

IBM Tivoli Netcool/System Service Monitors
Version 4.0.1
for AIX, HP-UX, Linux, Solaris, and Windows

Release Notes



Note

Before using this information and the product it supports, read the information in “Notices and trademarks” on page 17.

This edition applies to version 4.0.1 of Netcool/SSM (product numbers 5724-P39, 5724-P40, 5724-P41, 5724-P43) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. About this release

This information set provides release notes for Netcool®/System Service Monitors™ and Netcool®/Application Service Monitors™ version 4.0.1.

New in this release

This release includes a range of both new and changed features.

- Updated platform support, including:
 - RFE 13875 - Support for Solaris 11 in Netcool SSM/ASM
- Updated license files
- RFE 27484 - New UNIX installer option **INST_TMPDIR** allows you to specify a directory other than /tmp for the installer to use.
- RFE 22899 - Reduce SSM memory consumption when using fileMon by disabling fmDataTable in init.cfg
- RFE 22228 - Add the ability to modify the behaviour of srSystemSwapPercentUsed to use "Paging File\%Usage" metrics instead

Product fix history

This release contains fixes to limitations found in previous releases.

- APAR IV15741 - Many Event Driven Arithmetic rows triggered at the same time can cause the SSM to crash
- APAR IV21998 - srstoragelogicalusedpercent stays stagnant if the hrstoragetype of an index it is monitoring changes
- APAR IV24121 - SSM on Linux can leak file descriptors monitoring processes
- APAR IV24149 - init.ssmagent script does not return correct return code when agent startup fails
- APAR IV24293 - MIB explorer SNMP V3 requests fail with unknown user name every time an SNMP report is received
- APAR IV24439 - SSM 4.0 on a Solaris local zone has the uptime from the global zone in hrssystemuptime
- APAR IV24598 - init.ssmagent script does not stop the agent if the agent is installed in a directory that contains a symbolic link
- APAR IV31463 - Disk status is down on Solaris 11
- APAR IV33377 - SSM 4.0 FP13 ssmconsole logging may hang when it writes warning or error messages

Product compatibility notes

This information details the compatibility of Netcool/SSM with other applications and relevant standards.

Netcool/ASM application support

The Netcool/ASM suite is compatible with various combinations of applications and platform versions.

Table 1. Applications compatible with the Netcool/ASM suite

Netcool/ASM	Compatible applications
Netcool/ASM for Active Directory	Active Directory
Netcool/ASM for Apache	Apache 2.2.x
Netcool/ASM for Microsoft Exchange	Microsoft Exchange Server 2003
Netcool/ASM for Microsoft IIS	Microsoft IIS 7.0 Microsoft IIS 7.5
Netcool/ASM for Lotus Notes	Lotus Notes 7.0.1
Netcool/ASM for Microsoft SQL Server	Microsoft SQL Server 2005 Microsoft SQL Server 2008
Netcool/ASM for Oracle	Oracle 10g Oracle 10g RAC Oracle 11g
Netcool/ASM for Sybase ASE	Sybase ASE 15.0.1
Netcool/ASM for WebLogic	WebLogic 8.1 WebLogic 9.1
Netcool/ASM for WebSphere	WebSphere Application Server 6.0 WebSphere Application Server 6.1 WebSphere Application Server 7.0

Table 2. Platform support for the Netcool/ASM suite

Platform	Netcool ASM for ...									
	Active Directory	Apache	Micro-soft Exchange	Micro-soft IIS	Lotus Notes	Micro-soft SQL Server	Oracle	Sybase ASE	WebLogic	WebSphere
Microsoft Windows 2008, x86 and x64	X	X	X	X	X	X	X	X	X	X
Microsoft Windows 2008 R2, x86 and x64	X	X	X	X	X	X	X	X	X	X
Microsoft Windows Server 2012, x64		X	X	X	X	X	X	X	X	X
Solaris 10 (SunOS 5.10) SPARC or x86		X			X		X	X	X	X

Table 2. Platform support for the Netcool/ASM suite (continued)

