

Quick Guide

AIWAF-VE

v5.0.2

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Overview of AIWAF-VE menu

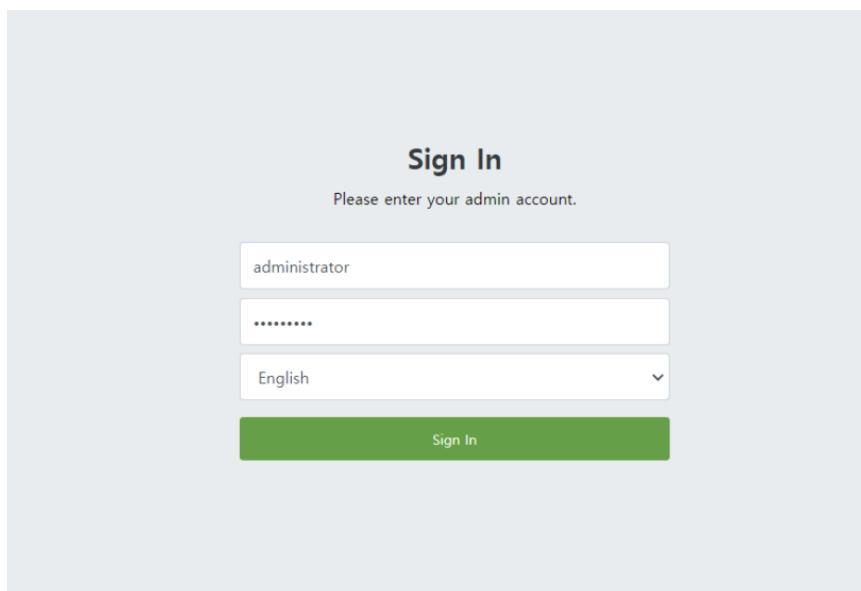
Menu	Description
Monitoring	Provides a centralized visual representation of web traffic, system information, detection counts, detection severity, and the detection log of your web server. It is a user interface that allows users to monitor and analyze real-time or historical data in a concise and easily understandable format.
Log analysis	Provides a platform for analyzing and interpreting detection log, audit log, and web server status log data. This menu is designed to assist users in gaining insights from large volumes of log entries, uncovering meaningful patterns, trends, anomalies, and security-related information.
Report	Generating, viewing, and managing various types of reports (detection log, web traffic, web accelerator, system, and policy settings) that summarize and present information from the registered domain. This menu provides a concise and organized overview of data, metrics, trends, and analysis results.
Policy settings	Configuring and managing the protected web server along with the security policies that govern the behavior of the AIWAF-VE. This menu empowers administrators to configure and fine-tune security policies, determining how the AIWAF-VE detects, prevents, and responds to potential threats targeting web servers.
Configurations	Offers various configurations for AIWAF-VE, including administrator, system, NIC, product settings, log management, and service control.

Configuration of AIWAF-VE

1. Deploy the AIWAF-VE Image:

- Upload the downloaded AIWAF-VE image file (ova, vhd, vmdk) to your preferred environment and boot it up

2. Access the Web User Interface (UI):



- Open your internet browser and access by entering the assigned IP from the AWS instance as follows: '[https://\[AIWAF-VE IP\]:222](https://[AIWAF-VE IP]:222)'. (e.g., <https://192.168.10.110:222>)
- Please change the language before sign in. (Supported languages: English, Japanese, Korean)
- Login with the provided ID and Password (ID: administrator, PW : [_appleader])

