Installation and Setup

This chapter covers the following sections:

Introduction

The Cisco Cisco Advanced Web Security Reporting application provides filters and dashboards that are designed to give insight into very large volumes of data from multiple Web Security Appliances, and Cisco Umbrella. The Cisco Advanced Web Security Reporting application includes a data collection-and-display application, and a related server that forwards log data collected from Web Security Appliances (WSAs), and an Umbrella host.

The Cisco Advanced Web Security Reporting application receives log data and stores it in data models. You can view these data using searches, or “filters,” that you define.

What’s New

New in Release 7.5.2

Feature	Description
Splunk Engine Upgrade	The Splunk engine is upgraded to version 8.2.5.
Python Upgrade	The Python version is upgraded from 2.7 to 3.7.
UI Updates	You can now access the Access Control page using the following navigation paths for 7.5.2: • **Settings** > **Users and Authentication** > **Access Controls Users** • **Settings** > **Users and Authentication** > **Access Controls Roles**. • **Settings** > **Users and Authentication** > **Access Controls Password Management**.
Summary Index	Summary Index has been enabled in the **Overview** page to improve the performance.

New in Release 7.5.1

Feature	Description
Splunk Engine Upgrade	The Splunk engine is upgraded to version 7.3.5.
Syslog Parser Update	Syslog parser update for Web Security Appliance 12.0.1-334.

New in Release 7.5

Feature	Description
Splunk Engine Upgrade	The Splunk engine is upgraded to version 7.3.3.

Feature	Description
User Drilldown page displays report of AD group details.	In the **User Analysis** > **User Drilldown** page, a new filter is added to search by AD Group name. The AD group details are displayed in the search results. It displays the following details: AD Group, User ID, Destination Domain, Bandwidth Used, and Time Spent.

New in Release 7.0

Feature	Description
AWSR proxy services display events with no WBRS Score in search results	New filter for no WBRS score (Show WBRS: No Score) is added in the **Web Tracking** > **Proxy Services** dashboard. With this filter, you can view the search results for AWSR proxy services with no WBRS score.
Department Membership Reporting displays detailed results for AD Group report	You can now view the following results for AD group reports under **User Analysis** > **Overview**: • Top Groups by Transactions Blocked • Transactions Blocked Summary • Top Groups by Bandwidth Used • Bandwidth Used Summary • Top Groups by User • Bandwidth Used Summary • AD Group Summary • AD Group per User Details

New in Release 6.6

Feature	Description
Search in Custom Dashboards	Searching for data in Custom Dashboards is supported. • You can search for data using the main search field with the submit button. • You can filter the search results using the secondary search field in the results pane.
Export from any page	You can export data (non graphical data) from any dashboard as a comma-separated values (csv) file, an XML file, or a JavaScript Object Notation (json) file. You must hover over the dashboard data display pane to view this option to ⤓ download.

New in Release 6.4

Feature	Description
Web Tracking Dashboard Updates	• New filters—**User, Client IP, WBRS** minimum and maximum score ranges, and **SNI** are added in the **Web Tracking** > **Proxy Services** dashboard. • You can view and export 10000 transactions from the Proxy Services dashboard.

New in Release 6.3

Feature	Description
Splunk Engine Upgrade	The Splunk engine is upgraded to version 6.6.6.

New in Release 6.2

Feature	Description
Cisco Umbrella reports support	You can point the Cisco Advanced Web Security Reporting application to the private AWS S3 bucket containing logs provided by Umbrella. You can view the reports in the Consolidated Web Security Reports dashboards.
Splunk Engine Upgrade	The Splunk engine is upgraded to the latest version.

Note Role based reporting works only on the data models that are not accelerated. Since disabling acceleration increases the time to load reports, enable data model acceleration if role based reporting is not used. See Configuration Best Practices and Restrict Access to Department Reports by Role.

New in Release 6.1

Feature	Description
CEF Extractor	The Common Event Format (CEF) Extractor service lets you transform access logs received from one or more WSAs into CEF-formatted output data.
Web Security appliance AsyncOS 10.1 support	Support for changes to Archive Scan access logs, included in the AsyncOS 10.1 for Web Security Appliances release.

New in Release 6.0

Feature	Description
Custom Filters	Define custom searches of the available access, SOCKS and AMP log data, in a process known as “filtering.”
Web Security appliance AsyncOS 10.0 changes	AMP enhancements and Referrer header-related support.

Supported and Unsupported Features

Component	Supported	Not Supported
Server	Single-server deployments	Multiple-server deployments
Transport Methods	FTP (files and directories) TCP (syslogs)	
PDF	Integrated PDF generation Scheduled PDF Reporting	
Custom Dashboards	For each predefined report, use **Save As Dashboard** to create a custom dashboard for selected time range, source type and host (limited). For each custom filter, use **Save As Dashboard** to create a custom dashboard for selected Filter fields from access, SOCKS or AMP logs.	

System Requirements and Sizing and Scaling Recommendations

System requirements, as well as sizing and scaling recommendations, are detailed in the *Cisco 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

The following ports that are used by AWSR must be open. Ensure that these ports are not blocked in the enterprise firewall.

- 8887/TCP - port number(s) for the python-based application server to listen. This port is called as app server ports.
- 8888/TCP - port to access Cisco Advanced Web Security Reporting GUI. This port is also called as web port.
- 8889/TCP - port that Cisco Advanced Web Security Reporting web use to communicate with the daemon process. This port is called as management port.
- 8886/TCP - mongodb - port that daemon uses to connect to the KV Store server.

- 22/TCP - SSH/SCP/WGET
- 514/TCP - Syslog
- 21/TCP - FTP

Note You can also enable nmap/netstat/iptables to control and verify the system configuration, and RDP on windows.

Set-up Overview

- Install Cisco Advanced Web Security Reporting for the first time:
  - –Installing Cisco Advanced Web security Reporting 7.5.2, on page 6
  - – Licensing and Migration
  - – Create the Folder Structure for Access and Traffic Monitor Log Files
  - – Import and Index Historical Data
  - – Set Up On-going Data Transfers (Including setup of Web Security Appliance.)
  - – Umbrella Log Updates
- Upgrading to Cisco Advanced Web Security Reporting 7.5.2

Installing Cisco Advanced Web security Reporting 7.5.2

Note Make sure that you clear the cookies and cache in the browser before installing/upgrading.

Note For AWSR 7.5.2, login credentials are created during installation. Credentials created during installation will have ‘administrator’ roles and capabilities/privileges.

Follow the steps in this section to install Cisco Advanced Web Security Reporting.

