



# Web Security On-prem

v8.5.x

Creating Custom Block Pages

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# Introduction

When Forcepoint web protection policies are used to block a user from accessing a website or cloud application, a block page is displayed in the user's browser. This block page is constructed from a series of HTML, CSS, and JavaScript files. You can customize the block page to adapt it to the needs of your organization and your end users.

It is helpful to have HTML, CSS, and JavaScript knowledge before attempting to create custom block pages. Excellent HTML and CSS reference information is available from [w3schools.com](http://w3schools.com).

The articles in this collection describe how to use the default block pages supplied with your on-premises web protection software as a template for creating your own customized block pages. It is also possible to:

- Create your own HTML files from scratch, then configure Filtering Service to pull in content from those files when it generates a block page.  
See [Using an alternate block page on another machine](#) in the Administrator Help.
- Display custom content in the top frame of a block page only, without customizing the entire block page.  
See [Creating alternate block messages](#) in the Administrator Help.
- Customize the block pages used by the hybrid service.  
See [Customizing hybrid block pages](#) in the Administrator Help.

To create custom block pages based on the default block pages, see:

### Related concepts

- Get started with block page elements on page 3
- Reverting to the default block pages on page 14

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**Related reference**

Block page content variables on page 12

# Get started with block page elements

**Warning**

Do not edit the default block page files directly. Instead, follow the instructions in *Edit block page files (overview)* to make a copy of the files as a template for your custom block pages.

**Related tasks**

Edit block page files ([overview](#)) on page 6

## Standard block pages

The standard block pages included with your web protection solution contain the following elements:

- 1) The **header** explains that the site is blocked.
- 2) The **top frame** contains a block message showing the requested URL and the reason the URL was blocked.
- 3) The **bottom frame** presents any options available to the user, such as the option to go back to the previous page, or to click a Continue or Use Quota Time button to view the site.

## Cloud application block page

When a cloud application is blocked, the block page contains similar elements:

- 1) The **header** explains that the application is blocked.
- 2) The **top frame** contains a block message showing the requested application and the reason the application was blocked.
- 3) The **bottom frame** presents any options available to the user, such as the option to go back to the previous page, or to click a Continue or Use Quota Time button to view the site.

# Site block page

If the site is blocked because it belongs to a category in the Security Risk class, the block page has a special header:

The block page is created from multiple files that are stored with each instance of Filtering Service in your network. This includes V-Series appliances and Windows and Linux servers.

- On Windows servers, block pages are found in the following folder:

```
C:\Program Files\WebSense\Web Security\BlockPages\<<language_code>\Default
```

or

```
C:\Program Files(x86)\WebSense\Web Security\BlockPages\<<language_code>\Default
```

- On Linux servers, block pages are found in the following directory:

```
/opt/WebSense/BlockPages/<language_code>/Default
```

- On V Series and X Series appliances, a series of appliance API calls are available for downloading and uploading block page files. See *Working with block page files on appliances*.

## Related concepts

[Working with block page files on appliances](#) on page 7

# HTML files to construct block pages

There are 2 primary HTML files used to construct block pages:

- master.html** constructs the header and top frame for the block page, and uses one of the following files to display appropriate options in the bottom frame

File Name	Contents
blockFrame.html	Text and button (Go Back option) for sites in blocked categories.
continueFrame.html	Text and buttons for sites in categories to which the <b>Confirm</b> action is applied.
quotaFrame.html	Text and buttons for sites in categories to which the <b>Quota</b> action is applied.
moreInfo.html	Content for the page that appears when a user clicks the <b>More information</b> link on the block page.
casbMoreInfo.html	Content for the page that appears when a user clicks the <b>More Information</b> link on the cloud application block page.

- block.html** contains the text for the top frame of the block message, which explains that access is restricted, lists the requested site, and describes why the site is restricted.