Platform	Netcool ASM for ...									
	Active Directory	Apache	Micro-soft Exchange	Micro-soft IIS	Lotus Notes	Micro-soft SQL Server	Oracle	Sybase ASE	WebLogic	WebSphere
Solaris 11 (SunOS 5.11) SPARC or x86		X			X		X	X	X	X
Red Hat Enterprise Linux 5 - x86, x64, ppc64		X					X	X	X	X
Red Hat Enterprise Linux 6.x - x86, x64, ppc64		X					X	X	X	X
SuSE Linux Enterprise Server 10 - x86, x64, ppc64		X					X	X	X	X
SuSE Linux Enterprise Server 11 - x86, x64, ppc64		X					X	X	X	X
AIX 6.1 (64-bit only)		X			X		X	X	X	X
AIX 7.1 (64-bit only)		X			X		X	X	X	X
HP-UX 11.23 (11i v2) on Intel Itanium		X					X	X	X	X
HP-UX 11.31 (11i v3) on Intel Itanium		X					X	X	X	X

SNMPv1 compatibility

Some Netcool/SSM MIB modules use the Counter64 data type, so they are not compatible with SNMPv1. You should only use them with SNMPv2 and later.

This limitation applies to the following subagents:

- appflow
- genalarm
- ntperfmon
- sla
- transaction
- Netcool/ASM for Active Directory
- Netcool/ASM for Oracle
- Netcool/ASM for WebLogic

Chapter 2. Hardware and software requirements

Hardware and software requirements describe the minimum host machine specifications and the supported operating system types and versions on which you can successfully install and use Netcool/SSM.

Microsoft Windows

The following system requirements apply to Microsoft Windows host machines.

Hardware

The hardware requirements for Windows platforms are:

- Intel Pentium II processor (400 MHz or greater)
- 128 MB RAM or greater recommended
- Approximately 25 MB free disk space
- 50MB minimum swap space recommended
- Ethernet 10/100 network interface card capable of supporting promiscuous packet reception.

Software

The software requirements for Windows platforms are:

- Microsoft Windows 2008, x86 and x64 Editions
- Microsoft Windows Vista, x86 and x64 Editions
- Microsoft Windows 7, x86 and x64 Editions
- Microsoft Windows 8, x86 and x64 Editions
- Microsoft Windows 2008 R2, x86 and x64 Editions
- Microsoft Windows Server 2012, x64 Edition

HP-UX

The following system requirements apply to HP-UX host machines.

Hardware

The minimum hardware requirements for running Netcool/SSM on HP-UX platforms are:

- Intel Itanium 2 processor
- 64 MB RAM or greater recommended
- 70 MB free disk space
- 50 MB minimum swap space recommended
- Ethernet 10/100 network interface card capable of supporting promiscuous packet reception

Software

Netcool/SSM is available for the following versions of HP-UX:

- HP-UX 11.23 (11i v2) on Intel Itanium

- HP-UX 11.31 (11i v3) on Intel Itanium

Latest Library Patches

The host machine may be running patches that have been recalled. The Netcool/SSM installer checks to see what operating system patches have been installed on the machine. If it detects a problem it provides a warning similar to the following:

```
# ./netcool-ssm-4.0.1-xxxx-platform-arch.installer
Netcool/SSM Installer
Patch PHCO_23919 (patch for printf) detected.
*** WARNING: THIS PATCH MAY CAUSE SETUP TO CRASH ***
Consult your Netcool/SSM documentation for details.
Do you want to continue? [n]
```

Note: Visit the Hewlett-Packard (HP) IT Resource Center online at <http://www.itrc.hp.com> for information on updating or removing this patch. The Netcool/SSM installer will not do this for you.

AIX

The following system requirements apply to AIX host machines.

Hardware

The minimum hardware requirements for running Netcool/SSM on AIX platforms are:

- IBM POWER4/5 64-bit processor
- 64 MB RAM or greater recommended
- Approximately 55 MB free disk space
- 50 MB minimum swap space recommended
- Ethernet 10/100 network interface card capable of supporting promiscuous packet reception

Software

Netcool/SSM is available on the following versions of AIX:

- AIX 6.1 (64-bit only)
- AIX 7.1 (64-bit only)

Red Hat Linux

The following system requirements apply to Red Hat Linux host machines.

