

# ZENworks 2020 Patch Management Airgap Solution

The Airgap solution for ZENworks Patch Management enables you to deliver patches to networks that are disconnected and isolated from the Internet. These networks are referred to as “airgapped” or “closed” networks.

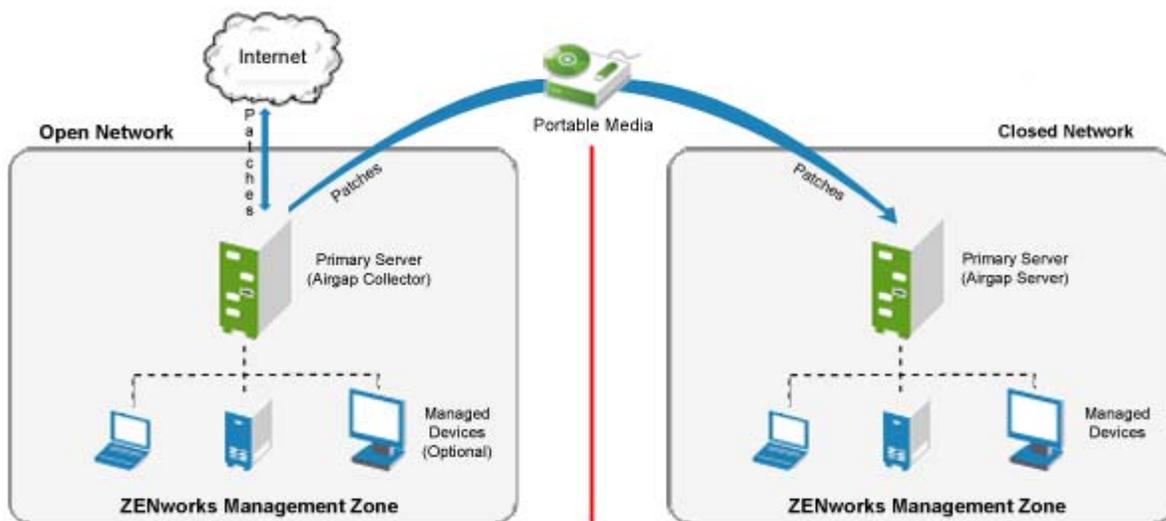
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**NOTE:** Airgap supports Microsoft Windows patches, not including Microsoft Office 365. Airgap does not currently support patches for Linux distributions or Mac operating systems.

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## About the Airgap Solution

The Airgap solution requires two ZENworks Management Zones, one zone in the open (Internet-connected) network and one in the closed network. A Primary Server (referred to as the Airgap Collector) in the open zone receives patches through the subscription service. You then transfer the patches via portable media from the Airgap Collector to a Primary Server (referred to as the Airgap Server) in the closed zone. The Airgap Server deploys the patches to managed devices as if it had received them directly through the subscription service.



The ZENworks Management Zone in your open network can optionally include managed devices that you want to patch. The patches downloaded by the Airgap Collector are retained in the zone (in addition to being copied to a transfer directory) and can be deployed to managed devices within the open zone.

## Prerequisites

- ◆ Two ZENworks Management Zones, one in the open network (*the Airgap Collector*) and another in the closed network (*the Airgap Server*).

ZENworks Servers must be 11 SP4 or later versions. For information about installing ZENworks, see the [ZENworks Server Installation](#).

- ◆ ZENworks Patch Management licensed in both zones, which includes a ZENworks Patch Management license for the Airgap Collector (open zone) and a ZENworks Patch Management Airgap license for the Airgap Server (closed zone). You cannot use an evaluation license.

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**NOTE:** The Airgap license is a no-charge entitlement if you are a licensed ZENworks Patch Management customer with Maintenance. The license must be requested for you by your sales representative. After it has been requested, it is added to your ZENworks Patch Management entitlement in your Customer Center portal, and you add the license key to the Airgap Server using a system variable.

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- ◆ Airgap Collector enabled prior to server replication or caching of patches on the Airgap Collector server.

## Setting Up the Open Zone

The tasks required to configure the ZENworks Management Zone in your open network are described in the following sections.

### Mirroring the Closed Zone's Managed Devices

When a ZENworks Primary Server downloads patches from the subscription service, it downloads the patch fingerprints, not the entire patch. A patch fingerprint contains metadata about which operating systems the patch applies to. The Primary Server compares the downloaded patch fingerprints against the operating systems of the zone's managed devices and displays the applicable patches in the Patches list. You can then select the patches you want to cache to the Primary Server for distribution to your managed devices.

If possible, we recommend that you register devices in your open zone that mirror the operating systems of the closed zone's managed devices. This limits the Patches list to only those patches that are applicable for your closed zone's devices.

If you do not mirror your closed zone's devices in your open zone, the Patches list displays all patches, which in the following example totals 4,957 patches. In this case, you would either need to cache all patches or manually filter and cache only the patches that apply to devices in your closed zone.

