Advanced Malware Detection and Protection

2.0

On-Premises Deployment Guide

Revision A

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Introduction

Forcepoint Advanced Malware Detection and Protection (AMDP) is an advanced file sandbox, sometimes referred to as a “Network Sandbox”, designed to detect zero-day malicious files currently not detectable via traditional signature based solutions and static analysis alone.

AMDP is integrated into Forcepoint’s Web Security and Secure SD-WAN products for fast and easy setup.

This guide describes the process to install the AMDP On-Premises Manager and Engine components on hardware provided by the customer.

The AMDP On-Premises Manager is offered as part of the on-premises deployment configuration to customers with stringent privacy and policy constraints. In this configuration, the AMDP On-Premises Manager stores, within the customer's data center, all the information regarding the detection of infected hosts and the analysis of software files.

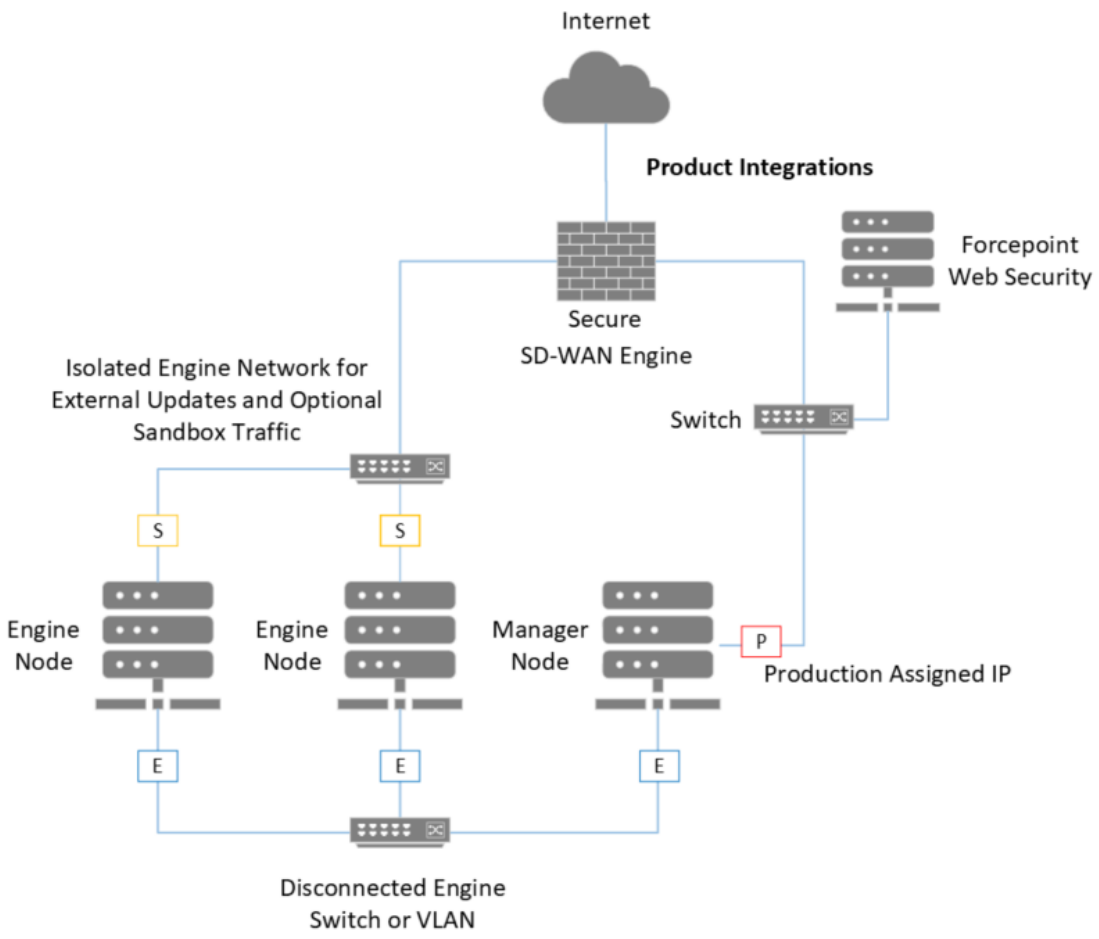
The AMDP On-Premises Manager collects information from Forcepoint appliances, processes it, and presents it to the End User. More precisely, the AMDP On-Premises Manager receives files (i.e., executables and documents) that are received or downloaded by the users and passes them to an Analysis Engine. The results of the analysis are collected and presented to the Admin User via a web portal using an incident-centered approach in which evidence from run-time analysis, network monitoring, and anomaly detection are correlated to provide prioritized and actionable threat intelligence.

The AMDP On-Premises Engine component receives files (i.e., executables and documents) from the AMDP On-Premises Manager. It runs these files, then returns analysis results back to SWG and Secure SD-WAN. Alerts can be configured to notify when AMDP detects an issue.

The Engine is managed by the Manager. However, as an important part of the installation process, the Engine must be made known to the Manager.

Network topology

Integrating AMDP with Secure SD-WAN Engine

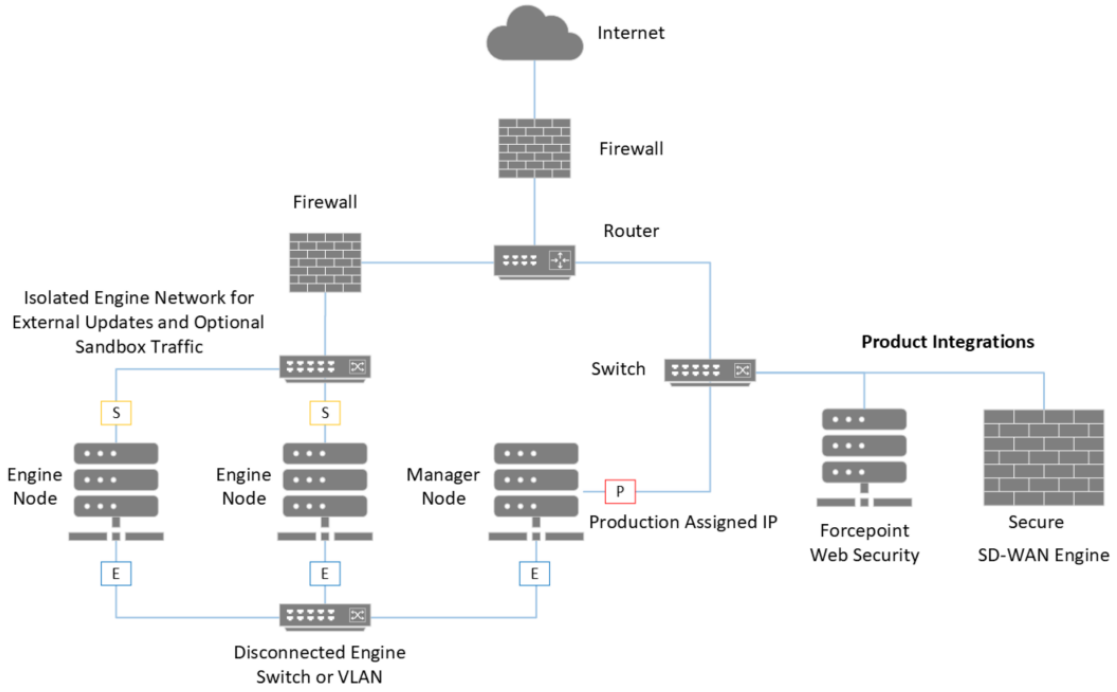


P - Primary / Production Network

E- Engine Network

S- Sandbox Network

Integrating AMDP with third party router and firewall



P - Primary / Production Network

E- Engine Network

S- Sandbox Network

Note

The Engine network should be isolated as the sandbox machines execute here.

Deployment prerequisites

The following system requirements provide the minimum specifications for optimal performance and effectiveness.

Manager

- CPU: 10 cores (20 threads) Intel Xeon, Broadwell or newer.
  For example: Xeon Silver 4114
- RAM: 64 GB
- NIC: 2
- Storage: 256 GB SSD, RAID 10 recommended

Engine

- CPU: 18 cores (36 threads) Intel Xeon, Broadwell or newer.
  For example: Xeon E5-2686 v4, or 2x Xeon Silver 4114
- RAM: 96 GB

- NIC: 2
- Storage: 256 GB SSD, RAID 10 recommended

Note

Engine cannot be installed on a VM.

Remember

AMDP requires at least NGFW and SMC version 7.1.1.

Licensing Forcepoint AMDP

Forcepoint AMDP requires a valid License Key. The License Key may be entered on installation but this step can be skipped and entered post-installation.

If an installation skips the License Key entry, the product defaults to running in an evaluation mode for a limited time and will function for a short evaluation period.

Note

Installations without a valid License Key will not receive updates.

Both the AMDP Manager and AMDP Engine require a valid License Key. Your AMDP On-Premises License Key can be found in the Support Hub Account License section.

Evaluation License

When installed without a License Key, AMDP On-Premises will automatically switch to an Evaluation License. After 60 days of evaluation, the service will no longer accept file submissions. Automatic updates are disabled in AMDP On-Premises Evaluation mode.

The service will enable automatic updates once a legitimate License Key is entered. Your AMDP On-Premises License Key can be found in the Support Hub Account License section.

Note

A valid Microsoft Office License Key is required for AMDP Engine. As Forcepoint is not a reseller of Microsoft Office License Keys, please use your organization's existing Microsoft License Keys or point AMD to your KMS. AMDP also supports O365 Licenses. This is needed to scan MS Office document types. If MS documents are not needed then this step can be skipped.

Downloading installation file

Steps

1) Go to Forcepoint Customer Hub

2) Log in using your existing user account.

3) Download the Forcepoint AMDP installation (`.iso`) file from **Downloads** > **All Downloads** section of Forcepoint Customer Hub.

Software installation

The Advanced Malware Detection and Protection software provisions the base system from an ISO image using an automated installation process. This is a combined installation media for both the Manager and Engines. The choice of system role is configured from the console after the base system is installed during registration. Before starting the installation, you must download an official copy of the latest Advanced Malware Detection and Protection 2.0 `.iso` file from **Downloads** > **All Downloads** section of Forcepoint Customer Hub. The image may be burned onto a bootable DVD, or otherwise mounted to the system to be installed.

To install the Advanced Malware Detection and Protection software, boot the system from the selected medium and let it run to completion. The installation is automatic and only stops if it encounters a hardware error. The system reboots, and then presents you with a login prompt at the system console.

Installing Manager

1) Log into the console of the host using the following credentials:

   a) username: admin

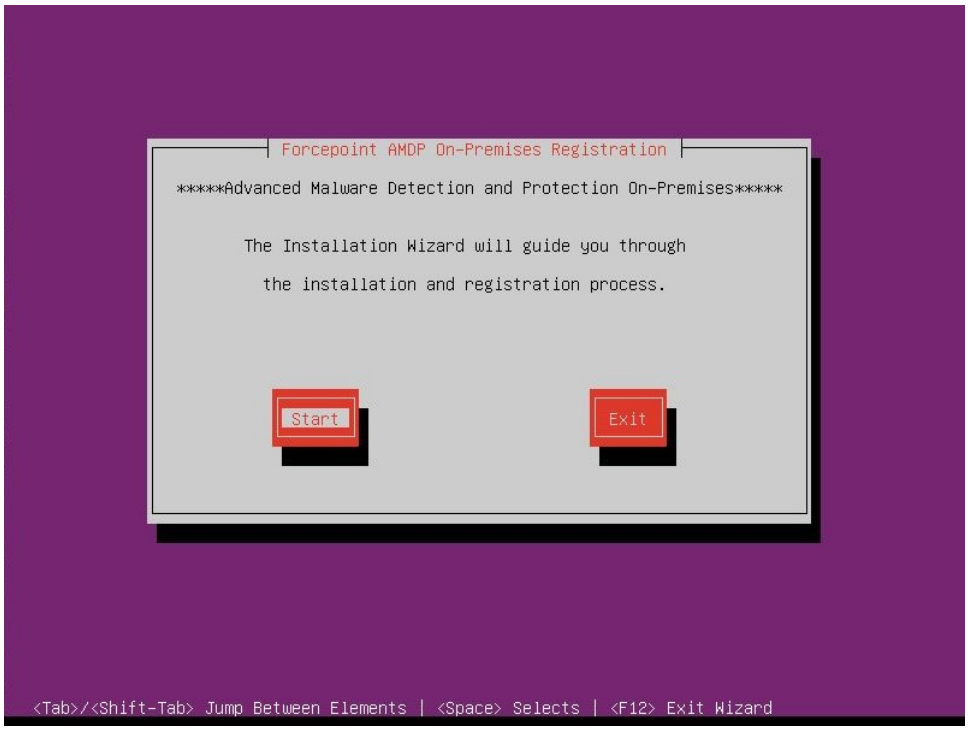
   b) password: **P!L)TP@ssw0rd**

   Important

   This is the default admin login credentials for AMDP console. Change the default password to a password that is unique to your organization.

2) Run the **sudo amd_register** command to start the guided installation and registration process.

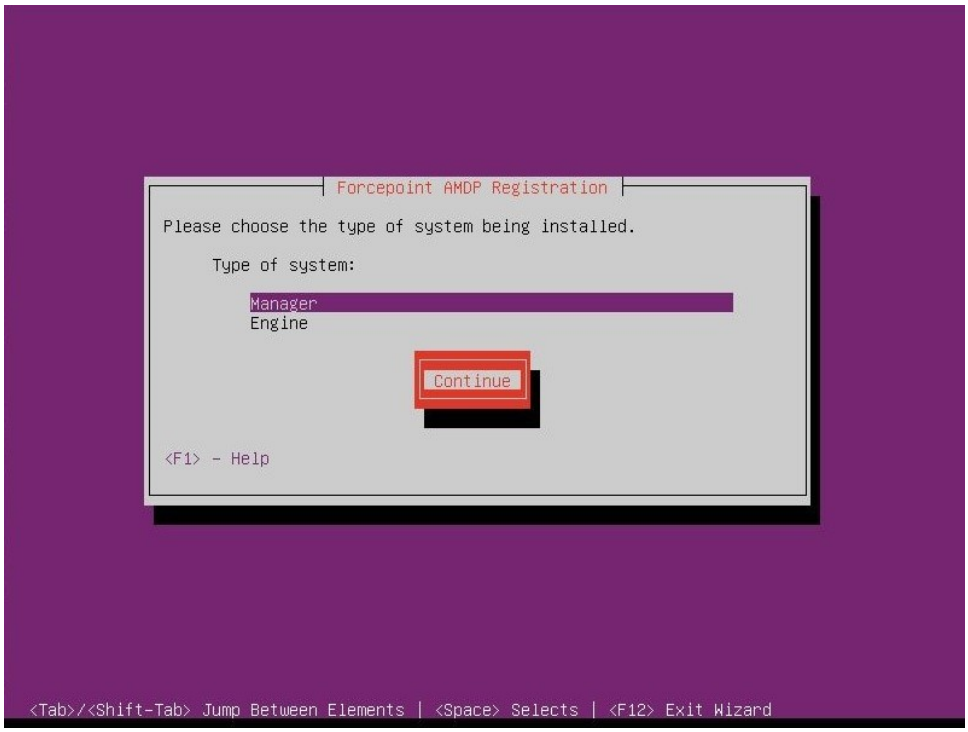
3) The installation process starts at the **Welcome** screen. When you are ready to begin the installation process, select **Start**. This wizard will gather information about the system role and install the appropriate components. The wizard provides the initial system configuration which is then further tailored with the **amd_setup** utility.



4) Read the Forcepoint Subscription Agreement and select **Accept** to proceed with the installation.

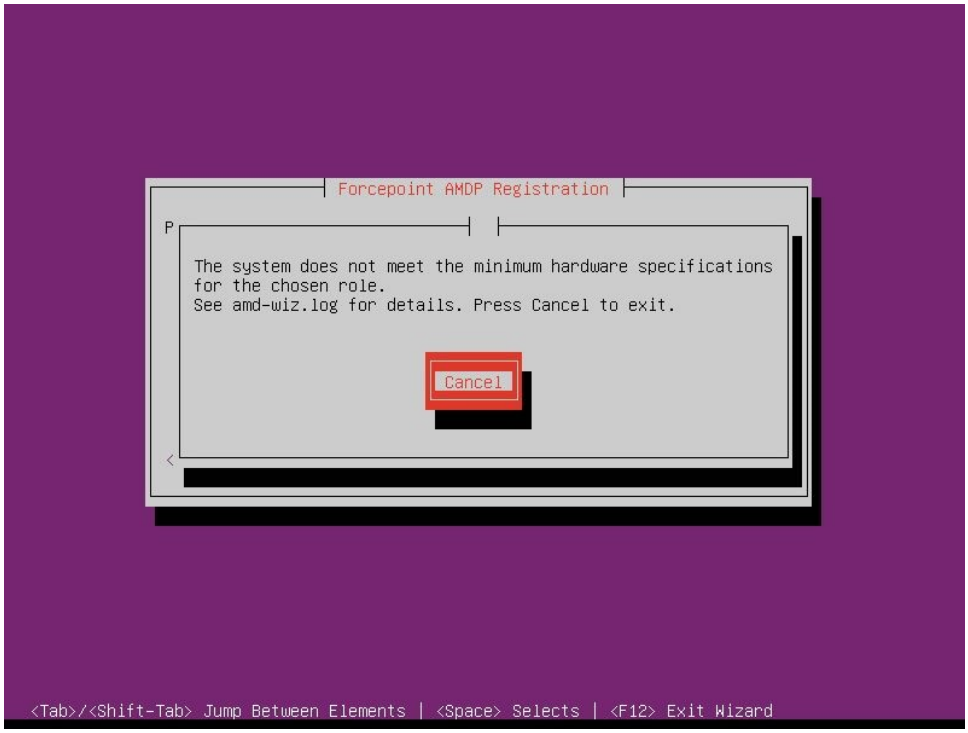
5) Choose the type of system to install. Select **Manager**, and select **Continue** to install and configure the **Manager**.

