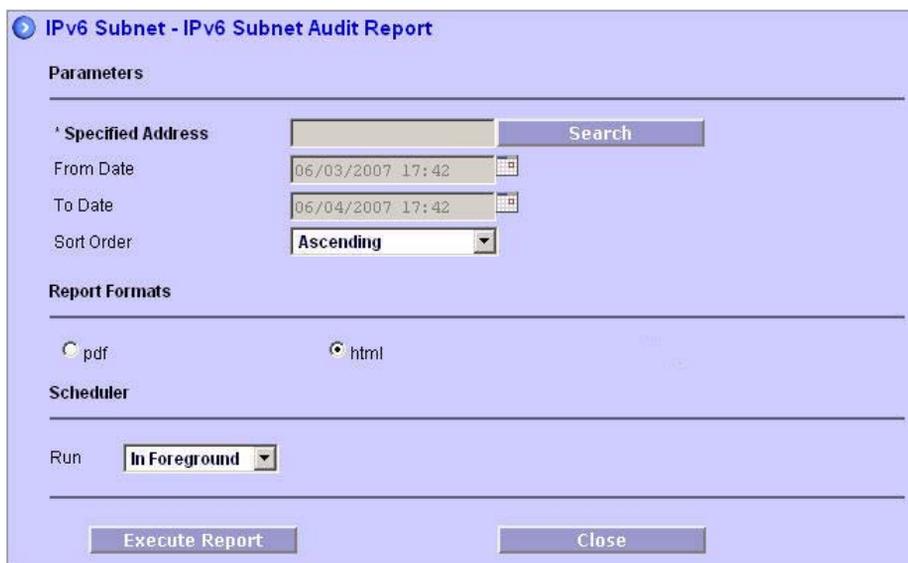
To produce an IPv6 Subnet Audit report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ()

**Result:** The Reports hierarchy opens.

- 2 In the **IPv6 Subnet** section, click **Audit**.

**Result:** The IPv6 Subnet Audit Report page opens.



The screenshot shows a dialog box titled "IPv6 Subnet - IPv6 Subnet Audit Report". It contains several sections: "Parameters" with fields for "Specified Address" (with a "Search" button), "From Date" (06/03/2007 17:42), "To Date" (06/04/2007 17:42), and "Sort Order" (Ascending); "Report Formats" with radio buttons for "pdf" and "html" (selected); and "Scheduler" with a "Run" dropdown set to "In Foreground". At the bottom are "Execute Report" and "Close" buttons.

- 3 Click **Search**.

**Result:** The Subnet Search window opens. Refer to [“To search for an IPv6 hierarchy item”](#), on page 534 for further information.

- 4 Highlight the address you wish to audit and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected address appears in the **Specified Address** field.

.....  
5 The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.

.....  
6 The report defaults to data sorted in **Ascending** order. Select **Descending** order if required.

.....  
7 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

.....  
8 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on [page 449](#) for more information.

.....  
9 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on [page 132](#) for more information.

.....  
E N D O F S T E P S  
.....

### From a hierarchy Properties page

To produce an IPv6 Address Audit report on an address in the IPv6 (or MyView) hierarchy, follow these steps.

.....  
1 Select the IPv6 item (seed block, address range, or subnet) on which you want to report.

**Result:** The Properties page opens.

.....  
2 Click **Reports**.

**Result:** The Configured Reports page opens.

Configured Reports	
Reports	
Name	Description
<a href="#">IPv6 Address Audit</a>	IPv6 Address Audit Report
<a href="#">IPv6 Subnet Audit</a>	IPv6 Subnet Audit Report
<a href="#">Managed Addresses</a>	Managed Addresses Report
<a href="#">Subnets</a>	IPv6 Subnets Report

3 Click the **IPv6 Subnet Audit** link.

**Result:** The IPv6 Subnet Audit Report page opens in the Report Execution window.

### IPv4 Subnet - Subnet Audit Report

**Parameters**

---

Subnet Address: 192.0.2.0

From Date: 06/11/2007 12:46

To Date: 06/12/2007 12:46

Sort Order: Ascending

---

**Report Formats**

pdf
  html

---

**Scheduler**

Run: In Foreground

---

4 The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.

5 The report defaults to data sorted in **Ascending** order. Select **Descending** order if required.

6 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

7 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on page 449 for more information.

**8 Click Execute Report.**

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on page 132 for more information.

.....  
 E N D O F S T E P S  
 .....

**Report format**

The IPv6 Subnet Audit report appears as shown in [Figure 31](#).

**Figure 31 Sample IPv6 Subnet Audit report**

IPv6 Subnet Audit Report				
Date:	06/13/2007 15:25			
User Name:	qjman			
Organization:	Cathy			
Specified Address:	1000:			
From Date:	06/12/2007 15:23			
To Date:	06/13/2007 15:23			
Sort Order:	Ascending			
Date/Time	Action	User	Entity Name	Parameters (Name: Old Value -> New Value)
06/13/2007 09:21	Update	qjman	1000::/64-subnet1000 name	V6Subnet_description: None -> description1
06/13/2007 09:21	Update	qjman	1000::/64-subnet1000 name	V6Subnet_subnetName: None -> subnet1000 name V6Subnet_description: None -> description1 V6Subnet_subnetName: None -> subnet1000 name
There are 2 records on this report.				
06/13/2007 15:25 <span style="float: right;">Page 1 of 1</span>				

The following table describes the fields on the report.

