Cisco Web Security Appliance S195, S395, S695, and S695F Getting Started Guide

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CHAPTER 1

Introduction to the Secure Web Appliance

About Secure Web Appliance

Cisco Web Security Appliance S195, S395, S695, and S695F (WSA) helps organizations secure and control web traffic. This guide describes how to setup your appliances and use the System Setup Wizard to configure basic settings for the appliance. You can also refer to the "Deployment" chapter in the *AsyncOS for Cisco Web Security Appliances User Guide* for information about how to configure appliance settings.

Document Network Settings

Before you begin, write down the following information about your network and administrator settings.

Deployment Options	
Web Proxy: • Transparent with L4 • Switch Transparent with WCCP Router • Explicit Forward Proxy	L4 Traffic Monitor: • Simplex tap/Span port • Duplex tap/Span port
Network Context	
Is there another proxy on the network:	
Other Proxy IP Address:	
Other Proxy Port:	
Network Settings	
Default System Hostname:	

DNS Servers:	Use the Internet root DNS servers. Use the DNS servers (maximum 3): 1. 2. 3.
Network Time Protocol (NTP) Server:	
Time Zone Region:	
Time Zone Country:	
Time Zone GMT Offset:	
Interface Settings	
Management Port	
IP Address:	
Network Mask:	
Hostname:	
Data Port (Optional, see Note)	
IP Address:	
Network Mask:	
Hostname:	
Note The Web Proxy can share the management interface. If configured separately, the Data interface IP address and the management interface IP address cannot share the same subnet.	
Routes	
Internal Routes for Management	
Default Gateway:	
Static Route Name:	
Static Route Destination Network:	
Static Route Gateway:	
Internal Routes for Data	
Default Gateway:	
Static Route Name:	

Static Route Destination Network:	
Static Route Gateway:	
Transparent Routing Device	
Device Type:	• Layer 4 Switch or No Device • WCCP Router – Enable standard service ID (web-cache). – Router Addresses: _______________ – Enable router security. Password: _______________
Note When you connect the appliance to a WCCP router, you might need to configure the Web Security appliance to create WCCP services after you run the System Setup Wizard.	
Administrative Settings	
Administrator Password:	
Email System Alerts To:	
SMTP Relay Host:	(Optional)
AutoSupport:	Enable
SenderBase Network Participation:	Enable • Limited • Standard
Security Services	
L4 Traffic Monitor:	• Monitor only • Block
Acceptable Use Controls:	Enable • Cisco IronPort Web Usage Controls
Web Reputation Filters:	Enable
Malware and Spyware Scanning:	• Enable Webroot • Enable McAfee • Enable Sophos

Action for Detected Malware:	• Monitor only • Block
IronPort Data Security Filtering:	Enable
Locking Faceplate	
4-digit code (for the S695-LKFP appliance)	

CHAPTER 2

Plan the Installation

Plan the Installation

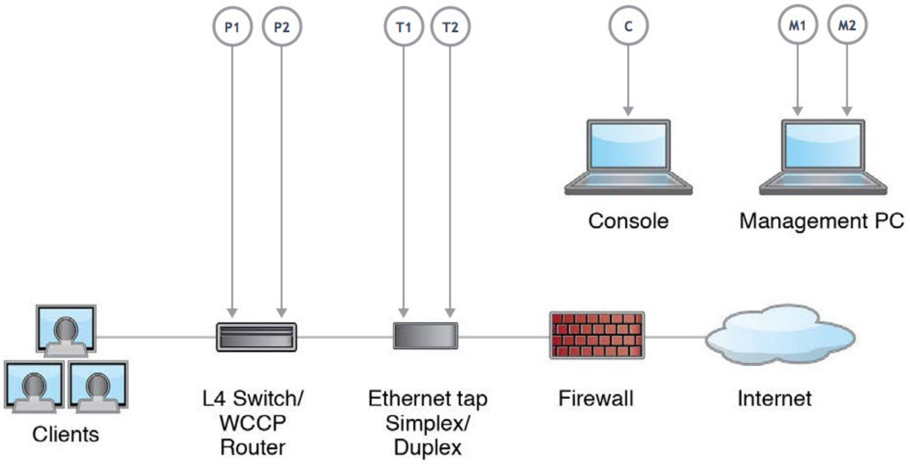
Decide how you are going to configure the Cisco Web Security Appliance within your network.

