Access an SMB Switch CLI using SSH or Telnet

Objective

The Cisco Small Business Managed Switches can be remotely accessed and configured through the Command Line Interface (CLI). Accessing the CLI allows commands to be entered in a terminal-based window. If you prefer to configure using terminal commands on your switch through the CLI rather than the web-based utility, this would be an easier alternative. Certain tasks such as Layer 3 mode enabling can only be performed through the CLI.

In order to remotely access the CLI of your switch, you must use an SSH or Telnet client. You must also enable the Telnet and SSH service on your switch first before you can access it remotely.

Note: For instructions on how to configure the Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) settings on your switch, click here.

This article provides instructions on how to access the CLI of your switch through SSH or Telnet using the following clients:

- PuTTY — A standard Telnet and SSH client. You can download an installer here and install in your Windows computer.
- Terminal — An application that is pre-installed in every Mac OS X computer. It is also known as the shell or the console.

Important: Before you make an SSH or Telnet connection to the switch, you must set the IP address for the switch. For instructions, click here.

Applicable Devices

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

Software Version

- 1.4.7.06 — Sx300, Sx500
- 2.2.8.04 — Sx350, SG350X, Sx550X

Access the CLI of the Switch through SSH

The SSH sessions disconnect automatically after the idle time configured in the switch has passed. The default idle session timeout for SSH is 10 minutes.

To make an SSH connection to the switch, choose your platform:

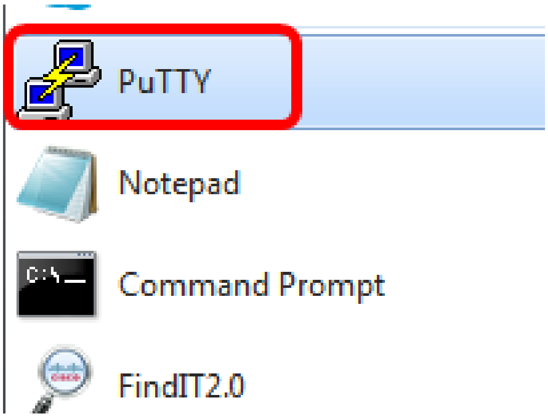
Windows Computer using PuTTY

Mac Computer using Terminal

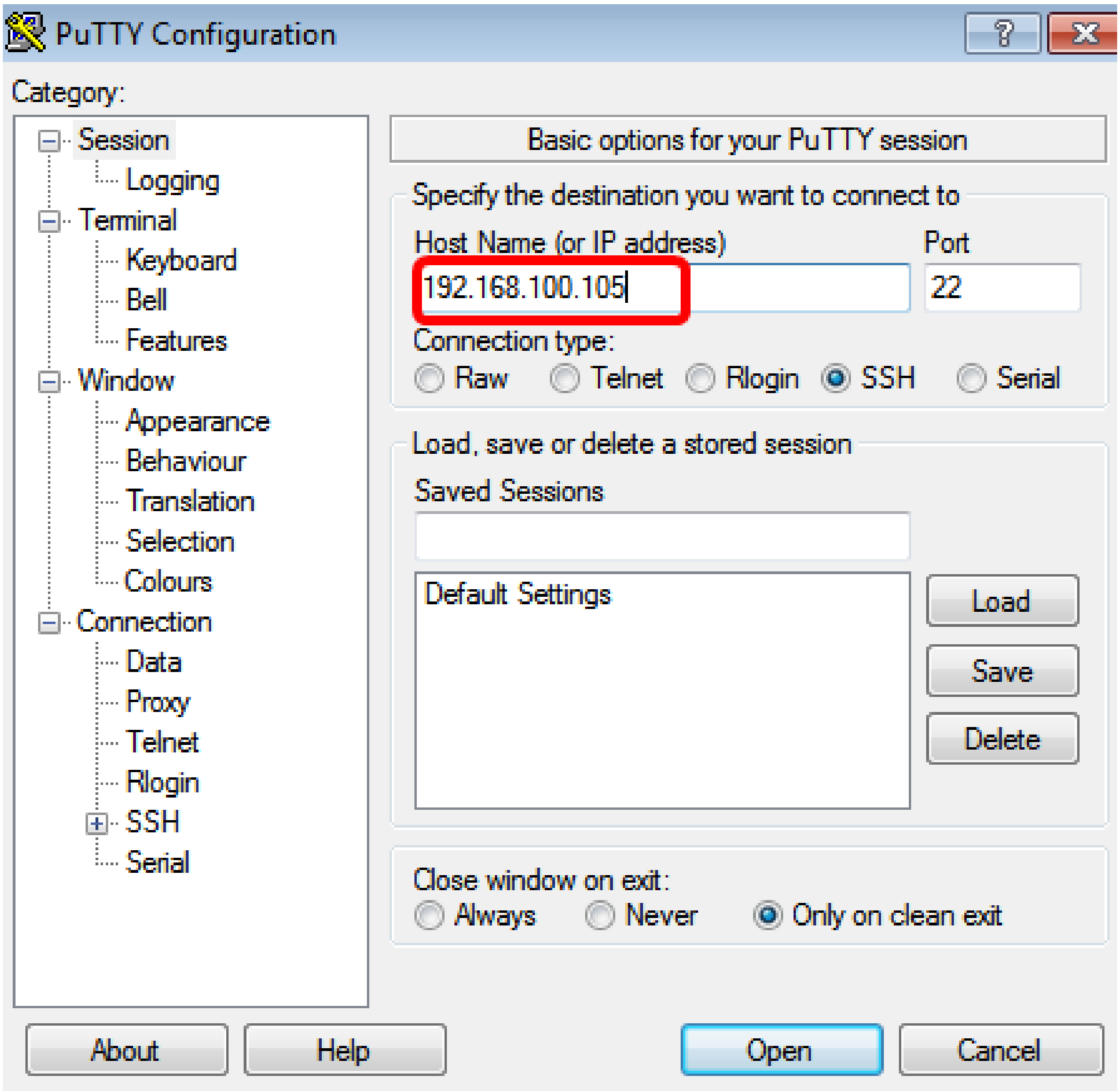
Access the CLI through SSH using PuTTY

Note: The images may vary according to the version of the Windows operating system you are using. In this example, the Windows 7 Ultimate is used and the PuTTY version is 0.63.

Step 1. Launch the PuTTY client on your computer.



Step 2. Enter the hostname or IP address of the switch that you want to remotely access in the *Host Name (or IP address)* field.



Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address): 192.168.100.105

Port: 22

Connection type: ○ Raw ○ Telnet ○ Rlogin ● SSH ○ Serial

Load, save or delete a stored session

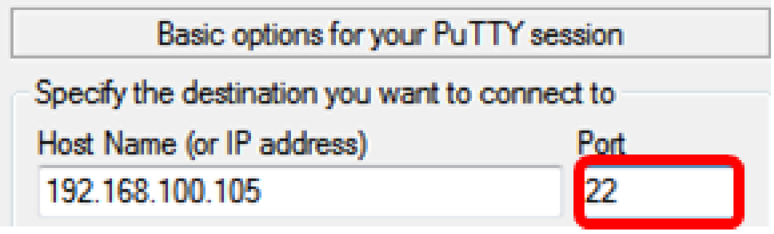
Saved Sessions

Default Settings

Close window on exit: ○ Always ○ Never ● Only on clean exit

Note: In this example, 192.168.100.105 IP address is used.