5(a)



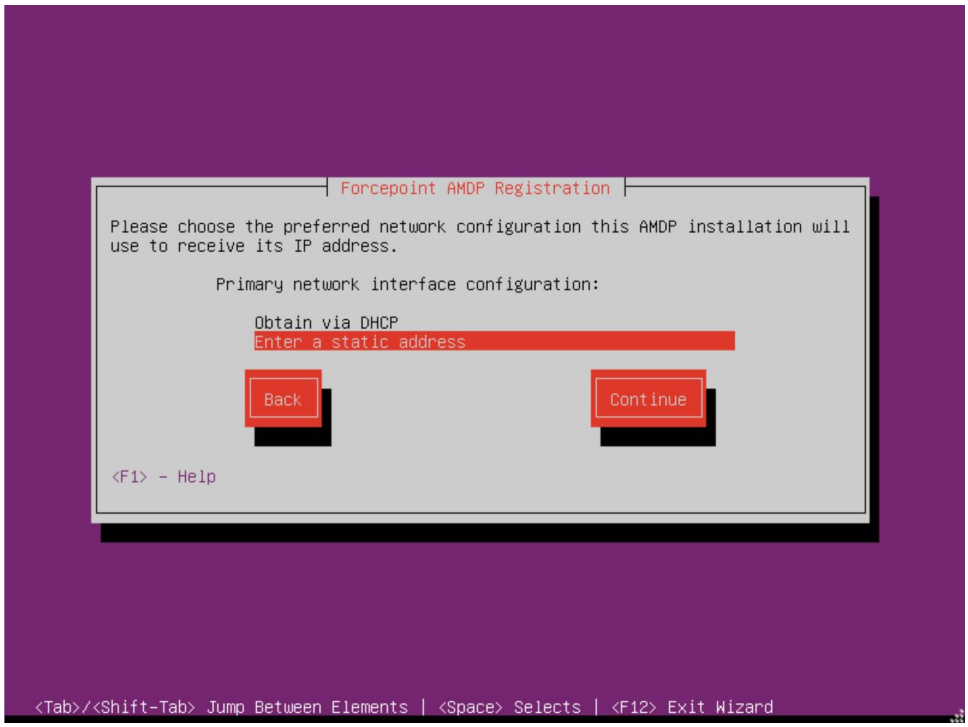
The below wizard checks the server for minimum hardware requirements. If the server does not meet the minimum requirements, either **5(b)** or **5(c)** will appear, depending on the severity of the requirement that is not met. **5(b)** forces the user to cancel the wizard and address the issue, while **5(c)** will allow the user to continue.

5(b)

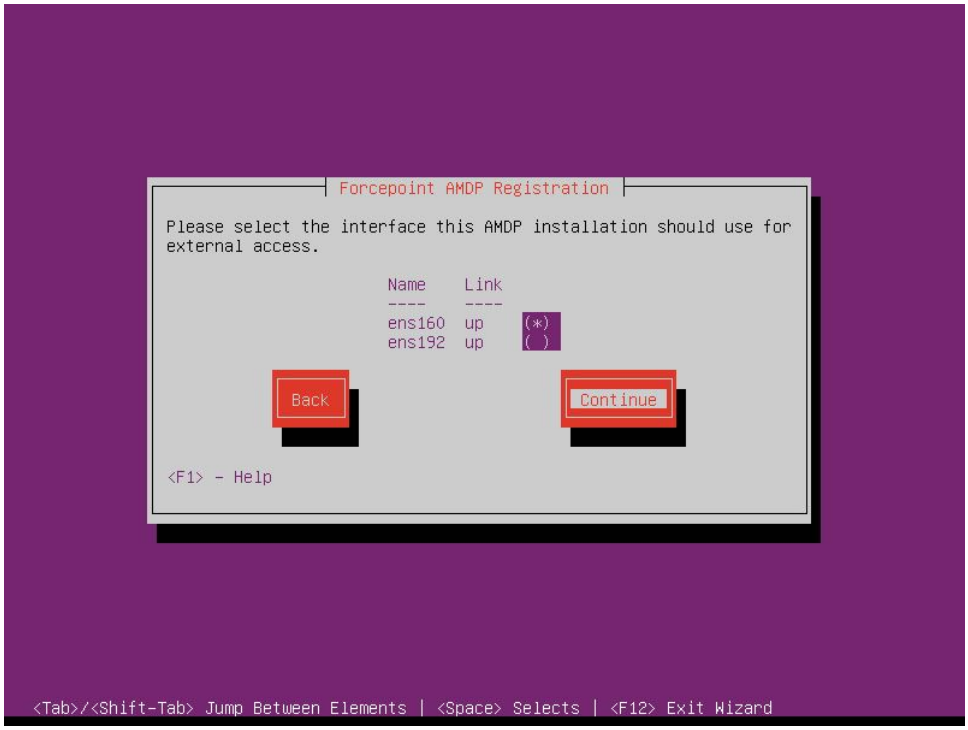


5(c)

6) Choose the preferred network configuration and select **Continue**.



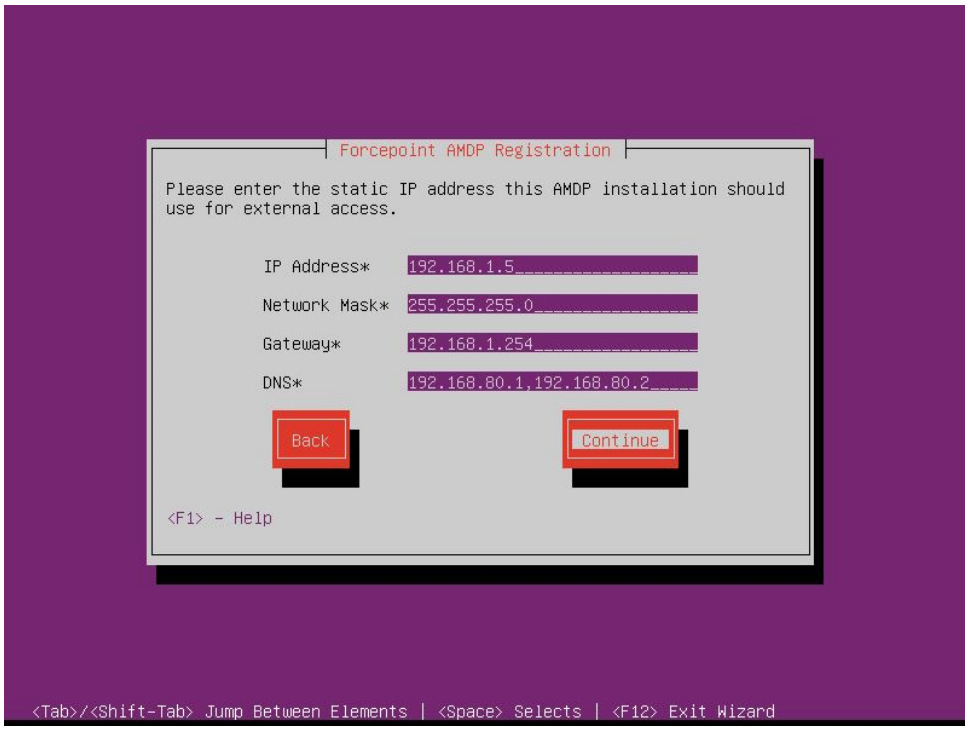
7) Choose the interface for external access and select **Continue**.



8) On the Primary network interface, enter the static **IP Address**, **Network Mask/CIDR**, **Gateway**, and **DNS** entries. Select **Continue**.

Note

Multiple DNS servers should be comma separated.

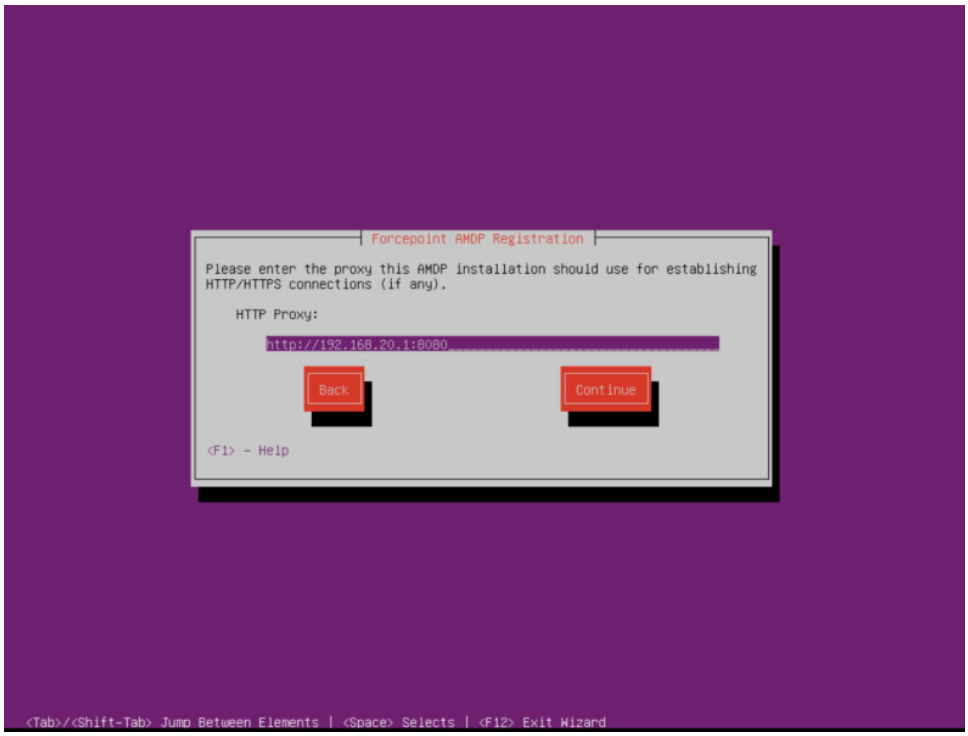


9) Select the interface for the Engine network and **Continue**.

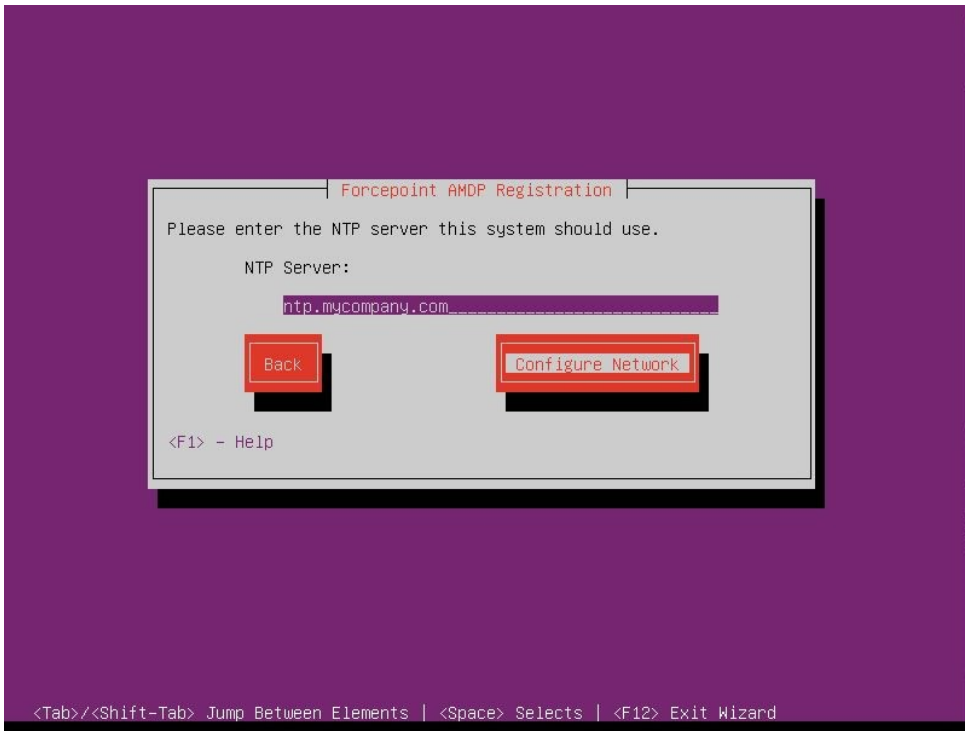
10) Enter the **HTTP Proxy** address for establishing connection with the update servers. Select **Continue**.

Note

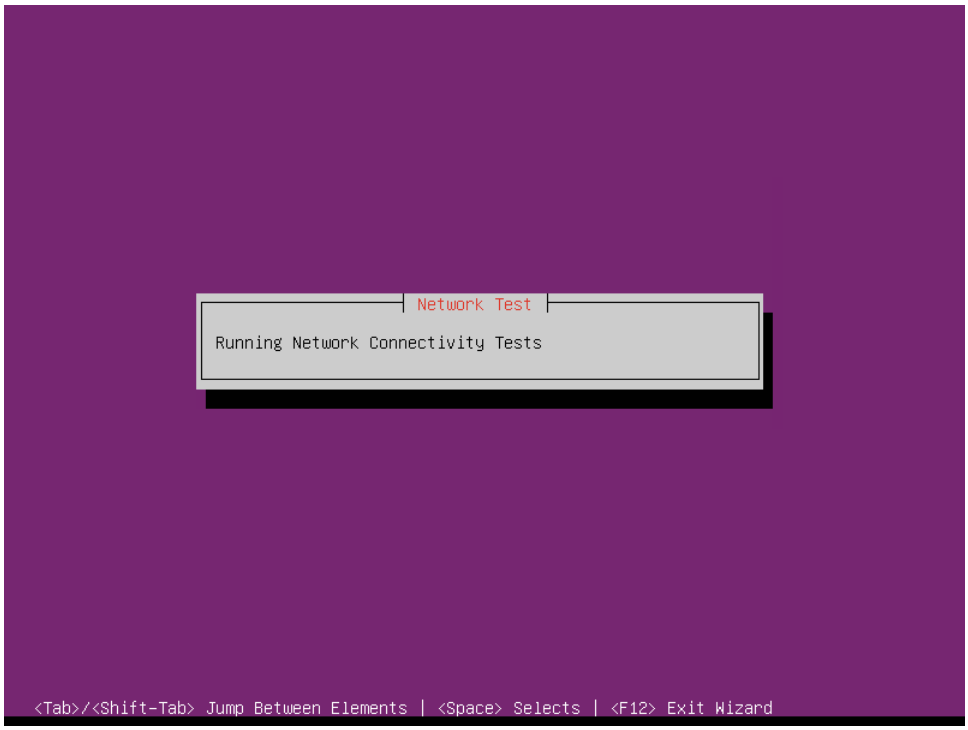
Port 9091 needs to be reachable through the proxy for license verification.



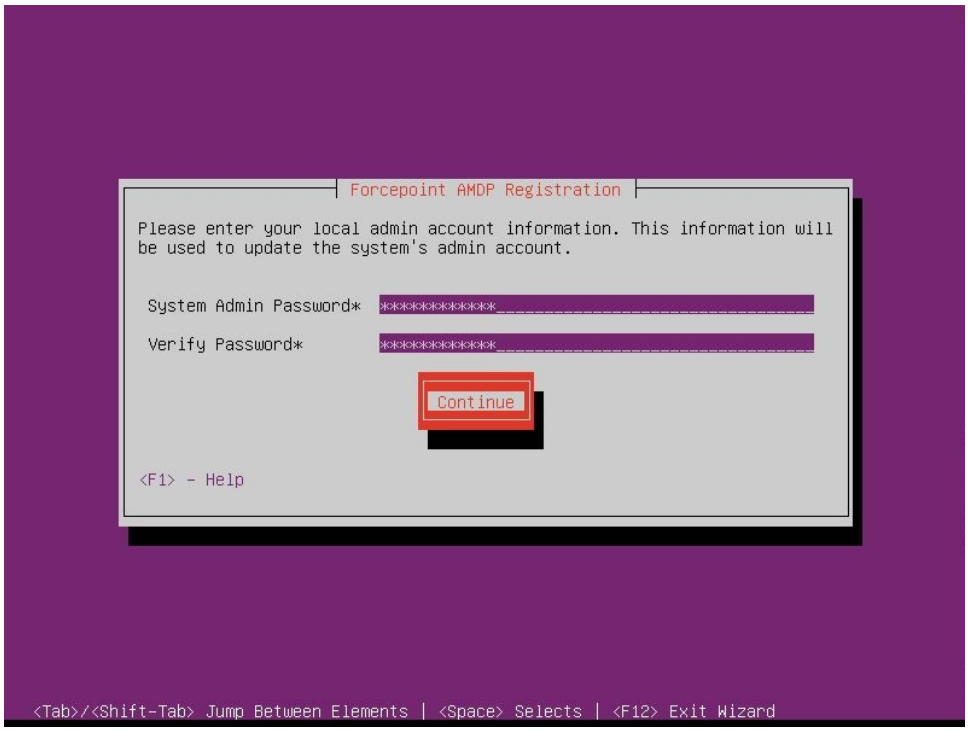
11) Enter the **NTP Server** address and select **Configure Network**.



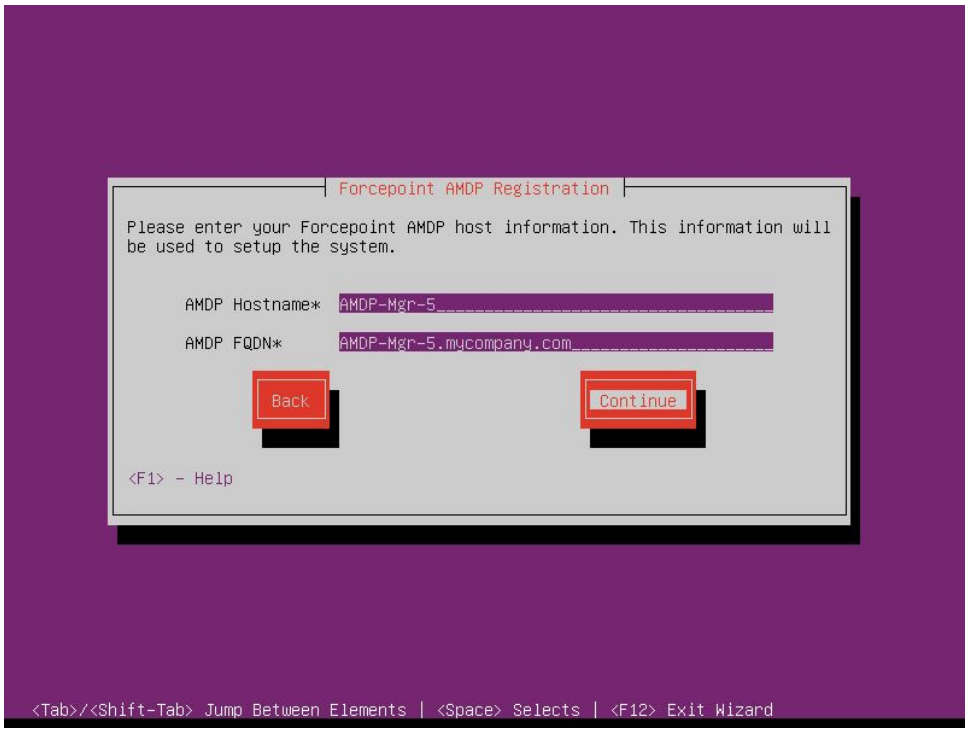
Network connectivity test runs.



