Configure Custom URL Categories in Secure Web Appliance

Contents

Introduction

This document describes the structure of Custom Uniform Resource Locator (URL) Categories, in Secure Web Appliance (SWA).

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- How proxy works.
- Secure Web Appliance (SWA) administration.

Cisco recommends that you have:

- Physical or Virtual Secure Web Appliance (SWA) Installed.
- License activated or installed.
- The setup wizard is completed.

- Administrative Access to the SWA.

Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Custom URL Categories

The URL filter engine lets you filter transactions in Access, Decryption, and Data Security Policies. When you configure URL categories for policy groups, you can configure actions for custom URL categories, if any are defined, and predefined URL categories.

You can create custom and external live-feed URL categories that describe specific **Host Names** and **Internet Protocol (IP) Addresses**. In addition, you can edit and delete URL categories.

When you include these custom URL categories in the same Access, Decryption, or Cisco Data Security Policy group and assign different actions to each category, the action of the higher included custom URL category takes precedence.

> **Note**: If Domain Name System (DNS) resolves several IPs to a website, and if one of those IPs is custom blocked list, then the Web Security Appliance blocks the website for all IPs, irrespective of they not listed in the custom blocked list.

Live-feed URL Categories

External Live Feed Categories are used to pull the list of URLs from specific site, for example to fetch the Office 365 URLs from Microsoft.

If you select External Live Feed Category for the Category Type when Creating and Editing Custom and External URL Categories, you must select the feed format (Cisco Feed Format or Office 365 Feed Format) and then provide a URL to the appropriate feed-file server.
Here are the expected format for each feed file:

- **Cisco Feed Format** â€“ This must be a comma-separated values (.csv) file; that is, a text file with a .csv extension. Each entry in the .csv file must be on a separate line, formatted as address/comma/address type
(for example: www.cisco.com,site or ad2.*\.com,regex). Valid address types are site and regex.

Here is an excerpt from a Cisco Feed Format .csv file:

```
www.cisco.com,site
\.xyz,regex
ad2.*\.com,regex
www.cisco.local,site
1:1:1:11:1:1::200,site
```

- **Office 365 Feed Format** â€“ This is an XML file located on a Microsoft Office 365 server, or a local server to which you saved the file. It is provided by the Office 365 service and cannot be modified.

The network addresses in the file are enclosed by XML tags, this structure: products > product > address list > address. In the current implementation, an "address list type" can be IPv6, IPv4, or URL [which can include domains and Regular Expressions (regex) patterns].

Here is a snippet of an Office 365 feed file:

```
<products updated="4/15/2016">
<product name="o365">
<addresslist type="IPv6">
<address>fc00:1040:401::d:80</address>
<address>fc00:1040:401::a</address>
<address>fc00:1040:401::9</address>
</addresslist>
<addresslist type="IPv4">
<address>10.71.145.72</address>
<address>10.71.148.74</address>
<address>10.71.145.114</address>
</addresslist>
<addresslist type="URL">
<address>*.cisco.com</address>
<address>*.example.local</address>
</addresslist>
</product>
<product name="LYO">
<addresslist type="URL">
<address>*.subdomain.cisco.com</address>
<address>*.example.local</address>
</addresslist>
</product>
</products>
```

Note: Do not include **http://** or **https://** as part of any site entry in the file, or an error occur. In other words, www.cisco.com is parsed correctly, while http://www.cisco.com produces an error

Steps to Create Custom URL Categories

Step 1. Choose Web Security Manager > Custom and External URL Categories.

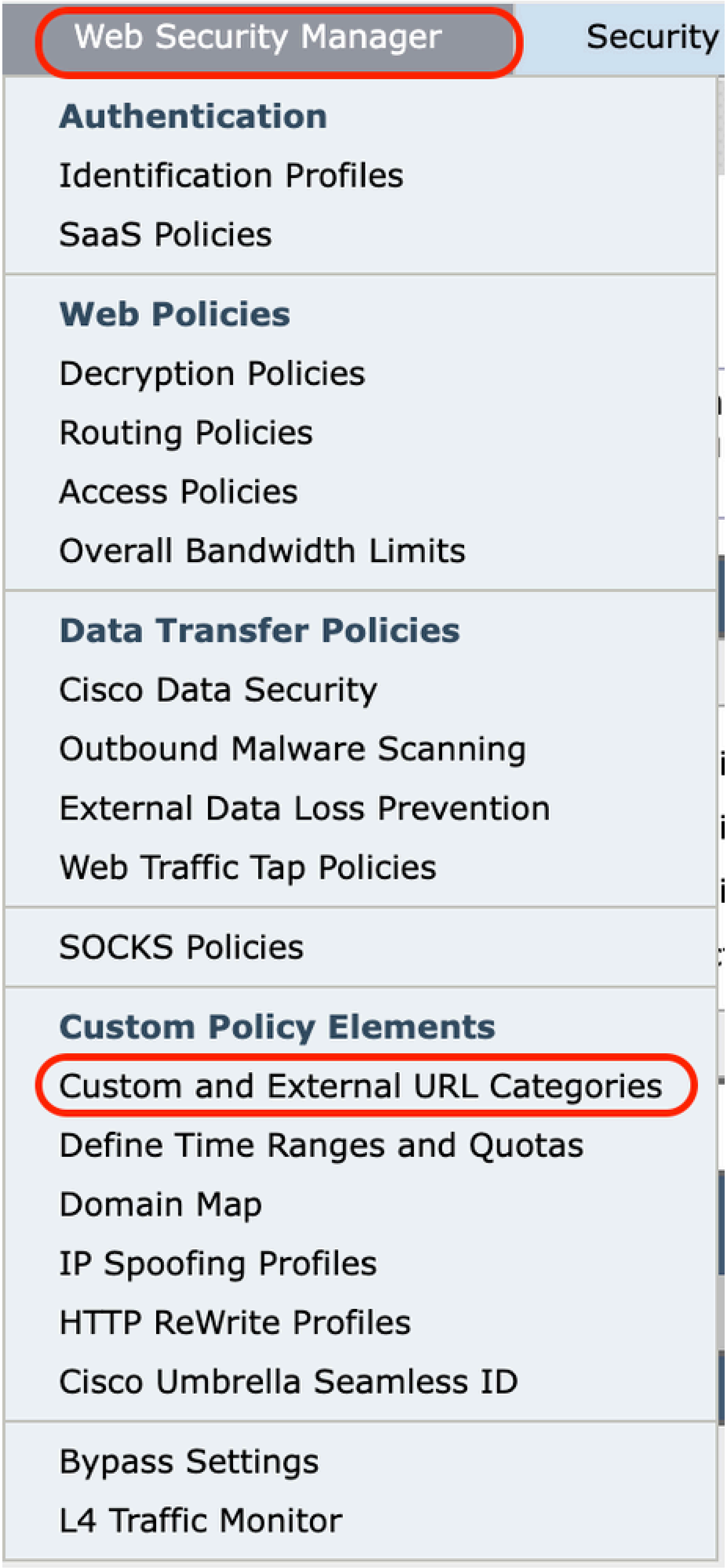


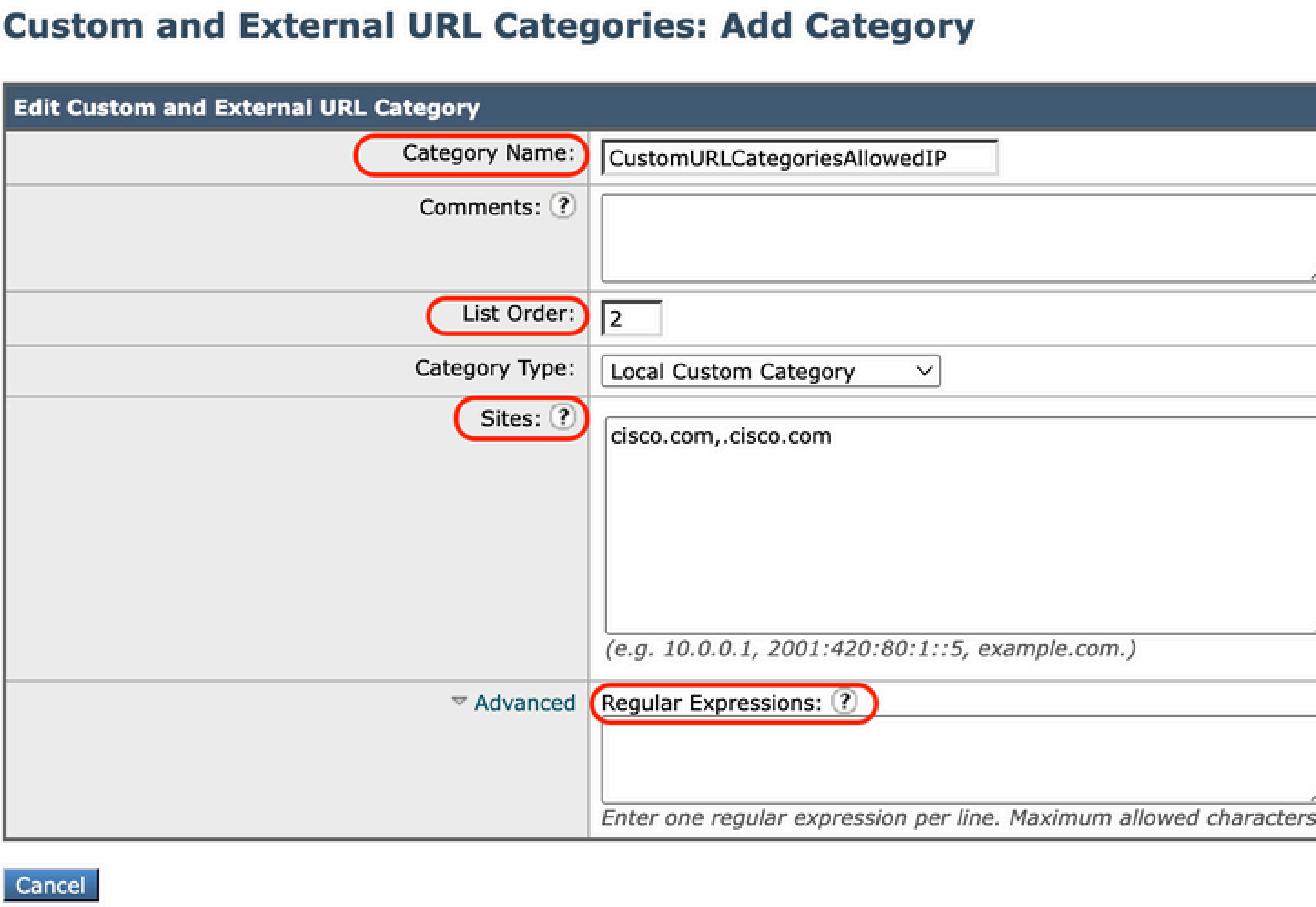
image- Select custom Category in GUI

: Enter an identifier for this URL category. This name appears when you configure URL filter for policy groups.

- **List Order**: Specify the order of this category in the list of custom URL categories. Enter â€œ1â€� for the first URL category in the list.
  The URL filter engine evaluates a client request against the custom URL categories in the order specified.

