



# **Cisco Advanced Web Security Reporting 5.0 Installation, Setup, and User Guide**

Version 5.0

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**Cisco Systems, Inc.**  
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Introduction	1-1
What's New in 5.0	1-2
Supported and Unsupported Features	1-2
System Requirements and Sizing & Scaling Recommendations	1-3
Set-up Overview	1-3
Install Version 5.0 of the Advanced Web Security Reporting Application	1-3
On Linux	1-3
On Windows	1-4
Upgrade to Version 5.0 of the Advanced Web Security Reporting Application	1-5
Upgrading from Version 4.0 or Later	1-5
On Linux	1-5
On Windows	1-6
Upgrading from Version 3.0 to Version 5.0	1-6
Administrative Users	1-7
Configuration Best Practices	1-7
Commands To Start and Stop the Advanced Web Security Reporting Application	1-7
On Linux	1-7
On Windows	1-8
Licensing and Migration	1-8
Migration from v3.0 WSA to v4.0 WSA-only Reporting	1-8
Migration from v3.0 WSA-only to v4.0 Hybrid Reporting	1-8
New Hybrid Reporting License	1-9
Hybrid Reporting License Issues	1-9
Licensing Considerations for Version 4.0 and Later Upgrades	1-9
License Installation	1-9
Create the Folder Structure for Access and Traffic Monitor Log Files	1-10
Import and Index Historical Data	1-10
(Optional) Configure the Application to Delete Log Files After Indexing	1-11
Set Up On-going Data Transfers	1-11
Configure Data Inputs for WSA Logs	1-12
Configuration Of Data Input for WSA Syslogs	1-12
Establish Log Transfers from A Web Security Appliance	1-13
Configure CWS Log Updates	1-14

- Set Up Department Membership Query (Optional) 1-15
  - Set Up Department Membership Reporting 1-15
  - Restrict Access to Department Reports by Role 1-16
  - Troubleshooting Department Membership Reporting 1-16
- Set Up Scheduled PDF Reporting (Optional) 1-17
  - Configure Email Alerts 1-17
  - Schedule PDF Report Generation 1-17
- Overview of Reports 2-1
- Accessing Reports 2-1
- Save As Dashboard 2-2
  - Editing A Custom Dashboard 2-2
- Data Formats 2-3
- Time Ranges 2-3
  - Timing of Data Availability 2-3
- Export 2-4
  - Exporting to a .CSV File 2-4
  - Exporting to a PDF File 2-4
- General Versus Specific Data 2-4
  - Viewing Specifics 2-4
- Search 2-5
  - Search Tips 2-5
  - Troubleshooting Searches 2-5
- Predefined Reports 2-5
- Usage Scenarios 2-7
  - User Investigation 2-7
    - Viewing Web Usage Trends 2-7
    - Viewing Transaction History 2-8
  - URLs Visited 2-8
    - Viewing Most Visited Web Sites 2-8
  - URL Categories Visited 2-8
    - Viewing Most Common URL Categories 2-8



# Installation and Setup

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- [Introduction, page 1-1](#)
- [System Requirements and Sizing & Scaling Recommendations, page 1-3](#)
- [Set-up Overview, page 1-3](#)
- [Install Version 5.0 of the Advanced Web Security Reporting Application, page 1-3](#)
- [Upgrade to Version 5.0 of the Advanced Web Security Reporting Application, page 1-5](#)
- [Licensing and Migration, page 1-8](#)
- [Create the Folder Structure for Access and Traffic Monitor Log Files, page 1-10](#)
- [Import and Index Historical Data, page 1-10](#)
- [Set Up On-going Data Transfers, page 1-11](#)
- [Configure CWS Log Updates, page 1-14](#)
- [Set Up Department Membership Query \(Optional\) , page 1-15](#)
- [Set Up Scheduled PDF Reporting \(Optional\), page 1-17](#)

## Introduction

The Cisco Advanced Web Security Reporting application provides reports and dashboards that are designed to give insight into very large volumes of data from multiple Cisco Web Security Appliances, and from Cisco's Cloud Web Security (CWS) gateways. The Advanced Web Security Reporting application includes a data collection-and-reporting application, and a related server that forwards log data collected from Web Security Appliances (WSAs) and CWS services.



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**Note**

Cloud Web Security is sometimes referred to as “ScanSafe.”

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The Advanced Web Security Reporting application receives log data and stores it in the default/main index. You can view these data using predefined reports.