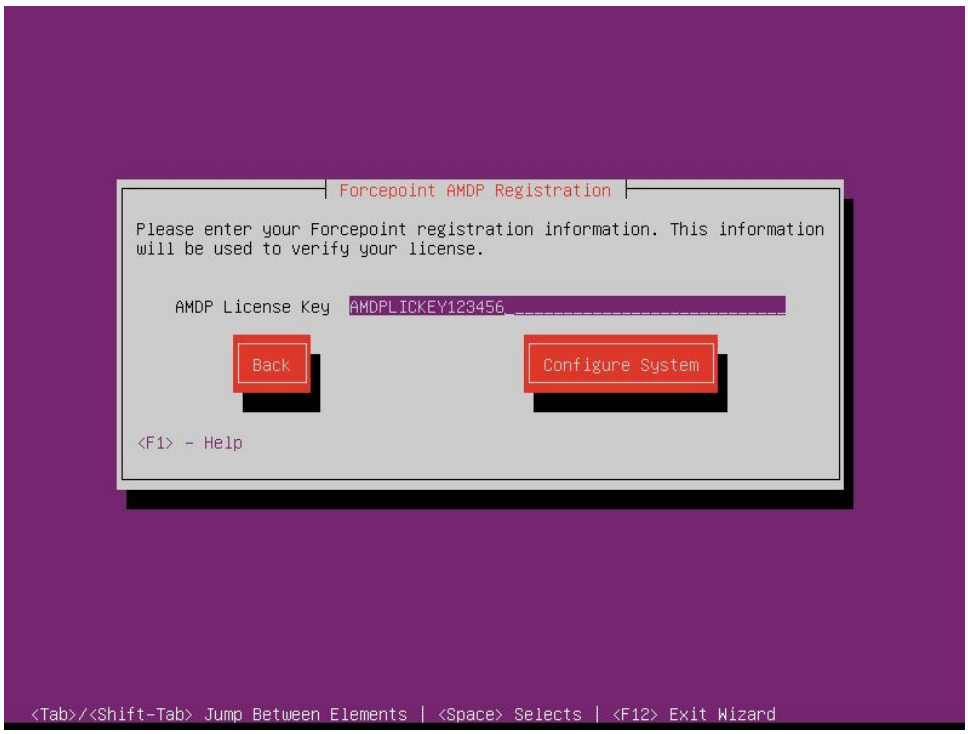
12) Update the password for the local admin user to be used for console and ssh access. Select **Continue**.



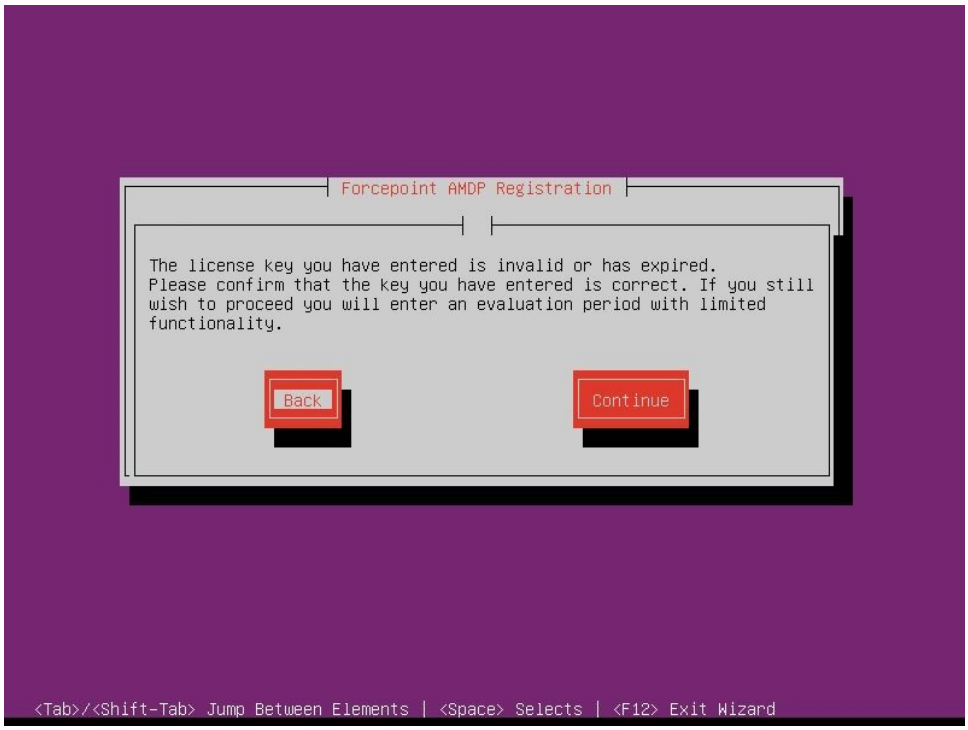
13) Enter your Forcepoint Manager host information and select **Continue**.



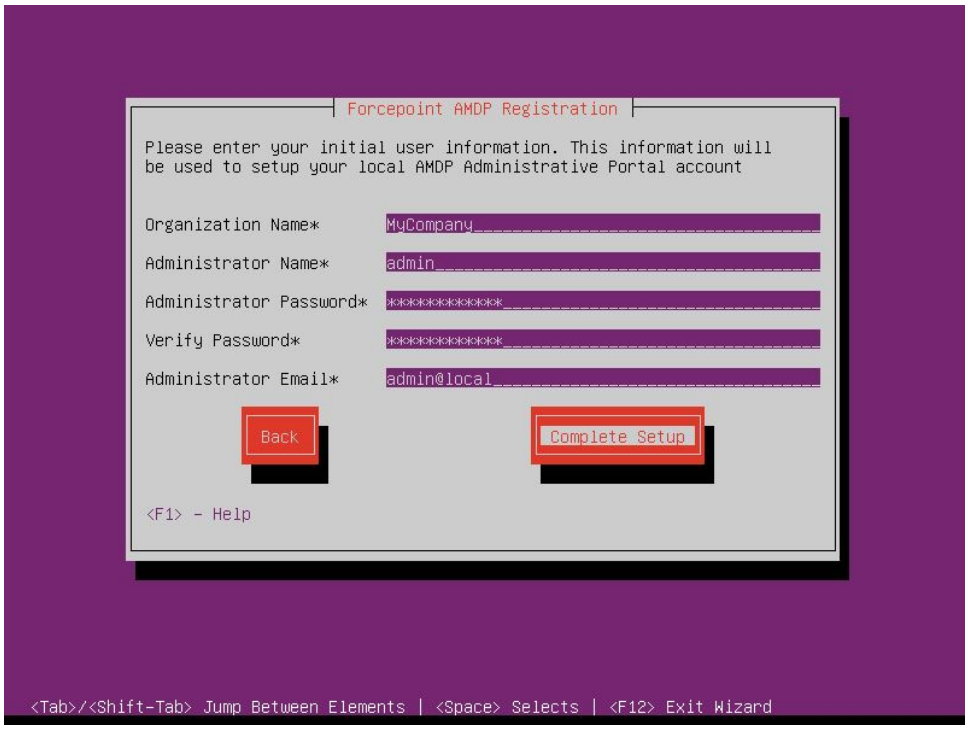
14) Enter your Forcepoint Manager License Key and select **Configure System**.



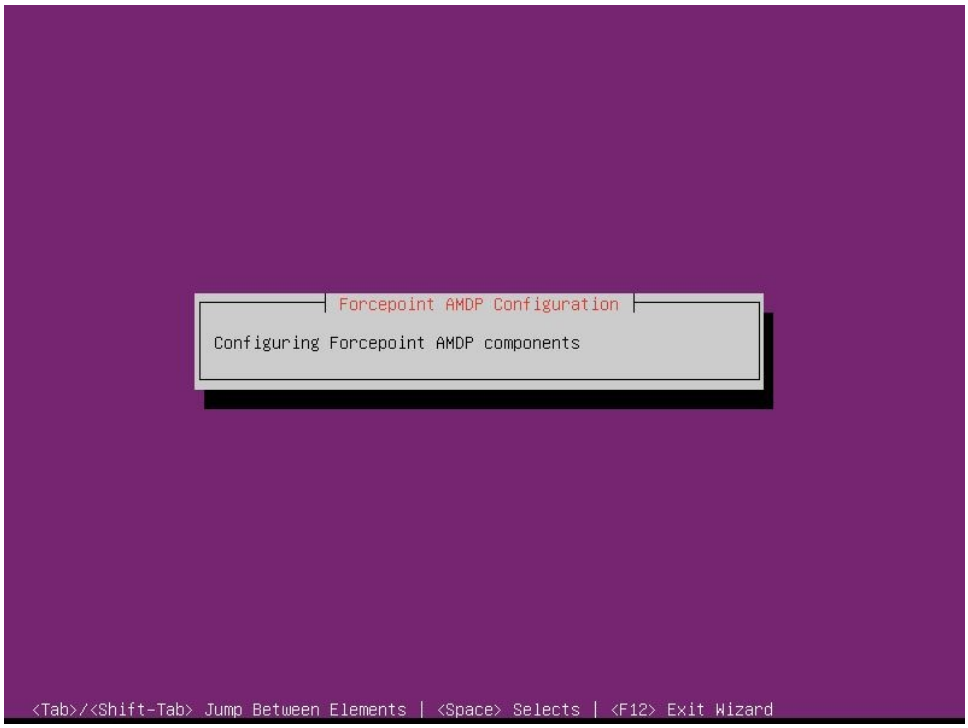
If the license key is invalid or has expired, you will enter an evaluation period with reduced functionality if you decide to **Continue**. Enter a valid license key to ensure the AMDP solution receives the necessary updates to function correctly.



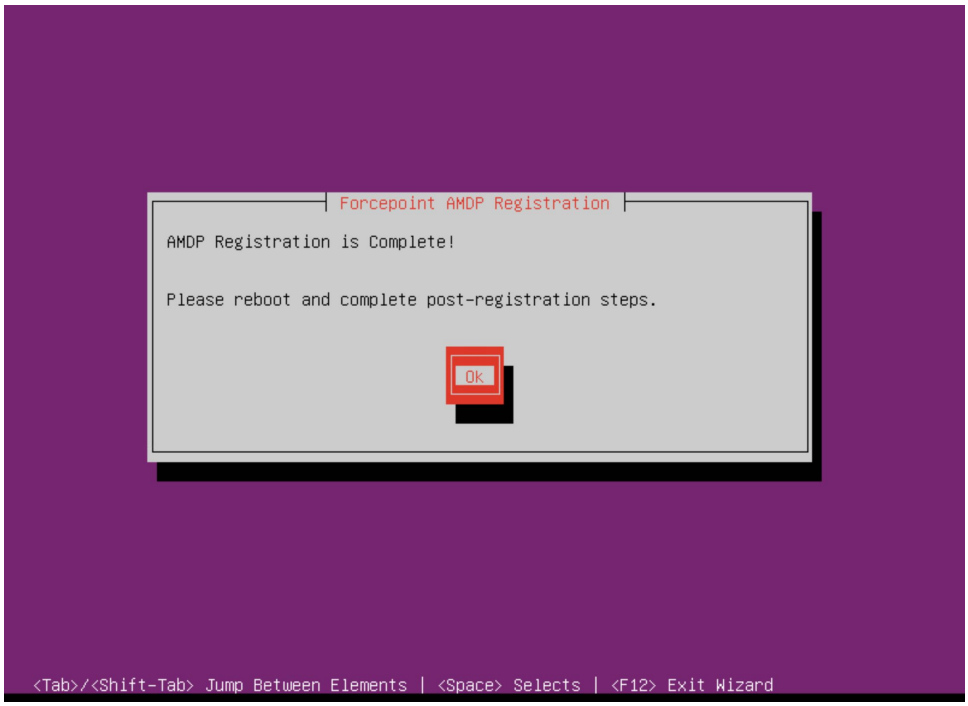
15) To configure the AMDP administrative portal and login account for the portal administrator, enter **Organization Name**, **Administrator Name**, **Administrator Password**, and **Administrator Email**. Select **Complete Setup**.



This will configure Forcepoint AMDP components. This step may take a while to complete.



16) Select **Ok** to exit the Manager Registration wizard. Upon exiting the Manager Registration wizard, you are taken back to the command line.



Using a Custom Certificate check for AMDP Manager:

As part of installation, a self-signed certificate is generated for the manager. If your organization is able to generate a certificate from a trusted authority, it is possible to install it manually.

Generating a trusted certificate is outside the scope of this document. The primary requirements are three files:

- The signing Certificate Authority's public key in PEM format.
- The signed certificate of the server in PEM format.
- The private key of the server in PEM format.

1) Copy the certificates to the Manager.

   In these examples, the files are uploaded to the home directory of the "**admin**" user, and are named:

   a) Server Cert: `amd-manager-crt.pem`

   b) Server PK: `amd-manager-key.pem`

   c) Signing CA: `ca-cert.pem`

2) Copy the certificate and key files to the correct locations.

```
root@amd-manager:/etc/nginx/ssl# cp ~admin/amd-manager-crt.pem tts.pem
root@amd-manager:/etc/nginx/ssl# cp ~admin/amd-manager-key.pem tts.key
```

3) Add the Signing Certificate to the web server certificate chain by concatenating files.

```
root@amd-manager:/etc/nginx/ssl# cat ~admin/ca-cert.pem >> tts.pem
```

4) Verify the certificate installation was successful.

```
root@amd-manager:/etc/nginx/ssl# nginx –t
nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
nginx: configuration file /etc/nginx/nginx.conf test is successful
```

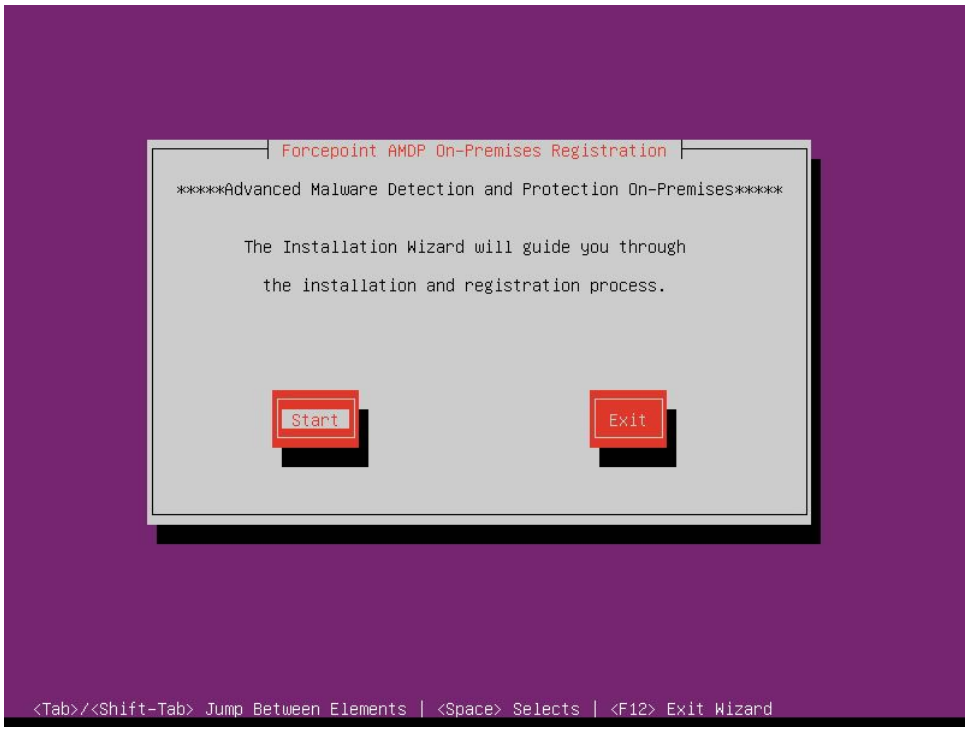
5) Restart the nginx web server.

```
root@amd-manager:/home/admin# systemctl restart nginx
```

Installing Engine

1) Run the **sudo amd_register** command to start the guided installation and registration process.

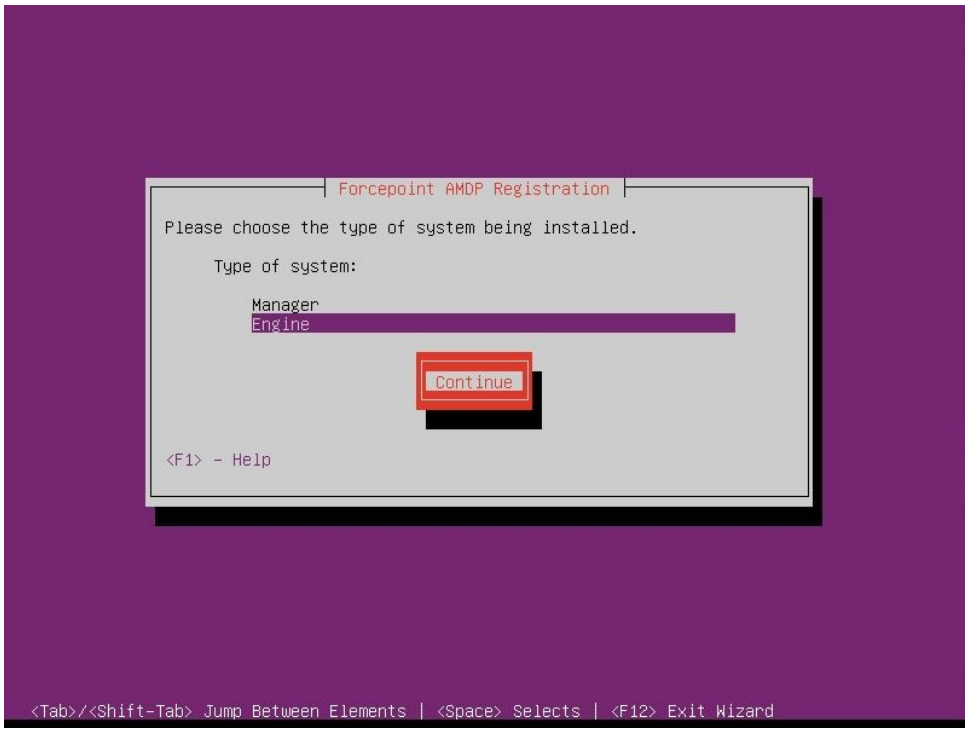
2) The installation process starts at the **Welcome** screen. When you are ready to begin the installation process, select **Start**. This wizard will gather information about the system role and install the appropriate components. The wizard provides the initial system configuration which is then further tailored with the **amd_setup** utility.



3) Read the Forcepoint Subscription Agreement and select **Accept** to proceed with the installation.

