

May 2012 Revision 1

1

## 1. Overview

Many Internet service providers use the Point-to-Point Protocol over Ethernet (PPPoE) to provide Digital Subscriber Link (DSL) broadband Internet access. PPPoE uses a standard method of encryption, authentication, and compression specified by the Point-to-Point Protocol. With the release of WING 5.3, a PPPoE client was implemented. Implementing a PPPoE client allows a WiNG 5.X device to connect to the ISP over an Ethernet interface.

As with other interfaces, a PPPoE client interface can be defined within a Device Profile or directly to a device as a Device Override. In the command console, the PPPoE client uses the interface name pppoe1. The interface also supports Firewall and Crypto policies as well as NAT. Keep in mind that the interface configuration MUST include the VLAN ID the DSL modem is connected to.

## 1.1 Configuring PPPoE parameters

1. Log in to the WING 5 GUI of the controller. In the WiNG GUI of your Wireless Controller, select Configuration > Devices > [your controller name] > [Edit]. Then expand Interface section and click on PPPoE.

Dashboard Configuration Diagnostic	s Operations Statistics		🔷 RF 54000 🕖	WiNG v5.3 11111 &	admin 😽
Devices Wireless Network Profiles	RF Domains Security Service	es Management		S Reve	art   🛃 Commit 🛛 拱 Sa
Device Configuration	Device rfs4000-1AF8A6 (50	C-0E-8B-1A-F8-A6) Type RFS4000		Profile Name	default-rfs4000
AP300 Devices       AP300 Devices       Revent Policy       Mint Policy       Mint Policy    Group By RF Domain       All     Controller       AP       RF Domain       Tmildefault       Image: State	Basic Configuration  Licenses Certificates RF Domain Overrides RF Domain Overrides WLAN Overrides General Cluster Adoption w Interface Ethernet Ports Virtual Interfaces	asic Settings Enable PPPoE  Service  DSL Modem Network (VLAN)  Lient IP Address  Username Password Authentication Type PAP  onnection  Maximum Transmission Unit (MTU) 1492  10  10	C Enabled (1 to 4,094) (1 to 4,094) ↓ Show ↓ (1 to 1,093)		
	Port Channels Radios WAN Backhaul PPPoE Network S	Keep Alive  Content of the second sec	Outside  None		

The PPPoE configuration page will appear:

Basic Settings	
Enable PPPoE	Disabled  Enabled
Service	0
DSL Modem Network (VLAN)	1 (1 to 4,094)
Client IP Address	0
Authentication	
Username	0
Password	O Show
Authentication Type	0 PAP 🔻
Connection	
Maximum Transmission Unit (MTU)	1492 (500 to 1,492)
Client Idle Timeout	I 10 Minutes ▼ (1 to 1,093)
Keep Alive	0
Network Address Translation (NA	<b>D</b> =
NAT Direction	0 Inside Outside  None
Security Settings	
IP Inhound Firewall Rules	

- Begin entering all the relevant parameters. Under the Basic Settings section, choose the Enable PPPoE :: Enabled option. You can also enter the name of your DSL service provider in the Service field. Next enter the VLAN ID of your network into the DSL Modem Network (VLAN) field. Finally, enter the Client IP Address if your ISP assigns you a static IP address. Otherwise, leave it unchecked.
- 3. Under Authentication, put in your username and password in the appropriate fields and select your ISP's authentication type. There is a choice of CHAP, MSCHAP, mschap-v2, and PAP for authentication.

I	YourUserN	ame				
	YourPassw			Show		
0	PAP	•	l.			
	None					
0	CHAP		0 to 1,492)			
0	MSCHAP		nutes		( 1 to 1,093 )	
1	mschap-v2	2				
	0	YourUserN     YourPassw     PAP     None     CHAP     MSCHAP     mschap-V.	<ul> <li>YourUserName</li> <li>YourPassword</li> <li>PAP</li> <li>None</li> <li>CHAP</li> <li>MSCHAP</li> <li>mschap-v2</li> </ul>	YourUserName       YourPassword       PAP       None       CHAP       Oto 1,49       MSCHAP       mschap-v2	YourUserName       YourPassword       PAP       None       CHAP       0 to 1,492)       MSCHAP       nutes       mschap-v2	

- 4. In Connection, you can choose to change the default Maximum Transmission Unit (MTU) parameter from 1492 to another value if you know the optimum setting. You can also choose to increase or decrease the Client Idle Timeout from the default of 10 minutes as well as enable Keep Alive to maintain connectivity.
- 5. You can configure the Network Address Translation to be Inside, Outside, or None. For the majority of network configurations, Outside will need to be selected.
- 6. Finally, you can choose the Crypto and Firewall policies to apply to the PPPoE interface.