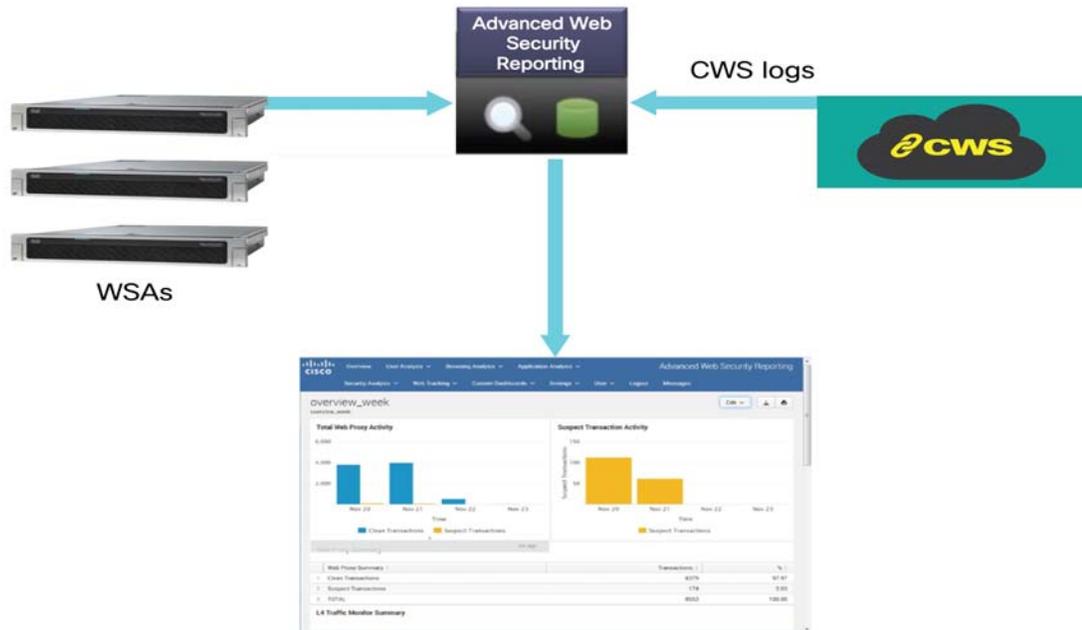


Figure 1-1 General architecture of the Advanced Web Security Reporting system.

## What's New in 5.0

Feature	Description
Seamless upgrade from earlier versions	
AMP reports for CWS	
Schedule email delivery for entire report	
Custom dashboard support	Add/delete existing panels Choose graph format Create your own dashboards
Updated interface	Updated “look and feel” for the application.

## Supported and Unsupported Features

Component	Supported	Not Supported
Reports	Reports included in the Advanced Web Security Reporting application	Custom reports
Server	Single-server deployments	Multiple-server deployments
Transport Methods	FTP (files and directories) TCP (syslogs)	N/A

Component	Supported	Not Supported
PDF	Integrated PDF generation Scheduled PDF Reporting	N/A
Custom Dashboards	For each report, <b>Save As Dashboard</b> to create custom dashboard for selected time range, source type and host (limited).	

## System Requirements and Sizing & Scaling Recommendations

System requirements, as well as sizing and scaling recommendations, are detailed in the *Advanced Web Security Reporting Release Notes*, available from <http://www.cisco.com/c/en/us/support/security/web-security-appliance/products-release-notes-list.html>

## Set-up Overview

Either:

- Install the Advanced Web Security Reporting application for the first time:
  - [Install Version 5.0 of the Advanced Web Security Reporting Application, page 1-3](#)
  - [Licensing and Migration, page 1-8](#)
  - [Create the Folder Structure for Access and Traffic Monitor Log Files, page 1-10](#)
  - [Import and Index Historical Data, page 1-10](#)
  - [Set Up On-going Data Transfers, page 1-11](#) (Including setup of Web Security Appliance.)
  - [Configure CWS Log Updates, page 1-14](#)

Or:

- [Upgrade to Version 5.0 of the Advanced Web Security Reporting Application, page 1-5](#)

## Install Version 5.0 of the Advanced Web Security Reporting Application

Follow the steps in this section to install version 5.0 of the Advanced Web Security Reporting application.

- [On Linux, page 1-3](#)
- [On Windows, page 1-4](#)

### On Linux

These tasks must be performed in order:

- 
- Step 1** Download the installer for the Advanced Web Security Reporting 5.0 software:

<https://software.cisco.com/download/release.html?mdfid=282803425&softwareid=283998384&release=5.0&reind=AVAILABLE&rellifecycle=&reltype=latest>

**Step 2** Extract the installer software.

To install into the current working directory, issue this command:

```
tar zxvf cisco_wsa_reporting-5.0.0.tgz.
```

To install into `/opt/cisco-wsa_reporting/` directory, use the following command:

```
tar zxvf cisco_wsa_reporting-5.0.0.tgz -C /opt
```

**Step 3** Change directory to `/cisco_wsa_reporting/` and then run the set-up script:

```
cd cisco_wsa_reporting
./setup.sh
```

Progress and milestone statements are displayed during set-up.

**Step 4** Launch the Advanced Web Security Reporting application and log in:

- a. Navigate to `http://<hostname>:8888` in a browser window.




---

**Note** Earlier versions used port 8000; since version 4.0, the port used is 8888.

---

- b. Log in with the user name `admin` and `Cisco@admin` as the password.
  - c. Change the `admin` password.
- 

#### Next Steps

- [Licensing and Migration, page 1-8](#)

## On Windows

### Before You Begin

Windows allows only one installed version of the Advanced Web Security Reporting software. Thus, if you have an earlier version installed, you must back-up your existing data and then uninstall that previous version, before installing the new version.

**Step 1** Download the installer for the Advanced Web Security Reporting 5.0 software:

<https://software.cisco.com/download/release.html?mdfid=282803425&softwareid=283998384&release=5.0&reind=AVAILABLE&rellifecycle=&reltype=latest>

**Step 2** Extract the installer; you can use applications such as 7-Zip, WinZip, etc.

**Step 3** Launch a command-line shell (PowerShell) as Administrator and change directory to the directory to which you extracted the installer.

**Step 4** Run `install.bat`.

The application is installed in the folder `C:\Program Files\Cisco\CiscoWSAReporting`.

**Step 5** Reboot the Advanced Web Security Reporting server.

**Step 6** Launch the Advanced Web Security Reporting application and log in:

- a. Navigate to `http://<hostname>:8888` in a browser window.



---

**Note** Earlier versions used port 8000; since version 4.0, the port used is 8888.

---

- b. Log in with the user name `admin` and `Cisco@admin` as the password.
  - c. Change the `admin` password.
- 

#### Next Steps

- [Licensing and Migration, page 1-8](#)

## Upgrade to Version 5.0 of the Advanced Web Security Reporting Application

- [Upgrading from Version 4.0 or Later, page 1-5](#)
- [Upgrading from Version 3.0 to Version 5.0, page 1-6](#)

### Upgrading from Version 4.0 or Later

Follow the steps in this section to upgrade from version 4.0 or version 4.5 to version 5.0.