The Cisco Web Security Appliance is typically installed as an additional layer in the network between clients and the Internet. Depending on how you deploy the appliance, you may or may not need a Layer 4 (L4) switch or a WCCP router to direct client traffic to the appliance.

Deployment options include:

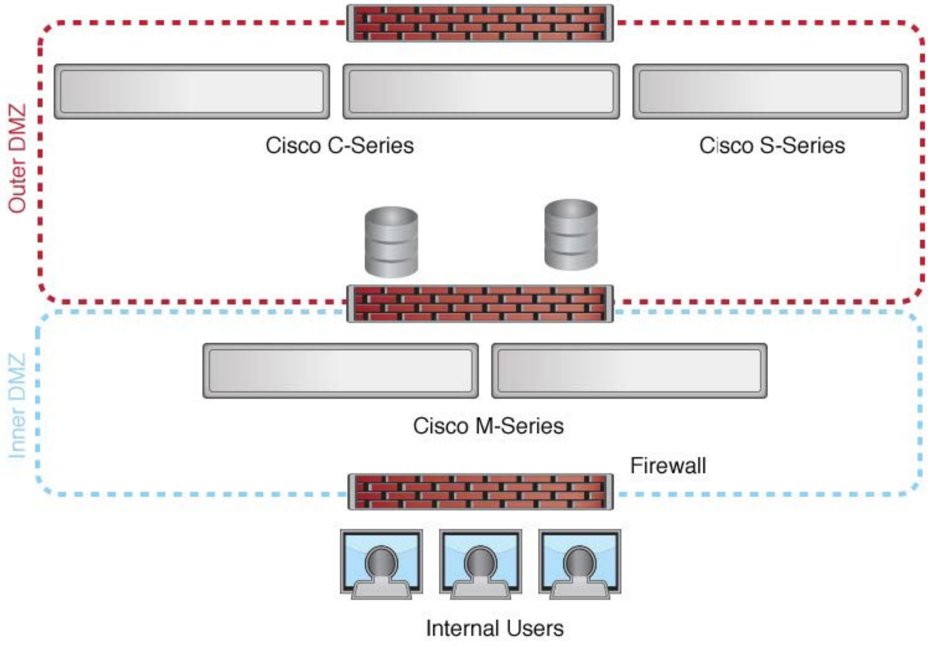
- Transparent Proxy—Web proxy with an L4 switch
- Transparent Proxy—Web proxy with a WCCP router
- Explicit Forward Proxy—Connection to a network switch
- L4 Traffic Monitor—Ethernet tap (simplex or duplex)
    - Simplex Mode: Port T1 receives all outgoing traffic, and port T2 receives all incoming traffic.
    - Duplex Mode: Port T1 receives all incoming and outgoing traffic.

Note See Connect to the Appliance for more information about individual ports on the appliance.



Note To monitor true client IP addresses, the L4 traffic monitor should always be configured inside the firewall and before NAT (Network Address Translation).

If your installation includes multiple Cisco Web Security Appliances (S-Series) or Cisco Email Security Appliances (C-Series), you may want to also use a Cisco Content Security Management Appliance (M-Series) to manage them, as show in the following network diagram:



Temporarily Change Your IP Address for Remote Access

To remotely configure the appliance using the network connection, you must temporarily change the IP address of your computer.

Note Make a note of your current IP configuration settings as you will need to revert to these settings after you finish the configuration.

Alternatively, you can use the serial console to configure the appliance, without changing the IP address. If you use the serial console, see Connect to the Appliance.

Temporarily Change Your IP Address on Windows

Note The exact steps depend on the version of your operating system.

