Protecting OWA and ActiveSync with FortiWeb

FORTINET DOCUMENT LIBRARY
HTTPS://docs.fortinet.com

FORTINET VIDEO GUIDE
HTTPS://video.fortinet.com

FORTINET BLOG
HTTPS://blog.fortinet.com

CUSTOMER SERVICE & SUPPORT
HTTPS://support.fortinet.com

FORTINET COOKBOOK
HTTPS://cookbook.fortinet.com

FORTINET TRAINING & CERTIFICATION PROGRAM
HTTPS://www.fortinet.com/support-and-training/training.html

NSE INSTITUTE
HTTPS://training.fortinet.com

FORTIGUARD CENTER
HTTPS://fortiguard.com/

END USER LICENSE AGREEMENT
HTTPS://www.fortinet.com/doc/legal/EULA.pdf

FEEDBACK
Email: techdocs@fortinet.com

Securing ActiveSync with FortiWeb
Updated on March 17, 2020

TABLE OF CONTENTS

Overview

ActiveSync is a Microsoft technology that has brought data synchronization and server access to hundreds of millions of mobile devices since its introduction. In over 20 years it has evolved to be the foundation of mobile access to today's latest email and server products, including Microsoft Exchange, Office 365, and IBM Notes. Chances are you're using ActiveSync if your organization uses Microsoft Exchange and you're accessing your email on an iOS, Android, Windows Mobile, or BlackBerry device.

Along with ActiveSync, Outlook on the Web is the standard for browser based access to Exchange and Office 365 for email, contacts, tasks, and other services managed by these servers. Outlook for the Web has had many previous names including Exchange Web Connect, Outlook Web Access, and Outlook Web App. Most people know it as OWA for Outlook Web Access. Both ActiveSync and OWA are widely used; however, they present a security challenge to IT teams, as the data sent from a mobile device or a web browser could bypass traditional threat detection systems in certain situations.

The security loophole with ActiveSync and OWA

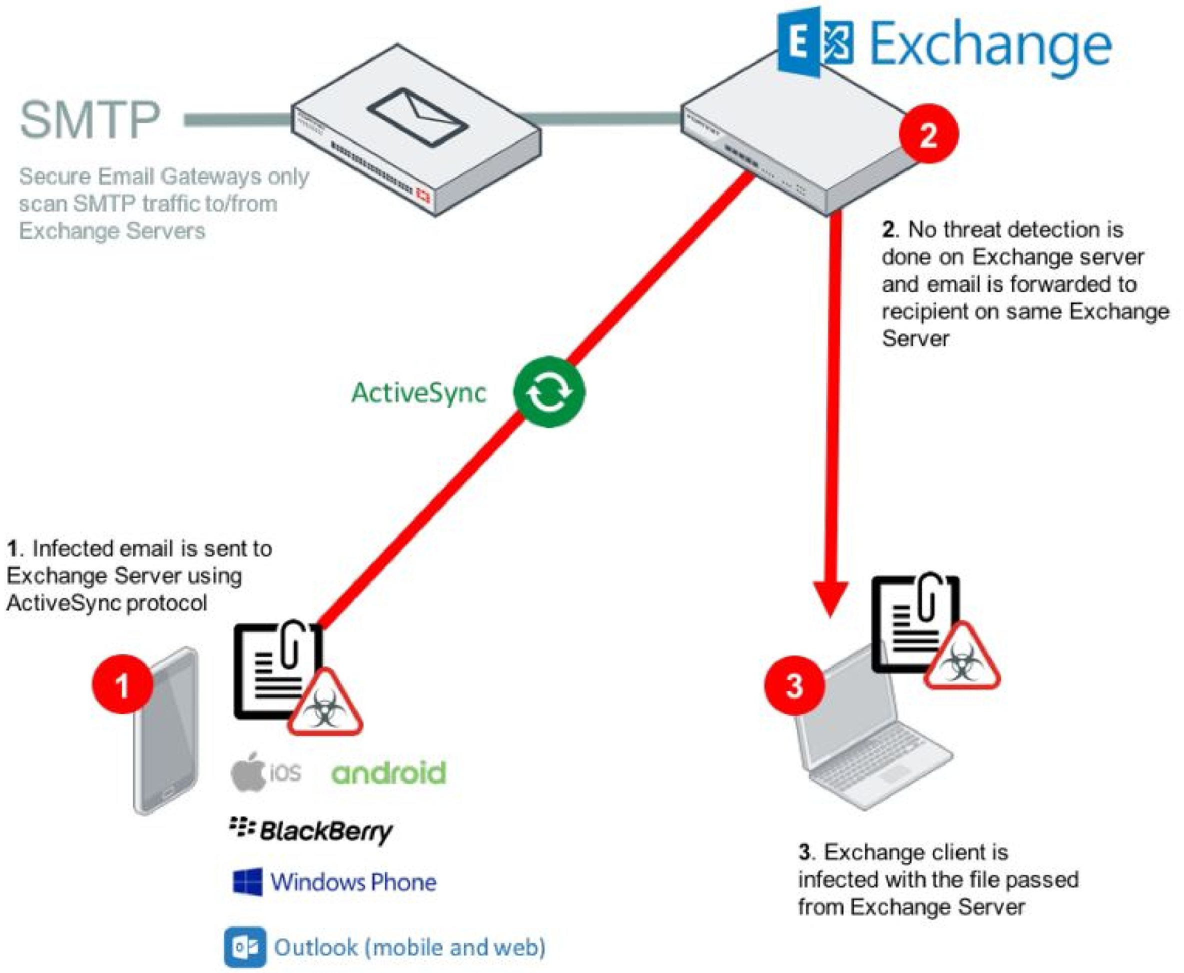
When remote users send and receive emails using ActiveSync or OWA, the server directly communicates with the devices, bypassing email protection services that scan SMTP traffic. Secure Email Gateways (SEGs) only scan inbound and outbound emails from users that are external to the communications server using SMTP.

The ActiveSync protocol is based on XML and uses HTTPS to communicate to the server. OWA is a browser-based method that communicates to the server using HTTP and HTTPS. SEGs have no visibility to this traffic and can't intercept threats that may be hidden inside.

Using Microsoft Exchange as an example, if a remote user sends an email infected with malware using their mobile device or OWA to a recipient outside the organization's Exchange Server, the email would be flagged and acted upon by the SEG. However, recipients on the same Exchange Server as the mobile or OWA user would receive the infected email, spreading the threat or possibly sending it to other users on the Exchange Server.

Many organizations need to control, secure, and protect ActiveSync and OWA communications for many reasons ranging from basic security hygiene to compliance. For example, ActiveSync and OWA email must be scanned for threats as part of ISO 27001 certification.

The following figure shows that remote users send email and attachments directly to the Exchange Server, bypassing traditional email security.

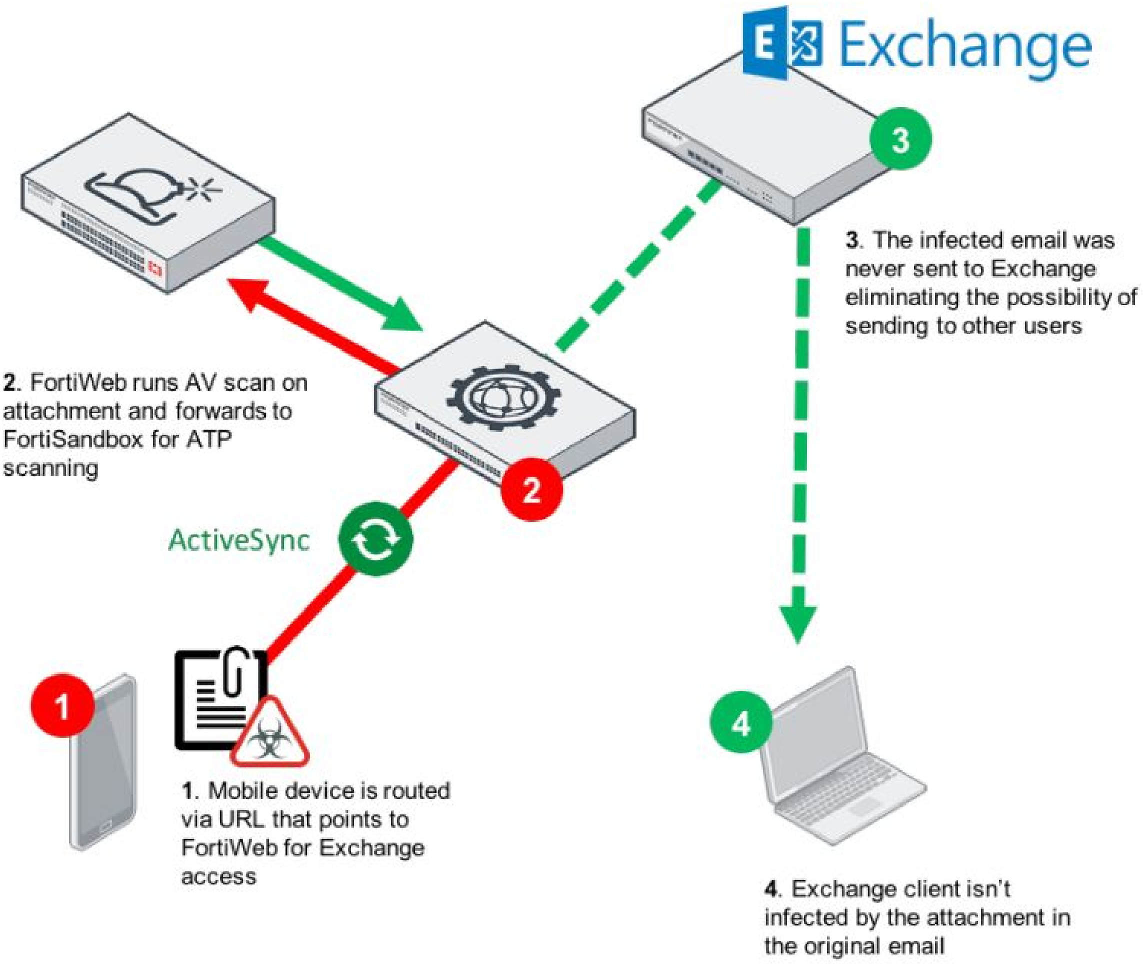

Exchange
SMTP
Secure Email Gateways only scan SMTP traffic to/from Exchange Servers
2
2. No threat detection is done on Exchange server and email is forwarded to recipient on same Exchange Server
ActiveSync
1. Infected email is sent to Exchange Server using ActiveSync protocol
1
3
iOS
android
BlackBerry
Windows Phone
Outlook (mobile and web)
3. Exchange client is infected with the file passed from Exchange Server

FortiWeb ActiveSync and OWA scanning

In addition to its core web application firewall functionality, FortiWeb can be deployed to publish applications, provide SSO, and manage authentication delegation. Many Fortinet customers use FortiWeb as a replacement for the discontinued Microsoft Threat Management Gateway to publish Microsoft Exchange and other Microsoft applications.

Using this functionality, FortiWeb can be deployed as a proxy for ActiveSync and OWA. This means that any remote mobile user or email client would be directed to FortiWeb. Here FortiWeb would inspect the traffic and intercept any attachments sent from the device or web browser. These attachments are then processed by FortiWeb’s antivirus engine to check for threats. FortiWeb can also be configured to send attachments to Fortinet’s sandboxing solutions for additional scans to detect advanced persistent threats or zero-day attacks.

The following figure shows that FortiWeb is deployed in front of Exchange Server to intercept email traffic from remote devices to scan for threats.


Exchange
3
3. The infected email was never sent to Exchange eliminating the possibility of sending to other users
2. FortiWeb runs AV scan on attachment and forwards to FortiSandbox for ATP scanning
2
ActiveSync
1
1. Mobile device is routed via URL that points to FortiWeb for Exchange access
4
4. Exchange client isn't infected by the attachment in the original email

Benefits

By using FortiWeb to protect your ActiveSync-based applications and users accessing email with OWA, you get:

- Proven protection against threats hidden in ActiveSync and OWA attachments
- Mobile Attachment Scanning for Office 365
- Flexible deployment options including VMs, Cloud, and Appliances
- Easy-to-deploy antivirus for Exchange, IBM Notes, and other ActiveSync-based applications
- Integration with FortiSandbox and FortiWeb Cloud Sandbox for protection from advanced persistent threats
- Integrated single platform for publishing Microsoft Exchange Server applications and services

Securing OWA with FortiWeb

You can use FortiWeb's site publishing features to authorize clients that want to connect to web applications such as Microsoft's Outlook Web App (OWA).