Note: When the URL filter engine matches a URL category to the URL in a client request, it first evaluates the URL against the custom URL categories included in the policy group. If the URL in the request does not match an included custom category, the URL filter engine compares it to the predefined URL categories. If the URL does not match any included custom or predefined URL categories, the request is un-categorized.

- **Category Type:** Choose **Local Custom Category** or **External Live Feed Category**.
- **Routing Table:** Choose Management or Data. This choice is available only if â€œsplit routingâ€� is enabled; that is, it is not available with local custom categories.



Custom and External URL Categories: Add Category

Edit Custom and External URL Category

Category Name:	CustomURLCategoriesAllowedIP
Comments: ?	
List Order:	2
Category Type:	Local Custom Category
Sites: ?	cisco.com,.cisco.com (e.g. 10.0.0.1, 2001:420:80:1::5, example.com.)
▽ Advanced	Regular Expressions: ? Enter one regular expression per line. Maximum allowed characters

image- Local custom URL category

Local Custom Category

Define Use Regular Expressions

The Secure Web Appliance uses a regular expression syntax that differs slightly from the regular expression syntax used by other Velocity pattern-matching engine implementations.

Further, the appliance does not support a backward slash to escape a forward slash. If you need to use a forward slash in a regular expression, simply type the forward slash without a backward slash.

Note: Technically, AsyncOS for Web uses the Flex regular expression analyzer

To test your regular Expressions you can use this link : flex lint - Regex Tester/Debugger

Caution: Regular expressions that return more that 63 characters fail and produce an invalid-entry error. Please be sure to form regular expressions that do not have the potential to return more than **63** characters

Caution: Regular expressions that perform extensive character match consume resources and can affect system performance. For this reason, regular expressions can be cautiously applied.

You can use regular expressions in these locations:
â€¢ Custom URL categories for Access Policies. When you create a custom URL category to use with Access Policy groups, you can use regular expressions to specify multiple web servers that match the pattern you enter.
â€¢ Custom user agents to block. When you edit the applications to block for an Access Policy group, you can use regular expressions to enter specific user agents to block.

Tip: You cannot set the web proxy bypass for Regular Expressions.

here is the List of Character Classes in Flex Regular Expression

Character classes	
.	any character except newline
\w \d \s	word, digit, white space
\W \D \S	not word, digit, white space
[abc]	any of a, b, or c
[^abc]	not a, b, or c
[a-g]	character between a & g
Anchors	
^abc$	start / end of the string
\b	word boundary
Escaped characters	
\. * \\	escaped special characters
\t \n \r	tab, linefeed, carriage return
\u00A9	unicode escaped ©
Groups & Lookaround	
(abc)	capture group
\1	back reference to group #1
(?:abc)	non-capturing group
(?=abc)	positive look ahead
(?!abc)	negative look ahead
Quantifiers & Alternation	

a* a+ a?	0 or more, 1 or more, 0 or 1
a{5} a{2,}	exactly five, two or more
a{1,3}	between one & three
a+? a{2,}?	match as few as possible
ab|cd	match ab or cd

> **Caution**: Be wary of un-escaped dots in long patterns, and especially in the middle of longer patterns and Be wary of this meta-character (Star *), especially in conjunction with the dot character. Any pattern contains an un-escaped dot that returns more than 63 characters after the dot is disabled.
> Always escape *(star) and . (dot) with \ (back slash) like ***** and **\.**
> If we use **.cisco.local** in the regular expression the domain **Xcisco.local** is a match as well.
> The un-escaped character affect the performance and it creates slowness during web Browsing. This is because the pattern-matching engine must go through thousands or millions of possibilities until find a match for the correct entry also it can have some security concerns regards to the similar URLs for allowed Policies

You can use the command-line interface (CLI) option **advancedproxyconfig > miscellaneous > Do you want to enable URL lower case conversion for velocity regex,** to enable or disable default regex conversion to lower case for case-insensitive matches. Use if you have issues with case sensitivity.

Limitations and Design Concerns

- You can use no more than 30 External Live Feed files in these URL category definitions, and each file must contain no more than 5000 entries.
- If the number of external feed entries increased, it causes performance degradation.
- It is possible to use the same address in multiple custom URL categories, but the order in which the categories are listed is relevant.

If you include these categories in the same policy, and define different actions for each, the action defined for the category listed highest in the custom URL categories table is applied.

- When a native File Transfer Protocol (FTP) request is transparently redirected to the FTP Proxy, it contains no Hostname information for the FTP server, only its IP address.

Because of this, some predefined URL categories and Web Reputation Filters that have only Hostname information does not match native FTP requests, even if the requests are destined for those servers.

If you wish to block access to these sites, you must create custom URL categories for them to use their IP addresses.

- An un-categorized URL is a URL that does not match any predefined URL category or included custom URL category

Use Custom URL Categories In Policies

The URL filter engine lets you filter transactions in Access, Decryption, and Data Security Policies. When you configure URL categories for policy groups, you can configure actions for custom URL categories, if any are defined, and predefined URL categories.

Steps To Configure URL Filters For Access Policy

Step 1. Choose Web Security Manager > Access Policies.

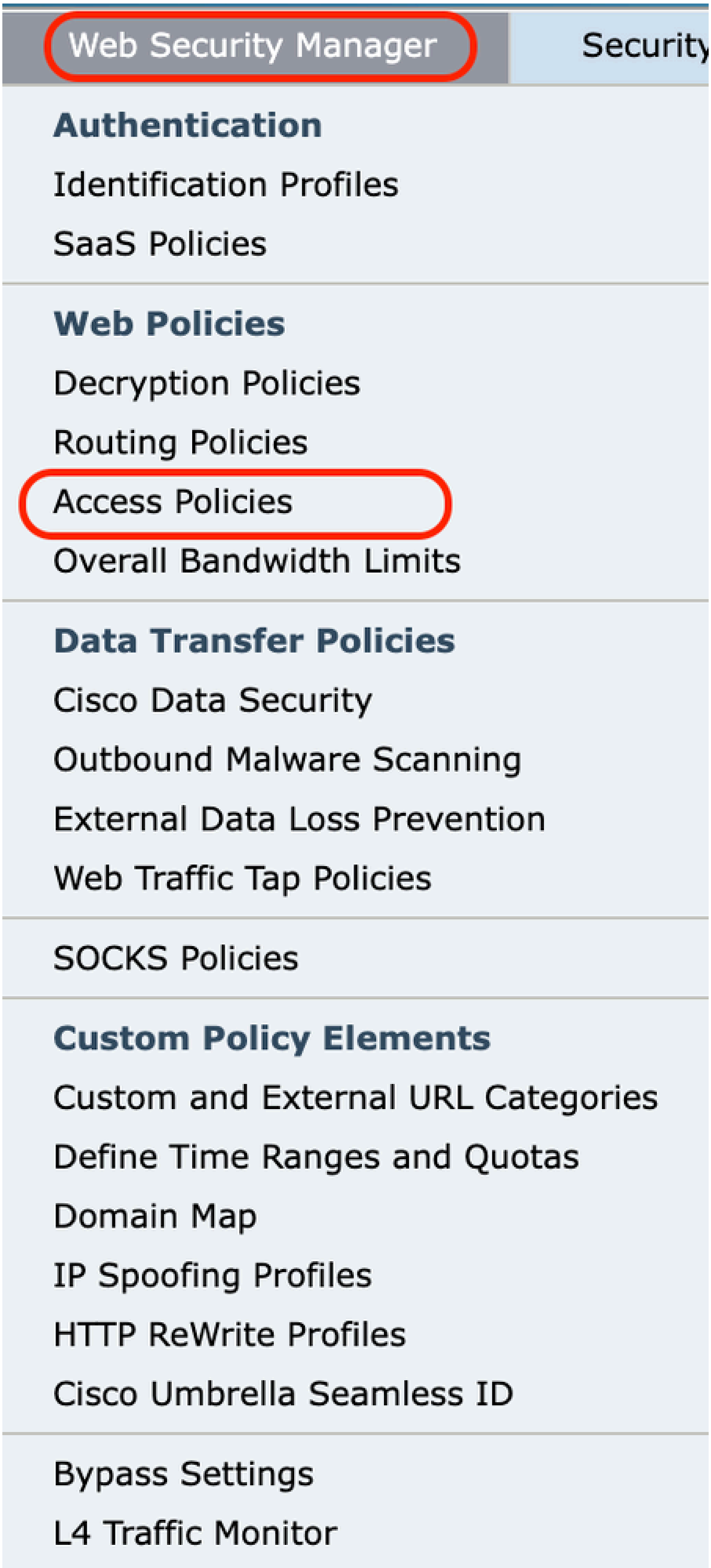
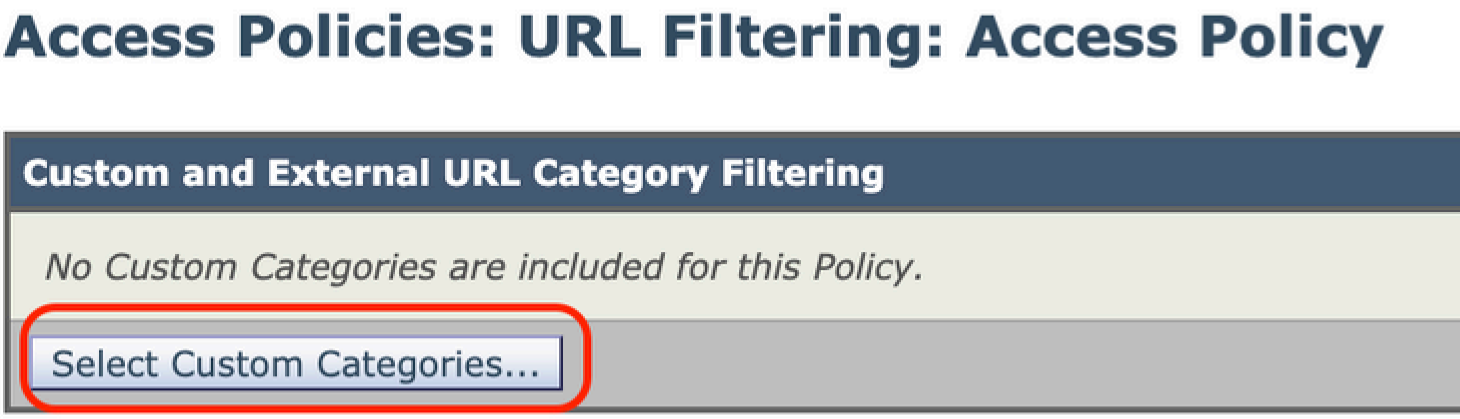


Image- Select Access Policies from GUI

Step

) In the Custom URL Category Filtering section, you can add custom URL categories on which to take action in this policy:

a) Click Select Custom Categories.