- [On Linux, page 1-5](#)
- [On Windows, page 1-6](#)

#### On Linux

These tasks must be performed in order:

- 
- Step 1** Download the installer (`CiscoAdvancedWebSecurityReporting_Linux_5_0_0.tgz`) for the Advanced Web Security Reporting 5.0 software:
- <https://software.cisco.com/download/release.html?mdfid=282803425&softwareid=283998384&release=5.0&relind=AVAILABLE&rellifecycle=&reltype=latest>
- Step 2** Copy the downloaded installer file into the base directory for the `cisco_wsa_reporting` directory. For example, if the earlier version of Advanced Web Security Reporting is installed in `/opt/cisco_wsa_reporting/`, then place the `.tgz` file in the `/opt/` directory.
- Step 3** Change directory to the installation's base directory (for example, `/opt/`).
- Step 4** Issue this command to extract the installer:
- ```
tar -zxvf CiscoAdvancedWebSecurityReporting_Linux_5_0_0-002.tgz
cisco_wsa_reporting/SeamlessUpgrade.sh; cp -f cisco_wsa_reporting/SeamlessUpgrade.sh .
```
- Step 5** Run the upgrade script:
- ```
./SeamlessUpgrade.sh CiscoAdvancedWebSecurityReporting_Linux_5_0_0-002.tgz
```
-

## On Windows

These tasks must be performed in order:

- 
- Step 1** Download the installer (`CiscoAdvancedWebSecurityReporting_Windows_5_0_0.tgz`) for the Advanced Web Security Reporting 5.0 software:  
<https://software.cisco.com/download/release.html?mdfid=282803425&softwareid=283998384&release=5.0&reind=AVAILABLE&rellifecycle=&reltype=latest>
  - Step 2** Extract the installer; you can use applications such as 7-Zip, WinZip, etc.
  - Step 3** Launch a command-line shell (PowerShell) as Administrator and change directory to the directory to which you extracted the installer.
  - Step 4** Execute the command `.\WinSeamlessUpgrade.ps1` to upgrade the Advanced Web Security Reporting application.
- 

## Upgrading from Version 3.0 to Version 5.0

You must follow the steps in this section to upgrade your version 3.0 installation for version 5.0. Upgrading from a version 3.0 installation involves these basic steps:

- Make a back-up copy of the existing version 3.0 indexed data.
- Shut down the newly installed version 5.0 application.
- Copy the version 3.0 back-up data to the new data directory.
- Restart the version 5.0 application.

Detailed steps follow.

For these instructions, we assume that version 3.0 is running in `/opt/splunk` and the new version is in `/opt/cisco_wsa_reporting`. Adjust your paths accordingly.

- 
- Step 1** Stop the old version:  
`/opt/splunk/bin/splunk stop`
  - Step 2** Edit the old `inputs.conf` file  
(`/opt/splunk/etc/apps/SplunkforCiscoIronportWSA/local/inputs.conf`) and disable all inputs.
  - Step 3** Restart the old version:  
`/opt/splunk/bin/splunk start`
  - Step 4** Verify that there are no hot buckets left in the main index:  
`cd /opt/splunk/var/lib/splunk/defaultdb/db`  
`ls -la hot* (verify no results)`
  - Step 5** Stop the old version again:  
`/opt/splunk/bin/splunk stop`
  - Step 6** Verify that the new version is not running:  
`/opt/cisco_wsa_reporting/shutdown.sh`

**Step 7** Clean the indexes folders of the new version:

```
cd /opt/cisco_wsa_reporting/var/lib/splunk
rm -rf *
```

**Step 8** Copy indexes from old version to new version:

```
cd /opt/cisco_wsa_reporting/var/lib/splunk
cp -r /opt/splunk/var/lib/splunk/defaultdb .
cp -r /opt/splunk/var/lib/splunk/fishbucket .
```

**Step 9** Start the new version of Advanced Web Security Reporting:

```
/opt/cisco_wsa_reporting/startup.sh
```

**Step 10** In a browser, open `http://<wsa_reporting_server_host_name>:8888` and log in with the user name `admin` and password `Cisco@dmn`.

---

## Administrative Users

The Advanced Web Security Reporting application provides two administrative users:

- The “default admin” (user name: `admin` and password: `Cisco@dmn`) will have access to all administration functionality.

The `admin` user can install licenses and configure the distributed environment. Use this account to configure, test, and troubleshoot.

- The second administrative user (name: `wsa_admin` and password: `Ironp0rt`) has access to a subset of administration functionality.

We recommend that you change both passwords immediately after installation (**Settings > Users and Authentication > Access Controls > Users**).

## Configuration Best Practices

- Set time zones consistently across WSA and CWS appliances.

The time displayed in the search results reflects the ‘local’ time of the Advanced Web Security Reporting instance. By default, all inputs for the appliance logs are set to TZ = GMT.

- Document the local `admin` account password (regardless of the chosen authentication method).

## Commands To Start and Stop the Advanced Web Security Reporting Application

### On Linux

To stop the Advanced Web Security Reporting application:

Change directory to `/cisco_wsa_reporting/` and issue this command:

```
./shutdown.sh
```

To start the Advanced Web Security Reporting application:

Change directory to `/cisco_wsa_reporting/` and issue this command:

```
/startup.sh
```

## On Windows

To stop the Advanced Web Security Reporting application:

Change directory to `<install_home>\` and issue this command:  
`shutdown.bat`

To start the Advanced Web Security Reporting application:

Change directory to `<install_home>\` and issue this command:  
`startup.bat`



**Note**

On Windows, `<install_home>` is `C:\Program Files\Cisco\CiscoWSAReporting`.

## Licensing and Migration

The three AMP reports added in version 4.5 are supported for WSA AMP logs only.