**Table 72 IPv6 Subnet Audit report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the item is located
Specified Address	The subnet address that is the subject of this report.
From Date	Starting date for the audit report date range.

<b>Field</b>	<b>Description</b>
To Date	Ending date for the audit report date range.
Sort order	Indicates whether data is sorted in Ascending or Descending order.
<b>Column headings</b>	
Date/Time	Date and time that the action occurred.
Action	Action that triggered the audit entry.
User	User who performed the action.
Entity Name	Component affected by the user.
Parameters (Name: Old Value > New Value)	The specific value change that occurred, showing the previous and revised values.



## To produce an IPv6 Subnets report

---

### When to use

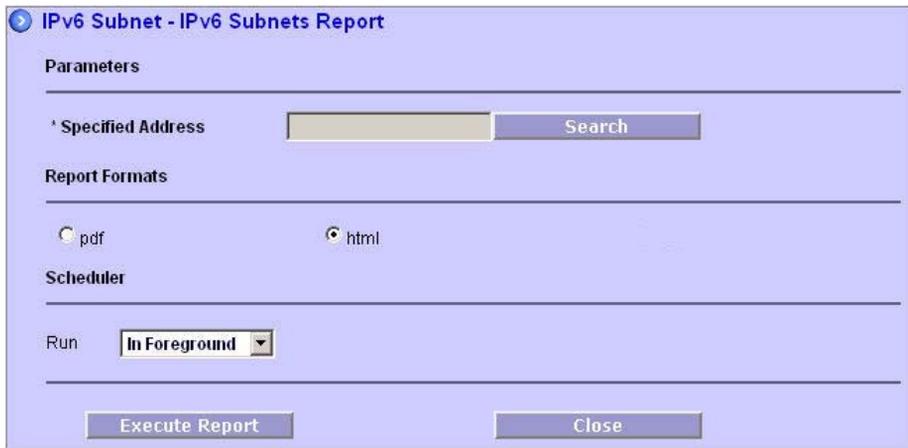
This report provides subnet information about a selected IPv6 subnets. Instructions are provided for access from the Reports hierarchy or from the IPv6 Hierarchy (or MyView Hierarchy if IPv6 seed blocks, subnets, and address ranges are present).

### From the menu or toolbar

To produce an IPv6 Subnets report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ().  
**Result:** The Reports hierarchy opens.

- 2 In the **IPv6 Subnets** section, click **Subnets**.  
**Result:** The IPv6 Subnets Report page opens.



- 3 Click **Search**.  
**Result:** The Subnet Search window opens. Refer to [“To search for an IPv6 hierarchy item”, on page 534](#) for further information.
- 4 Highlight the address on which you wish to report and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected address appears in the **Specified Address** field.

5 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

6 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

7 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

END OF STEPS

## From a hierarchy Properties page

To produce an IPv6 Subnets report on an address in the IPv6 (or MyView) hierarchy, follow these steps.

1 Select the IPv6 item (seed block, address range, or subnet) on which you want to report.

**Result:** The Properties page opens.

2 Click **Reports**.

**Result:** The Configured Reports page opens.



The screenshot shows a window titled "Configured Reports" with a table of reports. The table has two columns: "Name" and "Description".

Name	Description
<a href="#">IPv6 Address Audit</a>	IPv6 Address Audit Report
<a href="#">IPv6 Subnet Audit</a>	IPv6 Subnet Audit Report
<a href="#">Managed Addresses</a>	Managed Addresses Report
<a href="#">Subnets</a>	IPv6 Subnets Report

- 3 Click the **Subnets** (or **IPv6 Subnets**) link.

**Result:** The IPv6 Subnets Report page opens in the Report Execution window.

**IPv6 Seed Block - IPv6 Subnets Report**

**Parameters**

Seed Block 1000::32

**Report Formats**

pdf  html

**Scheduler**

Run In Foreground

Execute Report Close

- 4 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

- 5 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on page 449 for more information.

- 6 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”](#), on page 132 for more information.

END OF STEPS

## Report format

The IPv6 Subnets report appears as shown in [Figure 32](#).

**Figure 32 IPv6 Subnets report**

IPv6 Subnets Report				
<b>Date:</b>		8/16/06 12:26 PM		
<b>User Name:</b>		qjman		
<b>Organization:</b>		peg's org		
<b>Seed Block:</b>		2006:1000::20		
Subnet Address	Name	Description	Domain Name	# IP Addresses
2006:1000::/64	DEFAULT_CHILD_POOL:peg's org		seg5.qa.quadr1tek.com	502
2006:1000:0:1::/64	DEFAULT_CHILD_POOL:peg's org		seg2.qa.quadr1tek.com	500
2006:1000:0:2::/64			seg1.qa.quadr1tek.com	0
2006:1000:0:4::/64	DEFAULT_CHILD_POOL:peg's org		lucent.com	100
2006:1000:0:5::/64	DEFAULT_CHILD_POOL:peg's org		seg5.qa.quadr1tek.com	16
2006:1000:0:6::/64	DEFAULT_CHILD_POOL:peg's org			100
2006:1000:0:3::8000:0/97	DEFAULT_CHILD_POOL:peg's org			100
2006:1000:0:3::40:0/108	DEFAULT_CHILD_POOL:peg's org			100
2006:1000:0:3::/113			lucent.com	0
2006:1000:0:3::8000/14			lucent.com	0
2006:1000:0:3::c:000/114			lucent.com	0
2006:1000:0:3::1:4000/114			lucent.com	0
2006:1000:0:3::1:8000/114			lucent.com	0
2006:1000:0:3::1:c:000/114			lucent.com	0
2006:1000:0:3::2:0/114			lucent.com	0
2006:1000:0:3::2:4000/114			lucent.com	0
2006:1000:0:3::2:8000/114			lucent.com	0
2006:1000:0:3::2/114			lucent.com	0

The following table describes the fields on the report.