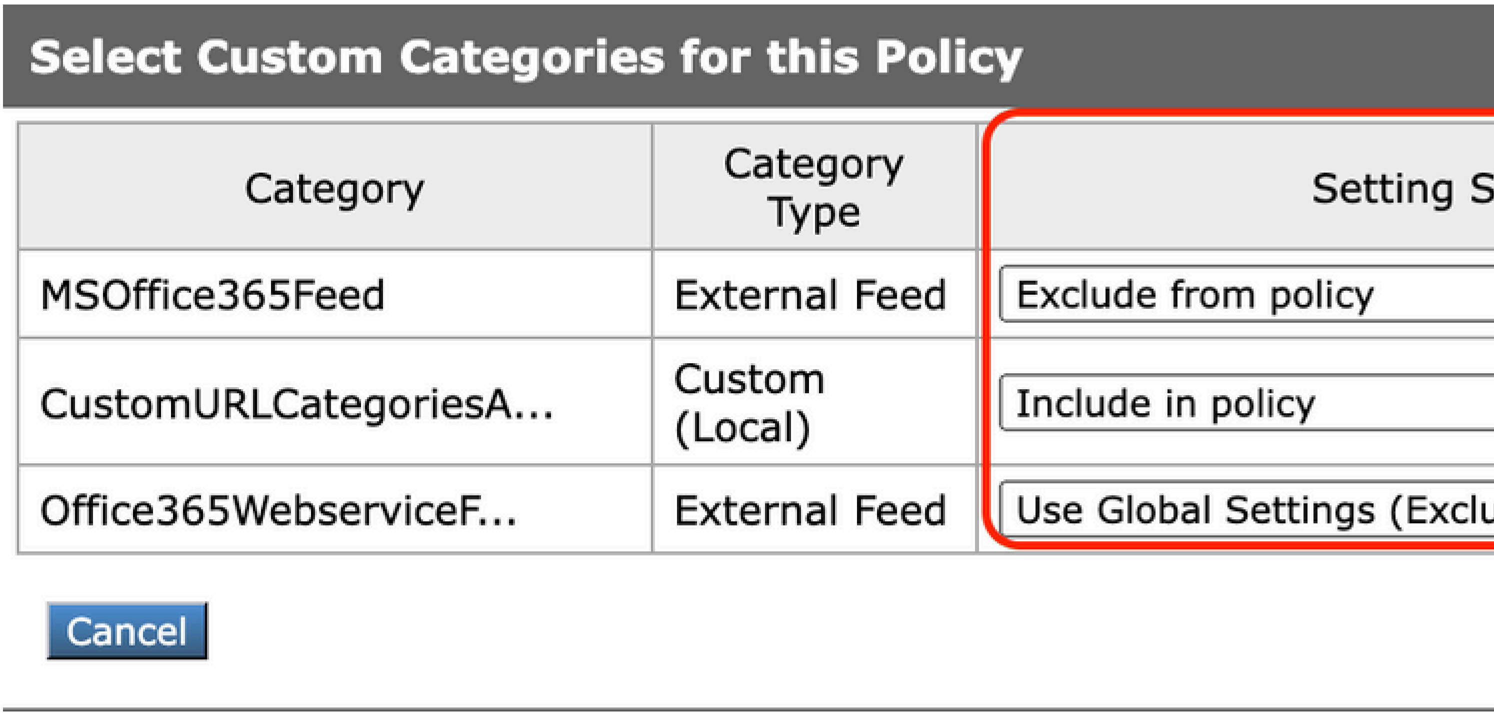
Access Policies: URL Filtering: Access Policy

Custom and External URL Category Filtering

No Custom Categories are included for this Policy.

Image-Select Custom URL Category

b) Choose which custom URL categories to include in this policy and click Apply.



Select Custom Categories for this Policy

Category	Category Type	Setting S
MSOffice365Feed	External Feed	Exclude from policy
CustomURLCategoriesA...	Custom (Local)	Include in policy
Office365WebserviceF...	External Feed	Use Global Settings (Exclu

Image-Select Custom Categories to include in policy

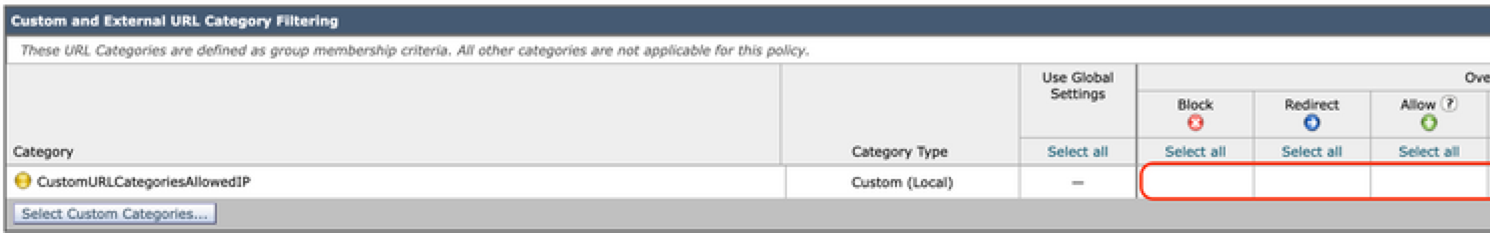
Choose which custom URL categories the URL filter engine must compare the client request against.

The URL filter engine compares client requests against included custom URL categories, and ignores excluded custom URL categories.

The URL filter engine compares the URL in a client request to included custom URL categories before predefined URL categories.

The custom URL categories included in the policy appear in the Custom URL Category Filtering section.

Step 4. In the Custom URL Category Filtering section, choose an action for each included custom URL category.



Custom and External URL Category Filtering

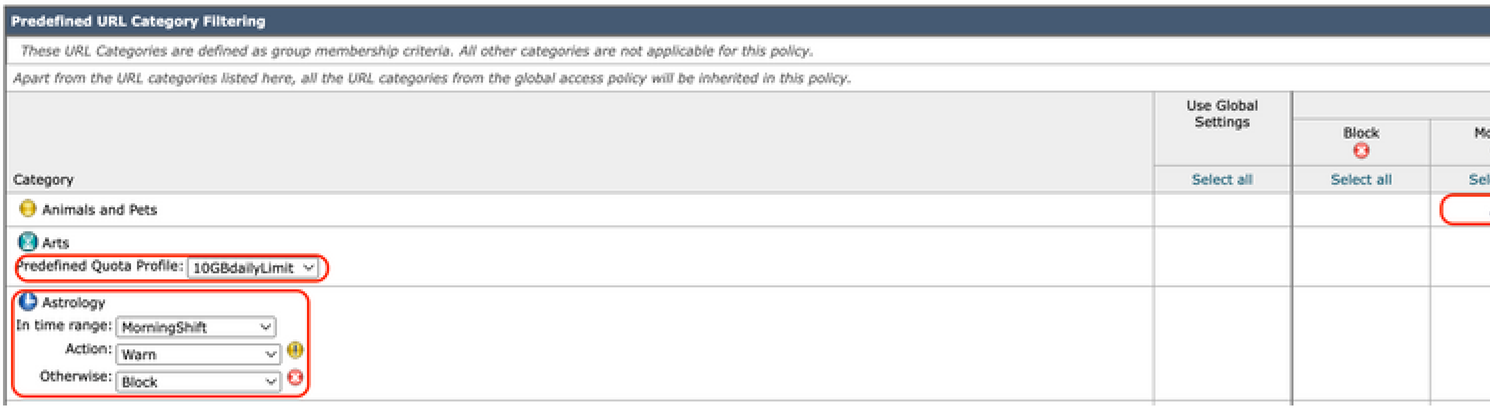
These URL Categories are defined as group membership criteria. All other categories are not applicable for this policy.

Category	Category Type	Use Global Settings	Ove		
			Block	Redirect	Allow
		Select all	Select all	Select all	Select all
CustomURLCategoriesAllowedIP	Custom (Local)	—			

Action	Description
Block	The Web Proxy denies transactions that match this setting.
Redirect	Redirects traffic originally destined for a URL in this category to a location you specify. When you choose this action, the Redirect To field appears. Enter a URL to which to redirect all traffic.
Allow	Always allows client requests for web sites in this category. Allowed requests bypass all further filters and Malware scans. Only use this setting for trusted web sites. You can use this setting for internal sites.
Monitor	The Web Proxy neither allows nor blocks the request. Instead, it continues to evaluate the client request against other policy group control settings, such as web reputation filter.
Warn	The Web Proxy initially blocks the request and displays a warning page, but allows the user to continue by click on a hypertext link in the warning page.
Quota-Based	As a individual user approaches either the volume or time quotas you have specified, a warning is displayed. When a quota is met, a block page is displayed. .
Time-Based	The Web Proxy blocks or monitors the request during the time ranges you specify.

Step 5. In the Predefined URL Category Filter section, choose one of these actions for each category:

- Use Global Settings
- Monitor
- Warn
- Block
- Time-Based
- Quota-Based



Predefined URL Category Filtering

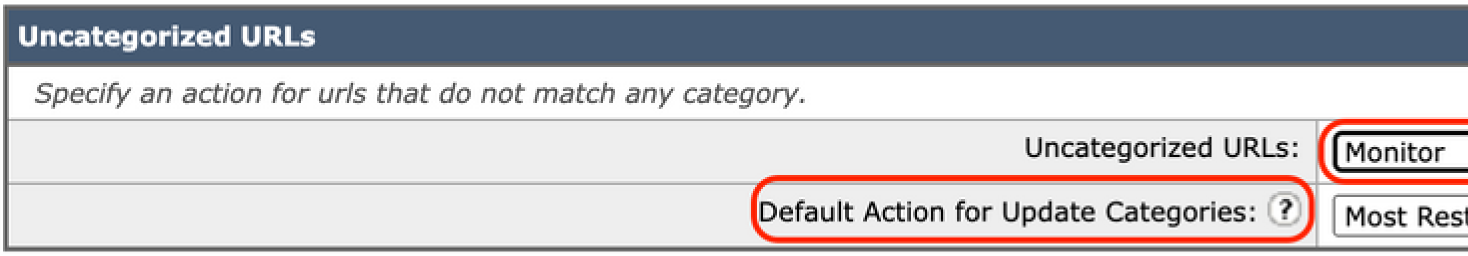
These URL Categories are defined as group membership criteria. All other categories are not applicable for this policy.

Apart from the URL categories listed here, all the URL categories from the global access policy will be inherited in this policy.

Category	Use Global Settings	Block	Mo
	Select all	Select all	Sel
Animals and Pets			
Arts Predefined Quota Profile: 10GBdailyLimit			
Astrology In time range: MorningShift Action: Warn Otherwise: Block			

Image- Select Action for predefined Category

Step 6. In the **Uncategorized** URLs section, choose the action to take for client requests to web sites that do not fall into a predefined or custom URL category. This setting also determines the default action for new and merged categories results from URL category set updates.



Uncategorized URLs

Specify an action for urls that do not match any category.

