NORTEL NETWORKS

Nortel Networks Multiservice

Switch 7400/15000/20000

What's New in PCR6.1

NN10600-000

Nortel Networks Multiservice Switch 7400/15000/20000

What's New in PCR6.1

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Chapter 1
New features for PCR 6.1

This section lists (in alphabetical order) the new features for this release of Nortel Networks Multiservice Switch 7400/15000/20000 that impact the documentation suite. This section also provides a description of each feature and explains how it impacts the product and the user.

> ***Note:*** Some new features may be documented but are not yet supported. For feature support details, see the Nortel Networks Multiservice Switch Release Notes.

See the following sections for the descriptions about the new features. To find out the feature impacts on and other changes to the documentation suite, see the section "Changes to the documentation suite" (page 35).

4-port Ethernet 10/100 BaseT function processor

This feature introduces a new 4-port Ethernet 10/100 BaseT Function Processor (NTNQ95AA) for the Nortel Networks Multiservice Switch 7400 platform. It does have the same features and capabilities as the 8-port 10/100 BaseT Function Processor (feature CD3045) except that is provides four ports rather than eight ports.

4-port Multi-Rate POS ATM function processor (ATM Services enabled)

This feature introduces the 4p Multi-Rate POS ATM (4pMRPosATM) MS3 FP (NTHW46AA). This FP leverages existing MS3 technology to produce a Multi-Rate Function Processor capable of hardware support for either 4pOC12/STM4 or 1pOC48/STM16. The software in this release provides support for only the 4p OC12/STM4 and ATM capabilities. The ATM capabilities of the FP are the same as those on the MS3 16pOC3/STM available in PCR 5.2.

Key capabilities of this FP include:

- SONET/SDH Inter-APS line sparing (no intra-FP APS sparing)
- Pluggable SFP Optic support for Intermediate Reach and Long Reach (no Short Reach Multimode)
- ATM access or trunking (existing FP equivalence)
- maximum 16k endpoints per port or 45k endpoints per FP (existing FP equivalence)
- line rate DPRS forwarding
- CP3 support (no CP2 support)
- 32k per VC queues (45k on existing PQC FPs)
- Basic VPT (no standard VPT support)
- PORS support
- ATM Multicast connections - 16K (16384) leaves per FP and up to 16 leaves per Multicast root
- ATM Sustained Call Rate - 300 calls/sec/FP (accounting and carrier grade off
- Only concatenated mode (STS-12c /AU-4-4c), no channelization

Capabilities NOT supported in PCR6.1:

- Hitless Equipment Protection
- Hitless Software Migration

- IP support (Bridge Termination, VIPR, RFC2764, RFC2547)
- FRF.5 or FRF.8
- Standard VPT
- G.841 Annex B

4pGigE CG PVG Integration

This feature delivers IP carrier grade capabilities on the 4pGE card for the VIPR solution.

There are four main features that deliver the carrier grade capability on the 4pGE card:

- “4pGigE Protected IP Routes” (page 15)
- “Hitless IP CPSO-VIPR MS3” (page 19)
- “Link Aggregation on 4pGigE” (page 21)
- “Inter-VR communication” (page 19)

This will allow PVG to setup hardware forwarding between VRs to enable intra-switched calls between VSPs without additional hardware (thus reducing cost).

This feature also makes the IP DiffServ for 4pGe (CD2723) available for use with the PVG application.

4pGigE Protected IP Routes

This feature provides Nortel Networks Multiservice Switch Carrier Grade protection at layer 3 for a non-ECMP load balanced IP Static Default route without the need for explicit physical and/or layer 2 protection for port failure, card failure, and Hitless Software Migrations. A Protected Static Default Route can be used to conceptually provide 1:1 equipment protection for the 4pGE FPs in the context of Static Default IP routing.

This feature only supports a protected Static Default route whose next hops are GE ports or GE LAG groups on the 4pGE FP on Multiservice Switch 15000 and Multiservice Switch 20000 VIPR solutions.

8-port Ethernet 10/100 BaseT Function Processor

This feature introduces a new 8-port Ethernet 10/100 BaseT Function Processor (NTNQ92AA) for the Nortel Networks Multiservice Switch 7400 platform. Key features include

- 8 full-duplex Ethernet ports
- 10/100BaseT auto-sensing ports
- RJ-45 connectors on the faceplate
- Individual port status indicators
- Multiservice Switch 7400 single slot FP
- Standard compliance
  - IEEE 802.3
  - EMC FCC Class B
  - NEBS and ETSI Compliant
- Programmable Ethernet Traffic management device
- Software controlled IP/Frame Forwarding device

In this release, both Virtual IP Router (VIPR) and IP VPN 2547 solutions are available. Other solutions on this FP are planned for future PCR releases. The hardware is also capable of enhanced traffic management in a future release due to its programmable Ethernet Traffic Management (ETM) device and its software controlled IP/Frame forwarding device.

8-slot Nortel Networks Multiservice Switch 7460

The 8-slot Nortel Networks Multiservice Switch 7460 extends the Multiservice Switch 7400 product line with a new 8-slot option that fills a gap between the 3-slot and 5-slot options and the full 16-slot Multiservice Switch 7480. With 8 slots it uses all of the same Multiservice Switch 7400 CPs and FPs and supports all the same services as the other Multiservice Switch 7400 portfolio. It provides a smaller form factor, more competitive option for customers, and, with 8-slots, can offer a fully redundant configuration (dual CPs, dual power supplies, 2 MSA32 FPs, 2 trunking FPs).

Annex B on 16pOC3 MS3

This feature extends Nortel Networks Multiservice Switch 15000 and Multiservice Switch 20000 support for ITU-T G.842 Annex B Multiplex Section Protection (MSP) to the NTHW44xx (MS3 16-port OC-3/STM-1) ATM Function Processor. In PCR5.2, ITU-T G.841 support was initially provided on the MSHS 16p OC3/STM1 FPs (NTHW21xx, NTHW31xx, NTHW24xx). The Annex B protocol implements a 1+1 optimized protection variant that differs from the implementation described in the main body of G.841. This algorithm uses two lines in order to realize high speed 1+1, bi-directional, non-revertive protection switching of SDH optical interfaces.

ATM Local and Global Reroute Scalability

The current (PCR5.1 or PCR5.2) stated performance limit for connection recovery is 200 simultaneous connection recoveries on a single ingress FP. This feature increases the connection recovery performance to 500 connections per ATM FP, and is based on a connection recovery timer of 15 seconds. This feature allows the network operators to recover more connections in under 15 seconds, thereby allowing them to offer better Service Level Agreements (SLAs) to their customers.

Ethernet Line Service on Gigabit Ethernet - with VLAN

This feature delivers Ethernet Line service (E-Line) on Nortel Networks Multiservice Switch 15000 and 20000, which provides transparent ATM transport for Ethernet MAC frames received or transmitted on a Gigabit Ethernet ports. Transport over ATM uses RFC2684 bridge-mode encapsulation.

It supports either port-mode or VLAN-mode of operation on each Gigabit Ethernet port. In port mode, VLAN tagging is ignored and all MAC frames are transported. In VLAN mode, only MAC frames belonging to designated VLANs are transported, with either 1:1 or N:1 mapping of VLANs to SPVCs.

Two termination modes are supported. With the end-to-end termination mode, MAC frames received on a Gigabit Ethernet port at ingress are transported over the ATM network and delivered to designated egress Gigabit Ethernet port. With the single-ended mode, the MAC frames received on a

Gigabit Ethernet port at network ingress are transported over the ATM network and delivered to a designated egress ATM interface, still encapsulated in ATM cells.

This feature depreciates the feature “MS3 Ethernet over ATM, GigE port to VCC mapping (CD2237)” delivered in PCR 5.1 and supported in PCR 5.2. Migration from PCR 5.1 or PCR 5.2 to PCR 6.1 will convert the old service configurations to the new component and operation model introduced by this feature.

Global Rerouting for Specified Paths

This feature allows a connection provisioned with Specified Paths to subscribe to Global Rerouting services, providing the same functionality as the regular SPVC/SPVP connections;

- Connection Recovery Capabilities: The connection is recovered on a specified primary, alternate, or dynamic PNNI path, without informing the source of the connection about the failure.
- Path Optimization Capabilities: The path optimization process will move the connection on a better path (primary, alternate, or a more optimal dynamically computed path) using a make-before-break technique. As for the regular SPVCs, the optimization process can be triggered manually or automatically
- Reconnect command: If a connection provisioned with specified paths is subscribed to EBR/Global path optimization capability, then the reconnect command is performed using a make-before-brake technique, hence providing minimum cell loss.

HEC Error Sensitivity Improvement Support for DS3/E3 PQC Cards

This feature is implementing a mechanism for monitoring the HEC error level, enhancing the sensitivity to HEC errors on Nortel Networks Multiservice Switch 7400/15000/20000 for the following card types: 3pE3Atm2, 3pDS3Atm2, 12pE3Atm, and 12pDS3Atm.

> ***Note:*** This HEC error functionality was supported until now on 3pDS1Atm, 8pDS1Atm,3pE1Atm, 8pE1Atm, 3pDS3Atm, and 3pE3Atm cards.

Hitless IP CPSO-VIPR MS3

This feature allows datapath IP forwarding to continue uninterrupted during a routing control processor (CP/XC) switchover event. This is an important component in carrier grade services offerings as it eliminates a single point of failure.

This feature enables LAN media on the 4pGe card to be hitless during a CPSO or XCSO event on the Nortel Networks Multiservice Switch 15000 and Multiservice Switch 20000.