**Table 73 IPv6 Subnets report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the seed block is located.
Seed Block/Address Range/Specified Address	Seed block/address range/subnet that is the subject of this report.
<b>Column headings</b>	
Subnet Address	IPv6 address and prefix of the subnet.
Name	Name of the subnet.
Description	Description, if entered, of the subnet.
Domain Name	Domain with which the subnet is associated.
# IP Addresses	Number of nodes or objects contained within the subnet.



# MyView reports

## MyView reports overview

---

The following reports are available from the MyView Properties page, as well as in the **MyView** section of the Reports hierarchy.

- MyView Audit Report
- MyView Report



## To produce a MyView Audit report

---

### When to use

Use this procedure to produce a MyView Audit report. Instructions are provided for access from the Reports hierarchy or from the MyView Properties page.

### From the menu or toolbar

To produce a MyView Audit report, follow these steps.

---

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ()

**Result:** The Reports hierarchy opens.

---

- 2 In the **MyView** section, click **Audit**.

**Result:** The MyView Audit Report page opens.



**MyView - MyView Audit Report**

**Parameters**

\* MyView Name: DocAdmin1

From Date: 06/03/2007 17:45

To Date: 06/04/2007 17:45

Sort Order: Ascending

**Report Formats**

pdf  html

**Scheduler**

Run: In Foreground

Execute Report Close

- 3 Select a view from the **MyView Name** drop-down list.
- 

- 4 The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.

.....  
**5** The report defaults to data sorted in **Ascending** order. Select **Descending** order if required.  
 .....

**6** The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.  
 .....

**7** Choose when to run the report in the **Scheduler** section. Refer to “[To schedule reports](#)”, on [page 449](#) for more information.  
 .....

**8** Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to “[To view scheduled jobs](#)”, on [page 132](#) for more information.

.....  
 E N D O F S T E P S  
 .....

### From a Properties page

To produce a MyView Audit report on a view in the MyView or MyView Management hierarchy, follow these steps.

.....  
**1** Select the view on which you want to report.

**Result:** The Properties page opens.

.....  
**2** Click **Reports**.

**Result:** The Configured Reports page opens.



.....  
**3** Click the **Audit** link.

**Result:** The MyView Audit Report page opens in the Report Execution window.

**MyView - MyView Audit Report**

**Parameters**

MyView Name: DocView1

From Date: 06/12/2007 16:13

To Date: 06/13/2007 16:13

Sort Order: Ascending

**Report Formats**

pdf  html

**Scheduler**

Run: In Foreground

Execute Report Close

- 4 The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.
- 5 The report defaults to data sorted in **Ascending** order. Select **Descending** order if required.
- 6 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
- 7 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.
- 8 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

END OF STEPS

## Report format

The MyView Audit report appears as shown in [Figure 33](#).

**Figure 33 Sample MyView Audit report**

MyView Audit Report				
Date:	06/15/2007 10:36			
User Name:	olpman			
Organization:	Cathy			
MyView Name:	demoview			
From Date:	06/14/2007 10:33			
To Date:	06/15/2007 10:33			
Sort Order:	Ascending			
Date/Time	Action	User	Entity Name	Parameters (Name: Old Value -> New Value)
06/15/2007 08:12	Insert	olpman	demoview_Cathy	
06/15/2007 08:12	Update	olpman	demoview_Cathy	MyView_description: Note --> This is a view for demo purposes
There are 2 records on this report.				
06/15/2007 10:36				
Page 1 of 1				

The following table describes the fields on the report.

**Table 74 IPv6 MyView Audit report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the item is located
MyView Name	The name of the view that is the subject of this report.
From Date	Starting date for the audit report date range.
To Date	Ending date for the audit report date range.
Sort order	Indicates whether data is sorted in Ascending or Descending order.
Column headings	
Date/Time	Date and time that the action occurred.
Action	Action that triggered the audit entry.
User	User who performed the action.
Entity Name	Component affected by the user.

<b>Field</b>	<b>Description</b>
Parameters (Name: Old Value > New Value)	The specific value change that occurred, showing the previous and revised values.



## To produce a MyView report

---

### When to use

Use this procedure to produce a MyView report. Instructions are provided for access from the Reports hierarchy or from the MyView Properties page.

### From the menu or toolbar

To produce a MyView report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ().

**Result:** The Reports hierarchy opens.

- 2 In the **MyView** section, click **MyView**.

**Result:** The MyView Report page opens.



- 3 Select a view from the **MyView Name** drop-down list.
- 4 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
- 5 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

.....

6 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to “[To view scheduled jobs](#)”, on page 132 for more information.

.....

END OF STEPS

.....

**From a Properties page**

To produce a MyView report on a view in the MyView or MyView Management hierarchy, follow these steps.

.....

1 Select the view on which you want to report.

**Result:** The Properties page opens.

.....

2 Click **Reports**.

**Result:** The Configured Reports page opens.



The screenshot shows a window titled "Configured Reports" with a light blue background. Below the title bar, there is a section labeled "Reports" containing a table with two columns: "Name" and "Description".

Name	Description
<a href="#">Audit</a>	MyView Audit Report
<a href="#">MyView</a>	MyView Report

.....