Configuration

APPLICATION INSIGHT WAF

Monitoring Log analysis Report Policy settings Configurations

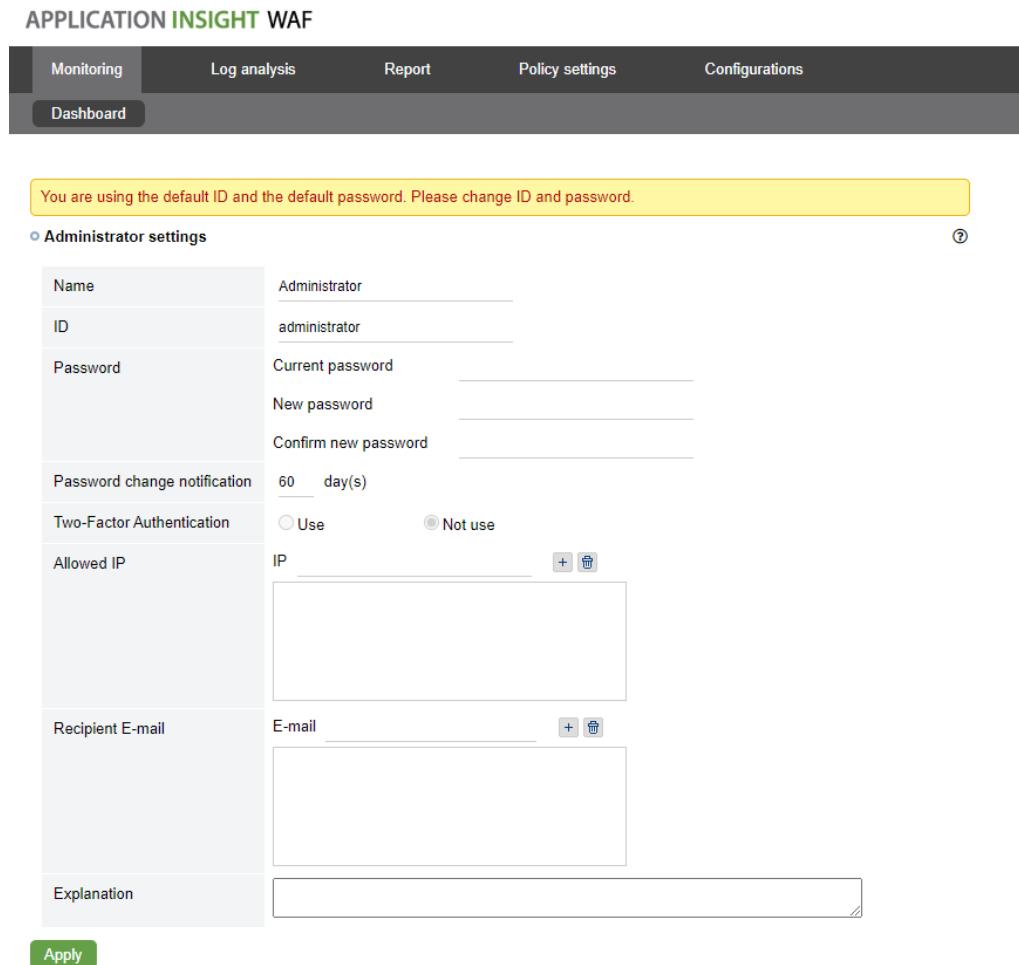
Dashboard

You are using the default ID and the default password. Please change ID and password.

Administrator settings

Name	Administrator
ID	administrator
Password	Current password New password Confirm new password
Password change notification	60 day(s)
Two-Factor Authentication	<input type="radio"/> Use <input checked="" type="radio"/> Not use
Allowed IP	IP <input type="button" value="+"/> <input type="button" value="Delete"/>
Recipient E-mail	E-mail <input type="button" value="+"/> <input type="button" value="Delete"/>
Explanation	<input type="text"/>

Apply



! NOTE

- After your first login, please change the **default ID** and **Password** and specify **Allowed access IPs** for the security.
- Password change menu location : Configurations → Administrator settings → click 'Change' button.

⚙️ Configure Static IP (Optional):

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Monitoring Log analysis Report Policy settings Configurations

Administrator settings System settings NIC settings Product settings Log management Service control

IP settings

Type: DHCP STATIC

IP Version: IPv4 IPv6

IP: _____

mgmt IP: _____

Netmask: _____

Gateway: _____

DNS 1: _____

DNS 2: _____

Apply

- If you are using a static IP, follow these steps: Go to **Configurations** → **System settings** → **IP settings**. Select 'STATIC,' enter the IP settings and gateway value, click '+', and then click 'Apply' to complete the process.

3. Register Your License:

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Monitoring Log analysis Report Policy settings Configurations

Administrator settings System settings NIC settings Product settings Log management Service control

Click menu title to move to the menu

Language settings

License management

HA settings

Configurations synchronization settings

Program/Configuration backup

National IP DB settings

Whois settings

Open API settings

Online update License update

Use/Not use: Use Not use

Activation Code: 8characters - 4charac - 4charac - 4charac - 12characters

Server address: IP: _____ Domain: _____ Port: 443

HA settings

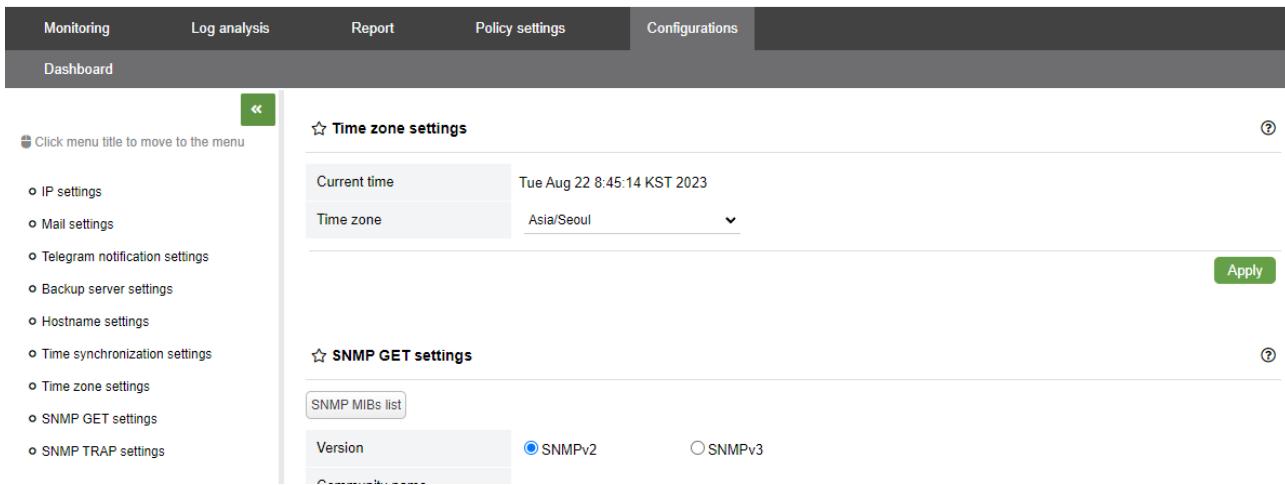
HA mode: Not use Active-Standby

Apply

- Access: **Configurations** → **Product settings** → **License management** → **Online update**.
- Choose your online update preference (enable/disable).
- Enter the Activation Code and click 'Check' to validate.
- Click 'Apply' to complete license registration.