Uncategorized URLs: Monitor

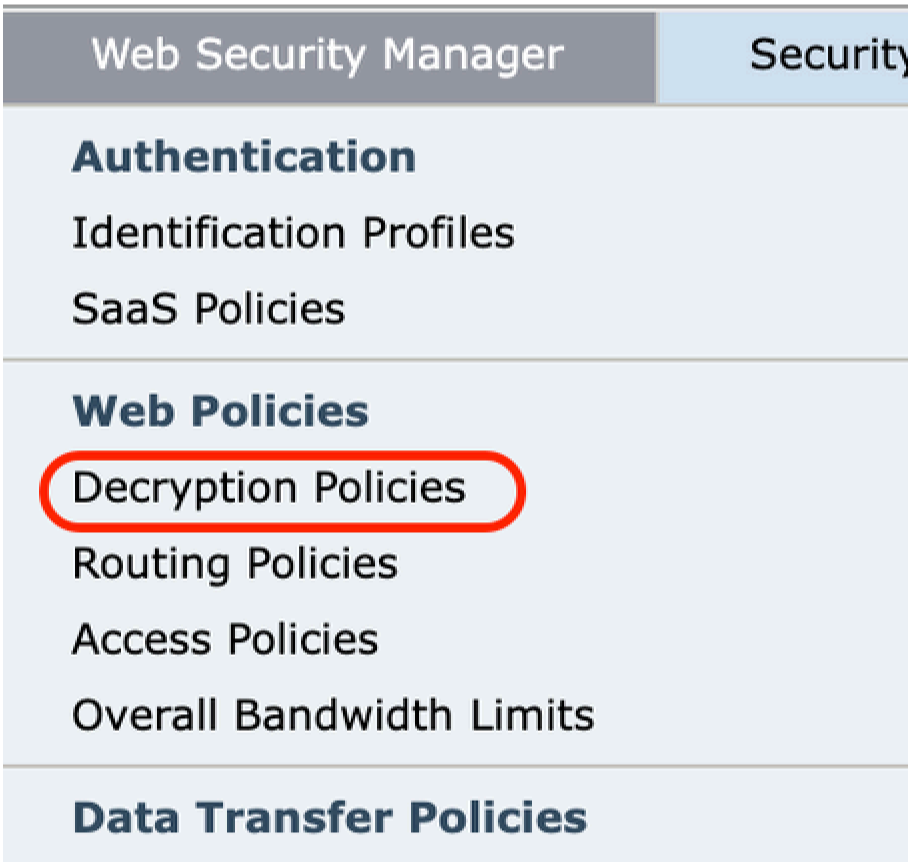
Default Action for Update Categories: ? Most Rest

Image- Choose action for uncategorized URL

Step 7. Submit and Commit Changes.

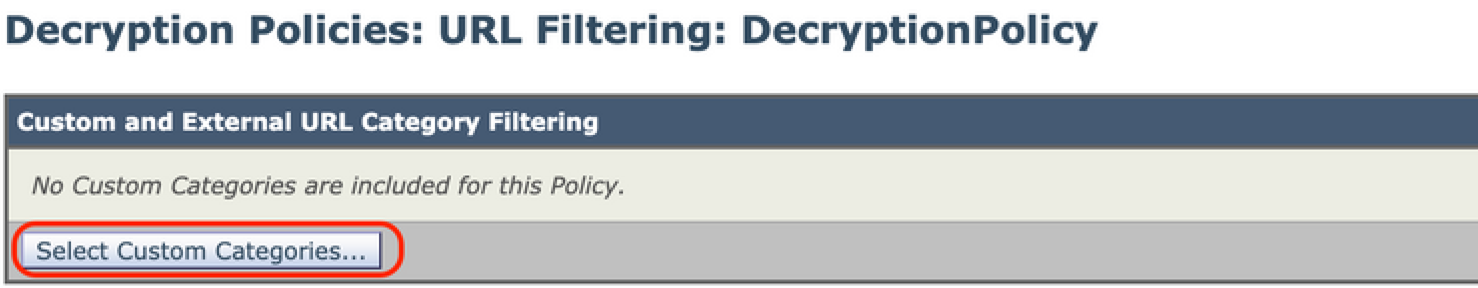
Steps To Configure URL Filters For Decryption Policy

Step 1. Choose Web Security Manager > Decryption Policies.



In the Custom URL Category Filtering section, you can add custom URL categories on which to take action in this policy:

a. Click Select Custom Categories.

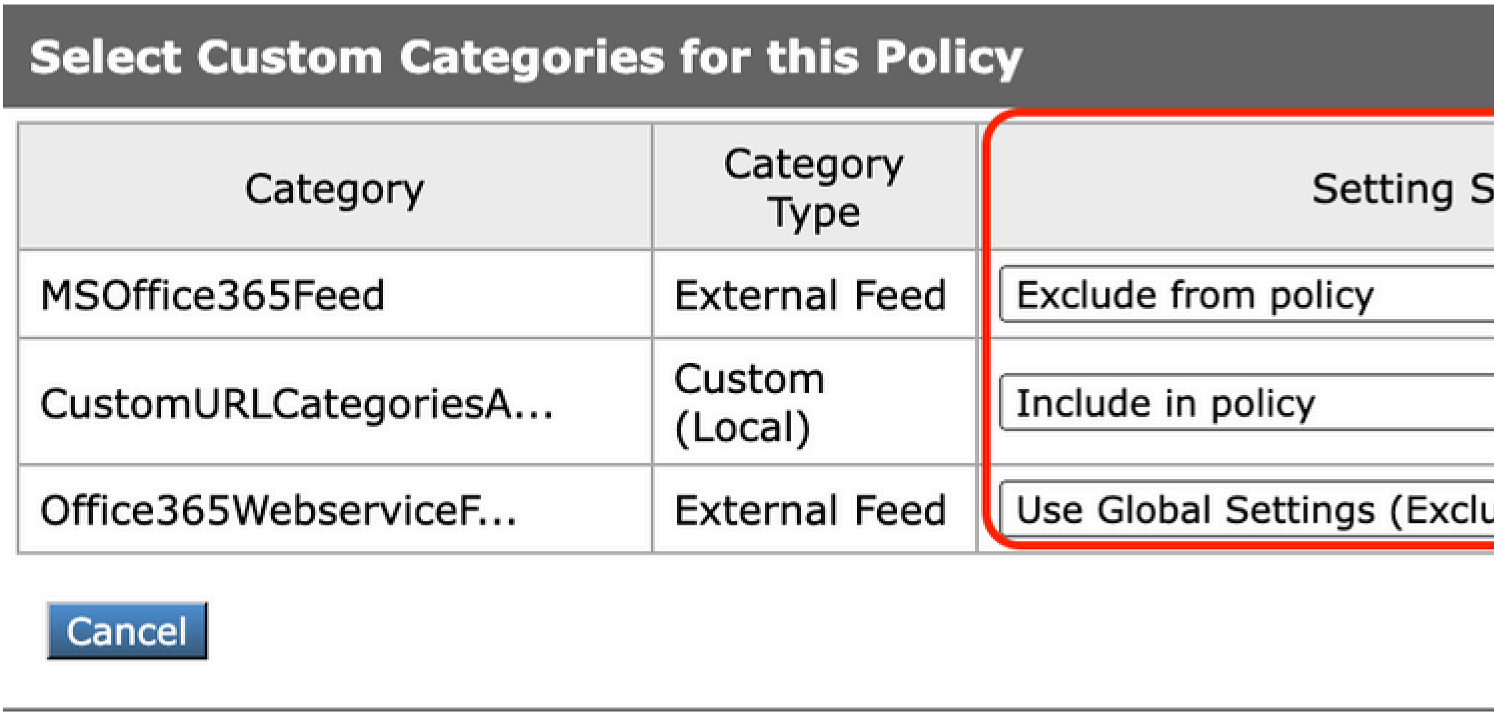


Decryption Policies: URL Filtering: DecryptionPolicy

Custom and External URL Category Filtering
No Custom Categories are included for this Policy.
Select Custom Categories...

Image - Choose Custom Categories

b. Choose which custom URL categories to include in this policy and click Apply.



Select Custom Categories for this Policy

Category	Category Type	Setting S
MSOffice365Feed	External Feed	Exclude from policy
CustomURLCategoriesA...	Custom (Local)	Include in policy
Office365WebserviceF...	External Feed	Use Global Settings (Exclu

Image-Select Custom Categories to include in policy

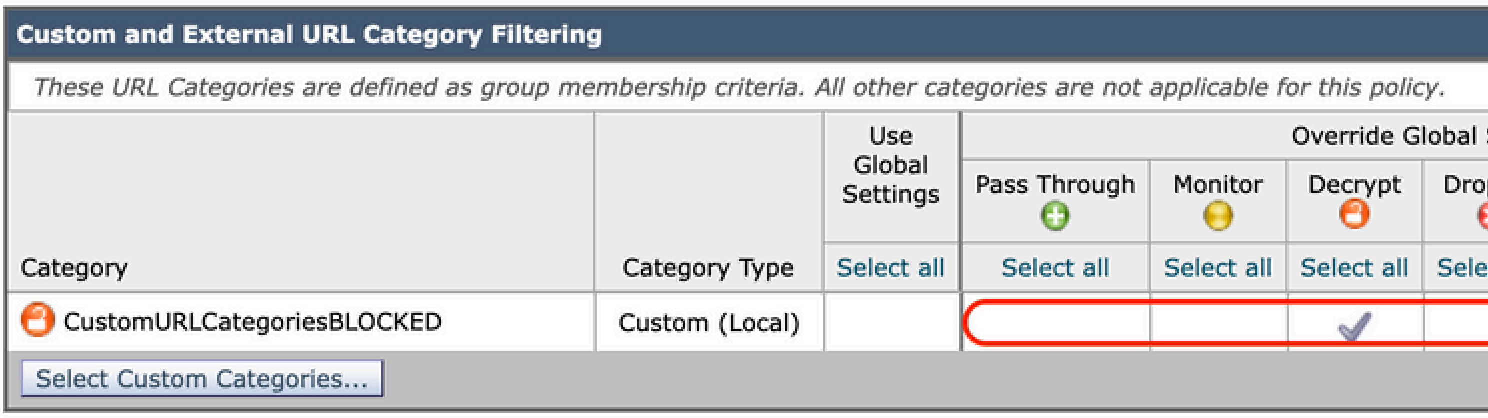
Choose which custom URL categories the URL filter engine must compare the client request against.

The URL filter engine compares client requests against included custom URL categories, and ignores excluded custom URL categories.

The URL filter engine compares the URL in a client request to included custom URL categories before predefined URL categories.

The custom URL categories included in the policy appear in the Custom URL Category Filtering section.

Step 4. Choose an action for each custom and predefined URL category.



Custom and External URL Category Filtering

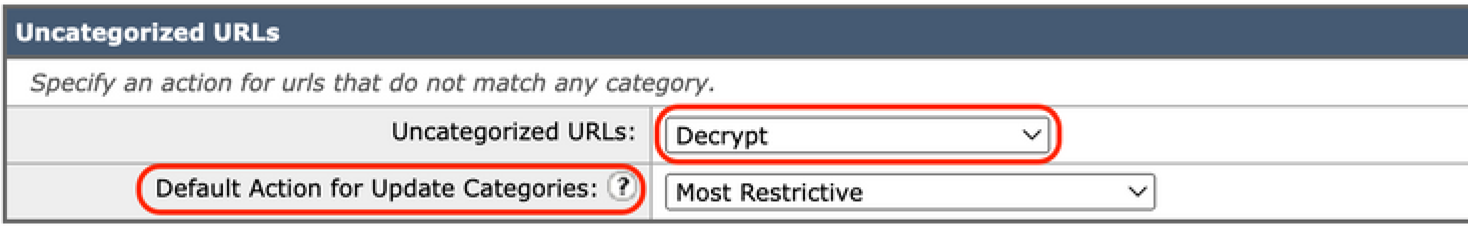
These URL Categories are defined as group membership criteria. All other categories are not applicable for this policy.