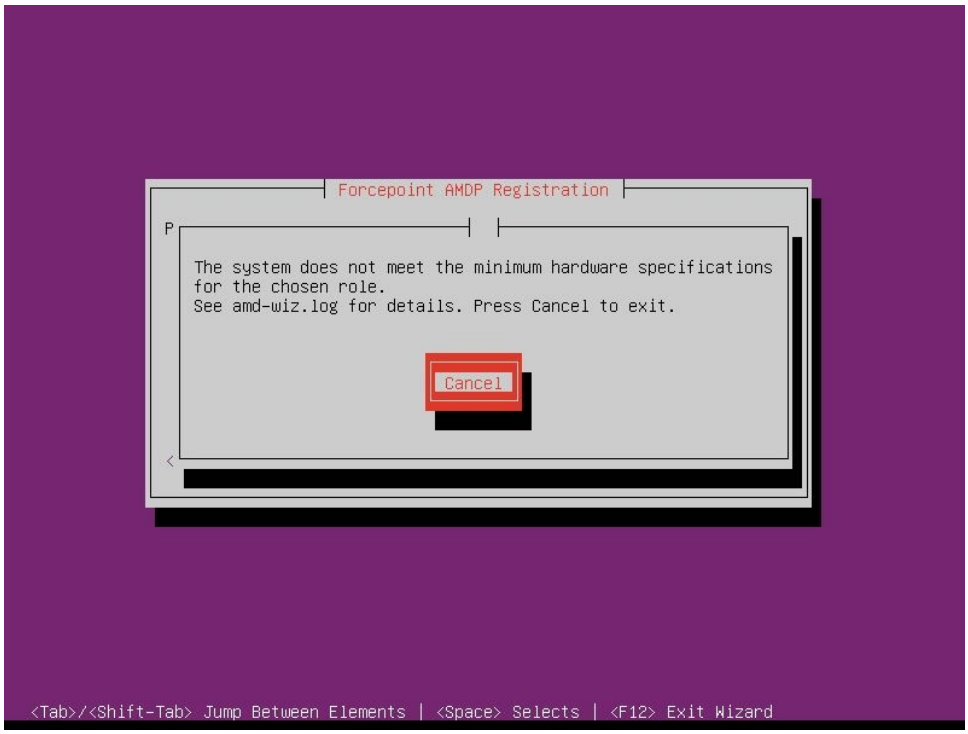
4) To install the Engine, choose **Engine** and select **Continue**.

4(a)



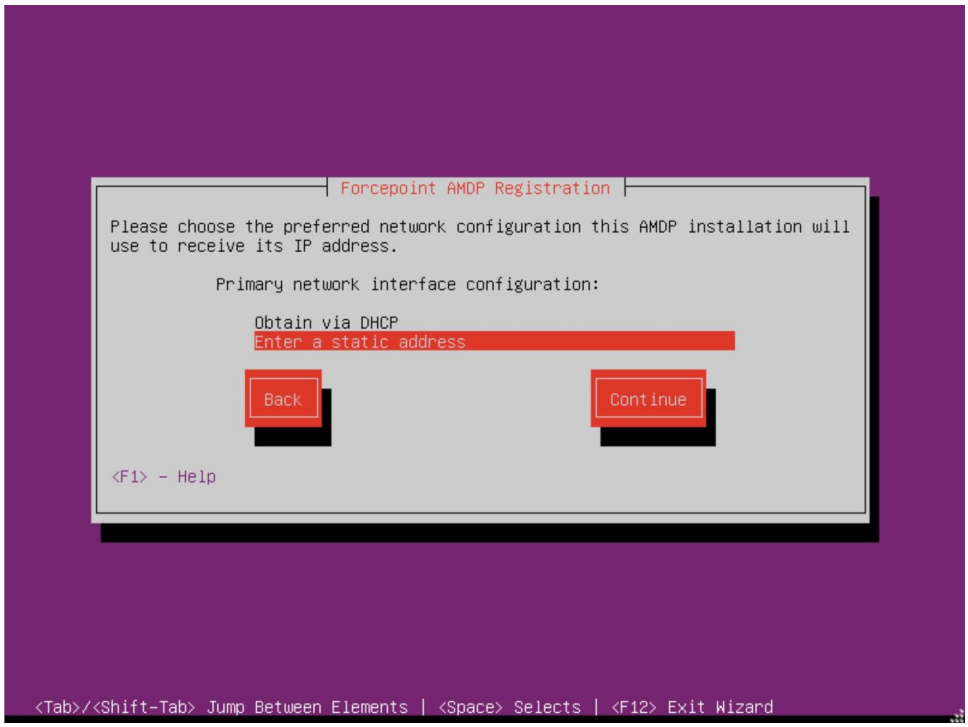
The below wizard checks the server for minimum hardware requirements. If the server does not meet the minimum requirements, either **4(b)** or **4(c)** will appear, depending on the severity of the requirement that is not met. **4(b)** forces the user to cancel the wizard and address the issue, while **4(c)** will allow the user to continue.

4(b)

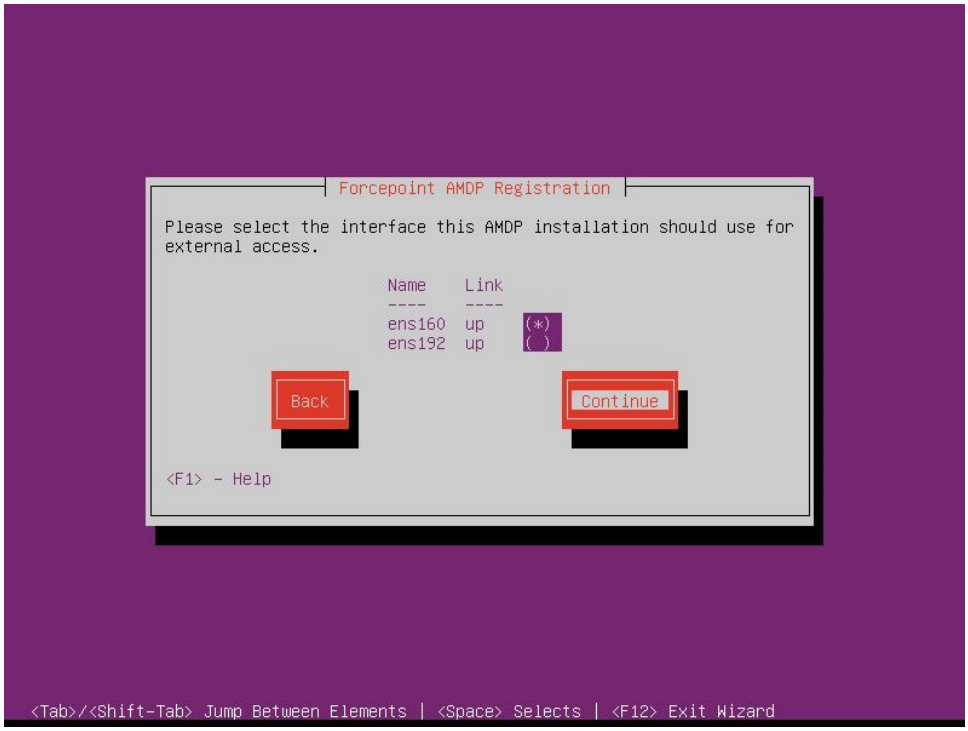


4(c)

5) Choose the preferred network configuration and select **Continue**.



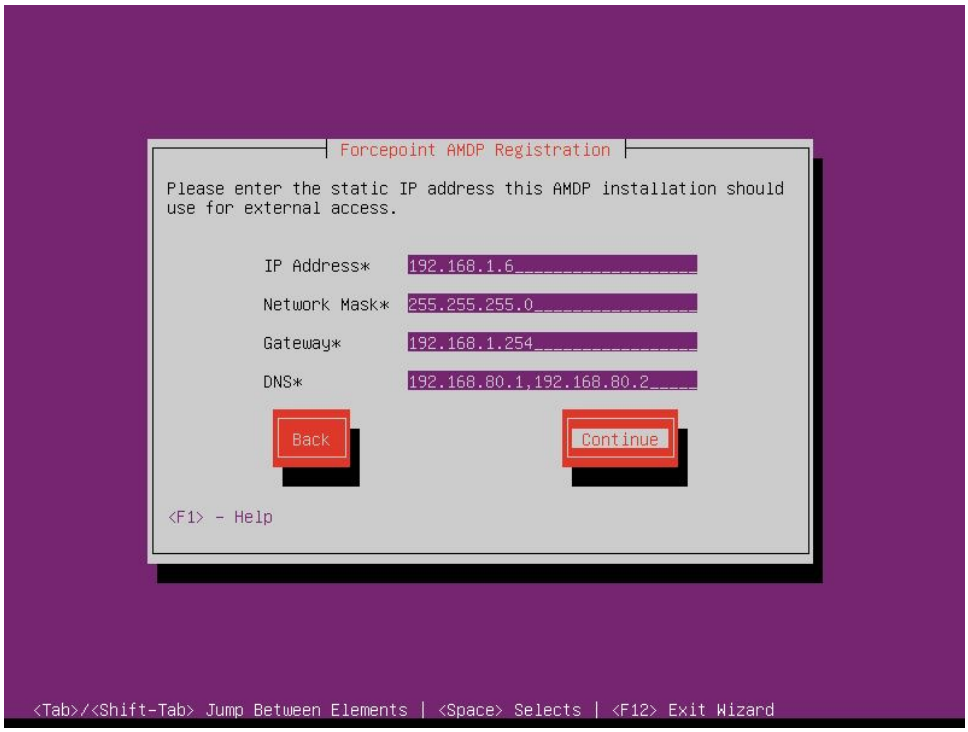
6) Choose the interface for external access and select **Continue**.



7) On the Engine network interface, enter the static **IP Address**, **Network Mask/CIDR**, **Gateway**, and **DNS** entries. Select **Continue**.

Note

Multiple DNS entries should be comma separated.

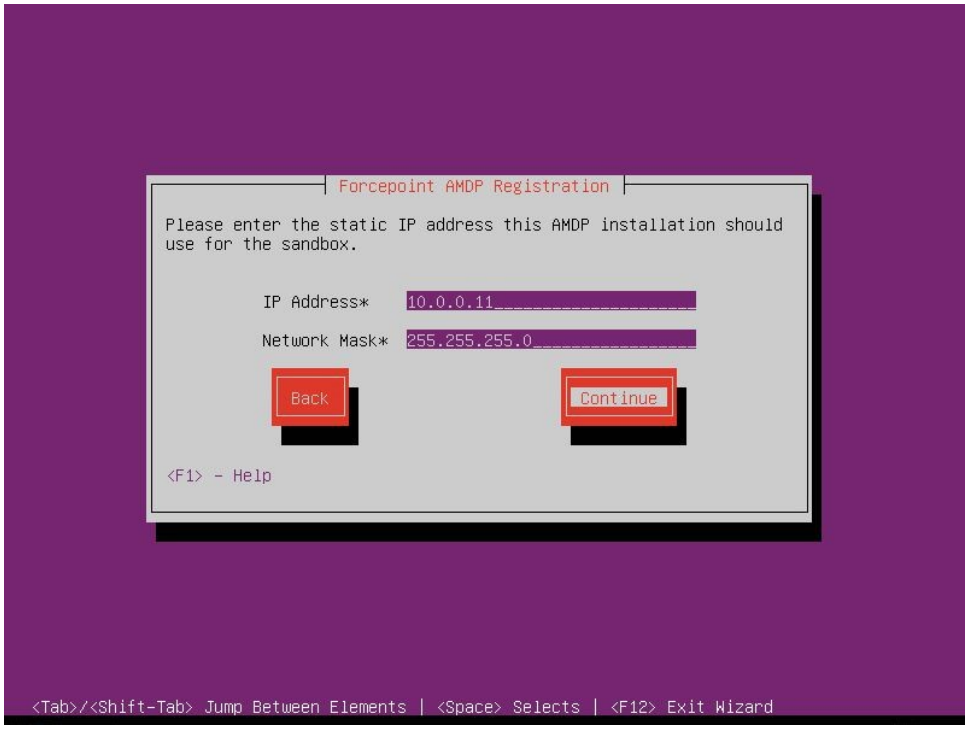


8) Select the interface for the Engine network and **Continue**.

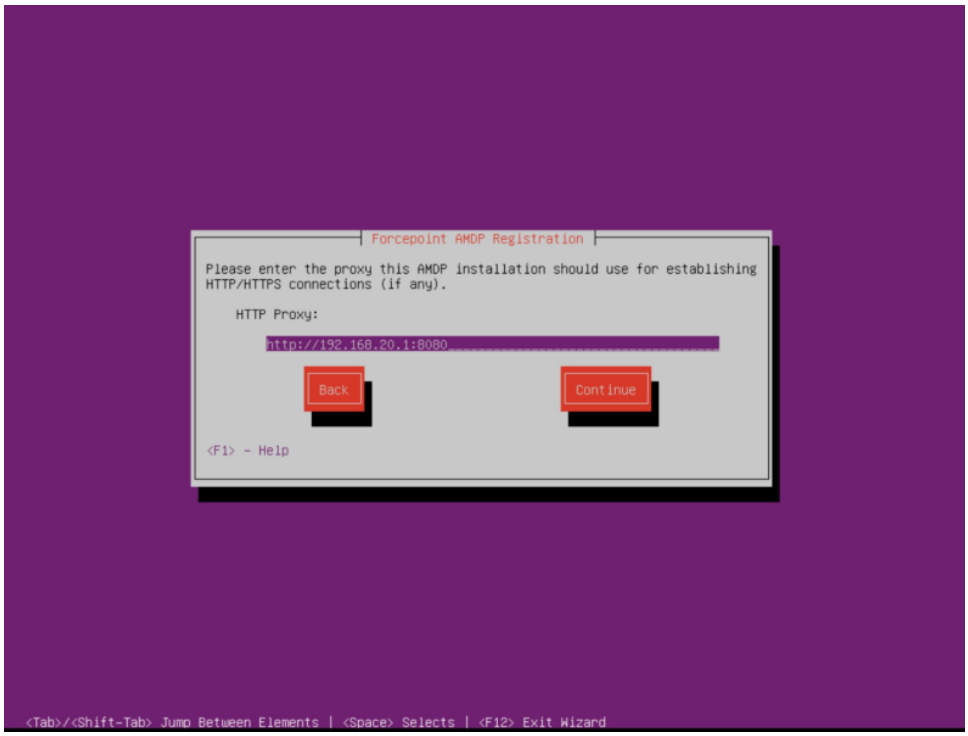
9) Enter the static **IP Address** and select **Continue**.

Note

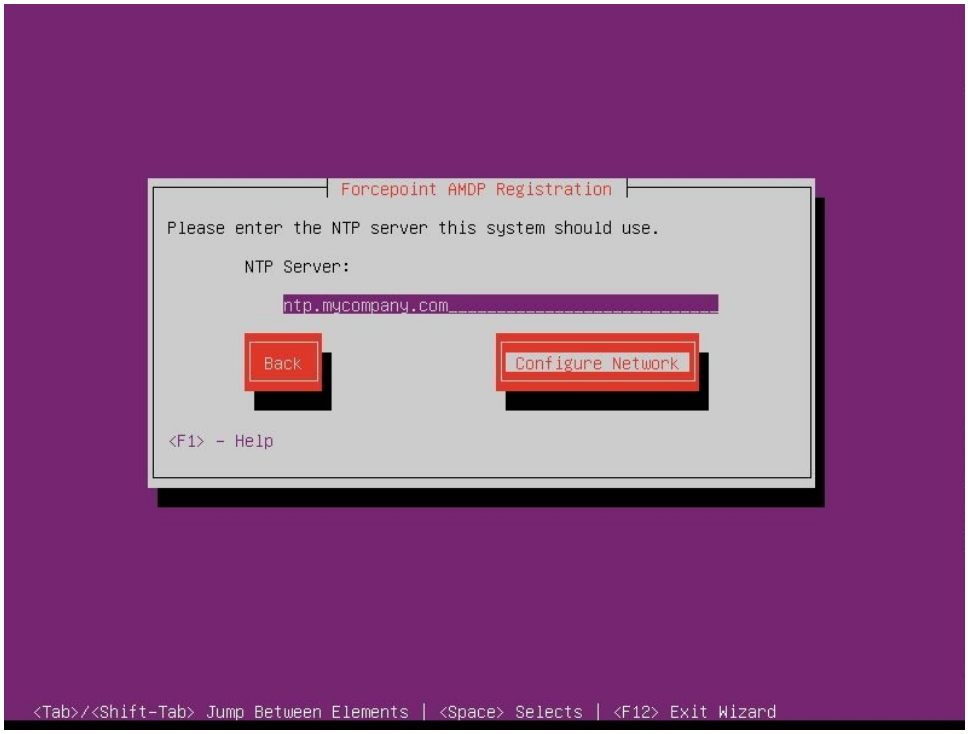
Select an unused IP address in the 10.0.0.0/24 subnet to communicate with the Manager. The Manager is assigned with the fixed (reserved) IP address 10.0.0.10 on the Engine network (E).



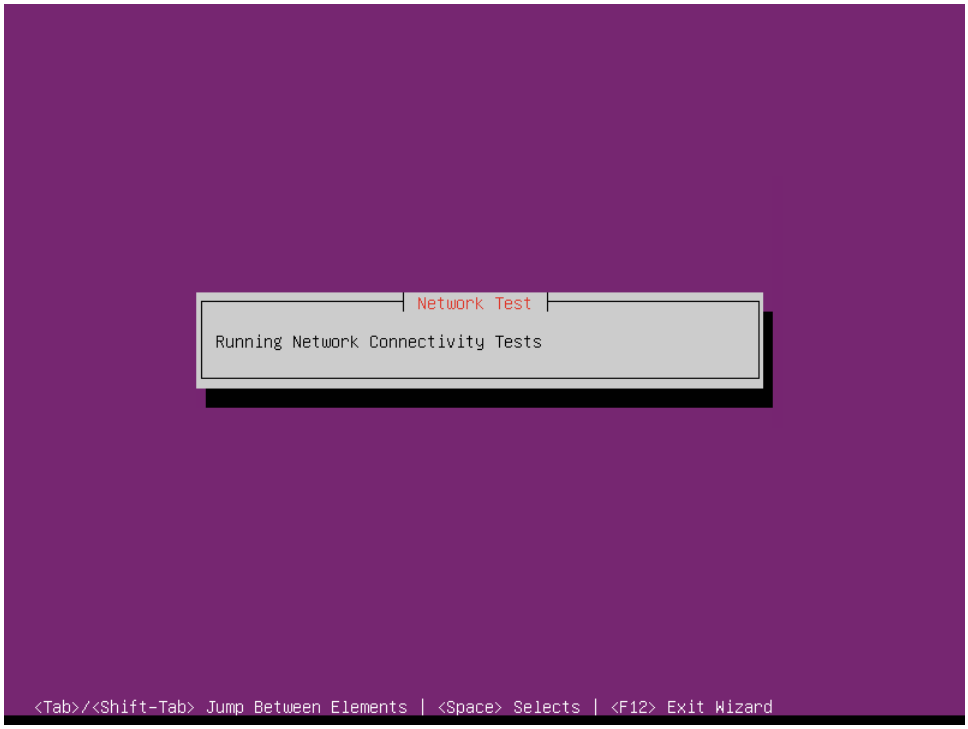
10) Enter the **HTTP Proxy** address for establishing connection with the update servers else leave it blank. Select **Continue**.