4. Time Zone and Language Settings:

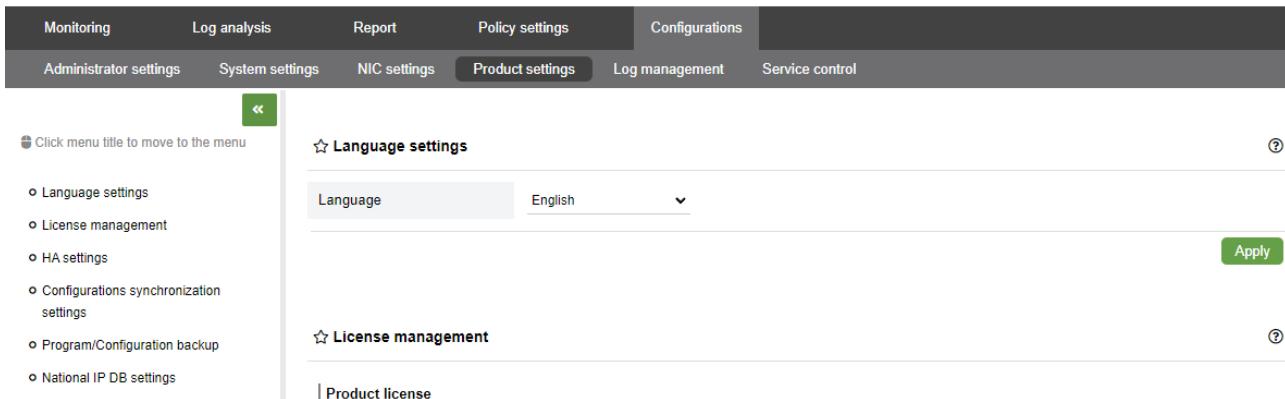
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The screenshot shows the 'Configurations' tab selected in the top navigation bar. On the left, a sidebar lists various settings: IP settings, Mail settings, Telegram notification settings, Backup server settings, Hostname settings, Time synchronization settings, Time zone settings, SNMP GET settings, and SNMP TRAP settings. The main content area is divided into two sections: 'Time zone settings' and 'SNMP GET settings'. The 'Time zone settings' section shows the current time as 'Tue Aug 22 8:45:14 KST 2023' and the time zone as 'Asia/Seoul'. The 'SNMP GET settings' section shows the version as 'SNMPv2' (selected) and 'SNMPv3' (unselected). Both sections have an 'Apply' button in the bottom right corner.

- Time zone Setup: Configurations > System Settings > Time zone Settings

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The screenshot shows the 'Configurations' tab selected in the top navigation bar. On the left, a sidebar lists: Language settings, License management, HA settings, Configurations synchronization settings, Program/Configuration backup, and National IP DB settings. The main content area is divided into two sections: 'Language settings' and 'License management'. The 'Language settings' section shows the language as 'English'. The 'License management' section shows a 'Product license' field. Both sections have an 'Apply' button in the bottom right corner.

- Language Setup: Configurations > System Settings > Language Settings

5. Update Signature and Geolocation DB:

- You need to update the pattern signatures and geolocation database.

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Monitoring Log analysis Report Policy settings Configurations

Default settings Admin policy Domain policy Policy test

Pattern update settings

Pattern update server

Server address: Domain: api.monitorapp.com Port: 443

Auto pattern update: Use

Online pattern update

The current pattern version: W.5.0.057.0007_20230727_79f5fc5e30c6bc9be5a827dc169051ccde6422c60520270ebd7711289f425e1

Latest pattern version: W.5.0.057.0007_20230727_79f5fc5e30c6bc9be5a827dc169051ccde6422c60520270ebd7711289f425e1

Pattern update

Offline pattern update

Upload pattern file: Choose File [No file chosen]

Auto Scaling mode settings

Apply

- [Signature Update] To access, go to: **Policy settings** → **Default settings** → **Pattern update settings** → **Online pattern update**.
- If the checkbox displays 'The current pattern version is the latest version' it indicates that the latest pattern is applied.

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Monitoring Log analysis Report Policy settings Configurations

Administrator settings System settings NIC settings Product settings Log management Service control

National IP DB settings

National IP DB automatic updates: Use

National IP DB file upload

The current national IP DB information: GeoIP2 Country database, Build Epoch: 2019-12-24

File upload: Choose File [No file chosen]

Whois settings

Apply

- [Geolocation Update] To update geolocation information, follow these steps: Go to **Configurations** → **Product settings** → **National IP DB settings**. Enable automatic updates 'Use' and click 'Apply.'
- Once you see the 'Completed' message, you can proceed to the next step.

6. Register Protected Web Servers:

- HTTP and HTTPS (page #11) have separate registration procedures for protected websites. Follow the relevant procedure based on the website's protocol.

6-1. Register HTTP Web Servers

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Monitoring Log analysis Report Policy settings Configurations

Default settings Admin policy Domain policy Policy test

Protected web server

Additional settings

IP policy

IP Whitelist

IP Blacklist

DoS policy

Session attack detection

Slow DoS attack detection

Slow Read attack detection

Priority policy

URL access rule

Admin policy > Protected web server [Add shortcut menu](#)

Use/Not use: All, Name: , Certificate status: All, Issued to:
Protocol: All, IP: , Port:
RX interface: All, TX interface: All, Explanation:

[Cert. Quick change](#) [Add rule](#)

[Save](#) [Delete](#) [Search](#) 15 line(s)

Name: Protocol: RX/TX: Web server information: Explanation: Change

There is no data.

- To access, go to **Policy settings** → **Admin policy** → **Protected web server**, then click 'Add rule'.
 - ✓ No need for changes as HTTP is set as the default configuration.

Web server

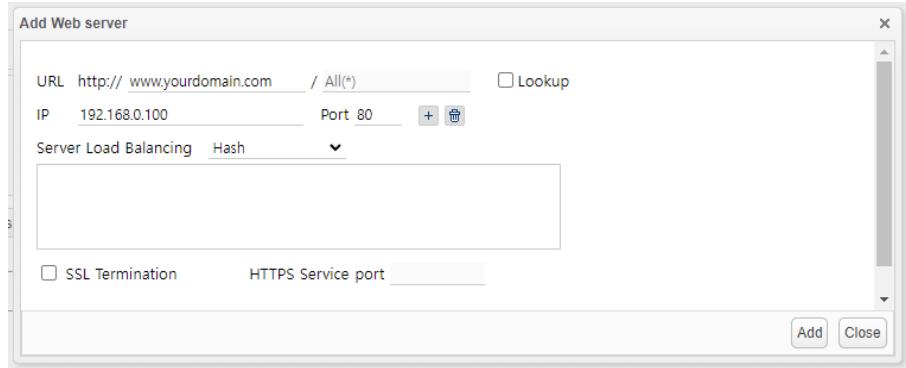
Web server

Use/Not use	<input checked="" type="radio"/> Use <input type="radio"/> Not use	
Name	<input type="text"/> CustomName	
Protocol	<input checked="" type="radio"/> HTTP <input type="radio"/> HTTPS	
RX interface	eth0: 10.0.11.230	Port 80
TX interface	eth0: 10.0.11.230	
Receive Allowed IPs other than RX interface IP list	IP:PORT <input type="text"/> + Delete <input type="text"/>	
Web server information	Register new web server	
Explanation	<input type="text"/>	