Hitless Software Patching

This feature facilitates the application of FP reset (disruptive) patches on Nortel Networks Multiservice Switch. Currently, if a disruptive software patch is applied to one or more FPs, all impacted cards (active and standby) are reset at the same. As a result, all services on the FPs are disrupted. This HSP feature will reduce unnecessary impacts and service outages to FPs during the application of the disruptive patch.

Inter-VR communication

The call model requires TDM traffic to enter PVG and exit with TDM on the same shelf. Due to bandwidth requirements, it is necessary to deploy more than one VR per PVG shelf. Today, using more than one VR requires an external router or a hairpin on IP WAN cards, which adds cost to the product and complicates the shelf configuration when Carrier Grade needs to be supported.

Today, VM supports inter-VR mode; however, the datapath is available only through software which is too slow for PVG applications. This feature would allow inter-VR communication to be achieved through a hardware datapath. This will eliminate the need for a hardware hairpin or bouncing traffic to a pair of external routers therefore making the product more competitive from a price perspective.

International Tones - Russia

This feature adds the capability to generate:

- Russian tones from the PVG VSP2, VSP3, and VSP3-0 FPs
- Japanese Fire and Police Trunks (jfpt) tones from PVG VSP3-o FPs

IP Diffserv on MS3, flat VR, 2547, 16pOC3/STM1

This feature provides IP Differentiated services functionality for the RFC2547 and VIPR (Virtual IP Router) network configuration on the 16-port OC3/STM-1 (GQM) FP as deployable on the Nortel Networks Multiservice Switch 15000 and Multiservice Switch 20000 platforms. This feature provides a number of benefits such as: mapping of user domain PHBs (per-hop behaviors) to the carrier domain, a rich set of supportable PHBs at the edge and in the backbone, and multi-field classification capability.

IP Routing MD5 Authentication

This feature introduces protection of OSPF, BGP, and LDP peering relationships via MD5 (Message Digest number 5) authentication. This provides security against control plane message spoofing. MD5 authentication prevents unauthorized parties from forming peer relationships with a router for the purposes of injecting bogus routing information, or from disrupting legitimate peering relationships. MD5 authentication is supported for all BGP sessions within the context of VIPR, 2547 and 2764, except 2764 BGP dynamic peers (that is, 2764 auto-discovered peering relationships).

IP VPN 2547– 4-port and 8-port Ethernet FPs

This feature provides Ethernet Access to the IP VPN 2547 solution. With the introduction of these new FPs, high throughput Ethernet ports are made available on Nortel Networks Multiservice Switch 7400 to carry IP traffic to and from VPNs as defined by the RFC2547 service. IP over Ethernet frames are processed on the Ethernet FP and carried over the MPLS network. Similarly, IP frames are received from the MPLS core network and delivered over Ethernet on these new FPs.

These two new Ethernet FPs interwork on the same shelf with the following trunk FPs: 2pSTM1e, 3pDS3, 3pE3, 2pOC3, and MSA32 FP trunk ports.

IP VPN Diffserv

This feature brings IP Differentiated services capability to a range of Function Processors in support of the Virtual IP Router (VIPR), RFC 2764 and RFC 2547 IP VPN capabilities. This feature provides a number of benefits such as: mapping of user domain PHBs (per-hop behaviors) to the carrier domain, support a rich set of standards based IP Differentiated Services capabilities

that includes DSCP/MF classification, marking and PHB based treatments. IP Diffserv also enables support for the IP Policing capability which is also a deliverable in PCR 6.1 (see "RFC 2547, RFC 2764:IP Policing" (page 28) for more details).

Kernel modifications for CP Disk space expansion

UMTS Access (RNC) requires the ability to use more of the CP's disk than just today's 4G. These extensions to the kernel optionally allow the creation of additional partitions, where these partitions can optionally be larger than 4G. The original 4G partition, its use and its APIs are not affected by these changes. These changes have been implemented and tested in the UMTS Access (RNC) offstream loads.

Link Aggregation on 4pGigE

Note: This feature is controlled release.

This feature implements base infrastructure for Ethernet Link Aggregation (LAG) on the 4-port Gigabit Ethernet (4pGigE) function processor (FP) on Nortel Networks Multiservice Switch 15000 and Multiservice Switch 20000, that can be used by higher layer applications. This initial implementation of LAG supports only intra-FP LAG groups where all links in a group must reside on the same GigE FP.

LAG is a protocol that facilitates the grouping of several Ethernet ports, thus allowing a media access control (MAC) client to treat a set of ports as a single port. Link aggregation is an optional sublayer between a MAC client (application) and the MAC (physical interface or media). LAG is specified by IEE Std 802.3-2002 Section 3 (Chapter 43). In addition to scaling MAC interface bandwidth by multiples of standard Ethernet link capacities, LAG also provides protection against individual link failures which is an important component of a larger system carrier grade solution.

Active Link Aggregation Control Protocol (LACP) will only be at Alpha with PCR 6.1 release.

Local and Global Reroute for FRF.8 and CES

This feature completes the Nortel Networks Multiservice Switch evolution from EBR to the standards based DBR solution. It provides the same Local and Global Rerouting capabilities on FRF.8 and CES SPVC/P connections as is currently available on standard ATM SPVC/P connections.

This feature is supported on all FPs in which FRF.8 and CES can be provisioned.

Log Access Enhancements

The primary purpose of Nortel Networks Multiservice Switch command logs is to provide an audit trail of user activity. In the context of security, the command logs are viewed as security audit logs, the purpose being to maintain an audit trail of user or administrator activities and events generated by the device itself. Because of their importance, the security logs must also be protected from unauthorized access, modification and deletion, and the primary purpose of this feature is to address this area. To meet the requirements of CDMA, this feature will also introduce some changes preventing the unauthorized deletion of the committed view file.Nortel Networks Multiservice Switch

MS3 Service Loader

This feature provides a mechanism to allow 16pOC3 GQM-based FPs with RSP2.0 Network Processor to support multiple firmware service loads. This allows the flexibility of using various firmware loads on the RSP2.0 by using the service loader to upload a provisioned firmware image upon initialization. Each firmware load has pre-defined services sets that can be executed on the RSP2.0 based MS3 FP. The service loader requires the user to pre-provision the service they plan on running on the MS3 FP prior to installation.

MSA32 Single Slot

The MSA32 has been redesigned to occupy a single shelf slot and is being introduced for use on all shelf configurations of the Nortel Networks Multiservice Switch 7400 portfolio. Customers can use the slots freed up for use by other FPs. The single slot MSA32 FPs support the same mix of services and offer the same performance and sparing capabilities as the dual-slot FPs, except that they occupy only one slot. The initial hardware release is PCR software independent with no software changes being required. New

PEC codes NTNQ93AA (for E1) and NTNQ94AA (for DS1) are assigned to differentiate the hardware. New cable codes are required to connect the FP to the existing MSA32 termination/sparing panels. The termination /sparing panels are not changing and remain the same.

In preparation for the natural evolution of some components, as part of PCR6.1, software changes are being introduced on the hardware in Q4/2004 and new PEC code vintages NTNQ93BA, NTNQ94BA will be introduced into manufacturing. These software changes will be applied back to prior PCR maintenance releases PCR5.2.3 and PCR5.1.4 before the hardware introduction to ensure most users will be able to deploy the new hardware vintages.

With the introduction of the single slot FPs it is expected most users will want to take advantage of these FPs for their future growth requirements, rather than continuing with the dual-slot FPs. However for users who may need to continue deploying the dual-slot FPs these will continue to be available for a reasonable period of time. Any advance notification of intent to 'manufacture discontinue' will follow Nortel Networks published policies & guidelines. The MSA32 FPs which have optical interfaces are NOT being changed and continue to be offered as dual-slot FPs.

Multi-Hop EBGP

This feature enhances the MSS EBGP protocol so that routes can be distributed across EBGP connections between EBGP peers that are not on a directly attached network and peer relationships can span multiple hops. This provides greater flexibility in BGP network design and also provides improved resiliency by providing redundancy in the paths across which EBGP connections are established.

NA PTS trunks on VSP3o

This feature introduces Channel Associated Signaling (CAS) or Per Trunk Signalling (PTS) onto PVG for the North American marketplace. CAS/PTS trunks are widely deployed in North America, mostly for PBX access, since CAS/PTS trunks are cheaper than PRI trunks and can also be used in an interoffice trunk configuration. Interfaces to the emergency services are also often via CAS/PTS. In this release the PVG will support MF, DTMF and DP

signalling, DAL, ONAT, EANT, OP, ES, IT, ATC, Supercama, PX, CELL and IBN trunks controlled via the H.248 protocol. All PVG capabilities available to ISUP/PRI trunks are available to PTS trunks.

Nortel Networks Multiservice Switch Autopatch Application feature

This feature allows automatic application of non-service affecting patches on Nortel Networks Multiservice Switch through a control process running on MDM. This process schedules patch software downloads, calculates required patches for the switch, and activates the required patches according to a pre-defined schedule.

Nortel Networks Multiservice Switch Border Gateway Protocol/Multiprotocol Label Switching

The feature allows a BGP/MPLS VPN service provider (SP) or carrier to itself subscribe to BGP/MPLS VPN services offered by another SP - the carrier's carrier. This is accomplished by allowing a BGP/MPLS VPN service provider to transit across another service provider delivering hierarchical BGP/MPLS VPN (Carrier's Carrier) services. This hierarchical VPN approach is introduced in RFC 2547.

This feature extends the geographical reach of BGP/MPLS services that can be offered by an SP by enabling BGP/MPLS VPN connectivity through a transit network other than the SP. It allows an SP to use multiple backbone solutions, and it allows an SP to use various topology solutions to ensure reliability of service. This feature implements the Carrier's Carrier capability on the PE node of the SP.