3 Click the **MyView** link.

**Result:** The MyView Report page opens in the Report Execution window.

**MyView - MyView Report**

**Parameters**

\* MyView Name DocView1

**Report Formats**

pdf  html

**Scheduler**

Run In Foreground

Execute Report Close

4 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

5 Choose when to run the report in the **Scheduler** section. Refer to “[To schedule reports](#)”, on [page 449](#) for more information.

6 Click **Execute Report**.

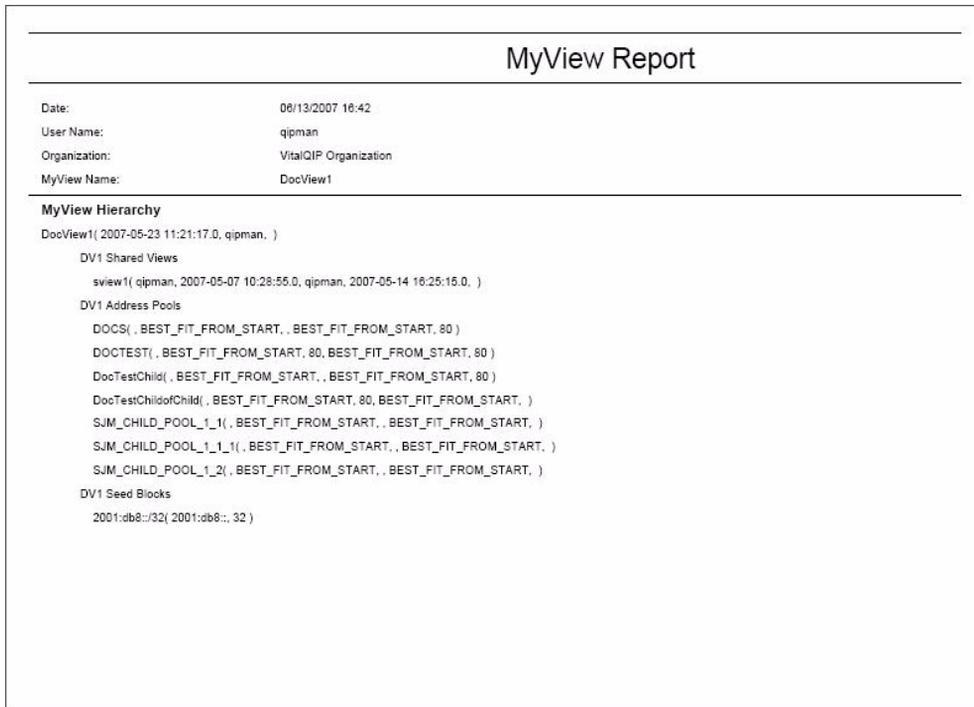
**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to “[To view scheduled jobs](#)”, on [page 132](#) for more information.

END OF STEPS

### Report format

The MyView report appears as shown in [Figure 34](#).

**Figure 34 Sample MyView report**



The following table describes the fields on the report.

**Table 75 IPv6 MyView report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the item is located

The report lists the properties of the following objects.

- Address Pool
- IPv6 Seed Block
- IPv6 Address Range
- IPv6 Subnet

The report also lists the object types and names for the following objects.

- Network
- IPv4 Subnet

- Subnet Organization
- OSPF Area
- Server
- Domain
- IPv4 Address Range
- Object Range



# Node hierarchy reports

## Node hierarchy reports overview

---

The following report is available from the **Node** section of the Reports hierarchy.

- Node Hierarchy Report



## To produce a Node Hierarchy report

---

### When to use

This report provides address information about a selected node's hierarchy. Instructions are provided for access from the Reports hierarchy or from the Node Properties page.

### From the hierarchy or toolbar

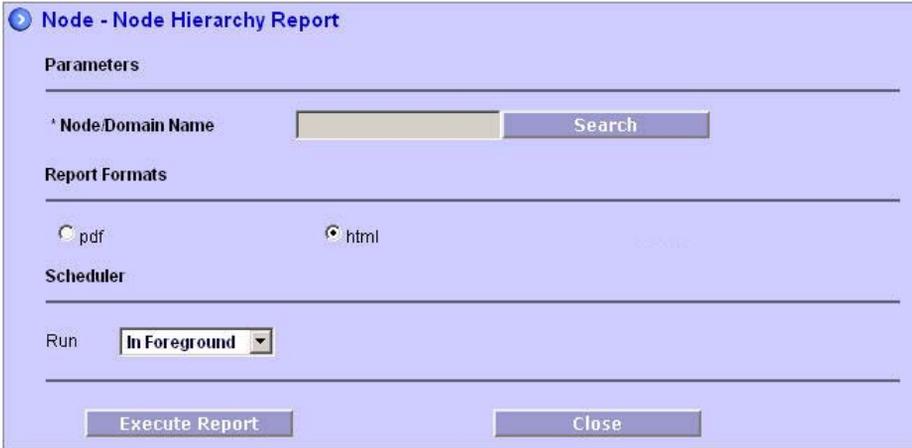
To produce a Node Hierarchy report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ().

**Result:** The Reports hierarchy opens.

- 2 In the **Node** section, click **Hierarchy**.

**Result:** The Node Hierarchy Report page opens.



- 3 Click **Search**.

**Result:** The Node Search window opens. Refer to [“To search for a node”, on page 340](#) for further information.

- 4 Highlight the node on which you wish to report and click **Select**.

**Important!** If there are multiple pages of matching objects, use the list scrolling arrows or the drop-down list to select another page of search results. Change the page size as needed.

