

# Configure the PnP Settings on a Switch through the CLI

## Objective

The installation of new networking devices or replacement of devices can be expensive, time-consuming, and error-prone when performed manually. Typically, new devices are first sent to a central staging facility where the devices are unboxed, connected to a staging network, updated with the right licenses, configurations, and images, and then packaged and shipped to the actual installation location. After these processes are completed, experts must travel to the installation locations to perform the installation. Even in scenarios where the devices are installed in the No Objection Certificate (NOC) or Data Center itself, there may not be enough experts for the sheer number of devices. All these issues contribute to delays in deployment and add to the operational costs.

The Cisco Plug-n-Play solution reduces the costs associated with deployment and installation of network devices, increase the speed of their installation, and reduce the complexity of deployments without compromising the security. Using the Cisco Plug-n-Play solution, you can perform Zero Touch Installs of the switches in various deployment scenarios and deployment locations.

This article provides instructions on how to configure the PnP settings on your switch through the Command Line Interface (CLI).

## Applicable Devices

- Sx350 Series
- SG350X Series
- Sx550X Series

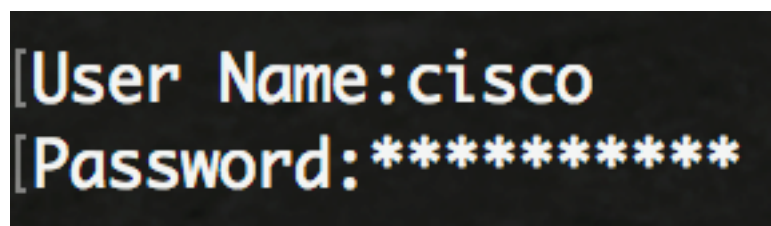
## Software Version

- 2.3.5.63

## Configure PNP Settings

Step 1. Log in to the switch console. The default username and password is cisco/cisco. If you have configured a new username or password, enter the credentials instead.

**Note:** To learn how to access an SMB switch CLI through SSH or Telnet, click [here](#).

A terminal window with a black background and white text. The first line shows "[User Name:cisco" and the second line shows "[Password:\*\*\*\*\*".

```
[User Name:cisco
[Password:*****
```

**Note:** The commands may vary depending on the exact model of your switch. In this example, the

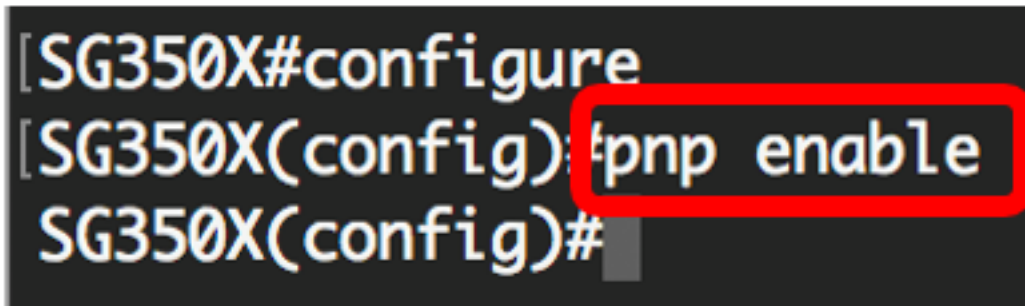
SG350X switch is accessed through Telnet.

Step 2. From the Privileged EXEC mode of the switch, enter the Global Configuration mode by entering the following:

```
CBS350X#configure
```

Step 3. To globally enable PnP on your switch, enter the following:

```
SG350X(config)#pnp enable
```

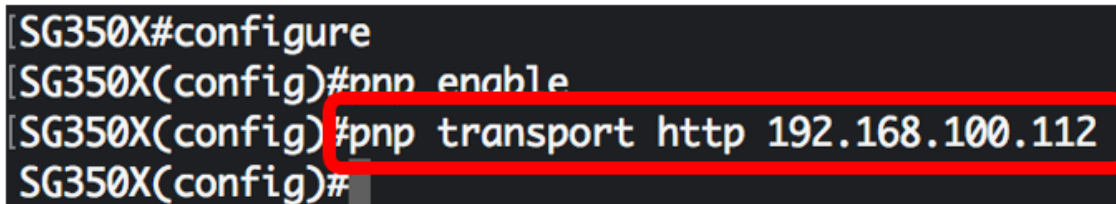


```
[SG350X#configure
[SG350X(config)#pnp enable
SG350X(config)#
```

Step 4. Enter the protocol and PnP server name or IP address for locating configuration information:

```
SG350X(config)#pnp transport [protocol] {{server [name] [ip address]}}
```

**Note:** The default transport protocol is HTTP and the PnP server name is **pnpserver**.

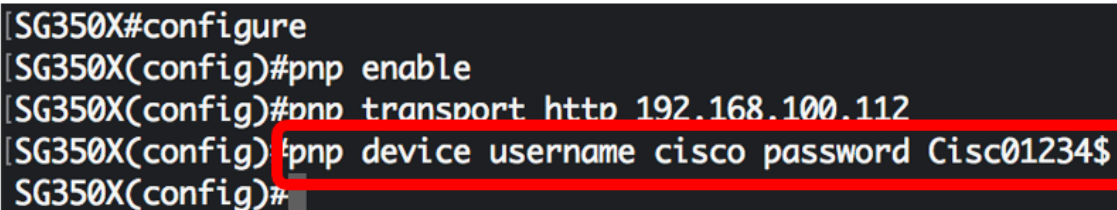


```
[SG350X#configure
[SG350X(config)#pnp enable
[SG350X(config)#pnp transport http 192.168.100.112
SG350X(config)#
```

