

CA Unified Infrastructure Management[®] Unified Management Portal

DMZ Guide

8.0



Document Revision History

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1.0	September, 2014	Initial version for UMP 8.0.

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Chapter 1: How to Set up Access to UMP through a DMZ

As a system administrator, you enable secure communication through a proxy web server to set up access to UMP through a DMZ.

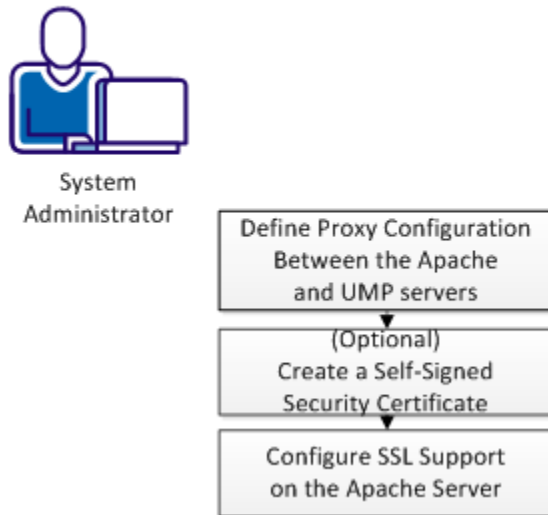
A DMZ limits your network vulnerability to unauthorized use or attack. External users have direct access only to the proxy web server in the DMZ and not your internal network.

Prerequisites:

- Install CA Unified Infrastructure Management.
- Install UMP and ensure that it is communicating with the CA Unified Infrastructure Management server.
- Download and install Apache on the server in the DMZ.
- Designate a public IP address for the Apache web server (if you want to access UMP from the Internet).

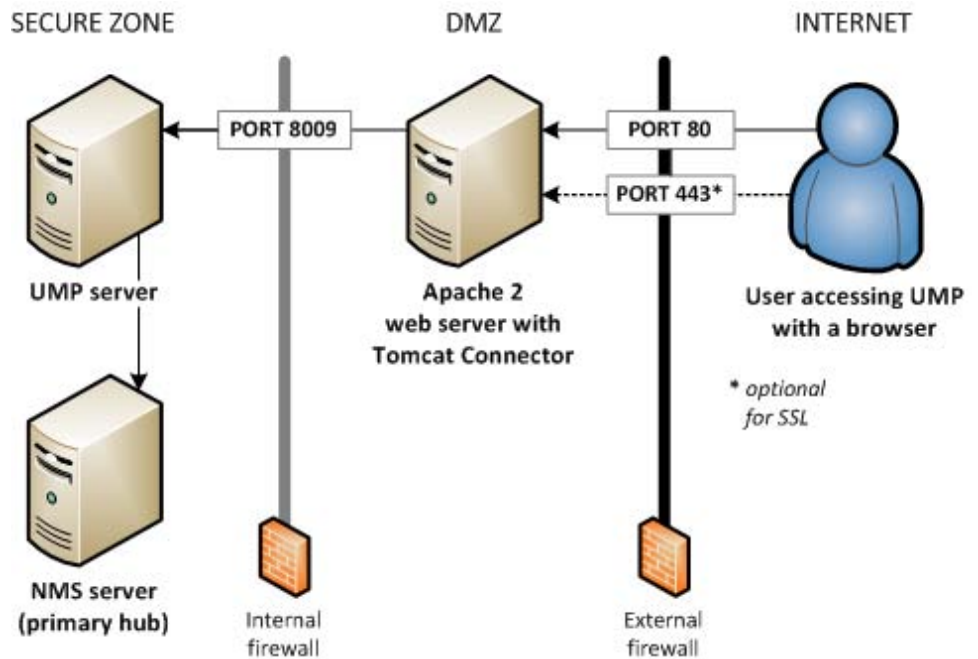
The following flowchart shows how to set up access to UMP through a DMZ.

How to Set Up Access to UMP Through a DMZ



1. [Define Proxy Configuration between the Apache and UMP Servers](#) (see page 7).
2. [\(Optional\) Create a Self-Signed Security Certificate](#) (see page 9).
3. [Configure SSL Support on the Apache Server](#) (see page 11).

Graphic Overview of UMP Configured with a DMZ



Define Proxy Configuration between the Apache and UMP Servers

Configure proxy communication between the Apache proxy web server and UMP server so that external browsers can access UMP through the DMZ.