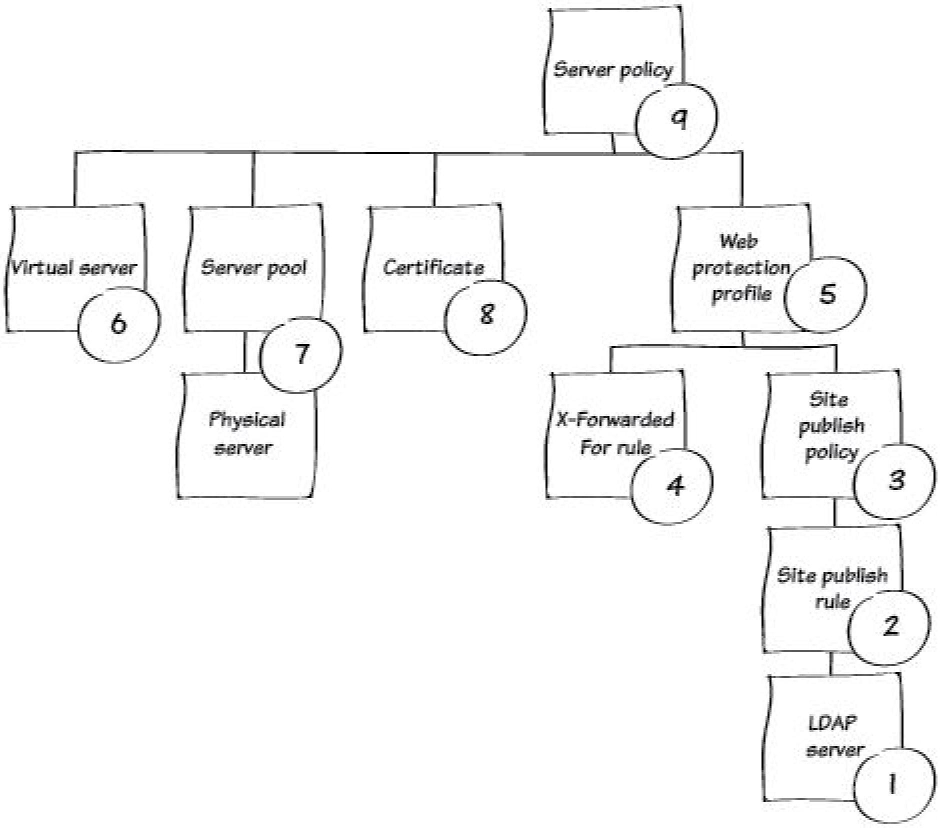
This site publishing feature can replace the web publishing functionality provided by Microsoft's Threat Management Gateway (TMG). FortiWeb also provides additional security features that protect the application after a successful login.

You create the FortiWeb configuration that publishes and protects web applications using a server policy.

A server policy is made up of several other configuration objects, including:

- Web protection profile — A set of security-related configuration objects.
- Virtual server — The IP address where FortiWeb receives client requests for access to the web application.
- Server pool — A backend server or servers where the web application is located.
- Certificate — Certificate to use for SSL encryption.

The numbers in the illustration correspond to the recipe instructions for the configuration objects.



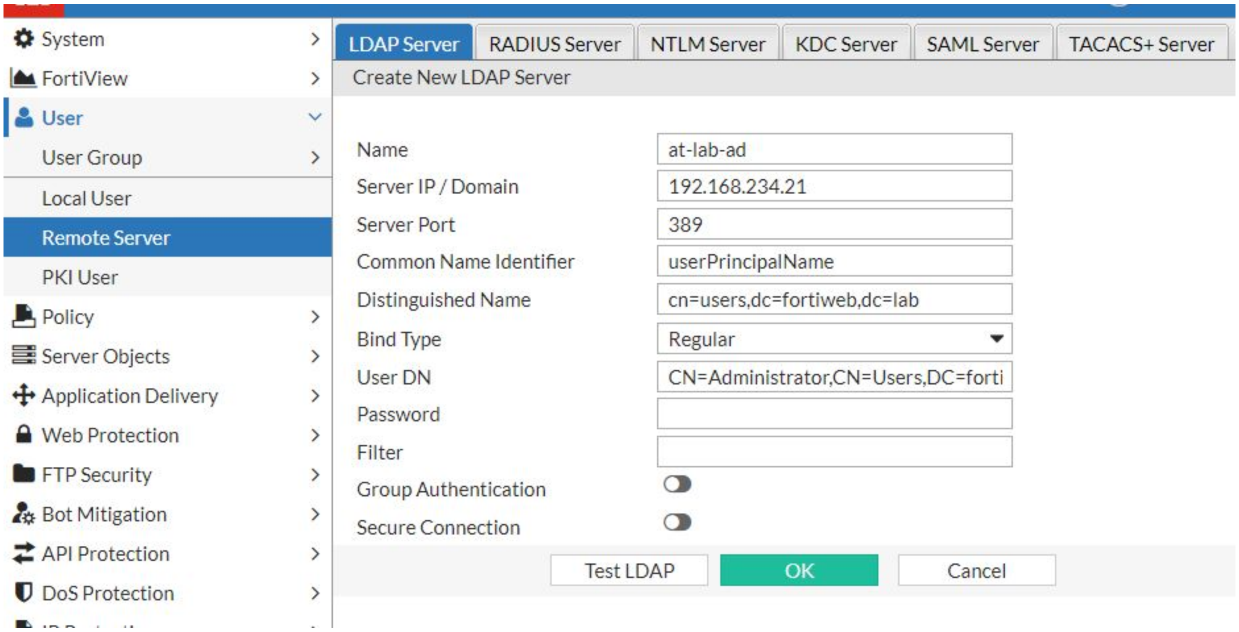
This guide assumes that:

- Basic configuration is complete, including IP addresses, routing, and DNS information.
- The operating mode is reverse proxy (the destination for requests for the web application is a virtual server IP address on FortiWeb, not the back-end server where the application resides)

FortiWeb configuration

Step 1 - LDAP query

Go to **User > Remote Server > LDAP Server** and create a new entry.



Create New LDAP Server

Name	at-lab-ad
Server IP / Domain	192.168.234.21
Server Port	389
Common Name Identifier	userPrincipalName
Distinguished Name	cn=users,dc=fortiweb,dc=lab
Bind Type	Regular
User DN	CN=Administrator,CN=Users,DC=forti
Password	
Filter	
Group Authentication	○
Secure Connection	○

In this example, users log in using their full mail address. Therefore, the Common Name Identifier value is the Active Directory field **userPrincipalName**.

(Other applications or configurations may require different login information.)

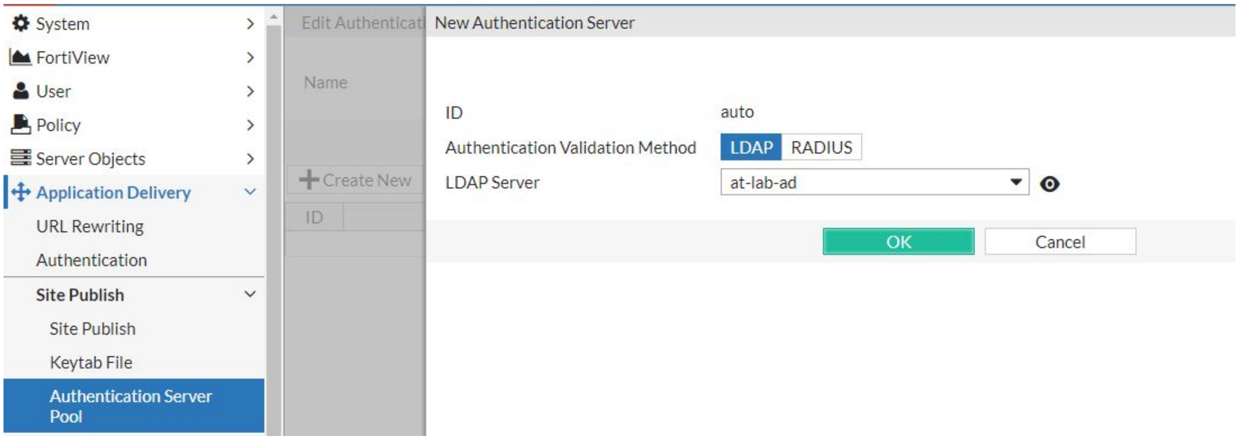
To obtain the **Distinguished Name** field:

1. On the domain controller, start the adsiedit.msc tool.
2. Click **Action > Connect to**.
3. Click **OK**.
4. Browse to the **CN=Users** folder.
5. Select a user (for example, CN=Administrator) and then select its properties.
6. Scroll down to **Distinguished Name** field to view the value to use in FortiWeb.

For more information on creating the LDAP query, see LDAP query best practices and tips.

Step 2 - Authentication server pool

Go to **Application Delivery > Site Publish > Authentication Server Pool**.



New Authentication Server

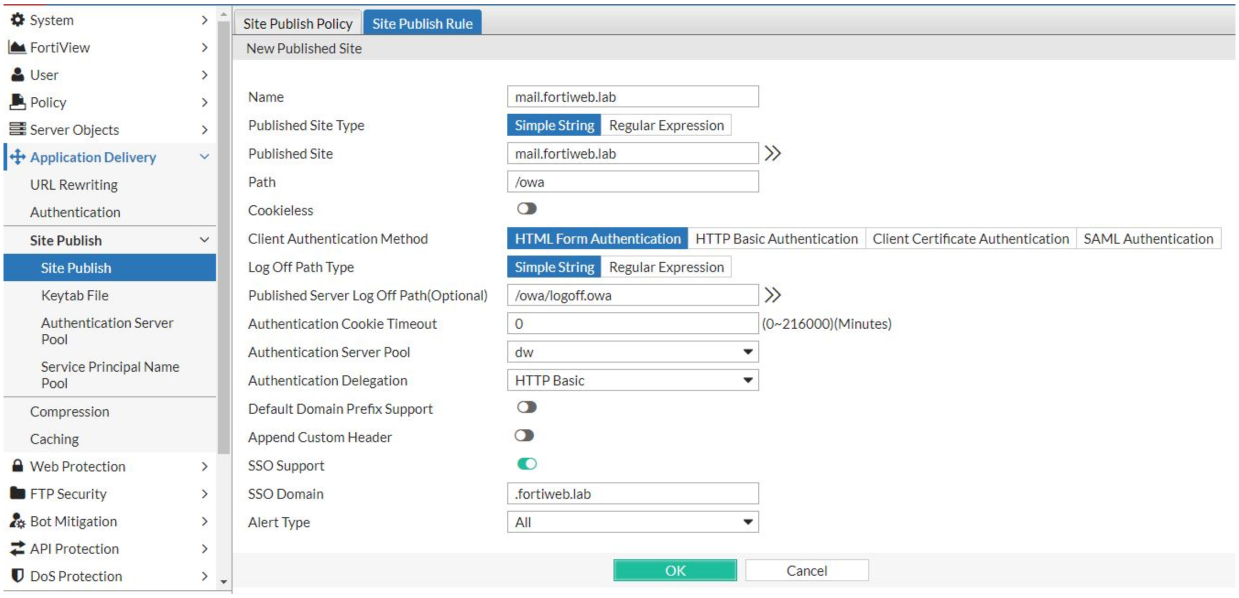
ID: auto

Authentication Validation Method: LDAP | RADIUS

LDAP Server: at-lab-ad

Create a new server pool and add the LDAP server in the pool.

Step 3 - Site publish rule



New Published Site

Name	mail.fortiweb.lab
Published Site Type	Simple String | Regular Expression
Published Site	mail.fortiweb.lab
Path	/owa
Cookieless	○
Client Authentication Method	HTML Form Authentication | HTTP Basic Authentication | Client Certificate Authentication | SAML Authentication
Log Off Path Type	Simple String | Regular Expression
Published Server Log Off Path(Optional)	/owa/logoff.owa
Authentication Cookie Timeout	0 (0~216000)(Minutes)
Authentication Server Pool	dw
Authentication Delegation	HTTP Basic
Default Domain Prefix Support	○
Append Custom Header	○
SSO Support	●
SSO Domain	.fortiweb.lab
Alert Type	All

Name is a unique identifier for the rule.

Published Site and **Path** specify the URL the client uses to access OWA. FortiWeb intercepts requests for this URL and forces the clients to pre-authenticate.

Because the path for OWA starts with /owa, the URL is:

HTTPS://mail.fortiweb.lab/owa

Published Server Log Off Path specifies the path FortiWeb uses to log off a user. For OWA, it is /owa/logoff.owa.
Note: For Exchange 2016 CU1 and later, the logoff path is no longer supported by Microsoft, which causes FortiWeb to be unable to recognize the logoff transaction. The following workaround is available for Exchange 2016 CU1:

1. Edit "Exchange\V15\ClientAccess\Owa\prem\15.1.1034.26\scripts\microsoft.owa.core.models.js".
2. Add this line.
   ```
   $(document).ready(function(){ $('._ho2_2').click(function () { $('body >
   div:last-child ._abs_c div[role=menu] > div > div:last-child > button').on
   ('click', function () { window.location.href= './logoff.owa' }) }) });
   ```
3. Save & iisreset

Without applying this community-provided workaround, FortiWeb will be unable to identify logoff requests, which means the session cookie will only expire once a user closes their browser and does not use the "Restore previous session" option when opening the browser again.

Client Authentication Method specifies how FortiWeb prompts the client to enter the authentication credentials. For example, via HTTP Basic Authentication or a predefined form (shown at right).

LDAP Server is the LDAP configuration you created earlier.

Authentication Delegation specifies whether FortiWeb sends the credentials the client enters to the back-end server.

For example, select **No Delegation** when the web application has no authentication of its own or uses HTML form-based authentication. Select **HTTP Basic** Authentication to use HTTP Authorization: headers with Base64 encoding to forward the client’s credentials to the web application.

Because FortiWeb stores the credentials for the length of the session, it can forward the credentials to other application servers without requiring the client to re-enter the password. To enable this functionality, select SSO Support and specify an SSO Domain value.

Alert Type specifies which login events FortiWeb writes to event log (none, failed only, successful only, or all).