In addition, several supporting files are used to supply the text content, styles, and button functionality used in block pages:

File Name	Description
blockStyle.css	Cascading style sheet containing most block page styles
master.css	Cascading style sheet containing styles for block page popups (like the account override popup)
casbBlock.html	Provides a cloud application block message along with the reason access is restricted, risk level, cloud application name, type, and URL.
popup.html	When an embedded page is blocked, this file is used to display the full-sized block page popup.
block.inl	Provides tools used in constructing the block frame of the block page
blockframe.inl	Provides additional information for standard block pages
continueframe.inl	Provides additional information for the block frame when users have a "Continue" option
quotaframe.inl	Provides additional information for the block frame when users have a "Use Quota Time" option
base64.js	JavaScript file used to support credential encryption when users have an "Account Override" option. This file should not be changed or removed.
master.js	JavaScript file used in construction of a standard block page
security.js	JavaScript file used in construction of a security block page
messagefile.txt	Contains text strings used in block pages
Copyright.txt	Copyright information for Forcepoint block pages
master.wml	WML file with basic blocking information

The Web DLP module adds the file **policyViolationDefaultPage.html**, which provides block page content when Web DLP components block content from being posted or downloaded.

# Edit block page files (overview)

## Before you begin

Before creating custom block pages, keep in mind that each Filtering Service instance in your network will need its own copy of the block pages.

As a best practice, customize your files on a test server. Then, when they are finalized, distribute them to the appropriate “Custom” folder on each server or appliance that hosts a Filtering Service instance.

To get started:

## Steps

- 1) If Filtering Service resides on a Windows or Linux server, navigate to the default block page directory. For English:

```
 Websense/Web Security/BlockPages/en/Default
```

- 2) Make a copy of the block pages.

- If Filtering Service resides on a Windows or Linux server, copy the block page files to the custom block page directory. For English:

```
 Websense/Web Security/BlockPages/en/Custom
```



### Important

Do **not** modify the original block message files in the `BlockPages/<lang_code>/Default` directory. Copy them to the `BlockPages/<lang_code>/Custom` directory and then modify the copies.

- If Filtering Service resides on an appliance, use the API to download the files you want to edit. See *Working with block page files on appliances*. Next, select the files you want to edit and click **Download File(s)**.

- 3) Open the first file you want to edit in a text editor or HTML editor.



### Warning

Some HTML editors modify HTML code, which could corrupt the files and cause problems displaying the block messages. Make sure to use an editor that will not insert changes beyond those you intend to make.

- 4) Modify the text. The files contain comments that guide you in making changes.

**Do not** modify the tokens (enclosed by `$*` and `*$` symbols), or the structure of the HTML code. These enable Filtering Service to display specific information in the block message.

For detailed instructions on making specific types of edits, see:

- *Change the size of the message frame*
- *Change the block page logo*
- *Block page content variables*

- 5) Some block page HTML files use hard-coded paths to reference the support files used to construct the page. If you have modified the stylesheet used to format the block pages (**blockStyle.css**) or the JavaScript file used to construct security block pages (**security.js**), make sure that you also update the path to those files in your custom HTML files. For example:

```
<link rel="stylesheet" href="/en/Custom/blockStyle.css type="text">
```

- 6) Save the file.
- 7) For appliances, upload the edited file and restart Filtering Service. See *Working with block page files on appliances*.
- 8) For Windows and Linux servers, use the **Status > Deployment** page in the Web module of the Forcepoint Security Manager to restart **Filtering Service**.  
Block page changes do not go into effect until you restart Filtering Service.

## Next steps

You can easily resume using the default block pages at any time, if needed. See *Reverting to the default block pages*.

### Related concepts

[Working with block page files on appliances on page 7](#)  
[Reverting to the default block pages on page 14](#)

### Related tasks

[Change the size of the message frame on page 9](#)  
[Change the block page logo on page 10](#)

### Related reference

[Block page content variables on page 12](#)

# Working with block page files on appliances

Version 8.4 introduced a series of API commands for managing block page files on V and X Series appliances when connecting to the appliance from a remote computer using cURL.

## Introduction

In the commands below:

- Syntax for using the **curl** tool is shown. Other tools may also be used to communicate with the RESTful appliance API, such as the Postman app.

- `<c_interface>` is the IP address of the appliance communication (C) interface.
- `<password>` is the password for the appliance **admin** account.  
The appliance API requires basic authentication to enable communication between the client and the appliance.
- The available language codes (`<lang_code>`) are:

Code	Language	Code	Language
de	German	ja	Japanese
en	English	pt_BR	Portuguese
es	Spanish	zh_CN	Simplified Chinese
fr	French	zh_TW	Traditional Chinese
it	Italian		



#### Note

Some versions of cURL require passwords with special characters to be enclosed in quotes ("`<password>`") and properly escaped.