Step 1 Connect your laptop to the primary Management Port (labeled M1) using the cross over or Ethernet cable included in the system box. The Cisco Web Security Appliance uses the M1 Management port only. See Plan the Installation .

Step 2 Go to the Start menu and choose **Control Panel**.

Step 3 Double-click **Network and Sharing Center**.

Step 4 Click **Local Area Connection** and then click **Properties**.

Step 5 Choose **Internet Protocol (TCP/IP)** and then click **Properties**.

Step 6 Choose **Use the Following IP Address**.

Step 7 Enter the following changes:

- IP Address: **192.168.42.43**
- Subnet Mask: **255.255.255.0**
- Default Gateway: **192.168.42.1**

Step 8 Click **OK** and **Close** to exit the dialog box.

Temporarily Change Your IP Address on Mac

Note The exact steps depend on the version of your operating system.

Step 1 Launch the Apple menu and choose **System Preferences**.

Step 2 Click **Network**.

Step 3 Click lock icon to allow changes.

Step 4 Select the Ethernet network configuration with the green icon. This is your active connection. Then click **Advanced**.

Step 5 Click the TCP/IP tab and from Ethernet settings, choose **Manually** from the drop-down list.

Step 6 Enter the following changes:

- IP Address: **192.168.42.43**
- Subnet Mask: **255.255.255.0**
- Default Gateway: **192.168.42.1**

Step 7 Click **OK**.

CHAPTER 3

Connect to the Appliance

After rack-mounting the appliance, follow these steps to connect cables, turn on power, and verify connectivity.

Note The connection diagram in each topic shows the default configuration using a management computer connected to your private network. Your deployment may vary depending on your basic logical network connectivity, ports, addressing, and configuration requirements.

Cisco S195 Appliance

Step 1 Plug one end of the straight power cable into the power supply on the back panel of the appliance.

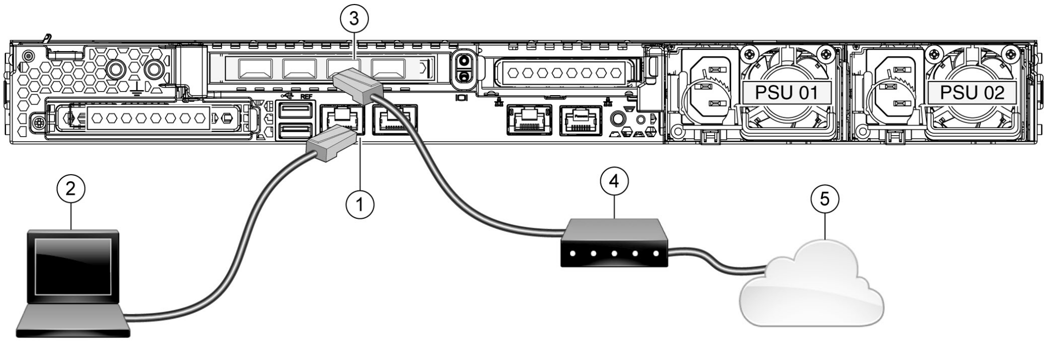
Note It is optional to order a separate power cable and connect to the second power supply at the back panel of the appliance for redundancy.

Step 2 Plug the other end into an electrical outlet.

Step 3 Plug the Ethernet cables into the appropriate ports on the back panel of the appliance.

- The proxy ports are labeled P1 and P2.
  - P1 only enabled: When only P1 is enabled, connect it to the network for both incoming and outgoing traffic.
  - P1 and P2 enabled: When both P1 and P2 are enabled, you must connect P1 to the internal network and P2 to the internet.
- The traffic monitor ports are labeled T1 and T2.
  - Simplex tap: Ports T1 and T2; one cable for all packets destined for the internet (T1) and one cable for all packets coming from the internet (T2).
  - Duplex tap: Port T1; one cable for all incoming and outgoing traffic.

Step 4 Connect your laptop to the Management port (M1) using the Ethernet cable included in the system box.



