



# Configuring the MPLS/VPN BGP LEG

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## Introduction

This chapter provides the configuration instructions to configure the Multiprotocol Label Switching (MPLS)/Virtual Private Network (VPN) Border Gateway Protocol (BGP) Login Event Generator (LEG).

The Subscriber Manager (SM) MPLS/VPN BGP LEG is configured using the configuration file **p3bgpleg.cfg** file, which resides in the **sm-inst-dir/sm/server/root/config** directory (**sm-inst-dir** refers to the SM installation directory). The configuration file is loaded only upon the SM MPLS/VPN BGP LEG startup.

The configuration file holds the IP addresses of the Provider Edge (PE) routers from which the routing information is gathered. When you reload the configuration file, all the BGP connections terminate and the BGP LEG waits for connections to be re-established from the IP addresses configured in the configuration file.

The configuration file consists of sections headed by a bracketed section title such as **[General]** for the general configuration section. Each section consists of one or more parameters having the format **parameter=value**. The number sign (“#”) at the beginning of a line signifies that it is a comment.

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## Configuring the MPLS/VPN BGP LEG Settings

This section describes the configuration file settings for each section.

The **[General]** section contains the following parameters:

- **as-num**  
Defines the autonomous system number of the BGP LEG. This parameter is mandatory and has no default value.  
Possible values are 1 to 65535.
- **max-route-burst**  
Defines an estimation of the expected burst of routes upon PE connection/refresh-all.  
This parameter sets the PRPC buffer size between the BGP LEG and the SM.  
The parameter is mandatory and has a default value of 100,000 routes in the p3bgpcfg configuration file.

The **[PE.xxxxxxx]** section holds the PE or Route Reflector information. Each PE section must include a unique PE/Route Reflector name. The section contains the following parameters:

- **access**  
Defines the IP address or addresses that the PE/Route Reflector accesses (in dotted notation). It is mandatory to configure at least one access IP address. Additional IP addresses, if needed, should be on the same line, separated by comma. The same IP address cannot appear in two PE sections.
- **as-num**  
Defines the autonomous system number connected to the PE/Route Reflector. This parameter is not required. If not specified, the as-num defined in the **[General]** section is used.

## Configuration File Example

The following example illustrates the MPLS/VPN BGP LEG configuration file:

```
[General]
as-num=255
max-route-burst=100000
[PE.site104]
access=10.56.211.80, 10.0.1.2, 10.55.123.56
[PE.site110]
access=10.28.233.129
as-num=110
[PE.10.56.211.81]
access=10.56.211.81
```

## Configuring the SM for the MPLS/VPN BGP LEG

You must configure the SM to support the SM MPLS/VPN BGP LEG. The SM configuration file, **p3sm.cfg** contains a configuration section for MPLS/VPN called **[MPLS/VPN]**. The section contains the following parameters:

- **vpn\_id**

Defines the BGP attribute that is used to identify the VPNs.

Possible values for this parameter are **RD** and **RT**.

The default value is **RT**.

- log\_all

Defines the logging level of the BGP LEG.

Possible values for this parameter are **true** or **false**.

The default value is **false**.

If this parameter is set to **true**, the SM logs all received BGP packets. Set this parameter to true during the integration/testing phase.

For further information on configuring the SM, see the [Cisco Service Control Management Suite Subscriber Manager User Guide](#).