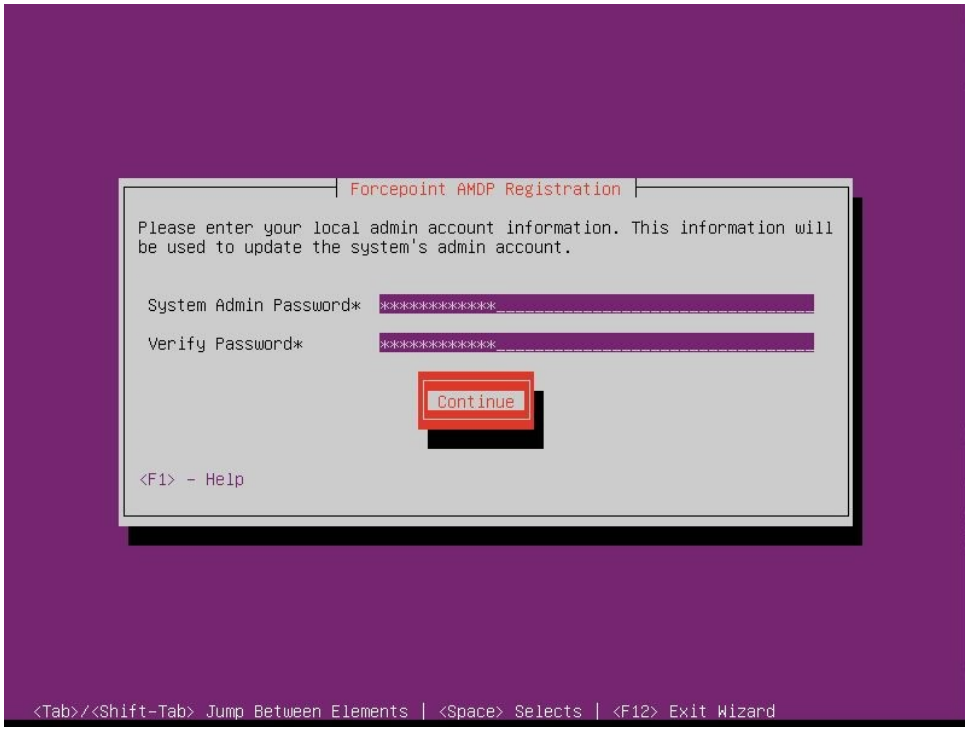
11) Enter the **NTP Server** address and select **Configure Network**.



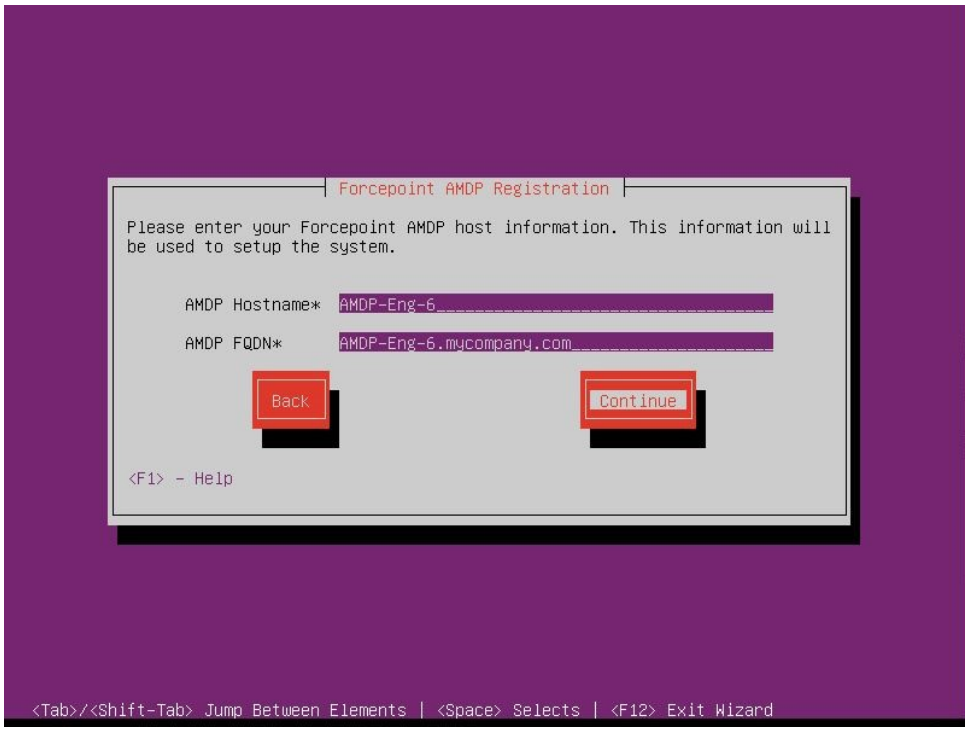
Network connectivity test runs…..



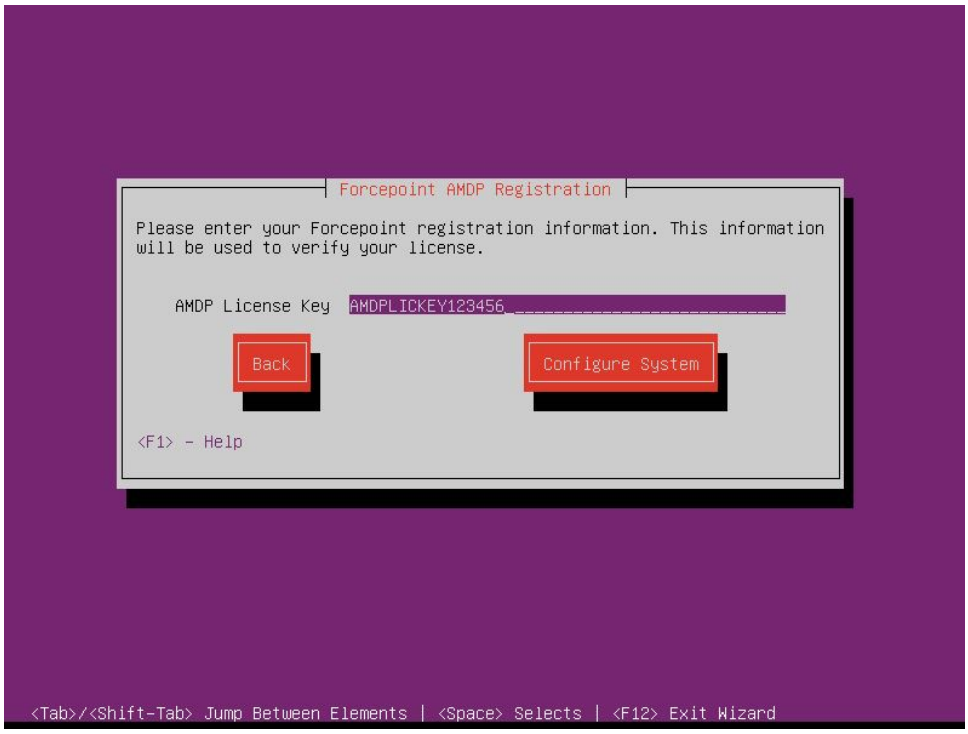
12) Update the password for the local admin user to be used for console and ssh access. Select **Continue**.



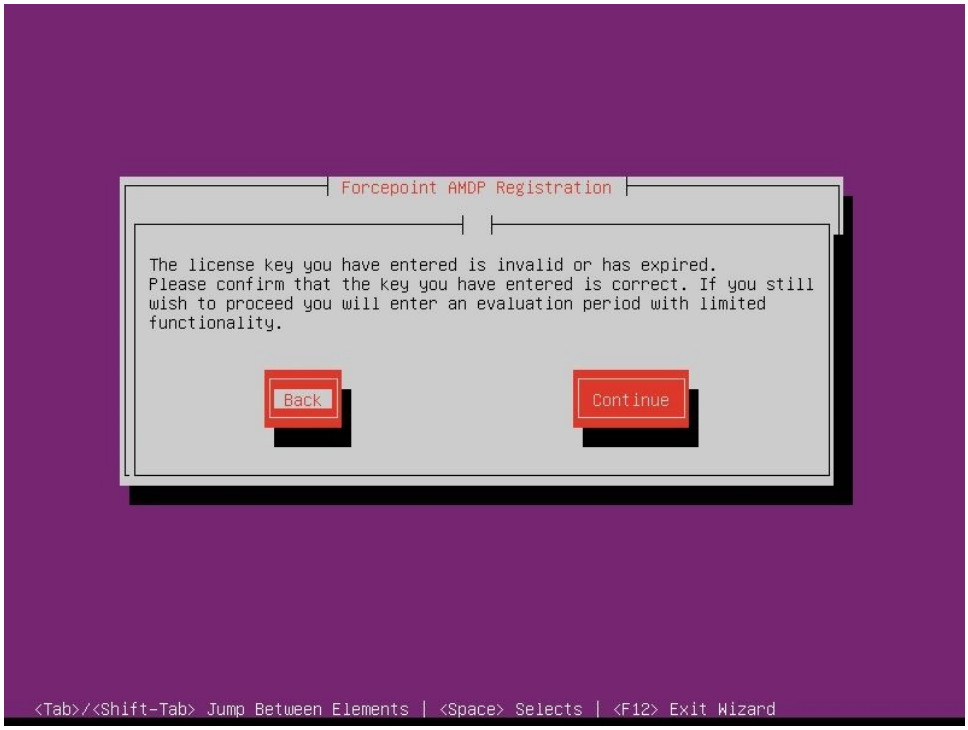
13) Enter your Forcepoint Engine host information and select **Continue**.



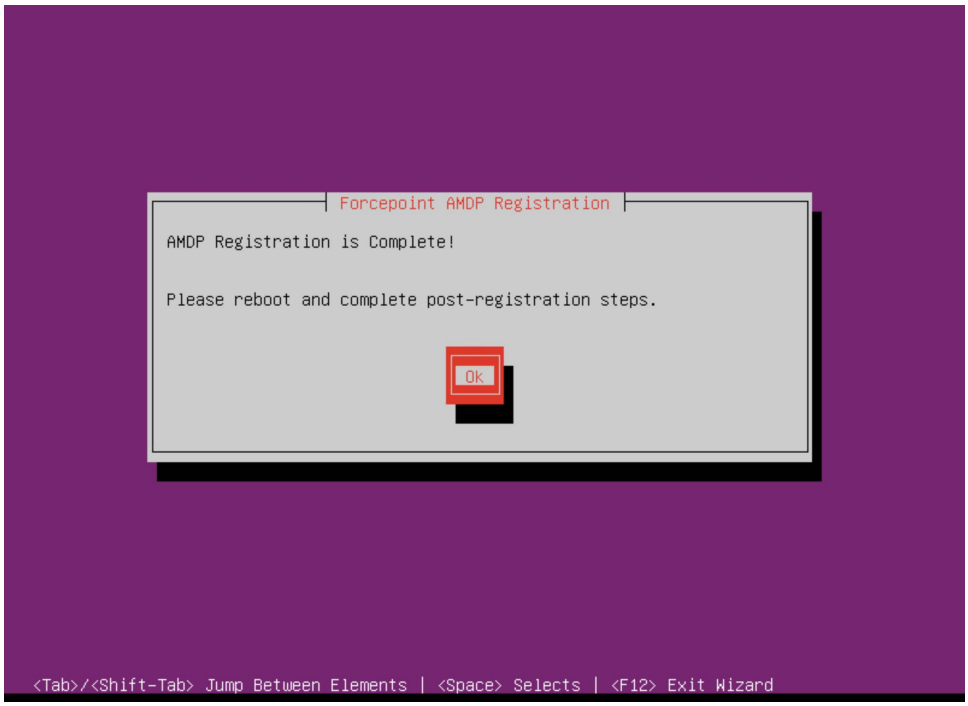
14) Enter your Forcepoint Engine License Key and select **Configure System**.



If the license key is invalid or has expired, you will enter an evaluation period with reduced functionality if you decide to **Continue**. Since installations without a valid key will not receive updates, provide a valid, non-expired license key.



15) Select **Ok** to exit the Engine Registration wizard.



Manager configuration

This section focusses on the **amd_setup** command.

> **Note**
>
> All CLI commands must be executed either using sudo or logged in as root.

The Manager CLI is primarily concerned with Engine management. The **amd_setup** utility supports the **engines** command.

```
root@amd-mgr:~# amd_setup engines -h
usage: amd_setup engine [-h] [-l] [-a ENGINE] [-r ENGINE] [-u ENGINE] [-i IP]

optional arguments:
  -h, --help            show this help message and exit
  -l, --list-engines
  -a ENGINE, --add-engine ENGINE
  -r ENGINE, --remove-engine ENGINE
  -u ENGINE, --update-engine ENGINE
  -i IP, --ip IP, --ipv4 IP
root@amd-mgr:~#
```

- Adding an Engine

```
amd_setup engine -a sandbox1 -i 10.0.0.11
```

- Listing Engines

```
amd_setup engines -l
```

- Removing an Engine

```
amd_setup engine -r sandbox1
```

Engine configuration

This section focusses on the **amd_setup** command.

> **Note**
>
> All CLI commands must be executed either using sudo or logged in as root.

The Engine CLI is primarily concerned with sandbox management. Sandbox environments are instantiated to detonate samples for particular machine types. The **amd_setup** utility supports the **sandbox** command.

```
root@amd-mgr:~# amd_setup sandbox -h
usage: amd_setup sandbox [-h] [--vms] [--vmbuild] [--vmstatus] [--fetch]
                         [--win7] [--win10] [--win10v2004] [--linux] [--android]
                         [--instances INSTANCES] [--autosize]
                         [--msofficekey MSOFFICEKEY | --office365] [--kms KMS] [--vmtimezone
 TIMEZONE]


optional arguments:
  -h, --help            show this help message and exit
  --vms
  --vmbuild
  --vmstatus
  --fetch
  --win7
  --win10
  --win10v2004
  --linux
  --android
  --instances INSTANCES
  --autosize
  --msofficekey MSOFFICEKEY
  --office365
  --kms KMS
  --vmtimezone TIMEZONE

 timezone for the sandbox virtual machine (e.g. America/Chicago ; see tzselect(8))
```

- Configuring Windows VMs

```
amd_setup sandbox --win7
amd_setup sandbox --win10v2004
```

- Configuring Linux VMs

```
amd_setup sandbox --linux
```

- Configuring Android VMs

```
amd_setup sandbox --android
```

- Sandbox engine capacity:
  The Engine is capable of running a number of sandbox virtual machine environments in parallel. This capacity is determined primarily by the number of CPUs on the engine and was automatically configured by **amd_register**. Each virtual machine environment is called an *instance*.

- Tailoring the instance count:
  You can specify an explicit instance count for a machine type (For example: win10v2004) by supplying the **--instances** parameter. In the following example, the Linux machine templates will be instantiated specifying 4 instances per machine type (Ubuntu, Debian, etc.).

  Alternatively, you can specify the **--autosize** parameter to consider all the machines listed on the command line and balance the available resource among them.

  > **Note**
  > Machines not listed in the command are not considered.

  ```
  amd_setup sandbox --linux --instances 4
  ```

- Autosize option:
  The **--autosize** sandbox option can be used to balance the available parallel instance capacity among the machine types listed on the command line.

  > **Note**
  > **--autosize** will overwrite any existing sandbox machine configurations, so is best used during initial provisioning of the engine.

  For example, to create a balanced configuration for all the available sandbox types use the following commands. First we check the status; the status will indicate the parallel instance capacity of the engine.

  ```
  root@amd-eng:~# amd_setup sandbox --vmstatus
  Instance capacity: 7
  Total instances: 0
  VM status:

  No desired VMs configured.
  ```

  Next, we create the basic configuration for each desired sandbox environment:

  ```
  root@amd-eng:~# amd_setup sandbox --win7 --win10 --win10v2004 --linux --android --autosize
  Instance capacity: 7
  Added instances:
          win10:      1
          win10v2004: 1
          win7:       1
          android9:   1
          android10:  1
          android11:  1
          ubuntu1804: 1
  Total instances: 7
  Warning: Windows options require a Microsoft Office license to ensure efficacy for analysis
  of Office documents; supply --msofficekey or --office365
  Warning: Windows options require a Microsoft Office license to ensure efficacy for analysis
  of Office documents; supply --msofficekey or --office365
  ```

  For any sandbox environment requiring additional options such as a license or office, take note of the instance count for that machine type and reissue the setup command with an explicit instance count observed from the **--autosize** command (1 in this example):

  ```
  root@amd-eng:~# amd_setup sandbox --win10v2004 --office365 --vmtimezone America/Chicago --
  instances 1
  Instance capacity: 7
  Added instances:
          win10v2004: 1
  Total instances: 7
  ```

- Building VMs:

To initiate a build of the configured sandbox VM types, use the **--vmbuild** option for the sandbox command. The build will create the VM environments for each newly configured or modified machine type. The build will also update sandbox VM environments if there has been a software update applied.

> **Note**
>
> Building sandbox VMs can be a time consuming operation and may take several hours to complete. Once the build has started, check the status with **--vmstatus** option to see if it has completed.

```
# amd_setup sandbox --vmbuild --vmstatus
```

- Checking VM build status:
  After allocating a virtual machine type (For example: --win10v2004), the corresponding virtual machine environment will need to be built. You can test the status of the build with the **--vmstatus** option. If the environment has not yet been built for that type or has changes pending due to a software update, the status will indicate "Build action recommended". The version will indicate "UNAVAILABLE" until the build action has completed (see Building VMs section above).

```
# amd_setup sandbox --vmstatus
sandbox: VM status:  VM: win10v2004
Latest version: UNAVAILABLE
Build action recommended
```

> **Note**
>
> If the build status indicates "UNAVAILABLE" the VM has not been built yet. Whenever a VM configuration has been changed or the base ISO has been updated, a build action is indicated. To start the build, run **amd_setup sandbox** with a **--vmbuild** option.

Software updates

The base operating system for AMDP is currently Ubuntu focal 20.04 LTS and uses standard Ubuntu software update facilities and package management tools.

The system installation from the ISO includes baseline packages for AMDP and Ubuntu, as well as configuration for the related update repositories and the digital signatures for validating updates. The primary tool for managing updates is the standard Linux Advanced Packaging Tool (APT).

As part of the initial setup and registration, the **amd_register** tool invokes **apt** to update the system and AMDP software to the latest versions available from the update repositories.

After the system has been installed and registered, the update behavior can be changed. By default, the repositories are checked daily to see if there are available updates, and any updates which are eligible for **automatic installation** are applied. To change this behavior, use the **amd_setup updates** command.

