Introducing Cisco XR 12000 Service Module Daughter Card for Performance Route Processor-3

As we near 2012, when the last IPv4 address will be assigned to a new subscriber, service providers must maintain and continue to accelerate growth. Billions of new devices such as mobile phones, portable multimedia devices, sensors, and controllers will demand Internet connectivity in the next 5 years. Service providers need a solution that supports unconstrained global accessibility. Carrier Grade IPv6 solutions (CGv6) are designed to help them deal with these challenges.

CGv6 extends the already wide array of IPv6 solutions and services available on Cisco® XR 12000 Series Routers. Now Cisco is introducing the Cisco XR 12000 Service Module Daughter Card for Performance Route Processor-3 (PRP3-SMDC) to help enable CGv6 services. Cisco PRP3-SMDC supports a comprehensive suite of CGv6 features and a number of service applications that help to bridge the IPv6 divide.

Cisco PRP3-SMDC Highlights

- Cisco PRP3-SMDC plugs into Cisco PRP-3 (the next-generation high-speed route processor for the Cisco XR 12000 Series).
- Cisco PRP3-SMDC can be ordered along with Cisco PRP-3, or can be ordered separately.
- Cisco PRP3-SMDC provides a dedicated 10 Gbps of fabric connectivity.
- Cisco PRP-3 control functionality (such as protocols) are isolated and not affected by the addition of Cisco PRP3-SMDC.
- A powerful 16-core processing element propels the Cisco PRP3-SMDC packet forwarding engine.
- With 4 GB of dedicated memory, Cisco PRP3-SMDC can support more than 10 million Network Address Translations (NATs) through Carrier Grade NAT (CGN).
- Support is planned for NAT64, DS-Lite, Network Positioning System and Cloud Centric Networking (NPS-CCN), high availability, and Bidirectional Forwarding Detection (BFD) offload.

New Features

Cisco PRP3-SMDC introduces new service applications on the Cisco XR 12000 Series as listed in Table 1. The daughter card plugs into the Cisco PRP-3, which runs Cisco IOS® XR Software.

Table 1.   Features of Cisco XR 12000 PRP3-SMDC

Feature	Cisco IOS XR Release
Carrier Grade NAT44	Release 4.1.2
Carrier Grade NAT64, high availability, NPS-CCN, DS-Lite, BFD offload	Planned introduction in later releases

Upgrade Paths

The recommended option is to order the Cisco PRP3-SMDC along with the Cisco PRP-3. However, if the Cisco PRP-3 is already installed, then Cisco PRP3-SMDC can be ordered separately and manually plugged into the PRP-3. Detailed configuration steps can be found at www.cisco.com/en/US/docs/routers/xr12000/Route_Processor/installation/guide/prpiosxr.html#wp198638.

First customer shipment of Cisco PRP-SMDC hardware is in December 2011. However, to enable Cisco PRP3-SMDC and run necessary applications, a license is required. In Cisco IOS XR release 4.1.2 (January 2012), customers can order the CGN license and download the CGN software package to enable the Carrier Grade NAT44 application.

Note: Cisco PRP3-SMDC will not power on with Cisco IOS XR releases prior to release 4.1.2.

Ordering Information

Table 2 lists the product IDs that will be orderable on the XR 12000 Series Routers. The CGN license will be only orderable with Cisco IOS XR Release 4.1.2.

Table 2.   Ordering Information

Product Name	Part Number
Cisco PRP-3 Service Module Daughter Card	PRP3-SMDC
Cisco PRP-3 Service Module Daughter Card Spare	PRP3-SMDC=
Carrier Grade NAT Application License	XR12K-CGN-LIC
Carrier Grade NAT Application License Spare	XR12K-CGN-LIC=
Combined product bundle including PRP-3 and PRP3-SMDC	PRP3-P=

To place an order, visit the Cisco Ordering Home Page. To download software, visit the Cisco Software Center.

For More Information

Additional product information may be found in the Cisco PRP3-SMDC data sheet.

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