Step 3. Enter **22** as the port number to be used for the SSH session in the *Port* field.



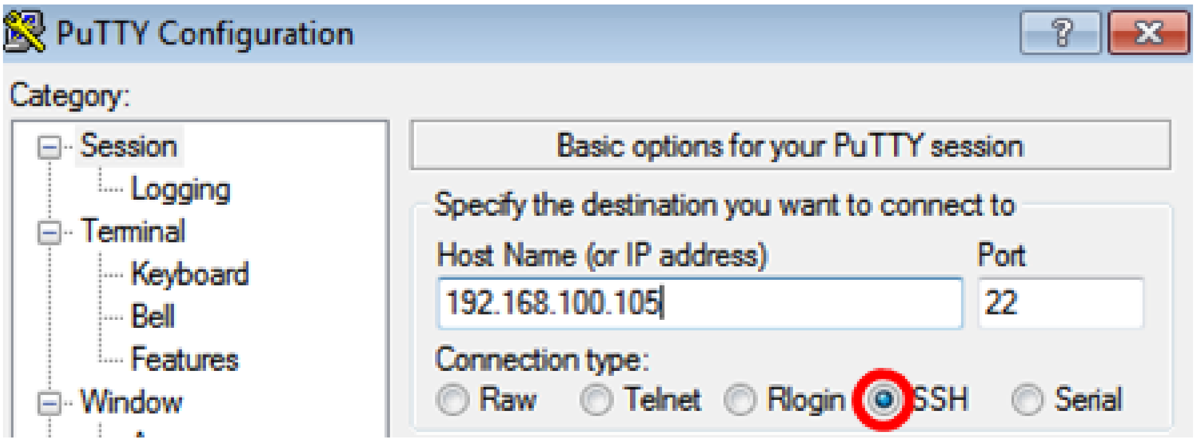
Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address): 192.168.100.105

Port: 22

Step 4. In the Connection type area, click the **SSH** radio button to choose SSH as your method of connection with the switch.

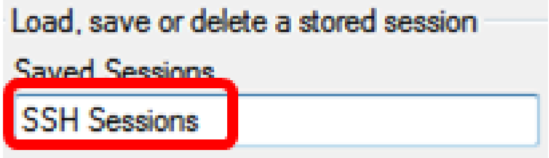

PuTTY Configuration
Category:
Session
Logging
Terminal
Keyboard
Bell
Features
Window
Basic options for your PuTTY session
Specify the destination you want to connect to

Host Name (or IP address): 192.168.100.105

Port: 22

Connection type: ○ Raw ○ Telnet ○ Rlogin ● SSH ○ Serial

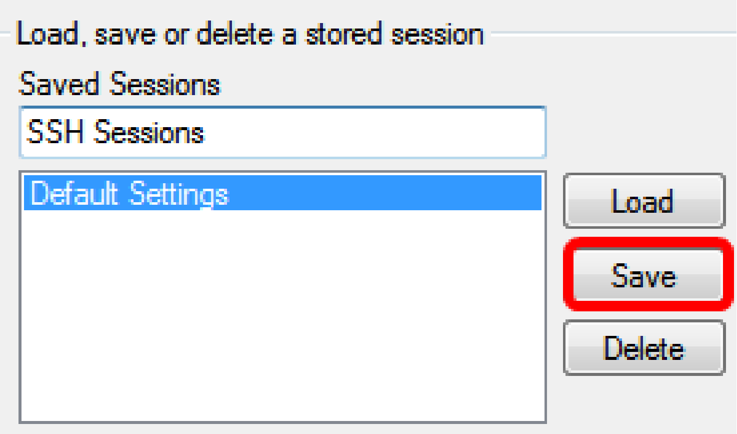
Step 5. (Optional) To save the session, enter the session name in the *Saved Sessions* field.



Saved Sessions: SSH Sessions

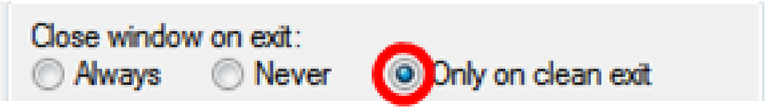
Note: In this example, SSH Sessions is used.

Step 6. (Optional) Click **Save** to save the session.



Saved Sessions: SSH Sessions

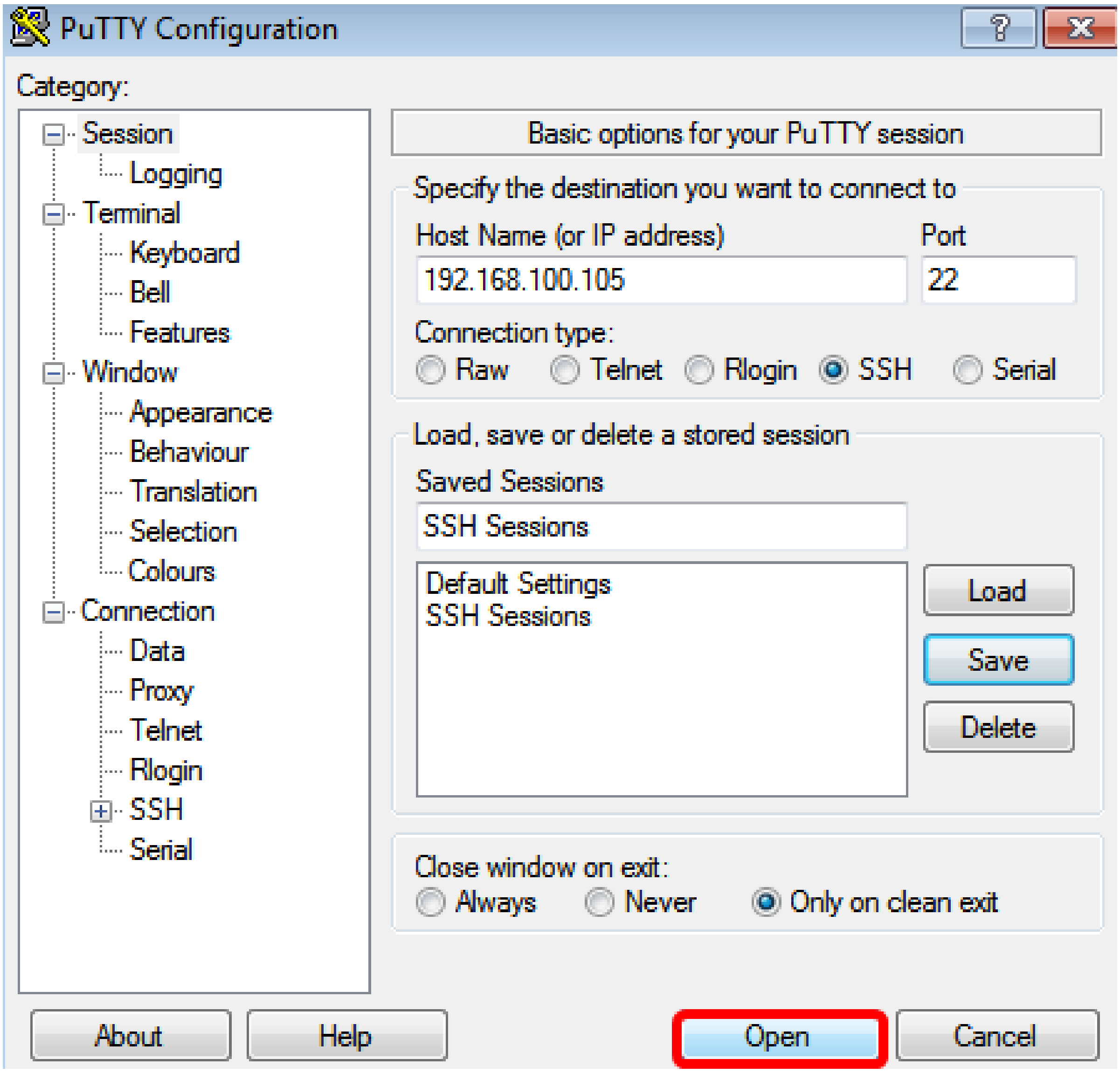
Step 7. (Optional) In the Close window on exit area, click the radio button to choose the behavior of the SSH window upon exit.