Since version 4.0, the Advanced Web Security Reporting application provides support for both WSA and CWS log reports, which is referred to as “hybrid reporting.” To use hybrid reporting, you must install a new license. You can continue to use WSA-only reporting with your existing license. The various licensing and migration scenarios are:

- [Migration from v3.0 WSA to v4.0 WSA-only Reporting](#)
- [Migration from v3.0 WSA-only to v4.0 Hybrid Reporting](#)
- [New Hybrid Reporting License](#)

### Migration from v3.0 WSA to v4.0 WSA-only Reporting

You can install the version 4.0 or later software and your previously installed license will continue to provide WSA reporting. Further, an evaluation license is embedded in the version 4.0 and later software; this license includes the additional reporting source types that will let you evaluate hybrid reporting.

### Migration from v3.0 WSA-only to v4.0 Hybrid Reporting

As mentioned in the previous section, you can install the version 4.0 or later software and your previously installed license will continue to provide WSA reporting. In addition, the embedded evaluation license will let you evaluate the hybrid reporting feature.

In order to migrate from WSA-only to hybrid reporting, you must open a [Cisco Technical Assistance Center](#) (TAC) support case to remove your existing license and install a new hybrid-reporting license that includes the complete list of source types—that is, the `ciscocws` source type is included.  
<https://tools.cisco.com/ServiceRequestTool/scm/mgmt/case>



**Note**

Contacting TAC is necessary only if you are upgrading from version 3.0 WSA-only reporting to version 4.0 or later hybrid reporting.

## New Hybrid Reporting License

After installing the version 4.0 or later software as a new Advanced Web Security Reporting user, to utilize WSA and Hybrid Web Security reporting, you can use the embedded evaluation license with no limitations during the term of the evaluation. To continue after the evaluation term, or to provide reporting beyond the evaluation limits, you must acquire a master hybrid license. With a new installation, utilize the infodoc supplied with your order to request the license.

## Hybrid Reporting License Issues

If you encounter hybrid-reporting issues, before contacting Cisco, verify that you have purchased a CWS Log Extraction license (L-CWS-LOG-LIC=), and that you have set up your environment to import CWS logs.

In addition, ensure that the reporting-application license (issued with purchase of SMA-WSPL-LIC=, SMA-WSPL-LOW-LIC=, or SMA-WSPL-HIGH-LIC=) includes **only** the following source types: `wsa_trafmonlogs`, `wsa_accesslogs`, `wsa_w3clogs`, `wsa_syslog`, `wsa_amplogs`, and especially `ciscocws`.

Using Cisco's Advanced Web Security Reporting application to process logs of any other source type, for example `ps`, will produce a license-violation error. This can happen if you install other applications which produce logs with alternate source types.

## Licensing Considerations for Version 4.0 and Later Upgrades

Initially, you will need at least an evaluation license good for a large volume of data to handle the historical data transfer. After that, you will need an Advanced Web Security Reporting license.

1. Consider the quantity of data to be indexed both during initial historical data upload, and on an on-going daily basis.
2. Acquire and upload an evaluation license sufficient for the historical data transfer.
3. Acquire and upload an Advanced Web Security Reporting license sufficient for the anticipated data of the applicable source type to be indexed.
4. Change the license type from Trial to Evaluation or Advanced Web Security Reporting.
5. Ensure that indexes are reported to the correct pool:
  - a. Navigate to **Settings > System > Licensing** and find the "Pools Indexers Volume used today" row under the appropriate license stack.
  - b. If necessary, you can click **Edit** to change the maximum daily volume allocation, and the indexers assigned.
  - c. Click **Cancel** if you made no changes, or **Submit** if you made changes.

## License Installation

To obtain licenses, please refer to the information provided when you placed your order. Follow these steps to install Advanced Web Security Reporting license(s):

- 
- Step 1** Launch the Advanced Web Security Reporting application (enter `http://<hostname>:8888` in a browser window) and log in as the default `admin` user.

- Step 2** Navigate to **Settings > System > Licensing**.
- Step 3** Click **Add license**.
- Step 4** Browse to your XML license file.
- Step 5** Click **Install**.
- 

## Create the Folder Structure for Access and Traffic Monitor Log Files

Log	Default Path	Variables
Traffic Monitor	/\$Input_base/wsa_hostname/trafmonlogs/	\$Input_base=path of root FTP folder host_name=WSA device
Access	/\$Input_base/wsa_hostname/accesslogs/	\$Input_base=deployment host_name=WSA device
AMP	/\$Input_base/wsa_hostname/amplogs/	\$Input_base=deployment host_name=WSA device

## Import and Index Historical Data

### Before You Begin

- Complete configuration tasks listed in [Upgrade to Version 5.0 of the Advanced Web Security Reporting Application, page 1-5](#).
  - Know the folder structure. See [Create the Folder Structure for Access and Traffic Monitor Log Files, page 1-10](#).
- 

- Step 1** Copy the historical log files into the folder structure for log files.
- Step 2** In the Advanced Web Security Reporting application, log in as `admin`.
- Step 3** Verify that data is being imported:
- Select **Settings > Data > Indexes**.
  - Scroll down to the summary row.
  - Verify that the Earliest event and Latest event columns display reasonable dates. If the historical data import was run under an evaluation license, install the default license downloaded for the account, and remove any non-production licenses.
-

**Tip**

If you find that the application is not indexing files for any type of configured input because of a checksum error, add the line `crcSalt = <source>` to each input stanza in the `inputs.conf` file. (The following section, [\(Optional\) Configure the Application to Delete Log Files After Indexing](#), describes editing the `inputs.conf` file.)

**What to Do Next**

- [Configure Data Inputs for WSA Logs, page 1-12.](#)

## (Optional) Configure the Application to Delete Log Files After Indexing

**Before You Begin**

If the file `inputs.conf` does not exist in the directory

`<install_home>/cisco_wsa_reporting/etc/apps/cisco_wsa_reporting/local/`, create the input-configuration file:

`<install_home>/cisco_wsa_reporting/etc/apps/cisco_wsa_reporting/local/inputs.conf`.

