

# Configure Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) Service Settings on a Switch

## Objective

Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) are transportation protocols which are some of the core protocols of the Internet protocol suite. Both TCP and UDP work at the transport layer of the TCP/IP model. TCP uses a three-way handshake to establish the reliable connection, whereas UDP is unreliable but faster when compared to TCP. The network device offers some of the services which use either TCP or UDP for easy management of the device. The services can be enabled or disabled based on the requirement.

The TCP and UDP services information are shown in the TCP and UDP Service tables of the web-based utility page of the switch. The information showed in these tables depict the current status of the enabled TCP and UDP services. You can use this information to manage and troubleshoot any of the enabled services on the switch.

This article provides instructions on how to configure the TCP and UDP services on your switch.

## Applicable Devices

- Sx250 Series
- Sx300 Series
- Sx350 Series
- SG350X Series
- Sx500 Series
- Sx550X Series

## Software Version

- 1.4.7.05 — Sx300, Sx500
- 2.2.8.04 — Sx250, Sx350, SG350X, Sx550X

## Configure TCP/UDP Services on your Switch

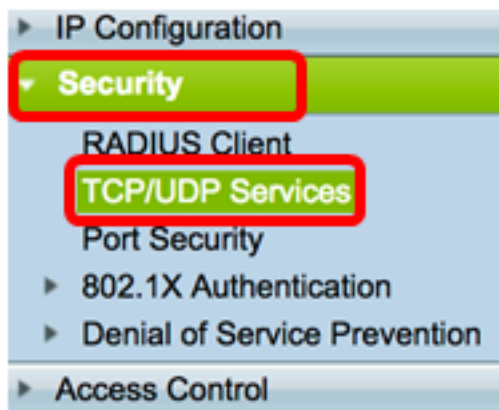
### Configure TCP/UDP Services

The TCP/UDP Services page enables TCP or UDP-based services on the device, usually for security reasons. Follow these steps to enable or disable a specific service:

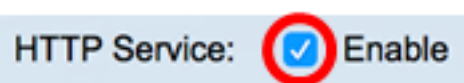
Step 1. Log in to the web-based utility of your switch then choose **Security > TCP/UDP Services**.

**Note:** The available options may vary depending on the exact model of your device. In this

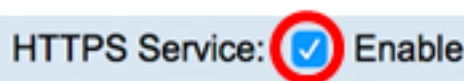
example, SG350X-48MP switch is used.



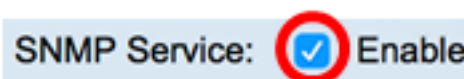
Step 2. Check the **Enable** HTTP to enable the Hyper Text Transfer Protocol (HTTP) service on your switch. By default, Cisco Small Business Switches can be configured through the web-based utility using a web browser thus this service is checked by default.



Step 3. Check the **Enable** HTTPS to enable the Hyper Text Transfer Protocol Secure (HTTPS) service on your switch. Connectivity between the administrator and the switch using HTTP is unencrypted. You can enable the HTTPS service which works with Secure Socket Layer (SSL) protocol to offer to the administrator a more secure web browser connection with the configuration utility of the switch. This service is enabled by default.

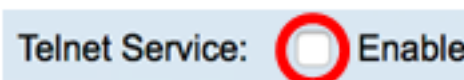


Step 4. Check the **Enable** SNMP to enable the Simple Network Management Protocol (SNMP) service on your switch. SNMP is an application layer protocol that is used to manage and monitor a network. For the different SNMP features to work properly, you first need to enable the SNMP service.



**Note:** In this example, SNMP Service is enabled.

Step 5. Check the **Enable** Telnet Service check box to enable the Telnet service on your switch. Telnet is a network protocol that allows a device to be controlled by a command line interface over the Internet or a LAN. When Telnet is enabled, an administrator can configure the switch through the use of a Telnet client application. However, since Telnet messages are not encrypted, it is recommended that you use SSH service.



**Note:** In this example, Telnet Service is disabled.

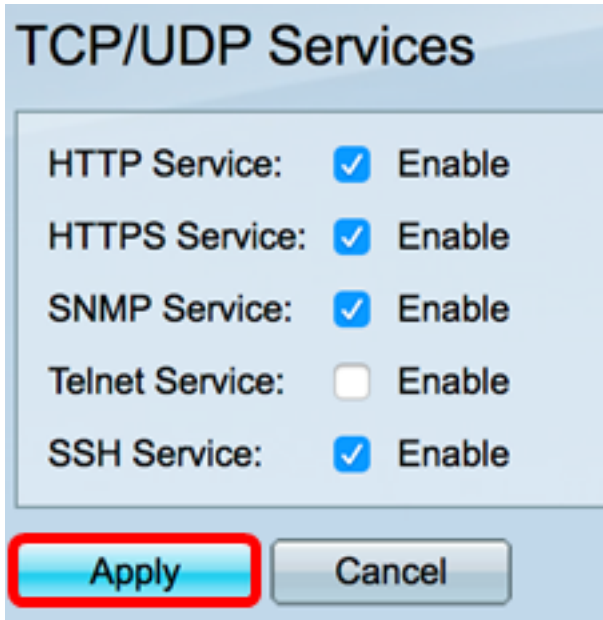
Step 6. Check the **Enable** SSH Service check box to enable the Secure Shell (SSH) service on your switch. SSH allows the administrator to configure the switch through a command line interface (CLI) with a third party program. In CLI mode via SSH, the administrator can

execute more advanced configurations in a secure connection.