Note: This feature extends the capabilities of BGP/MPLS VPNs introduced in PCR5.2.

OAM IPSec Encryption

Note: This feature is a separately orderable and controlled package, and prior to obtaining the IPSec software, users will be required to go through a screening process to meet regulatory export controls.

This feature provides IPSec encryption support for OA&M traffic on Nortel Networks Multiservice Switch. IPSec protocols enhance IP by allowing cryptographically-secure packets to be exchanged between cooperating systems. By adding security at the network layer, any IP-based application can take advantage of its services without having to design its own application-specific standard.

PORS Support on MS3 ATM FPs

This feature delivers PORS routing on the MS3 based 16pOC3/STM1 and 4pMR. All PORS capabilities currently found on the existing 16pOC3 (MSHS) are supported on these FPs.

Port Test with LAPS Configuration

This feature introduces the capability to perform port test on the standby card in a LAPS configuration for the following card types on Nortel Networks Multiservice Switch 15000 and Multiservice Switch 20000: 16pOC3SmIrAtm, 4pOC12SmIrAtm, 4pOC3SmIrAtm, 4pOC3MmAtm.

Note: Port test capability is currently supported only on unprotected Sonet/sdh ports.

PPP access for RFC2547

This feature enables support for PPP access to a Multiservice Switch RFC 2547 VRF. Supported FPs include the Multiservice Switch 7400 MSA FPs, and the Multiservice Switch 15000 and 20000 Frame MSAS FPs.

PVG 5 Minute Performance Measurements

This feature enables a PVG to provide 5 minute Performance Measurements (PMs) to MDM and from there onto OSS performance hosts. This allows users to perform tasks for monitoring, planning and engineering related to performance of the PVG platform, applications and service. The feature is restricted to 2pGeMmSrVsp3 and 2pOC3ChSmIrVsp3 cards.

Recurring fan alarms and shelf temperature alarm

This feature has four distinct components:

- “Alarm repetition” (page 26)
- “Fabric temperature alarm” (page 26)

- "Shelf alarm" (page 26)
- "5 min Performance Measurement for shelf temperature" (page 26)

Alarm repetition

Subsequent to the initial alarm raised soon after a single fan failure, that alarm is repeated once every 8 hours. The alarm repetition is implemented as a provisionable attribute since the existing Nortel Networks Multiservice Switch users may want the system behavior unchanged. The attribute can be turned 'on' or 'off (default is 'off'').

For Succession users, this attribute is set to 'on'. Other Nortel Networks Multiservice Switch users can leave this attribute 'off' in which case, the fan alarm is not be repeated. The repetition interval is agreed to be hard coded to 8 hours.

Fabric temperature alarm

Currently, when the fabric temperature reaches 65 degrees Celsius, a 'warning' alarm is issued to the operator console. This alarm has been changed from a 'warning' alarm to a 'major' alarm. This change applies to all Nortel Networks Multiservice Switch users.

Shelf alarm

Currently a 'warning' alarm is generated when the shelf temperature rises above 70 degrees Celsius. This alarm is translated as a 'minor' SCC2 alarm. This Shelf alarm has been changed from 'minor' to 'critical' (as there is a very limited time window between the time that the shelf alarm comes out and the time that the fabric reaches 72 degrees Celsius and shuts itself down). This change applies to all Nortel Networks Multiservice Switch users.

5 min Performance Measurement for shelf temperature

It is possible to read the fabric temperature through software. To provide a better view of the rise in shelf temperature for network operations personnel, it is suggested that the maximum temperature during a 5 minute interval be included in the 5 min PM record. The 5 min PMs can be monitored at the user OSS and appropriate pro-active actions can be taken at the network level.

RFC 2547 4pGigE Ethernet VLAN or Port Access

This feature introduces VLAN and Port access on the 4pGigE FP to RFC 2547 VPNs and VIPR. Port access provides standard IP over Ethernet connectivity between Nortel Networks Multiservice Switch and devices that are connected to a single LAN segment.

Virtual LAN (VLAN) access permits Multiservice Switch connectivity to devices that belong to different Virtual LANs (VLANs). This is accomplished by enabling Nortel Networks Multiservice Switch to recognize VLAN tags that are used to specify VLAN membership. Multiservice Switch supports the standard IEEE 802.

RFC 2547: CP-based RFC 2547

This feature permits the support of RFC 2547 VPNs on Nortel Networks Multiservice Switch Control Processor (CP). Up to 10 customer VPN Router and Forwarder instances can be supported in a multiservice environment.

RFC 2547 “BGP/MPLS VPNs” describes a method of offering Layer 3 provider provisioned VPNs using extensions to the BGP routing protocol and MPLS for customer data transport between their respective sites. The service provider network is transparent to the end customer.

Multiservice Switch implementation enables the configuration of an RFC2547 provider edge (PE) node on the Nortel Networks MSS 7400/15000/20000 platform. Multi-protocol BGP with Extended Communities is used for the distribution of VPN membership and routing information. LDP-DU is used for the distribution of transport labels. Multiservice Switch 15000 and Multiservice Switch 20000 can also provide LSR (P-node) functionality for this solution. Quality of Service is provided using the DiffServ paradigm.

RFC 2547 Inter-AS VPNs

Note: This feature is at Alpha status.

This feature allows for Inter-working the Multiservice Switch RFC 2547 solution with other RFC 2547 deployments using the IETF RFC 2547bis Multi-AS Backbones Type C option.

RFC 2547, RFC 2764:IP Policing

IP Policing is required to regulate the amount traffic of a particular Service Class that is allowed to enter the service provider network. The amount of traffic of a certain class that enters the network varies with each users SLA. The capability to police IP traffic is critical to ensure that network resources are distributed fairly between the subscribers of the network.

The Nortel Networks Multiservice Switch IP policer is implemented as dual rate dual token bucket. The two rates traffic is measured against are the committed flow rate (CFR) and the excess flow rate (EFR). Traffic conforming to the committed flow rate is forwarded through. Traffic that exceeds the CFR but conforms to the EFR may be either tagged as more discard eligible or dropped. Traffic that does not conform to the EFR is discarded.

RFC 2547: Route Target Policy

To minimize the amount of MB-BGP routing information that is propagated in the RFC 2547 network it is useful to implement cooperative route filtering. With this feature enabled, each PE node sends out a message to its peers dictating the information that it requires. The peers configure their outbound route filters so that only the required information is sent to the PE that sent out the original Outbound Route Filter message.

This reduces the amount of routing information that a PE must process. In turn this increases network scalability

RFC 2547 Support (Access and Trunking) on 16pOC3 MS3 FPs

This feature introduces support for RFC2547 Access and trunking on the 16pOC3/STM1 MS3 ATM FP, permits high speed ATM access to RFC 2547 VPNs, and includes routed encapsulation for access to the VRF. The MPLS SHIM encapsulation is used to enable MPLS trunking necessary for the LSR capability functionality. This permits the aggregation of the Nortel Networks Multiservice Switch 7400 PE nodes into the core MPLS network.

Router Model Enhancements

Note: This feature is at Beta status.

This feature provides enhancements to the router model to increase usability in PCR6.1. It also provide preparations for basic IP services to use the router model for OAM. This feature applies to RFC2764 L3 VPN service for both CP-based and XC-based deployments.

This feature includes PPP media access for the router model and work with the LDP/RSVP-TE co-existence feature to allow MPLS IP LER to run on the router model.

RSVP-TE on Router Model

Note: This feature is at Beta status.

This feature allows LDP and RSVP-TE protocols to co-exist on the same shelf (not possible in PCR5.2). This is accomplished by moving the OAM for RSVP-TE to the router model. Migration procedures will also be provided to convert RSVP-TE to the router model.

rTracer Enhancements & Productization

This feature enhances rTracer to allow for a complex set of user-defined sub-commands to be executed for the purpose of capturing register values, memory contents, stack frames, and other user-defined information. rTracer is a field-safe debug tool which enhances debugging of problems both in the lab and in the field, capturing information once a specified line of code has been executed.

SN07 UA-IP Architectural analysis and T&C (includes 4pGigE)

This feature provides engineering guidelines for Nortel Networks Multiservice Switch 15000 as used in Succession Universal Access – IP solution (UA-IP).

A UA-IP Succession office includes a single Call Server supporting legacy telephony services and Succession Packet trunking and Universal access over IP. The IP packet core can either be a third party IP Core, or IP over ATM packet core based on the Multiservice Switch 15000 with virtual router technology, or combination of the two. Packet trunking to the legacy PSTN is provided by Passport Voice Gateways (PVGs). Customer line access is

provided by MG9000 Gateways. The customer line traffic is aggregated on the Multiservice Switch 15000 using virtual router technology into Call Server LAN based on Passport 8600 routers.

Multiservice Switch 15000 plays one or more of the following roles in a UA-IP Succession office:

- Provides connectivity to Call Server LAN (CS-LAN).
- PVG functionality can be hosted on a P15K shelf.
- Multiservice Switch 15000 can be used to aggregate traffic from subtended PVGs and MG9K media gateways.
- Multiservice Switch 15000 can be used for ATM trunking from remote sites to central Call Server site.
- Multiservice Switch 15000 supports DPT router functionality at the Call Server site.
- DSLAM access and DSL traffic aggregation.
- DSL hand-off to ISPs

T.38 Fax & DMTF Interworking with H.323

This feature provides the following:

- Supports CS/GK controlled T.38 switchover on CS2000 and GW's when required for the call.
  - — Allows on a per call basis, either T.38 Annex B/D or new Annex E.
  - — If a PVG can do autonomous switchovers, then it offers both T.38 and voice codecs in its SDP.
  - — If a PVG cannot do autonomous switchovers in a call (T.38 disabled) then in its SDP it only provides a voice codec and not T.38.
  - — Provides the support for event dtone of package ctyp
- SDP enhancement for H.323 interopt (add o=, s=, t= and p= lines to SDP)
- Allows DMTF tone duration for package dg.