Close window on exit: ○ Always ○ Never ● Only on clean exit

Note: In this example, Only on clean exit is chosen.

Step 8. Click **Open** to start the session.



PuTTY Configuration

Category:

- Session
  - Logging
- Terminal
  - Keyboard
  - Bell
  - Features
- Window
  - Appearance
  - Behaviour
  - Translation
  - Selection
  - Colours
- Connection
  - Data
  - Proxy
  - Telnet
  - Rlogin
  - SSH
  - Serial

Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address): 192.168.100.105

Port: 22

Connection type: ○ Raw ○ Telnet ○ Rlogin ● SSH ○ Serial

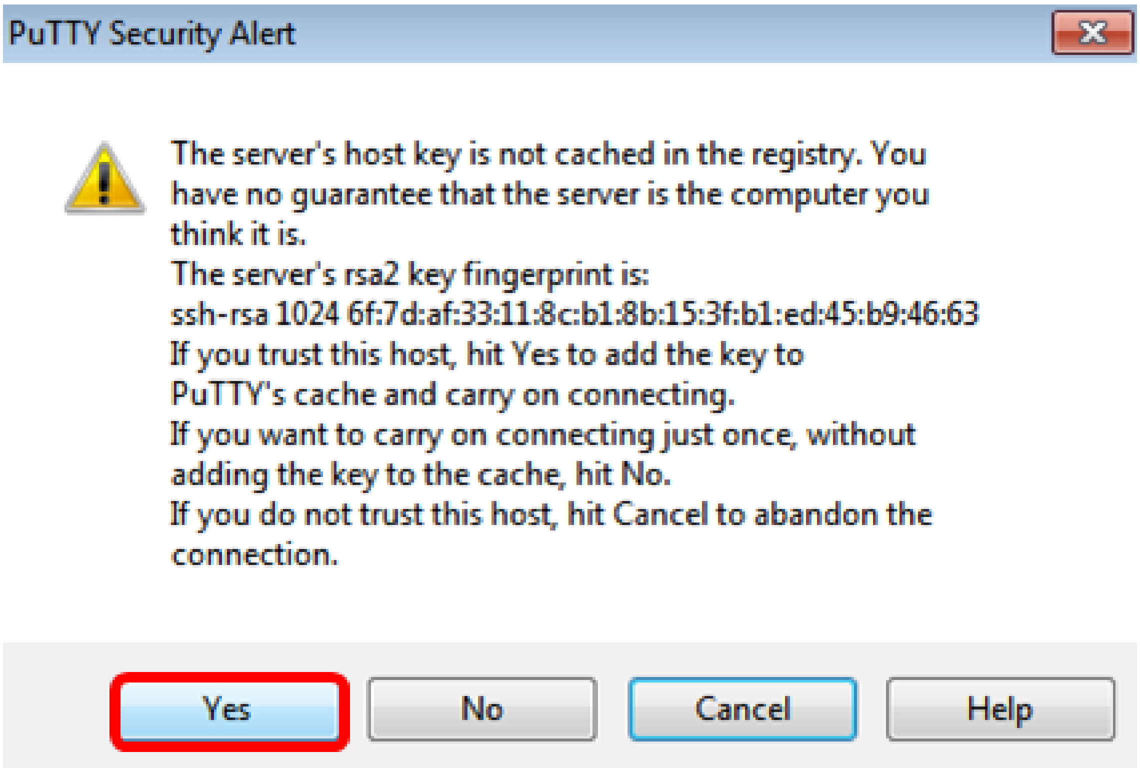
Load, save or delete a stored session

Saved Sessions: SSH Sessions

Default Settings
SSH Sessions

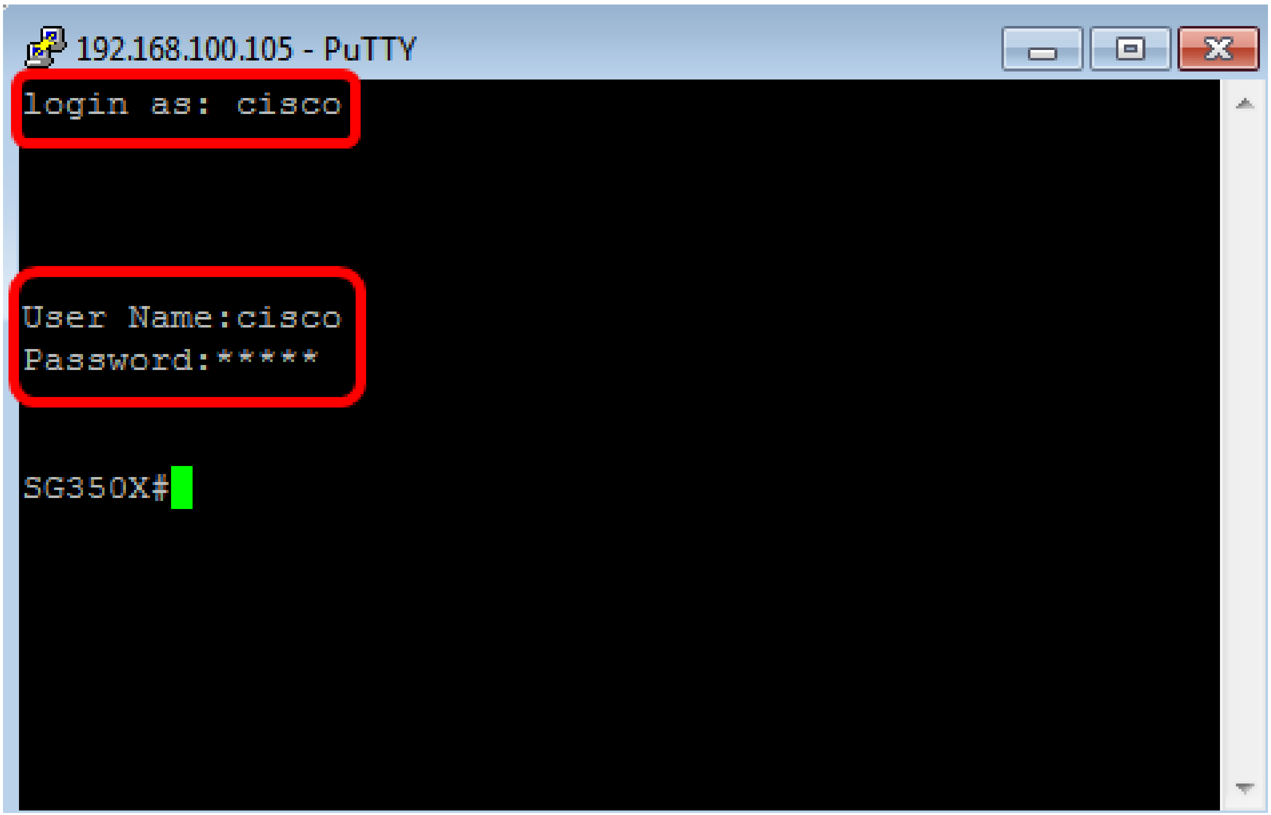
Close window on exit: ○ Always ○ Never ● Only on clean exit