**Step 1** Using a text editor, open

`<install_home>/cisco_wsa_reporting/etc/apps/cisco_wsa_reporting/local/inputs.conf`.

**Step 2** Add a segment as below:-

```
[batch:///home/logger/incoming/wsa176.wga/accesslogs/*]
host_segment = 4
disabled = false
sourcetype = wsa_accesslogs
move_policy = sinkhole
```

Where the first line is the FTP directory path where WSA logs are sent. The second line is the part of the FTP path containing the host name. The third line enables this FTP input. The fourth line specifies the source of this input. The final line, `move_policy = sinkhole`, enables deletion of the original data once it is indexed.

**Step 3** Save the `inputs.conf` file and then restart the Advanced Web Security Reporting application by navigating to **Settings > System > Server controls** and clicking **Restart**.

## Set Up On-going Data Transfers

**Before You Begin**

- [Import and Index Historical Data, page 1-10](#)
- Know the path to your log files: [Create the Folder Structure for Access and Traffic Monitor Log Files, page 1-10.](#)
- Log into the Advanced Web Security Reporting application as `admin`.

## Configure Data Inputs for WSA Logs



**Note** To configure data input from multiple WSAs, repeat the following steps for each host.

- 
- Step 1** In the Advanced Web Security Reporting application:
- Choose **Settings > Data > Data inputs > Files & directories**.
- Step 2** Disable any inputs labeled `CiscoWSA`.
- Step 3** Click **New**.
- Step 4** Click **Continuously Monitor** and provide the full path to the FTP directory to which WSA logs will be sent.
- This path and the FTP path provided on the WSA's Log Subscription page must match.
- Step 5** Click **Next**.
- Step 6** Click **Manual** as the Sourcetype and provide the Sourcetype label (`wsa_accesslogs`, `wsa_trafmonlogs`, or `wsa_amplogs`).
- Step 7** Choose **Advanced Web Security 5.0.0** from the App Context menu.
- Step 8** Click **Constant value** and provide the WSA host name in the **Host field value** field.
- Step 9** Choose **Default** as the destination Index.
- Step 10** Click **Review** and review the values you provided.
- Step 11** Click **Submit**.



**Note** You can navigate to **Settings > Data > Data inputs > Files & directories** to confirm the new data input entry.

## Configuration Of Data Input for WSA Syslogs

- 
- Step 1** In the Advanced Web Security Reporting application:
- Choose **Settings > Data > Data inputs > TCP**.
- Step 2** Click **New**.
- Step 3** Click the **TCP** button and enter `514` in the **Port** field; leave the rest of the fields blank.
- Step 4** Click **Next**.
- Step 5** Click **Manual** and then enter `wsa_syslog` in the Sourcetype field.
- Step 6** Choose **Advanced Web Security 5.0.0** as the **App Context**.
- Step 7** In the Host section, click **Custom** as the Method field, and then enter the WSA host name as the Host field value.
- Step 8** Choose **Default** as the destination Index.
- Step 9** Click **Review** and review the values you provided.
- Step 10** Click **Submit**.

**Step 11** Navigate to **Settings > Data Inputs > TCP** to confirm the new input entry.



**Note**

With a multiple-appliance configuration, you must repeat these steps from the Advanced Web Security Reporting application for each appliance. However, you also can configure multiple appliances by editing the `inputs.conf` file.

## Establish Log Transfers from A Web Security Appliance

### Before You Begin

- Know the path to your log files: [Create the Folder Structure for Access and Traffic Monitor Log Files, page 1-10](#).
- Determine the frequency of transfers, no more than 60-minute increments.
- Open the web interface for the Web Security Appliance.

**Step 1** In the Web interface for the Web Security Appliance, navigate to **System Administration > Log Subscriptions**.

**Step 2** Click **Add Log Subscription**, or click the name of an existing subscription to edit it.

**Step 3** Configure the subscription (this example refers specifically to access, AMP engine and traffic-monitor logs):

Setting	Log Type	Value
Log Type	Access	accesslogs
	Traffic Monitor	trafmonlogs
	AMP Engine	amp_logs
Log Name	Any one	Name for the log directory.
(Depending on your AsyncOS release) <b>Rollover by File Size</b> <b>Maximum File Size</b>	Any one	Recommend no more than 500 MB.
(Availability of this option varies by AsyncOS release) Rollover by Time	Any one	Recommend custom rollover interval of one hour (1h) or more frequent rollovers. For AMP logs, recommend one minute (1m).
Log Style	Access	<b>Squid</b>
	Traffic Monitor	N/A
	AMP Engine	N/A

Setting	Log Type	Value
Log Level	Access	N/A
	Traffic Monitor	N/A
	AMP Engine	Select <b>Debug</b> .  <b>Note</b> It is important to change <b>Log Level</b> to <b>Debug</b> for AMP reporting, or little to no information will be reported.
(Optional) Custom Fields	Access only	%XK (Adds a web reputation threat reason.)
Retrieval Method <b>FTP on Remote Server</b>	Any one	Hostname: IP address or host name of the Advanced Web Security Reporting host. Directory: name of Advanced Web Security Reporting instance directory. Username/Password: FTP user name and password for access to application.  <b>Note</b> If connection between Advanced Web Security Reporting and WSA is lost, logs for that period are not available until connection is restored.
Retrieval Method <b>Syslog Push</b>	Either	Hostname: IP address or host name of the Advanced Web Security Reporting host. Protocol: <b>TCP</b> . Facility: choose <b>auth</b> .  <b>Note</b> If connection between Advanced Web Security Reporting and WSA is lost, logs for that period are not available until connection is restored.