		Use Global Settings	Override Global			
			Pass Through	Monitor	Decrypt	Dro
Category	Category Type	Select all	Select all	Select all	Select all	Sele
CustomURLCategoriesBLOCKED	Custom (Local)				✓	

Action	Description
Pass Through	Passes through the connection between the client and the server without inspection the traffic content.
Monitor	The Web Proxy neither allows nor blocks the request. Instead, it continues to evaluate the client request against other policy group control settings, such as web reputation filter.
Decrypt	Allows the connection, but inspects the traffic content. The appliance decrypts the traffic and applies Access Policies to the decrypted traffic as if it were a plain text Hypertext Transfer Protocol (HTTP) connection. When connection decrypted and Access Policies Applied, you can scan the traffic for Malware.
Drop	Drops the connection and does not pass the connection request to the server. The appliance does not notify the user that it dropped the connection.

Step 5. In the **Uncategorized** URLs section, choose the action to take for client requests to web sites that do not fall into a predefined or custom URL category.

This setting also determines the default action for new and merged categories results from URL category set updates.



Uncategorized URLs

Specify an action for urls that do not match any category.

Uncategorized URLs:	Decrypt
Default Action for Update Categories: ?	Most Restrictive

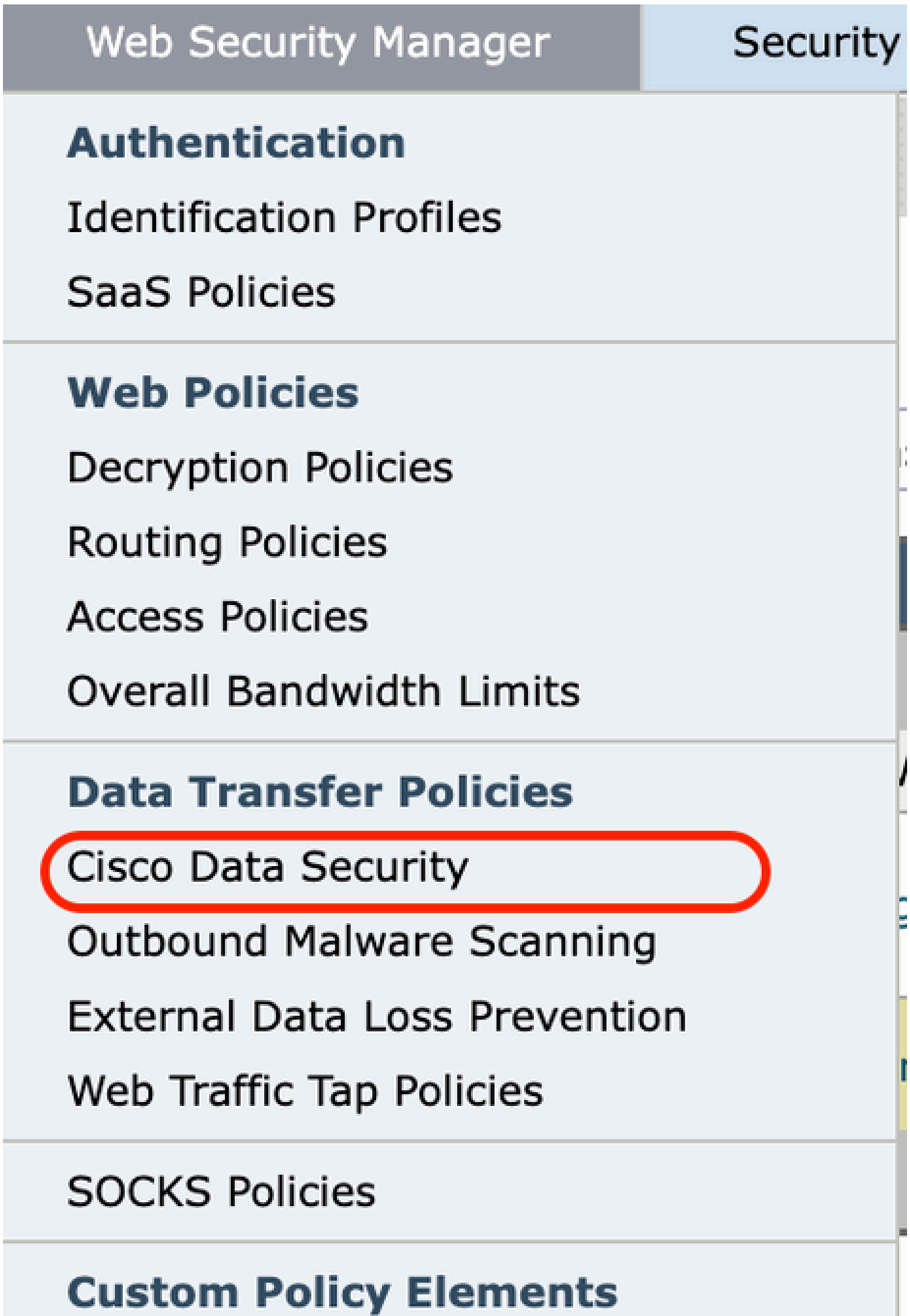
Image - Uncategorized decryption Policy

Step 6. Submit and Commit Changes.

> **Caution**: If you want to *block* a particular URL category for Hypertext Transfer Protocol Secure (HTTPS) requests, choose to decrypt that URL category in the Decryption Policy group and then choose to block the same URL category in the Access Policy group.

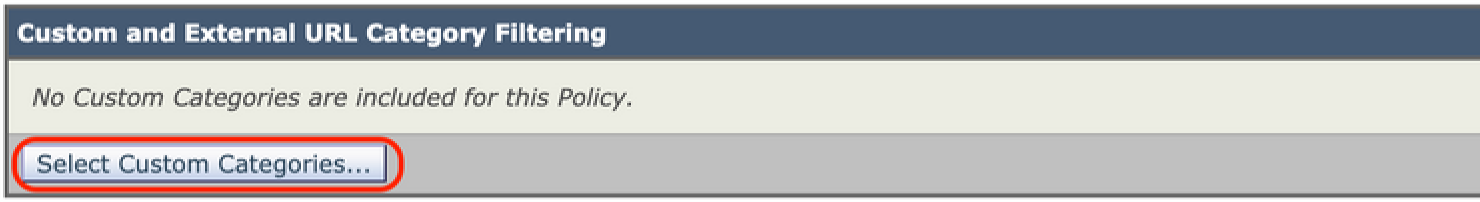
Steps To Configure URL Filters For Data Security Policy Groups

Step 1. Choose Web Security Manager > Cisco Data Security.



In the Custom URL Category Filtering section, you can add custom URL categories on which to take action in this policy:

a. Click Select Custom Categories.

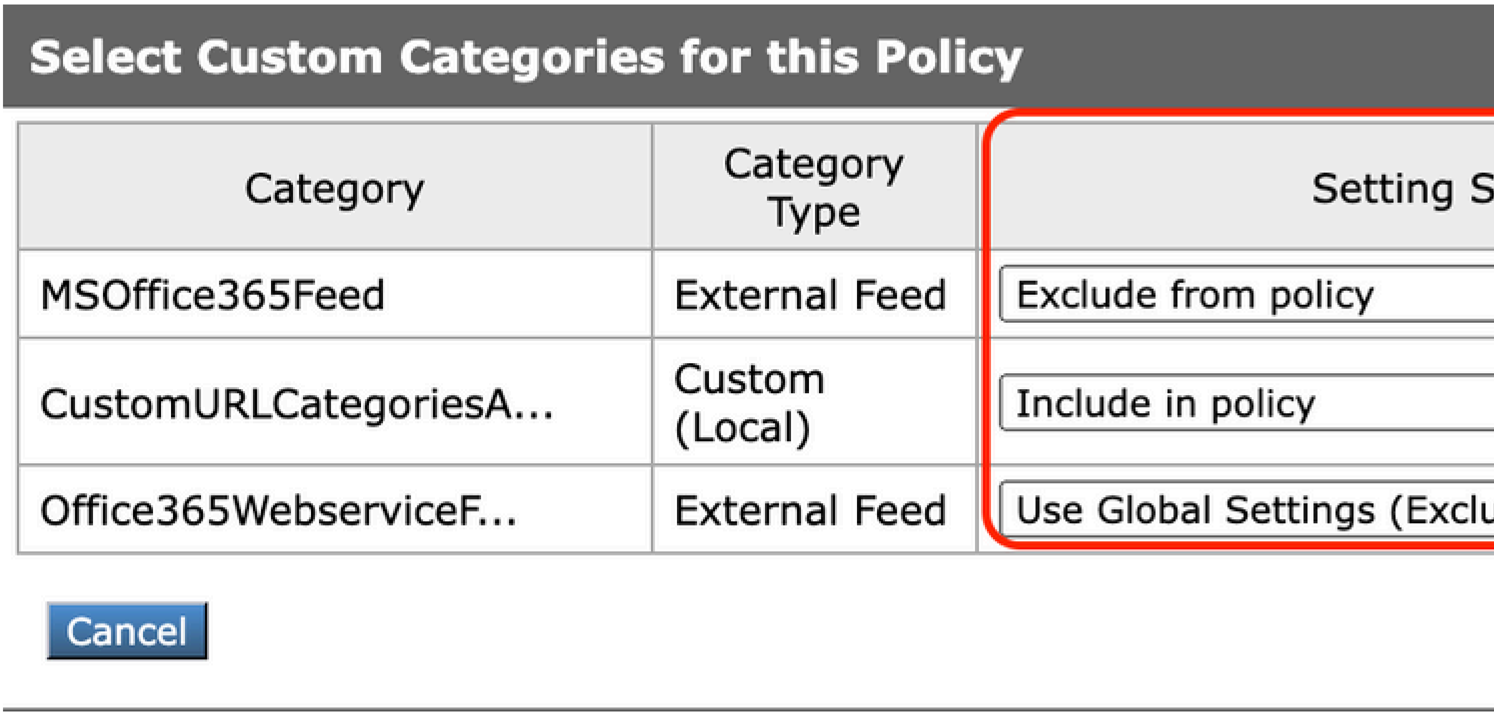


Custom and External URL Category Filtering

No Custom Categories are included for this Policy.

Image - Select Custom Field

b. Choose which custom URL categories to include in this policy and click Apply.