Step 9. If this is your first time using SSH to connect to the switch, you may receive a Security Breach Warning. This warning lets you know that it is possible that you are connecting to another computer pretending to be the switch. Once you have ensured you entered the correct IP address in the Host Name field in Step 4, click **Yes** to update the Rivest Shamir Adleman 2 (RSA2) key to include the new switch.



The server's host key is not cached in the registry. You have no guarantee that the server is the computer you think it is.
The server's rsa2 key fingerprint is:
ssh-rsa 1024 6f:7d:af:33:11:8c:b1:8b:15:3f:b1:ed:45:b9:46:63
If you trust this host, hit Yes to add the key to PuTTY's cache and carry on connecting.
If you want to carry on connecting just once, without adding the key to the cache, hit No.
If you do not trust this host, hit Cancel to abandon the connection.

Step 10. Enter the username and password of the switch in the *login as*, *User Name* and *Password* fields accordingly.



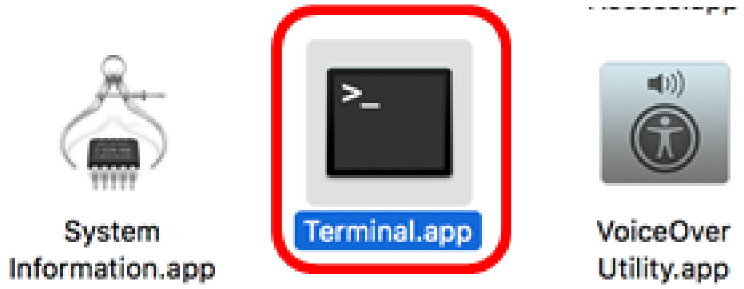
```
login as: cisco


User Name:cisco
Password:*****

SG350X#
```

You should now have successfully remotely accessed the CLI of your switch through SSH using PuTTY.

Access the CLI through SSH using Terminal

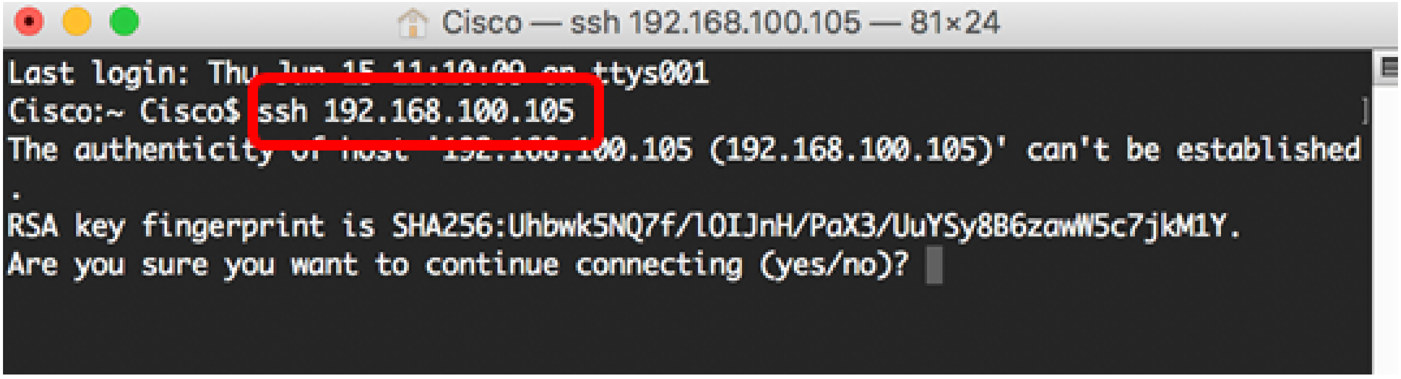
Note: The images may vary according to the version of the operating system of the Mac computer that you are using. In this example, the macOS Sierra is used and the Terminal version is 2.7.1.

Step 1. Go to **Applications > Utilities** then launch the **Terminal.app** application.



Step 2. Enter the **ssh** command and then the IP address to access the CLI of the switch.

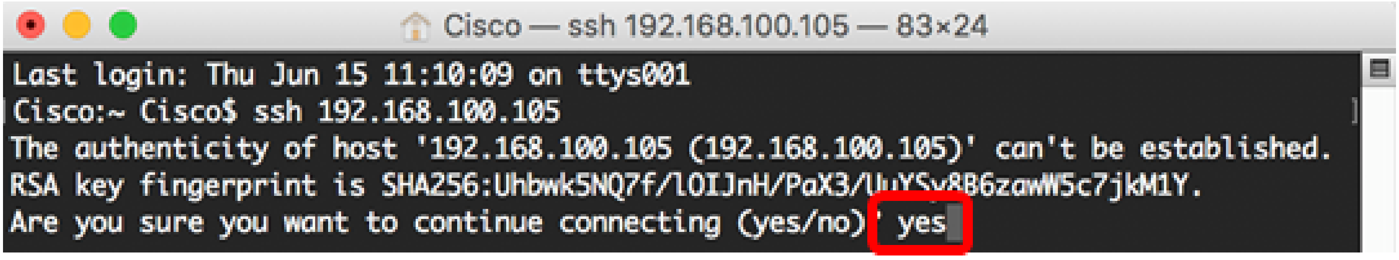
```
Cisco: ~Cisco$ ssh [ip-address]
```



```
Last login: Thu Jun 15 11:10:09 on ttys001
Cisco:~ Cisco$ ssh 192.168.100.105
The authenticity of host '192.168.100.105 (192.168.100.105)' can't be established
.
RSA key fingerprint is SHA256:Uhbwk5NQ7f/lOIJnH/PaX3/UuYSy8B6zawW5c7jkM1Y.
Are you sure you want to continue connecting (yes/no)?
```