**Note**

Accessing online Help from the Add Log Subscription page brings up detailed information about all settings.

## Configure CWS Log Updates

### Before You Begin

- Log into the Advanced Web Security Reporting application as `admin`.

- 
- Step 1** In the Advanced Web Security Reporting application:
- Choose **Settings > Data > Data inputs > Cisco CWS Logs**.
- Step 2** Click **New**.
- Step 3** Provide a meaningful **name** for this data input.

- Step 4** Provide the **client\_id**, **s3\_key** and **s3\_secret** that have been provided from CWS. The **client\_id** is the bucket ID used in CWS.
- Step 5** Click **More settings** check box and provide the time **Interval** in seconds at which CWS logs can be pulled; default is 3600.
- Step 6** Click **Next**.
- Step 7** A success screen is displayed.



**Note** You can navigate to **Settings > Data > Data inputs > Cisco CWS Logs** to confirm the new data input entry.

## Set Up Department Membership Query (Optional)

Perform the set-up procedure for department membership requirements under these conditions:

- You will use AD/LDAP groups bound to roles in the Advanced Web Security Reporting application.
- You will run reports on data that are based on organizational roles.

### Related Topics

- [Restrict Access to Department Reports by Role, page 1-16](#)

## Set Up Department Membership Reporting

### Before You Begin

- Linux users: Install `ldapsearch` tool using the following command:  

```
sudo yum install openldap-clients
```

- Step 1** In the Advanced Web Security Reporting application:
- Choose **Settings > Data > Data inputs > AD/LDAP Server Details**.
- Step 2** Click **LDAP AD Server Details**.
- Step 3** On the LDAP AD Server Details page, provide the following server information, and then click **Save**:
- AD/LDAP Server Name –
  - AD/LDAP User Name –
  - AD/LDAP User Password and Confirm –
  - AD/LDAP Group Name –
- Step 4** Choose **Settings > Data > Data inputs > scripts** to enable the membership script:
- On Linux, the script name is `discovery.py`.
  - On Windows, the script name is `discovery.vbs`.

The membership script is set to run every day by default. The interval is set in seconds and can be changed by navigating to **Settings > Data > Data inputs > scripts** and editing the interval in the `discovery` file.

You can verify that the script populated the file `departments.csv` with the user data by examining the file `<install_home>/etc/apps/cisco_wsa_reporting/lookups/departments.csv`.




---

**Note** On Windows, if the `departments.csv` file is not populated with data at this point, change directory to `<install_home>\etc\apps\cisco_wsa_reporting\bin`, and run `cscript discovery.vbs`, where `<install_home>` is `C:\Program Files\Cisco\CiscoWSAReporting`.

---

The membership script is set to run every day by default. The interval is set in seconds and can be changed as per the deployment requirements.

## Restrict Access to Department Reports by Role

### Before You Begin

- Understand that if users are restricted to viewing data from specific departments or groups, Layer 4 Transport Monitor (L4TM) data will only be available to administrators because L4TM data is not linked to a department or role.
- Log into the Advanced Web Security Reporting application as `admin`.

---

**Step 1** In the Advanced Web Security Reporting application,

- Select **Settings > Users and authentication > Access controls > Roles**.

**Step 2** Click **New** or edit an existing role.

**Step 3** Define search restrictions for the role.

Example: To restrict a role to viewing data for the Sales Department, in the **Restrict search terms** field, enter `department=sales`.

**Step 4** Click **Save**.

---

## Troubleshooting Department Membership Reporting



### Tip

- 
- Linux users: Verify that `ldapsrch` tool is in the Advanced Web Security Reporting user's path.
  - Verify that the `departments.csv` file exists in the application's lookup folder.
  - Windows users: Comment out `option explicit` to reveal more specific information the origin and cause of an error.
  - Verify the LDAP paths are syntactically correct.
  - Verify the bind service account name is correct.
  - Verify the correct bind password is entered.
  - Test connection to the remote machine over port 389.
  - Verify the correct attribute was configured for the member name.

- Verify the correct attribute was used for group membership.
- Verify the correct attribute was configured for group name.

## Set Up Scheduled PDF Reporting (Optional)

Advanced Web Security Reporting application users can schedule PDF output generation from any dashboard, view, search or report. Follow these configuration steps to set up scheduled PDF reporting:

- [Configure Email Alerts, page 1-17](#)
- [Schedule PDF Report Generation, page 1-17](#)

### Configure Email Alerts

You can configure the Advanced Web Security Reporting application to send email alerts following PDF report generation.

#### Before You Begin

- Log into the Advanced Web Security Reporting application as `admin`.

- 
- Step 1** In the Advanced Web Security Reporting application:
- Choose **Settings > System > Server Settings > Email Settings**.
- Step 2** Enter or update the necessary Mail Server Settings in order to send alert emails:
- Mail host** – Enter the SMTP server host name.
  - Email security** (Optional) – Select an email security option. The application can use SSL or TLS when it communicates with the SMTP server.
  - Username** – Enter the name to use during SMTP server authentication.
  - Password** – The password configured for the specified user name.
  - Confirm password** – Re-enter the password.
- Step 3** Provide the necessary Email Format information:
- Link hostname** – Host name of the server used to create outgoing results.
  - Send email as** – Sender name displayed as email originator.
  - Email footer** – The note presented as a footer in sent emails.
- Step 4** Change the PDF Report Settings if necessary: choose a **Report Paper Size** and a **Report Paper Orientation**.
- Step 5** Click **Save**.
- 

### Schedule PDF Report Generation

You can schedule regular generation and emailing of a PDF report for any custom dashboard. See [Save As Dashboard, page 2-2](#) for information about creating custom dashboards.

**Before You Begin**

- Log into the Advanced Web Security Reporting application as `admin`.