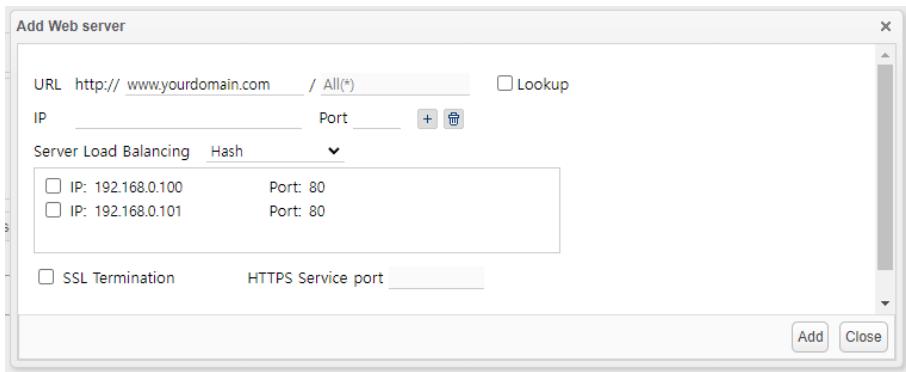
[Apply](#)

- Enter a custom name for the web server registration and then click 'Register new web server'.

Configuration



- Put your **protected URL**, **IP address** and **Port number** and click '**+**'
- For servers with dynamic IP, use **Lookup** option for alias registration.



- Once you have confirmed that the entered value is applied correctly, click '**Add**' to continue.

Configuration

- After verifying the entered web server information, click 'APPLY' to finalize the web server registration.

- In the 'Protected web server' menu, you can see the registered web server.

6-2. Register HTTPS Web Servers

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- Access: Policy settings → Admin policy → Protected web server → Click 'Add rule'

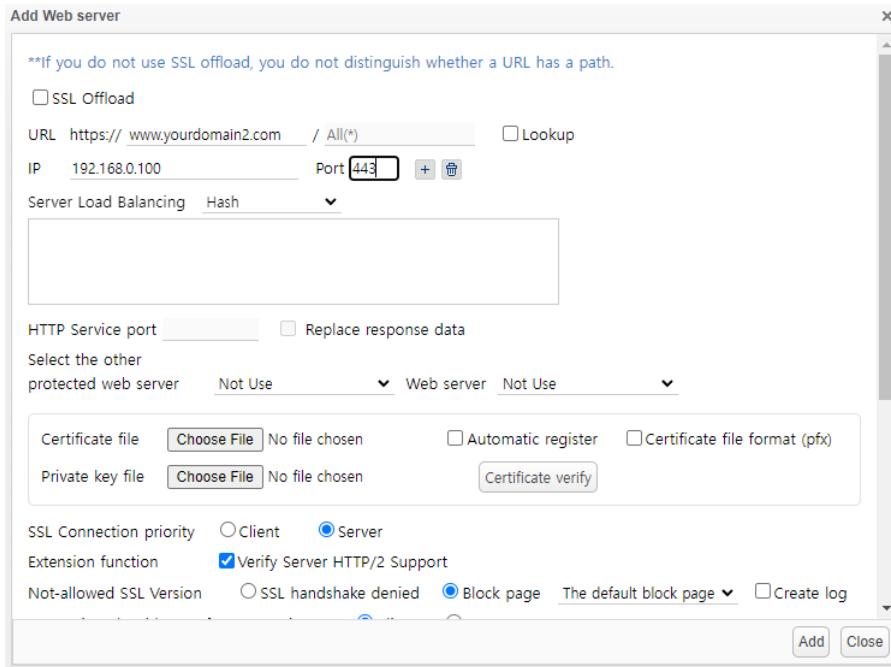
Web server

Web server

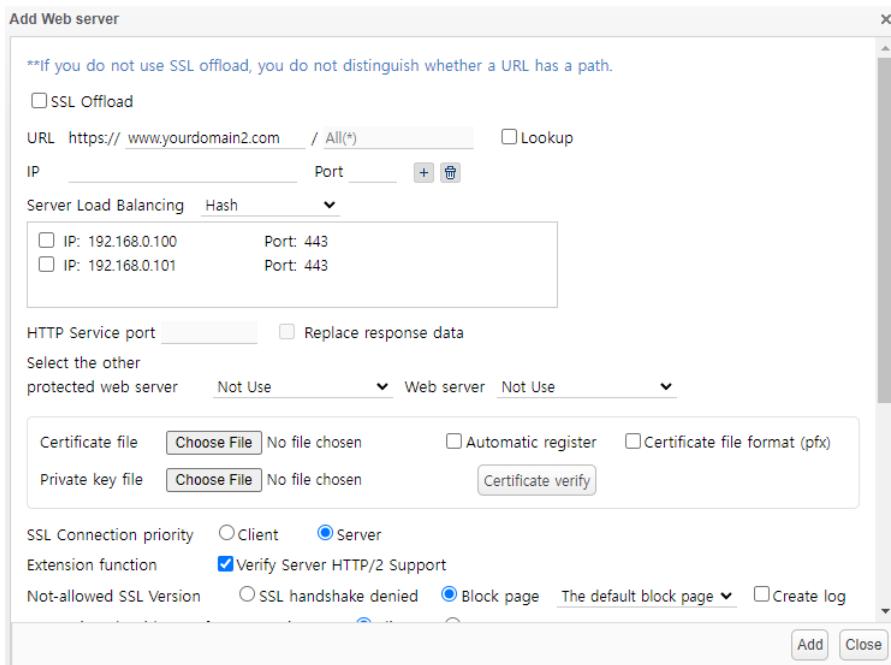
Use Not use
 Name: CustomNameHTTPS
 Protocol: HTTP HTTPS
 RX interface: eth0: 10.0.11.230 Port: 443
 TX interface: eth0: 10.0.11.230
 Receive Allowed IPs other than RX interface IP list: IP:PORT
 Web server information: Register new web server
 Explanation:
 Apply

- Enter a custom name, ensure 'HTTPS' is checked, and then click 'Register new web server'.