- On Linux
- On Windows

On Linux

Perform the following tasks in order.

Step 1 Download the installer for the version of the Cisco Advanced Web Security Reporting required:

https://software.cisco.com/download/home/286290962/type/283998384/release/7.5.2

Step 2 Extract the installer software at /opt using the below command.

```
tar -zxvf CiscoAdvancedWebSecurityReporting-Linux_7-5-2-0-124.tgz -C /opt
```

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

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

- If the result of this command is:

  ```
  ./setup.sh: Permission denied
  ```

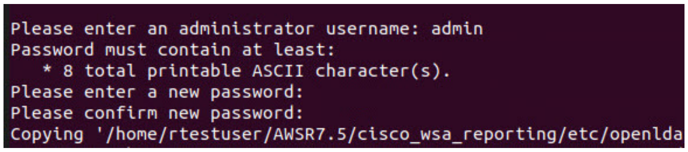
  a. Change the permission level of the script `setup.sh` by using the following command:

  ```
  chmod 777 setup.sh
  ```

  b. Re-run the script.

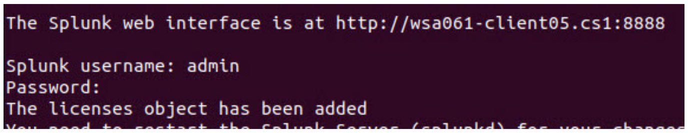
The progress, and milestone statements are displayed during set-up.

Step 4 Create the administrator username and password and confirm password.



```
Please enter an administrator username: admin
Password must contain at least:
   * 8 total printable ASCII character(s).
Please enter a new password:
Please confirm new password:
Copying '/home/rtestuser/AWSR7.5/cisco_wsa_reporting/etc/openlda
```

Step 5 Enter the username and password created above in the previous step to login.



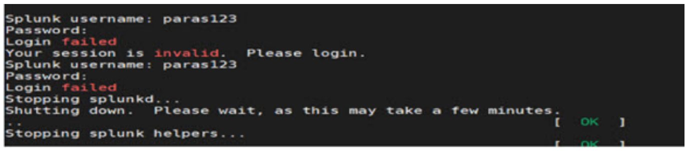
```
The Splunk web interface is at http://wsa061-client05.cs1:8888

Splunk username: admin
Password:
The licenses object has been added
```

Step 6 Launch Cisco Advanced Web Security Reporting, and log in with the credentials created during installation:

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

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

Note If the username and password is provided incorrectly twice during Splunk login, during the execution of **setup.sh** command, the license does not get added.

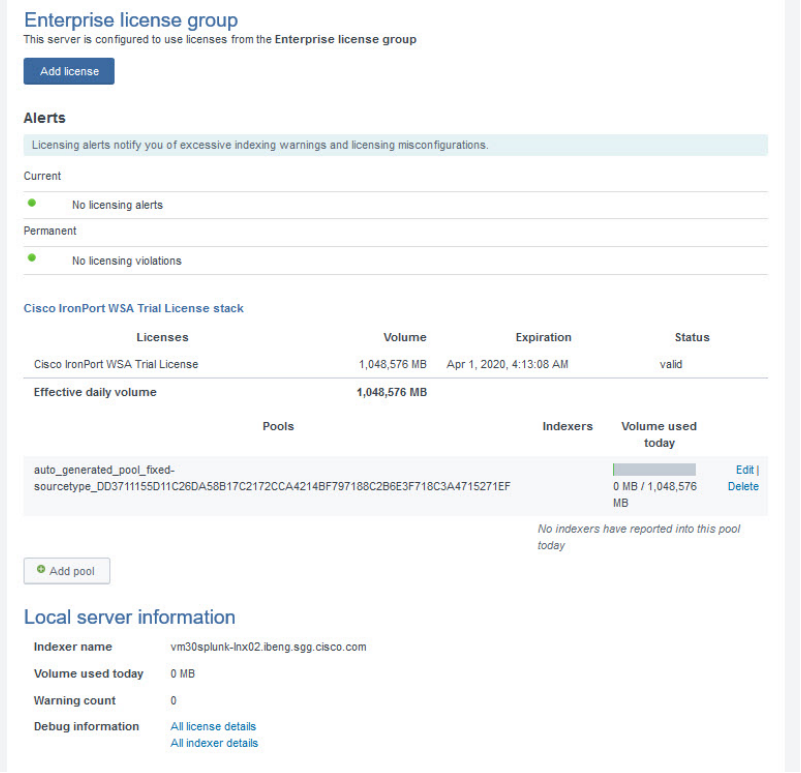


```
Splunk username: paras123
Password:
Login failed
Your session is invalid.  Please login.
Splunk username: paras123
Password:
Login failed
Stopping splunkd...
Shutting down.  Please wait, as this may take a few minutes.
..                                                          [  OK  ]
Stopping splunk helpers...
                                                            [  OK  ]
```

To add the license file manually, follow the below steps:

From the `<INSTALL_HOME>` directory, for example, `/opt/cisco_wsa_reporting`:

- Copy the content of the file '**Splunk-eval-120d-500GB.License**' and login to AWSR GUI as administrator.
- Navigate to **Settings** > **SYSTEM** > **Licensing** > **Add license** > click **Copy & paste the license XML directly** and paste the content of '**Splunk-eval-120d-500GB.License**' > **Install** and then restart.



Enterprise license group

This server is configured to use licenses from the **Enterprise license group**

Alerts

Licensing alerts notify you of excessive indexing warnings and licensing misconfigurations.

Current

● No licensing alerts

Permanent

● No licensing violations

Cisco IronPort WSA Trial License stack

Licenses	Volume	Expiration	Status
Cisco IronPort WSA Trial License	1,048,576 MB	Apr 1, 2020, 4:13:08 AM	valid
Effective daily volume	**1,048,576 MB**		

Pools	Indexers	Volume used today	
auto_generated_pool_fixed-sourcetype_DD3711155D11C26DA58B17C2172CCA4214BF797188C2B6E3F718C3A4715271EF		0 MB / 1,048,576 MB	Edit | Delete

No indexers have reported into this pool today

Local server information

Indexer name	vm30splunk-lnx02.ibeng.sgg.cisco.com
Volume used today	0 MB
Warning count	0
Debug information	All license details All indexer details

- Post Installation Tasks
- Licensing and Migration

On Windows

Before you begin

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

Step 1 Download the installer for the version of the Cisco Advanced Web Security Reporting required:

https://software.cisco.com/download/home/286290962/type/283998384/release/7.5.2

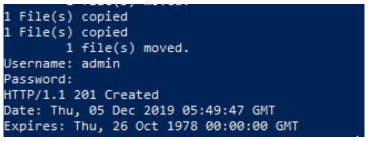
Step 2 Extract the installer. You can use applications such as 7-Zip, WinZip, etc.