Step 4 - Site publish policy

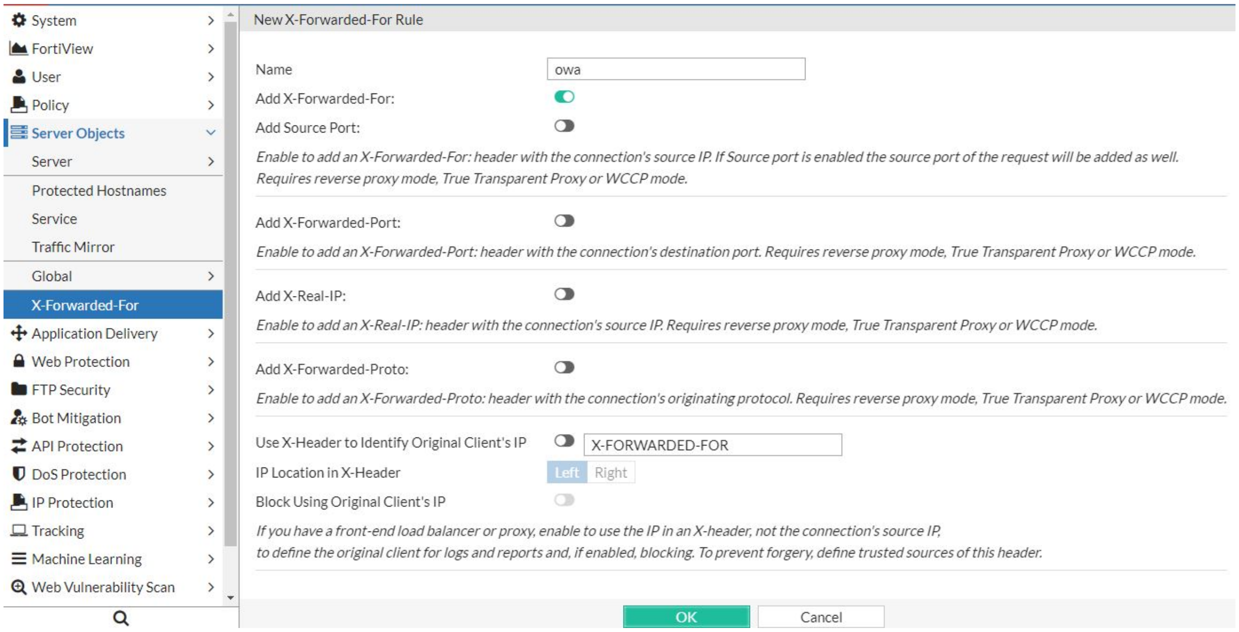
Use a site publish policy to add site publish rules to a web protection profile. The site publish policy allows you to add multiple site publish rules to a policy.

To create a new policy, go to **Application Delivery > Site Publish > Site Publish Policy**. Create a new entry, enter the policy name, and then click OK. Then, you can add one or more site publish rules to the policy.

Step 5 - X-Forwarded-For rule

Because the operating mode is reverse proxy, the source address of all connections from the FortiWeb to the back-end server is the IP address of one of the FortiWeb interfaces.

To provide the client IP address in the log of the back-end server, you can forward the IP address of the client in the request in a `X-Forwarded-For:` header.



New X-Forwarded-For Rule

Name: owa

Add X-Forwarded-For: on

Add Source Port: off

Enable to add an X-Forwarded-For: header with the connection's source IP. If Source port is enabled the source port of the request will be added as well. Requires reverse proxy mode, True Transparent Proxy or WCCP mode.

Add X-Forwarded-Port: off

Enable to add an X-Forwarded-Port: header with the connection's destination port. Requires reverse proxy mode, True Transparent Proxy or WCCP mode.

Add X-Real-IP: off

Enable to add an X-Real-IP: header with the connection's source IP. Requires reverse proxy mode, True Transparent Proxy or WCCP mode.

Add X-Forwarded-Proto: off

Enable to add an X-Forwarded-Proto: header with the connection's originating protocol. Requires reverse proxy mode, True Transparent Proxy or WCCP mode.

Use X-Header to Identify Original Client's IP: off X-FORWARDED-FOR

IP Location in X-Header: Left Right

Block Using Original Client's IP: off

If you have a front-end load balancer or proxy, enable to use the IP in an X-header, not the connection's source IP, to define the original client for logs and reports and, if enabled, blocking. To prevent forgery, define trusted sources of this header.

Go to **Server Objects > X-Forwarded-For > X-Forwarded-For** and create a new entry. Enter a name and select **Add X-Forwarded-For**.

(These settings also provide alternative methods to include this information in requests.)

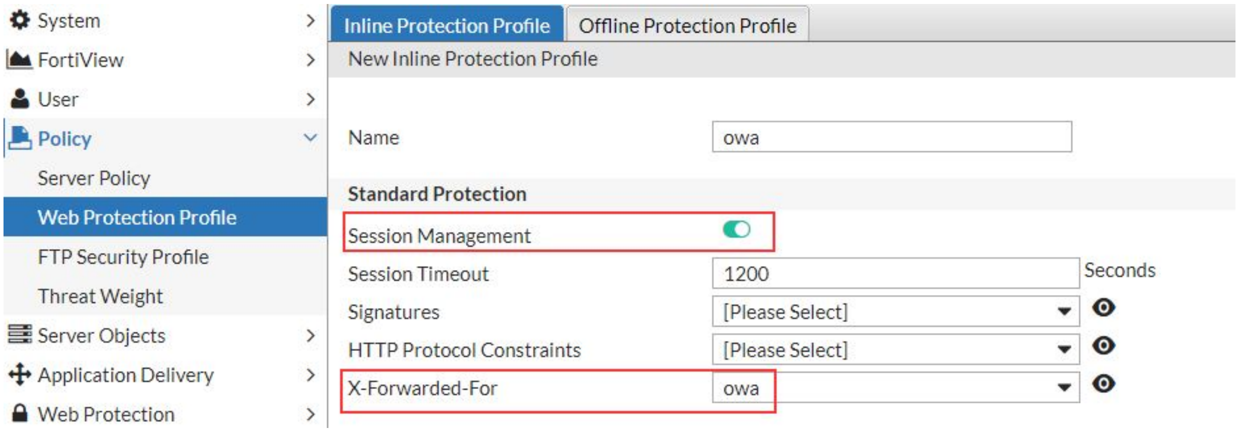
Step 6 - Web protection profile

Go to **Policy > Web Protection Profile > Inline Protection Profile**.

Instead of creating a new profile, you can clone the predefined profile for Exchange 2013, and then configure the cloned profile to suit your environment.

Enter a name, enable **Session Management** and select the **X-Forwarded-For** profile you created earlier.

At the bottom of the profile configuration, under **Application Delivery**, for **Site Publish**, select the site publish policy that you created earlier.



New Inline Protection Profile

Name: owa

Standard Protection

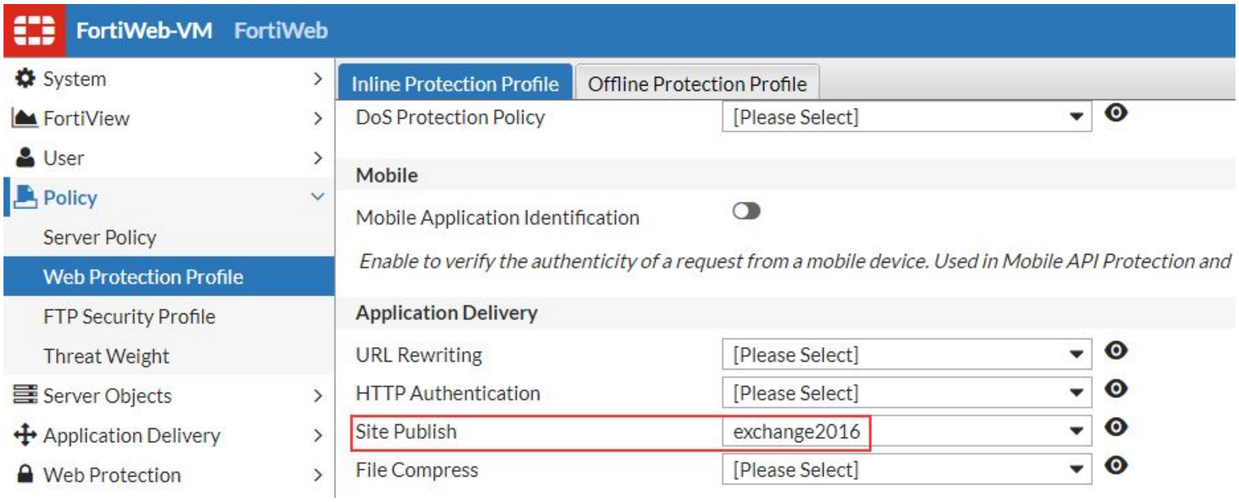
Session Management: on

Session Timeout: 1200 Seconds

Signatures: [Please Select]

HTTP Protocol Constraints: [Please Select]

X-Forwarded-For: owa



DoS Protection Policy [Please Select]

Mobile

Mobile Application Identification

Enable to verify the authenticity of a request from a mobile device. Used in Mobile API Protection and

Application Delivery

URL Rewriting [Please Select]

HTTP Authentication [Please Select]

Site Publish exchange2016

File Compress [Please Select]

Step 7 - Virtual server

Go to **Server Objects > Server > Virtual Server** and create a new entry that specifies the IP address that FortiWeb listens to for connections from the Internet.

Step 8 - Server pool

Go to **Server Objects > Server > Server Pool**. Create a new pool that is a single server pool (the default). Then, add a new pool member by specifying the IP address of the server that runs the published application.

Step 9 - Certificates

To upload certificates or generate certificate signing requests, go to **System > Certificates > Local**.

If you have an official, signed certificate, upload the certificate of the signing authority (CA). Depending on your authority, you also upload the Intermediate CAs.

The FortiWeb Administration Guide includes detailed information about uploading certificates. For example, see “How to offload or inspect HTTPS”.

Step 10 - Server policy

Go to **Policy > Server Policy > Server Policy** and create a new entry.

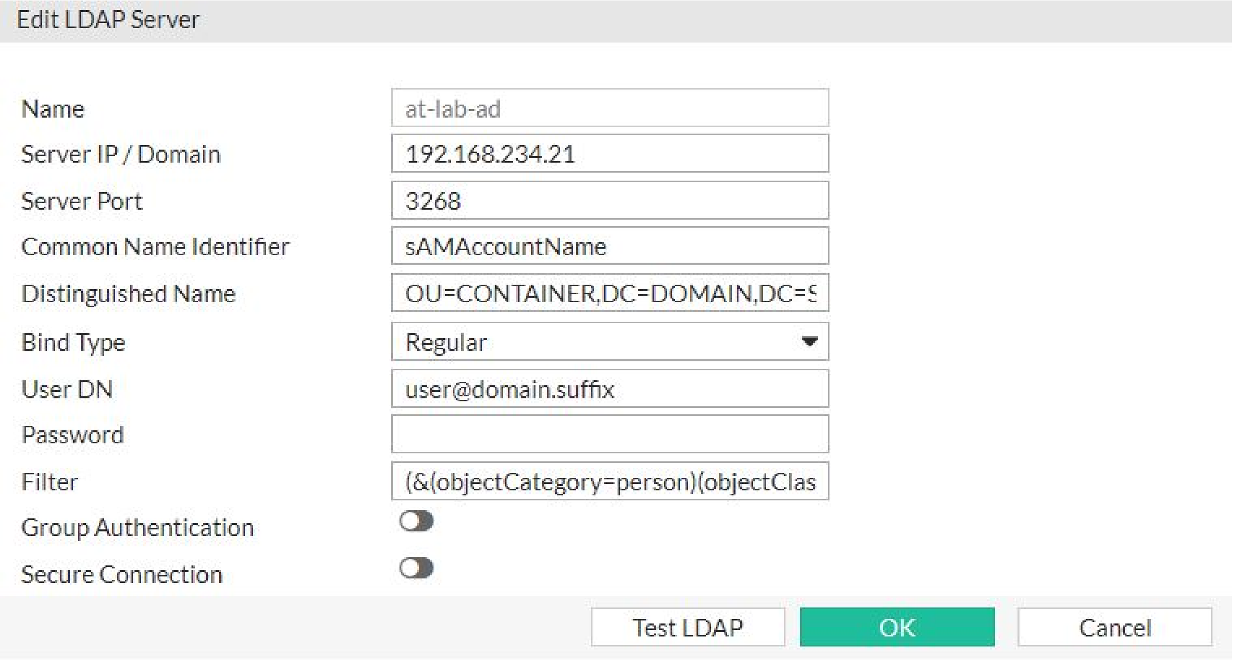
Select the configuration objects that you created earlier:

- Virtual server
- Server pool
- Certificate
- Web protection profile (inline)

FortiWeb is now listens on the specified IP address and intercepts connections destined for the URL defined in the site publishing rule (in this example, HTTPS://mail.fortiweb.lab/owa). The client must successfully complete authentication before it can send any further requests to the application server.

You can configure additional security features, but these are outside the scope of this guide.

LDAP query best practices and tips



Edit LDAP Server

Name	at-lab-ad
Server IP / Domain	192.168.234.21
Server Port	3268
Common Name Identifier	sAMAccountName
Distinguished Name	OU=CONTAINER,DC=DOMAIN,DC=S
Bind Type	Regular
User DN	user@domain.suffix
Password	
Filter	(&(objectCategory=person)(objectClas
Group Authentication	○
Secure Connection	○

In most cases, the AD attribute sAMAccountName is the container used for authentication and the appropriate value for **Common Name Identifier**.

However, in some environments, the userPrincipalName (email address) is the required or preferred container (for example, for networks that use a domain forest).

For **Server Port**:

- To search for AD objects more efficiently, specify 3268 instead of the default LDAP port 389.
- Fortinet recommends that you transmit user credentials securely by specifying 3269 (for more efficient searching) or the LDAP port 636.