To enable automatic updates for both AMDP and the system, use the following command:

```
amd_setup updates --system --amdp enable
```

or to disable automatic updates:

```
amd_setup updates --system --amdp disable
```

If either **--system** or **--amdp** are omitted, only the specified updates are affected by the command, so for example

```
amd_setup updates --amdp enable
```

enables updates for AMDP but doesn't change the setting for system updates.

Run **amd_setup updates -h** to see the available options for the command:

```
root@amd-mgr:~# amd_setup updates -h
usage: amd_setup updates [-h] [--system] [--amdp] {enable,disable}

positional arguments:
  {enable,disable}  Choose whether to enable or disable automatic updates

optional arguments:
  -h, --help        show this help message and exit
  --system          base system software updates
  --amdp            AMDP software updates
```

Automatic updates

The following package types are eligible for automatic update:

- Security updates for system packages
- AMDP administrative tools (wizard, cli)
- AMDP services and health monitors
- Threat Detection and Malware signatures (manager); (autoinstalled, but need to reload)
- Sandbox VM monitors (engine); (autoinstalled, but VMs may need be rebuilt)

Manual updates

For updates which are not automatically applied, the following CLI command will upgrade all available packages to the most recent version.

Note

Some AMDP packages require special handling prior to upgrade (see *Upgrade Special Handling Steps* below).

```
apt update  # updates the information about available updates

apt list --upgradeable  # lists packages eligible for update

apt upgrade  # upgrade and install all eligible packages
```

or

```
apt install package(s) #  upgrade and install a particular package (or packages)
```

Note

The **apt upgrade** command will install non-security related system packages as well as the AMDP packages.

Check for available updates on the manager once a week for signature updates, and every few weeks for other updates.

Upgrade special handling steps

Some packages require special handling prior to and/or after upgrading, so we strongly recommend to use the **apt list** command to see what changes will be affected prior to deciding to use the apt upgrade command.

Malware signatures (Manager)

The malware signature package for the manager is updated frequently, so weekly you should check if the package (hatching-triage-processing) has been changed. In order for the signatures to be active, the triage processes need to be signaled to reload.

```
killall -HUP triage
```

CAUTION

Avoid restarting the hatching-triage or hatching-triage-processing services until the signatures have been reloaded if there are active analysis in progress.

Static analysis service (Manager)

Prior to upgrading the hatching-triage package, it's desirable to quiesce the processing of new samples and finish ones in progress. Use the following command:

```
killall -TERM triage; while pidof triage >/dev/null; do echo -n .; sleep 1; done
```

Restart the service now:

```
systemctl restart hatching-triage
```

VM monitors and services (Engine)

Virtual machine monitors include some components which are installed in the virtual machine environments for the sandbox. While the monitor packages are automatically installed, the corresponding VMs may need to be rebuilt. When checking for general updates, run the following command to check if the VMs need to be rebuilt:

```
amd_setup sandbox --vmstatus
```

See *Engine configuration* for additional information on building VMs.

Sandbox manager and services (Engine)

Prior to upgrading the hatching-sandbox and hatching-sandbox-net packages, it's desirable to quiescent the processing of new samples and finish ones in progress. Use the following command:

```
killall -HUP sandbox; while pidof sandbox >/dev/null; do echo -n .; sleep 1; done
```

Restart the services now:

```
systemctl restart hatching-sandbox hatching-sandbox-net
```

After updating HatchVM (**hatching-hatchvm** and **hatching-hatchavd** packages), the **hatchng-vms** service must be restarted.

Note

Do not restart this service if there is an active VM build (see **amd_setup sandbox --vmstatus**).

```
systemctl restart hatching-vms
```

Packages requiring reboot

Some updates require the system to be rebooted to complete the installation, typically associated with a new kernel or core service. Generally, AMDP updates do not require a reboot, but a reboot is the easiest way to ensure all the associated services have been restarted following an upgrade.

General notes about package naming

AMDP package names start with "**amd**", "**python3-amd**", "**hatching**" or "**tts**".

Related concepts
Engine configuration on page 28

Backup and Restore

The **amd_backup** tool creates a backup of the AMDP configuration files and log files that can be restored through the **amd_restore** command on a freshly installed machine that has gone through the initial registration.

Usage and options for the backup command are as follows:

```
root@amd-mgr# amd_backup -h
usage: amd_backup [-h] [--logs-only] [--no-sql-backup] [--template TEMPLATE] [--list] [--dry-run]

optional arguments:
  -h, --help           show this help message and exit
  --logs-only          Only backup logs
  --no-sql-backup      Don't backup the Triage database
  --template TEMPLATE  Provide a custom backup template
  --list               List available backup files
  --dry-run            Do a dry-run backup
```

Usage and options for the restore command are as follows:

```
root@amd-mgr# amd_restore -h
usage: amd_restore [-h] -f FILE

optional arguments:
  -h, --help            show this help message and exit
  -f FILE, --file FILE  Backup file to restore
```

Usage

To provide the backup logs to Forcepoint Support, you may wish to use the **--logs-only** option to exclude samples.

```
root@amd-mgr:# amd_backup --logs-only
Space required for backup: 54369 KB
Available Space: 38294704 KB
Creating backup
Created backup at /var/spool/amd/backups/amdp-backup_20231129-160139-logs.tar.gz
root@amd-mgr:# amd_backup --list
Available backups:
/var/spool/amd/backups/amdp-backup_20231129-160139-logs.tar.gz

----

root@amd-mgr:~# amd_backup --list
Available backups:
/var/spool/amd/backups/amdp-backup_20231129-160139-logs.tar.gz
root@amd-mgr:~# amd_restore -f /var/spool/amd/backups/amdp-backup_20231129-160139-logs.tar.gz
Extracting /var/spool/amd/backups/amdp-backup_20231129-160139-logs.tar.gz
Validating backup compatibility
Stopping services
Restoring backup
Cleaning up temp directory
Initial restore complete. Restart the system to finish the restore operation.
root@amd-mgr:~#
```

Microsoft Office licensing

Note

- Windows **10** VM requires **Microsoft Office 2019**
- Windows **7** VM requires **Microsoft Office 2010**

There are 2 options for Microsoft Office licensing:

1) `root@amd-eng:~# amd_setup sandbox --[vm type][--msofficekey MSOFFICEKEY]`
   where MSOFFICEKEY is a license key for Microsoft Office.

   For example: `amd_setup sandbox --win10 --msofficekey XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX`

2) `root@amd-eng:~# amd_setup sandbox --[vm type][--msofficekey MSOFFICEKEY][--kms KMS]`
   where KMS is an optional key management server.

If you want to specify **--instances** to tailor the instance count that must be supplied with the Windows VM type and the license key then,

```
root@amd-eng:~# amd_setup sandbox --[vm type][--msofficekey MSOFFICEKEY][--instances count]
```

For example: `root@amd-eng:~# amd_setup sandbox --win10 --msofficekey XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --instances 24`

Below warning message is displayed if MS license key is **not** supplied: `root@amd-eng:~# amd_setup sandbox --win10`

Warning

Windows options require a Microsoft Office license to ensure efficacy for analysis of Office documents; supply --msofficekey

Office 365 configuration

Steps

1) Add a Windows 10 sandbox with Office 365 support with following command. Make sure to insert the correct timezone for your location.

```
sudo amd_setup sandbox --win10v2004 --office365 --vmtimezone <tzselect style>
```

A `<tzselect style>` would be in this format: America/New_York or Europe/London for example.

```
admin@bt-amdp-eng-159:~$ sudo amd_setup sandbox --win10v2004 --office365 --vmtimezone
 America/Denver
[sudo] password for admin:
Instance capacity:15
No instance count specified, defaulting to 8
Added instances:
    win10v2004: 8
Total instances: 8
```

2) Run `sudo amd_setup sandbox --vmbuild` to start building the sandbox VM.

```
admin@bt-amdp-eng-159:~$ sudo amd_setup sandbox --vmbuild
Instance capacity:15
Total instances: 8
VM build:

Building all desired VMs
{}
```

Waiting for Office to be ready for manual action...

a) When the Office 365 script is ran, the `hatching-vms` logs will log the used host and port. This log message looks like:

```
The current script may need manual interaction. VNC is enabled. script=office365new
 vnc_host=0.0.0.0 vnc_port=29023 ..
```

b) Find it by running:

```
journalctl -u hatching-vms | grep "script may need manual" | tail -1
```

c) The Office 365 script will first install Office 365. When it is ready to be activated, the following log messages will appear:

```
script=office365new script-message="Waiting for manual activation of Office 365. Connect
 with VNC and manually activate.\n" ..
```

d) Find it by running:

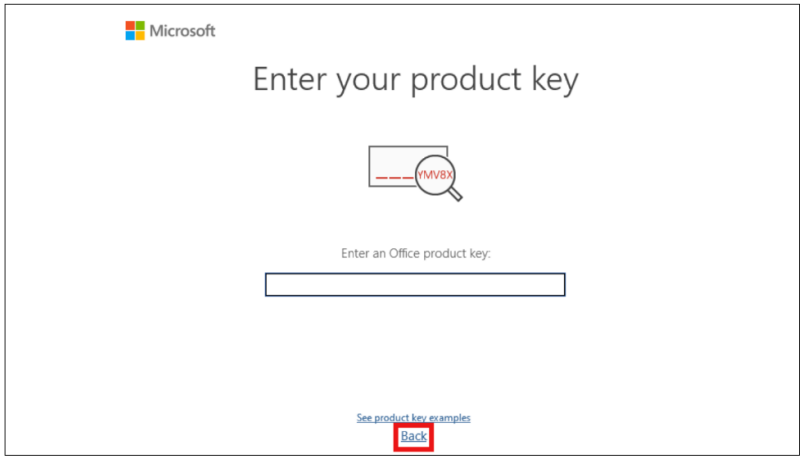
```
journalctl -u hatching-vms | grep "Waiting for manual activation of Office 365" | tail -1
```

Note

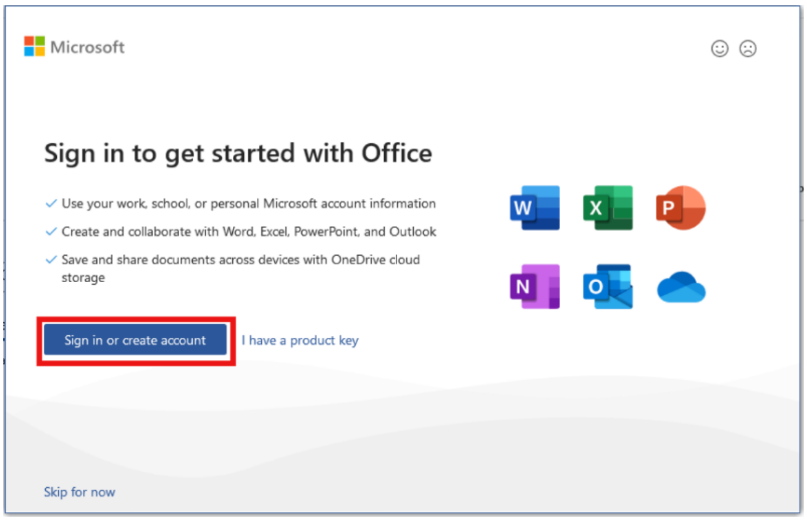
The **vnc_port** is listed in the first log message.

3) On a separate host, use a VNC client to connect to the IP of the engine on the port listed previously.

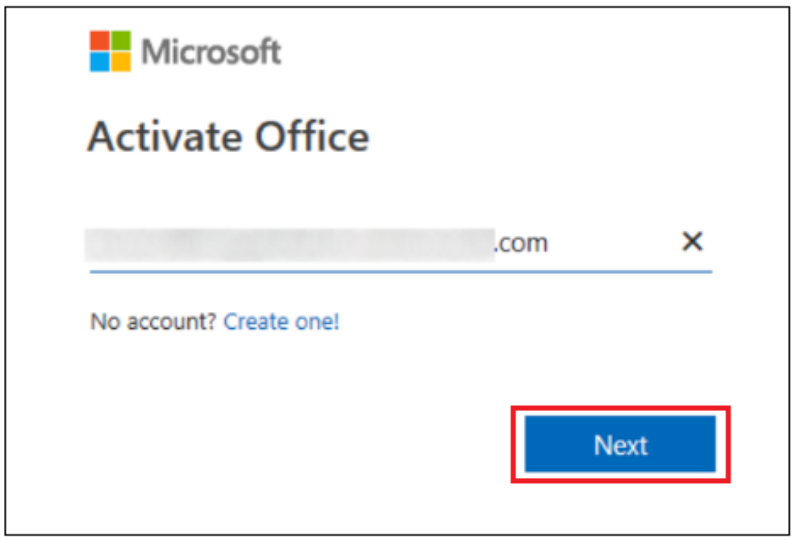
4) Once connected via VNC, you will be presented with a prompt to enter a product key for Office. Select **Back** on this menu.



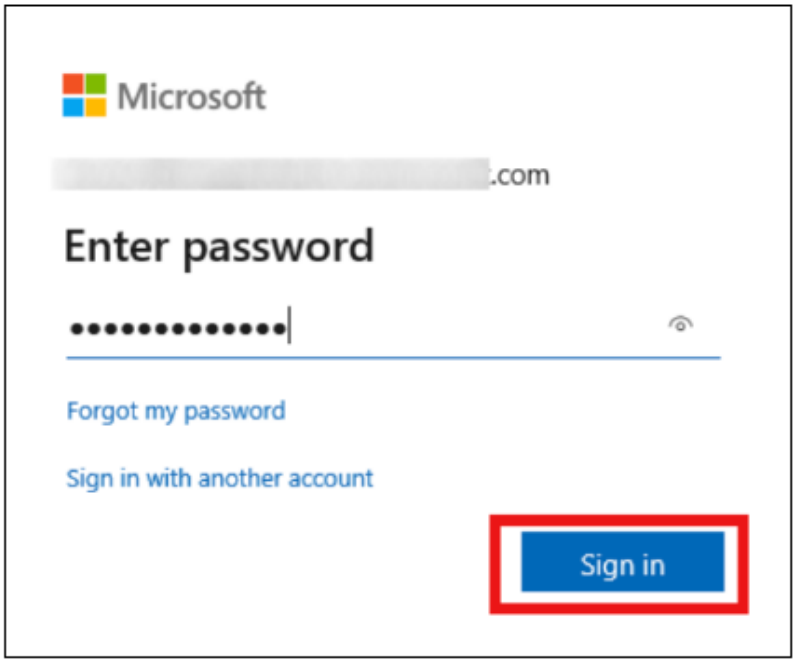
5) A new pop-up appears asking to **Sign in to get started with Office**. Select **Sign in or create account**.



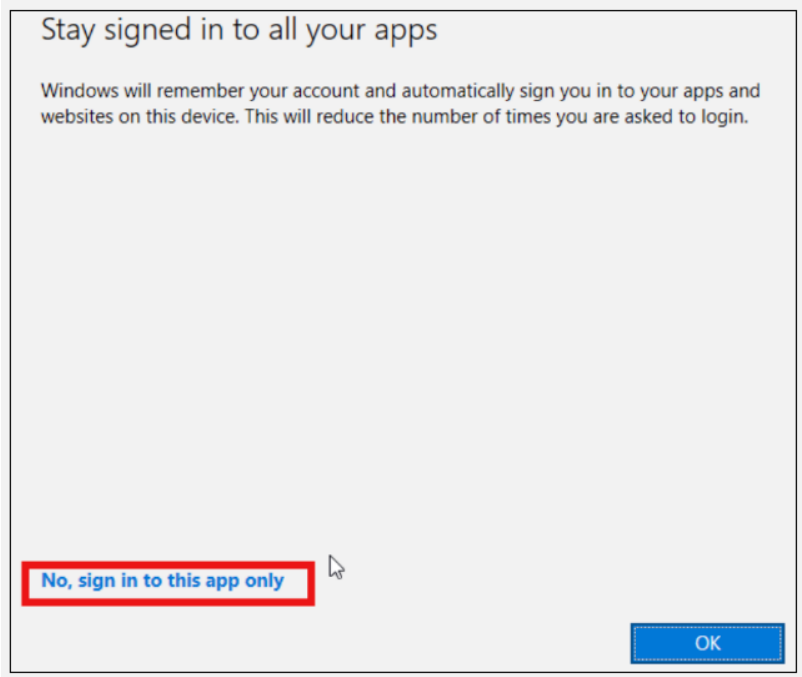
6) Enter the email address of the user that will be used with the sandboxes and select **Next**.



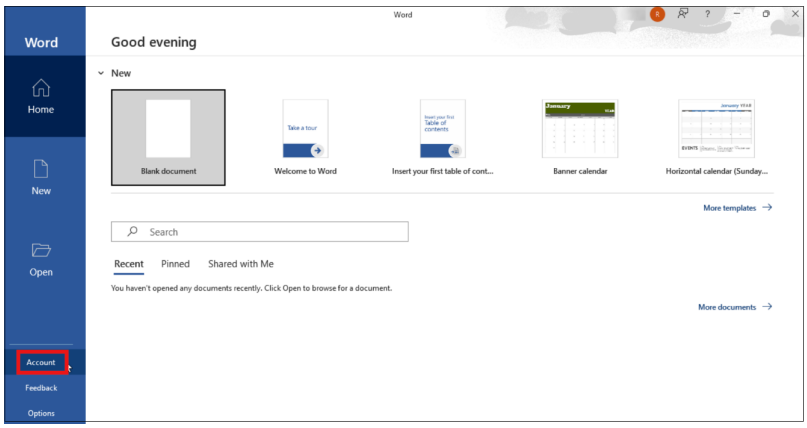
7) Enter the password for the user entered previously.

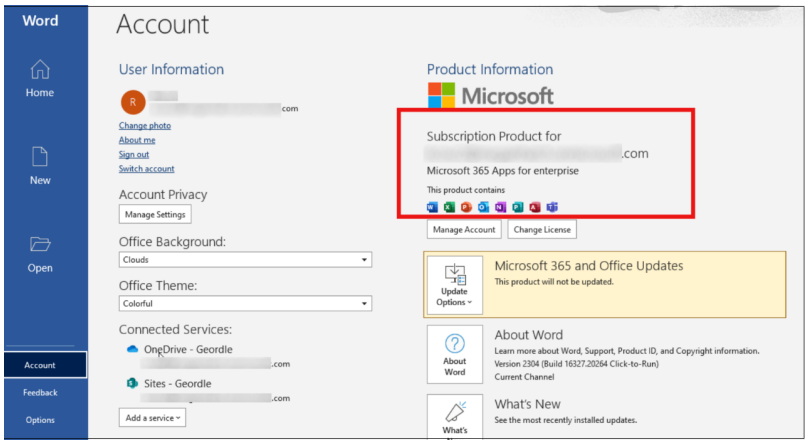


8) Once signed in, select **No, sign in to this app only** on the pop-up that says **Stay signed in to all your apps**.