Select Custom Categories for this Policy

Category	Category Type	Setting S
MSOffice365Feed	External Feed	Exclude from policy
CustomURLCategoriesA...	Custom (Local)	Include in policy
Office365WebserviceF...	External Feed	Use Global Settings (Exclu

Image-Select Custom Categories to include in policy

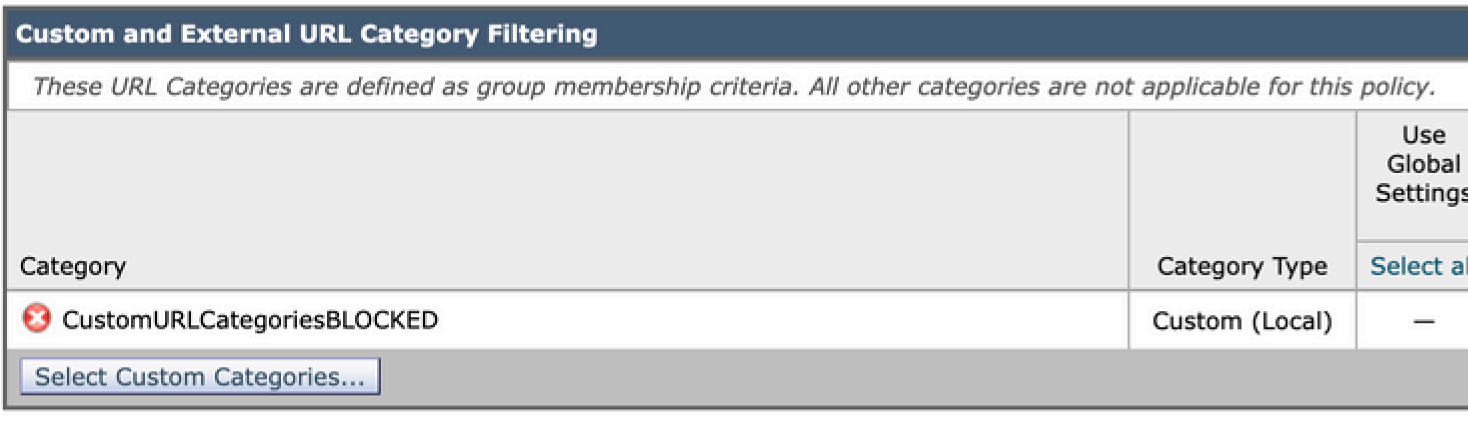
Choose which custom URL categories the URL filter engine must compare the client request against.

The URL filter engine compares client requests against included custom URL categories, and ignores excluded custom URL categories.

The URL filter engine compares the URL in a client request to included custom URL categories before predefined URL categories.

The custom URL categories included in the policy appear in the Custom URL Category Filtering section.

Step 4. In the Custom URL Category Filtering section, choose an action for each custom URL category.



Custom and External URL Category Filtering

These URL Categories are defined as group membership criteria. All other categories are not applicable for this policy.

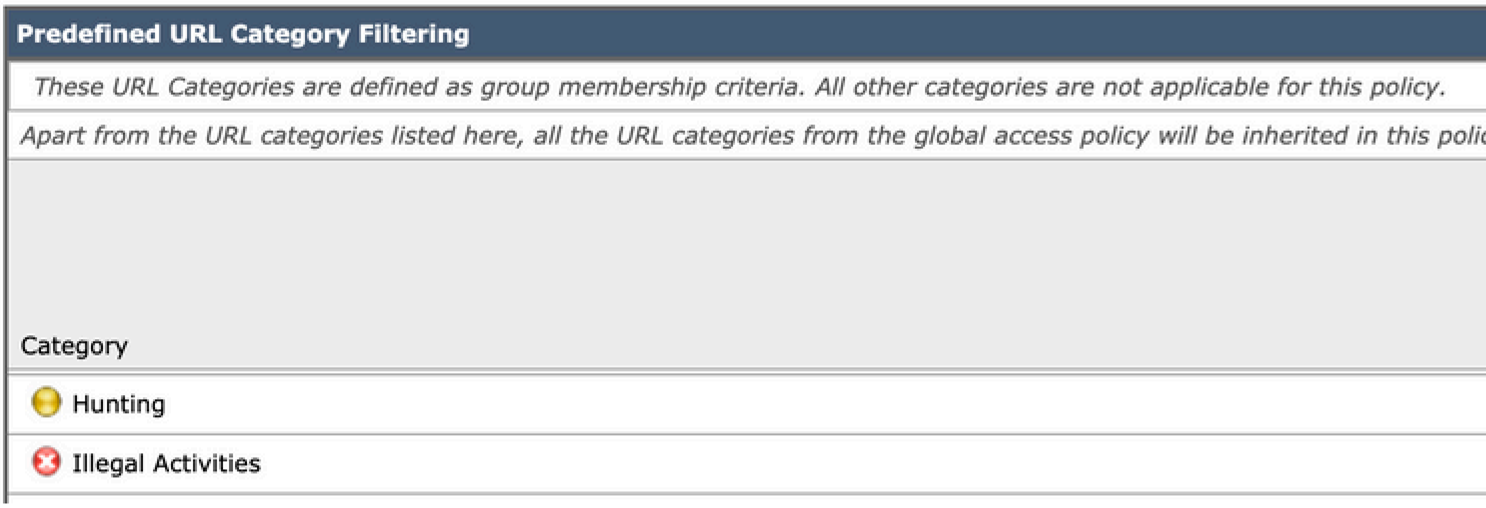
Category	Category Type	Use Global Settings Select al
✖ CustomURLCategoriesBLOCKED	Custom (Local)	—

Image - Data Security Choose Action

Action	Description
Allow	Always allows upload requests for web sites in this category. Applies to custom URL categories only. Allowed requests bypass all further data security scan and the request is evaluated against Access Policies. Only use this setting for trusted web sites. You can use this setting for internal sites.
Monitor	The Web Proxy neither allows nor blocks the request. Instead, it continues to evaluate the upload request against other policy group control settings, such as web reputation filter.
Block	The Web Proxy denies transactions that match this setting.

Step 5. In the Predefined URL Category Filtering section, choose one of these actions for each category:

- Use Global Settings
- Monitor
- Block



Predefined URL Category Filtering

These URL Categories are defined as group membership criteria. All other categories are not applicable for this policy.

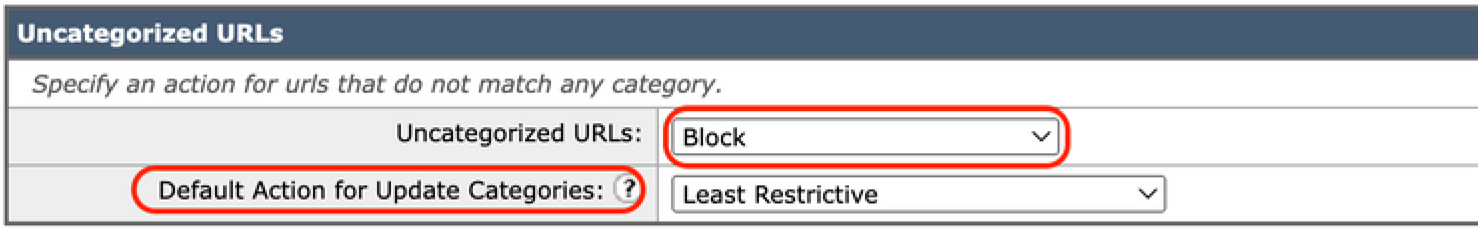
Apart from the URL categories listed here, all the URL categories from the global access policy will be inherited in this polic

Category
● Hunting
✖ Illegal Activities

Image - Data Security Pre Defined URL Choose Action

Step 6. In the **Uncategorized** URLs section, choose the action to take for upload requests to web sites that do not fall into a predefined or custom URL category.

This setting also determines the default action for new and merged categories results from URL category set updates.



Uncategorized URLs

Specify an action for urls that do not match any category.

Uncategorized URLs:	Block
Default Action for Update Categories: ?	Least Restrictive

Image - Data Security Un Categorized

Step 7. Submit and Commit Changes.

> **Caution**: If you do **not** disable the maximum file size limitation, Web Security Appliance continues to validate the maximum file size when the Allow or Monitor options are selected in the URL filtering.

Steps To Configure Controlling Upload Requests With Custom URL Categories

Each upload request is assigned to an "Outbound Malware Scanning" Policy group and inherits the control settings of that policy group.

After the Web Proxy receives the upload request headers, it has the information necessary to decide if it must scan the request body.

The DVS engine scans the request and returns a verdict to the Web Proxy. The block page appears to the end user, if applicable.

Step 1	Choose Web Security Manager > **Outbound Malware Scanning**.

<table>
<tr><td><b>Step 2</b></td><td>In the Destinations column, click the link for the policy group you want to configure.</td></tr>
<tr><td><b>Step 3</b></td><td>In the Edit Destination Settings section, select "<b>Define Destinations Scanning Custom Settings</b>" from the drop-down menu.</td></tr>
<tr><td><b>Step 4</b></td><td>In the Destinations to Scan section, select one of these:
<table>
<tr><th>Option</th><th>Description</th></tr>
<tr><td>Do not scan any uploads</td><td>The DVS engine scans no upload requests. All upload requests are evaluated against the Access Policies</td></tr>
<tr><td>Scan all uploads</td><td>The DVS engine scans all upload requests. The upload request is blocked or evaluated against the Access Policies, depends on the DVS engine scan verdict</td></tr>
<tr><td>Scan uploads to specified <b>custom URL categories</b></td><td>The DVS engine scans upload requests that belong in specific c<b>ustom URL categories</b>. The upload request is <b>blocked</b> or <b>evaluated</b> against the Access Policies, depends on the DVS engine scan verdict.
Click Edit custom categories list to select the URL categories to scan</td></tr>
</table>
</td></tr>
<tr><td><b>Step 5</b></td><td>Submit your changes.</td></tr>
<tr><td><b>Step 6</b></td><td>In the Anti-Malware Filtering column, click the link for the policy group.</td></tr>
<tr><td><b>Step 7</b></td><td>In the Anti-Malware Settings section, select Define Anti-Malware Custom Settings.</td></tr>
<tr><td><b>Step 8</b></td><td>In the Cisco DVS Anti-Malware Settings section, select which anti-malware scan engines to enable for this policy group.</td></tr>
<tr><td><b>Step 9</b></td><td>In the <b>Malware Categories</b> section, choose whether to monitor or block the various malware categories.
The categories listed in this section depend on which scan engines you enable.</td></tr>
<tr><td><b>Step 10</b></td><td>Submit and Commit Changes.</td></tr>
</table>

Steps To Configure Control Upload Requests in External DLP Policies

Once the Web Proxy receives the upload request headers, it has the information necessary to decide if the request can go to the external DLP system for scan.

The DLP system scans the request and returns a verdict to the Web Proxy, either block or monitor (evaluate the request against the Access Policies).

Step 1	Choose **Web Security Manager** > **External Data Loss Prevention**.
Step 2	Click the link under the Destinations column for the policy group you want to configure.
Step 3	Under the Edit Destination Settings section, choose â€œ**Define Destinations Scanning Custom Settings.**â€�
Step 4	In the Destination to scan section, choose one of these options: • Do not scan any uploads. No upload requests are sent to the configured Data Loss Prevention (DLP) system(s) for scan. All upload requests are evaluated against the Access Policies. • Scan all uploads. All upload requests are sent to the configured DLP system(s) for scan. The upload request is blocked or evaluated against the Access Policies depends on the DLP system scans verdict. • Scan uploads except to specified **custom and external URL categories**. Upload requests that fall in specific **custom URL categories** are excluded from DLP scan policies. Click **Edit** custom categories list to select the URL categories to scan.
Step 5	Submit and Commit Changes.

Bypass And Passthrough URLs

You can configure the Secure Web Appliance in transparent proxy implementation to bypass the HTTP or HTTPS requests from particular clients, or to particular destinations.