- 
- Step 1** Choose the desired dashboard from the **Custom Dashboards** menu.
- Step 2** Choose **Edit > Schedule PDF Delivery**.
- Step 3** In the Edit PDF Schedule dialog box, check **Schedule PDF** and provide schedule, email and page options.
- Step 4** (Optional) Click **Send Test Email** to confirm that the generated PDF is sent as an attachment to the specified email address.
- Step 5** (Optional) Click **Preview PDF** to preview the generated PDF.
-



## Reports

---

- [Overview of Reports, page 2-1](#)
- [Accessing Reports, page 2-1](#)
- [Save As Dashboard, page 2-2](#)
- [Data Formats, page 2-3](#)
- [Time Ranges, page 2-3](#)
- [Export, page 2-4](#)
- [General Versus Specific Data, page 2-4](#)
- [Predefined Reports, page 2-5](#)
- [Usage Scenarios, page 2-7](#)

## Overview of Reports

Advanced Web Security Reporting includes a set of predefined reports. As much as possible the reporting is consistent with the native reporting of the Web Security Appliance.



**Note**

---

Reports generated using Advanced Web Security Reporting may show more data than is available through the Web Security Appliance alone.

---

## Accessing Reports

### Before You Begin

Advanced Web Security Reporting administrators can control the Web Security appliances (hosts) that you see on the Overview report and Web Tracking report. Contact your Advanced Web Security Reporting administrator with details of any hosts you would like to add, remove, or rename.

- 
- Step 1** Sign into the Advanced Web Security Reporting application using a Web browser. Summary information is displayed.
  - Step 2** Choose a report from the other menus. See [Predefined Reports, page 2-5](#).
  - Step 3** Select a time range, data source and hosts, if applicable.



Tip

---

Improve performance by specifying smaller time ranges and crafting searches to be as precise as possible.

---

## Save As Dashboard

On each report page, you can create a custom report page, or “dashboard,” for selected time range, source type and host.

- 
- Step 1** On the current report page, modify the search parameters for the report as desired, and then click the **Save As Dashboard** button.
- Step 2** Provide the following information in the Save As Dashboard Panel dialog box:
- **Dashboard Title** – A display name for the new dashboard.  
When saving any report page as a dashboard, you must provide a proper title to reflect the input selected in order to differentiate the custom dashboards.
  - **Dashboard ID** – Provide a file name for saving the dashboard; cannot be changed later.
  - **Dashboard Description** – (Optional) A short description.
  - **Dashboard Permissions** – Select **Private** or **Shared in App**. Private dashboards are visible only to you, while Shared dashboards are visible to all users.
- Step 3** Click **Save**.
- 

The new dashboard is added to the **Custom Dashboards** menu; choose a custom dashboard from the menu to view and edit that dashboard.

## Editing A Custom Dashboard

You can edit the currently displayed custom dashboard, repositioning and deleting individual report panels, changing the dashboard title and description, modifying the time range for search queries in those panels, modifying a panel’s chart type, and so on.

- 
- Step 1** Click the **Edit** button in the current custom dashboard and choose one of the following options:
- **Edit Panels** – Enable panel editing: drag a panel title bar to reposition it; click its close button to delete a panel; add a label above the panel’s title; click the appropriate button to:
    - Change the panel chart type.
    - Change chart parameters.
  - **Edit Title or Description** – Change the title and description of the entire dashboard.
  - **Edit Permissions** – Change the viewing permission for the entire dashboard.
  - **Schedule PDF Delivery** – Schedule regular generation of a report PDF from this dashboard; the generated PDF is then emailed to the address(es) you have specified.
  - **Delete** – Delete entire dashboard.

- Step 2** You also can click **Add Panel** to add a panel from similar custom dashboards to this dashboard. This button is displayed after you click the custom dashboard's **Edit** button.
- Step 3** Click **Done** when you are finished editing this dashboard.

## Data Formats

In some cases, the presentation of data available through Advanced Web Security Reporting differs from the presentation of data available through native reporting functionalities.

Data	Format Example
Large numbers (greater than seven digits)	2E11 represents $2 \times 10^{11}$
Time	d+hh:mm:ss.ms indicates elapsed days, hours, minutes, seconds, and milliseconds. For example, 1+03:22:36.00 represents one day, three hours, 22 minutes, 36 seconds, and zero milliseconds.

## Time Ranges



Tip

Select a smaller time range to return results more quickly.

## Timing of Data Availability

Range	Indexing Begins	Data Appears in Reports
Hour	Just past the hour	60-90 minutes after indexing begins
Day	After midnight daily	One day after indexing begins
Week	After midnight Saturday (early Sunday morning)	One week after indexing begins
90 Days	After midnight of the 90th day.	90 days after indexing begins.
Custom: Less than hourly	Just past the hour	60-90 minutes after indexing begins
Custom: Less than daily	After midnight daily	One day after indexing begins
Custom: Less than weekly	After midnight Saturday (early Sunday morning)	One week after indexing begins

# Export

## Exporting to a .CSV File

This option can be useful for tracking-type reports.

- 
- Step 1** Generate the report.
- Step 2** Select **Export**.
- 

## Exporting to a PDF File

### Before You Begin

- Verify that the Advanced Web Security Reporting administrator has enabled PDF output.

- 
- Step 1** Generate the report.
- Step 2** Select **Save as PDF**.
- 

### Related Topics

- [Set Up Scheduled PDF Reporting \(Optional\), page 1-17](#)

## General Versus Specific Data

Predefined general reports provide hyperlinks to predefined specific reports.

## Viewing Specifics

- 
- Step 1** Select the most appropriate predefined general report.  
For example, if you want specific information about a user, begin with the predefined Users report.
- Step 2** Click the hyperlink for the subject for which you want specifics.  
For example, click the User ID for an individual user.
- 

### Related Topics

- [Export, page 2-4](#)

# Search

Simple and advanced search options are available for most report pages.