VLAN – 4-port and 8-port Ethernet FPs

This feature provides VLAN capability as defined in IEEE 802.1Q standard. A VLAN-aware Ethernet port enables logical multiplexing of multiple virtual LAN segments onto the same physical port. VLAN media provides virtual connection to a VR or VPN such that VLANs on the Ethernet port can be mapped to one or multiple VRs/VPNs. The whole Ethernet port does not have to be mapped to a single VR/VPN. VLANs within the port can be mapped to the same or different VRs/VPNs which optimize port usage and port bandwidth.

It should be noted that one VLAN can only be mapped to one VR or VPN. Although the software is enabling the use of the VLAN tag in this release, the use of pbits as defined in IEEE 802.1p is reserved for future usage.

VR/VRF Control Plane Protection

This capability can help to protect well behaved VPNs from a misbehaved CPE router. This feature can provide protection against excessive, locally destined packet floods, such as during a TCP SYN flood DOS attack or a CPE router that is excessively flapping routes. Dataplane traffic from/to the CPE router on the FP is processed in hardware. In normal operation, locally destined packets, typically control plane packets (such as routing updates) are sent to the CP/XC for processing. Protection is provided by monitoring locally destined packets over a given interval of time (flow rate) on a per-VR/VRF basis. If the flow rate exceeds a provisionable threshold, such as when a CPE misbehaves, the control plane protection feature provides alarming and potentially discarding of the offending control traffic in hardware. The behavior of this feature is controllable by provisioning appropriately.

VIPR: 4pGigE Ethernet VLAN Access

This feature introduces VLAN access on the 4-port GigE FP to the VIPR (flat VR solution).

Port access has been available for VIPR from PCR5.1, it provides standard IP over Ethernet connectivity between Nortel Networks Multiservice Switch and devices that are connected to a single LAN segment.

Virtual LAN (VLAN) access permits Nortel Networks Multiservice Switch connectivity to devices that belong to different Virtual LANs (VLANs). This is accomplished by enabling Nortel Networks Multiservice Switch to recognize VLAN tags that are used to specify VLAN membership. Multiservice Switch supports the standard IEEE 802.1Q encapsulation.

VIPR support on 16pOC3 MS3 FPs

This feature enables the 16port OC3 STM1 MS3 function processor to perform IP routing and forwarding. The Nortel Networks Multiservice Switch Virtual IP Router (VIPR) solution is deployable as a high speed multimedia access router. The VIPR solution is targeted at premium VPNs, large enterprise and demanding packet voice applications. This feature brings Nortel Networks Multiservice Switch access at OC-3 and STM1 rates with close to line rate processing speeds for encapsulated IP traffic. IP Traffic is encapsulated using RFC2784 (RFC1483 compatible) ATM Multiprotocol encapsulation.

Virtual IP Router – 4-port and 8-port Ethernet FPs

This feature provides Ethernet Access to the Virtual IP Router (VIPR) solution. With the introduction of these new FPs, high throughput Ethernet ports are made available on Nortel Networks Multiservice Switch 7400 to carry IP traffic to and from Virtual Routers (VRs) as defined by the VIPR service. This feature applies to both “8-port Ethernet 10/100 BaseT Function Processor” (page 16) and “4-port Ethernet 10/100 BaseT function processor” (page 13).

VLAN Infrastructure

This feature implements a VLAN base for Nortel Networks Multiservice Switch Ethernet FPs, including 4pFE, 8pFE, 4pGE. This feature is not intended as a stand-alone user deployable feature, but as a common base to be used by other services that require separation of Ethernet traffic by VLAN.

VRF/BGP Route Flood Protection

This feature is used to limit the number of routes that can learned by a Multiservice Switch RFC 2547 VRF. Two levels of route limiting are provided:

- The ability for a RFC 2547 VRF to limit the number of routes learned by a CE on a per BGP session basis.
- The ability for a RFC 2547 VRF to limit the total number of routes learned independent of protocol.

VRRP on GigE

This feature implements the Virtual Router Redundancy Protocol (VRRP) on the Gigabit Ethernet FP (NTHW49) on Nortel Networks Multiservice Switch 15000 and Multiservice Switch 20000. It delivers redundancy for a default next-hop route to virtual routers (VRs) or RFC2547 virtual router/forwarders (VRF), by enabling election and maintenance of a master and backup VRs or VRFs. If the master VR or VRF is not reachable due to failure of the associated Gigabit Ethernet link (port), FP, or node, the backup VR or VRF resumes service transparently without impacting operation and forwarding decisions of the host. VRRP is supported for configurations with either port or VLANs as protocol ports to VRs or VRFs.

VRRP (Virtual Router Redundancy Protocol)– 4-port and 8-port Ethernet FPs

This feature provides Virtual Router redundancy across 2 Ethernet ports or VLANs. VRRP is supported on two MSS nodes or a single MSS node across two Ethernet ports. VRRP is also supported across 2 Ethernet ports on the same FP.

One VRRP instance is defined as the master and the other as the backup. The master VRRP instance is elected to route the IP traffic (ingress and egress) while the backup VRRP instance is in “listen only” mode. The master VRRP instance does send regular messaging (heartbeat) to the back VRRP instance to indicate it is alive. The messaging is sent through the LAN/VLAN. When the backup VRRP instance does not receive the heartbeat from the master VRRP, it assumes the master VRRP is not alive and elects itself as the master. Only LANs or VLANs on an Ethernet interface linked to either a Protocol Port of VRF Ethernet (Enet) Interface with VRRP configured are protected

by their respective VRRP instance. LANs or VLANs on an Ethernet interface linked to a protocol port or VRF Enet interface without VRRP configured are not protected.

This feature applies to both solutions “Virtual IP Router – 4-port and 8-port Ethernet FPs” (page 32) and “IP VPN 2547– 4-port and 8-port Ethernet FPs” (page 20).

VSP3 with integrated Optical TDM Port - VSP3-o

This feature introduces the support of H.248 VoIP traffic, T.38, PRI and G.729 (VoIP & VoAAL2) on the VSP3-o FP. The VSP3-o provides service equivalence with VSP3 with significantly improved cost margins and enables higher density shelf configurations.

Chapter 2
Changes to the documentation suite

This section identifies changes to the Nortel Networks Multiservice Switch documentation suite for PCR6.1. For additional feature information and last-minute post-publication changes, see the Nortel Networks Multiservice Switch Release Notes.

This document includes information about the following topics:

New documents

Two new documents were added to the Nortel Networks Multiservice Switch documentation suite for this release.

The NN10600-590 *Nortel Networks Multiservice Switch 7400/15000/20000 Layer 3 Traffic Management Fundamentals* and NN10600-591 *Nortel Networks Multiservice Switch 7400/15000/20000 Layer 3 Traffic*

Management Configuration were added to include new information about Layer 3 Traffic Management. These new documents include existing information that has been restructured to increase usability.

Removed documents

The documents listed below were removed from the suite. The information from these documents was restructured and moved into the NN10600-030 *Nortel Networks Multiservice Switch 7400/15000/20000 Overview*.

- 241-5701-045 *Passport 7400, 15000, 20000 Management System User Interface Guide*
- 241-5701-400 *Passport 7400, 15000, 20000 Networking Overview*

Renamed and renumbered documents

The table "Renamed and renumbered documents for PCR6.1" (page 36) lists all documents that were renamed or renumbered for this release.

Note: This renaming and renumbering was done in conjunction with the corporate product rebranding initiative. Refer to "Product rebranding" (page 42) for more information.

Table 1
Renamed and renumbered documents for PCR6.1

Original document name and number	New document name and number
241-1501-200 *Passport 15000, 20000 Hardware Description*	NN10600-120 *Nortel Networks Multiservice Switch 15000/20000 Hardware Description*
241-1501-205 *Passport 15000, 20000 Site Requirements and Preparation Guide*	NN10600-125 *Nortel Networks Multiservice Switch 15000/20000 Planning Site Requirements*
241-1501-240 *Passport 15000, 20000 Hardware Installation, Maintenance and Upgrade*	NN10600-130 *Nortel Networks Multiservice Switch 15000/20000 Hardware Installation, Maintenance, and Upgrade*
241-1501-850 *Passport 15000, 20000 Ethernet Service Operations Configuration*	NN10600-580 *Nortel Networks Multiservice Switch 7400/15000/20000 Ethernet Service Operations*
(Sheet 1 of 7)	