1	Management port (M1) - (192.168.42.42)	2	Management computer (192.68.42.43)
3	Traffic monitor port 1 (T1)	4	WAN modem
5	Internet		

Step 5 Power up the appliance by pressing the On/Off switch on the front panel of the appliance. You must wait 10 minutes for the system to initialize each time you power up the system. After the appliance powers up, a solid green light on the front panel indicates that the appliance is operational.

Caution If you turn the power off before the initialization is complete, the appliance will not reach an operational state and must be returned to Cisco.

Note If turned on quickly after connecting power to the appliance, the appliance powers up, the fans spin and the LEDs turn on. Within 30-60 seconds, the fans stop and all LEDs turn off. The appliance powers on 31 seconds later. This behavior is by design to allow the system firmware and controller to synchronize.

Step 6 See the *AsyncOS for Cisco Web Security Appliances User Guide* for further configuration.

Cisco S395 Appliance

Step 1 Plug one end of each straight power cable into the redundant power supplies on the back panel of the appliance.

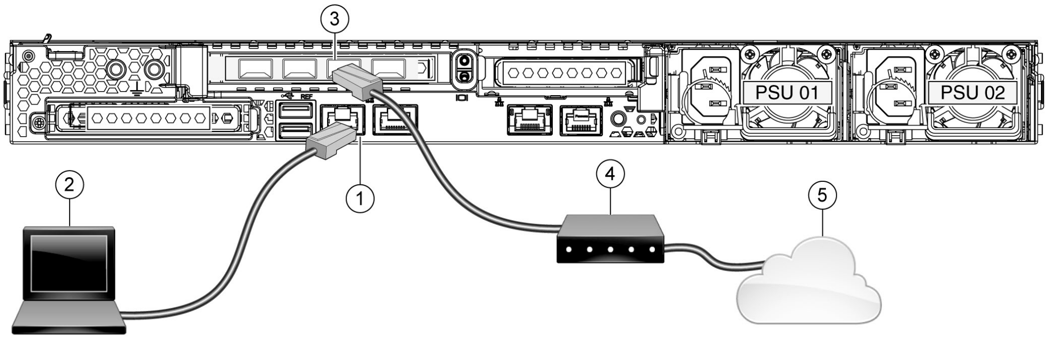
Step 2 Plug the other end into an electrical outlet.

Step 3 Plug the Ethernet cables into the appropriate ports on the back panel of the appliance.

- The proxy ports are labeled P1 and P2.
    - P1 only enabled: When only P1 is enabled, connect it to the network for both incoming and outgoing traffic.
    - P1 and P2 enabled: When both P1 and P2 are enabled, you must connect P1 to the internal network and P2 to the internet.
- The traffic monitor ports are labeled T1 and T2.

- Simplex tap: Ports T1 and T2; one cable for all packets destined for the internet (T1) and one cable for all packets coming from the internet (T2).
- Duplex tap: Port T1; one cable for all incoming and outgoing traffic.

Step 4 Connect your laptop to the Management port using the Ethernet cable included in the system box. The S-Series appliance uses the M1 Management port only.



1	Management Port (M1) - (192.168.42.42)	2	Management Computer (192.168.42.43)
3	Traffic Monitor Port 1 (T1)	4	WAN Modem
5	Internet		

Step 5 Power up the appliance by pressing the On/Off switch on the front panel of the appliance. You must wait 10 minutes for the system to initialize each time you power up the system. After the appliance powers up, a solid green light on the front panel indicates that the appliance is operational.

Caution If you turn the power off before the initialization is complete, the appliance will not reach an operational state and must be returned to Cisco.

Note If turned on quickly after connecting power to the appliance, the appliance powers up, the fans spin and the LEDs turn on. Within 30-60 seconds, the fans stop and all LEDs turn off. The appliance powers on 31 seconds later. This behavior is by design to allow the system firmware and controller to synchronize.

Step 6 See the *AsyncOS for Cisco Web Security Appliances User Guide* for further configuration.

Cisco S695 Appliance

Step 1 Plug one end of each straight power cable into the redundant power supplies on the back panel of the appliance.