Distinguished Name specifies the Base DN from which to start the LDAP query.

Filter allows you to improve the speed and efficiency of the queries. If **Common Name Identifier** is userPrincipalName, use that attribute in the Filter value.

If the query does not work when you specify the LDAP **Distinguished Name** for **User DN**, use the UPN (User Principle Name) instead.

In most cases, the UPN (Email Address) format produces the best results.

Search Filter – (&(objectCategory=person)(objectClass=user)(sAMAccountName=*))

For Windows 2003 SP2 and later, the filter can use the string identifier LDAP_MATCHING_RULE_IN_CHAIN (Matching rule OID 1.2.840.113556.1.4.1941). For example:

```
(memberOf:1.2.840.113556.1.4.1941=(CN=Users*))
```

The following example filter matches multiple groups:

```
(&(objectCategory=group)(|(cn=Test*)(cn=Admin*)))
```

The example filters that follow are based on the following example environment:

Directory: DC=domain,DC=com

+ Test_Users

——internet_group

————Matthew Vassallo (user)

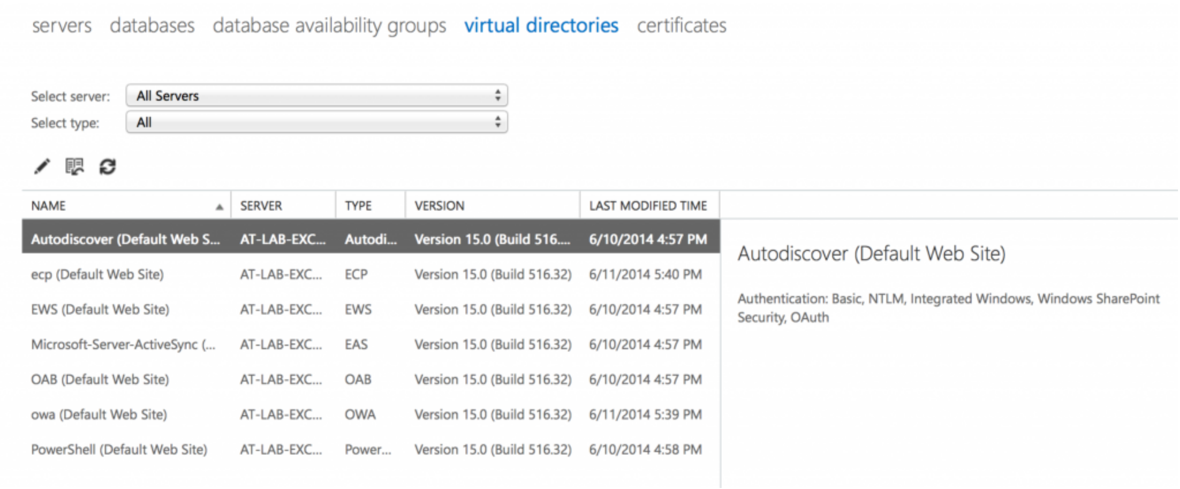
——normal_group

————Kenneth Grech (user)

Query multiple groups (method 1)	`(&(memberOf=CN=*,OU=Test_Users,DC=domain,DC=com)(sAMAccountName=*))`
Query multiple groups (method 2)	`(&(|(memberOf=CN=normal_group,OU=Test_Users,DC=domain,DC=com)(memberOf=CN=internet_group,OU=Test_Users,DC=domain,DC=com))(sAMAccountName=%s))`
Query all users by sAMAccount type	`(sAMAccountType=805306368)`
Exclude users in a specific group from the query	`(!(memberOf=cn=TestGroup,OU=Groups,DC=DOMAIN,DC=com))`
Query for non-disabled users in a group	`(&(objectCategory=person)(objectclass=user)(memberOf=CN=All Europe,OU=Global,dc=company,dc=com)(!(userAccountControl:1.2.840.113556.1.4.803:=2)) )`

Outlook Web App configuration

1. Log in to the Exchange Control Panel. The default URL is: HTTPS://<*server_name*>.<*domain_name*>.com/ecp
2. Go to **servers > virtual directories**.
3. Select the owa entry, and then click the pencil icon (edit).



Select server: All Servers

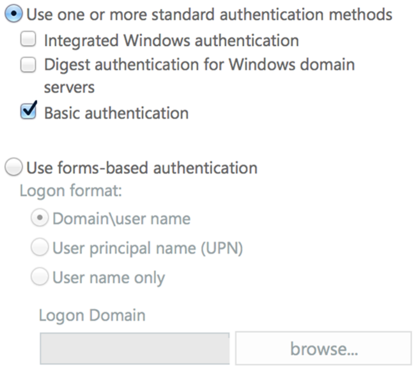
Select type: All

NAME	SERVER	TYPE	VERSION	LAST MODIFIED TIME
Autodiscover (Default Web S...	AT-LAB-EXC...	Autodi...	Version 15.0 (Build 516....	6/10/2014 4:57 PM
ecp (Default Web Site)	AT-LAB-EXC...	ECP	Version 15.0 (Build 516.32)	6/11/2014 5:40 PM
EWS (Default Web Site)	AT-LAB-EXC...	EWS	Version 15.0 (Build 516.32)	6/10/2014 4:57 PM
Microsoft-Server-ActiveSync (...	AT-LAB-EXC...	EAS	Version 15.0 (Build 516.32)	6/10/2014 4:57 PM
OAB (Default Web Site)	AT-LAB-EXC...	OAB	Version 15.0 (Build 516.32)	6/10/2014 4:57 PM
owa (Default Web Site)	AT-LAB-EXC...	OWA	Version 15.0 (Build 516.32)	6/11/2014 5:39 PM
PowerShell (Default Web Site)	AT-LAB-EXC...	Power...	Version 15.0 (Build 516.32)	6/10/2014 4:58 PM

Autodiscover (Default Web Site)

Authentication: Basic, NTLM, Integrated Windows, Windows SharePoint Security, OAuth

4. Select authentication, and then select **Use one or more standard authentication methods** and **Basic authentication.**



● Use one or more standard authentication methods

- □ Integrated Windows authentication
- □ Digest authentication for Windows domain servers
- ☑ Basic authentication

○ Use forms-based authentication

Logon format:

- ● Domain\user name
- ○ User principal name (UPN)
- ○ User name only

Logon Domain

5. Select **Save**.

Outlook Web Access administration prompts to make the same change to the /ecp virtual folder.

Select the ecp entry and make the same setting changes as you did for the owa entry.

Securing ActiveSync with FortiWeb

As part of its core publishing functionality FortiWeb allows publishing ActiveSync as well. This means any access to the application over ActiveSync is proxied through FortiWeb which secures the connection, enforcing multiple security rules including scanning email attachments with Antivirus and FortiSandbox. FortiWeb can also be used for its publishing functionality for SSO and authentication delegation.

This guide configuration discusses two use cases – when the requirement is specifically for ActiveSync antivirus and sandboxing scanning or when SSO and authentication delegation is also required.

Use Case 1: Scanning ActiveSync Email Attachments

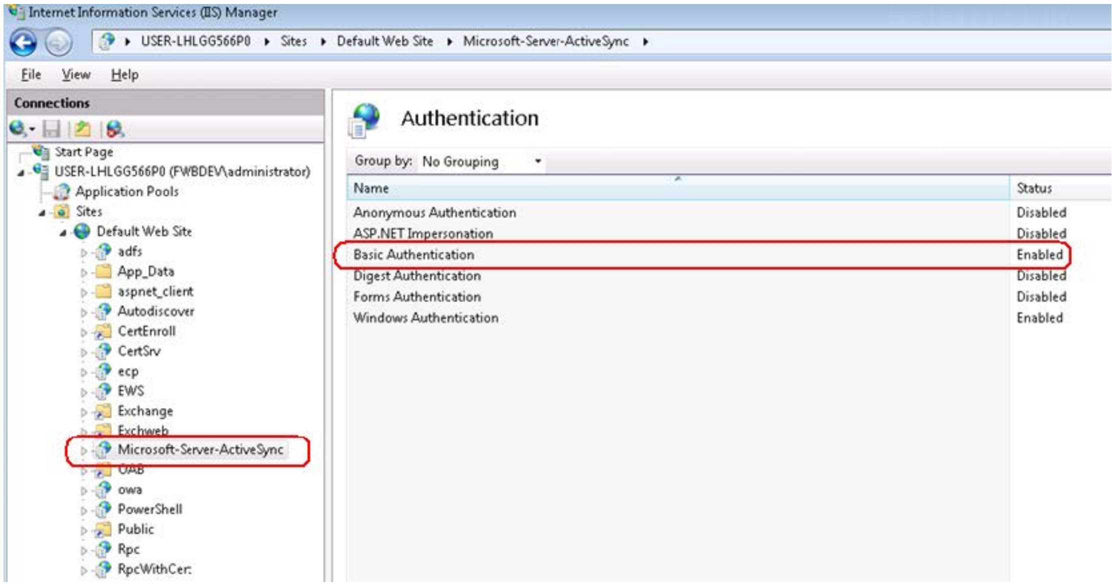
As ActiveSync delivers emails to devices, organizations need to make sure email attachments are scanned to ensure they do not carry any malware.

FortiWeb provides the ability to extract attachments from the mobile to mail server sessions, scan them using its embedded Antivirus engine, and send them to FortiSandbox for additional scanning.

First, make sure your web server supports ActiveSync and configured correctly. Here is an example for Microsoft Exchange:

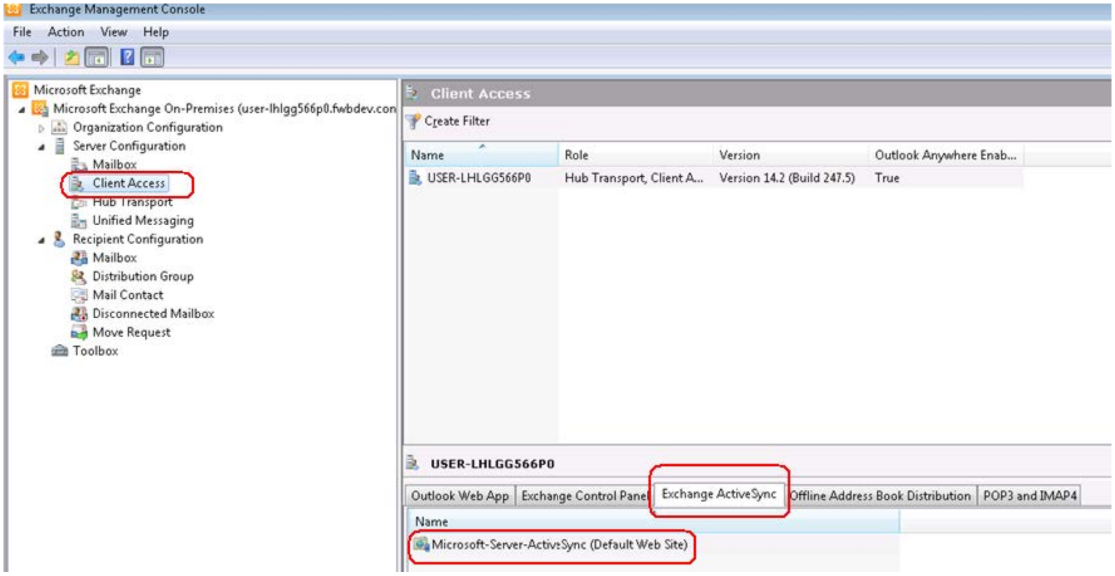
Exchange 2010

1. Open IIS Manager.
   a. Go to **Microsoft-Server-ActiveSync**.
   b. Make sure **Basic Authentication** is enabled.



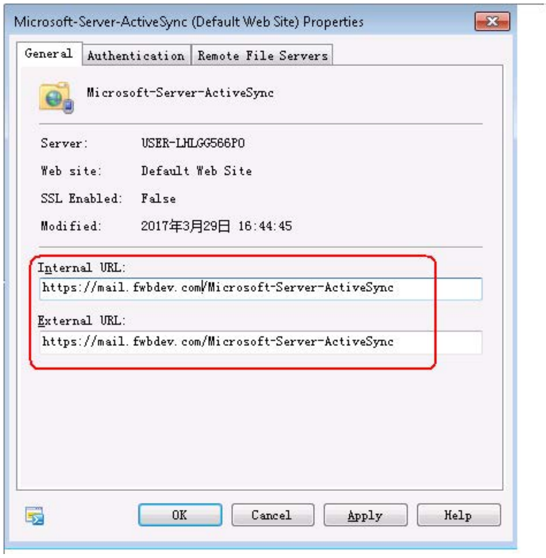
Name	Status
Anonymous Authentication	Disabled
ASP.NET Impersonation	Disabled
Basic Authentication	Enabled
Digest Authentication	Disabled
Forms Authentication	Disabled
Windows Authentication	Enabled

2. Open Exchange Management Console.
   a. Go to **Client Access**.
   b. Switch to **Exchange ActiveSync** on the bottom panel.



Name	Role	Version	Outlook Anywhere Enab...
USER-LHLGG566P0	Hub Transport, Client A...	Version 14.2 (Build 247.5)	True

   c. Double click **Microsoft-Server-ActiveSync (Default Web Site)**.
   d. Make sure:
      i. URLs are configured correctly.
      ii. Basic authentication is enabled.
      iii. Client certificate is ignored.