**Result:** The Search window closes and the selected pool appears in the **Node/Domain Name** field.

---

5 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

---

6 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

---

7 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

---

END OF STEPS

---

## From the Properties page

To produce a Node Hierarchy report, follow these steps.

---

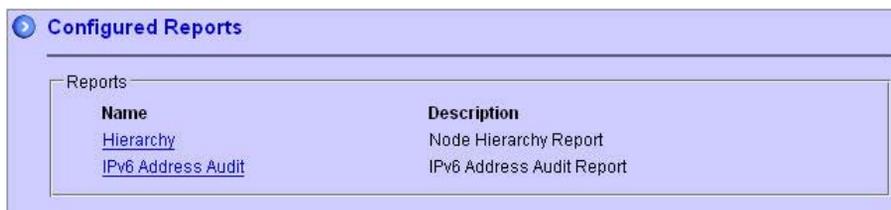
1 In the hierarchy, click the name of the node for which you want the report.

**Result:** The Node Properties page opens.

---

2 Click **Reports**.

**Result:** The Configured Reports page opens.



---

3 Click the **Hierarchy** link.

**Result:** The Node Hierarchy Report page opens in the Report Execution window.

**Node - Node Hierarchy Report**

**Parameters**

\* Node/Domain Name

**Report Formats**

pdf  html

**Scheduler**

Run

.....

4 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

.....

5 Choose when to run the report in the **Scheduler** section. Refer to “[To schedule reports](#)”, on [page 449](#) for more information.

.....

6 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to “[To view scheduled jobs](#)”, on [page 132](#) for more information.

.....

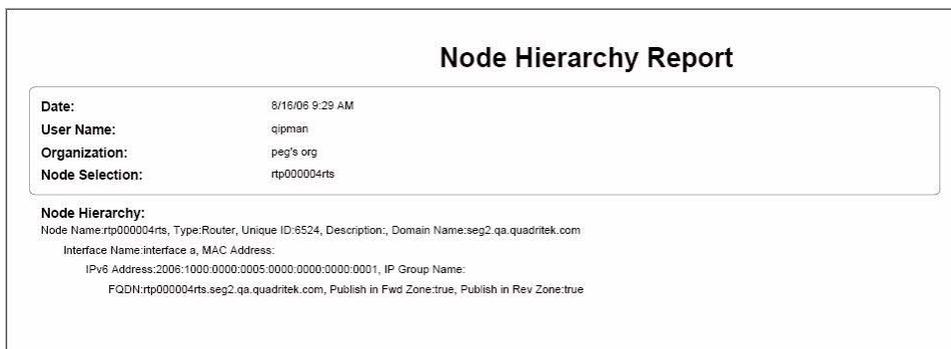
END OF STEPS

.....

### Report format

The Node Hierarchy report appears as shown in [Figure 35](#).

**Figure 35 Sample Node Hierarchy report**



The following table describes the fields on the report.

**Table 76 Node Hierarchy report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.
Organization	Organization where the node is located.
Node Selection	Name of the node whose hierarchy information is displayed.
<b>Node Hierarchy fields</b>	
Node Name	Name assigned to the node when it was created.
Type	Type of hardware (workstation, router, printer, and so on).
Unique ID	Identification number assigned to the node.
Description	Text description assigned to the node, if entered.
Domain Name	Domain name assigned to the node.
Interface Name	Name assigned to each interface contained within the node.
MAC Address	MAC address assigned to each interface contained within the node.
IPv6 Address	IPv6 address assigned to each interface contained within the node.
IP Group Name	Name of the subnet where this node resides.
FQDN	Fully qualified domain name of the node within its domain name.

<b>Field</b>	<b>Description</b>
Publish in Forward Zone	Publish a forward zone record for this domain name in DNS.
Publish in Reverse Zone	Publish a reverse zone record for this domain name in DNS.
IPv4 Address	If applicable, IPv4 address associated with the node.
Object Name	If applicable, name of the object associated with the node.
MAC Address	If applicable, MAC address of the object associated with the node.



# Rule reports

## Rule reports overview

---

The following reports are available from the **Allocation Rules** section of the Address Allocation and Management Infrastructure hierarchy, as well as the **Rule** section of the Reports hierarchy.

- Rule Audit Report
- Rule Summary Report



## To produce a Rule Audit report

---

### When to use

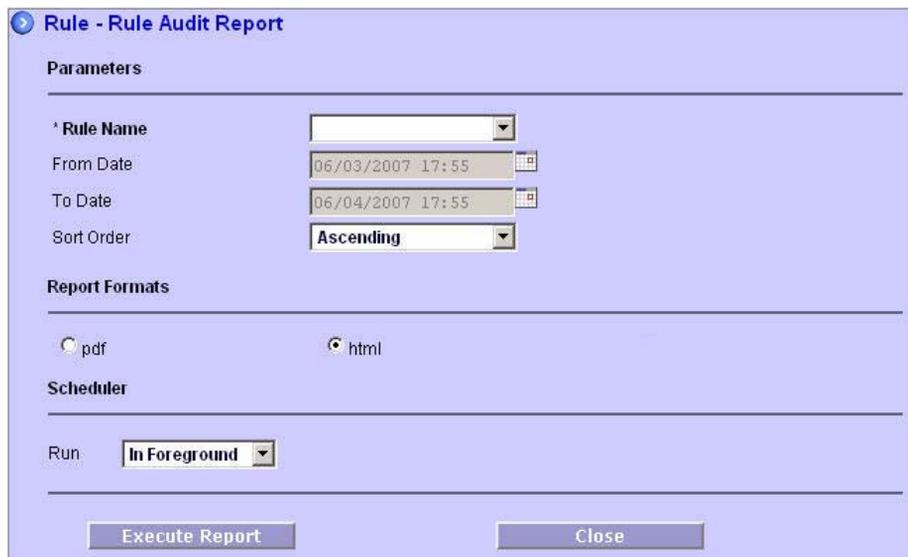
Use this procedure to produce a Rule Audit report. Instructions are provided for access from the **Reports** hierarchy or the **Allocation Rules** section of the Address Allocation and Management Infrastructure Hierarchy.