Step 2 Plug the other end into an electrical outlet.

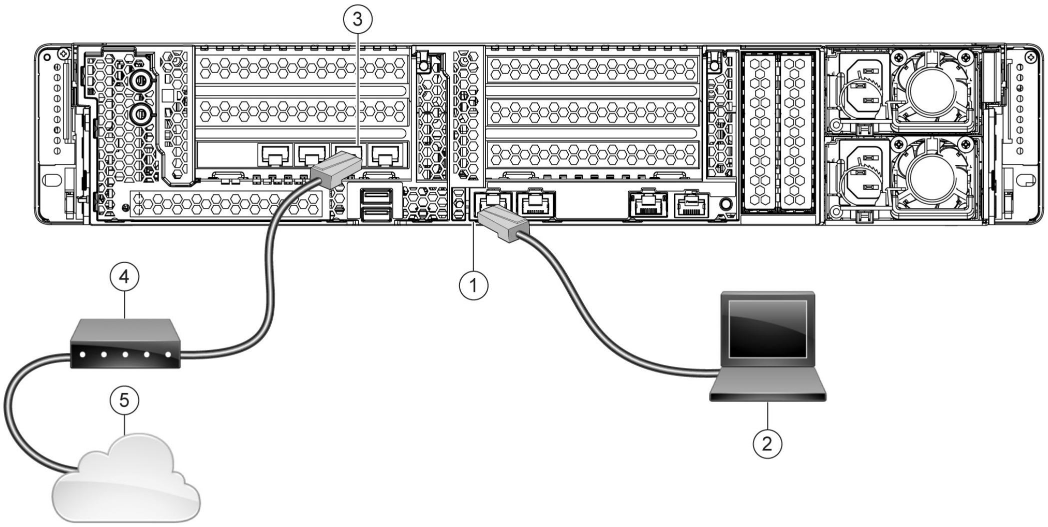
Step 3 Plug the Ethernet cables into the appropriate ports on the back panel of the appliance.

- The proxy ports are labeled P1 and P2.
  - P1 only enabled: When only P1 is enabled, connect it to the network for both incoming and outgoing traffic.

  - P1 and P2 enabled: When both P1 and P2 are enabled, you must connect P1 to the internal network and P2 to the internet.

- The traffic monitor ports are labeled T1 and T2.
  - Simplex tap: Ports T1 and T2; one cable for all packets destined for the internet (T1) and one cable for all packets coming from the internet (T2).
  - Duplex tap: Port T1; one cable for all incoming and outgoing traffic.

Step 4 Connect your laptop to the Management port using the Ethernet cable included in the system box.



1	Management port (M1) - (192.168.42.42)	2	Management computer (192.168.42.43)
3	Traffic monitor port (T1)	4	WAN modem
5	Internet		

Step 5 Power up the appliance by pressing the On/Off switch on the front panel of the appliance. You must wait 10 minutes for the system to initialize each time you power up the system. After the appliance powers up, a solid green light on the front panel indicates that the appliance is operational.

Caution Wait at least 10 minutes for the system to complete the power up sequence and the LEDs to turn green. If you turn the power off before the initialization is complete, the appliance will not reach an operational state and must be returned to Cisco.

Note If turned on quickly after connecting power to the appliance, the appliance powers up, the fans spin and the LEDs turn on. Within 30-60 seconds, the fans stop and all LEDs turn off. The appliance powers on 31 seconds later. This behavior is by design to allow the system firmware and controller to synchronize.

Step 6 See the *AsyncOS for Cisco Web Security Appliances User Guide* for further configuration.

Cisco S695F Appliance

The following illustration shows the Cisco S695F model with fiber optic ports. These fiber optic ports are located above the Ethernet ports shown in the illustration, and the Ethernet ports are not present. For details, see the *Cisco x95 Series Web Security Appliances Installation and Maintenance Guide*.

The top two fiber optic ports are used as proxy ports in the same way as the Ethernet proxy ports described in the following table. The middle two fiber optic ports are used as traffic ports. The bottom two fiber optic ports are used as Management ports.