Table 1 (continued)
Renamed and renumbered documents for PCR6.1

Original document name and number	New document name and number
241-5701-000 *Passport 7400, 15000, 20000 What's New in Passport Documentation*	NN10600-000 *Nortel Networks Multiservice Switch 7400/15000/20000 What's New in PCR6.1*
241-5701-001 *Passport 7400, 15000, 20000 Documentation Guide*	NN10600-001 *Nortel Networks Multiservice Switch 7400/15000/20000 Basics: Using the Documentation*
241-5701-002 *Passport 7400, 15000, 20000 Using New Task-based Documentation*	NN10600-002 *Nortel Networks Using Task-based Documentation Job Aid*
241-5701-005 *Passport 7400, 15000, 20000 List of Terms*	NN10600-005 *Nortel Networks Multiservice Switch 7400/15000/20000 Terminology*
241-5701-030 *Passport 7400, 15000, 20000 Overview*	NN10600-030 *Nortel Networks Multiservice Switch 7400/15000/20000 Overview*
241-5701-050 *Passport 7400, 15000, 20000 Commands*	NN10600-050 *Nortel Networks Multiservice Switch 7400/15000/20000 Command Reference*
241-5701-053 *Passport 7400, 15000, 20000 Command Summary Card*	NN10600-053 *Nortel Networks Multiservice Switch 7400/15000/20000 Commands Job Aid*
241-5701-060 *Passport 7400, 15000, 20000 Components*	NN10600-060 *Nortel Networks Multiservice Switch 7400/15000/20000 Component Reference*
241-5701-270 *Passport 7400, 15000, 20000 Software Installation Guide*	NN10600-270 *Nortel Networks Multiservice Switch 7400/15000/20000 Software Installation*
241-5701-271 *Passport 7400, 15000, 20000 Network Management Connectivity*	NN10600-271 *Nortel Networks Multiservice Switch 7400/15000/20000 Network Management Connectivity*
241-5701-272 *Passport 7400, 15000, 20000 Software Upgrade*	NN10600-272 *Nortel Networks Multiservice Switch 7400/15000/20000 Upgrading Software*
241-5701-300 *Passport 7400, 15000, 20000 SNMP Guide*	NN10600-300 *Nortel Networks Multiservice Switch 7400/15000/20000 Operations: SNMP*
241-5701-405 *Passport 7400, 15000, 20000 Call Server Guide*	NN10600-405 *Nortel Networks Multiservice Switch 7400/15000/20000 Operations: Call Server*
(Sheet 2 of 7)	

Table 1 (continued)
Renamed and renumbered documents for PCR6.1

Original document name and number	New document name and number
241-5701-410 *Passport 7400, 15000, 20000 Call Redirection Server Guide*	NN10600-410 *Nortel Networks Multiservice Switch 7400/15000/20000 Operations: Call Redirection Server*
241-5701-415 *Passport 7400, 15000, 20000 Hunt Group Server Guide*	NN10600-415 *Nortel Networks Multiservice Switch 7400/15000/20000 Operations: Hunt Group Server*
241-5701-420 *Passport 7400, 15000, 20000 Trunking Guide*	NN10600-420 *Nortel Networks Multiservice Switch 7400/15000/20000 Operations: Trunking*
241-5701-425 *Passport 7400, 15000, 20000 Dynamic Packet Routing System Guide*	NN10600-425 *Nortel Networks Multiservice Switch 7400/15000/20000 Operations: Dynamic Packet Routing System*
241-5701-435 *Passport 7400, 15000, 20000 Path-Oriented Routing System Guide*	NN10600-435 *Nortel Networks Multiservice Switch 7400/15000/20000 Operations: Path-Oriented Routing System*
241-7401-440 *Passport 7400 Frame Relay Managed Cut-through Switching Guide*	NN10600-440 *Nortel Networks Multiservice Switch 7400 Operations: Frame Relay Managed Cut Through Switching*
241-5701-445 *Passport 7400, 15000, 20000 Multiprotocol Label Switching Guide*	NN10600-445 *Nortel Networks Multiservice Switch 7400/15000/20000 Operations: Multiprotocol Label Switching*
241-5701-500 *Passport 6400, 7400, 15000, 20000 Alarms*	NN10600-500 *Nortel Networks Multiservice Switch 6400/7400/15000/20000 Alarms Reference*
241-5701-510 *Passport 7400, 15000, 20000 Trace Guide*	NN10600-510 *Nortel Networks Multiservice Switch 7400/15000/20000 Operations: Trace System*
241-5701-520 *Passport 7400, 15000, 20000 Troubleshooting and Testing*	NN10600-520 *Nortel Networks Multiservice Switch 7400/15000/20000 Fault and Performance Management: Troubleshooting*
241-5701-581 *Passport 7400, 15000, 20000 Basics: VPN Fundamentals*	NN10600-581 *Nortel Networks Multiservice Switch 7400/15000/20000 VPN Technology Fundamentals*
(Sheet 3 of 7)	

Table 1 (continued)
Renamed and renumbered documents for PCR6.1

Original document name and number	New document name and number
241-5701-582 *Passport 7400, 15000, 20000 VPN Configuration Management*	NN10600-582 *Nortel Networks Multiservice Switch 7400/15000/20000 VPN Configuration Management*
241-5701-600 *Passport 7400, 15000, 20000 Configuration Guide*	NN10600-550 *Nortel Networks Multiservice Switch 7400/15000/20000 Common Configuration Procedures*
241-5701-611 *Passport 7400, 15000, 20000 Data Collection Guide*	NN10600-561 *Nortel Networks Multiservice Switch 7400/15000/20000 Data Management*
241-5701-615 *Passport 7400, 15000, 20000 FP Configuration Reference*	NN10600-551 *Nortel Networks Multiservice Switch 7400/15000/20000 FP Configuration Reference*
241-5701-650 *Passport 7400, 15000, 20000 Accounting Fundamentals*	NN10600-560 *Nortel Networks Multiservice Switch 7400/15000/20000 Accounting*
241-5701-700 *Passport 7400, 15000, 20000 ATM Overview*	NN10600-700 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Technology Fundamentals*
241-5701-702 *Passport 7400, 15000, 20000 ATM Routing and Signaling Fundamentals*	NN10600-702 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Routing and Signalling Fundamentals*
241-5701-705 *Passport 7400, 15000, 20000 ATM Traffic Management Fundamentals*	NN10600-705 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Traffic Management Fundamentals*
241-5701-706 *Passport 7400, 15000, 20000 ATM Traffic Shaping and Policing*	NN10600-706 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Traffic Shaping and Policing Fundamentals*
241-5701-707 *Passport 7400, 15000, 20000 ATM Queuing and Scheduling*	NN10600-707 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Queuing and Scheduling Fundamentals*
241-5701-708 *Passport 7400, 15000, 20000 ATM CAC and Bandwidth Management*	NN10600-708 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM CAC and Bandwidth Fundamentals*
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Table 1 (continued)
Renamed and renumbered documents for PCR6.1

Original document name and number	New document name and number
241-5701-710 *Passport 7400, 15000, 20000 ATM Configuration Guide*	NN10600-710 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Configuration Management*
241-5701-715 *Passport 7400, 15000, 20000 ATM Monitoring and Troubleshooting Guide*	NN10600-715 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Fault and Performance Management*
241-5701-720 *Passport 7400, 15000, 20000 AAL1 Circuit Emulation Guide*	NN10600-720 *Nortel Networks Multiservice Switch 7400/15000/20000 AAL1 Circuit Emulation Operations*
241-5701-730 *Passport 7400, 15000, 20000 Inverse Multiplexing for ATM Guide*	NN10600-730 *Nortel Networks Multiservice Switch 7400/15000/20000 Inverse Multiplexing for ATM Operations*
241-5701-780 *Passport 7400, 15000, 20000 Packet Voice Gateway Technology Fundamentals*	NN10600-780 *Nortel Networks Media Gateway 7480/15000 Technology Fundamentals*
241-5701-781 *Passport 7400, 15000, 20000 Configuring Non-Switched Packet Voice Gateway*	NN10600-781 *Nortel Networks Media Gateway 7480/15000 Non-switched Service Configuration Management*
241-5701-782 *Passport 7400, 15000, 20000 Configuring Switched Packet Voice Gateway*	NN10600-782 *Nortel Networks Media Gateway 7480/15000 Switched Service Configuration Management*
241-5701-805 *Passport 7400, 15000, 20000 Understanding IP*	NN10600-800 *Nortel Networks Multiservice Switch 7400/15000/20000 IP Technology Fundamentals*
241-5701-810 *Passport 7400, 15000, 20000 Configuring IP*	NN10600-801 *Nortel Networks Multiservice Switch 7400/15000/20000 IP Configuration Management*
241-5701-901 *Passport 7400, 15000, 20000 Frame Relay Fundamentals*	NN10600-900 *Nortel Networks Multiservice Switch 7400/15000/20000 Frame Relay Technology Fundamentals*
241-5701-902 *Passport 7400, 15000, 20000 Configuring Frame Relay*	NN10600-901 *Nortel Networks Multiservice Switch 7400/15000/20000 Frame Relay Configuration Management*
(Sheet 5 of 7)	

Table 1 (continued)
Renamed and renumbered documents for PCR6.1

Original document name and number	New document name and number
241-5701-905 *Passport 7400, 15000, 20000 Frame Relay UNI Summary Card*	NN10600-905 *Nortel Networks Multiservice Switch 7400/15000/20000 Frame Relay UNI Job Aid*
241-5701-910 *Passport 7400, 15000, 20000 Frame Relay NNI Guide*	NN10600-906 *Nortel Networks Multiservice Switch 7400/15000/20000 Frame Relay NNI Job Aid*
241-5701-920 *Passport 7400, 15000, 20000 Frame Relay to ATM Interworking Guide*	NN10600-920 *Nortel Networks Multiservice Switch 7400/15000/20000 Operations: Frame Relay to ATM Interworking*
241-7401-110 *Passport 7400, DPN-100 Interworking Guide*	NN10600-450 *Nortel Networks Multiservice Switch 7400: Operations: DPN-100 Interworking*
241-7401-200 *Passport 7400 Hardware Description*	NN10600-170 *Nortel Networks Multiservice Switch 7400 Hardware Description*
241-7401-240 *Passport 7400 Hardware Installation, Maintenance and Upgrade*	NN10600-175 *Nortel Networks Multiservice Switch 7400 Hardware Installation, Maintenance, and Upgrade*
241-7401-242 *Passport 7400 FP Cabling Specifications*	NN10600-172 *Nortel Networks Multiservice Switch 7400 FP Cabling Reference*
241-7401-480 *Passport 7400 Multiservice Passport Access Network Link Guide*	NN10600-745 *Nortel Networks Multiservice Switch 7400 Operations: MPANL*
241-7401-750 *Passport 7400 Voice Transport Guide*	NN10600-750 *Nortel Networks Multiservice Switch 7400 Operations: Voice Transport*
241-7401-755 *Passport 7400 Voice Networking Guide*	NN10600-755 *Nortel Networks Multiservice Switch 7400 Operations: Voice Networking*
241-7401-760 *Passport 7400 DCME Voice Service Guide*	NN10600-760 *Nortel Networks Multiservice Switch 7400 Operations: DCME Voice Service*
241-7401-765 *Passport 7400 Remote Server Agent Guide*	NN10600-765 *Nortel Networks Multiservice Switch 7400 Operations: Remote Server Agent*

