



VPDN Features Roadmap

This roadmap lists the features documented in the *Cisco IOS VPDN Configuration Guide* and maps them to the modules in which they appear.

Roadmap History

This roadmap was first published on October 31, 2005, and last updated on November 20, 2006.

Feature and Release Support

[Table 1](#) lists VPDN feature support for the following Cisco IOS software release trains:

- [Cisco IOS Releases 12.2T, 12.3, 12.3T, and 12.4T](#)
 - For feature information in Cisco IOS Release 12.4(11)T, see the *Cisco IOS VPDN Configuration Guide* at:

http://www.cisco.com/univercd/td/doc/product/software/ios124/124cg/hvpdn_c/index.htm

- [Cisco IOS Release 12.2SB](#)

Only features that were introduced or modified in Cisco IOS Release 12.2(1) or a later release appear in the table. *Not all features may be supported in your Cisco IOS software release.*

Cisco IOS software images are specific to a Cisco IOS software release, a feature set, and a platform. Use Cisco Feature Navigator to find information about platform support and Cisco IOS software image support. Access Cisco Feature Navigator at <http://www.cisco.com/go/fn>. You must have an account on Cisco.com. If you do not have an account or have forgotten your username or password, click **Cancel** at the login dialog box and follow the instructions that appear.



Note

[Table 1](#) lists only the Cisco IOS software release that introduced support for a given feature in a given Cisco IOS software release train. Unless noted otherwise, subsequent releases of that Cisco IOS software release train also support that feature.

Table 1 Supported VPDN Features

Release	Feature Name	Feature Description	Where Documented
Cisco IOS Release 12.2SB			
12.2(31)SB2	L2TP Domain Screening, Rules Based	This feature allows you to modify the domain portion of the username seamlessly when you enter into a VPN service.	Configuring AAA for VPDNs
12.2(31)SB2	L2TP Calling Station ID Suppression	This feature was introduced in Cisco IOS Release 12.4(2)T and is now integrated into Cisco IOS Release 12.2(31)SB2. This feature allows the NAS to suppress part or all of the calling station ID from the NAS in the L2TP AV pair 22, the Calling Number ID. Calling station ID suppression can be configured globally on the router, for individual VPDN groups on the router, or on the remote RADIUS server if one is configured.	Configuring NAS-Initiated Dial-In VPDN Tunneling
Cisco IOS Releases 12.2T, 12.3, 12.3T, and 12.4T			
12.4(4)T	Configurable Domain Name Prefix and Suffix Stripping	This feature allows the NAS to be configured to strip prefixes, suffixes, or both from the full username. The reformatted username is then forwarded to the remote AAA server.	Configuring AAA for VPDNs
12.4(4)T	L2TP Tunnel Selection Load Balancing with Random Algorithm	This feature introduces an improved algorithm for load balancing L2TP sessions using the RADIUS tunnel preference attribute.	Configuring AAA for VPDNs
12.4(2)T	L2TP Calling Station ID Suppression	This feature allows the NAS to suppress part or all of the calling station ID from the NAS in the L2TP AV pair 22, the Calling Number ID. Calling station ID suppression can be configured globally on the router, for individual VPDN groups on the router, or on the remote RADIUS server if one is configured.	Configuring NAS-Initiated Dial-In VPDN Tunneling
12.3(4)T	L2TP Tunnel Connection Speed Labeling	This feature introduces the ability to accept or deny an L2TP session based on the allowed connection speed that is configured on the Cisco AR RADIUS server for that user. The RADIUS server can authorize users based on their SLA.	Configuring AAA for VPDNs
12.3(4)T	RFC-2867 RADIUS Tunnel Accounting	This feature introduces six new RADIUS accounting types that are used with the RADIUS accounting attribute Acct-Status-Type (attribute 40), which indicates whether an accounting request marks the beginning of user service (start) or the end (stop).	Configuring AAA for VPDNs
12.3(4)T	Tunnel Authentication via RADIUS on LNS	This feature allows the L2TP tunnel server to perform remote authentication and authorization with RADIUS on incoming L2TP NAS dial-in connection requests. This feature also allows the L2TP NAS to perform remote authentication and authorization with RADIUS on incoming L2TP tunnel server dial-out connection requests.	Configuring AAA for VPDNs