Microsoft-Server-ActiveSync (Default Web Site) Properties

General | Authentication | Remote File Servers

Microsoft-Server-ActiveSync

Server: USER-LHLGG566P0

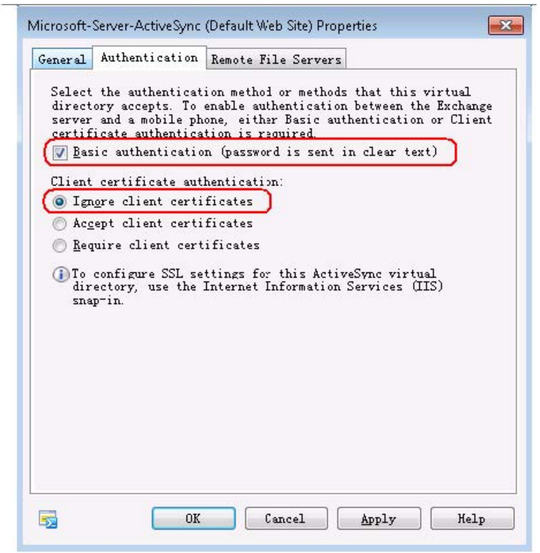
Web site: Default Web Site

SSL Enabled: False

Modified: 2017年3月29日 16:44:45

Internal URL:
https://mail.fwbdev.com/Microsoft-Server-ActiveSync

External URL:
https://mail.fwbdev.com/Microsoft-Server-ActiveSync


Microsoft-Server-ActiveSync (Default Web Site) Properties

General | Authentication | Remote File Servers

Select the authentication method or methods that this virtual directory accepts. To enable authentication between the Exchange server and a mobile phone, either Basic authentication or Client certificate authentication is required.

☑ Basic authentication (password is sent in clear text)

Client certificate authentication:

● Ignore client certificates

○ Accept client certificates

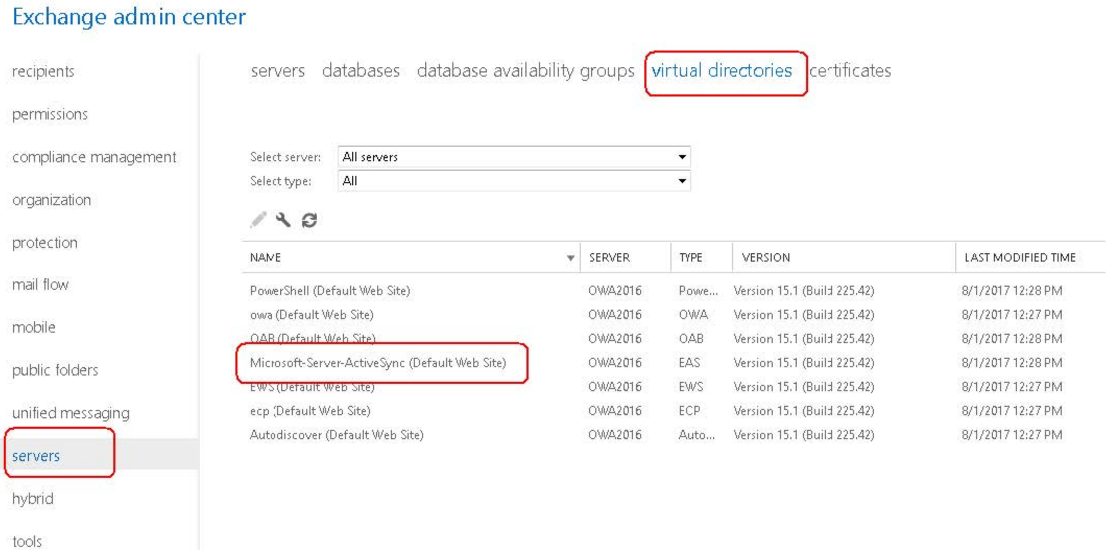
○ Require client certificates

To configure SSL settings for this ActiveSync virtual directory, use the Internet Information Services (IIS) snap-in.

Exchange 2013/2016/2019

1. Open your browser, and access Exchange admin center HTTPS://<exchange.server.com>/ecp.
2. Log in with administrator credentials.

3. Go to **Microsoft-Server-ActiveSync (Default Web Site)**.



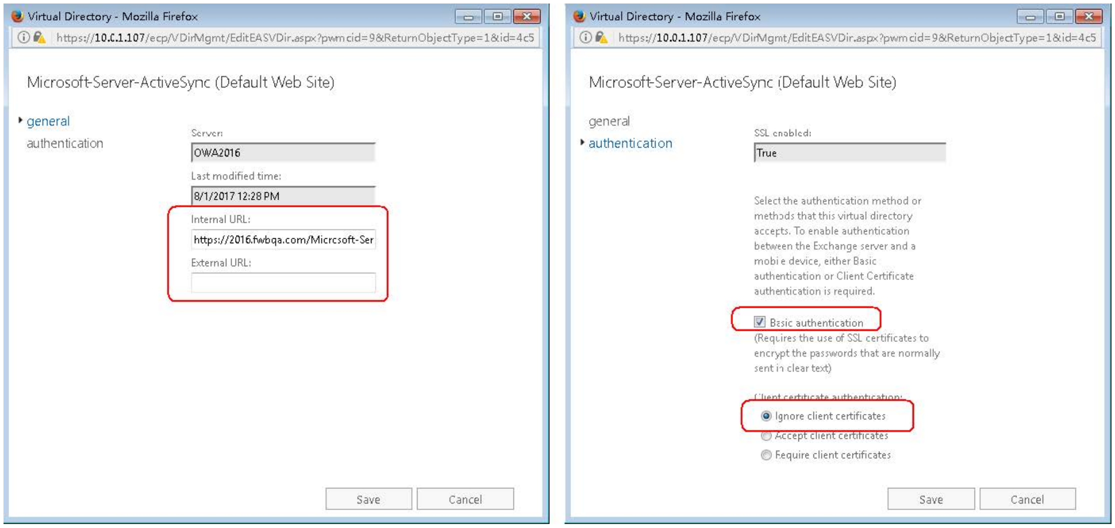
Exchange admin center

Select server: All servers

Select type: All

NAME	SERVER	TYPE	VERSION	LAST MODIFIED TIME
PowerShell (Default Web Site)	OWA2016	Powe...	Version 15.1 (Build 225.42)	8/1/2017 12:28 PM
owa (Default Web Site)	OWA2016	OWA	Version 15.1 (Build 225.42)	8/1/2017 12:27 PM
OAB (Default Web Site)	OWA2016	OAB	Version 15.1 (Build 225.42)	8/1/2017 12:28 PM
Microsoft-Server-ActiveSync (Default Web Site)	OWA2016	EAS	Version 15.1 (Build 225.42)	8/1/2017 12:28 PM
EWS (Default Web Site)	OWA2016	EWS	Version 15.1 (Build 225.42)	8/1/2017 12:27 PM
ecp (Default Web Site)	OWA2016	ECP	Version 15.1 (Build 225.42)	8/1/2017 12:27 PM
Autodiscover (Default Web Site)	OWA2016	Auto...	Version 15.1 (Build 225.42)	8/1/2017 12:27 PM

4. Make sure the configurations are the similar to those of Exchange 2010 above.



Virtual Directory - Mozilla Firefox

https://10.0.1.107/ecp/VDirMgmt/EditEASVDir.aspx?pwmcid=9&ReturnObjectType=1&id=4c5

Microsoft-Server-ActiveSync (Default Web Site)

Server: OWA2016

Last modified time: 8/1/2017 12:28 PM

Internal URL: https://2016.fwbqa.com/Microsoft-Ser

External URL:

Virtual Directory - Mozilla Firefox

https://10.0.1.107/ecp/VDirMgmt/EditEASVDir.aspx?pwmcid=9&ReturnObjectType=1&id=4c5

Microsoft-Server-ActiveSync (Default Web Site)

SSL enabled: True

Select the authentication method or methods that this virtual directory accepts. To enable authentication between the Exchange server and a mobile device, either Basic authentication or Client Certificate authentication is required.

☑ Basic authentication
(Requires the use of SSL certificates to encrypt the passwords that are normally sent in clear text)

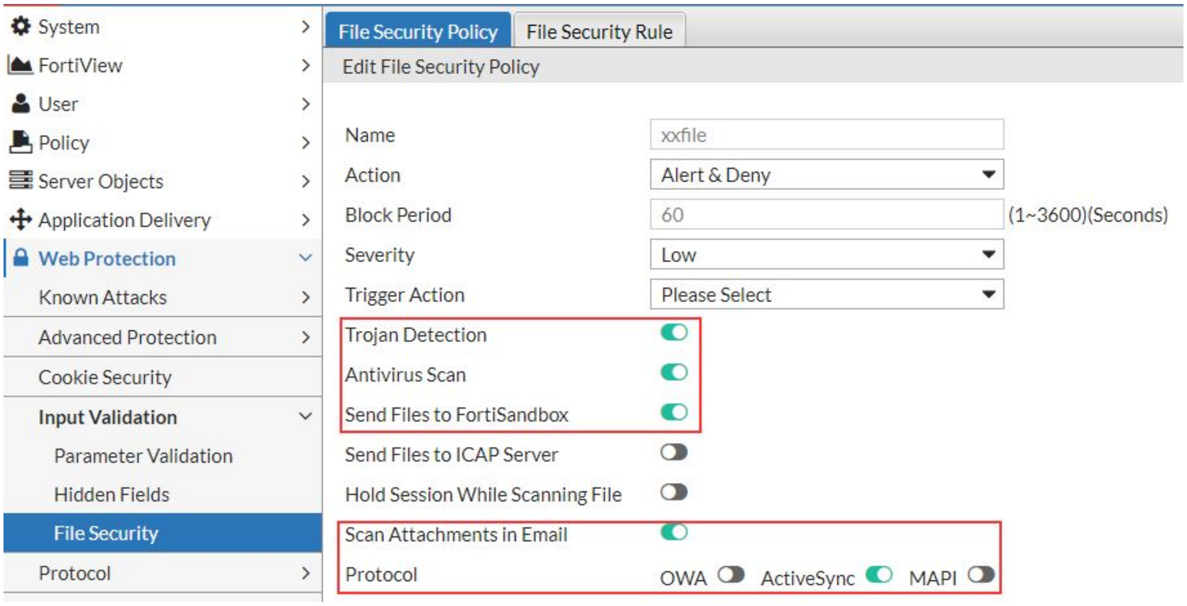
Client certificate authentication:

● Ignore client certificates
○ Accept client certificates
○ Require client certificates

FortiWeb Configuration

First, configure the File Security policy.

1. Enable **Trojan Detection** for additional security. Make sure you enable Antivirus Scan and FortiSandbox.
2. Enable **Scan attachments in Email** and choose **ActiveSync** in Protocol (possibly OWA too if you're using FortiWeb to publish Exchange OWA as well).



Name: xxfile

Action: Alert & Deny

Block Period: 60 (1~3600)(Seconds)

Severity: Low

Trigger Action: Please Select

Trojan Detection: ●

Antivirus Scan: ●

Send Files to FortiSandbox: ●

Send Files to ICAP Server: ○

Hold Session While Scanning File: ○

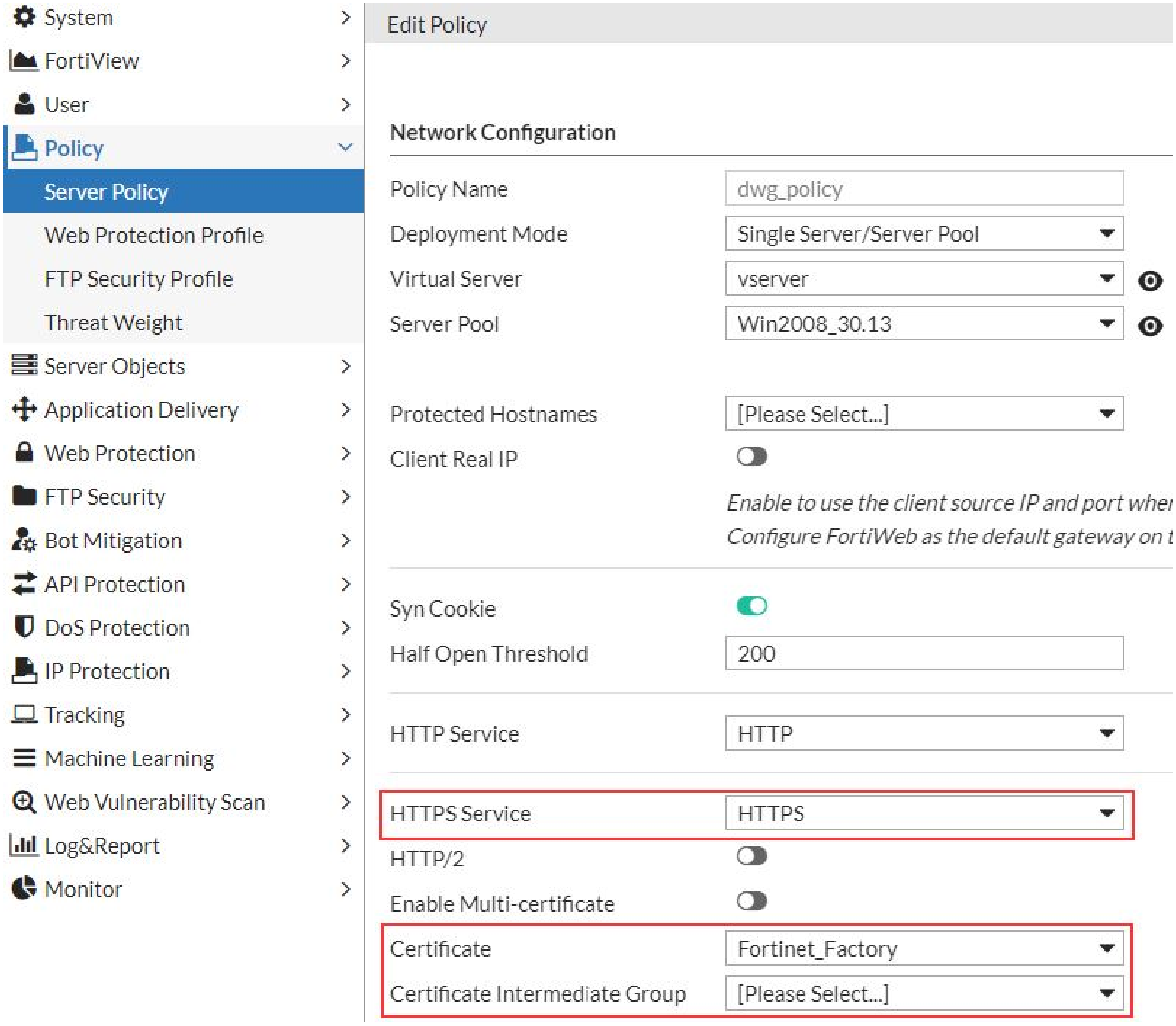
Scan Attachments in Email: ●

Protocol: OWA ○ ActiveSync ● MAPI ○

Now, attach the File Security policy to the Web Protection Profile. For more information on File Security, see **Limiting file uploads** in *FortiWeb Administration Guide*.