Follow these steps:

1. Edit the Apache configuration file, `httpd.conf`, as follows:

- Uncomment the following lines:
`LoadModule proxy_module modules/mod_proxy.so`
`LoadModule proxy_ajp_module modules/mod_proxy_ajp.so`
- Locate: `#ServerName www.example.com`; uncomment and change it to:
`ServerName <Apache_server_name>.<domain>.com:80`
- Add the following lines to the end of the `httpd.conf` file:
`ProxyRequests On`
`<Proxy *>`
`Order deny,allow`
`Allow from all`
`</Proxy>`
`ProxyPass / ajp://<ump_server_name_orIP>:8009/`
`ProxyPass /c/portal ajp://<ump_server_name_orIP>:8009/c/portal`
`ProxyPass /web/guest ajp://<ump_server_name_orIP>:8009/web/guest`
`ProxyRequests Off`

For example:

```
ProxyRequests On
<Proxy *>
Order deny,allow
Allow from all
</Proxy>
ProxyPass / ajp://10.10.10.10:8009/
ProxyPass /c/portal ajp://10.10.10.10:8009/c/portal
ProxyPass /web/guest ajp://10.10.10.10:8009/web/guest
ProxyRequests Off
```

2. On the *inside* firewall, open Port 8009.

3. On the *outside* firewall, open Port 80

Note: (Optional) To allow internet access to a hub in the DMZ, you must assign a public IP address.

4. (Optional) if you want to enable *only* https access and disable standard http, you must do the following:

- a. In the `http.conf`, comment out the following line
`#Listen 80`
- b. In the `ServerName` entry, specify port 443 instead of port 80.

Important! If you enable https access and do *not* disable http access, both http and https access are possible.

5. Restart the Apache server.
6. To test whether the Apache web server proxies you to the UMP login page, access the URL of the proxy server in your web browser.

You defined proxy configuration between the Apache and UMP servers.

Troubleshooting Proxy Configuration between the Apache and UMP Servers on a Windows Installation

Symptom:

When you configure SSL using 64bit Apache on a Windows installation, Apache fails to start.

Solution:

Modify the SSLSessionCache path 'Program Files (x86)' portion:

```
SSLSessionCache "shmcb:C:/PROGRA~2/Apache Software  
Foundation/Apache2.2/logs/ssl_scache(512000)"
```

(Optional) Create a Self-Signed Certificate

You must have a security certificate to configure a secure connection between the proxy web server and web browsers. A certificate from a certificate authority ensures site visitors that any transferred data is more secure. If you do not transfer sensitive data and you are less concerned about security, create a self-signed certificate.

Note: Visitors see a warning that a trusted certificate authority did not issue the certificate but they can proceed to the website.

Follow these steps:

1. Open a command prompt on the web server.
2. Change directories:
C:\Program Files\Apache\conf
3. Generate a private key:
..\bin\openssl genrsa -des3 -out server.key 1024
4. Generate a CSR (Certificate Signing Request):
..\bin\openssl req -config ..\conf\openssl.cnf
-new -key server.key -out server.csr
5. Remove the passphrase from the key:
copy server.key server.key.org
..\bin\openssl rsa -in server.key.org -out server.key
6. Generate a self-signed certificate:
..\bin\openssl x509 -req -days 365 -in server.csr -signkey server.key -out
server.crt
7. Edit httpd-ssl.conf to update paths to:
SSLCertificateFile and SSLCertificateKeyFile

You created a self-signed certificate.

Configure SSL Support on the Apache Server

Configure SSL support on the Apache server to establish an encrypted link between the web proxy server and *external* browsers.

Note: Enabling https communication between the proxy server and UMP within your *internal* firewall is beyond the scope of this document. For more about how to configure https in this situation, see Apache documentation on the `mod_proxy_http` module.

Follow these steps:

1. In the Apache configuration file, `httpd.conf`, uncomment the following lines:
`LoadModule ssl_module modules/mod_ssl.so`
`Include conf/extra/httpd-ssl.conf`

2. In the Apache configuration file `conf/extra/httpd-ssl.conf`, edit the following parameters:

Listen port

Identifies the port number that is opened on the inside firewall for SSL as required.

Note: You can use the `netstat` command to make sure that no other applications are using the port that you specify. If you use port 443 on an Internet Information Services (IIS) web server, this may be an issue.

VirtualHost

Identifies the port number that is opened on the inside firewall for SSL. (Default value is 443.)

ServerName

Defines the name for the Apache server, including port number (for example: `10.10.10.10:443`).

ServerAdmin

Defines the email address for the administrator.

SSLCertificateFile

Identifies the path to the PEM encoded certificate.

SSLCertificateKeyFile

Identifies the path to the private key if it is not already combined with the certificate.

3. In the Apache configuration file `conf/extra/httpd-ssl.conf`, accept the default or specify the desired path for the following parameters:
 - **DocumentRoot**
 - **SSLSessionCache**
 - **ErrorLog**

-
- **TransferLog**
 - **CustomLog**

4. Restart the Apache web server.

You configured SSL support on the Apache server.

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