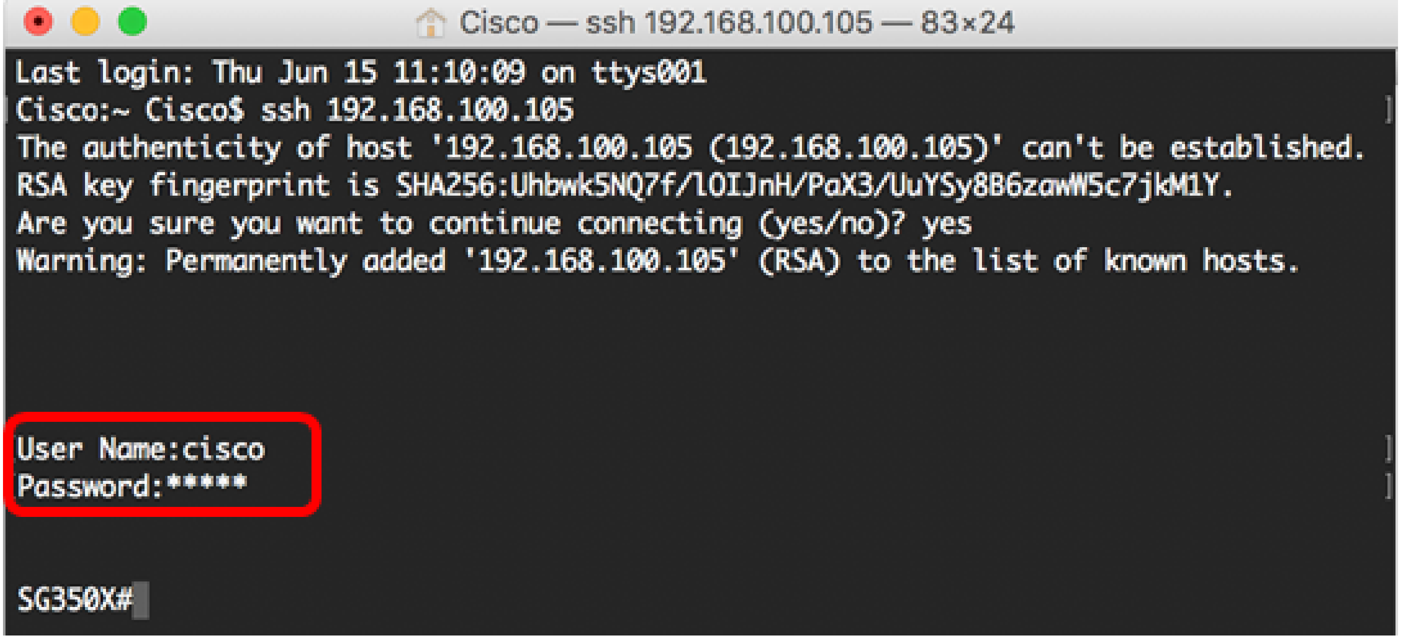
Note: In this example, 192.168.100.105.

Step 3. Once prompted by the message asking if you want to continue connecting, enter **Yes**.



```
Last login: Thu Jun 15 11:10:09 on ttys001
Cisco:~ Cisco$ ssh 192.168.100.105
The authenticity of host '192.168.100.105 (192.168.100.105)' can't be established.
RSA key fingerprint is SHA256:Uhbwk5NQ7f/lOIJnH/PaX3/UuYSy8B6zawW5c7jkM1Y.
Are you sure you want to continue connecting (yes/no)? yes
```

Step 4. Enter the username and password of the switch in the *User Name* and *Password* fields accordingly.



```
Last login: Thu Jun 15 11:10:09 on ttys001
Cisco:~ Cisco$ ssh 192.168.100.105
The authenticity of host '192.168.100.105 (192.168.100.105)' can't be established.
RSA key fingerprint is SHA256:Uhbwk5NQ7f/lOIJnH/PaX3/UuYSy8B6zawW5c7jkM1Y.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '192.168.100.105' (RSA) to the list of known hosts.



User Name:cisco
Password:*****


SG350X#
```

You should now have successfully remotely accessed the CLI of your switch through SSH using the Terminal.

Access the CLI of the Switch through Telnet

The Telnet sessions disconnect automatically after the idle time configured in the switch has passed. The default idle session timeout for Telnet is 10 minutes.

To make a Telnet connection to the switch, choose your platform:

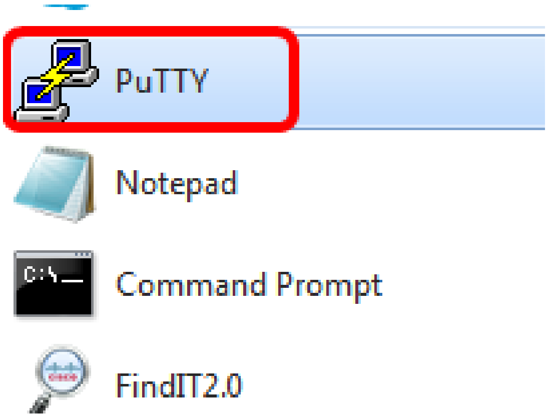
Windows Computer using PuTTY

Mac Computer using Terminal

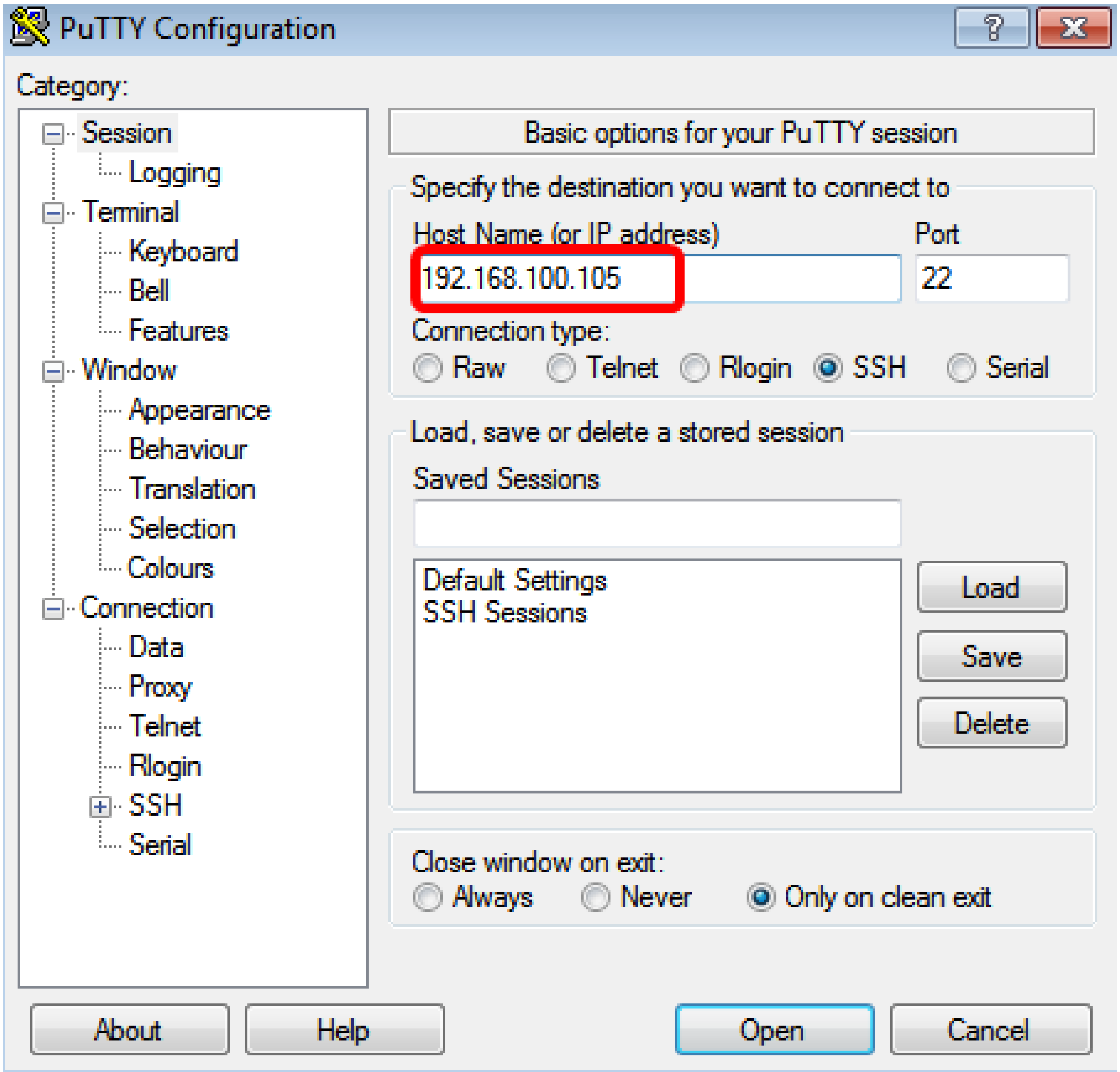
Access the CLI through Telnet using PuTTY