## Block page commands

List files in the Default block page directory:

```
curl -k -u admin:<password> -X GET https://<c_interface>/ wse/customblockpage/list/default/<lang_code>
```

List files in the Custom block page directory:

```
curl -k -u admin:<password> -X GET https://<c_interface>/ wse/customblockpage/list/custom/<lang_code>
```

List files in the block page Images directory:

```
curl -k -u admin:<password> -X GET https://<c_interface>/ wse/customblockpage/list/images
```

Get a file from the Default block page directory:

```
curl -k -u admin:<password> -X GET https://<c_interface>/ wse/customblockpage/file/default/<lang_code>/<filename>
```

Get a file from the Custom block page directory:

```
curl -k -u admin:<password> -X GET https://<c_interface>/ wse/customblockpage/file/custom/<lang_code>/<filename>
```

Get an image from the Images directory:

```
curl -k -u admin:<password> -X GET https://<c_interface>/ wse/customblockpage/images/<filename>
```

Upload a custom block page file to the appropriate Custom directory:

```
curl -k -u admin:<password> -X PUT -F "file=@./<filename>" https://<c_interface>/ wse/customblockpage/file/<lang_code>
```

For example:



```
curl -k -u admin:*My3Password -X PUT -F "file=@./ master.html"
https://10.115.75.30/wse/customblockpage/file/ en
```

Upload a custom block page image to the Images directory:

```
curl -k -u admin:<password> -X PUT -F "file=@./<filename>" https://<c_interface>/
wse/customblockpage/images
```

For example:

```
curl -k -u admin:*My3Password -X PUT -F "file=@./mylogo.png" https://10.115.75.30/
wse/customblockpage/images
```

Delete a file from the Custom directory:

```
curl -k -u admin:<password> -X DELETE https://<c_interface>/ wse/customblockpage/
delfile/<lang_code>/<filename>
```

Delete an image from the Images directory:

```
curl -k -u admin:<password> -X DELETE https://<c_interface>/ wse/customblockpage/
delimage/<filename>
```

Stop and then start Filtering Service to cause your changes to take effect:

```
curl -k -u admin:<password> -X PUT https://<c_interface>/ wse/admin/filter/stop
curl -k -u admin:<password> -X PUT https://<c_interface>/ wse/admin/filter/start
```

## Change the size of the message frame

Depending on what information you want to provide in the block message, the default width of the block message and height of the top frame may not be appropriate.

To change these size parameters in the **master.html** file:

### Steps

- 1) Get a copy of the master.html file to edit:
  - On Windows and Linux servers, copy **master.html** from the `websense/ BlockPages/<lang_code>/Default` directory to `websense/BlockPages/ <lang_code>/Custom.`
  - On appliances, use the following API command:

```
curl -k -u admin:<password> -X GET https://<c_interface>/wse/customblockpage/
file/default/<lang_code>/master.html
```

- 2) Open the copy in the Custom directory with a text editor or HTML editor.



#### Warning

Some HTML editors modify HTML code, which could corrupt the files and cause problems displaying the block messages. Make sure to use an editor that will not insert changes beyond those you intend to make.

- 3) To change the width of the message frame, edit the following line:

```
<div style="border: 1px solid #A6A6A6;width: 95%; max-width: 700px; ...>
```

Change the value of the **width** and **max-width** parameters as required.

- 4) Save and close the file.
- 5) Do one of the following to apply your changes:
  - For Filtering Service instances on Windows and Linux servers, use the **Status > Deployment** page in the Web module of the Forcepoint Security Manager to restart **Filtering Service**.
  - For Filtering Service instances on appliances, first upload the file, then restart Filtering Service:
 

```
curl -k -u admin:<password> -X PUT -F "file=@./ master.html" https://<c_interface>/wse/ customblockpage/file/en
```

```
curl -k -u admin:<password> -X PUT https://<c_interface>/wse/admin/filter/stop
```

```
curl -k -u admin:<password> -X PUT https://<c_interface>/wse/admin/filter/start
```

## Next steps

Block page changes do not go into effect until Filtering Service has restarted.

# Change the block page logo

## Before you begin

The **master.html** file also includes the HTML code used to display a Forcepoint logo on the block page. You can replace this with a custom image of your choice.