### From the menu or toolbar

To produce a Rule Audit report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ().  
**Result:** The Reports hierarchy opens.

- 2 In the **Rule** section, click **Audit**.  
**Result:** The Rule Audit Report page opens.



**Rule - Rule Audit Report**

**Parameters**

\* Rule Name

From Date

To Date

Sort Order

**Report Formats**

pdf  html

**Scheduler**

Run

- 3 Select a rule from the **Rule Name** drop-down list.
- 4 The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.

.....

5 The report defaults to data sorted in **Ascending** order. Select **Descending** order if required.

.....

6 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

.....

7 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.

.....

8 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

.....

END OF STEPS

.....

### From a Properties page

To produce a Rule Audit report on a rule in the Address Allocation and Management Infrastructure Hierarchy, follow these steps.

.....

1 Select the rule on which you want to report.

**Result:** The Properties page opens.

.....

2 Click **Reports**.

**Result:** The Configured Reports page opens.



.....

3 Click the **Audit** link.

**Result:** The Rule Audit Report page opens in the Report Execution window.

**Rule - Rule Audit Report**

**Parameters**

Rule Name: cea\_sued\_8

From Date: 06/12/2007 17:58

To Date: 06/13/2007 17:58

Sort Order: Ascending

**Report Formats**

pdf  html

**Scheduler**

Run: In Foreground

Execute Report Close

- 4 The report defaults to a 24-hour date range prior to the time you selected the report. To change either the **From Date** or the **To Date** values, click the calendar icon and use the widget controls to change time, month, day or year values.
- 5 The report defaults to data sorted in **Ascending** order. Select **Descending** order if required.
- 6 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.
- 7 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”, on page 449](#) for more information.
- 8 Click **Execute Report**.
 

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to [“To view scheduled jobs”, on page 132](#) for more information.

END OF STEPS

## Report format

The Rule Audit report appears as shown in [Figure 36](#).



<b>Field</b>	<b>Description</b>
Parameters (Name: Old Value > New Value)	The specific value change that occurred, showing the previous and revised values.



## To produce a Rule Summary report

---

### When to use

This report provides a list of all rules within an organization. Instructions are provided for access from the **Reports** hierarchy or the **Allocation Rules** section of the Address Allocation and Management Infrastructure Hierarchy.

### From the menu or toolbar

To produce a Rule Summary report, follow these steps.

- 1 Click the **Reports** tab. Alternatively, click the Reports icon ()

**Result:** The Reports hierarchy opens.

- 2 In the **Rule** section, click **Summary**.

**Result:** The Rule Summary Report page opens.



The screenshot shows a dialog box titled "Rule - Rule Summary Report". It has a light blue background and a title bar with a blue arrow icon. The dialog is divided into two main sections by horizontal lines. The first section is labeled "Report Formats" and contains two radio buttons: "pdf" (unselected) and "html" (selected). The second section is labeled "Scheduler" and contains a "Run" label followed by a dropdown menu currently set to "In Foreground". At the bottom of the dialog, there are two buttons: "Execute Report" on the left and "Close" on the right.

- 3 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

- 4 Choose when to run the report in the **Scheduler** section. Refer to [“To schedule reports”](#), on [page 449](#) for more information.

5 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to “[To view scheduled jobs](#)”, on page 132 for more information.

END OF STEPS

**From a Properties page**

To produce a Rule Summary report on a rule in the Address Allocation and Management Infrastructure Hierarchy, follow these steps.

1 Select any rule in the hierarchy.

**Result:** The Properties page opens.

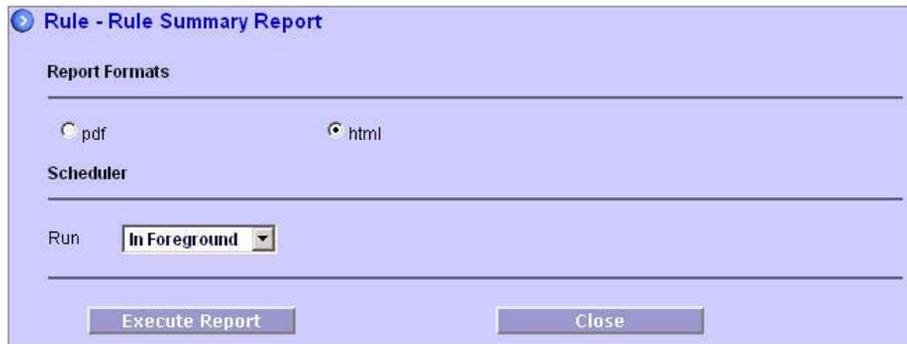
2 Click **Reports**.

**Result:** The Configured Reports page opens.



3 Click the **Summary** link.

**Result:** The Rule Summary Report page opens in the Report Execution window.



4 The report output defaults to **html** format. If you would prefer to view output in a PDF file, select **pdf**.

5 Choose when to run the report in the **Scheduler** section. Refer to “[To schedule reports](#)”, on [page 449](#) for more information.