SSH Service:  Enable

**Note:** In this example, Telnet Service is enabled.

Step 7. Click **Apply** to save the settings.

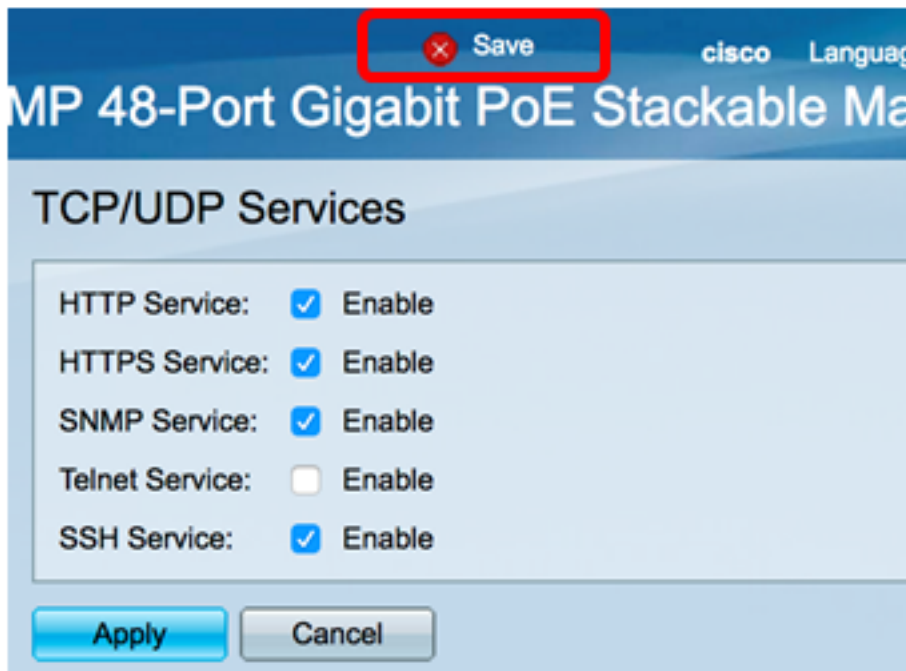


TCP/UDP Services

HTTP Service:	<input checked="" type="checkbox"/>	Enable
HTTPS Service:	<input checked="" type="checkbox"/>	Enable
SNMP Service:	<input checked="" type="checkbox"/>	Enable
Telnet Service:	<input type="checkbox"/>	Enable
SSH Service:	<input checked="" type="checkbox"/>	Enable

Apply Cancel

Step 8. (Optional) Click **Save** to save settings to the startup configuration file.



Save

TCP/UDP Services

HTTP Service:	<input checked="" type="checkbox"/>	Enable
HTTPS Service:	<input checked="" type="checkbox"/>	Enable
SNMP Service:	<input checked="" type="checkbox"/>	Enable
Telnet Service:	<input type="checkbox"/>	Enable
SSH Service:	<input checked="" type="checkbox"/>	Enable

Apply Cancel

You should now have configured the TCP/UDP Services on your switch.

## View TCP Service Table

The TCP Service table displays the next information:

TCP Service Table						
Service Name	Type	Local IP Address	Local Port	Remote IP Address	Remote Port	State
HTTP		All	80	All	0	Listen
HTTPS		All	443	All	0	Listen
HTTP		10.10.100.106	80	10.10.100.105	54284	Time wait
HTTP		10.10.100.106	80	10.10.100.105	54352	Established
HTTP		All	80	All	0	Listen
HTTPS		All	443	All	0	Listen

- Service Name — The different access services currently enabled for TCP connections.
- Type — The TCP type used by each service. The two types are:
  - TCP — offers a reliable connection between IPv4 hosts.
  - TCP6 — offers a reliable connection between both IPv4 and IPv6 hosts.
- Local IP Address — The IP address used by the switch to offer TCP connections.
- Local Port — The port number used by the switch for each TCP service to receive connection requests.
- Remote IP Address — The IP address of the device that requests a TCP connection through the specified TCP service.
- Remote Port — The port number used by the remote device to connect to the specified TCP service.
- State — The current state of the connection. Some of the states are:
  - Listen — The switch takes any connection for this Service on the Local Port.
  - Established — Indicates an active connection.
  - Time wait — Indicates a connection that has been closed, but tracked so that out-of-order packets can still arrive to the destination.

You should now have viewed the TCP Service Table on your switch.

## View UDP Service Table

The UDP Service table displays the next information:

UDP Service Table					
Service Name	Type	Local IP Address	Local Port	Application Instance	
	UDP	All	123	1	
SNMP	UDP	All	161	1	
	UDP6	All	546	1	
Bonjour	UDP6	All	5353	1	

- Service Name — The different access services currently enabled for UDP connections.

- Type — The UDP type used by each service. The two types are:
  - UDP — offers a connection between IPv4 hosts.
  - UDP6 — offers a connection between both IPv4 and IPv6 hosts.
- Local IP Address — The IP address used by the switch to offer UDP connections.
- Local Port — The port number used by the switch for each UDP service to receive connection requests.
- Application Instance — The current UDP service instance.

You should now have viewed the UDP Service Table on your switch.