Note Files related to digital signature can be seen in the directory where the package was extracted. For example, `C:\Users\<UserDirectory>\Downloads\CiscoAdvancedWebSecurityReporting-Windows_7-5-2-0-124.tgz`

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

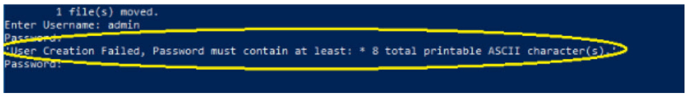
Step 4 Run the installation command `./install.bat`.

Step 5 Create the administrator username and password and then confirm password.



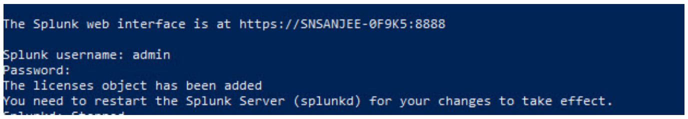
```
1 File(s) copied
1 File(s) copied
        1 file(s) moved.
Username: admin
Password:
HTTP/1.1 201 Created
Date: Thu, 05 Dec 2019 05:49:47 GMT
Expires: Thu, 26 Oct 1978 00:00:00 GMT
```

Note In case of an invalid length of password, you might get an error message “Password must contain at least 8 total printable ASCII characters”. Ensure that the password contains minimum of 8 ASCII characters for successful user creation.



```
        1 file(s) moved.
Enter Username: admin
Password:
'User Creation Failed, Password must contain at least: * 8 total printable ASCII character(s).'
Password:
```

Step 6 Enter the username and password created above in the previous step to login.



```
The Splunk web interface is at https://SNSANJEE-0F9K5:8888

Splunk username: admin
Password:
The licenses object has been added
You need to restart the Splunk Server (splunkd) for your changes to take effect.
```

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

Step 7 Reboot the Cisco Advanced Web Security Reporting server.

Step 8 Launch the Cisco Advanced Web Security Reporting application and log in:

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

b. Log in with the username and password created during installation.

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

What to do next

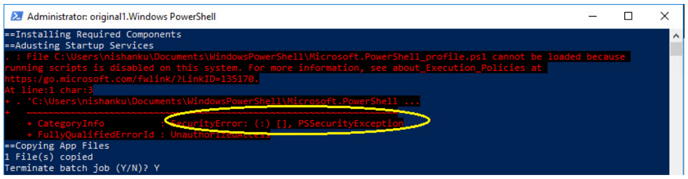
- Post Installation Tasks
- Licensing and Migration

Handling Errors During Installation

The following error might appear during installation. This section describes the common errors that can occur during installation and the steps that you need to be perform to resolve these errors.

Security Error: PSSecurityException

The PSSecurityException error occurs in some cases when you install Cisco Advanced Web Security Reporting on a fresh appliance.



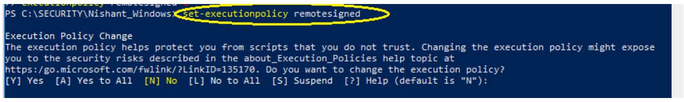
Administrator: original1.Windows PowerShell

```
==Installing Required Components
==Adusting Startup Services
. : File C:\Users\nishanku\Documents\WindowsPowerShell\Microsoft.PowerShell_profile.ps1 cannot be loaded because
running scripts is disabled on this system. For more information, see about_Execution_Policies at
https:/go.microsoft.com/fwlink/?LinkID=135170.
At line:1 char:3
+ . 'C:\Users\nishanku\Documents\WindowsPowerShell\Microsoft.PowerShell ...
+   ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : SecurityError: (:) [], PSSecurityException
    + FullyQualifiedErrorId : UnauthorizedAccess
==Copying App Files
1 File(s) copied
Terminate batch job (Y/N)? Y
```

Perform the following steps to resolve this error.

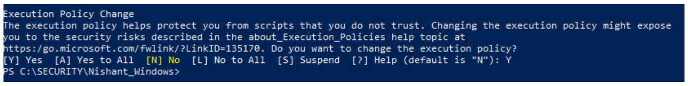
Step 1 Run the following command in the prompt:

```
set-executionpolicy remotesigned
```



```
PS C:\SECURITY\Nishant_Windows> set-executionpolicy remotesigned

Execution Policy Change
The execution policy helps protect you from scripts that you do not trust. Changing the execution policy might expose
you to the security risks described in the about_Execution_Policies help topic at
https:/go.microsoft.com/fwlink/?LinkID=135170. Do you want to change the execution policy?
[Y] Yes  [A] Yes to All  [N] No  [L] No to All  [S] Suspend  [?] Help (default is "N"):
```

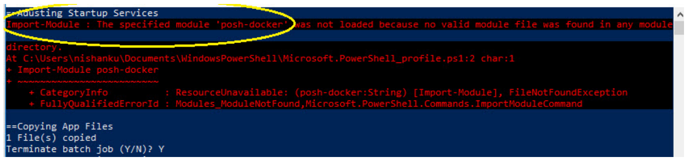
Step 2 Select [Y] yes for any prompt that appear.



```
Execution Policy Change
The execution policy helps protect you from scripts that you do not trust. Changing the execution policy might expose
you to the security risks described in the about_Execution_Policies help topic at
https:/go.microsoft.com/fwlink/?LinkID=135170. Do you want to change the execution policy?
[Y] Yes  [A] Yes to All  [N] No  [L] No to All  [S] Suspend  [?] Help (default is "N"): Y
PS C:\SECURITY\Nishant_Windows>
```

Step 3 Re-run the installation command `./install.bat`

Import Module Error: posh-docker

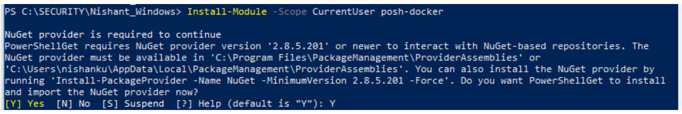


```
==Adusting Startup Services
Import-Module : The specified module 'posh-docker' was not loaded because no valid module file was found in any module
directory.
At C:\Users\nishanku\Documents\WindowsPowerShell\Microsoft.PowerShell_profile.ps1:2 char:1
+ Import-Module posh-docker
+ ~~~~~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : ResourceUnavailable: (posh-docker:String) [Import-Module], FileNotFoundException
    + FullyQualifiedErrorId : Modules_ModuleNotFound,Microsoft.PowerShell.Commands.ImportModuleCommand