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Table 1 (continued)
Renamed and renumbered documents for PCR6.1

Original document name and number	New document name and number
241-7401-770 *Passport 7400 HDLC Transparent Data Service Guide*	NN10600-770 *Nortel Networks Multiservice Switch 7400 Operations: HDLC Transparent Data Service*
241-7401-775 *Passport 7400 Bit Transparent Data Service Guide*	NN10600-775 *Nortel Networks Multiservice Switch 7400 Operations: Bit Transparent Data Service*
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Restructured documents

There were no documents that underwent major restructuring for this release.

Product rebranding

Nortel Networks is currently simplifying the corporate brand naming process to streamline the way products, services, and solutions are marketed. Products will no longer reflect a marketing brand. Product names will be converted to easily understood terminology according to the functionality they provide.

Based on this new brand simplified naming format, the “Passport” product name has been rebranded. Refer to the table “Rebranded product names for PCR6.1” (page 42) for a summary of the former product names and what they are now called in this documentation suite.

Table 2
Rebranded product names for PCR6.1

Original name	Rebranded name
Passport	Nortel Networks Multiservice Switch
Passport 15000	Nortel Networks Multiservice Switch 15000
Passport 15000-VSS	Nortel Networks Multiservice Switch 15000 Variable Speed Switch (VSS)
Passport 20000	Nortel Networks Multiservice Switch 20000
Passport 7400	Nortel Networks Multiservice Switch 7400

Table 2 (continued)
Rebranded product names for PCR6.1

Original name	Rebranded name
Passport 7420	Nortel Networks Multiservice Switch 7420
Passport 7480	Nortel Networks Multiservice Switch 7480
Media Gateway (PVG)	Media Gateway (see note for more information)
Note: Since the rebranding initiative is being done by many different products using a phased approach over several releases, instances of both PVG and Media Gateway appear in the documentation suite.	

Feature updates

This section lists the PCR 6.1 documents that were modified with new feature information and describes how to access the new information in those documents.

The table "Feature updates" (page 44) lists the documents that were updated for each PCR 6.1 feature listed. For any features that did not impact the documentation suite, the table identifies these features as well.

> ***Note:*** Some features may be documented but are not yet supported. For feature support details, see the Nortel Networks Multiservice Switch Release Notes.

To find the new feature information in a document, see the "What's new in this document" section in that document. That section provides cross-references that lead you directly to the new information.

The table also indicates the documentation status of each feature, whether Draft, Preliminary, or Standard. For an explanation of information quality and status definitions, see the NN10600-001 *Nortel Networks Multiservice Switch 7400/15000/20000 Basics: Using the Documentation*.

The following reference documents were updated for many of the features listed in the feature updates table. They are not included in the table, in the interests of keeping it as short as possible.

- NN10600-005 *Nortel Networks Multiservice Switch 7400/15000/20000 Terminology*
- NN10600-030 *Nortel Networks Multiservice Switch 7400/15000/20000 Overview*
- NN10600-060 *Nortel Networks Multiservice Switch 7400/15000/20000 Component Reference*
- NN10600-500 *Nortel Networks Multiservice Switch 6400/7400/15000/20000 Alarms Reference*

Table 3
Feature updates

Feature name	Documentation status	Documents updated
Firmware Delivery (CD2357)	N/A	No documentation impact
Ethernet Line Service on Gigabit Ethernet - with VLAN (CD2377)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/15000/20000 FP Configuration Reference* NN10600-580 *Nortel Networks Multiservice Switch 7400/15000/20000 Ethernet Service Operations*
RFC 2547, RFC 2764:IP Policing (CD2617)	Standard	NN10600-590 *Nortel Networks Multiservice Switch 7400/15000/20000 Layer 3 Traffic Management Fundamentals* NN10600-591 *Nortel Networks Multiservice Switch 7400/15000/20000 Layer 3 Traffic Management Configuration*
VR/VRF Control Plane Protection (CD2697)	Standard	NN10600-582 *Nortel Networks Multiservice Switch 7400/15000/20000 VPN Configuration Management* NN10600-800 *Nortel Networks Multiservice Switch 7400/15000/20000 IP Technology Fundamentals* NN10600-801 *Nortel Networks Multiservice Switch 7400/15000/20000 IP Configuration Management*
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Table 3 (continued)
Feature updates

Feature name	Documentation status	Documents updated
Link Aggregation on 4pGigE (CD2765)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference* NN10600-580 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Ethernet Service Operations*
International Tones - Russia (CD2767)	Standard	NN10600-780 *Nortel Networks Media Gateway 7480/ 15000 Technology Fundamentals*
NA PTS trunks on VSP3o (CD2777)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference* NN10600-780 *Nortel Networks Media Gateway 7480/ 15000 Technology Fundamentals* NN10600-782 *Nortel Networks Media Gateway 7480/ 15000 Switched Service Configuration Management*
VLAN Infrastructure (CD2925)	Standard	NN10600-580 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Ethernet Service Operations*
8-port Ethernet 10/ 100 BaseT Function Processor (CD3045)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference* NN10600-800 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Technology Fundamentals* NN10600-801 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Configuration Management*
Log Access Enhancements (CD3066)	Standard	NN10600-561 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Data Management*

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Table 3 (continued)
Feature updates

Feature name	Documentation status	Documents updated
4-port Multi-Rate POS ATM function processor (ATM Services enabled) (CD3068)	Standard	NN10600-120 *Nortel Networks Multiservice Switch 15000/20000 Hardware Description* NN10600-125 *Nortel Networks Multiservice Switch 15000/20000 Planning Site Requirements* NN10600-130 *Nortel Networks Multiservice Switch 15000/20000 Hardware Installation, Maintenance, and Upgrade* NN10600-520 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Fault and Performance Management: Troubleshooting* NN10600-550 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Common Configuration Procedures* NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference*
Nortel Networks Multiservice Switch Autopatch Application feature (CD3072)	Standard	NN10600-270 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Software Installation* NN10600-272 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Upgrading Software* NN10600-520 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Fault and Performance Management: Troubleshooting* NN10600-550 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Common Configuration Procedures*
Global Rerouting for Specified Paths (CD3073)	Standard	NN10600-050 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Command Reference* NN10600-702 *Nortel Networks Multiservice Switch 7400/ 15000/20000 ATM Routing and Signalling Fundamentals* NN10600-715 *Nortel Networks Multiservice Switch 7400/ 15000/20000 ATM Fault and Performance Management*

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Table 3 (continued)
Feature updates

Feature name	Documentation status	Documents updated
Hitless Software Patching (CD3077)	Standard	NN10600-272 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Upgrading Software*
Hitless IP CPSO-VIPR MS3 (CD3080)	Standard	NN10600-800 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Technology Fundamentals*
8 Slot Nortel Networks Multiservice Switch 7460 (CD3082)	Standard	NN10600-170 *Nortel Networks Multiservice Switch 7400 Hardware Description* NN10600-175 *Nortel Networks Multiservice Switch 7400 Hardware Installation, Maintenance, and Upgrade*
4pGigE Protected IP Routes (CD3088)	Standard	NN10600-272 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Upgrading Software* NN10600-800 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Technology Fundamentals* NN10600-801 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Configuration Management*
RFC 2547: Route Target Policy (CD3097)	Standard	NN10600-581 *Nortel Networks Multiservice Switch 7400/ 15000/20000 VPN Technology Fundamentals* NN10600-582 *Nortel Networks Multiservice Switch 7400/ 15000/20000 VPN Configuration Management*
IP VPN 2547– 4-port and 8-port Ethernet FPs (CD3110)	Standard	NN10600-582 *Nortel Networks Multiservice Switch 7400/ 15000/20000 VPN Configuration Management*

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Table 3 (continued)
Feature updates

Feature name	Documentation status	Documents updated
VRRP (Virtual Router Redundancy Protocol)– 4-port and 8-port Ethernet FPs (CD3112)	Standard	NN10600-581 *Nortel Networks Multiservice Switch 7400/ 15000/20000 VPN Technology Fundamentals* NN10600-582 *Nortel Networks Multiservice Switch 7400/ 15000/20000 VPN Configuration Management* NN10600-800 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Technology Fundamentals* NN10600-801 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Configuration Management*
Virtual IP Router – 4-port and 8-port Ethernet FPs (CD3115)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference* NN10600-580 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Ethernet Service Operations* NN10600-800 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Technology Fundamentals* NN10600-801 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Configuration Management*
Recurring fan alarms and shelf temperature alarm (CD3116)	Standard	NN10600-120 *Nortel Networks Multiservice Switch 15000/20000 Hardware Description* NN10600-550 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Common Configuration Procedures*
VLAN – 4-port and 8-port Ethernet FPs (CD3117)	Standard	NN10600-580 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Ethernet Service Operations*
VIPR support on 16pOC3 MS3 FPs (CD3120)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference* NN10600-801 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Configuration Management*
PORS Support on MS3 ATM FPs (CD3124)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference*

