

APPN-to-SNA Switching Services Migration

General

Q. Why do I need to migrate from Advanced Peer-to-Peer Networking (APPN) to SNA Switching Services (SNASw)?

A. The traditional APPN feature set, Portable SNA (PSNA), will no longer be supported in Cisco IOS[®] Release 12.1 and later. The feature set has been replaced by a new second-generation Cisco APPN product, SNASw. The following milestones have been set for this process:

- April 16, 2001—End of engineering (EOE) for Cisco IOS Release 11.2
- August 13, 2001—End of sales (EOS) for Cisco IOS Release 12.0
- October 15, 2001—End of engineering (EOE) for Cisco IOS Release 12.0

It is time for you and your customer to start considering migration steps from the traditional APPN features to SNASw.

Q. What requirements are addressed by SNASw?

A. SNASw addresses the following requirements:

- To provide the needed SNA routing functionality
- To reduce the complexity in traditional APPN environments by simplifying network designs and reducing configuration requirements
- To address scalability issues associated with traditional APPN network node (NN) topologies

Q. What functionality is provided by SNASw?

A. SNASw supports APPN Branch Extender (BX), APPN Enterprise Extender (EE), and Dependent Logical Unit Requester (DLUR) functionality.

Q. What version and release of IBM OS/390 is needed to support SNASw BX?

A. To support the BX feature, OS/390 must be running at V2R5 or higher. In addition, the following authorized program analysis reports (APARs) must be applied: OW37548, OW37549, and OW39559. OW39559 is required for connection network support.

Q. What version and release of IBM Communications Server/390 (CS/390) is needed to support SNASw EE?

A. The *minimum* version and release of CS/390 for EE support is V2R6 with APAR OW36113 applied (the EE function was not present in the initial shipment of Release 6 but was enabled by this PTF). In addition to EE support, APAR OW36113 also provided support for the enhanced Responsive Mode adaptive rate-based (ARB-2) flow control algorithm for High Performance Routing (HPR) over IP. Responsive Mode ARB was released with EE to allow HPR

ENTERPRISE EXTENDER GENERAL INFORMATION

The following IBM APARs are recommended for customers planning to implement EE:

- APAR OW36113 (OS/CS/390 V2R6)
- APAR OW36458 (OS/CS/390 V2R7)

OS/CS/390 V2R10 (or V2R8 and higher with APAR OW43814 PQ38173) has an enhancement that enables the activation of EE major node definitions prior to TCP/IP startup.

Q. Are you currently implementing APPN RFC 1483 (with or without connection network) over Asynchronous Transfer Mode (ATM)?

A. SNASw provides data-link control (DLC) support compatible with having direct links between SNASw and upstream hosts and, therefore, does not support RFC 1483. When deploying SNASw over ATM, your connectivity choices are LAN emulation (LANE) or HPR/IP EE.

Q. Do you currently have cascaded APPN NN routers supporting DLUR functionality?

A. An APPN architectural restriction of DLUR/DLUS is that a DLUR can never be cascaded below another DLUR. The SNASw DLUR router must be directly connected to the upstream NN/DLUS server.

Q. Is your current APPN network topology composed of multiple APPN NNs cascaded below other APPN NNs?

A. Introducing SNASw BX/EX routers requires a careful insertion strategy if there are currently a number of cascaded NNs in the network path from the downstream device to upstream hosts. SNASw BX/EX must not have traditional NNs below it in the network configuration, so you should add Cisco SNASw routers at the bottom level (layer) of the APPN network topology as a starting point. Direct links or connection network preferably should be used for links between SNASw BX/EX routers and the CS/390 hosts instead of having a complex cascaded NN network in the middle.

This is accomplished using SNASw EX (HPR/IP) such that an IP network can connect the SNASw router EE RTP endpoint directly to upstream hosts. SNASw BX support eliminates the need for any intermediate APPN NN routing by providing all required emulated NN services to downstream SNA devices.

As previously mentioned, when a pre-existing DLSw+ WAN network is in place, SNASw can be deployed at the hub end (data center) or in the distribution (or aggregation) layers such that HPR/IP (EX) transport is supported between the SNASw data center router and the upstream S/390 or zSeries host. At the same time you can support the existing DLSw+ WAN transport of remote SNA traffic downstream into SNASw to use the SNA routing capabilities provided by SNASw BX and support for SNA dependent PU 2.0 devices by SNASw DLUR support.

Q. Do you have any secondary logical unit (LU)-initiated independent LU sessions?

A. Secondary LU-initiated independent LU sessions are not supported by SNASw. SNASw only supports primary LU-initiated independent LU SNA sessions and does not support the session services extensions (SSE) APPN option set.

Q. Does SNASw BX support host-to-host connection between VTAM hosts (APPN border node) or connections to downstream peripheral border nodes?

A. APPN ENs downstream from an SNASw BX router must be real ENs or other branch extenders acting as ENs, not border nodes or peripheral border nodes presenting an EN image. SNASw BX does not support being on the same path between two VTAM hosts (border node or extended border node implementations) or allow AS/400 border nodes acting as ENs to be downstream from a SNASw BX router (as mentioned previously, SNASw does not provide SSE NN server support).



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