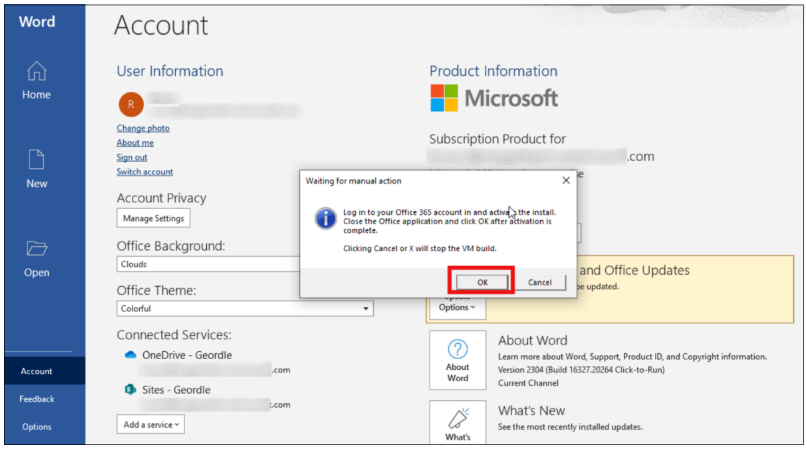


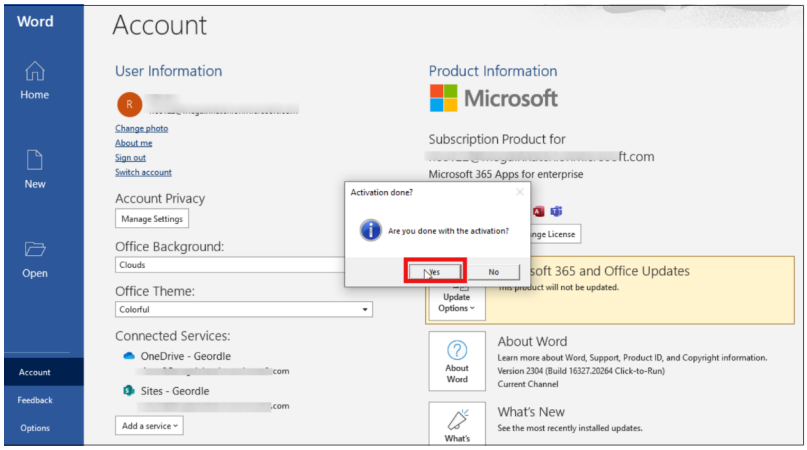
9) Select **Account** in the Microsoft Word menu and verify that Office is activated. You should see a section related to your subscription on the right side of the screen.





10) In the taskbar, find the window that has **Waiting for manual activation** in the text field and select **OK**. Select **Yes** on the next pop-up to confirm that the activation is complete.

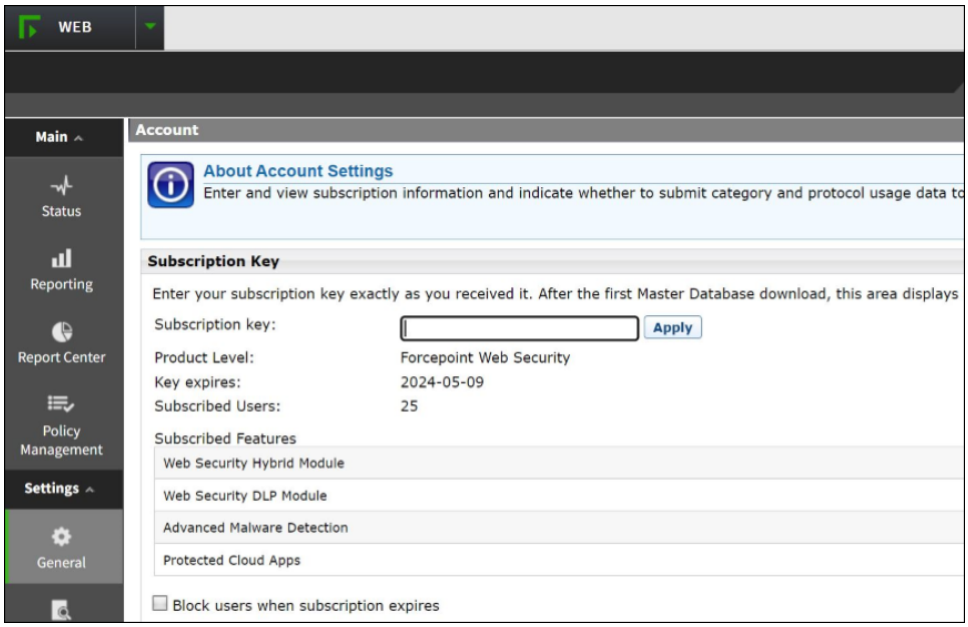




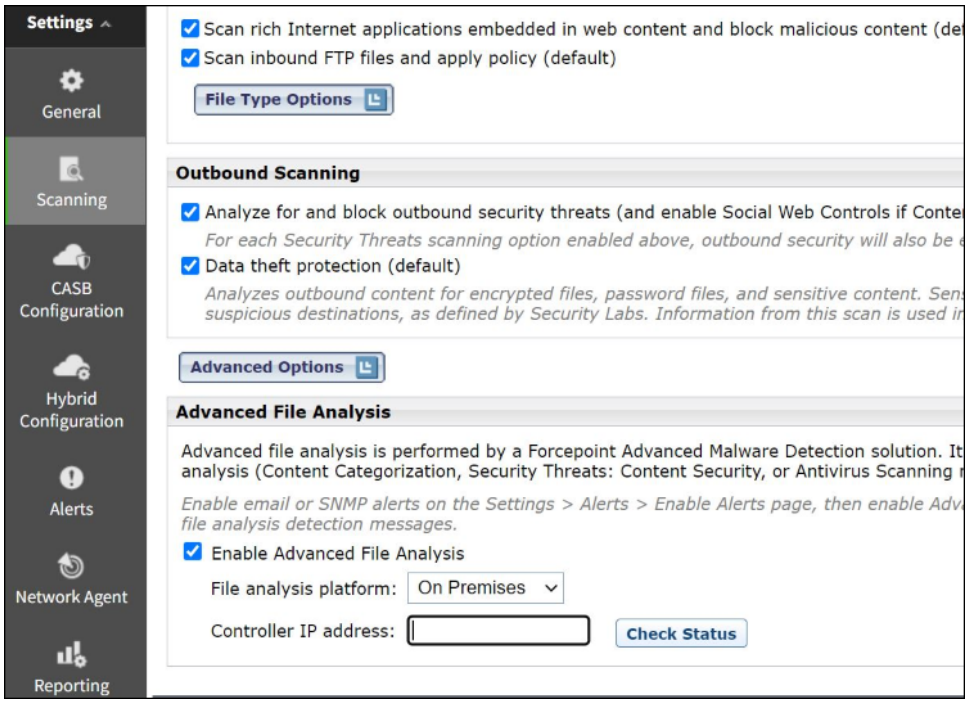
11) Close the VNC session and wait for the VM to finish building.

Web Security licensing and configuration

The Web Security License Key is entered in the Web section of Forcepoint Security Manager (FSM) under **Settings** > **General** > **Account** > **Subscription Key**.



AMDP configuration for Web Security is done in the Web section of Forcepoint Security Manager under **Settings** > **Scanning** > **Scanning Options** > **Advanced File Analysis**. The only configuration needed, is the IP address of the AMDP Manager.



For detailed information, refer to Advanced File Analysis section and Configuring your account information section in Forcepoint Web Security Administrator Help.

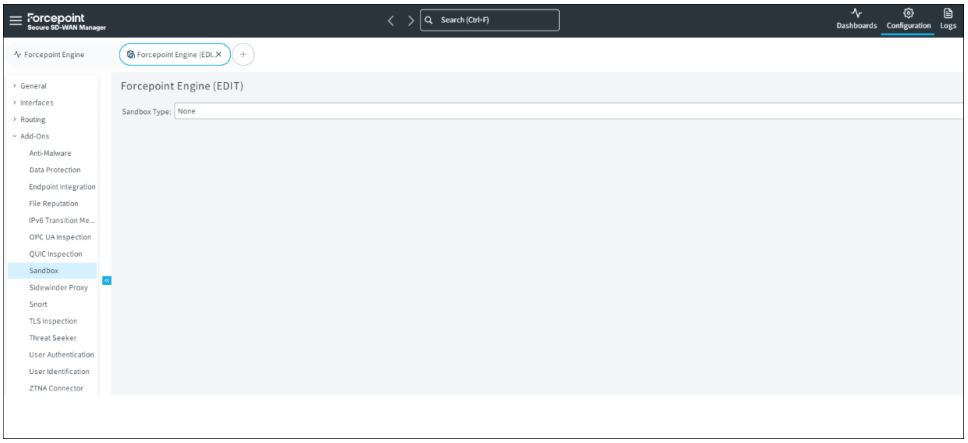
Configuring AMDP on Secure SD-WAN via SMC GUI

Follow the instructions listed below to configure AMDP on the Secure SD-WAN using the SMC GUI:

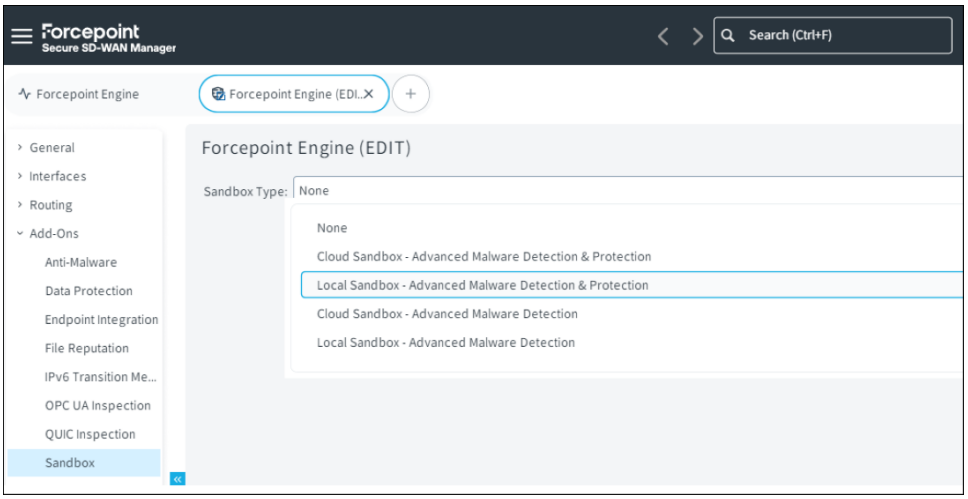
Note

The menu options described in the numbered list below are only present on SMC version 7.1.1 and above.

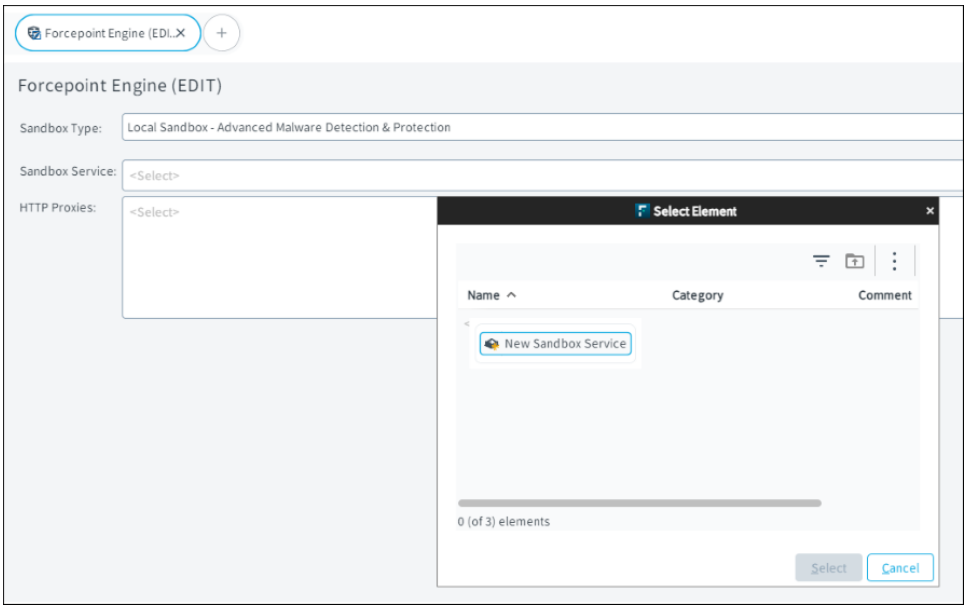
1) Open the engine editor for a firewall and navigate to **Add-Ons** > **Sandbox**.



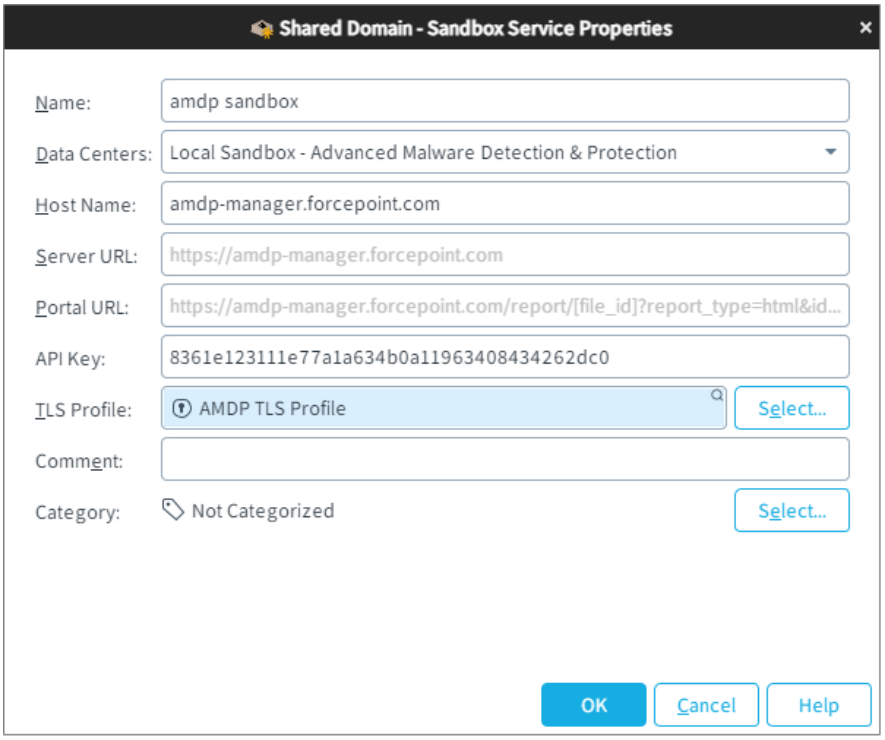
2) Under **Sandbox Type** select **Local Sandbox - Advanced Malware Detection & Protection**.



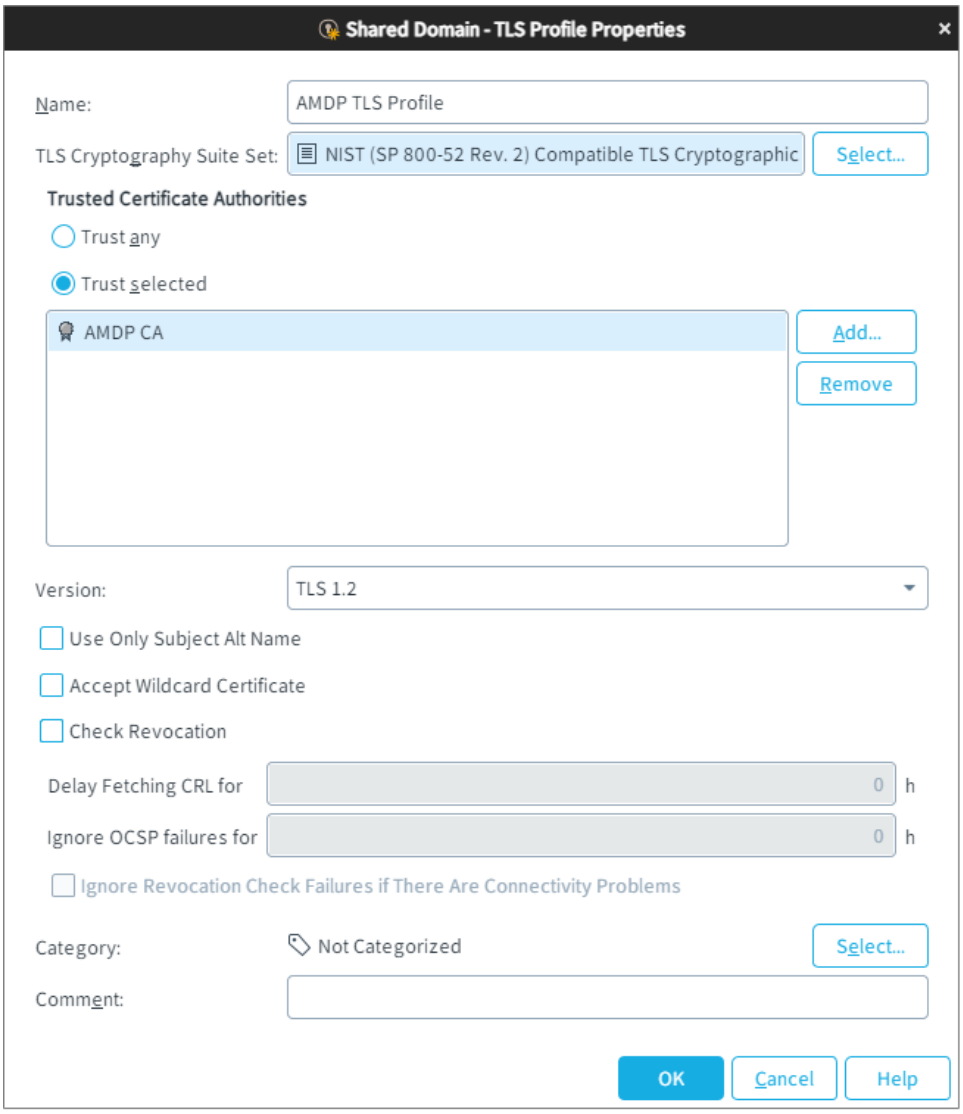
3) Select the **Sandbox Service** field and create a **New Sandbox Service** element in the pop-up that appears.