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Table 3 (continued)
Feature updates

Feature name	Documentation status	Documents updated
IP VPN Diffserv (CD3143)	Standard	NN10600-590 *Nortel Networks Multiservice Switch 7400/15000/20000 Layer 3 Traffic Management Fundamentals* NN10600-591 *Nortel Networks Multiservice Switch 7400/15000/20000 Layer 3 Traffic Management Configuration*
RFC 2547 Support (Access and Trunking) on 16pOC3 MS3 FPs (CD3186)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/15000/20000 FP Configuration Reference*
MS3 Service Loader (CD3245)	Standard	NN10600-550 *Nortel Networks Multiservice Switch 7400/15000/20000 Common Configuration Procedures* NN10600-551 *Nortel Networks Multiservice Switch 7400/15000/20000 FP Configuration Reference*
RFC 2547 4pGigE Ethernet VLAN or Port Access (CD3246)	Standard	NN10600-582 *Nortel Networks Multiservice Switch 7400/15000/20000 VPN Configuration Management*
Stack Overflow Protection (CD3267)	N/A	No documentation impact
rTracer Enhancements & Productization (CD3268)	N/A	No documentation impact
Persistent memory device (CD3269)	N/A	No documentation impact
iLearnX (CD3304)	N/A	No documentation impact
Crash Handling Enhancements (CD3324)	N/A	No documentation impact

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Table 3 (continued)
Feature updates

Feature name	Documentation status	Documents updated
PEV Overdraft protection (CD3325)	N/A	No documentation impact
IP Robustness and Scalability (CD3326)	N/A	No documentation impact
VSP Control Protocol Trace Tool (CD3327)	N/A	No documentation impact
PVG 5 Minute Performance Measurements (CD3328)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference* NN10600-782 *Nortel Networks Media Gateway 7480/ 15000 Switched Service Configuration Management*
VSP3 with integrated Optical TDM Port - VSP3-o (CD3347)	Standard	NN10600-120 *Nortel Networks Multiservice Switch 15000/20000 Hardware Description* NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference* NN10600-780 *Nortel Networks Media Gateway 7480/ 15000 Technology Fundamentals* NN10600-782 *Nortel Networks Media Gateway 7480/ 15000 Switched Service Configuration Management*
Shelf Diagnostics (CD3348)	N/A	No documentation impact
4pGigE CG PVG Integration (CD3367)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference* NN10600-780 *Nortel Networks Media Gateway 7480/ 15000 Technology Fundamentals* NN10600-782 *Nortel Networks Media Gateway 7480/ 15000 Switched Service Configuration Management*

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Table 3 (continued)
Feature updates

Feature name	Documentation status	Documents updated
ATM Local and Global Reroute Scalability (CD3387)	N/A	No documentation impact
IP Routing MD5 Authentication (CD3392)	Standard	NN10600-582 *Nortel Networks Multiservice Switch 7400/15000/20000 VPN Configuration Management* NN10600-801 *Nortel Networks Multiservice Switch 7400/15000/20000 IP Configuration Management*
RFC 2547: CP-based RFC 2547 (CD3405)	Standard	NN10600-120 *Nortel Networks Multiservice Switch 15000/20000 Hardware Description* NN10600-170 *Nortel Networks Multiservice Switch 7400 Hardware Description* NN10600-550 *Nortel Networks Multiservice Switch 7400/15000/20000 Common Configuration Procedures* NN10600-582 *Nortel Networks Multiservice Switch 7400/15000/20000 VPN Configuration Management*
Nortel Networks Multiservice Switch Border Gateway Protocol/ Multiprotocol Label Switching (CD3406)	Standard	NN10600-581 *Nortel Networks Multiservice Switch 7400/15000/20000 VPN Technology Fundamentals* NN10600-582 *Nortel Networks Multiservice Switch 7400/15000/20000 VPN Configuration Management*
VRRP on GigE (CD3409)	Standard	NN10600-581 *Nortel Networks Multiservice Switch 7400/15000/20000 VPN Technology Fundamentals* NN10600-582 *Nortel Networks Multiservice Switch 7400/15000/20000 VPN Configuration Management* NN10600-800 *Nortel Networks Multiservice Switch 7400/15000/20000 IP Technology Fundamentals* NN10600-801 *Nortel Networks Multiservice Switch 7400/15000/20000 IP Configuration Management*

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Table 3 (continued)
Feature updates

Feature name	Documentation status	Documents updated
Port Test with LAPS Configuration (CD3410)	Standard	NN10600-130 *Nortel Networks Multiservice Switch 15000/20000 Hardware Installation, Maintenance, and Upgrade* NN10600-520 *Nortel Networks Multiservice Switch 7400/15000/20000 Fault and Performance Management: Troubleshooting* NN10600-551 *Nortel Networks Multiservice Switch 7400/15000/20000 FP Configuration Reference*
Annex B on 16pOC3 MS3 (CD3412)	Standard	NN10600-520 *Nortel Networks Multiservice Switch 7400/15000/20000 Fault and Performance Management: Troubleshooting* NN10600-550 *Nortel Networks Multiservice Switch 7400/15000/20000 Common Configuration Procedures* NN10600-551 *Nortel Networks Multiservice Switch 7400/15000/20000 FP Configuration Reference*
4-port Ethernet 10/100 BaseT function processor (CD3415)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/15000/20000 FP Configuration Reference* NN10600-800 *Nortel Networks Multiservice Switch 7400/15000/20000 IP Technology Fundamentals* \NN10600-801 *Nortel Networks Multiservice Switch 7400/15000/20000 IP Configuration Management*
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Table 3 (continued)
Feature updates

Feature name	Documentation status	Documents updated
MSA32 Single Slot (CD3454)	Standard	NN10600-170 *Nortel Networks Multiservice Switch 7400 Hardware Description* NN10600-172 *Nortel Networks Multiservice Switch 7400 FP Cabling Reference* NN10600-175 *Nortel Networks Multiservice Switch 7400 Hardware Installation, Maintenance, and Upgrade* NN10600-520 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Fault and Performance Management: Troubleshooting* NN10600-550 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Common Configuration Procedures* NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference*
Inter-VR communication (CD3456)	Standard	NN10600-300 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Operations: SNMP* NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference* NN10600-800 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Technology Fundamentals*
Layer 3 IP/MPLS into Class Based Scheduler (CD3551)	N/A	No documentation impact
Object Time Migration - Phase 1 (CD3571)	N/A	No documentation impact
Processor Daughter Board 4 (PDB4) (CD3591)	N/A	No documentation impact

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Table 3 (continued)
Feature updates

Feature name	Documentation status	Documents updated
SN07 UA-IP Architectural analysis and T&C (includes 4pGigE) (CD3593)	Standard	NN10600-782 *Nortel Networks Media Gateway 7480/ 15000 Switched Service Configuration Management*
Adjunct Processor Base (CD3631)	N/A	No documentation impact
T.38 Fax & DMTF Interworking with H.323 (CD3651)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference* NN10600-780 *Nortel Networks Media Gateway 7480/ 15000 Technology Fundamentals*
ARP Robustness (CD3671)	N/A	No documentation impact
Duplicate Node ID detector (CD3691)	N/A	No documentation impact
IP Diffserv on MS3, flat VR, 2547, 16pOC3/STM1 (CD3712)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference* NN10600-590 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Layer 3 Traffic Management Fundamentals*
HEC Error Sensitivity Improvement Support for DS3/E3 PQC Cards (CD3771)	N/A	No documentation impact
Router Model Enhancements (CD3791)	Standard	NN10600-300 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Operations: SNMP* NN10600-800 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Technology Fundamentals* NN10600-801 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Configuration Management*

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Table 3 (continued)
Feature updates

Feature name	Documentation status	Documents updated
Multi-Hop EBGP (CD3811)	Standard	NN10600-582 *Nortel Networks Multiservice Switch 7400/ 15000/20000 VPN Configuration Management* NN10600-800 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Technology Fundamentals* NN10600-801 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Configuration Management*
RSVP-TE on Router Model (CD3812)	Standard	NN10600-445 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Operations: Multiprotocol Label Switching*
Kernel modifications for CP Disk space expansion (CD3871)	N/A	No documentation impact
VIPR: 4pGigE Ethernet VLAN Access (CD3872)	Standard	NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference* NN10600-580 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Ethernet Service Operations* NN10600-800 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Technology Fundamentals* NN10600-801 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Configuration Management*
Header File Cleanup (CD3932)	N/A	No documentation impact
ClearMake Migration (CD3933)	N/A	No documentation impact

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Table 3 (continued)
Feature updates

Feature name	Documentation status	Documents updated
Local and Global Reroute for FRF.8 and CES (CD3954)	Standard	NN10600-050 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Command Reference* NN10600-551 *Nortel Networks Multiservice Switch 7400/ 15000/20000 FP Configuration Reference* NN10600-702 *Nortel Networks Multiservice Switch 7400/ 15000/20000 ATM Routing and Signalling Fundamentals* NN10600-710 *Nortel Networks Multiservice Switch 7400/ 15000/20000 ATM Configuration Management* NN10600-715 *Nortel Networks Multiservice Switch 7400/ 15000/20000 ATM Fault and Performance Management* NN10600-720 *Nortel Networks Multiservice Switch 7400/ 15000/20000 AAL1 Circuit Emulation Operations* NN10600-920 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Operations: Frame Relay to ATM Interworking*
BGP Route Flood Protection (CD4774)	Standard	NN10600-582 *Nortel Networks Multiservice Switch 7400/ 15000/20000 VPN Configuration Management*
Inter-AS VPNs (CD4775)	Standard	NN10600-581 *Nortel Networks Multiservice Switch 7400/ 15000/20000 VPN Technology Fundamentals*
PPP access for RFC2547 (CD4874)	Standard	NN10600-300 *Nortel Networks Multiservice Switch 7400/ 15000/20000 Operations: SNMP* NN10600-800 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Technology Fundamentals* NN10600-801 *Nortel Networks Multiservice Switch 7400/ 15000/20000 IP Configuration Management*

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Customer change requests addressed

The table "Customer CR updates" (page 57) lists the customer change requests that were addressed in the PCR 6.1 documentation. The table also states which documents were updated. To locate the changed information in a particular document, see its section called "What's new in this document".