> **Tip**: You can use passthrough for applications that require traffic to passthrough the appliance, without need to any modification, or certificate checks of the destination servers

> **Caution**: The Domain Map feature works in HTTPS Transparent mode. This feature does **not** work in Explicit mode and for HTTP traffic.

- Local Custom Category must be configured to allow the traffic to use this feature.
- When this feature enabled, it modify or assign the server name as per the server name configured in the Domain Map, even if Server Name Indication (SNI) information is available.
- This feature does not block traffic based on domain name if that traffic matches the Domain Map and

correspond custom category, decryption policy and passthrough action are configured.

- Authentication does not work with this pass through feature. Authentication requires decryption, but traffic is not be decrypted in this case.
- traffic is not monitored. You must configure UDP traffic not to come to the Web Security Appliance , instead it must go directly through firewall to the Internet for applications like WhatsApp, Telegram and so on.
- WhatsApp, Telegram and Skype works in Transparent mode. However, some apps like WhatsApp do not work in Explicit mode due to restrictions on the app.

Ensure you have an identification policy defined for the devices that require pass through traffic to specific servers. Specifically, you must:

- Choose Exempt from authentication/identification.
- Specify the addresses to which this Identification Profile must apply. You can use IP addresses, Classless Inter-Domain Routing (CIDR) blocks, and subnets.

<table>
<tr><td><b>Step 1</b></td><td>Enable HTTPS Proxy.</td></tr>
<tr><td><b>Step 2</b></td><td>Choose <b>Web Security Manager</b> &gt; <b>Domain Map</b>.
a. Choose Add Domain.
b. Enter the Domain Name or the destination server.
c. Choose the order of the priority if there are some domains specified.
d. Enter the IP addresses.
e. Click <b>Submit</b>.</td></tr>
<tr><td><b>Step 3</b></td><td>Choose <b>Web Security Manager</b> &gt; <b>Custom and External URL Categories</b>.
a. Choose Add Category.
b. Provide these information.
<table>
<tr><th>Settings</th><th>Description</th></tr>
<tr><td>Category Name</td><td>Enter an identifier for this URL category. This name appears when you configure URL filter for policy groups.</td></tr>
<tr><td>List Order</td><td>Specify the order of this category in the list of custom URL categories. Enter â€œ1â€� for the first URL category in the list.</td></tr>
</table>
</td></tr>
</table>

<table>
<tr>
<td></td>
<td>
<table>
<tr><th>Settings</th><th>Description</th></tr>
<tr><td></td><td>The URL filter engine evaluates a client request against the custom URL categories in the order specified.</td></tr>
<tr><td>Category Type</td><td>Choose Local Custom Category.</td></tr>
<tr><td>Advanced</td><td>You can enter regular expressions in this section to specify additional sets of addresses.
You can use regular expressions to specify multiple addresses that match the patterns you enter.</td></tr>
</table>
c. Submit and commit the changes.
</td>
</tr>
<tr>
<td><b>Step 4</b></td>
<td>Choose Web Security Manager > <b>Decryption Policies</b>.
a. Create a new decryption policy.
b. Choose the identification profile that you created for bypass HTTPS traffic for specific applications.
c. In the Advanced panel, click the link for URL Categories.
d. In the Add column, click to add the custom URL category created in step 3.
e. Choose <b>Done</b>.
f. In the Decryption Policies page, click the link for URL Filtering.
g. Choose Pass Through.
h. Submit and commit the changes.
<b>(Optional)</b> You can use the <b>%(</b> format specifier to view access log information.</td>
</tr>
</table>

Configure Web Proxy Bypass For Web Requests

Once you add the Custom URL Categories to the proxy bypass list, all the IP addresses and the domain names of the Custom URL categories are bypassed for both the **source** and **destination**.

Step 1	Choose Web Security Manager > Bypass Settings.
Step 2	Click Edit Bypass Settings.

Step 3	Enter the addresses for which you wish to bypass the web proxy. **Note**: When you configure **/0** as a subnet mask for any IP in the bypass list, the appliance bypasses all the web traffic. In this case, the appliance interprets the configuration as 0.0.0.0/0.
Step 4	Choose the Custom URL Categories that you want to add to the proxy bypass list.
Step 5	Submit and commit your changes.

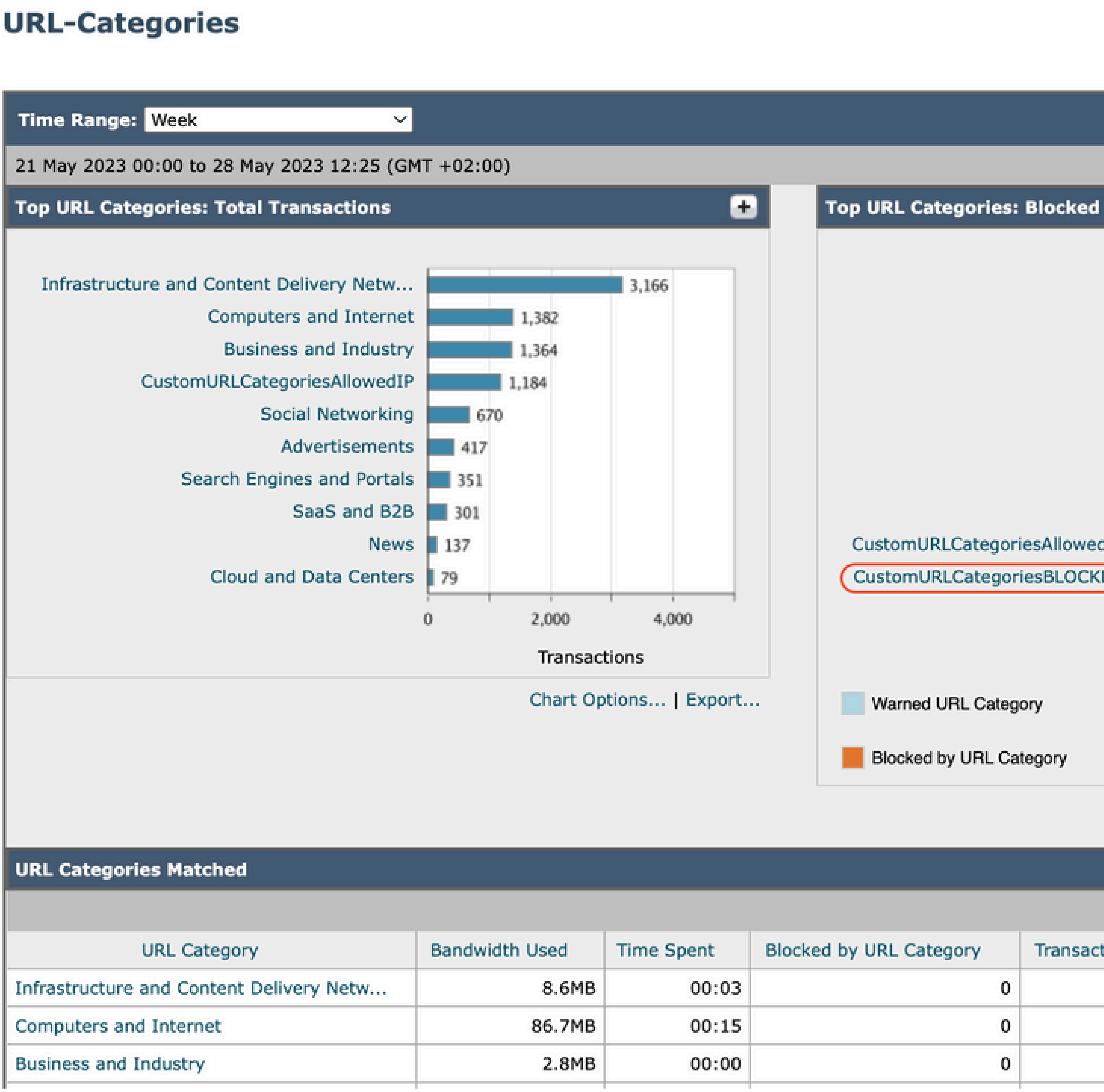
Caution: You **cannot** set the web proxy bypass for Regular Expressions.

Reports

In the "Reporting" >> URL Categories' page provides a collective display of URL statistics that includes information about top URL categories matched and top URL categories blocked.

This page displays category-specific data for bandwidth savings and web transactions.

Section	Description
Time Range (drop-down list)	Choose the time range for your report.
Top URL Categories by Total Transactions	This section lists the top URL categories that are visited on the site in a graph format.
Top URL Categories by Blocked and Warned Transactions	Lists the top URL that triggered a block or warning action to occur per transaction in a graph format.
URL Categories Matched	Shows the disposition of transactions by URL category during the specified time range, plus bandwidth used and time spent in each category. If the percentage of uncategorized URLs is higher than 15-20%, consider these options: • **For specific localized URLs, you can create custom URL categories and apply them to specific users or group policies.** • You can report uncategorized and misclassified and URLs to the Cisco for evaluation and database update. • Verify that Web Reputation Filter and Anti-Malware Filter are enabled.



URL-Categories

Time Range: Week

21 May 2023 00:00 to 28 May 2023 12:25 (GMT +02:00)

Top URL Categories: Total Transactions

Infrastructure and Content Delivery Netw... 3,166
Computers and Internet 1,382
Business and Industry 1,364
CustomURLCategoriesAllowedIP 1,184
Social Networking 670
Advertisements 417
Search Engines and Portals 351
SaaS and B2B 301
News 137
Cloud and Data Centers 79
0
2,000
4,000
Transactions

Chart Options... | Export...

Top URL Categories: Blocked

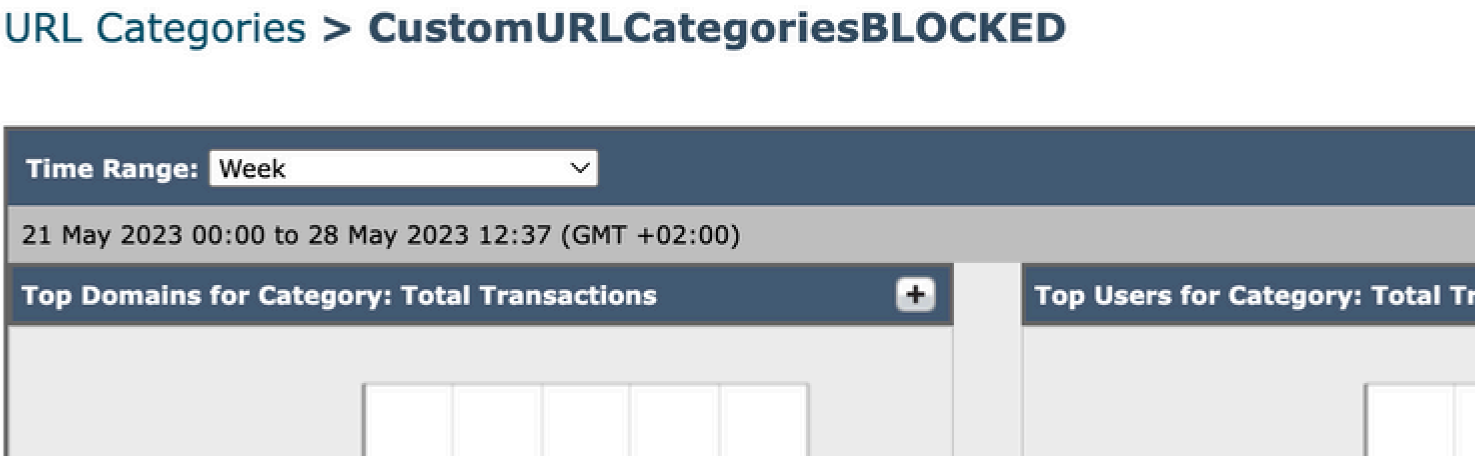
CustomURLCategoriesAllowed
CustomURLCategoriesBLOCK
Warned URL Category
Blocked by URL Category

URL Categories Matched

URL Category	Bandwidth Used	Time Spent	Blocked by URL Category	Transact
Infrastructure and Content Delivery Netw...	8.6MB	00:03	0	
Computers and Internet	86.7MB	00:15	0	
Business and Industry	2.8MB	00:00	0	

Image-URL Category Report

You can click on any category name to view more details related to that category, such as Domains Matched or users list.