Hardware

The minimum hardware requirements for running Netcool/SSM on Red Hat Linux platforms are:

- Intel Pentium II processor 400 MHz or greater
- 128 MB RAM or greater recommended
- Approximately 20 MB free disk space
- 50 MB minimum swap space recommended

- Ethernet 10/100 or Token Ring network interface card capable of supporting promiscuous packet reception

Software

Netcool/SSM is available for the following versions of Red Hat Linux:

- Red Hat Enterprise Linux 5 - x86, x64, ppc64
- Red Hat Enterprise Linux 6.x - x86, x64, ppc64

Note: Ensure that all applicable versions (32-bit or 64-bit) of the libstdc++-33-3.2.3 packages are installed.

SuSE Linux Enterprise Server

The following system requirements apply to SuSE Linux Enterprise Server (SLES) host machines.

Hardware

The minimum hardware requirements for running Netcool/SSM on SLES platforms are:

- Intel Pentium II processor 400 MHz or greater
- 128 MB RAM or greater recommended
- Approximately 20 MB free disk space
- 50 MB minimum swap space recommended
- Ethernet 10/100 or Token Ring network interface card capable of supporting promiscuous packet reception

Software

Netcool/SSM is available for the following versions of SLES:

- SuSE Linux Enterprise Server 10 - x86, x64, ppc64
- SuSE Linux Enterprise Server 11 - x86, x64, ppc64

Note: Ensure that all applicable versions (32-bit or 64-bit) of the libstdc++-33-3.2.3 packages are installed.

Solaris

The following system requirements apply to Solaris host machines.

Hardware

The minimum hardware requirements for running Netcool/SSM on Solaris platforms are:

- UltraSPARC Ili 400 MHz processor or AMD/Intel x64 processor
- 128 MB RAM or greater recommended
- Approximately 25 MB free disk space
- 50 MB minimum swap space recommended
- Ethernet 10/100 network interface card capable of supporting promiscuous packet reception

Software

Netcool/SSM is available on the following versions of Solaris:

- Solaris 10 (SunOS 5.10) SPARC or x86
- Solaris 11 (SunOS 5.11) SPARC or x86

Note: On Solaris SPARC systems, ensure 32-bit libraries are installed.

Latest library patches

Patches to the Solaris Operating Environment libraries are available. Ensure that the latest patch for the Solaris Operating Environment is installed and running on the host machine before you install Netcool/SSM.

Table 3 lists the current patch IDs available at the time of writing. Before installing a patch, check that it is the latest version as patches are cumulative and always backward compatible.

Table 3. Patch IDs for Solaris Operating System Versions

Solaris	Patch ID
10	119963-08

For further information about patches to the Solaris Operating Environment, see http://developers.sun.com/sunstudio/downloads/patches/ss11_patches.html.

Limitations

- Packet capture cannot work in a Solaris zone
- If you are using Solaris 11 on Oracle 64-bit, ensure that you install the Oracle 32-bit libraries before installing Netcool/SSM

Chapter 3. Known problems, limitations, and workarounds

The following problems, limitations and workarounds exist for Netcool/SSM version 4.0.1.

Netcool/SSM components

Specific functional or operational limitations exist for some components of Netcool/SSM.

ipconfig subagent

If the monitored host's default gateway has multiple network interfaces that share the same DNS name, the IP address indicated by the object `srIpDefaultGateway` may vary. This occurs because the DNS server reports the IP address of each interface in a 'round-robin' manner, resulting in a different IP address being returned with each DNS lookup. This issue applies to all UNIX platforms except Solaris.

Master agent

There are several known limitations of the master agent.

