

PPPoE Session Limit Local Override

The PPPoE Session Limit Local Override feature enables the session limit configured locally on the broadband remote access server (BRAS) or L2TP access concentrator (LAC) to override the per-NAS-port session limit downloaded from the RADIUS server when Subscriber Service Switch (SSS) preauthorization is enabled.

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Information About PPPoE Session Limit Local Override

How PPPoE Session Limit Local Override Works

PPP over Ethernet (PPPoE) session limits are downloaded from the RADIUS server when you enable SSS preauthorization on the LAC using the **subscriber access pppoe pre-authorize nas-port-id**command. By enabling preauthorization, you limit the number of PPPoE sessions on a specific VLAN; that is, the PPPoE per-NAS-port session limit downloaded from the RADIUS server takes precedence over locally configured (port-based) session limits, such as per-VLAN session limits. The following is a sample user profile to configure a session limit through RADIUS:

```
Username=nas_port:10.10.10.10:4/0/0/1.100
Password = "password1"
cisco-avpair= "pppoe:session-limit=session limit per NAS-port"
```

The PPPoE Session Limit Local Override feature enables the local session limit configured at the BRAS to override the per-NAS-port session limit configured at the RADIUS server when SSS preauthorization is configured.

Note The PPPoE Session Limit Local Override feature is useful only when you have configured SSS preauthorization on the BRAS or LAC.

To enable the PPPoE Session Limit Local Override feature, configure the **sessions pre-auth limit ignore** command under the broadband access (BBA) group associated with the interface. When the PPPoE Session

Limit Local Override feature is enabled, the locally configured session limit is applied before PPP is started; that is before the BRAS sends out a PPPoE Active Discovery Offer (PADO) packet to the client, advertising a list of available services.

When preauthorization is configured without the PPPoE Session Limit Local Override feature enabled, the client receives an authentication failure response from the BRAS when there is no session limit downloaded from the RADIUS server and the locally configured session limit is exceeded. The BRAS waits to apply locally configured limits until PPP negotiation is completed. When a call is finally rejected, the client receives the authentication failure response, resulting in session failure, with no ability to distinguish whether the session failure results from a Challenge Handshake Authentication Protocol (CHAP) authentication failure or a PPPoE session limit having been exceeded. The PPPoE Session Limit Local Override feature allows for differentiation between the handling of per-NAS-port failures and session limiting failures.

If you enable the PPPoE Session Limit Local Override feature, but there are no locally configured per-port session limits, then per-NAS-port session limits downloaded from the RADIUS server are applied.

How to Configure PPPoE Session Limit Local Override

Enabling PPPoE Session Limit Local Override

Enable the PPPoE Session Limit Local Override feature to allow the local session limit configured on the BRAS to override the per-NAS-port session limit downloaded from the RADIUS server.



Note If there are no locally configured per-port session limits, then per-NAS port session limits downloaded from the RADIUS server are applied.

>

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **bba-group pppoe** {*group-name* | **global**}
4. **sessions per-vlan limit** *per-vlan-limit*
5. **sessions pre-auth limit ignore**
6. **end**

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:**	Enables privileged EXEC mode. • Enter your password if prompted.

	Command or Action	Purpose
	`Router> enable`	
Step 2	**configure terminal** **Example:** `Router# configure terminal`	Enters global configuration mode.
Step 3	**bba-group pppoe** {*group-name* | **global**} **Example:** `Router(config)# bba-group pppoe test`	Creates a PPPoE profile and enters BBA group configuration mode. • *group-name* --Name of the PPPoE profile.
Step 4	**sessions per-vlan limit** *per-vlan-limit* **Example:** `Router(config-bba-group)# sessions per-vlan limit 3`	Limits the number of PPPoE sessions per VLAN in a PPPoE profile. • *per-vlan-limit* --Maximum number of PPPoE sessions that can be established over an Ethernet VLAN. The default is 100.
Step 5	**sessions pre-auth limit ignore** **Example:** `Router(config-bba-group)# sessions pre-auth limit ignore`	Enables the PPPoE Session Limit Local Override feature. The locally configured limit overrides the per-NAS-port session limit configured at the RADIUS server.
Step 6	**end** **Example:** `Router(config-bba-group)# end`	Exits BBA group configuration mode and returns to privileged EXEC mode.

Configuration Examples for PPPoE Session Limit Local Override

Enabling PPPoE Session Limit Local Override Example

The following example creates a PPPoE group named test, configures a limit of three sessions per VLAN, and enables the PPPoE Session Limit Local Override feature in bba-group configuration mode. The running configuration shows that the **sessions pre-auth limit ignore** command was used to enable this feature.

```
Router(config)# bba-group pppoe test
Router(config-bba-group)# sessions per-vlan limit 3
Router(config-bba-group)# sessions pre-auth limit ignore

.
.
!
bba-group pppoe test
virtual-template 2
```

```
sessions per-vlan limit 3
sessions pre-auth limit ignore
!
```

Additional References

The following sections provide references related to the PPPoE Session Limit Local Override feature.

Related Documents

Related Topic	Document Title
Additional information about commands used in this document	• *Cisco IOS Broadband Access Aggregation and DSL Command Reference* •

Standards

Standard	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	--

MIBs

MIB	MIBs Link
No new or modified MIBs are supported by this feature, and support for existing MIBs has not been modified by this feature.	To locate and download MIBs for selected platforms, Cisco IOS XE releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFCs	Title
No new or modified RFCs are supported by this feature, and support for existing RFCs has not been modified by this feature.	--

Technical Assistance

Description	Link
The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.	http://www.cisco.com/techsupport

Feature Information for PPPoE Session Limit Local Override

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Table 1: Feature Information for PPPoE Session Limit Local Override

Feature Name	Releases	Feature Information
PPPoE--Session Limit Local Override	Cisco IOS XE Release 2.1	This feature was introduced on Cisco ASR 1000 Series Routers. This feature enables the session limit configured locally on the broadband remote access server (BRAS) or L2TP access concentrator (LAC) to override the per-NAS-port session limit downloaded from the RADIUS server when Subscriber Service Switch (SSS) preauthorization is enabled. The following commands were introduced or modified: **sessions pre-auth limit ignore**.