Configuration

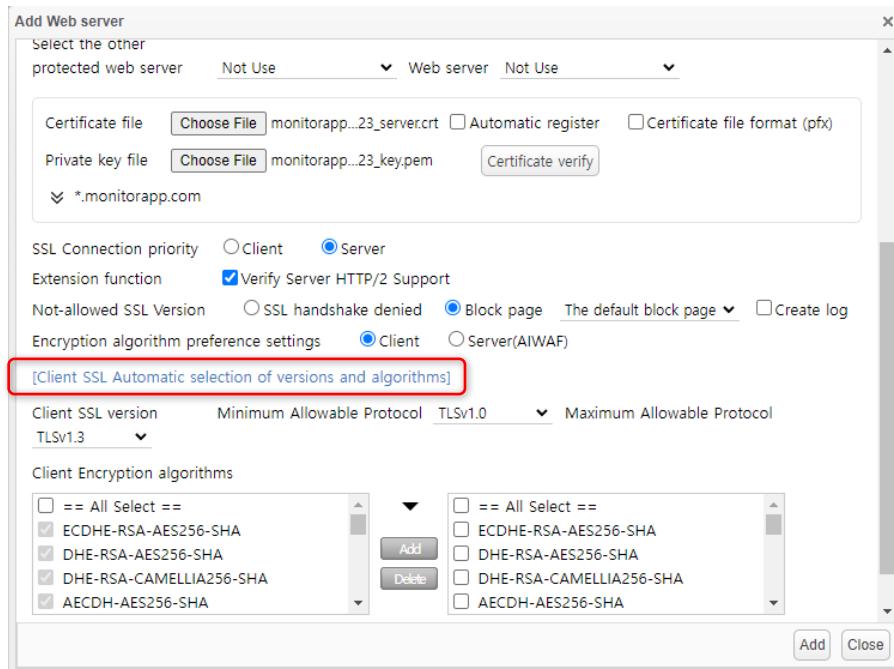


- Put your **protected URL**, **IP address** and **Port number** and click '**+**'
- For servers with dynamic IP, use **Lookup** option for alias registration.

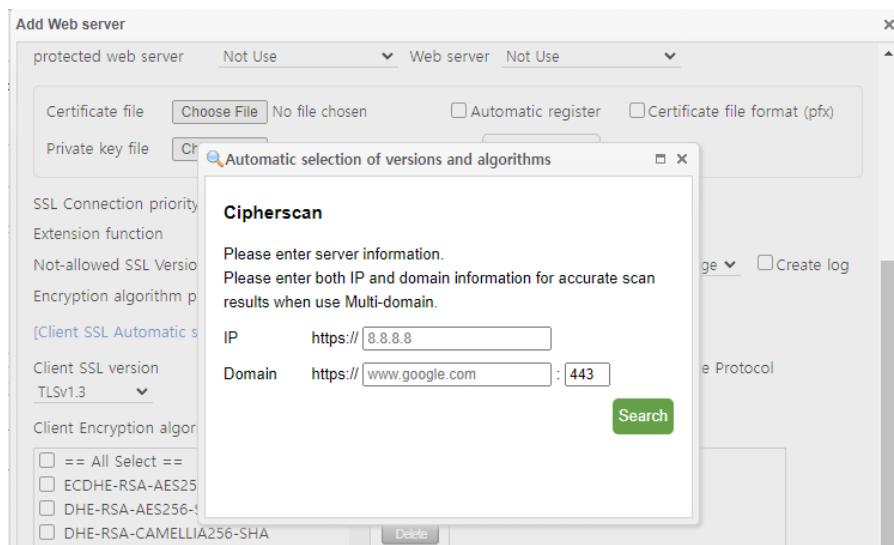


- Verify the registered IP address and port number.
- Register the '**Certificate file**', '**Private key file**' and click '**Certificate verify**' to proceed.

Configuration



- Once you've confirmed the certificate file and private key, proceed with the detailed configuration of the web server, including SSL/TLS versions and cipher suites, if necessary.
- Additionally, for **[Client SSL Automatic selection of versions and algorithms]**, input the domain and IP to scan the cipher suite of the web server you are registering.



- Enter the IP and domain information. The web server scanning will automatically select the SSL version and algorithms for the web server.
- After completing the previous steps,, click 'Add' to register web server information.

Configuration

Web server

Web server

Use/Not use Use Not use

Name: CustomNameHTTPS

Protocol: HTTP HTTPS

RX interface: eth0: 10.0.11.230 Port: 443

TX interface: eth0: 10.0.11.230

Receive Allowed IPs other than RX interface IP list:

IP PORT: [Empty table]

Web server information: Register new web server

www.yourdomain2.com 192.168.0.100:443, 192.168.0.101:443

Explanation: [Empty text area]

Delete

Apply

- Once you've reviewed the provided information, click 'Apply' to complete the process.