6 Click **Execute Report**.

**Result:** If the job is scheduled in foreground, the report opens. If the job is scheduled in background or at a later time, the Job Scheduler page opens. Refer to “[To view scheduled jobs](#)”, on [page 132](#) for more information.

END OF STEPS

## Report format

The Rules Summary report appears as shown in [Figure 37](#).

**Figure 37 Sample Rules Summary report**

Rules Summary Report					
Date:	09-13-2007 18:05				
User Name:	30rmln				
Organization:	ViasatIP Organization				
Rule Name	IPv4v	RS	Level	Address Template	Subnet Profile Template
<b>Rule of "Free"</b>					
SUM_FREE_V4_SIZE_18	IPV4	/18	Normal		
SUM_V4_FREE_SIZE_24	IPV4	/24	Normal		
SUM_V4_FREE_SIZE_28	IPV4	/28	Normal		
<b>Rule of "Used"</b>					
88an0tameu00Cr1	IPV4	/24	Normal	DocTest	
88near1	IPV4	/24	Normal		
88q9m1	IPV4	/24	Normal		
CREATE_07	IPV4	/27	Normal		
r1	IPV4	/24	Normal		
rm1	IPV4	/8	Normal		
rm13	IPV4	/8	Normal		
rm13B	IPV4	/8	Normal		
rm13C	IPV4	/8	Normal		
rm1B	IPV4	/8	Normal		
09-13-2007 18:05 <span style="float: right;">Page 1 of 2</span>					

The following table describes the fields on the report. The report is sorted by rule type: Free, Used, Reserved, and Site. Additional information is displayed if a site rule has been defined.

**Table 78 Rule summary report fields**

Field	Description
Date	Date and time the report was produced.
User Name	User who produced the report.

<b>Field</b>	<b>Description</b>
Organization	Organization where the rule is located.
<b>Column headings for Free, Used, and Reserved</b>	
Rule Name	Name of the rule.
IPv4/v6	Indicates the type of address block for which the rule is used.
RS	Requested Size. Indicates the length of the block to which the rule applies.
Level	Indicates the user level of the rule. Allowable values are as follows: <ul style="list-style-type: none"> <li>• Normal</li> <li>• Advanced</li> <li>• Expert</li> </ul>
Address Template	The address template, if applicable, assigned to this rule.
Subnet Profile Template	The subnet profile template, if applicable, assigned to this rule.
<b>Additional column headings (second line) for Site</b>	
Status	Indicates whether the status of the site rule is <b>Used</b> or <b>Reserved</b> .
Size	Indicates the length of the block to which the site rule applies.
Address Template	Address template with which the site rule is associated.
Subnet Profile Template	Subnet profile template with which the site rule is associated.





# 14 Troubleshooting

## Overview

---

### Purpose

This chapter contains information you can use to troubleshoot the VitalQIP Web GUI.

### Contents

This chapter covers these topics.

<a href="#">Application errors</a>	584
<a href="#">Internet registry email not being sent</a>	586



## Application errors

---

### When to use

This section describes some common application problems and suggested solutions.

**Table 79 Troubleshooting problems**

Problem	Solution
Web GUI does not process commands and does not provide an error message.	Pop-ups may be disabled in your Web browser. Be sure that pop-ups are enabled for VitalQIP, as the application uses this function to provide messages to the user.
Firefox prompts you to "Turn off unresponsive script."	<ul style="list-style-type: none"><li>• Type <code>about:config</code> in Firefox's address bar.</li><li>• Filter down to the value for <code>dom.max_script_run_time</code>.</li><li>• Change the value to something higher than the default (which is 5) or set it to 0 which allows the script to run for as long as it needs.</li><li>• Further information: <a href="http://kb.mozillazine.org/Dom.max_script_run_time">http://kb.mozillazine.org/Dom.max_script_run_time</a></li></ul>
Browser cannot display the VitalQIP Web GUI or provides an error message indicating a proxy problem.	<p>If the VitalQIP web server is on your corporate intranet, and you have proxies defined, you may need to adjust the users' proxy exception lists.</p> <p><b>Internet Explorer:</b> Click on Tools=&gt;Internet Options =&gt;Connections=&gt;LAN Settings=&gt;Advanced. List is in the Exceptions section. It is labeled "Do not use proxy server for addresses beginning with:".</p> <p><b>Firefox:</b> Click on Tools=&gt;Options=&gt;Connection Setting. List is labeled "No Proxy For".</p> <p>If the users launch the web GUI using the fully qualified hostname web address (for example <code>http://webserver.lucent.com/qip</code>), ensure either the fully qualified hostname or <code>*.domain</code> is listed as an exception (for example <code>*.lucent.com</code>).</p> <p>If the users launch the web GUI using the IP address web address (for example <code>http://1.2.3.4/qip</code>), ensure the specific web server IP address is listed as an exception (for example <code>1.2.3.4</code>).</p>
After localization and login, the main tabs do not appear correctly, or the Login screen is missing its splash screen,	Check the localization steps. The required images files are not copied.