Next, create a new server policy. ActiveSync is usually used with SSL. So the front end and backend should be configured with HTTPS.

1. Configure the front end (towards the client) options.

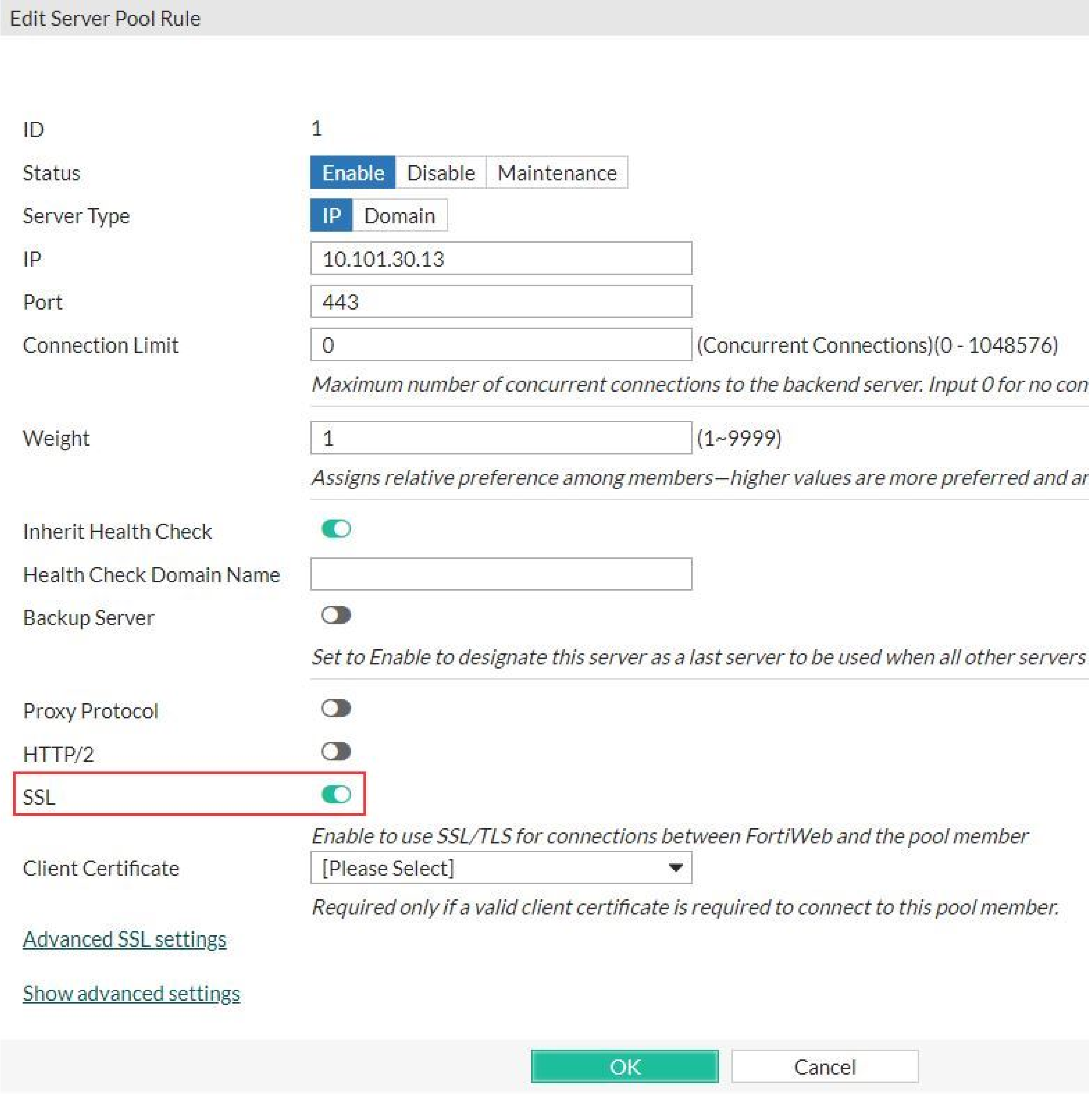


Edit Policy

Network Configuration

Policy Name	dwg_policy
Deployment Mode	Single Server/Server Pool
Virtual Server	vserver
Server Pool	Win2008_30.13
Protected Hostnames	[Please Select...]
Client Real IP	○
	Enable to use the client source IP and port whe *Configure FortiWeb as the default gateway on t*
Syn Cookie	●
Half Open Threshold	200
HTTP Service	HTTP
HTTPS Service	HTTPS
HTTP/2	○
Enable Multi-certificate	○
Certificate	Fortinet_Factory
Certificate Intermediate Group	[Please Select...]

2. Configure the backend (towards the server pool) options.



Edit Server Pool Rule

ID	1
Status	[✓ Enable] Disable Maintenance
Server Type	[✓ IP] Domain
IP	10.101.30.13
Port	443
Connection Limit	0 (Concurrent Connections)(0 - 1048576) *Maximum number of concurrent connections to the backend server. Input 0 for no con*
Weight	1 (1~9999) *Assigns relative preference among members—higher values are more preferred and ar*
Inherit Health Check	●
Health Check Domain Name	
Backup Server	○ *Set to Enable to designate this server as a last server to be used when all other servers*
Proxy Protocol	○
HTTP/2	○
SSL	● *Enable to use SSL/TLS for connections between FortiWeb and the pool member*
Client Certificate	[Please Select] *Required only if a valid client certificate is required to connect to this pool member.*

Advanced SSL settings

Show advanced settings

Now, open the mail application on your phone and test.

Use Case 2: Managing Authentication and SSO to ActiveSync

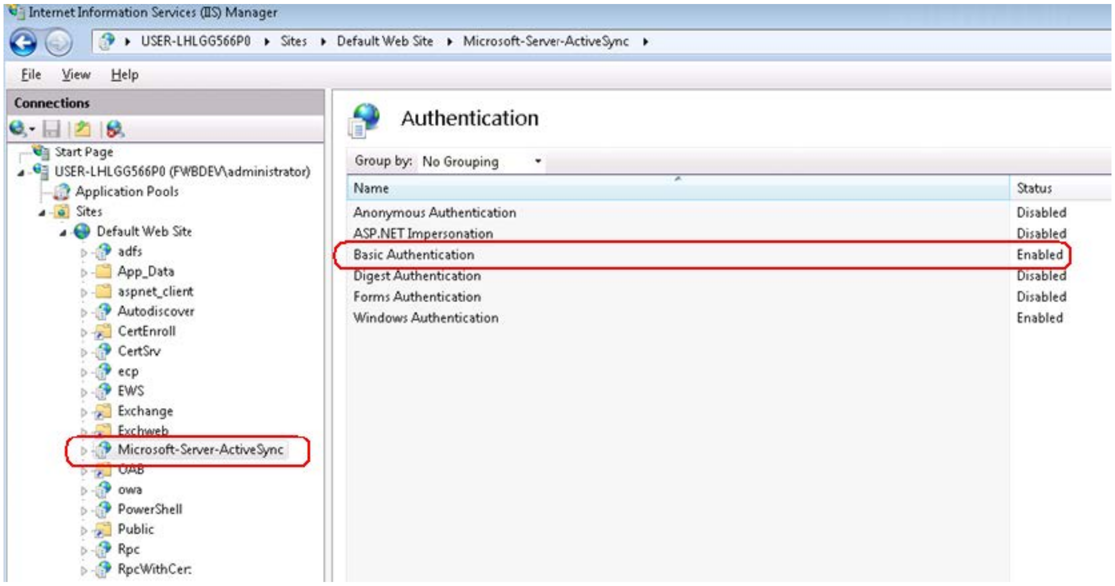
Many organizations tightly control how Microsoft applications are used by publishing the application through TMG, Microsoft's Threat Management Gateway that allows secure access to these applications. With TMG EOL'd and sunsetting customers can use FortiWeb as a replacement.

Customers that want to control the authentication and SSO for ActiveSync, usually as part of publishing other components of the Exchange server should use FortiWeb's Site Publish feature.

First, make sure your Microsoft Exchange is configured correctly:

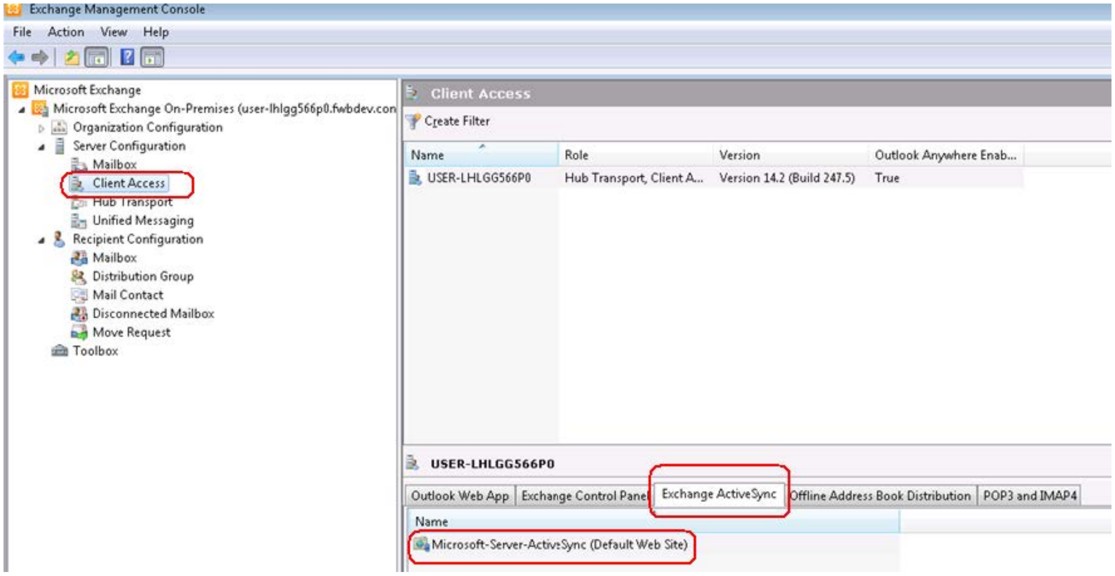
Exchange 2010

1. Open IIS Manager.
   a. Go to **Microsoft-Server-ActiveSync**.
   b. Make sure **Basic Authentication** is enabled.



Name	Status
Anonymous Authentication	Disabled
ASP.NET Impersonation	Disabled
Basic Authentication	Enabled
Digest Authentication	Disabled
Forms Authentication	Disabled
Windows Authentication	Enabled

2. Open Exchange Management Console.
   a. Go to **Client Access**.
   b. Switch to **Exchange ActiveSync** on the bottom panel.

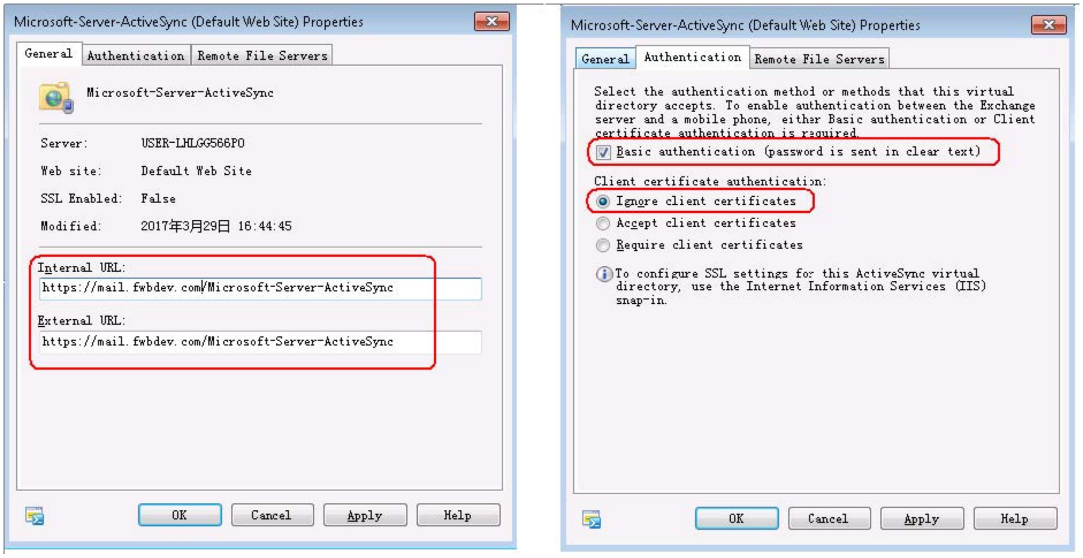


Name	Role	Version	Outlook Anywhere Enab...
USER-LHLGG566P0	Hub Transport, Client A...	Version 14.2 (Build 247.5)	True

Name
Microsoft-Server-ActiveSync (Default Web Site)

   c. Double click **Microsoft-Server-ActiveSync (Default Web Site)**.
   d. Make sure:
      i. URLs are configured correctly.
      ii. Basic authentication is enabled.

iii. Client certificate is ignored.