6-3. Apply Policy

APPLICATION INSIGHT WAF

Policy	Changed items
<input checked="" type="checkbox"/> Protected web server	1 Case(s)
<input type="checkbox"/> IP Whitelist	0 Case(s)
<input type="checkbox"/> IP Blacklist	0 Case(s)
<input type="checkbox"/> Session attack detection	0 Case(s)
<input type="checkbox"/> Slow DoS attack detection	0 Case(s)
<input type="checkbox"/> Slow Read attack detection	0 Case(s)
<input type="checkbox"/> URL access rule	0 Case(s)
<input type="checkbox"/> National IP detection	0 Case(s)
<input type="checkbox"/> User Management	0 Case(s)
<input type="checkbox"/> User-defined rule	0 Case(s)
<input type="checkbox"/> Block page manage	0 Case(s)
<input type="checkbox"/> Default SSL	0 Case(s)
<input type="checkbox"/> Health-check URL	0 Case(s)
<input type="checkbox"/> URL Rewriting request rule	0 Case(s)
<input type="checkbox"/> URL Rewriting response rule	0 Case(s)
<input type="checkbox"/> URL Encryption policies	0 Case(s)
<input type="checkbox"/> API policies	0 Case(s)

Apply policy **Restored to the previous policies.**

Restore policy

- After registering the web server, configuring its details, and making changes to various policies, remember to click '**Apply policy**' in the Admin policy section of the upper-level menu to implement the changes. Otherwise, the changes will not be applied. (Previous policies will be backed up.)
- To access: **Policy settings** → **Admin policy** → **Policy apply/cancel** → click '**Apply policy**'.

Configuration

6-4. Security Policy Block Mode Configuration

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Operation mode

Block mode

Bypass target

Request Header name:Value : All headers are applied if there are no

[Request/Response] Content-Type application/vnd.ms.wms-hdr.asfv1

[Request/Response] Content-Type application/x-mms-framed

[Request/Response] Content-Type application/x-wms-getcontentinfo

[Request/Response] Content-Type application/x-wms-LogStats

URL Path HTTP :// 80 / ?

URL extension

Detection mode targets

Apply

- To access, go to **Policy settings** → **Default settings** → **Operation mode**
- The default operation mode of AIWAF-VE is 'Detection.' Click on 'Block' and press 'Apply' to proceed.

APPLICATION INSIGHT WAF

Apply policy/Cancel

There is a policy that has been changed.
Do you want to apply the policy?

Apply policy

Restored to the previous policies.

Click menu title to move to the menu

Operation mode

Block mode

Bypass target

Request Header name:Value : All headers are applied if

[Request/Response] Content-Type application/vnd.ms.wms-hdr.asfv1

[Request/Response] Content-Type application/x-mms-framed

[Request/Response] Content-Type application/x-wms-getcontentinfo

[Request/Response] Content-Type application/x-wms-LogStats

URL Path HTTP :// 80 / ?

- When making changes, you'll see the 'Apply policy/Cancel' box on the left. Select 'Apply policy' to save and apply the modified settings.

Configuration

APPLICATION INSIGHT WAF

Monitoring Log analysis Report Policy settings ■ Configurations

Default settings ■ Admin policy Domain policy Policy test

Domain management

Domain policy

Default

Policy apply/cancel

Domain	Changed items
<input type="checkbox"/> Default	0 Case(s)

Total count(s) : 1 Case(s)

Apply policy Restored to the previous policies.

- To apply the blocking policy completely, you need to change the **Detect** setting to **Block** for each individual security policy per domain.
- To access, go to **Policy settings** → **Domain policy**
- Click '**Default**' to manage each security policy. (The default page refers to the basic rule settings applied to the web pages users have registered(5-1, 5-2).)

Monitoring Log analysis Report Policy settings ■ Configurations

Default settings ■ Admin policy Domain policy Policy test

Domain management

Domain policy

Default

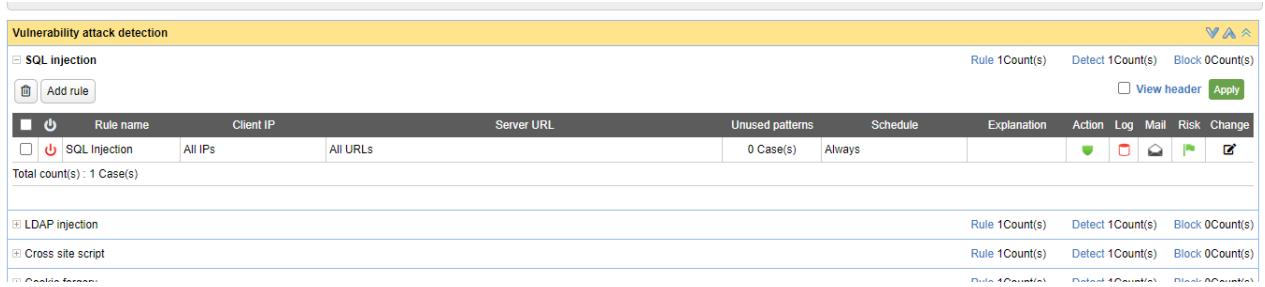
Applied URL Rule name Use/Not use All Action All Mail All Risk All Search

Batch change use/not use of policies Use Apply Batch change action of policies Detect Apply Policy status summary view

Vulnerability attack detection	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
SQL injection	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
LDAP injection	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
Cross site script	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
Cookie forgery	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
CSRF detection	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
Malicious file upload detection	Rule 1Count(s)	Allow 0Count(s)	Detect 1Count(s)	Block 0Count(s)
Malicious file access detection	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
Command injection detection	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
Directory access detection	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
Vulnerable page access detection	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
System file access detection	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
Web server vulnerability detection	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
Header vulnerability detection	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
Application vulnerability detection	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	
Scanner/Proxy/Spambot detection	Rule 1Count(s)	Detect 1Count(s)	Block 0Count(s)	