Problem	Solution
<p>After localization, labels for some GUI objects (for example, field names, page titles, static values in drop-down lists or Hierarchy) have a value of "UNDEFINED".</p>	<p>Check the GuiCatalog_(country Code).properties, make sure that the tag name for that label has not been altered.</p>
<ul style="list-style-type: none"> <li>• One web browser cannot display the Web GUI, but another on the same machine can.</li> <li>• Web browser cannot display the GUI using a URL, but can display it using an IP address.</li> </ul>	<p>Clear all cookies in the browser that came from VitalQIP.</p>
<ul style="list-style-type: none"> <li>• The web UI cannot be launched on occasion.</li> </ul>	<p>This problem occurs when the servlet is unable to find a page that is requested. One scenario where this occurs is when a user who has previously logged in using a language (such as Chinese) reinstalls VitalQIP and deletes the language directory containing the Chinese localized files. To fix the problem, either clear all cookies from the browser, or delete the cookies in the browser that came from the VitalQIP servlet.</p> <p>For example, if you are using Mozilla FireFox, follow these steps.</p> <ol style="list-style-type: none"> <li>8. Select Tools Options. In the Options dialog box and click the Privacy (padlock) icon.</li> <li>9. Select the <b>Cookies</b> tab</li> <li>10. Click the <b>View Cookies</b> button. A list of cookies organized by originating server opens.</li> <li>11. Delete the cookies under the FQDN or IP address of the VitalQIP 7 web server.</li> </ol>



## Internet registry email not being sent

---

### When to use

In some instances, email to the Internet Registries is not being sent, although a success message is seen after completion of the RIR Screen. This typically occurs when allocating a Used IPv4/IPv6 block in a pool associated with one of the internet registries, ARIN, RIPE or APNIC.

### Resolution

Ensure the SMTP server's IP address and port is correctly specified in the *\$QIPHOME/web/conf/email.properties* file on the server where the VitalQIP 7.0 web client is installed. If the SMTP server is having problems or is not configured correctly, the *\$QIPHOME/tomcat/logs/catalina.out* file contains messages similar to the following:

```
Mail server connection failed; nested exception is
  javax.mail.MessagingException
: Could not connect to SMTP host: 12.12.12.12, port: 25;
  nested exception is:
    java.net.ConnectException: Connection timed out
```

or

```
Mail server connection failed; nested exception is
  javax.mail.MessagingException
: Could not connect to SMTP host: 10.200.100.140, port: 25;
  nested exception is:
    java.net.ConnectException: Connection refused
```

After correcting the email parameters in the *\$QIPHOME/web/conf/email.properties* file, re-start the Tomcat services. Refer to [“To start or stop the Tomcat server”](#), on page 22 for information about this procedure.

□

# A Northbound interface

## Overview

---

### Purpose

Appendix [A](#) contains information on the northbound interface that is used by one or more upstream systems to send address allocation records to VitalQIP.

This appendix contains the following topics.

<a href="#">VitalQIP northbound interface</a>	<a href="#">588</a>
<a href="#">Using northbound interface</a>	<a href="#">589</a>



## VitalQIP northbound interface

---

### Overview

The VitalQIP northbound interface (also known as the VitalQIP Web Service) is a SOAP-based web service that enables SOAP clients to access the address allocation function of VitalQIP. The interface uses the Simple Object Access Protocol (SOAP), which encodes messages using Extensible Markup Language (XML), and uses HTTP and HTTPS for transport. The Web Services Description Language (WSDL) specifies interface operations, their associated messages and message parameters, the schema for the data types required by the messages, port types, and binding information.

Address Allocation is one of the core features of VitalQIP. The northbound interface allows a northbound system to utilize the Address Allocation functionality with VitalQIP. Address Allocation allows for the allocation and management of the IP address space through user-defined rules and a hierarchical address pool structure. As blocks of IP addresses are assigned to users, the Address Allocation module creates the corresponding network infrastructure objects in VitalQIP.

### Operations available through northbound interface

The following operations are supported by the VitalQIP Web Service Application. An operation can include one or more messages. For the VitalQIP Web Service Application, each operation can have a Request message, a Response message, and a Fault message.

VitalQIP Web Service supports the following objects:

- Rules
- Pools
- Blocks

For more information on messages and programming a client to use the northbound interface, contact your Lucent sales representative to obtain the *VitalQIP Web Service Specification*. The northbound interface uses a Web Services Description Language (WSDL) document. WSDL is written in Extensible Markup Language (XML) and defines a SOAP interface to VitalQIP. The WSDL document is located at the following URL:

<http://<WebServerIPAddress>:<WebServerPort>/services/VQIP7.0ManagerPort?wsdl>



## Using northbound interface

---

### Starting VitalQIP northbound interface

The northbound interface can be started along with the rest of the VitalQIP services by executing the following:

```
$QIPHOME/etc/startup.sh
```

### Stopping VitalQIP northbound interface

The northbound interface can be stopped along with the rest of the VitalQIP services by executing the following:

```
$QIPHOME/etc/shutdown.sh
```

### Checking status of VitalQIP northbound interface

Check the availability of the northbound interface by accessing the following URL:

<http://<ServerIPAddress>:<WebServerPort>/services>

where <Server\_IP\_Address> and <Port> are the IP address and port respectively being used by the Apache Web Server. If the Web Service is accessible, VQIPManagerPort appears in the list of services.





# Glossary

---

**A**    **APNIC**

Acronym for Asia Pacific Network Information Centre

**ARIN**

Acronym for American Registry for Internet Numbers

---

**H**    **HD**

Acronym for Host Density

---

**I**    **ISP**

Acronym for Internet Service Provider

---

**R**    **RIPE**

Acronym for Réseaux IP Européens

**RIR**

Acronym for Regional Internet Registry

---

**S**    **SWIP**

Acronym for Shared WhoIS Project



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