Microsoft-Server-ActiveSync (Default Web Site) Properties

Microsoft-Server-ActiveSync

Server: USER-LHLGG566P0

Web site: Default Web Site

SSL Enabled: False

Modified: 2017年3月29日 16:44:45

Internal URL:
https://mail.fwbdev.com/Microsoft-Server-ActiveSync

External URL:
https://mail.fwbdev.com/Microsoft-Server-ActiveSync

Microsoft-Server-ActiveSync (Default Web Site) Properties

Select the authentication method or methods that this virtual directory accepts. To enable authentication between the Exchange server and a mobile phone, either Basic authentication or Client certificate authentication is required.

☑ Basic authentication (password is sent in clear text)

Client certificate authentication:

● Ignore client certificates

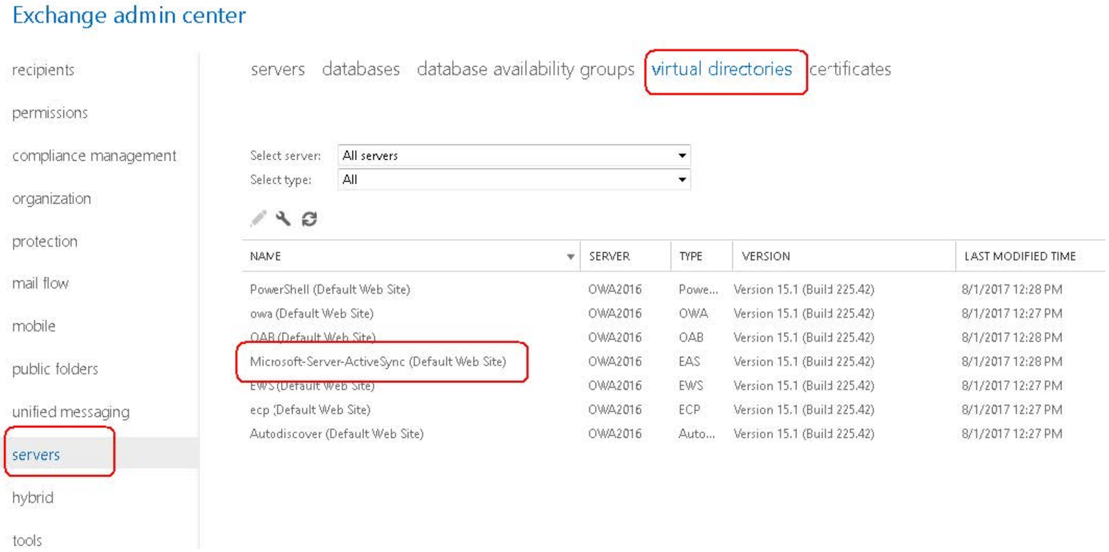
○ Accept client certificates

○ Require client certificates

To configure SSL settings for this ActiveSync virtual directory, use the Internet Information Services (IIS) snap-in.

Exchange 2013/2016/2019

1. Open your browser, and access Exchange admin center HTTPS://<exchange.server.com>/ecp.
2. Log in with administrator credentials.
3. Go to **Microsoft-Server-ActiveSync (Default Web Site)**.



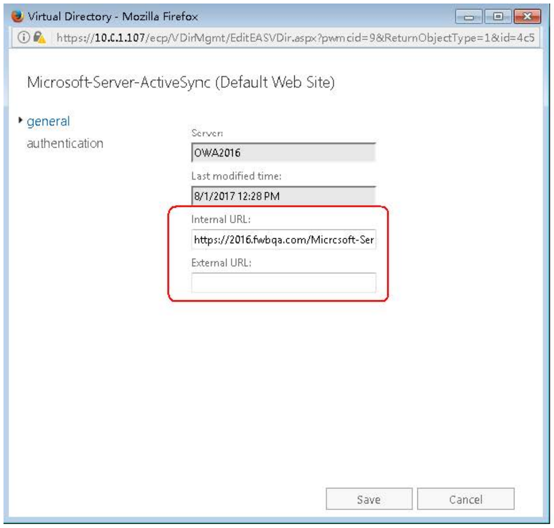
Exchange admin center

Select server: All servers

Select type: All

NAME	SERVER	TYPE	VERSION	LAST MODIFIED TIME
PowerShell (Default Web Site)	OWA2016	Powe...	Version 15.1 (Build 225.42)	8/1/2017 12:28 PM
owa (Default Web Site)	OWA2016	OWA	Version 15.1 (Build 225.42)	8/1/2017 12:27 PM
OAB (Default Web Site)	OWA2016	OAB	Version 15.1 (Build 225.42)	8/1/2017 12:28 PM
Microsoft-Server-ActiveSync (Default Web Site)	OWA2016	EAS	Version 15.1 (Build 225.42)	8/1/2017 12:28 PM
EWS (Default Web Site)	OWA2016	EWS	Version 15.1 (Build 225.42)	8/1/2017 12:27 PM
ecp (Default Web Site)	OWA2016	ECP	Version 15.1 (Build 225.42)	8/1/2017 12:27 PM
Autodiscover (Default Web Site)	OWA2016	Auto...	Version 15.1 (Build 225.42)	8/1/2017 12:27 PM

4. Make sure the configurations are the similar to those of Exchange 2010 above.



https://10.C.1.107/ecp/VDirMgmt/EditEASVDir.aspx?pwmcid=9&ReturnObjectType=1&id=4c5

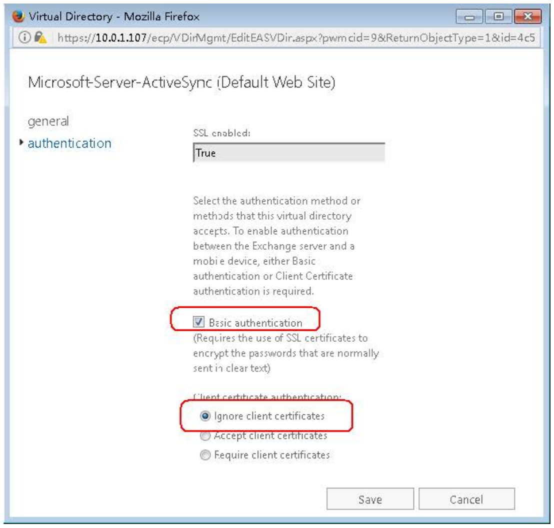
Microsoft-Server-ActiveSync (Default Web Site)

Server: OWA2016

Last modified time: 8/1/2017 12:28 PM

Internal URL: https://2016.fwbqa.com/Micrcsoft-Ser

External URL:



https://10.0.1.107/ecp/VDirMgmt/EditEASVDir.aspx?pwmcid=9&ReturnObjectType=1&id=4c5

Microsoft-Server-ActiveSync (Default Web Site)

SSL enabled: True

Select the authentication method or methods that this virtual directory accepts. To enable authentication between the Exchange server and a mobile device, either Basic authentication or Client Certificate authentication is required.

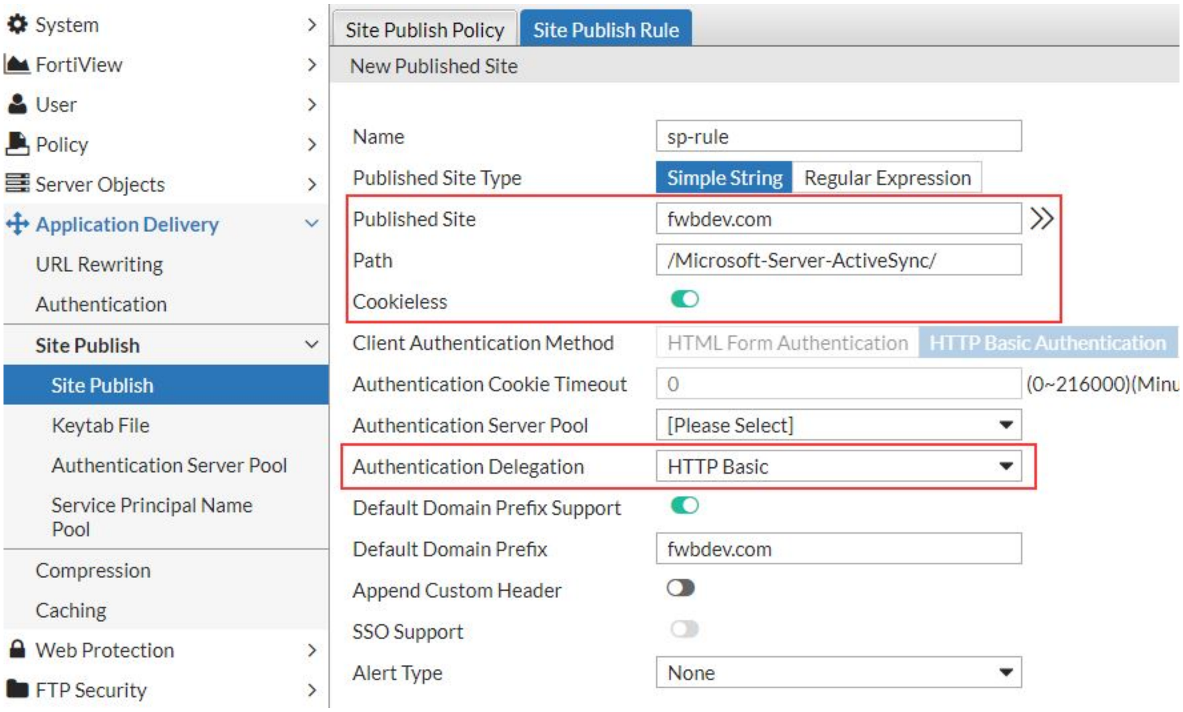
☑ Basic authentication
(Requires the use of SSL certificates to encrypt the passwords that are normally sent in clear text)

Client certificate authentication:
● Ignore client certificates
○ Accept client certificates
○ Require client certificates

FortiWeb Configuration

First, configure a Site Publish policy:

- **Published Site** should be the domain name of the URL above.
- **Path** should be consistent with the URL above.
- **Cookieless** should be enabled so that clients can access to Microsoft Exchange servers through Exchange ActiveSync.
- **Authentication Delegation** only supports HTTP Basic.



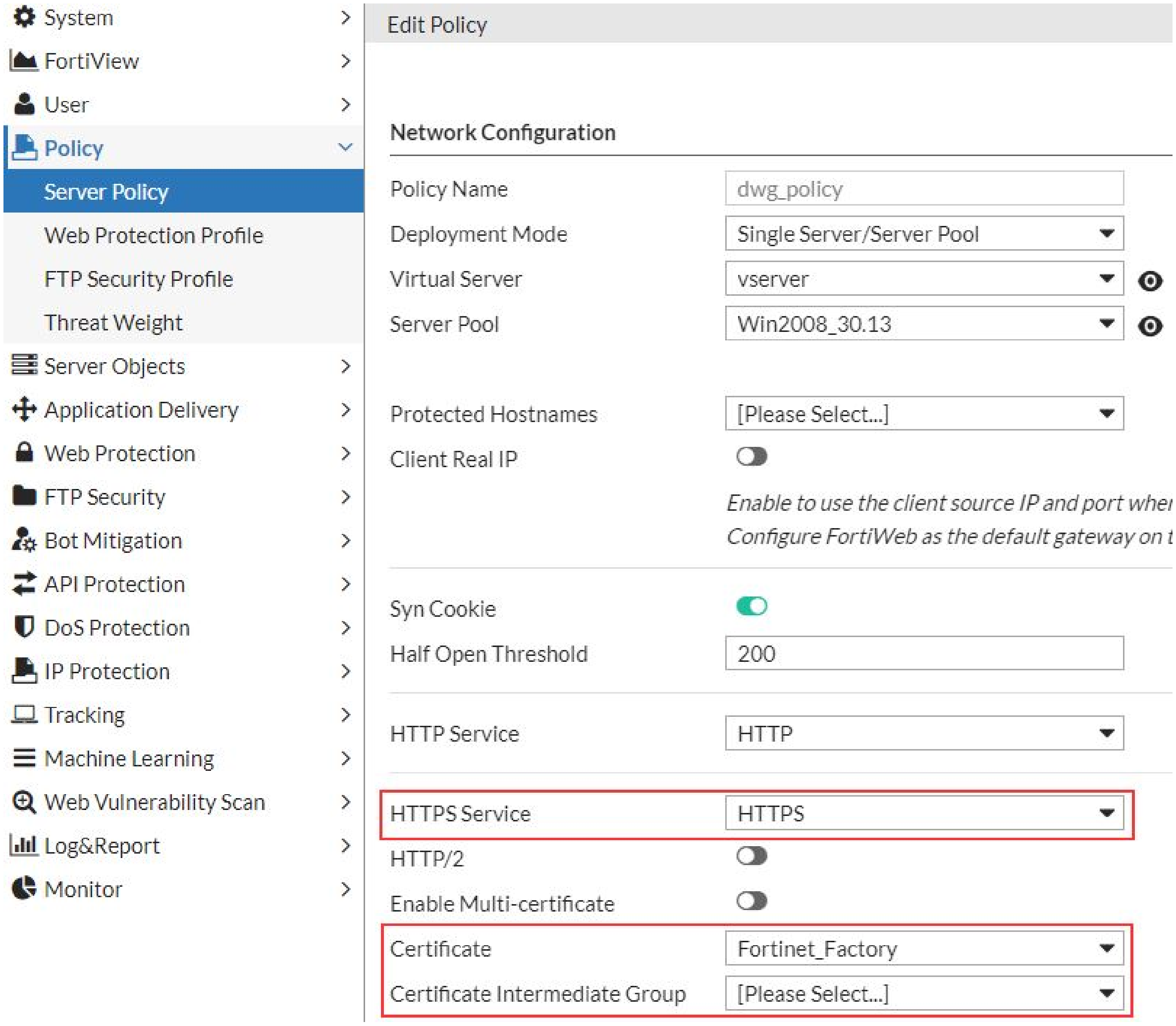
New Published Site

Name	sp-rule
Published Site Type	Simple String / Regular Expression
Published Site	fwbdev.com
Path	/Microsoft-Server-ActiveSync/
Cookieless	●
Client Authentication Method	HTML Form Authentication / HTTP Basic Authentication
Authentication Cookie Timeout	0 (0~216000)(Minu
Authentication Server Pool	[Please Select]
Authentication Delegation	HTTP Basic
Default Domain Prefix Support	●
Default Domain Prefix	fwbdev.com
Append Custom Header	○
SSO Support	○
Alert Type	None