To update the logo in the **master.html** file:

## Steps

- 1) Open the copy of the file in the **Websense/BlockPages/<lang\_code>/Custom** directory (Windows or Linux servers), or download a copy of the file from your appliance:
 

```
curl -k -u admin:<password> -X GET https://<c_interface>/wse/customblockpage/file/default/<Lang>/ master.html
```
- 2) Copy an image file containing your organization's logo to the **BlockPages/ Images** folder:
 

```
curl -k -u admin:<password> -X PUT -F "file=@./<filename>" https://<c_interface>/wse/customblockpage/ images
```
- 3) Open the copy of **master.html** in a text editor or HTML editor.



### Warning

Some HTML editors modify HTML code, which could corrupt the files and cause problems displaying the block messages. Make sure to use an editor that will not insert changes beyond those you intend to make.

- 4) Edit the following line to replace the Forcepoint logo with your organization's logo:

```

```

- Replace **logo\_block\_page.png** with the location and name of the image file you want to display (for example, your organization's logo).
- Replace the values of the **title** parameter and **alt** parameter to accurately describe the new image.

For example:

```

```

The default block page logo is 228 pixels wide by 54 pixels high. If you change the size of the logo dramatically, additional HTML or CSS changes may be needed to ensure that the logo and other elements of the page display properly.

- 5) Save and close the file.

- 6) Do one of the following to apply your changes:

- For Filtering Service instances on Windows and Linux servers, use the **Status > Deployment** page in the Web module of the Forcepoint Security Manager to restart **Filtering Service**.

- For Filtering Service instances on appliances, first upload the file, then restart Filtering Service:

```
curl -k -u admin:<password> -X PUT -F "file=@./ master.html" https://<c_interface>/wse/ customblockpage/file/<lang_code>
```

```
curl -k -u admin:<password> -X PUT https://<c_interface>/wse/admin/filter/stop
```

```
curl -k -u admin:<password> -X PUT https://<c_interface>/wse/admin/filter/start
```

Block page changes do not go into effect until Filtering Service has restarted.

## Custom block page code examples

There are a number of ways that you can customize block pages.

In the following example, the **blockFrame.html** file has been updated to add 2 new buttons: one that links to an Internet usage policy document, and one that submits a request to permit access to a blocked website.

Some text has also been added to the page to give guidance about submitting requests to access a blocked website.

The sample code has been added after the "more info" section of the block file code. This section starts with:

```
<!-- MORE INFO section -->
```

It ends with:

```
*$WS_ACEINSIGHT_LINK-END*$
```

The following section of sample code was inserted to create the button that links to the Internet Usage Policy document:

```
<table class="first-option" id="usage-policy">
<tr>
<td>
<input type="button" onclick="window.open('//
www.mycompany.com/documents/internal/
internet_usage_policy.pdf', '_blank');" value="Internet Usage
Policy" id="isp_link" class="ws_btn">
</td>
<td>
<span class="ws_btn_desc">Click to view the
MyCompany policy for secure Internet browsing.</span>
</td>
</tr>
</table>
```

The next section of code adds the guidance about requesting access to a blocked website:

```
<p class="option">
<strong>Requests to access the following types of websites
require a specific, detailed business case for the exception.</strong></p>
<p>
<ul class="option">
<li>Personal Network Storage and Backup</li>
<li>Social Networking</li>
<li>Hacking</li>
</ul>
</p>
```

And finally, a second button offers the chance to submit the request for access directly to the appropriate destination:

```
<table class="option" id="permitReq">
<tr>
<td>
<input type="button" onclick="window.open('//
helpdesk.mycompany.com/kinetic/
DisplayPage?name=URLUnblock&date=$*WS_DATE*${username=$*WS_U
SERNAME*${url=$*WS_URL*${category=$*WS_CATEGORY*$', '_blank'})
;"value="Request Access" id="unlock_btn" class="ws_btn">
</td>
<td>
<span class="ws_btn_desc">Click to request access
to this website. <strong>All requests must be business
related.</strong></span>
</td>
</tr>
</table>
```

## Block page content variables

Content variables control the information displayed on HTML block pages. The following variables are included with the default block message code.