- CR8014: The agent crashes when it runs out of memory, rather than reporting an error and continuing to operate or exiting gracefully.
- alm00287198; The error `tar: .boots: Cannot stat: No such file or directory` can appear in the installation logs after upgrade. This file is no longer required and the error is of no consequence.
- alm00289386: After upgrade the `patchman` binary is still present but running it produces a `hive not found` error. This error can safely be ignored.
- alm00289390, APA IV36116: symlinks that reference `init.ssmagent` by using a relative rather than absolute path can cause `init.ssmagent` to fail if the symlink is not called from the directory containing the symlink.

Host resources

Lists the known limitations of the `hostres` subagent.

- alm00284139: The `hostres` subagent does not monitor ram disks on Solaris systems.

Netcool/ASM for Oracle

If you are using Solaris 11 on Oracle 64-bit, ensure that you install the Oracle 32-bit libraries before installing Netcool/SSM.

Netcool/ASM for Sybase ASE

Automated deployment and configuration using Netcool/SM Configuration is not supported for Netcool/ASM for Sybase ASE. If you deploy Netcool/ASM for Sybase ASE using Netcool/SM Configuration, you must manually set the SybaseHome inivar to the location of the target Sybase ASE installation.

Netcool/ASM for WebLogic

This release includes an updated version of the WebLogic performance monitoring servlet, PerfMonitor.ear. When upgrading an existing Netcool/SSM installation that uses Netcool/ASM for WebLogic to monitor WebLogic servers, you must redeploy PerfMonitor.ear on each monitored server.

Using the WebLogic Administration Console, undeploy PerfMonitor on each WebLogic server, then run the wl_setup script (located in the Netcool/SSM bin directory) to redeploy PerfMonitor on those servers.

Netcool/ASM for WebSphere

Starting with WebSphere Fix 3 for SSM 4.0, the Netcool/ASM for WebSphere uses the built-in performance servlet that ships with WebSphere Application Server 7.0. The legacy Netcool/SSM ws* setup scripts are no longer used.

To set up the new performance servlet, complete the following steps:

1. In the Integrated Solutions Console, select **Monitoring and Tuning > Performance Monitoring Infrastructure (PMI)** and select your server.
Ensure that **Enable Performance Monitoring Infrastructure (PMI)** is selected, and that the **Currently monitored statistic set** field is set to **Extended**. Restart WebSphere Application Server if required for the changes to take effect.
2. Using the Integrated Solutions Console (or whatever means you currently use to deploy applications), deploy the performance servlet, WAS_HOME/installableApps/PerfServletApp.ear.
3. Start the performance servlet.
4. Using a web browser from the agent host, verify that the servlet is running. In the web browser, enter the following address: `http://hostname/wasPerfTool/servlet/perfservlet`

If you do not have an HTTP server installed, the servlet is available on port 9080 by default: `http://hostname:9080/wasPerfTool/servlet/perfservlet`

Do not continue until you can verify that the page returns XML data.

When the servlet is running, the updated WebSphere Application Server subagent (build 1700 and later) automatically finds it and lists the collection names in wsCollectionTable.

5. Ensure that the Netcool/ASM for WebSphere is configured for the same host name and port number that are used in step 4. Also, check the collection names and the counter names (shown in wsCounterTable when wsControlCounterMode is automatic) as most of the names are updated in the new servlet. A sample configuration script for WebSphere Application Server 7.0 is provided in config/websphere7.cfg.

For more information about the performance servlet, see WebSphere Application Server Information Center(http://pic.dhe.ibm.com/infocenter/wasinfo/v7r0/topic/com.ibm.websphere.zseries.doc/info/zseries/ae/tprf_devprfservlet.html).

For support with the performance servlet, contact WebSphere Application Server support.

programmable subagent

CR9048: The agent hangs when aborting a programmable control row that is configured to execute a program which has created child processes (Windows only).

svrsecurity subagent

There are several issues concerning the operation of the Server Security (svrsecurity) subagent.