==Copying App Files
1 File(s) copied
Terminate batch job (Y/N)? Y
```

Perform the following steps to resolve this error.

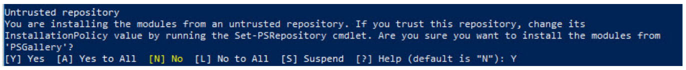
Step 1 Run the following command in the prompt:

```
Install-Module -Scope CurrentUser posh-docker
```



```
PS C:\SECURITY\Nishant_Windows> Install-Module -Scope CurrentUser posh-docker

NuGet provider is required to continue
PowerShellGet requires NuGet provider version '2.8.5.201' or newer to interact with NuGet-based repositories. The
NuGet provider must be available in 'C:\Program Files\PackageManagement\ProviderAssemblies' or
'C:\Users\nishanku\AppData\Local\PackageManagement\ProviderAssemblies'. You can also install the NuGet provider by
running 'Install-PackageProvider -Name NuGet -MinimumVersion 2.8.5.201 -Force'. Do you want PowerShellGet to install
and import the NuGet provider now?
[Y] Yes  [N] No  [S] Suspend  [?] Help (default is "Y"): Y
```

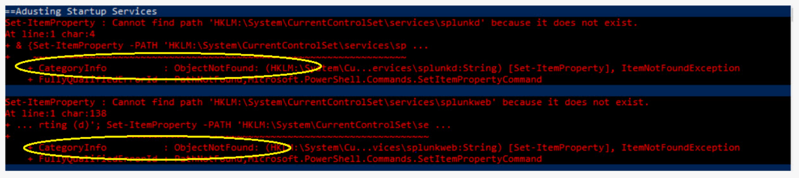
Step 2 Select **[Y]** yes for any prompt that appear.



```
Untrusted repository
You are installing the modules from an untrusted repository. If you trust this repository, change its
InstallationPolicy value by running the Set-PSRepository cmdlet. Are you sure you want to install the modules from
'PSGallery'?
[Y] Yes  [A] Yes to All  [N] No  [L] No to All  [S] Suspend  [?] Help (default is "N"): Y
```

Step 3 Re-run the installation command `./install.bat`

ObjectNotFound: Cannot find path



```
==Adusting Startup Services
Set-ItemProperty : Cannot find path 'HKLM:\System\CurrentControlSet\services\splunkd' because it does not exist.
At line:1 char:4
+ & {Set-ItemProperty -PATH 'HKLM:\System\CurrentControlSet\services\sp ...
+   ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : ObjectNotFound: (HKLM:\System\Cu...ervices\splunkd:String) [Set-ItemProperty], ItemNotFoundException
    + FullyQualifiedErrorId : PathNotFound,Microsoft.PowerShell.Commands.SetItemPropertyCommand

Set-ItemProperty : Cannot find path 'HKLM:\System\CurrentControlSet\services\splunkweb' because it does not exist.
At line:1 char:138
+ ... rting (d)'; Set-ItemProperty -PATH 'HKLM:\System\CurrentControlSet\se ...
+                 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : ObjectNotFound: (HKLM:\System\Cu...vices\splunkweb:String) [Set-ItemProperty], ItemNotFoundException
    + FullyQualifiedErrorId : PathNotFound,Microsoft.PowerShell.Commands.SetItemPropertyCommand
```

Perform the following steps to resolve this error.

Step 1 Run the following command in the prompt:

```
New-Item -Path HKLM:\System\CurrentControlSet\services\splunkd -Force | Out-Null

New-Item -Path HKLM:\System\CurrentControlSet\services\splunkweb -Force | Out-Null
```

Step 2 Re-run the installation command `./install.bat`

Upgrading to Cisco Advanced Web Security Reporting 7.5.2

- On Linux
- On Windows

On Linux

These tasks must be performed in order:

Step 1 Navigate to the directory of previous version of installed Cisco Advanced Web Security Reporting.

Step 2 Shutdown the previous session using the `chmod 777 ./shutdown` command.

Step 3 Check if the AWSR is still running through the browser by navigating to `https://<hostname>:8888`.

Step 4 Download new installer for the version of the Cisco Advanced Web Security Reporting in `/opt/` directory from:

https://software.cisco.com/download/home/286290962/type/283998384/release/7.5.2

Step 5 Copy the downloaded installer file into the base directory for the cisco_wsa_reporting directory.

For example, if the earlier version of Cisco Advanced Web Security Reporting is installed in `/opt/cisco_wsa_reporting/`, then place the file in the `/opt/` directory.

Step 6 Change directory to the installation's base directory (for example, `/opt/`).

Step 7 Use the command below to extract the installer. Use appropriate version number.

```
tar -zxvf CiscoAdvancedWebSecurityReporting-Linux_7-5-2-0-124.tgz
cisco_wsa_reporting/SeamlessUpgrade.sh; cp -f cisco_wsa_reporting/SeamlessUpgrade.sh./
```

Step 8 Run the upgrade script. Use appropriate version number.

```
./SeamlessUpgrade.shCiscoAdvancedWebSecurityReporting-Linux_7-5-2-0-124.tgz
```

- If the result of this command is:

  ```
  ./SeamlessUpgrade.sh: Permission denied
  ```

  a. Change the permission level of the script SeamlessUpgrade.sh by issuing the following command:

  ```
  chmod 777 cisco_wsa_reporting/SeamlessUpgrade.sh
  ```

  b. Re-run the script

Step 9 In a browser, open `https://<wsa_reporting_server_host_name>:8888` and log in with the username and password.

On Windows

These tasks must be performed in order:

Step 1 Download the installer for the version of the Cisco Advanced Web Security Reporting required:

https://software.cisco.com/download/home/286290962/type/283998384/release/7.5.2

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 Use the command `.\WinSeamlessUpgrade.ps1` to upgrade Cisco Advanced Web Security Reporting.

Step 5 In a browser, open `https://<wsa_reporting_server_host_name>:8888` and log in with the username and password.

Users

The Cisco Advanced Web Security Reporting application provides two administrative users. You can also create users and assign roles already available or create a new role. See Restrict Access to Department Reports by Role.

Administrative Users

The Cisco Advanced Web Security Reporting application provides two administrative users:

- The “default admin” (user name: `admin` and password: `Cisco@dmin`) 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**).

Creating New Users

Apart from administrative users, you can also create new users:

Step 1 Choose **Settings** > **Users and Authentication** > **Access Controls Users**.

Step 2 Click **New**.

Step 3 Enter a **Username**, and assign a role. See Restrict Access to Department Reports by Role.

Step 4 Set a password.

Step 5 Click **Save**.

Configuration Best Practices

- Set time zones consistently across Web Security appliances, and the Umbrella host.

  The time displayed in the search results reflects the ‘local’ time of the Cisco 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).

- Enable data model acceleration if role based reporting is not used.

  1. Choose **Settings** > **Data** > **Data Acceleration**.

  2. Click **Edit**.

3. Select **Edit Acceleration**.
4. Check the **Accelerate** check box, and select 3 months as **Summary Range**.
5. Click **Save**.

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

On Linux

To stop the Cisco Advanced Web Security Reporting application:

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