Note: The images may vary according to the version of the Windows operating system you are using. In this example, the Windows 7 Ultimate is used and the PuTTY version is 0.63.

Step 1. Launch the PuTTY client on your computer.



Step 2. Enter the hostname or IP address of the switch that you want to remotely access in the *Host Name (or IP address)* field.



PuTTY Configuration

Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address): 192.168.100.105

Port: 22

Connection type: ○ Raw ○ Telnet ○ Rlogin ● SSH ○ Serial

Load, save or delete a stored session

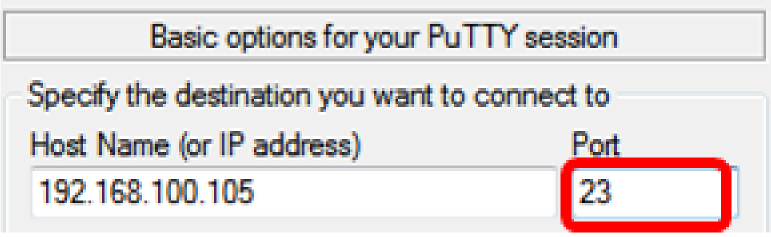
Saved Sessions:

Default Settings
SSH Sessions

Close window on exit: ○ Always ○ Never ● Only on clean exit

Note: In this example, 192.168.100.105 is used.

Step 3. Enter **23** as the port number to be used for the Telnet session in the Port field.



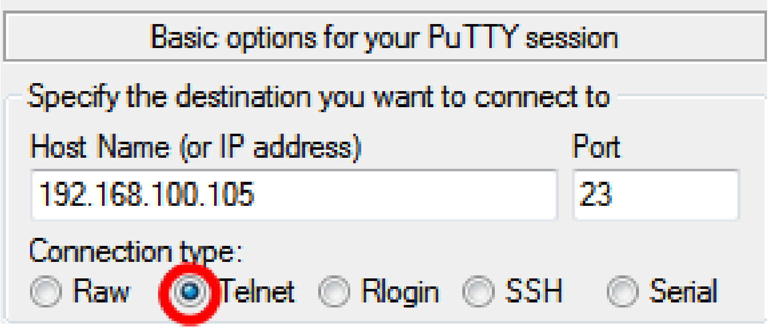
Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address): 192.168.100.105

Port: 23

Step 4. In the Connection type area, click the **Telnet** radio button to choose Telnet as your method of connection with the switch.



Basic options for your PuTTY session

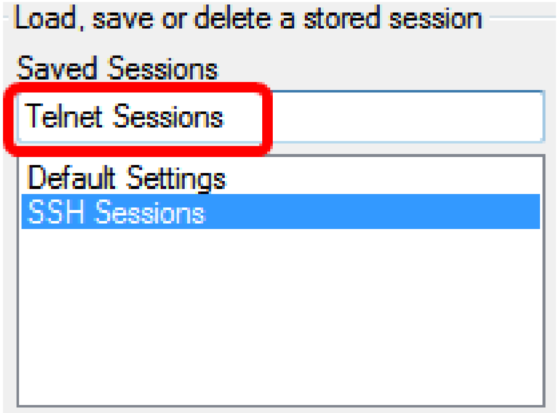
Specify the destination you want to connect to

Host Name (or IP address): 192.168.100.105

Port: 23

Connection type: ○ Raw ● Telnet ○ Rlogin ○ SSH ○ Serial

Step 5. (Optional) To save the session, enter the session name in the *Saved Sessions* field.



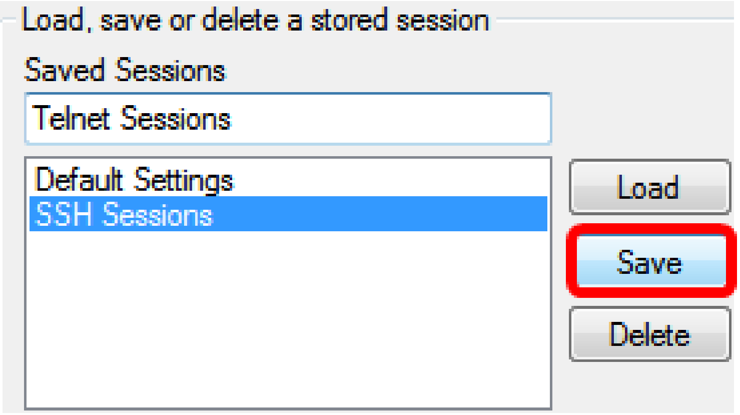
Load, save or delete a stored session

Saved Sessions: Telnet Sessions

Default Settings
SSH Sessions

Note: In this example, Telnet Sessions is used.

Step 6. (Optional) Click **Save** to save the session.