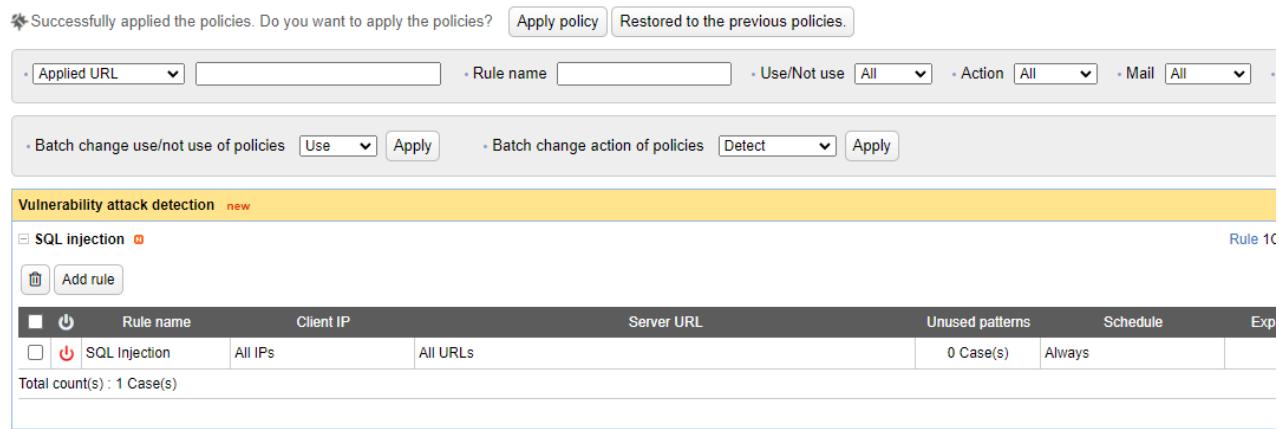
- All default rules are set to '**Detect**'. Please click on the rule you want to change.

Configuration



Rule name	Client IP	Server URL	Unused patterns	Schedule	Explanation	Action	Log	Mail	Risk	Change
SQL Injection	All IPs	All URLs	0 Case(s)	Always						

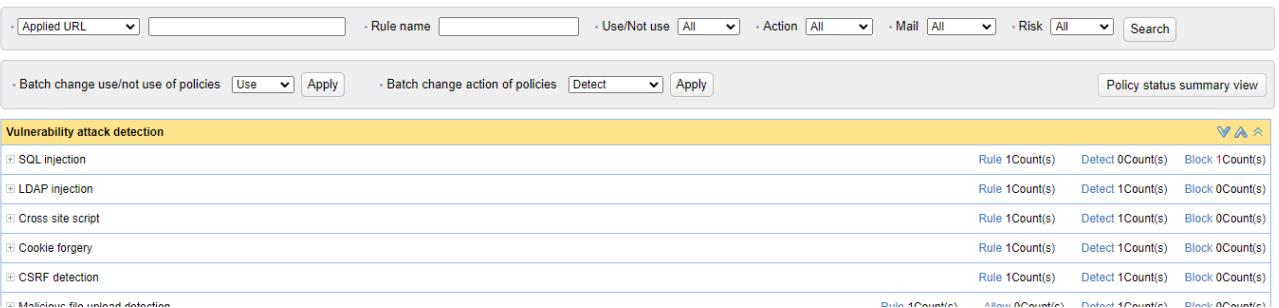
- The green shield below the Action on the right side of the security rule represents the 'Detect' mode. Clicking on it will change it to 'Block'.
- To apply the changes, please click the 'Apply' button.



Successfully applied the policies. Do you want to apply the policies? [Apply policy](#) [Restored to the previous policies.](#)

Rule name	Client IP	Server URL	Unused patterns	Schedule	Explanation	Action	Log	Mail	Risk	Change
SQL Injection	All IPs	All URLs	0 Case(s)	Always						

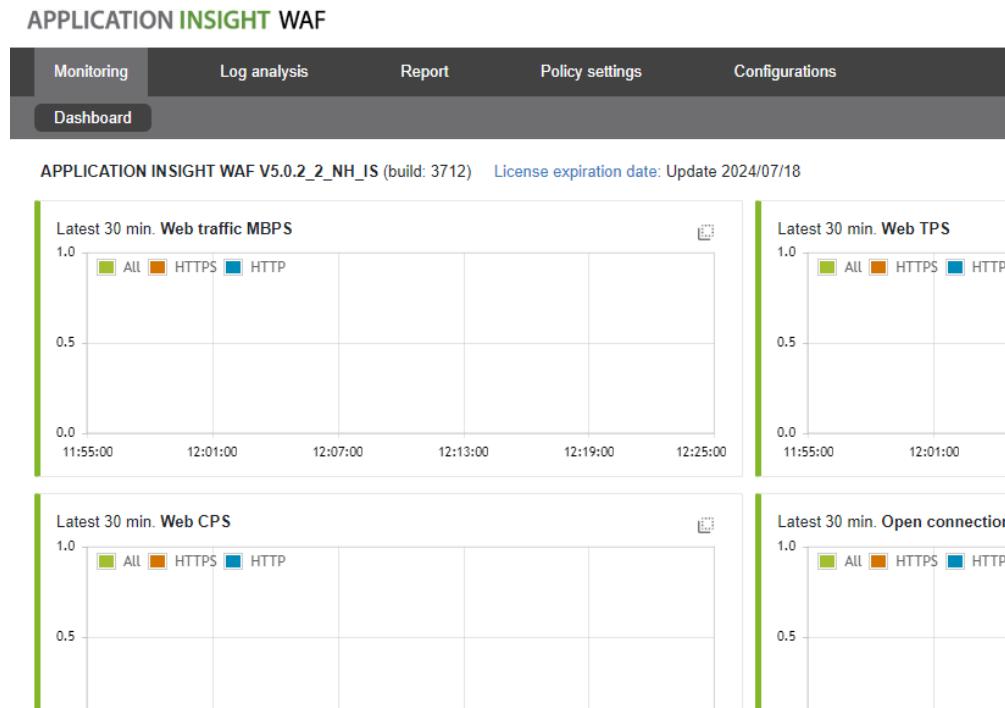
- Similar to saving other modifications, click on 'Apply policy' at the top to save your changes.