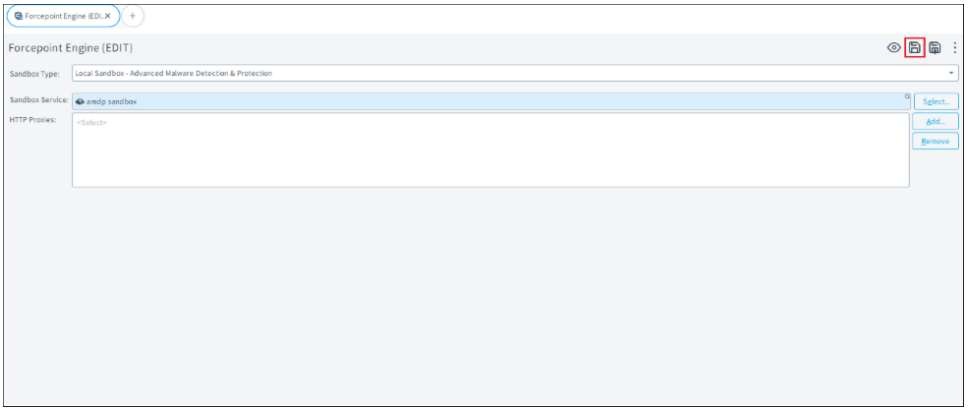
4) Under **Host Name** field add the domain name or IP address of the AMDP Manager and under **API Key** field, enter your AMDP License. Under **TLS Profile**, click **Select** and create a new TLS Profile.



5) Select an appropriate Cryptographic Suite such as **NIST (SP 800-52 Rev. 2)**. Either use **Trust any** under **Trusted Certificate Authorities** or upload the AMDP Manager certificate to the SMC and add that to the trusted CA list. Select **OK** to finish creating the Sandbox Service element.



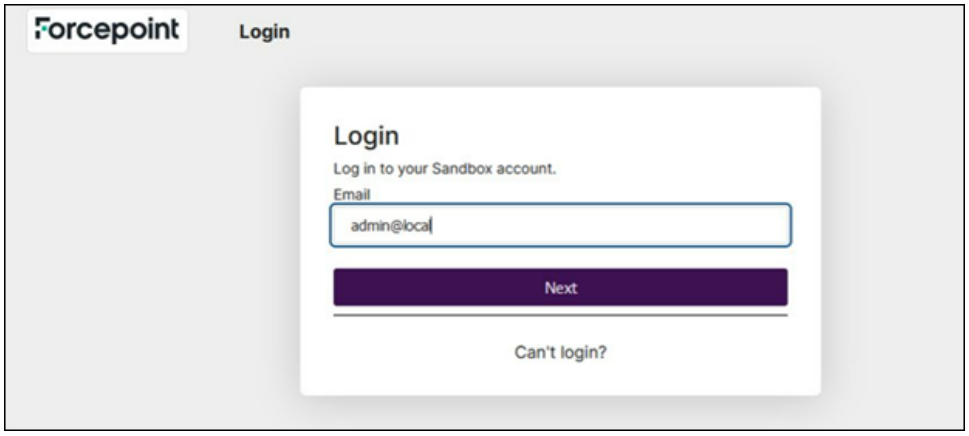
6) Select the newly created Sandbox Service element from the list and save your engine configuration.



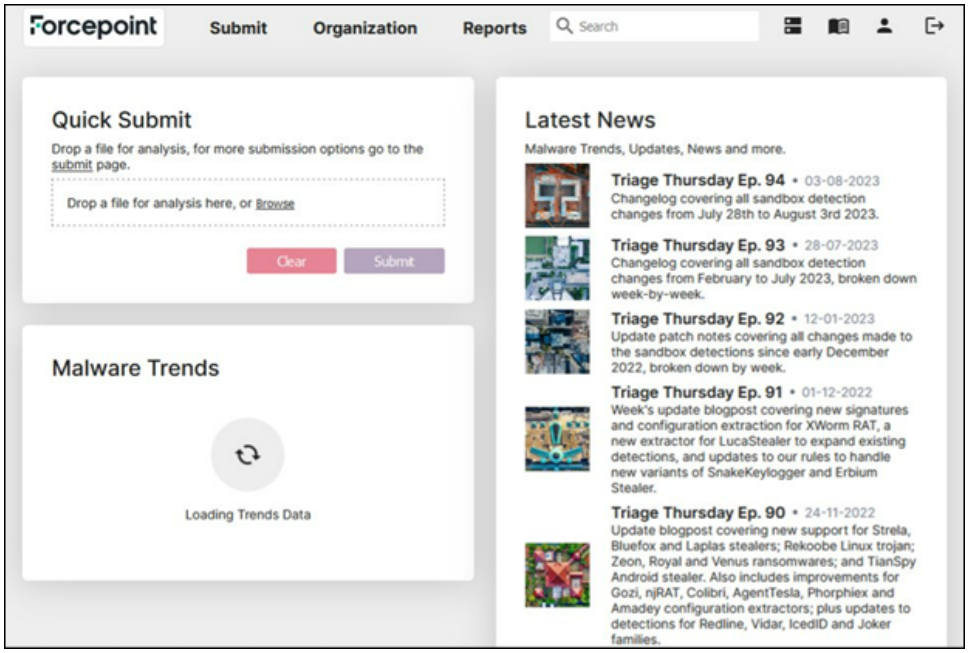
Admin Web Portal

The Admin Web Portal user interface allows you to verify the state of the sandbox machine availability, to manually submit samples (useful for troubleshooting), to view and edit the default analysis profile, to view reports, and to administer the Admin account (add/remove other accounts).

- Log into the Admin Web Portal with the email address and password of the user you added on the Manager in the Organization screen of the wizard.



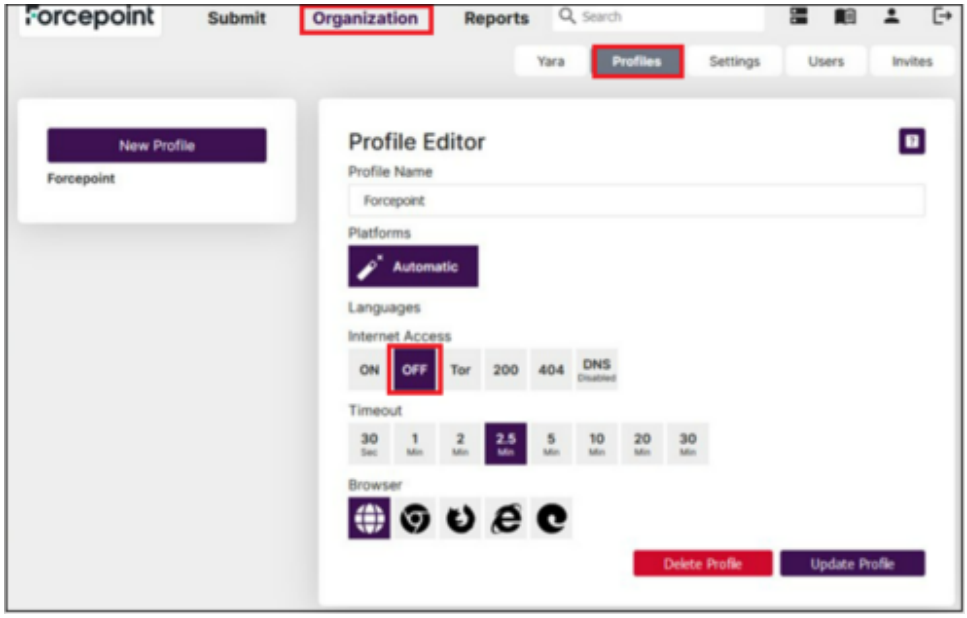
The dashboard is the initial view when logging into the portal.



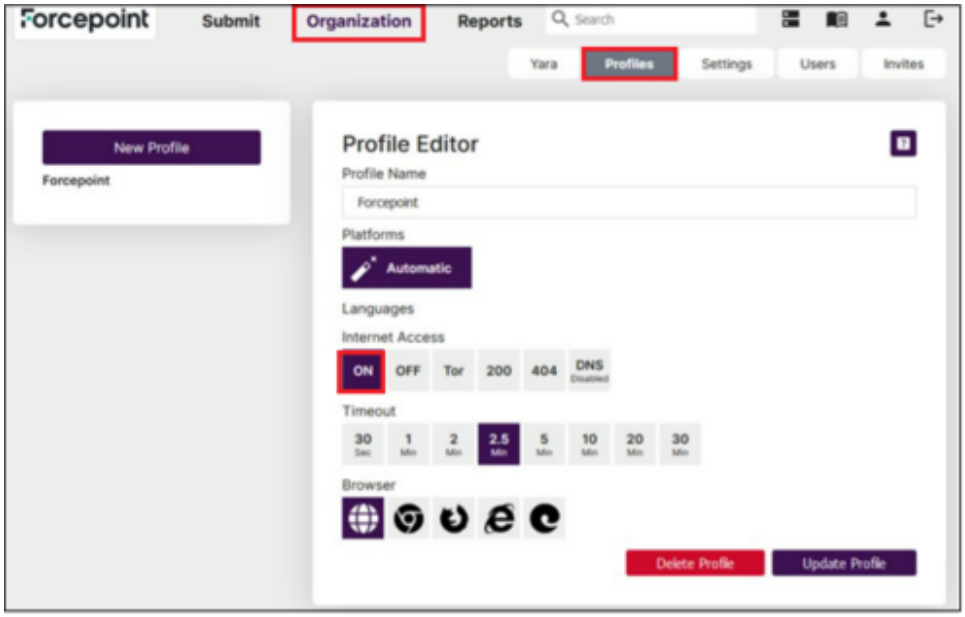
- Profiles control various aspects for control of the sandbox detonation. Select the **Organization** tab, then select **Profiles**. The default profile used for sample analysis is called “Forcepoint”. The default for **Internet access** is **OFF** to enhance the security of the system. There is a trade off in setting internet access to off in a loss of efficacy and each customer should determine what best suites their needs.

CAUTION

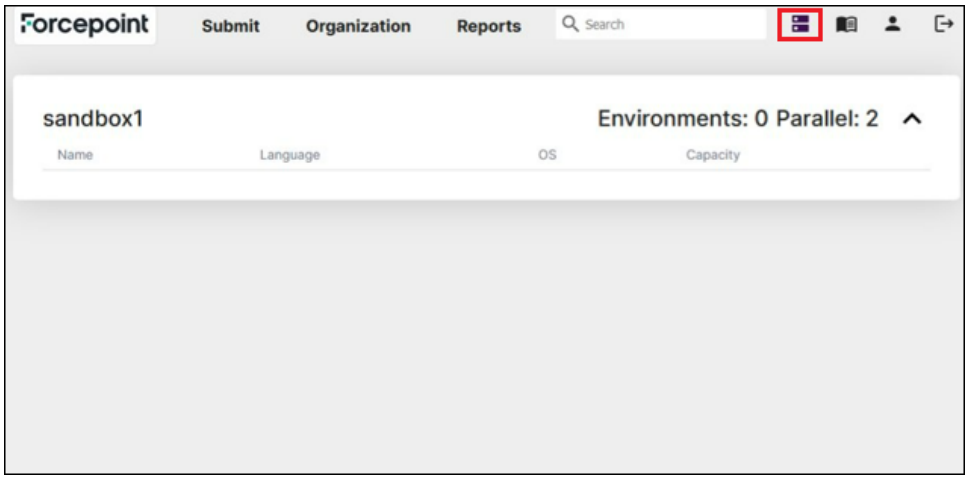
The default profile (Forcepoint) should not be deleted.



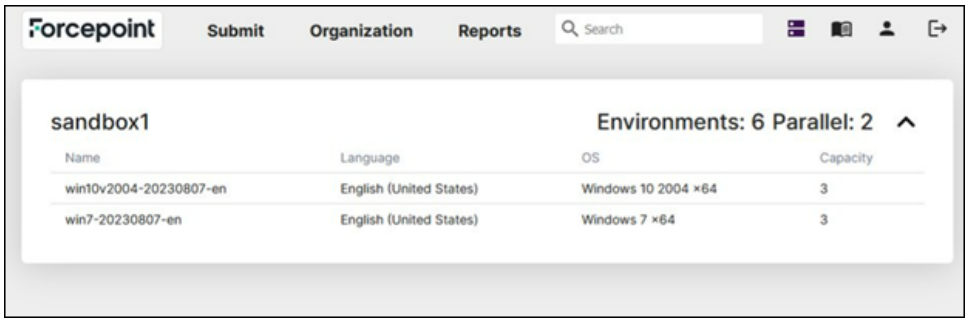
Here we modify the **Forcepoint** profile to enable **Internet access** (setting changed to ON).



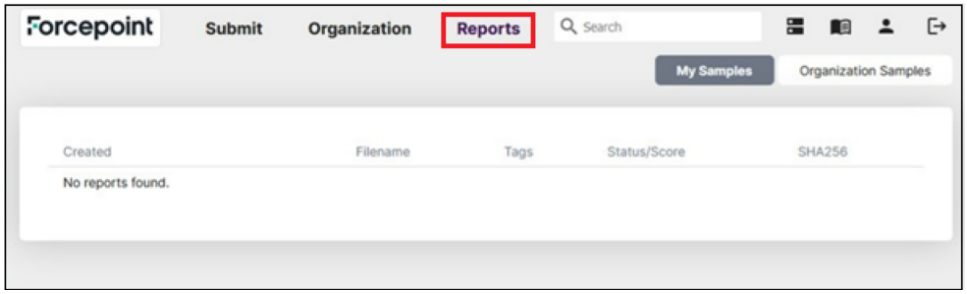
- The **Machines** tab is selected via the icon highlighted in red below (just left of the docs/help icon). Here is the initial configuration after an Engine has been configured and added to the Manager. The Environments count reflects the total of the instance counts for each configured virtual machine. The Parallel count is the number of environments which can be executed simultaneously. That value is set when the Engine is initially configured and based on the number of CPUs in the Engine.



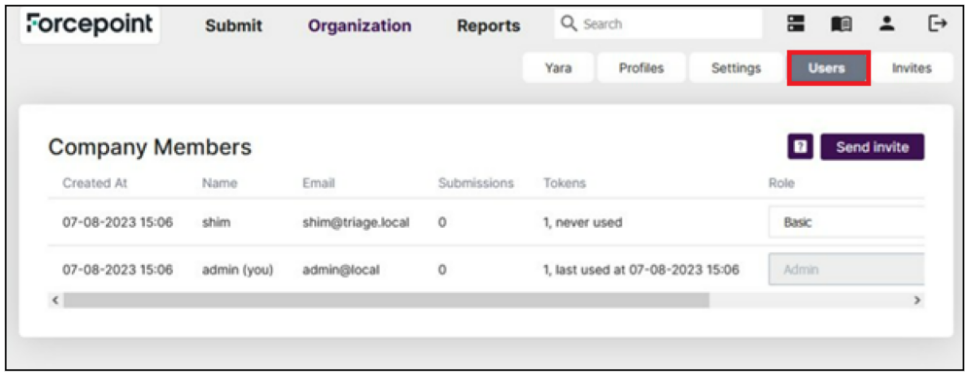
Once the VMs have been built, the available machine types are shown on the **Machines** tab. Note for this example, there are 6 environments available (3 windows 10, 3 windows 7), and 2 VMs can operate in parallel. If an analysis requires a machine type but all the parallel slots are in use, the analysis will be queued until a parallel slot becomes available.



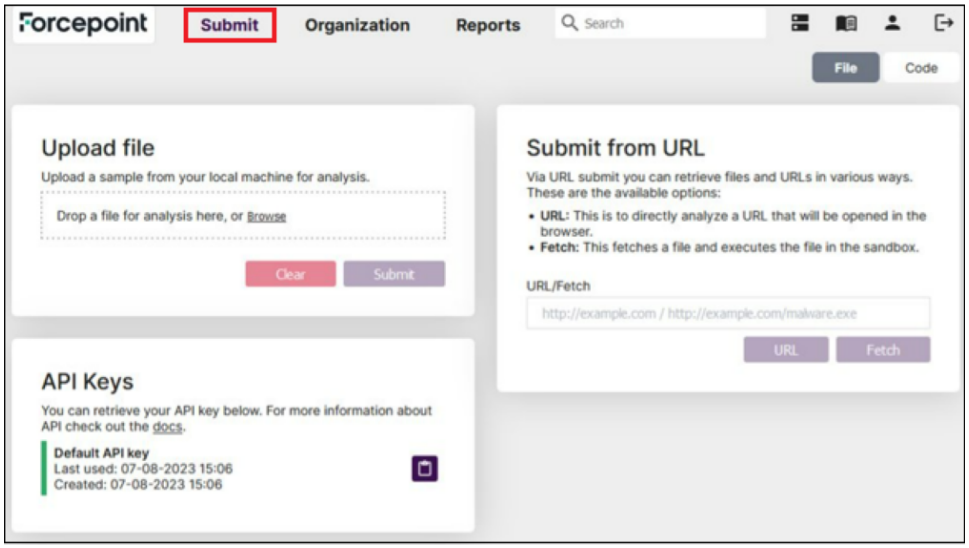
- Selecting the **Reports** tab shows the samples which have been submitted and the associated analysis. **My Samples** only shows samples for the user logged into the portal. To see samples/reports which were submitted to the Manager, select the **Organization Samples** tab.



- Selecting the **Users** tab allows you to view the configured Users for the system. There is a reserved user "**shim@triage.local**" which is used to relay the samples received by the Manager. You should not modify or delete this user.The user with (you) indicates the currently logged in user, which is the user created in the registration wizard on the Organization (web portal) screen for the Manager.



- The **Submit** tab allows for manual upload and analysis of files.

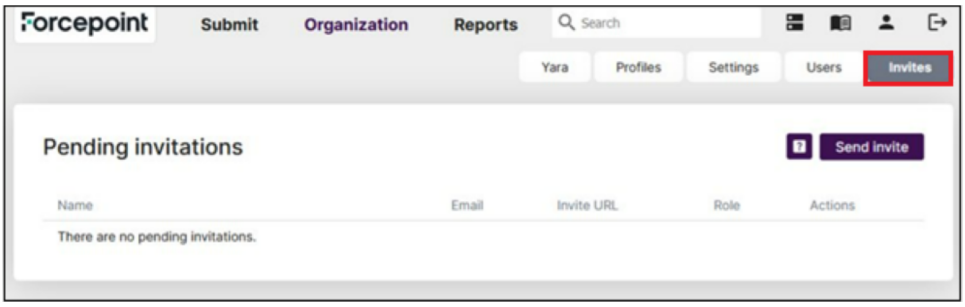


Note

Files submitted through the Admin Web Portal will not generate a score visible to other products integrating with AMDP.

- The **Invites** tab is used to craft an invitation with initial login details for a newly created user. The primary use case is to add other Portal Administrator accounts.
  Delivering invitations via the email channel is not supported. An Admin should select a pending invitation and click the clipboard icon to copy the invite URL. The Admin should then send the invite URL to the intended new user using their email application or some other method.

  The new user then follows the link provided in the invite to setup their new account.



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