## Search Tips

- Make the searches as specific as possible, and narrow the time range.
- Advanced Web Security Reporting uses a set of files to populate menus. If experience problems with the menus, verify that the necessary files are in the application's look-ups folder, including:
  - `malware_categories.csv`
  - `transaction_types.csv`
  - `url_categories.csv`
- The administrator can edit the list of URL categories visible within the application. When a category appears within the access log, but is not present in the look-up file, Advanced Web Security Reporting displays “Custom Category.”
- Administrators can control the options available in the drop-down fields in the Web Tracking form.

## Troubleshooting Searches

The `departments.csv` is a file used as part of the role-based security functionality. This file may be edited manually, or by configuring one of the role-discovery scripts (available in the application's `bin` folder) as a scripted input. There is a script for both Linux and Windows.

- Ensure the file exists in the application's look-up folder.
- If the Linux version is used, ensure the CLI command `ldapsearch` is installed and in the application user's path.
- If the Windows version is used, “option explicit” may be commented out to reveal more specific information regarding why and from where an error might have originated.
- Verify the LDAP paths are syntactically correct.
- Verify the bind service account name is correct.
- Verify the correct bind password is entered.
- Test connection to the remote machine over port 389.
- Verify the correct attribute was configured for the member name.
- Verify the correct attribute was used for group membership
- Verify the correct attribute was configured for group name.

## Predefined Reports

- Overview
- User Analysis
  - Overview

- Location Based
- User Drilldown
- Browsing Analysis
  - Domain
  - URL Category
- Application Analysis
  - Overview
  - Application
    - Location Based
    - Application Drilldown
  - Application Type
    - Application Type Drilldown
- Security Analysis
  - L4 Traffic Monitor
    - Overview
    - L4 TM Drilldown
  - Anti Malware
    - Overview
    - Client Malware Risk
    - Location Based
    - Malware Category Drilldown
    - Malware Threat Drilldown
  - Web Reputation Filters
    - Overview
    - Location Based
  - Advanced Malware Protection
    - Overview
    - AMP Drilldown

File Analysis – You can click the file ID (SHA256) for any entry in the “Completed Analysis Requests from This Appliance” table to open the File Analysis Detail page for that file. The File Analysis Detail page includes a File Analysis Server URL text box in which you can specify the File Analysis server for which you wish to view data. Generally, this URL is <https://intel.api.sourcefire.com> across all WSA versions through 8.5.

However, if you used another server for analysis of this particular file (demonstrations perhaps), you can change the server URL here to view the details for this file (as identified by its SHA, which you clicked to arrive at this drill-down report).

AMP Verdict Updates

- Web Tracking
  - Proxy Services
  - SOCKS
  - SOCKS Drilldown

**Related Topics**

- [Accessing Reports, page 2-1](#)
- [Search, page 2-5](#)

## Usage Scenarios

### User Investigation

This example demonstrates how a system administrator would investigate a particular user at a company. In this scenario, a manager has received a complaint that an employee is visiting inappropriate Web sites at work. To investigate this, the system administrator now needs to look at the employee's Web usage trends and transaction history:

- URL Categories by Total Transactions
- Trend by Total Transactions
- URL Categories Matched
- Domains Matched
- Applications Matched
- Malware Threats Detected
- Policies Matched for a particular User ID or Client IP

Using these reports, the system administrator can discover whether, for example, user “johndoe” was trying to access blocked URLs, which can be viewed in the Transactions Blocked column under the Domains section.

### Viewing Web Usage Trends

---

**Step 1** Select **Users** from the Cisco Advanced Web Security Reporting drop-down menu.

**Step 2** Click the User ID or Client IP address.



**Note** If you do not see the User ID or Client IP address you want to investigate in the Users table, click any User ID or Client IP. Then search for all or part of the User ID or Client IP address.

---

**Step 3** (Optional) Select **Actions > Print**.

---

## Viewing Transaction History

- 
- Step 1** Select **Web Tracking** from the Cisco Advanced Web Security Reporting drop-down menu.
  - Step 2** **Search** for the User ID/Client IP Address.
  - Step 3** Click **Pick fields** above the transaction list to change the information displayed for each transaction.
  - Step 4** (Optional) Click **Export** to export the data to a CSV file.
- 

## URLs Visited

In this scenario, a Sales manager wants to discover the top five visited Web sites at their company for the last week. Additionally, the manager wants to know which users are going to those Websites.

### Viewing Most Visited Web Sites

- 
- Step 1** Select **Web Sites** from the Cisco Advanced Web Security Reporting drop-down menu.
  - Step 2** Select **Week** from the Time Range drop-down list.
  - Step 3** View the top 25 domains in the Domains Matched table.
  - Step 4** Click a domain to view the users who have visited that domain in order of frequency.
- 

## URL Categories Visited

In this scenario, the Human Resources manager wants to know what the top three URL categories all employees have visited over the past 30 days. Additionally, a network manager wants to get this information to monitor bandwidth usage, to find out what URLs are taking up the most bandwidth on the network. The example below is to show how you can gather data for several people covering several points of interest, while only having to generate one report.

### Viewing Most Common URL Categories

- 
- Step 1** Select **URL Categories** from the Cisco Advanced Web Security Reporting drop-down menu.
  - Step 2** View the top ten URL Categories by Total Transactions graph.
  - Step 3** (Optional) Click the **Export PDF** button. Save the PDF and send it to the appropriate people.
  - Step 4** View the Bytes Allowed column in the URL Categories Matches table.
  - Step 5** (Optional) Click the **Export PDF** button. Save the PDF and send it to the appropriate people.
  - Step 6** For finer granularity, select a specific URL Category.
-