URL Categories > CustomURLCategoriesBLOCKED

Time Range: Week

21 May 2023 00:00 to 28 May 2023 12:37 (GMT +02:00)

Top Domains for Category: Total Transactions

Top Users for Category: Total Tr

URL Filtering Bypassed	Represents policy, port, and admin user agent blocked which occurs before URL filtering.
Uncategorized URL	Represents all transactions for which the URL filtering engine is queried, but no category is matched.

View Custom URL Categories In The Access Log

The Secure Web Appliance uses the first four characters of custom URL category names preceded by â€œc_â€� in the access logs.

In this example the category name is **CustomURLCategoriesBLOCKED** and in the acesslogs you can see **C_Cust** :

```
1685269516.853 86 10.61.108.72 TCP_DENIED_SSL/403 0 GET https://www.cisco.com:443/ - NONE/- - DROP_CUSTO
```

> **Caution**: Consider the custom URL category name if you use Sawmill to parse the access logs. If the first four characters of the custom URL category include a space,Sawmill cannot properly parse the access log entry. Instead, only use supported characters in the first four characters.

> **Tip**: If you want to include the full name of a custom URL category in the access logs, add the %XF format specifier to the access logs.

When a web access policy group has a custom URL category set to **Monitor** and some other component (such as the Web Reputation Filters or the **Different Verdicts Scanning** (DVS) engine) makes the final decision to allow or block a request for a URL in the custom URL category, then the access log entry for the request shows the predefined URL category instead of the custom URL category.

For more information about how to configure custom fields in Access Logs, visit : Configure Performance Parameter in Access Logs - Cisco

Troubleshoot

Category Missmatched

From the access logs you can see the request belongs to which Custom URL Category, if the selection is not as expected:

- If the request is categorized to other custom URL Categories, check for duplicate URL or a matched Regular Expression in other Categories or Move the Custom URL Category to top and test again. it is better to inspect the machted Custom URL Category carefully.

- If the request is categorized to Pre-Defined Categories, Check the conditions in the existed Custom URL Category, if all match, try to add the IP address and test or make sure for the typo and correct regullar expression is used, if any.

Predefined Categories Are Not Up To Date

If the Predefined Categories are not up to dated, or in the accesslogs you see "err" in the URL category section, make sure TLSv1.2 is enabled for Updater.

To change the Updater SSL configuration, use these steps from GUI:

Step 1. From **System Administration**, choose **SSL Configuration**

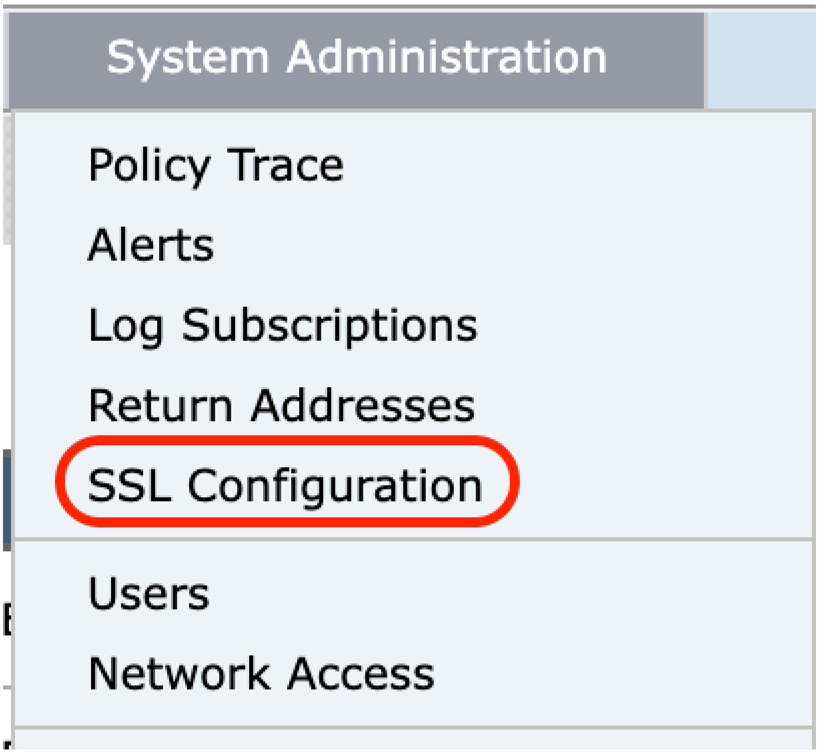
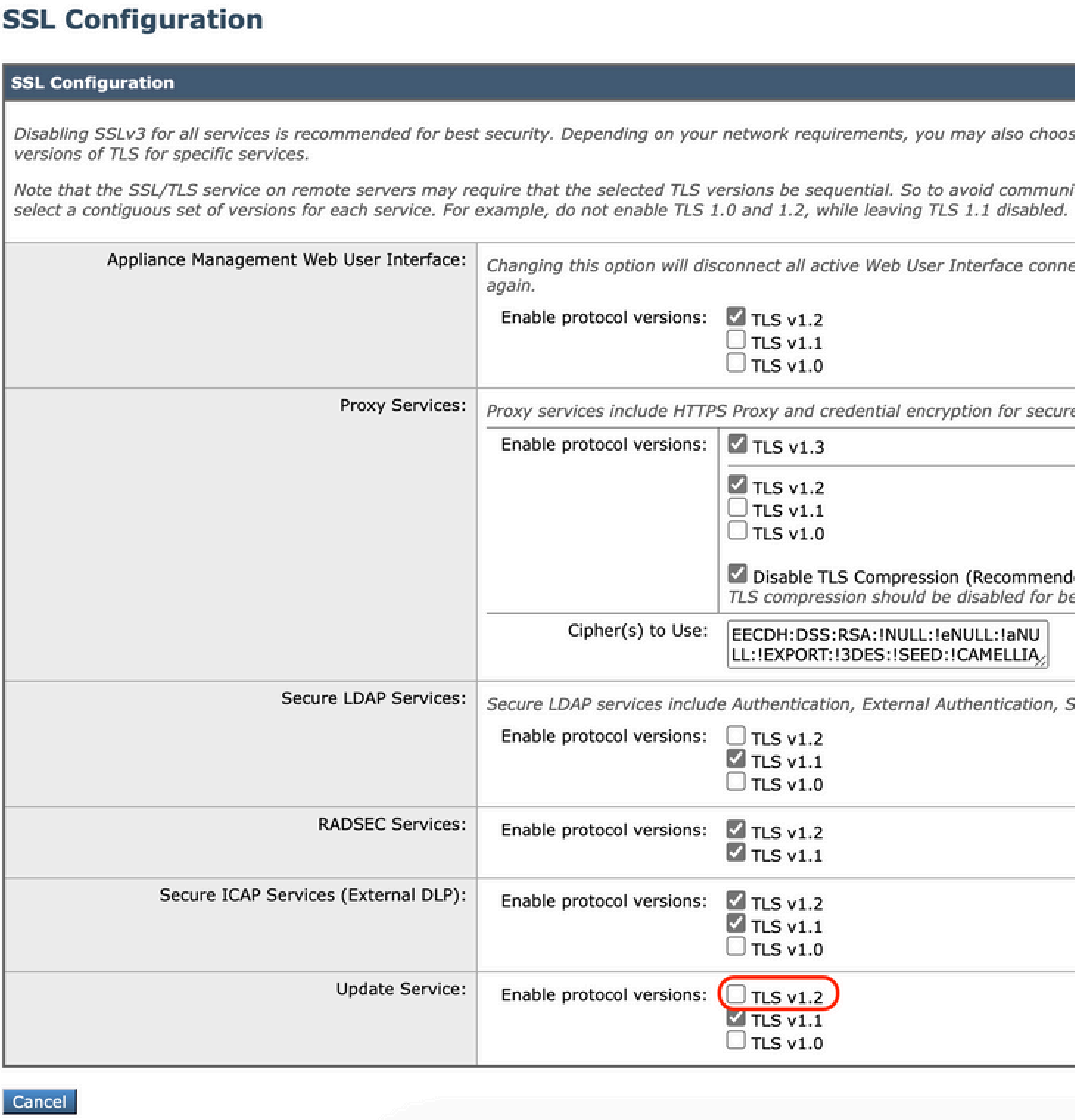


Image- ssl configuration

Step 2. Choose Edit Settings.

Step 3. In Update service section, choose TLSv1.2



SSL Configuration

SSL Configuration

Disabling SSLv3 for all services is recommended for best security. Depending on your network requirements, you may also choos versions of TLS for specific services.

Note that the SSL/TLS service on remote servers may require that the selected TLS versions be sequential. So to avoid communi select a contiguous set of versions for each service. For example, do not enable TLS 1.0 and 1.2, while leaving TLS 1.1 disabled.

Appliance Management Web User Interface:

Changing this option will disconnect all active Web User Interface conne again.

Enable protocol versions: ☑ TLS v1.2 □ TLS v1.1 □ TLS v1.0

Proxy Services:

Proxy services include HTTPS Proxy and credential encryption for secure

Enable protocol versions: ☑ TLS v1.3

☑ TLS v1.2 □ TLS v1.1 □ TLS v1.0

☑ Disable TLS Compression (Recommend

TLS compression should be disabled for be

Cipher(s) to Use: EECDH:DSS:RSA:!NULL:!eNULL:!aNULL:!EXPORT:!3DES:!SEED:!CAMELLIA

Secure LDAP Services:

Secure LDAP services include Authentication, External Authentication, S

Enable protocol versions: □ TLS v1.2 ☑ TLS v1.1 □ TLS v1.0

RADSEC Services:

Enable protocol versions: ☑ TLS v1.2 ☑ TLS v1.1

Secure ICAP Services (External DLP):

Enable protocol versions: ☑ TLS v1.2 ☑ TLS v1.1 □ TLS v1.0

Update Service:

Enable protocol versions: □ TLS v1.2 ☑ TLS v1.1 □ TLS v1.0

Image - Update Service TLSv1.2

Step 4. Submit and **commit** changes

To change the Updater SSL configuration, use these steps from CLI:

Step 1. From CLI, run **sslcofig**

Step 2. Type **version** and press enter

Step 3. Choose **Updater**

Step 4. Choose **TLSv1.2**

Step 5. Press Enter to exit the wizard