Step 1 Plug one end of each straight power cable into the redundant power supplies on the back panel of the appliance.

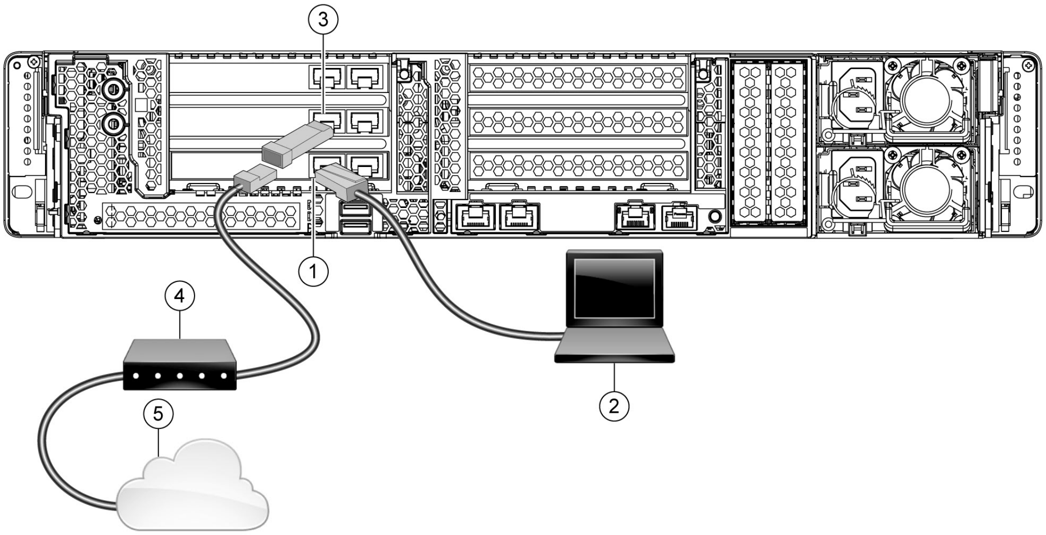
Step 2 Plug the other end into an electrical outlet.

Step 3 Plug the Ethernet cables into the appropriate ports on the back panel of the appliance.

- The proxy ports are labeled P1 and P2.
    - P1 only enabled: When only P1 is enabled, connect it to the network for both incoming and outgoing traffic.
    - P1 and P2 enabled: When both P1 and P2 are enabled, you must connect P1 to the internal network and P2 to the Internet.
- The traffic monitor ports are labeled T1 and T2.
    - Simplex tap: Ports T1 and T2; one cable for all packets destined for the internet (T1) and one cable for all packets coming from the internet (T2).
    - Duplex tap: Port T1; one cable for all incoming and outgoing traffic.

Step 4 Connect your laptop to the Management port using the Ethernet cable included in the system box.

Caution Use only the transceiver modules supplied with the 10-Gigabit fiber optic interfaces. The use of any other transceiver modules may damage the fiber optic interface card.



1	Management port (M1) - (192.168.42.42)	2	Management computer (192.168.42.43)
3	Traffic monitor port (T1)	4	WAN modem
5	Internet		

Step 5 Power up the appliance by pressing the On/Off switch on the front panel of the appliance. You must wait 10 minutes for the system to initialize each time you power up the system. After the appliance powers up, a solid green light on the front panel indicates that the appliance is operational.

Caution Wait at least 10 minutes for the system to complete the power up sequence and the LEDs to turn green. If you turn the power off before the initialization is complete, the appliance will not reach an operational state and must be returned to Cisco.

Note If turned on quickly after connecting power to the appliance, the appliance powers up, the fans spin and the LEDs turn on. Within 30-60 seconds, the fans stop and all LEDs turn off. The appliance powers on 31 seconds later. This behavior is by design to allow the system firmware and controller to synchronize.

Step 6 See the *AsyncOS for Cisco Web Security Appliances User Guide* for further configuration.