```
./shutdown.sh
```

To start the Cisco Advanced Web Security Reporting application:

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

```
/startup.sh
```

On Windows

To stop the Cisco Advanced Web Security Reporting application:

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

```
shutdown.bat
```

To start the Cisco 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`.

Post Installation Tasks

Enable HTTPS with AWSR

Step 1 In Cisco Advanced Web Security Reporting application, choose **Settings** > **System** > **Server Settings**.

Step 2 Click **General Settings**.

Step 3 Click **Yes** for **Enable SSL (HTTPS) in Cisco Advanced Web Security Reporting application**.

By default, AWSR deployments point to the default certificates when encryption is turned on. See Generate and Sign Certificates to sign the certificates.

Step 4 Log into the CLI as `root` user and navigate to `$AWSR_Home/etc/system/local/`

Step 5 Edit **web.conf** file and make sure that the entry `enableSplunkWebSSL = 1` is present in it.

Step 6 Navigate to the `$AWSR_HOME` directory and run the **shutdown.sh** command to stop the AWSR process.

Step 7 Start the AWSR process by executing the **startup.sh** command.

Step 8 You must now add `https://` before the URL you use to access Cisco Advanced Web Security Reporting application.

Disable Client-Initiated Renegotiation

Step 1 Log into the CLI as `root` user and navigate to `$AWSR_Home/etc/system/local/`

Step 2 Open the **web.conf** file and append the text `allowSslRenegotiation = false` at the end.

Step 3 Navigate to the `$AWSR_HOME` directory and run the **shutdown.sh** command to stop the AWSR process.

Step 4 Start the AWSR process by executing the **startup.sh** command.

Generate and Sign Certificates

See Generate and Sign Certificates for more details.

Send Strict Transport Security Header

Step 1 Log into the CLI as `root` user and navigate to `$AWSR_Home/etc/system/local/`

Step 2 Open the **server.conf** file and append the following text:

```
[httpServer]
replyHeader.X-XSS-Protection= 1; mode=block
replyHeader.Content-Security-Policy = script-src 'self'; object-src 'self'
[sslConfig]
sendStrictTransportSecurityHeader = true
```

Step 3 Open the **web.conf** file and append the following text:

```
sendStrictTransportSecurityHeader = true
replyHeader.X-XSS-Protection= 1; mode=block
```

Step 4 Navigate to the `$AWSR_HOME` directory and run the **shutdown.sh** command to stop the AWSR process.

Step 5 Start the AWSR process by executing the **startup.sh** command.

Restrict Password Length

This topic describes how to configure minimum permitted password length in characters when passwords are set or modified.

Step 1 Log into the CLI as `root` user and navigate to `$AWSR_Home/etc/system/local/`

Step 2 Open the **authentication.conf** file and append the following text at the end:

```
[splunk_auth]
minPasswordLength = <positive integer>
```

where, `positive integer` can be a positive number such as 12, 127, 256 etc.

Note If the **authentication.conf** file is not present in `$AWSR_HOME/etc/system/local` path, then copy the file from `$AWSR_HOME/etc/system/default` path to `$AWSR_HOME/etc/system/local` path and make the changes specified in step 2 above.

Step 3 Navigate to the `$AWSR_HOME` directory and run the **shutdown.sh** command to stop the AWSR process.

Step 4 Start the AWSR process by executing the **startup.sh** command.

Disable Compression Algorithms

The following steps address the SSL/TLS Compression Algorithm Information Leakage Vulnerability.

Step 1 Log into the CLI as `root` user and navigate to `$AWSR_Home/etc/system/local/`

Step 2 Open the **server.conf** file and `append allowSslCompression = false` under **[sslConfig]** section.

Step 3 Navigate to the `$AWSR_HOME` directory and run the **shutdown.sh** command to stop the AWSR process.

Step 4 Start the AWSR process by executing the **startup.sh** command.

Licensing and Migration

The three AMP reports added in version 4.5 are supported for Web Security appliance AMP logs only.

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

- Migration from v3.0 (Web Security Appliance) to v4.0 (Web Security Appliance-only) Reporting
- Migration from v3.0 (Web Security Appliance-only) to v4.0 Hybrid Reporting
- New Hybrid Reporting License

Migration from v3.0 (Web Security Appliance) to v4.0 (Web Security Appliance-only) Reporting

You can install the version 4.0 or later software and your previously installed license will continue to provide Web Security appliance 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 (Web Security Appliance-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 Web Security appliance reporting. In addition, the embedded evaluation license will let you evaluate the hybrid reporting feature.

In order to migrate from Web Security appliance-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 including `ciscoumbrella`. https://tools.cisco.com/ServiceRequestTool/scm/mgmt/case

Note Contacting TAC is necessary only if you are upgrading from version 3.0 Web Security appliance-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 Cisco Advanced Web Security Reporting user, to utilize Web Security appliance 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 the appropriate Umbrella package.

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`, and `wsa_amplogs`.

Using Cisco’s Cisco 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 Cisco 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 Cisco 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 Cisco 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 Cisco Advanced Web Security Reporting license(s):

Step 1 Launch the Cisco Advanced Web Security Reporting application (enter `https://<hostname>:8888` in abrowser 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/	$Input_base=path of root FTP folder host_name=Web Security appliance
Access	/$Input_base/wsa_hostname/accesslogs/	$Input_base=deployment host_name=Web Security appliance
AMP	/$Input_base/wsa_hostname/amplogs/	$Input_base=deployment host_name=Web Security appliance

Import and Index Historical Data

Before you begin

- Complete configuration tasks listed in Upgrading to Cisco Advanced Web Security Reporting 7.5.2, on page 11 .
- Know the folder structure. See Create the Folder Structure for Access and Traffic Monitor Log Files.

Step 1 Copy the historical log files into the folder structure for log files.

Step 2 In the Cisco Advanced Web Security Reporting application, log in as `admin`.

Step 3 Verify that data is being imported:

a. Select **Settings** > **Data** > **Indexes**.

b. Scroll down to the summary row.

c. 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 Web Security Appliance Logs.

(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 Web Security appliance 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 Cisco 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
- Know the path to your log files: Create the Folder Structure for Access and Traffic Monitor Log Files.
- Log into the Cisco Advanced Web Security Reporting application as `admin`.

Configure Data Inputs for Web Security Appliance Logs

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

Step 1 In the Cisco 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 Enter the full path to the FTP directory to which Web Security appliance logs will be sent.

This path, and the FTP path provided on the Web Security appliance's Log Subscription page must match.

Step 5 Click **Next**.

Step 6 Click **New**.

Step 7 Enter the **Source Type**, select the **Source Type Category**, and enter the **Source Type Description**.

`wsa_accesslogs` - These are used for all reports except layer 4 traffic monitor & Advanced Malware Protection reports.

`wsa_trafmonlogs` - These are used for layer 4 traffic monitor reports.

`wsa_amplogs` - These are used for Advanced Malware Protection reports.

Step 8 Choose **Advanced Web Security Reporting 7.5.2** from the App Context drop-down list.

Step 9 Click **Constant value** and enter the Web Security appliance host name in the **Host field value** field.

Step 10 Choose **Main** as the destination **Index**.

Step 11 Click **Review** and review the values you provided.

Step 12 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 Web Security Appliance Syslogs

Step 1 In the Cisco 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 **New**.

Step 6 Enter `wsa_syslog` in the **Source type** field.

Step 7 Choose **Advanced Web Security 7.5.2** as the **App Context**.

Step 8 In the Host section, click **Custom** as the **Method**, and then enter the Web Security appliance host name as the **Host field value**.

Step 9 Choose **Main** as the destination Index.

Step 10 Click **Review** and review the values you provided.

Step 11 Click **Submit**.

Step 12 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 Cisco Advanced Web Security Reporting application for each appliance. You cannot use the same port for two different data inputs. 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
- 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) **Rollover by File Size** **Maximum File Size**	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	**Squid**
	Traffic Monitor	N/A
	AMP Engine	N/A
Log Level	Access	N/A
	Traffic Monitor	N/A
	AMP Engine	Select **Debug**. **Note** It is important to change **Log Level** to **Debug** for AMP reporting, or little to no information will be reported.
(Optional) Custom Fields	Access only	%XK (Adds a web reputation threat reason.)

Setting	Log Type	Value
Retrieval Method **FTP on Remote Server**	Any one	Hostname: IP address or host name of the Cisco Advanced Web Security Reporting host. Directory: name of Cisco Advanced Web Security Reporting instance directory. Username/Password: FTP user name and password for access to application. **Note** If connection between Cisco Advanced Web Security Reporting and Web Security appliance is lost, logs for that period are not available until connection is restored.
Retrieval Method **Syslog Push**	Either	Hostname: IP address or host name of the Cisco Advanced Web Security Reporting host. Protocol: TCP. Facility: choose auth. **Note** If connection between Cisco Advanced Web Security Reporting and Web Security appliance 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.

Umbrella Log Updates

Before you begin

- Log into the Cisco Advanced Web Security Reporting application as `admin`.
- You must have a private AWS S3 bucket. To configure private S3 bucket, see https://docs.umbrella.com/umbrella-user-guide/docs/enable-logging-to-your-own-s3-bucket

Step 1 In the Cisco Advanced Web Security Reporting application:

Choose **Settings** > **Data** > **Data inputs** > **Cisco Umbrella Logs**.

Step 2 Click **New**.

Step 3 Enter a **name** for this data input.

Step 4 Enter the **client_id**, **s3_key** and **s3_secret** that have been provided by Umbrella. The **client_id** is the AWS bucket name for Umbrella.

Step 5 Click the **More settings** check box and provide the time **Interval** in seconds at which Umbrella logs can be pulled; default is 3600.

Step 6 Choose **Manual** in the **Set sourcetype** drop-down list.

Step 7 Enter the **Source type**. Enter `ciscoumbrella` (for Umbrella reports).

Step 8 Click **Next**.

Step 9 A success screen is displayed.

Note Not supported on Cisco managed AWS S3 bucket.

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 Cisco Advanced Web Security Reporting application.
- You will run reports on data that are based on organizational roles.

Related Information:

- Restrict Access to Department Reports by Role

Set Up Department Membership Reporting

Before you begin

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

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

Step 1 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 (Specify the Group DN)