Variable Name	Content Displayed
WS_DATE	Current date
WS_USERNAME	Current user name (excluding domain name)
WS_USERDOMAIN	Domain name for the current user

Variable Name	Content Displayed
WS_IPADDR	IP address of the requesting source machine
WS_WORKSTATION	Machine name of the blocked computer (if no name is available, IP address is displayed)
WS_CASB_IS_BLOCK	If the page was blocked as a cloud application, "true". If the page was not blocked as a cloud application, "false".
WS_CASB_RISKLEVEL	Low, medium, or high risk level.
WS_CASB_APP	Name of the cloud application.
WS_CASB_APPTYPE	Category of the cloud application.

To use a variable, insert the variable name between the `$* *$` symbols in the appropriate HTML tag:

```
<p id="UserName">*$WS_USERNAME*$</p>
```

Here, `WS_USERNAME` is the variable.

The block message code includes additional variables, described below. You may find some of these variables useful in constructing your own, custom block messages.

When you see these variables in default block message files, however, please do **not** modify them. Because Filtering Service uses these variables when processing blocked requests, they must remain in place.

Variable Name	Purpose
WS_URL	Displays the requested URL
WS_BLOCKREASON	Displays why the site was blocked (i.e., which action was applied)
WS_ISSECURITY	Indicates whether the requested site belongs to any of the categories in the Security Risk class. When TRUE, the security block page is displayed.
WS_PWOVERRIDECGIDATA	Populates an input field in the block page HTML code with information about use of the <b>Password Override</b> button
WS_QUOTACGIDATA	Populates an input field in the block page HTML code with information about use of the <b>Use Quota Time</b> button
WS_PASSWORDOVERRIDE-BEGIN, WS_PASSWORDOVERRIDE-END	Involved in activating password override functionality
WS_MOREINFO	Displays detailed information (shown after the <b>More information</b> link is clicked) about why the requested site was blocked
WS_POLICYINFO	Populates the hidden "more information" section in block page source code
WS_MOREINFOCGIDATA	Sends data to Filtering Service about use of the <b>More information</b> link
WS_QUOTATIME	Displays the amount of quota time remaining for the requesting client

Variable Name	Purpose
WS_QUOTAINTERVALTIME	Displays quota session length configured for the requesting client
WS_QUOTABUTTONSTATE	Indicates whether the <b>Use Quota Time</b> button is enabled or disabled for a particular request
WS_SESSIONID	Acts as an internal identifier associated with a request
WS_TOPFRAMESIZE	Indicates the size (as a percentage) of the top portion of a block page sent by a custom block server, if one is configured
WS_BLOCKMESSAGE_PAGE	Indicates the source to be used for a block page's top frame
WS_CATEGORY	Displays the category of the blocked URL
WS_CATEGORYID	The unique identifier for the requested URL category

## Reverting to the default block pages

If users experience errors after you implement customized block messages, you can restore the default block messages by deleting the custom block files and restarting Filtering Service. If there are no files in the custom directory, Filtering Service automatically resumes using the default block files.

## Windows and Linux servers

On Windows and Linux servers, you can directly delete files from the Custom directory:

### Steps

- 1) Delete all the files from the `Websense/BlockPages/<lang_code>/Custom` directory.
- 2) Use the **Status > Deployment** page in the Web module of the Forcepoint Security Manager to restart **Filtering Service**.  
As an alternative, you can use either the Windows Services tool or the Linux WebsenseDaemonControl tool to restart the service.

# Forcepoint appliances

## Before you begin

On both V Series and X Series appliances, use the appliance API to delete custom block page files. For information about the syntax used in the sample commands below, see the introduction to *Working with block page files on appliances*.

To delete the files and revert to the default block pages:

## Steps

- 1) Use the “delfile” command to delete files in the Custom directory, one at a time:

```
curl -k -u admin:<password> -X PUT https://<c_interface>/ wse/customblockpage/delfile/  
<lang_code>/<file_name>
```

For example:

```
curl -k -u admin:<password> -X PUT https://10.115.75.30/ wse/customblockpage/delfile/en/  
master.html
```

- 2) After deleting the files, stop Filtering Service:

```
curl -k -u admin:<password> -X PUT https://<c_interface>/ wse/admin/filter/stop
```

- 3) Start Filtering Service:

```
curl -k -u admin:<password> -X PUT https://<c_interface>/ wse/admin/filter/start
```

## Next steps

For the complete list of files, see *Get started with block page elements*.

### Related concepts

[Working with block page files on appliances on page 7](#)

[Get started with block page elements on page 3](#)