CHAPTER 4

Log In to the Appliance

You can log into the Cisco Web Security Appliance using one of two interfaces – the web interface or the CLI.

Log In to the Appliance Using the Web Interface

Step 1 For web browser access through the Ethernet port (see the Connect to the Appliance), go to the appliance management interface by entering the following URL in a web browser:

http://192.168.42.42:8080

Step 2 Enter the following login information:

- Username: **admin**
- Password: **ironport**

Note The hostname parameter is assigned during system setup. Before you can connect to the management interface using a hostname (http://hostname:8080), you must add the appliance *hostname* and IP address to your DNS server database.

Step 3 Click **Login**.

Log In to the Appliance Using the CLI

Step 1 Access the CLI locally or remotely:

- To access the CLI locally, set up a terminal to connect to the serial port using 9600 bits, 8 bits, no parity, 1 stop bit (**9600, 8, N, 1**) and flow control set to Hardware. To physically connect the terminal, (see the Connect to the Appliance).

- To access the CLI remotely, initiate an SSH session to the IP address **192.168.42.42**.

Step 2 Log in as **admin** with the password **ironport**.

Step 3 At the prompt, enter the **systemsetup** command.

CHAPTER 5

Run the System Setup Wizard

Run the System Setup Wizard

Run the System Setup Wizard to configure basic settings and enable a set of system defaults. The System Setup Wizard starts automatically when you access the appliance through the web-based interface and displays the end user license agreement (also known as the EULA).

Step 1 Accept the end user license agreement.

Step 2 Enter information from the Document Network Settings.

If you need additional information about the settings, choose **Help and Support** > **Online Help**.

Step 3 Review the configuration summary page.

Step 4 Click **Install this Configuration**.

Step 5 The appliance may not appear to have accepted your configuration or be performing the installation. This is because you have changed the IP address, but the installation is underway.

Step 6 If you temporarily changed the IP address of your computer as described above, change the IP address settings back to the original values.

Step 7 Ensure that your computer and the appliance are connected to the network.

Step 8 Log in to the appliance again, at the hostname or IP address that you noted in the Plan the Installation. Use the username **admin** and the new password that you entered in the wizard.

The Cisco Web Security Appliance uses a self-signed certificate that may trigger a warning from your web browser. Accept the certificate and ignore this warning.

Step 9 Be sure to keep your new administrator password in a safe place.

Check for Available Upgrades

After logging in to the appliance, look at the top of the web browser window for an upgrade notification (or for a notice in the CLI.) If an upgrade is available, evaluate whether you should install it.

Details about each release are available in the release notes for that Async OS version.

CHAPTER 6

Configure Network Settings

Configure Network Settings

Depending on your network configuration, you may need to configure your firewall to allow access using the following ports. SMTP and DNS services must have access to the internet.

The web security appliance must be able to listen on the following ports:

- FTP: port 21, data port TCP 1024 and higher
- HTTP: port 80
- HTTPS: port 443
- Management access: ports 8443 (HTTPS) and 8080 (HTTP)
- SSH: port 22

The web security appliance must be able to make an outbound connection on the following ports:

- DNS: port 53
- FTP: port 21, data port TCP 1024 and higher
- HTTP: port 80
- HTTPS: port 443
- LDAP: port 389 or 3268
- LDAP over SSL: port 636
- LDAP with SSL for global catalog queries: port 3269
- NTP: port 123
- SMTP: port 25

Note If you do not open port 80 and 443, you cannot download feature keys.

For more information, see firewall information in the user guide for your version of AsyncOS for Cisco Web Security Appliances.