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`.

The `departments.csv` file is used as part of the role-based reporting. This file contains:

- user (cs-username - Authenticated username) in the first column
- displayname, groupname in subsequent columns, retrieved from the Active Directory or LDAP server using scripts. For the user present in access log (user_id field), the corresponding display name and group will be displayed in the displayname and department fields.

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 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.

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`.

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 Cisco Advanced Web Security Reporting application as `admin`.

Step 1 Choose **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**.

Step 5 Choose **Settings** > **Data** > **Data Acceleration**.

Step 6 Click **Edit**.

Step 7 Select **Edit Acceleration**.

Step 8 Uncheck the **Accelerate** check box, and click **Save**.

To verify the new role's search restrictions, you can create a new user and run searches. See Creating New Users. Search results for a user, assigned to the role created in Step 4, will only show events that match the search strings specified in the role.

Note Enable data model acceleration if role based reporting is not used. This will enhance reporting performance. See Configuration Best Practices.

Related Information:

- Users

Troubleshooting Department Membership Reporting

Tip

- Linux users: Verify that ldapsearch tool is in the Cisco 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)

Cisco 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
- Schedule PDF Report Generation

Configure Email Alerts

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

Before you begin

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

Step 1 In the Cisco 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:

a. **Mail host**—Enter the SMTP server host name.

b. **Email security** (Optional)—Select an email security option. The application can use SSL or TLS when it communicates with the SMTP server.

c. **Username**—Enter the name to use during SMTP server authentication.

d. **Password**—The password configured for the specified user name.

e. **Confirm password**—Re-enter the password.

Step 3 Provide the necessary Email Format information:

a. **Link hostname**—Host name of the server used to create outgoing results.

b. **Send email as**—Sender name displayed as email originator.

c. **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 for information about creating custom dashboards.

Before you begin

- Log into the Cisco 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.

Schedule Summary Index Generation

Before you begin

rpt_awsr_top_malware_categories will run everyday 0:00 hours for last 24 hours.

Note You can change the schedule based on the requirement.

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

Step 1 Go to *https://<host>:8888/en-US/manager/search/saved/searches?app=cisco_wsa_reporting*.

Step 2 Change the owner as **All**.

Step 3 Choose **rpt_awsr_top_malware_categories**.

Step 4 Choose **Edit** > **Edit Schedule**.

Step 5 Change the **Schdule Time** and **Time Range** based on the requirement.

Step 6 Click **Save**.

Create or Modify Users

To create a new user

Step 1 Login to Cisco Advanced Web Security Reporting application as an admin user.

Step 2 Choose **Settings** > **USERS AND AUTHENTICATION** > **Access Controls Users- Add New**

Step 3 Enter the following details

a. Username: Enter a unique username (mandatory)

b. Full Name: Enter the first name and last name

c. email address: Enter the email address

d. Time zone: Choose the time zone

e. Default app: **cisco_wsa_reporting** (Advanced Web Security Reporting 7.5.2)

f. Assign to roles or Create a role for this user: To create a new user role, see Create or Modify Roles (mandatory).

g. Password (mandatory): Enter a password.

h. Confirm Password (mandatory): Retype the password

Step 4 Click **Save**.

Delete Users

To delete an existing user:

Step 1 Login to Cisco Advanced Web Security Reporting application as an admin user.

Step 2 Choose **Settings** > **USERS AND AUTHENTICATION** > **Access Controls Users**

Step 3 Click **Delete** next to each user to remove that user.

Note You cannot delete the admin user.

Create or Modify Roles

To create or modify a user role

Step 1 Login to Cisco Advanced Web Security Reporting application as an admin user.

Step 2 Choose **Settings** > **USERS AND AUTHENTICATION** > **Access Controls Users- Add New**

Step 3 Enter following details to create a new role

a. **Role Name:** Enter a unique name for the role.

b. **Default app:** cisco_wsa_reporting

c. **Search Restrictions:** Restrict the scope of searches run by this role. Search results for this role will only display events that matches this search string.

– Restrict search terms (Can include source, host, index (can be set below), eventtype, sourcetype, search fields, *, and OR and AND). For example, “host=web* OR source=/var/log/*”

– Restrict search time range (Set a maximum time window (in seconds) for searches for this role. For example, set this to '60' to restrict this role's searches to 1 minute before the most recent time specified in the search. You can also set this to '0' to explicitly make the window infinite, or '-1' to unset the window for this role (can be overridden by imported roles).)

– User-level concurrent search jobs limit (Enter the maximum number of concurrent search jobs for each user of this role).

– Real-time search jobs for each user of this role. (This count is independent from the normal search jobs limit).

– Role-level concurrent search jobs limit (Enter the maximum number of cumulative concurrent search jobs for this role).

– Role-level concurrent real-time search jobs limit (Enter the maximum number of cumulative concurrent real-time search jobs for this role. This count is independent from the normal search jobs limit).

– Limit total jobs disk quota (Enter the total disk space in MB that can be used by a user's search jobs. For example, '100' would limit this role to 100 MB total).

d. **Inheritance:** Specify roles from which this role inherits capabilities and indexes. Inherited capabilities and indexes cannot be disabled. If multiple roles are specified, this role inherits capabilities from the parent with broadest permissions. Below are the list of predefined roles that varies depending on the capabilities:

– admin

– can_delete

– power

– splunk_system_role

– user

– wsa_admin

e. **Capabilities:** See the List of Capabilities table below for the available list of capability names.

f. **Indexes searched by default:** Set the index(es) that searches default to when no index is specified. User with this role can search other indexes using index= (For example, “index=special_index”).

g. **Indexes:** Restrict this role's searches to the specified index(es).

h. Click **Save**.

List of Capabilities

Capability name	What it lets you do
accelerate_datamodel	Enable or disable acceleration for data models. Set acceleration to true to enable automatic acceleration of this data model. Additional space is required depending on the number of events, fields, and distinct field values in the data. See the Knowledge Manager Manual for more information.

Capability name	What it lets you do
accelerate_search	Lets the user enable or disable acceleration for reports. The user must also have the schedule_search capability assigned. Works for searches that use transforming commands. See the Knowledge Manager Manual for more information.
admin_all_objects	Lets the user access and modify any object in the system regardless of any restrictions set in the objects. For example user objects, search jobs, reports, and knowledge objects. Allows the user to bypasses any ACL restrictions, much the way root access in a Linux environment does.
change_authentication	Lets the user change authentication settings and reload authentication. See the Securing Splunk Enterprise Manual for more about authentication.
change_own_password	Lets the user change their own password.
delete_by_keyword	Lets the user use the "delete" operator. The "delete" command marks all of the events returned by the search as deleted. This masks the data from showing up in search results but does not actually delete the raw data on disk. See the Search Manual for more information.
dispatch_rest_to_indexers	Lets a user dispatch the REST search command to indexers.
edit_deployment_client	Lets the user change deployment client settings. See the Managing Indexers and Clusters of Indexers Manual for more about the deployment client.
edit_deployment_server	Lets the user change deployment server settings. User can change or create remote inputs that are pushed to the forwarders and other deployment clients. See the Managing Indexers and Clusters of Indexers manual for more about the deployment server.