Table 1 Supported VPDN Features (continued)

Release	Feature Name	Feature Description	Where Documented
Cisco IOS Release 12.2SB			
12.2(31)SB2	L2TP Domain Screening, Rules Based	This feature allows you to modify the domain portion of the username seamlessly when you enter into a VPN service.	Configuring AAA for VPDNs
12.2(31)SB2	L2TP Calling Station ID Suppression	This feature was introduced in Cisco IOS Release 12.4(2)T and is now integrated into Cisco IOS Release 12.2(31)SB2. This feature allows the NAS to suppress part or all of the calling station ID from the NAS in the L2TP AV pair 22, the Calling Number ID. Calling station ID suppression can be configured globally on the router, for individual VPDN groups on the router, or on the remote RADIUS server if one is configured.	Configuring NAS-Initiated Dial-In VPDN Tunneling
12.3(2)T	L2TP Client-Initiated Tunneling	This feature introduces the ability to establish client-initiated L2TP tunnels. The client may initiate an L2TP or L2TPv3 tunnel to the tunnel server without the intermediate NAS participating in tunnel negotiation or establishment.	Configuring Client-Initiated Dial-In VPDN Tunneling
12.2(15)T	L2TP Dial-Out Load Balancing and Redundancy	This feature enables a tunnel server to dial out to multiple NASs. When the NAS with the highest priority goes down, it is possible for the tunnel server to fail over to another lower priority NAS. The tunnel server can also load balance sessions between multiple NASs that have the same priority settings.	Configuring Additional VPDN Features
12.2(15)T	VRF-Aware VPDN Tunnels	This feature enhances the support of VPDN tunnels by allowing VPDN tunnels to start outside an MPLS VPN and terminate within the MPLS VPN.	Configuring Additional VPDN Features
12.2(13)T	L2TP Extended Failover	This feature extends L2TP failover to occur if during tunnel establishment a router receives a StopCCN message from its peer, or if during session establishment a router receives a CDN message from its peer. In either case, the router selects an alternate peer to contact.	Configuring NAS-Initiated Dial-In VPDN Tunneling
12.2(13)T	L2TP Redirect	This feature allows a tunnel server participating in SGBP to send a redirect message to the NAS if another stack group member wins the SGBP bid. The NAS will then reinitiate the call to the newly redirected tunnel server.	Configuring Multihop VPDN
12.2(13)T	Per-VRF AAA	This feature allows AAA to be configured for VRF instances.	Configuring AAA for VPDNs “Configuring RADIUS” section of the <i>Cisco IOS Security Configuration Guide</i> , Release 12.4
12.2(13)T	RADIUS Tunnel Attribute Extensions	This feature introduces RADIUS attribute 90 and RADIUS attribute 91. Both attributes help support the provision of compulsory tunneling in VPDNs by allowing the user to specify authentication names for the NAS and the RADIUS server.	Configuring AAA for VPDNs