Login files

To monitor logins using svrsecurity, the following files must exist or be symbolically linked to the real files for the subagent to work correctly:

- Linux: /var/log/lastlog
- Solaris: /var/adm/loginlog
- HP-UX: /var/adm/acct/sum/loginlog

Login failure threshold on Solaris platforms

On Solaris platforms, the operation of the svrsecurity login failure detection is different to that on other platforms. Normally the subagent generates a trap when three failed logins are detected. However, on Solaris platforms the number of failed logins that must be observed before a trap is generated depends on the value of the retries parameter defined in the file /etc/default/login. If the value of this parameter is greater than 3, a trap is not generated until this value is exceeded (this occurs because the operating system does not write the number of login failures to the disk until a breach has occurred). If the value of this parameter is 3 or lower, then the subagent behaves as it does on other platforms.

FIN, NULL, and Xmas port scans on Solaris 10

The Server Security subagent does not detect FIN, NULL, and Xmas port scans on Solaris 10 because this operating system provides automatic protection against such attacks.

Operating system limitations

Operating system limitations relate to the interaction between Netcool/SSM and the operating system that is running on the machine on which Netcool/SSM is installed.

UNIX

These limitations apply to Netcool/SSM on all UNIX platforms.

UNIX system date/time

On UNIX platforms, changing the system date/time can cause unexpected behavior in the agent. This is because many events within the agent are scheduled to perform actions at certain times. Changing the date/time effectively corrupts the application runtime environment. Symptoms include hanging or spinning the agent, data not being periodically updated. Agents running on Solaris platforms are particularly sensitive to system date/time changes.

Note: This does not include changes made by NTP because these date/time changes are gradual.

Linux

These limitations apply to Netcool/SSM on Linux platforms.

This section describes the known issues on Linux operating systems.

Bonding driver virtual interface

The agent cannot detect the virtual interface formed by the bonding driver (for example, bond0). The agent only reports interfaces with an assigned IP address. Assign the interface a dummy IP address (for example, `ifconfig bond0 1.1.1.1`). Ensure that the IP address you assign does not interfere with the routing table.

AIX

These limitations apply to Netcool/SSM on AIX platforms.

Low-level packet capture

It is not possible for the low-level packet capture code to capture the outbound packets. There is no workaround to this issue at present. This affects all monitoring activities running on AIX that are configured to monitor that same host's outbound network activity.

Terminate configuration command

The terminate configuration command terminates the agent; however, when you issue this command, the AIX service controller is not informed that the agent has terminated. Similarly, if you terminate the agent using the AIX command `kill -9` on the agent process, the AIX service controller is not informed of this. In both cases, the AIX service controller is not aware that the service has terminated; however any attempt to stop it using the AIX command `stopsrc -s <service name>` will fail.

If this situation arises, restart the host. To prevent this situation occurring, always invoke the service controller when terminating the agent by using either of the following commands:

```
stopsrc -c -s service name (kill -2 plus kill -9 on the named service)
```

```
stopsrc -f -s service name (kill -9 on the named service)
```

Core files

If the agent attempts to dump core and there is not enough disk space in the partition in which the core file is being created then it will probably be lost or useless for debug purposes. To prevent this, ensure that there is sufficient disk space in the partition to hold a core file.

Windows

These limitations apply to Netcool/SSM on Windows platforms.

- alm00287193: The User name and Company name are not saved to the registry for Windows installations.

Interaction with other applications

These limitations relate to the interaction between Netcool/SSM and other applications that are running on the machine on which Netcool/SSM is installed.

Kaspersky® Anti-Virus software

On Windows platforms that are running Kaspersky Anti-Virus software there have been issues when uninstalling the agent. This seems to happen because as InstallShield performs the uninstallation operation it touches the executable images installed, which in turn alerts the anti-virus software, which in turn is detected by InstallShield. The latter complains that the image being uninstalled is in use but allows the end user to complete the uninstall successfully. The message is benign and can be ignored.

Veritas® NetBackup™

Some versions of Veritas NetBackup may hang if the agent is running when a backup is performed. The agent creates a lock file under `/var/spool/locks` containing the PID of the agent; this is normal behavior. It sets the permissions of this file to enforce mandatory locking. Any attempt to open the file will hang until the lock is released. To avoid this problem, configure Veritas NetBackup to exclude this directory from the backup cycle.