Table 4
Customer CR updates

CR number and request title	Documents updated
Q00643620, Documentation Correction: frame-tagging feature cancelled	No fix required
Q00760898, PVC FR time to announce a remote end failure not documented	NN10600-901 *Nortel Networks Multiservice Switch 7400/15000/20000 Frame Relay Configuration Management*
Q00824883, CIVO: SN06 PT-IP Telus: 241-5701-782 NTP VR Updates Required	NN10600-782 *Nortel Networks Media Gateway 7480/15000 Switched Service Configuration Management*
Q00829283, Missing Alarm Help for the Group 1100	NN10600-500 *Nortel Networks Multiservice Switch 6400/7400/15000/20000 Alarms Reference*
Q00835954, CIVO: SN06 PT-IP Telus: Multiple VRs could not be added	NN10600-782 *Nortel Networks Media Gateway 7480/15000 Switched Service Configuration Management*
Q00835959, CIVO: SN06 PT-IP Telus: AtmMpe could not be added	NN10600-782 *Nortel Networks Media Gateway 7480/15000 Switched Service Configuration Management*
Q00836047, CIVO: SN06 PT-IP Telus: ERROR: VR/X virtualRouterProcessor	NN10600-782 *Nortel Networks Media Gateway 7480/15000 Switched Service Configuration Management*
Q00836054, CIVO: SN06 PT-IP Telus: Static ARP entry for VR needed	NN10600-782 *Nortel Networks Media Gateway 7480/15000 Switched Service Configuration Management*
Q00838804, PP15K:PCR5.1 documentation issue with the "display prov" command	NN10600-272 *Nortel Networks Multiservice Switch 7400/15000/20000 Upgrading Software*
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Table 4 (continued)
Customer CR updates

CR number and request title	Documents updated
Q00838963, CIVO:SN06:PP15K upgrade documentation issue pertaining to fabric causes reload	NN10600-272 *Nortel Networks Multiservice Switch 7400/15000/20000 Upgrading Software*
Q00839960, Region identifier (mod regionId) change does not result in a node restart	NN10600-060 *Nortel Networks Multiservice Switch 7400/15000/20000 Component Reference* NN10600-550 *Nortel Networks Multiservice Switch 7400/15000/20000 Common Configuration Procedures*
Q00847793, Fix required for NTP 241-5701-271 (Version 5.2S2) - IPIFR section	NN10600-271 *Nortel Networks Multiservice Switch 7400/15000/20000 Network Management Connectivity*
Q00857292, TRIAL: PCR5.2.2/Doc: some figures in draft 241-5701-710 include wrong parameter	NN10600-710 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Configuration Management*
Q00857334, TRIAL: PCR5.2.2 / Draft Documentation: error in provisioning flow figure	NN10600-710 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Configuration Management*
Q00857358, TRIALPCR5.2.2/Doc:241-5701-715 call redir job aid should include more components	NN10600-715 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Fault and Performance Management*
Q00863518, TRIAL PCR5.2.2: Doc: 241.5701-710 lock/unlock capability not a prerequisite	NN10600-710 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Configuration Management*
Q00866544, NTP 241-5701-805 - Chapter 9 Forwarding classes rule exception	NN10600-800 *Nortel Networks Multiservice Switch 7400/15000/20000 IP Technology Fundamentals*
Q00873356, NTP 241-5701-271: inARP and ARP not supported on IPIFR	NN10600-271 *Nortel Networks Multiservice Switch 7400/15000/20000 Network Management Connectivity*
Q00879752-01, Passport BCS Bus Test Enhancements	NN10600-520 *Nortel Networks Multiservice Switch 7400/15000/20000 Fault and Performance Management: Troubleshooting*

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Table 4 (continued)
Customer CR updates

CR number and request title	Documents updated
Q00879752-02, Passport BCS Bus Test Enhancements	NN10600-520 *Nortel Networks Multiservice Switch 7400/15000/20000 Fault and Performance Management: Troubleshooting*
Q00880419, NTP needs to be updated for the new attribute instance for the ATMMPE	No fix required
Q00881172, Upgrade procedure for SN06.2 IP solutions	NN10600-272 *Nortel Networks Multiservice Switch 7400/15000/20000 Upgrading Software*
Q00881217, Change in behavior of shaped UBR connections	NN10600-706 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Traffic Shaping and Policing Fundamentals*
Q00886870, TRIAL: Passport Software Upgrade NTP Change	NN10600-272 *Nortel Networks Multiservice Switch 7400/15000/20000 Upgrading Software*
Q00899228, CDMA:PGMSC:MTX12P:PP15K:NTP 241-5701-272 5.2S1, customer request an NTP change	NN10600-272 *Nortel Networks Multiservice Switch 7400/15000/20000 Upgrading Software*
Q00904657, 2pSTM1eCh - Limitations for ATMIF's not mentioned in NTPs	NN10600-551 *Nortel Networks Multiservice Switch 7400/15000/20000 FP Configuration Reference* NN10600-710 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Configuration Management*
Q00909044, Component DiffServ not available under PCR 5.2.2 for PP7K	NN10600-801 *Nortel Networks Multiservice Switch 7400/15000/20000 IP Configuration Management*
Q00918357, 241-5701-920: FrAtm Ca linkRate should be 429496729 when overrideLinkRate is 0	NN10600-920 *Nortel Networks Multiservice Switch 7400/15000/20000 Operations: Frame Relay to ATM Interworking*
Q00928148, 241-5701-520: PCR5.2: NTP shows wrong test type supported in MSA	NN10600-520 *Nortel Networks Multiservice Switch 7400/15000/20000 Fault and Performance Management: Troubleshooting*
Q00928616, CIVO:SN06.2:PT-IP Bell ITech PVG 7056 0003 not card specific	NN10600-500 *Nortel Networks Multiservice Switch 6400/7400/15000/20000 Alarms Reference*

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Table 4 (continued)
Customer CR updates

CR number and request title	Documents updated
Q00941677, QSC: Note regarding EBR support on 4pOC3Ch FP missing in NTP	NN10600-720 *Nortel Networks Multiservice Switch 7400/15000/20000 AAL1 Circuit Emulation Operations*
Q00973727, PP7K - OSPF neighbour down when residing VR on XC card	NN10600-801 *Nortel Networks Multiservice Switch 7400/15000/20000 IP Configuration Management*
Q00983787, PP15K: Hitless software upgrade documentation: warning of service disruption	NN10600-272 *Nortel Networks Multiservice Switch 7400/15000/20000 Upgrading Software*
Q00985434, Technical Tidbits for 6.1 GA	NN10600-175 *Nortel Networks Multiservice Switch 7400 Hardware Installation, Maintenance, and Upgrade*
Q00987930, BT-SPAIN/PP/Incorrect Information in NTP	NN10600-715 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Fault and Performance Management*
Q01000863, NN10600-272: Changes to MSS Upgrade Procedure to PCR6.1	NN10600-272 *Nortel Networks Multiservice Switch 7400/15000/20000 Upgrading Software*
Q01011313, Trace Destination attribute for Pnni only	NN10600-710 *Nortel Networks Multiservice Switch 7400/15000/20000 ATM Configuration Management*

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Other updates and changes

Multiservice Switch documentation is frequently updated with other changes that are not specific to a feature or customer CR. To determine the other changes made in a particular document, read its section called “What’s new in this document”.

Chapter 3
Documentation media available

This section describes the current delivery methods for Multiservice Switch documentation:

- “Internet” (page 61)
- “Intranet” (page 61)
- “Helmsman-based CD-ROM” (page 62)
- “Paper” (page 62)

Internet

Over the Internet, you can use Helmsman Express on the Nortel Networks web site to view, do a suite-wide search, or download documents in PDF format.

To register for access to Multiservice Switch documents on Helmsman Express, contact your Nortel Networks account representative.

Intranet

You can install the Multiservice Switch documents on a server in your own intranet to provide access to the documentation using the Helmsman software. Install the documents and Helmsman from the “Helmsman-based CD-ROM” (page 62).

Helmsman-based CD-ROM

The Helmsman-based CD-ROM contains the current release of Multiservice Switch documentation in PDF format, viewable with the Helmsman software. The CD-ROM includes the Helmsman software as well as installation software for the PC, Unix (Sun and HP) and Macintosh platforms. Helmsman provides suite-wide search capabilities.

Installation instructions are provided on the CD-ROM.

Your Nortel Networks account representative needs to place an order for you to receive the CD-ROMs. Depending on which Performance Pack support package you have, you receive either one copy or up to five copies of the Helmsman-based CD-ROM.

Paper

You can purchase sets of Multiservice Switch documentation in hardcopy format in binders, at extra cost. For more information or to purchase hard copies, contact your Nortel Networks account representative.

Nortel Networks Multiservice Switch 7400/15000/20000

What's New in PCR6.1

Release 6.1

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