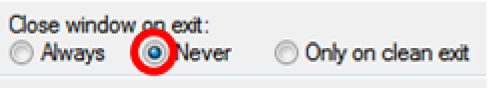


Load, save or delete a stored session

Saved Sessions: Telnet Sessions

Default Settings
SSH Sessions

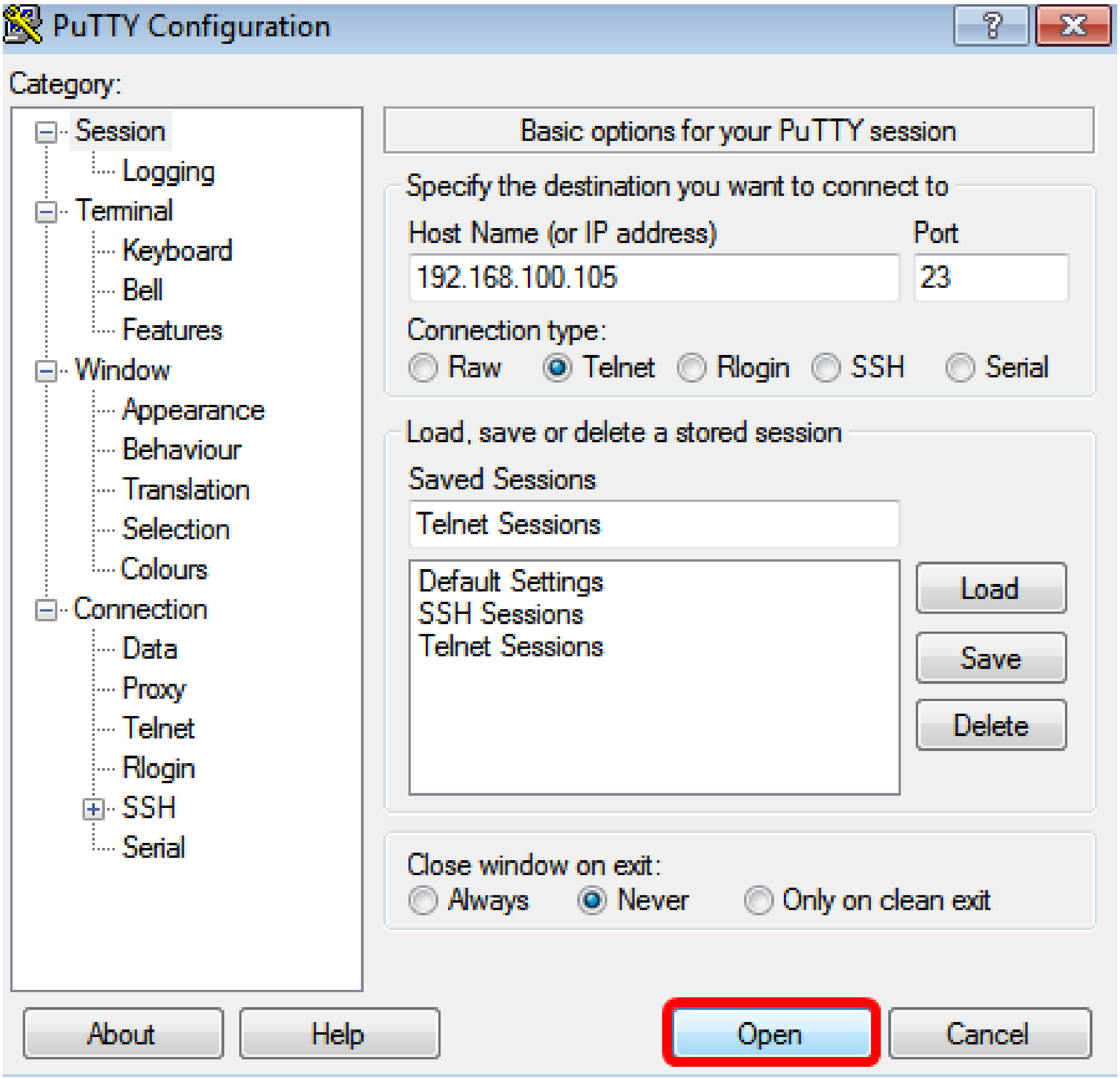
Step 7. Optional) In the Close window on exit area, click the radio button to choose the behavior of the SSH window upon exit.



Close window on exit: ○ Always ● Never ○ Only on clean exit

Note: In this example, Never is chosen.

Step 8. Click **Open** to start the session.



PuTTY Configuration

Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address): 192.168.100.105

Port: 23

Connection type: ○ Raw ● Telnet ○ Rlogin ○ SSH ○ Serial

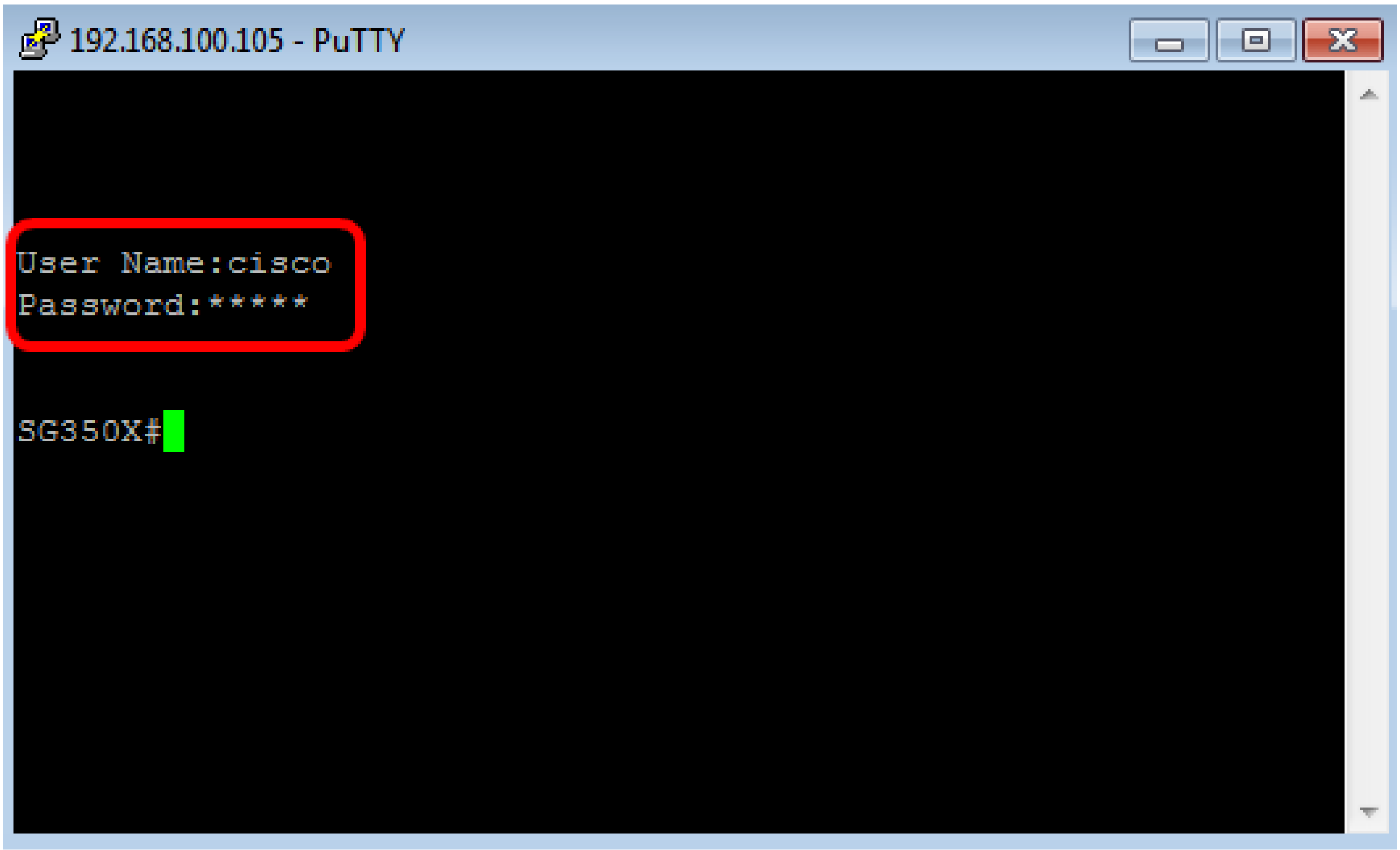
Load, save or delete a stored session

Saved Sessions: Telnet Sessions

Default Settings
SSH Sessions
Telnet Sessions

Close window on exit: ○ Always ● Never ○ Only on clean exit

Step 9. Enter the username and password of the switch in the login as, *User Name* and *Password* fields accordingly.