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12.2(13)T	Session Limit per VRF	This feature allows you to apply session limits on all VPDN groups associated with a common VPDN template. You can limit the number of VPDN sessions that terminate in a single VRF instance.	VPDN Tunnel Management
12.2(13)T	Subscriber Service Switch	This feature provides flexibility on where and how many subscribers are connected to available services and how those services are defined. The primary focus of SSS is to direct PPP from one point to another using a Layer 2 subscriber policy. The policy will manage tunneling of PPP in a policy-based bridging fashion.	Configuring Multihop VPDN “Configuring a Cisco Subscriber Service Switch Policy” section of the <i>Cisco IOS Broadband and DSL Configuration Guide</i> , Release 12.4
12.2(13)T	VPDN Multihop by DNIS	This feature allows DNIS-based multihop capability for VPDNs.	Configuring Multihop VPDN
12.2(8)T	VPDN Default Group Template	This feature introduces the ability to configure global default values for VPDN group parameters in a VPDN template. These global default values are applied to all VPDN groups, unless specific values are configured for individual VPDN groups.	Configuring Additional VPDN Features
12.2(4)T	L2TP Security	This feature allows the robust security features of IPSec to protect the L2TP tunnel and the PPP sessions within the tunnel. In addition, the L2TP Security feature provides built-in keepalives and standardized interfaces for user authentication and accounting to AAA servers.	Configuring Additional VPDN Features
12.2(4)T	RADIUS Attribute 82: Tunnel Assignment ID	This feature allows the L2TP NAS to group users from different per-user or domain RADIUS profiles into the same active tunnel if the tunnel endpoints, tunnel type, and Tunnel-Assignment-ID are identical.	Configuring AAA for VPDNs
12.2(4)T	RADIUS Tunnel Preference for Load Balancing and Fail-Over	This feature provides industry-standard load balancing and failover functionality for multivendor networks.	Configuring AAA for VPDNs

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12.2(4)T	Timer and Retry Enhancements for L2TP and L2F	This feature allows the user to configure certain adjustable timers and counters for L2TP and L2F.	VPDN Tunnel Management
12.2(4)T	VPDN Group Session Limiting	This feature allows the user to configure a limit on the number of L2F or L2TP VPDN sessions allowed for each VPDN group.	VPDN Tunnel Management
12.2(2)T	Shell-Based Authentication of VPDN Users	This feature provides terminal services for VPDN users to support rollout of wholesale dial networks.	Configuring AAA for VPDNs
Cisco IOS Release 12.2SB			
12.2(31)SB2	L2TP Domain Screening	This feature ensures that the appropriate domain (VPN or otherwise) is screened before allowing access to an L2TP tunnel for the user session.	L2TP Domain Screening
12.2(31)SB2	L2TP Calling Station ID Suppression	This feature allows you to “anonymize” a calling number in a Call Detail Record (CDR) to allow for more granular control for Automatic Number Identification applications.	L2TP Calling Station ID Suppression
12.2(31)SB2	L2TP Tunnel Selection Load Balancing with Random Algorithm	This feature changes the current LAC/LNS tunnel selection algorithm from a Least Connection/Round Robin scheme to a Least Connection/Random scheme. This ensures a balanced distribution of tunnels from LAC to LNS.	Configuring L2TP Tunnel Server Load Balancing and Failover Using the RADIUS Tunnel Preference Attribute
12.2(28)SB	L2TP Congestion Avoidance	This feature provides packet flow control and congestion avoidance by throttling L2TP control messages as described in RFC 2661.	VPDN Tunnel Management
12.2(28)SB	L2TP Dial-Out Load Balancing and Redundancy	This feature enables a tunnel server to dial out to multiple NASs. When the NAS with the highest priority goes down, it is possible for the tunnel server to fail over to another lower priority NAS. The tunnel server can also load balance sessions between multiple NASs that have the same priority settings.	Configuring Additional VPDN Features

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12.2(28)SB	L2TP Extended Failover	This feature extends L2TP failover to occur if during tunnel establishment a router receives a StopCCN message from its peer, or if during session establishment a router receives a CDN message from its peer. In either case, the router selects an alternate peer to contact.	Configuring NAS-Initiated Dial-In VPDN Tunneling
12.2(28)SB	L2TP Redirect	This feature allows a tunnel server participating in SGBP to send a redirect message to the NAS if another stack group member wins the SGBP bid. The NAS will then reinitiate the call to the newly redirected tunnel server.	Configuring Multihop VPDN
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