**Note:** In this example, the PnP transport protocol used is HTTP and the server IP address 192.168.100.112 is entered.

Step 5. To configure the username and password to be entered in the PnP packets, enter the following:

```
SG350X(config)#pnp device username [username] password [password]
```



```
[SG350X#configure
[SG350X(config)#pnp enable
[SG350X(config)#pnp transport http 192.168.100.112
[SG350X(config)#pnp device username cisco password Cisc01234$
SG350X(config)#
```

**Note:** In this example, the username is cisco and the password is Cisc01234\$.

Step 6. To configure the Reconnection Interval in seconds before attempting to reconnect the session after the connection is lost, enter the following:

```
SG350X(config)#pnp reconnect interval [seconds]
```

```
SG350X#configure
SG350X(config)#pnp enable
SG350X(config)#pnp transport http 192.168.100.112
SG350X(config)#pnp device username cisco password Cisc01234$
SG350X(config)#pnp reconnect interval 30
SG350X(config)#
```

**Note:** In this example, Use Default is chosen which has the default value of 30 seconds.

Step 7. To configure the discovery timeout settings, enter the following:

```
SG350X(config)#pnp discovery timeout [seconds] [exponential factor] [timeout value]
```

```
SG350X#configure
SG350X(config)#pnp enable
SG350X(config)#pnp transport http 192.168.100.112
SG350X(config)#pnp device username cisco password Cisc01234$
SG350X(config)#pnp reconnect interval 30
SG350X(config)#pnp discovery timeout 60 3 540
SG350X(config)#
```

The options are:

- timeout seconds — the time to wait in seconds before attempting discovery again after a discovery of the PnP server failed. The default value is 60 seconds.
- exponential factor — the value that triggers the discovery attempt exponentially by multiplying the previous timeout value by an exponential value and applying the result as timeout (if value is smaller than max timeout value). In this example, the default value of 3 is used.
- max timeout value — the maximum value of timeout in discover. The value must be greater than the Discovery Timeout value.

Step 8. To configure the watchdog timeout, enter the following:

```
SG350X(config)#pnp watchdog timeout [seconds]
```

- seconds — the interval of time to wait for a reply from a PnP or file server during an active PnP session, such as during a file download process. In this example, 60 seconds is used.

```
SG350X#configure
SG350X(config)#pnp enable
SG350X(config)#pnp transport http 192.168.100.112
SG350X(config)#pnp device username cisco password Cisc01234$
SG350X(config)#pnp reconnect interval 30
SG350X(config)#pnp discovery timeout 60 3 540
SG350X(config)#pnp watchdog timeout 60
SG350X(config)#
```

Step 9. Enter the **exit** command to go back to the Privileged EXEC mode:

```

SG350X#configure
SG350X(config)#pnp enable
SG350X(config)#pnp transport http 192.168.100.112
SG350X(config)#pnp device username cisco password Cisc01234$
SG350X(config)#pnp reconnect interval 30
SG350X(config)#pnp discovery timeout 60 3 540
SG350X(config)#pnp watchdog timeout 60
SG350X(config)#exit
SG350X#

```

Step 10. (Optional) To display the PnP settings on your switch, enter the following:

```
CBS350X#show pnp
```

```

SG350X(config)#exit
SG350X#show pnp
Administrative status: enabled
Operational status: ready
PnP Agent state: discoveryWait
Transport protocol: http
Server IP address: 192.168.100.112
TCP port: 80
Username: cisco
(Encrypted>Password: R0Z8xIG/Z6y1iBQgm0IjzCChWoNV3LiNH3gwByD4V0k=
Discovery Timeout: 60 seconds
Discovery Exponential Factor: 3
Discovery Maximum Timeout: 540 seconds
PnP Session Interval Timeout: 30 seconds
PnP Watchdog Timeout: 60 seconds
Timer Remainder: 211 seconds
SG350X#

```

Step 11. (Optional) In the Privileged EXEC mode of the switch, save the configured settings to the startup configuration file by entering the following:

```
CBS350X#copy running-config startup-config
```

```

SG350X#copy running-config startup-config
Overwrite file [startup-config]... (Y/N)[N] ?

```

Step 12. (Optional) Press **Y** for Yes or **N** for No on your keyboard once the Overwrite file [startup-config]... prompt appears.

```

SG350X#copy running-config startup-config
Overwrite file [startup-config]... (Y/N)[N] ?Y
22-Sep-2017 04:09:18 %COPY-I-FILECPY: Files Copy - source URL running-config des
tination URL flash://system/configuration/startup-config
22-Sep-2017 04:09:20 %COPY-N-TRAP: The copy operation was completed successfully
SG350X#

```

You should now have successfully configured the PnP settings on your switch through the CLI.