Configuration Summary

Item	Description
Management	You can manage the web security appliance from the management port (Management port) by entering http://192.168.42.42:8080 or using the IP address assigned to the management interface after you have completed the System Setup Wizard. If you reset your configuration to factory default settings (for example, by re-running the System Setup Wizard), you can access the management interface only from the Management port (http://192.168.42.42:8080), so ensure you have a connection to the Management port. Also, verify that you open firewall ports 80 and 443 on your management interface.
Data	After running the System Setup Wizard, at least one port on the appliance is configured to receive web traffic from the clients on the network: M1 only; M1 and P1; M1, P1 and P2; P1 only; or P1 and P2. **Note** If you configured the web proxy in explicit forward mode, the applications on the client machines must be configured to explicitly forward web traffic to the web security appliance’s web proxy using the IP address configured for data, either M1 or P1.
Traffic Monitor	After running the System Setup Wizard, one or both L4 traffic monitor ports (T1 only or both T1 and T2) are configured to listen to traffic on all TCP ports. The default setting for the L4 traffic monitor is monitor only. During or after setup, you can configure the L4 traffic monitor to both monitor and block suspicious traffic.
Computer Address	Remember to change your computer IP address back to the original settings that you noted in the Temporarily Change Your IP Address for Remote Access. **Note** You can review a summary of your system settings from the **System Administration** > **Configuration Summary** page.

CHAPTER 7

Additional Configurations

The following topics describe some additional features that you can configure in your appliance. See the online help or user guide for your AsyncOS release for complete details.

User Policies

Use the web interface to create policies that define which users can access which web resources as necessary.

- Identify Users—Choose **Web Security Manager** > **Identities** to define groups of users that can access the Internet.
- Define Access Policies—Choose **Web Security Manager** > **Access Policies** to control user access to the Internet by configuring which objects and applications to allow or block, which URL categories to monitor or block, and web reputation and anti-malware settings.

You can also define several other policy types to enforce your organization's acceptable use policies by controlling access to the Internet. For example, you can define policies for decrypting HTTPS transactions and other polices that control upload requests.

For information about configuring policies on the Cisco Web Security Appliance appliance, see the "Working with Policies" chapter in the *AsyncOS for Cisco Web Security Appliances User Guide*.

Reporting

You can view statistics about blocked and monitored web traffic on your network by viewing reports available in the web interface. You can view reports about the top URL categories blocked, client activity, system status, and more.

More Information

There are other features that you may want to configure for your Cisco Web Security Appliance. For more information about configuring feature keys, end user notifications, logging, and for details about other available web security appliance features, see the Cisco Web Security Appliance S195, S395, S695, and S695F documentation.

APPENDIX A

Additional Information

Related Documentation

Support	
Cisco Support Portal	http://www.cisco.com/support
U.S. and Canada Toll-Free Number	800-553-2447
International Contacts	Worldwide Phone Numbers
Email:	tac@cisco.com
Cisco Web Security Appliance Support Community	https://supportforums.cisco.com/community/netpro/security/web
Product Documentation	
Cisco Web Security Appliance S195, S395, S695, and S695F Web Security Appliance Getting Start Guide (this document)	https://www.cisco.com/c/en/us/support/security/web-security-appliance/products-installation-guides-list.html
Cisco x95 Series Content Security Appliances Installation and Maintenance Guide Includes information about LEDs, technical specifications, and mounting options.	https://www.cisco.com/c/en/us/support/security/web-security-appliance/products-installation-guides-list.html
Cisco Web Security Appliance Documentation Includes release notes, CLI References, and Configuration Guides.	http://www.cisco.com/en/US/customer/products/ps10164/tsd_products_support_series_home.html
Safety and Compliance Guide	https://www.cisco.com/c/en/us/support/security/web-security-appliance/products-installation-guides-list.html

MIBs	
AsyncOS MIBs for Cisco Web Security Appliance (Related Tools section)	http://www.cisco.com/en/US/products/ps10164/tsd_products_support_series_home.html

Cisco Notification Service

Sign up to receive notifications relevant to your Cisco Content Security Appliances, such as Security Advisories, Field Notices, End of Sale and End of Support statements, and information about software updates and known issues.

You can specify options such as notification frequency and types of information to receive. You should sign up separately for notifications for each product that you use.

To sign up, go to http://www.cisco.com/cisco/support/notifications.html

A Cisco.com account is required. If you do not have one, register at https://identity.cisco.com/ui/tenants/global/v1.0/enrollment-ui.