Configuration issues

These limitations relate to the configuration of Netcool/SSM and its components.

System resource usage

It is possible to configure the agent and its subagents in such a way that its resource usage severely reduces the performance of the host system. For example, monitoring system activity at too high a rate, or specifying resources to be monitored at too coarse a level of granularity can consume excessive amounts of system resources. Try to strike a balance between the number of objects monitored, the polling interval, and the resource usage on the host on which the agent is running.

Chapter 4. Support information

If you have a problem with your IBM software, you want to resolve it quickly. IBM provides a number of ways for you to obtain the support you need.

- Searching knowledge bases: You can search across a large collection of known problems and workarounds, Technotes, and other information.
- Obtaining fixes: You can locate the latest fixes that are already available for your product.
- Contacting IBM Software Support: If you still cannot solve your problem, and you need to work with someone from IBM, you can use a variety of ways to contact IBM Software Support.

Frequently asked questions

What about Microsoft SNMP service?

This service is provided by Microsoft to provide basic SNMP services. Netcool/SSM is designed to be a replacement for this service, therefore Microsoft SNMP must be disabled during or prior to the installation process.

What if I'm using a third-party MIB module which is usually loaded with the Microsoft SNMP service?

The ntext subagent enables you to use third-party SNMP modules. See the Netcool/SSM Administration Guide for details.

Why are some elements of the standard and vendor specific MIBs not implemented (for example, hostres and sysres)?

Some MIB objects are not appropriate to particular platforms or there is no way for Netcool/SSM to extract the values on that platform.

What is the difference between the ControlRowTimeout specified in the init.cfg file and, for example, the transactionControlRequestTimeout in a transaction control row?

ControlRowTimeout applies to all non-active control rows. All control rows consume resources and over time it is not uncommon for existing ones to be deactivated or created and forgotten about. Setting ControlRowTimeout controls how long the agent will wait before purging these. A value of 0 implies all rows will be retained.

The transactionControlRequestTimeout object in a transaction control row covers the time the transaction sub-agent will wait before deciding to end a transaction. If packets that the transaction subagent expects get lost or if the application generating the transactions dies, it can leave the subagent in a state where it is trying to collect metrics on transactions that will never end. The transactionControlRequestTimeout object controls that timeout period.

Why does my Windows server seem to have several sessions open from machines running the agent?

This occurs because the hostres subagent is attempting to query network drive information. You can reduce the number of sessions created on the server by doing any of the following:

- On the server, reduce the auto-disconnect timeout with the command:
`net config server /autodisconnect:<minutes>`
- Change the service user account under which the agent executes to be a domain member.
- Run the agent in application mode.

Why can't I see any information about network drives in hostres?

This occurs because the agent is running as a service user which does not have domain privileges and hence can't query the network drive. To correct this, run the agent service as a user who is a domain member, or run the agent in application mode.

Why does transaction subagent stop monitoring some transaction types?

When a control row is created to monitor particular transaction types, the subagent can fail to capture and display the expected transaction type. The principal reason for this is that the value of the control row's `transactionControlRequestTimeout` object is too small for the transaction type being monitored or the way the transaction is configured to operate on the host under test.

For example, if a default transaction row is created to monitor POP & SMTP traffic between two hosts and there is no such traffic before the request timeout expires then the connection will timeout. When this occurs, an entry with the following format is created in the `agent.log` file (if the agent is configured to operate at log level 3 or higher):

```
<DateTime Stamp>: Timed out connection: <Connection endpoints>;  
<Application Type> will be created in the agent.log file if it is configured  
to operate at log level 3 or higher.
```

Why does the loopback interface in the MIB-2 interfaces ifTable have a speed of 0?

The agent uses low level system functions to determine the speed of the loopback interface. The values returned on the different platforms and the semantics associated with those values vary from platform to platform. By convention, if the `ifSpeed` object has the value 0, this indicates "as fast as possible" for the platform being monitored.

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