Rule name	Client IP	Server URL	Unused patterns	Schedule	Explanation	Action	Log	Mail	Risk	Change
SQL Injection	All IPs	All URLs	0 Case(s)	Always						

- You'll notice that the SQL injection security rule has been switched from 'Detect' to 'Block'.
- You can refer to page 22 to review actual log data (detection, blocking data).

7. Complete Configuration:



- Your configuration is now set. You can monitor web traffic at **Monitoring → Dashboard**.

Testing AIWAF-VE: Procedure for Test

If you're looking to conduct a test with AIWAF-VE, follow these steps. Please note that the client (visitor) for this test scenario is designed around the Windows OS.

Step 1: Redirect Test Traffic to AIWAF-VE:

To direct test client (visitor) traffic to AIWAF-VE, adjust the DNS information using the procedure below. In an actual network setting, you would typically modify the A record or CNAME of the domain name server. However, in this example, we're outlining a process that involves changing the contents of the hosts file.

- Launch Notepad as a Windows administrator.
- In Notepad, navigate to File and choose Open.
- Locate the hosts file path and open it using Notepad.
- Windows hosts file path: `C:\Windows\System32\drivers\etc\hosts`
- Register the IP of AIWAF-VE along with the domain name of the protected web server.
- Example: [AIWAF-VE IP] [Domain] (e.g., 192.168.10.110 www.yourdomain.com)
- Save the hosts file.

Step 2: Send Sample Traffic to AIWAF-VE:

Generate sample detection traffic from the client (visitor) PC to AIWAF-VE.

- Open an internet browser.
- Enter the following values in the URL address input:
URL: `http://www.yourdomain.com/?monitorapp=monitorapp`

Step 3: Verify Attack Detection:

Check if the attack is logged in AIWAF-VE's detection log.

APPLICATION **INSIGHT** WAF

Monitoring Log analysis Report Policy settings Configurations

Detection log view Audit log view View web server status log

Period : 2023-08-16 12:51 ~ 2023-08-16 13:21

Period Today 1 week 1 month 2023-08-16 : ~ 2023-08-16 :

Search Download Chart Pivot Chart

Auto Refresh

Attack domain: 0Count(s) | Attacker(Origin IP): 0Count(s)(0Count(s)) | Attack count: 0Case(s)

Time	Client IP	Origin IP	Server IP	Domain	Detection type
There is no data					

- Navigate to: Web UI > **Log analysis** > **Detection log view**.
- This procedure provides a concise way to test AIWAF-VE. For more detailed instructions and assistance, consult our user manual or reach out to our support team.

Step 3: Verify Attack Detection:

Check if the attack is logged in AIWAF-VE's detection log.

APPLICATION INSIGHT WAF

Monitoring Log analysis Report Policy settings Configurations

Detection log view Audit log view View web server status log

All Delete

Period: 2023-08-16 12:51 ~ 2023-08-16 13:21 **X**

Period: Today 1 week 1 month 2023-08-16 ~ 2023-08-16

Search Download Chart Pivot Chart

Auto Refresh

Attack domain: 0Count(s) | Attacker(Origin IP): 0Count(s)(0Count(s)) | Attack count: 0Case(s)

Time Client IP Origin IP Server IP Domain Detection type

There is no data

- Navigate to: Web UI > Log analysis > Detection log view.

*Example of Detection Log View(using quick guide's policy setup)

APPLICATION INSIGHT WAF

Monitoring Log analysis Report Policy settings Configurations

Detection log view Audit log view View web server status log

All Delete

Period: 2023-08-22 10:52 ~ 2023-08-22 12:06 **X**

Period: Today 1 week 1 month 2023-08-22 ~ 2023-08-22 View only pattern detection mode logs Show only interest logs

Search Download Chart Pivot Chart **C Apply search filter**

Auto Refresh

Attack domain: 1Count(s) | Attacker(Origin IP): 1Count(s)(0Count(s)) | Attack count: 10Case(s)

Time	Client IP	Origin IP	Server IP	Domain	Detection type	Rule name	URL	Risk	Action	Mail	Search
08-22 10:52:40	112.216.3.62	None	3.38.96.49	Default	SQL injection	SQL Injection	http://example.com/			<input type="button" value="Mail"/>	<input type="button" value="Search"/>
08-22 10:52:32	112.216.3.62	None	3.38.96.49	Default	SQL injection	SQL Injection	http://example.com/			<input type="button" value="Mail"/>	<input type="button" value="Search"/>
08-22 10:52:12	112.216.3.62	None	3.38.96.49	Default	Directory access detect...	Directory Access	http://example.com/			<input type="button" value="Mail"/>	<input type="button" value="Search"/>
08-22 10:52:12	112.216.3.62	None	3.38.96.49	Default	System file access det...	System File Access	http://example.com/			<input type="button" value="Mail"/>	<input type="button" value="Search"/>
08-22 10:52:09	112.216.3.62	None	3.38.96.49	Default	Character set limits det...	CHARSET	http://example.com/			<input type="button" value="Mail"/>	<input type="button" value="Search"/>
08-22 10:52:09	112.216.3.62	None	3.38.96.49	Default	Cross site script	Cross-Site Scripting	http://example.com/			<input type="button" value="Mail"/>	<input type="button" value="Search"/>

- You can confirm the detection and blocking results below the 'Action'. In this case, SQL injection has been successfully blocked (indicated by a red shield icon), and other attacks have been detected (indicated by a green shield icon).

Additional Resources

MONITORAPP offers further resources more in-depth information and support.

- **Support Contact :** +1-909-957-1335
- **Email :** support@monitorapp.com

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