**Example Configuration** 

asic settings	
Enable PPPoE	P 🔘 Disabled 💽 Enabled
Service	/ DSLCompany
DSL Modem Network (VLAN)	
Client IP Address	0
uthentication	
Username	/ YourUserName
Password	✓ YourPassword ✓ Show
Authentication Type	• PAP •
onnection	10 <sup>2</sup> - 20 <sup>2</sup>
Maximum Transmission Unit (MTU)	● 1492
Client Idle Timeout	In Minutes ▼ (1 to 1,093)
Keep Alive	1 1
letwork Address Translation (NAT NAT Direction	) 🥒 🕐 🕐 Outside 🚫 None
letwork Address Translation (NAT NAT Direction Authentication	) 🖉 🕐 Inside 💿 Outside 🚫 None
letwork Address Translation (NAT NAT Direction Authentication Username	Inside      Outside      None     YourUserName
letwork Address Translation (NAT NAT Direction Authentication Username Password	VourUserName  Show
etwork Address Translation (NAT NAT Direction Authentication Username Password Authentication Type	VourUserName VourUserName PAP  A Show
etwork Address Translation (NAT NAT Direction Authentication Username Password Authentication Type Connection	PourUserName PAP Show
etwork Address Translation (NAT NAT Direction Authentication Username Password Authentication Type Connection Maximum Transmission Unit (MTU	) Inside Outside None
etwork Address Translation (NAT NAT Direction Authentication Username Password Authentication Type Connection Maximum Transmission Unit (MTU) Client Idle Timeout	) Inside ⊙ Outside ○ None
etwork Address Translation (NAT NAT Direction Authentication Username Password Authentication Type Connection Maximum Transmission Unit (MTU Client Idle Timeout Keep Alive	<ul> <li>Inside Outside None</li> <li>YourUserName</li> <li>YourUserName</li> <li>FAP</li> <li>(500 to 1,492)</li> <li>10</li> <li>Minutes</li> <li>(1 to 1,093)</li> </ul>
etwork Address Translation (NAT NAT Direction Authentication Username Password Authentication Type Connection Maximum Transmission Unit (MTU) Client Idle Timeout Keep Alive Interverk Address Translation (N	) Inside Outside None VourUserName PAP 1492 (500 to 1,492) 10 Minutes (1 to 1,093) V
etwork Address Translation (NAT NAT Direction Authentication Username Password Authentication Type Connection Maximum Transmission Unit (MTU) Client Idle Timeout Keep Alive Ietwork Address Translation (N NAT Direction	) Inside ⊙ Outside ○ None / YourUserName / *********** PAP ▼ ) ① 1492 ★ (500 to 1,492) ① 10 Minutes ▼ (1 to 1,093) / ♥
Ietwork Address Translation (NAT NAT Direction Authentication Username Password Authentication Type Connection Maximum Transmission Unit (MTU) Client Idle Timeout Keep Alive Ietwork Address Translation (N NAT Direction Security Settings	) Inside ⊙ Outside ○ None

7. When you're done, save your changes to the running configuration on the switch by clicking the Commit command at the upper right-hand corner of the main window:

Dashboard	Configur	Diagnosti	. Operations	Statistics	🔷 RF\$4000		Wi-NG v5.0	<u>8</u> adr	min	j o
Devices	Wireless	Profiles	RF Domains	Security	Services	Managem	ent	5 Revert	Commit	Save
				1	Commit					

8. Save your changes to the startup configuration on the switch by clicking the Save command at the upper right-hand corner of the main window.

Dashbo	ard Conf	igur	Diagnosti.	Operations	Statistics	RF\$4000		Wi-NG v5.0	admir	n	Ø,
Device	s Wirel	less	Profiles	RF Domains	Security	Services	Manager	nent 🦻	Revert 🛛 🖢	Commit	Save
					l.	Save					