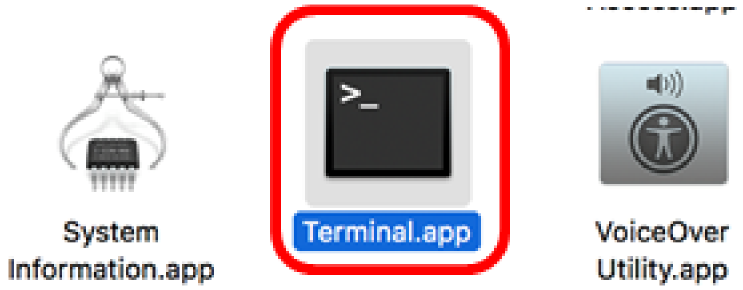
```
User Name:cisco
Password:*****

SG350X#
```

You should now have successfully remotely accessed the CLI of your switch through Telnet using PuTTY.

Access the CLI through Telnet using Terminal

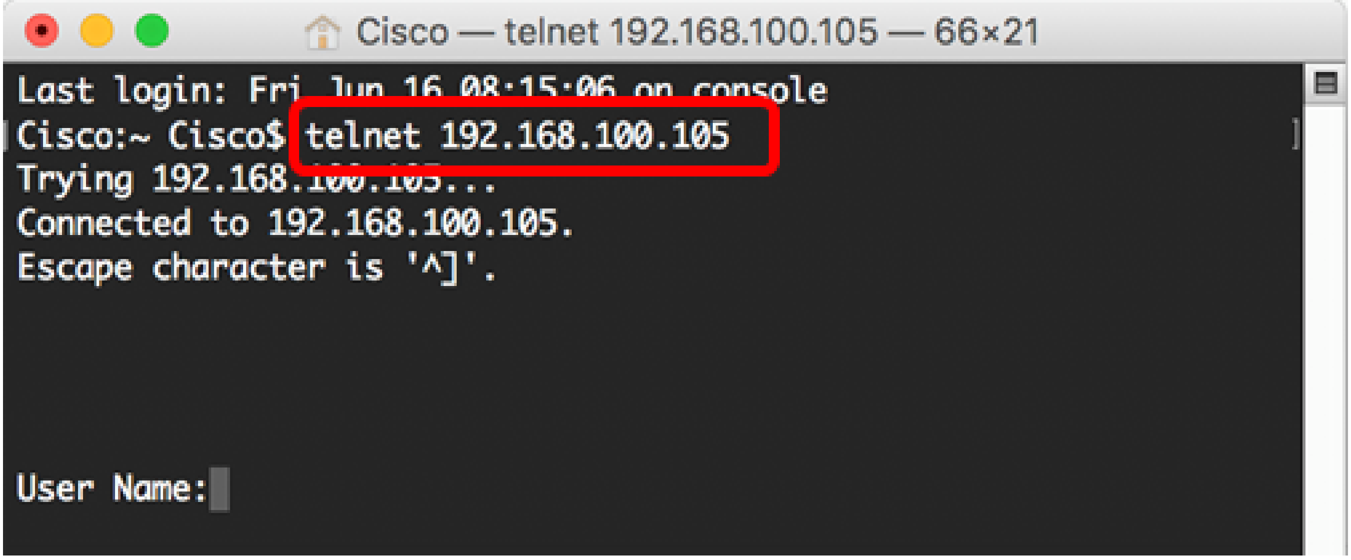
Note: The images may vary according to the version of the operating system of the Mac computer that you are using. In this example, the macOS Sierra is used and the Terminal version is 2.7.1.

Step 1. Go to **Applications > Utilities** then launch the **Terminal.app** application.



Step 2. Enter the **telnet** command and then the IP address to access the CLI of the switch.

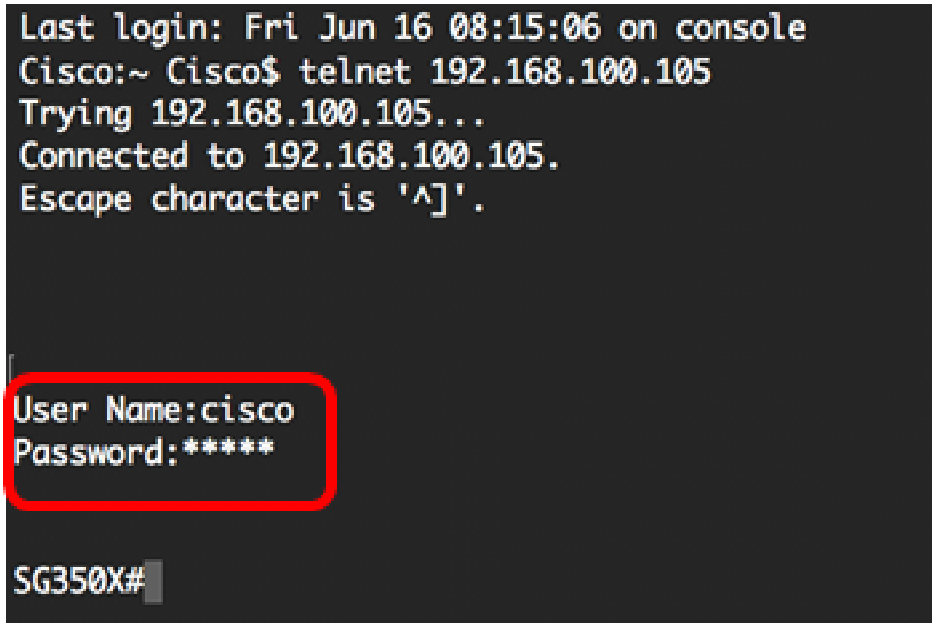
```
Cisco: ~Cisco$ telnet [ip-address]
```



```
Last login: Fri Jun 16 08:15:06 on console
Cisco:~ Cisco$ telnet 192.168.100.105
Trying 192.168.100.105...
Connected to 192.168.100.105.
Escape character is '^]'.



User Name:
```

Note: In this example, 192.168.100.105.

Step 3. Enter the username and password of the switch in the *User Name* and *Password* fields accordingly.



```
Last login: Fri Jun 16 08:15:06 on console
Cisco:~ Cisco$ telnet 192.168.100.105
Trying 192.168.100.105...
Connected to 192.168.100.105.
Escape character is '^]'.



User Name:cisco
Password:*****

SG350X#
```

You should now have successfully remotely accessed the CLI of your switch through Telnet using the Terminal.