Now, attach the Site Publish policy to the Web Protection Profile.

Next, create a new server policy. ActiveSync is usually used with SSL, so the front end and backend should be configured with HTTPS.

1. Configure the front end (towards the client) options.



Edit Policy

Network Configuration

Policy Name: dwg_policy

Deployment Mode: Single Server/Server Pool

Virtual Server: vserver

Server Pool: Win2008_30.13

Protected Hostnames: [Please Select...]

Client Real IP: ○

Enable to use the client source IP and port whe
Configure FortiWeb as the default gateway on t

Syn Cookie: ●

Half Open Threshold: 200

HTTP Service: HTTP

HTTPS Service: HTTPS

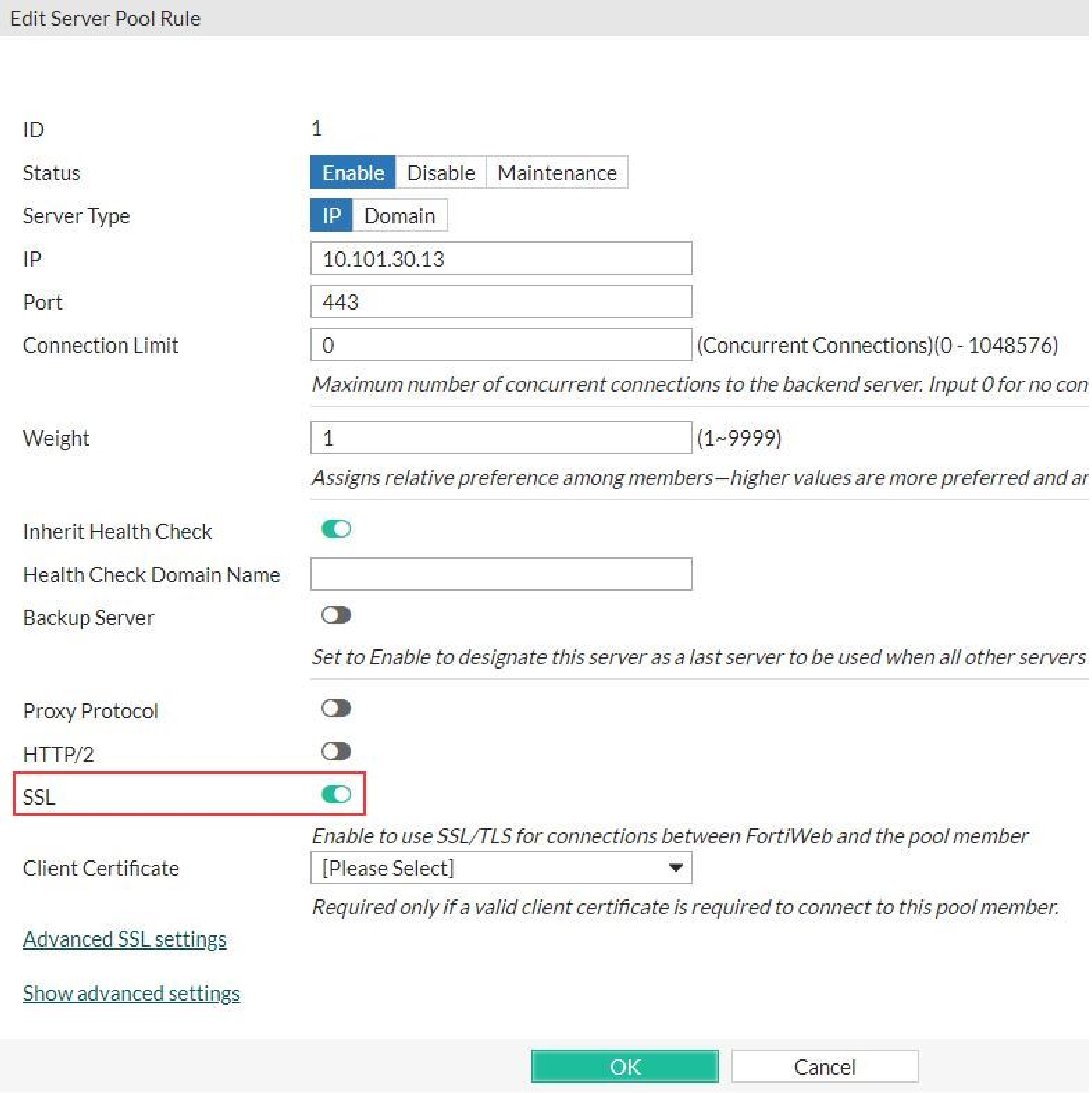
HTTP/2: ○

Enable Multi-certificate: ○

Certificate: Fortinet_Factory

Certificate Intermediate Group: [Please Select...]

2. Configure the backend (towards the server pool) options.



Edit Server Pool Rule

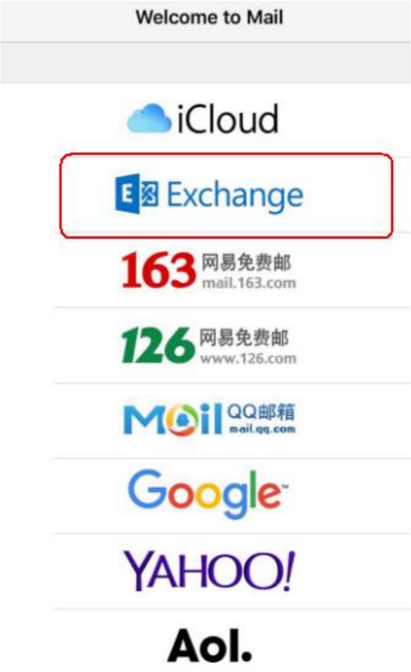
ID	1
Status	[✓ Enable] Disable Maintenance
Server Type	[✓ IP] Domain
IP	10.101.30.13
Port	443
Connection Limit	0 (Concurrent Connections)(0 - 1048576) *Maximum number of concurrent connections to the backend server. Input 0 for no con*
Weight	1 (1~9999) *Assigns relative preference among members—higher values are more preferred and ar*
Inherit Health Check	●
Health Check Domain Name	
Backup Server	○ *Set to Enable to designate this server as a last server to be used when all other servers*
Proxy Protocol	○
HTTP/2	○
SSL	● *Enable to use SSL/TLS for connections between FortiWeb and the pool member*
Client Certificate	[Please Select] *Required only if a valid client certificate is required to connect to this pool member.*

Advanced SSL settings

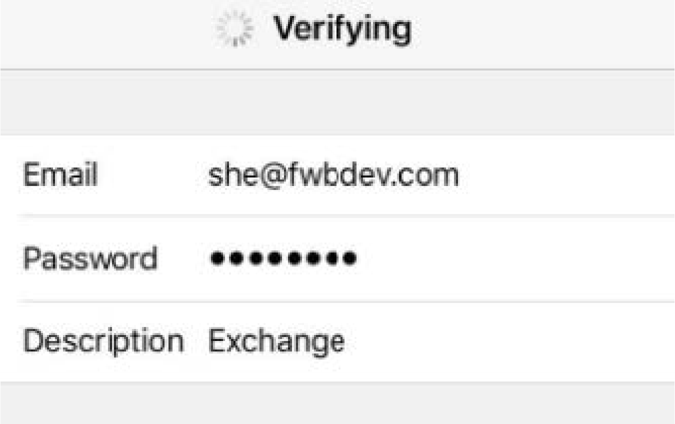
Show advanced settings

Now, open the mail application on your phone and test. The following uses iPhone as an example

1. Open the Mail app.
2. Choose Exchange.



3. Input your credentials.



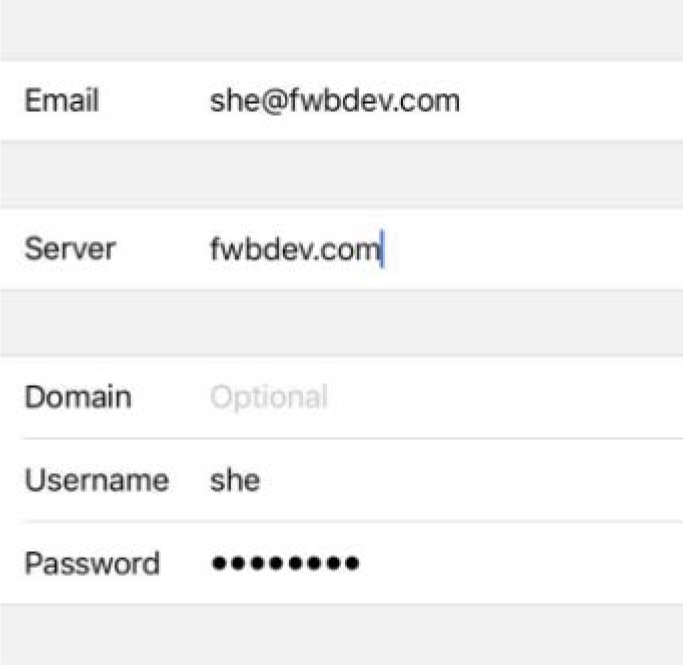
Verifying

Email she@fwbdev.com

Password ●●●●●●●●●

Description Exchange

4. Sometimes, a re-check form would pop up. Input your info again.



Email she@fwbdev.com

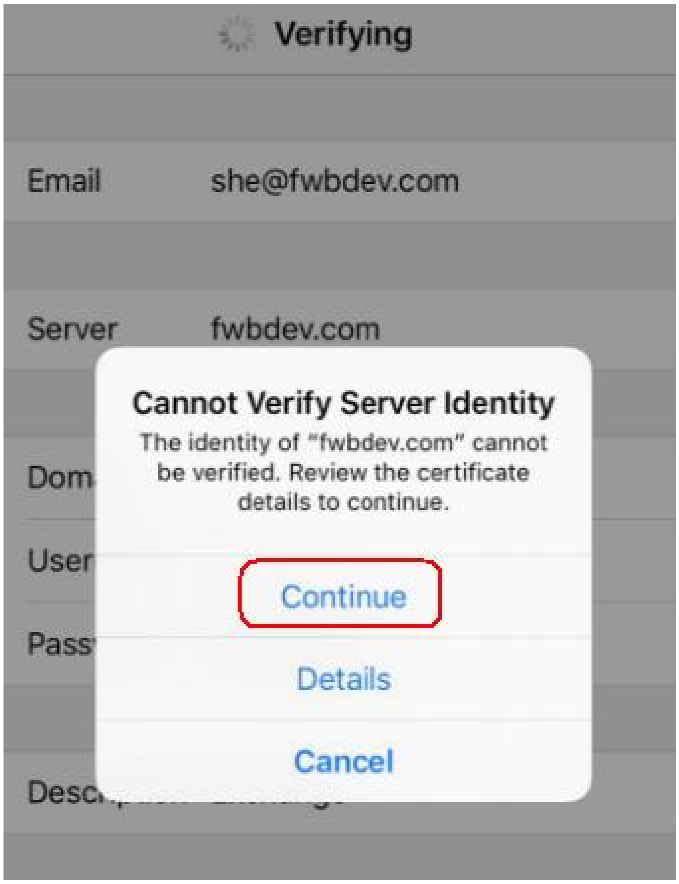
Server fwbdev.com

Domain Optional

Username she

Password ●●●●●●●●●

5. If the FortiWeb certificate is not trusted, there will be a warning page. Press **Continue**.



Verifying

Email she@fwbdev.com

Server fwbdev.com

Cannot Verify Server Identity

The identity of "fwbdev.com" cannot be verified. Review the certificate details to continue.

6. Access now is secured by FortiWeb.