edit_dist_peer	Lets the user add and edit peers for distributed search. See the Managing Indexers and Clusters of Indexers Manual for more information.
edit_forwarders	Lets the user change forwarder settings, including settings for SSL, backoff schemes, etc. Also used by TCP and Syslog output admin handlers.
edit_httpauths	Lets the user edit and end user sessions through the httpauth-tokens endpoint.
edit_indexer_cluster	Lets the user edit indexer clusters. See the Managing Indexers and Clusters of Indexers Manual for more about indexers.
edit_input_defaults	Lets the user use the server settings endpoint to change default hostnames for input data.

Capability name	What it lets you do
edit_monitor	Lets the user add inputs and edit settings for monitoring files. Also used by the standard inputs endpoint and the one-shot input endpoint.
edit_roles	Lets the user edit roles and change user/role mappings. Used by both the user and role endpoint.
edit_roles_grantable	Lets the user edit roles and change user/role mappings for a limited set of roles. Can assign any role to other users. To limit this ability, configure grantableRoles in authorize.conf. For example: grantableRoles = role1;role2;role3
edit_scripted	Lets the user create and edit scripted inputs.
edit_search_head_clustering	Lets the user edit search head clustering settings.
edit_search_schedule_priority	Lets the user assign a search a higher-than-normal schedule priority. For information about the search scheduler, see the Knowledge Manager Manual.
edit_search_schedule_window	Lets the user assign schedule windows to scheduled reports. Requires the schedule_search capability. For more about the search scheduler, see the Knowledge Manager Manual.
edit_search_scheduler	Lets the user enable and disable the search scheduler. See the Knowledge Manager Manual.
edit_search_server	Lets the user edit general distributed search settings like timeouts, heartbeats, and blacklists.
edit_server	Lets the user edit general server settings like server name, log levels, etc.
edit_server_crl	Lets the user edit general server settings like server name, log levels, etc. Inherits the ability to read general server and introspection settings.
edit_sourcetypes	Lets the user edit sourcetypes. See the Knowledge Manager manual for more information about sourcetypes.
edit_splunktcp	Lets the user change settings for receiving TCP inputs from another Splunk instance.
edit_splunktcp_ssl	Lets the user view or edit any SSL-specific settings for Splunk TCP input.
edit_splunktcp_token	Lets the user edit the Splunktcp token.
edit_tcp	Lets the user change settings for receiving general TCP inputs.
edit_tcp_token	Lets the user change TCP tokens. This is an admin capability and should only be assigned to system administrators.

Capability name	What it lets you do
edit_telemetry_settings	Opt in or out of product instrumentation.
edit_token_http	Lets the user create, edit, display, and remove settings for HTTP token input. Also enables the HTTP Event Collector feature.
edit_udp	Lets the user change settings for UDP inputs.
edit_user	Lets the user create, edit, or remove users. A role with the edit_user capability can assign any role to other users. To limit this ability, configure grantableRoles in authorize.conf. For example, grantableRoles = role1;role2;role3. Also lets a user manage certificates for distributed search.
edit_view_html	Lets the user create, edit, or modify HTML-based views.
edit_web_settings	Lets the user change settings for web.conf through the system settings endpoint.
embed_report	Lets the user embed reports and disable embedding for embedded reports.
export_results_is_visible	Lets the user display or hide the **Export Results** button in Splunk Web. The default value is to display the button.
extra_x509_validation	Lets the user add additional x509 validation.
get_diag	Lets the user get a remote diag from a Splunk instance using the /streams/diag endpoint.
get_metadata	Lets the user use the "metadata" search processor.
get_typeahead	Lets the user use typeahead in the endpoint and the typeahead search field.
indexes_edit	Lets the user change any index settings such as file size and memory limits.
input_file	Lets the user add a file as an input through inputcsv (except for dispatch=t mode) and inputlookup.
license_edit	Lets the user edit the license.
license_tab	Lets the user access and change the license. This attribute is deprecated.
license_view_warnings	Lets the user see a warning message when they are exceeding data limits or reaching the expiration date of their license. These warnings appear on the system banner.
list_accelerate_search	Lets the user view accelerated reports. User cannot accelerate reports.

Capability name	What it lets you do
list_deployment_client	Lets the user view deployment client settings.
list_deployment_server	View deployment server settings.
list_forwarders	Lets a user list and view settings for data forwarding. Can be used by TCP and Syslog output admin handlers.
list_httpauths	Lets the user view user sessions through the httpauth-tokens endpoint.
list_indexer_cluster	Lets the user view the list of indexer clusters as well as indexer cluster objects such as buckets, peers, etc.
list_indexerdiscovery	Lets the user view settings for indexer discovery. Also used by indexer discovery handlers.
list_inputs	Lets the user view lists of various inputs, including input from files, TCP, UDP, scripts, etc.
list_introspection	Lets the user read introspection settings and statistics for indexers, search, processors, queues, etc.
list_search_head_clustering	Lets the user list and view search head clustering objects like artifacts, delegated jobs, members, captain, etc.
list_search_scheduler	Lets the user view lists of search scheduler jobs.
list_settings	Lets the user list and view server and introspection settings such as the server name, log levels, etc.
list_storage_passwords	Lets the user list and view the /storage/passwords endpoint, lets the user perform GETs. The admin_all_objects capability must added to the role for the user to perform POSTs to the /storage/passwords endpoint.
output_file	Lets the user create file outputs, including outputcsv (except for dispatch=t mode) and outputlookup.
pattern_detect	Lets the user see and use the Patterns tab in the Search view.
request_remote_tok	Lets the user obtain a remote authentication token, which lets the user perform some distributed peer management and bundle replication and distribute searches to old 4.0.x Splunk instances.
rest_apps_management	Lets the user edit settings for entries and categories in the python remote apps handler. See restmap.conf for more information.
rest_apps_view	Lets the user list and view various properties in the Python remote apps handler. See restmap.conf for more information.
rest_properties_get	Lets the user get information from the services/properties endpoint.

Capability name	What it lets you do
rest_properties_set	Lets the user edit the services/properties endpoint.
restart_splunkd	Lets the user restart Splunk Enterprise through the server control handler.
rtsearch	Lets the user run real-time searches.
run_debug_commands	Lets the user run debug commands. For example "Summarize".
run_multi_phased_searches	Lets the user run searches with the redistribute command, which invokes parallel reduce search processing in distributed search environments. This capability is not assigned to any role by default.
schedule_search	Lets the user schedule saved searches, create and update alerts, and review triggered alert information.
search	Lets the user run a search. See the Search Manual for more information.
search_process_config_refresh	Lets the user use the "refresh search-process-config" CLI command to manually flush idle search processes.
srchFilter	Lets the user manage search filters. See the Search Manual for more information.
srchIndexesAllowed	Lets the user run search indexes. See the Search Manual for more information.
srchIndexesDefault	Lets the user set default search indexes.
srchJobsQuota	Lets the user set search job quotas.
srchMaxTime	Lets the user set the maximum time for a search.
use_file_operator	Lets the user use the "file" search operator. The "file" search operator is deprecated.
web_debug	Lets the user debug Web files.

Table 1: Windows Specific Capabilities

Capability name	What it lets you do
edit_modinput_admon	Edit modular inputs in admon.conf.
edit_modinput_perfmon	Edit modular inputs in perfmon.conf.
edit_modinput_winhostmon	Add and edit inputs for monitoring Windows host data
edit_modinput_winnetmon	Add and edit inputs for monitoring Windows network data.

Capability name	What it lets you do
edit_modinput_winprintmon	Required to add and edit inputs for monitoring Windows printer data.
edit_win_admon	(Deprecated)
edit_win_eventlogs	Edit windows eventlogs.
edit_win_perfmon	(Deprecated)
edit_win_regmon	(Deprecated)
edit_win_wmiconf	Edit wmi.conf.
list_pdfserver	View PDF server files
list_win_localavailablelogs	List all local Windows event logs.
srchTimeWin	Set search time limits.
write_pdfserver	Write to PDF server files.