Getting Started Security Dashboard Patch Dashboard Patch Policies Patches

Patches Enabled: 522 Disabled: 538 Total: 1060

Patch Name	Impact	Patched	Not Patched	Released On
2023-06_Microsoft Edge 114.0.1823.51(KBMEDEG114018235)_x64	Critical	0	2	Jun-16-2023
Royal TS 6.1.60616.0(KBRTS51606160N)	Software Installer	0	2	Jun-16-2023
2023-06_Microsoft Edge WebView2 Runtime 114.0.1823.51(KBWEVW1140182351)_x64	Critical	0	3	Jun-16-2023
Dropbox 176.4.5108(KBDRBX17645108N)_x64	Software Installer	0	2	Jun-15-2023
2023-06_Azure Connected Machine Agent 1.31.02356.1083(KBACMA1312356108N)_x64	Software Installer	0	2	Jun-15-2023
Dropbox 176.4.5108(KBDRBX17645108N)	Software Installer	0	2	Jun-15-2023
Skype 8.98.0.407(KBSKY8980407N)	Software Installer	0	2	Jun-15-2023
VMware Tools 12.2.5(KBVMWT1225)_x64	Critical	0	2	Jun-14-2023
2023-06_.NET 6.0.18 - June 13, 2023(KBASPDNC6018N)	Software Installer	0	2	Jun-13-2023
2023-06_.NET 7.0.7 - June 13, 2023(KBWBRT707N)_x64	Software Installer	0	2	Jun-13-2023
2023-06_.NET 7.0.7 - June 13, 2023(KBASPDNC707N)_x64	Software Installer	0	2	Jun-13-2023
2023-06_.NET 6.0.18 - June 13, 2023(KBBDNCOR6018N)	Software Installer	0	2	Jun-13-2023
Google Chrome 114.0.5735.134086GC11405735134N	Software Installer	0	2	Jun-13-2023
2023-06_.NET 6.0.18 - June 13, 2023(KBBDNHOS6018N)	Software Installer	0	2	Jun-13-2023
2023-06_.NET 6.0.18 - June 13, 2023(KBASPDNC6018N)_x64	Software Installer	0	2	Jun-13-2023
2023-06_.NET 7.0.7 - June 13, 2023(KBWBRT707N)	Software Installer	0	2	Jun-13-2023
2023-06_.NET 7.0.7 - June 13, 2023(KBBDNCOR707N)_x64	Software Installer	0	2	Jun-13-2023
2023-06_OneDrive 23.107.521.1(KBODRV231075211N)_x64	Software Installer	0	2	Jun-13-2023
2023-06_.NET 7.0.7 - June 13, 2023(KBASPDNC707N)	Software Installer	0	2	Jun-13-2023
2023-06_June 13, 2023-KBSO27223 (OS Build 22000.2057) - Microsoft Support(KBSO27223)_x64	Critical	0	2	Jun-13-2023
Google Chrome 114.0.5735.134086GC11405735134N	Software Installer	0	2	Jun-13-2023
2023-06_.NET 6.0.18 - June 13, 2023(KBWBRT6018N)_x64	Software Installer	0	2	Jun-13-2023
2023-06_.NET 7.0.7 - June 13, 2023(KBBDNHOS707N)	Software Installer	0	2	Jun-13-2023
2023-06_.NET 6.0.18 - June 13, 2023(KBBDNCOR6018N)_x64	Software Installer	0	2	Jun-13-2023
2023-06_OneDrive 23.107.521.1(KBODRV231075211N)	Software Installer	0	2	Jun-13-2023

1 - 25 of 148 items show 25 items

If you choose to mirror your closed zone's devices in your open zone, consider the following guidelines:

- ◆ In your closed zone, log in to ZENworks Control Center and review the Devices list. The list displays the operating system for each registered device.
- ◆ In your open zone, register devices that have the same operating systems as the ones displayed in your closed zone's Devices list.
- ◆ Registering a device in your open zone adds the device object to the zone. The device object is what is needed to automatically filter the Patches list to show applicable patches only. Once the device is registered in your open zone, it does not need to continue to contact the zone; if desired, you can re-register the device against your closed zone for management purposes. Optionally, you could retain the devices in your open zone and use the devices to test new patches.

## Licensing ZENworks Patch Management

To activate your ZENworks Patch Management license, do the following:

- 1 Log in to the ZENworks Control Center for the zone in your open network.
- 2 Click **Configuration** in the navigation panel and scroll down in the **Configuration** page to locate **Licenses > Product Licensing**.
- 3 Click the **ZENworks 2020 Patch Management** link, and select **Activate Product** in the Patch Management License panel.
- 4 Enter your Product Subscription Serial Number in the field provided, and click **Add**.
- 5 Click **OK** to save the changes.

## Enabling the Airgap Collector

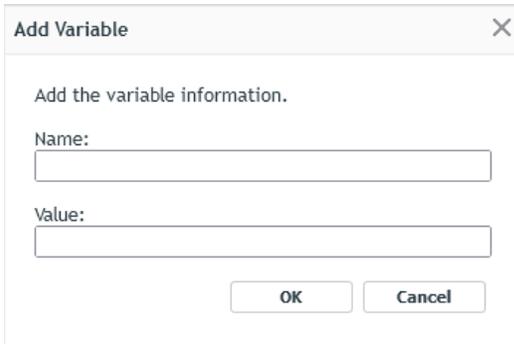
You enable the Airgap Collector by adding a `PATCH_AIRGAP_COLLECTOR=true` system variable to your ZENworks Management Zone.

- 1 Log in to ZENworks Control Center for the zone in your open network.

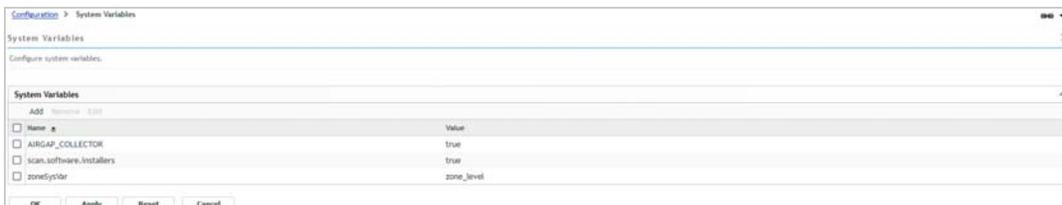
- 2 Click **Configuration > Device Management** (in the **Management Zone Settings** panel) > **System Variables** to display the System Variables list.



- 3 Click **Add** to display the Add Variable dialog box.



- 4 Fill in the following fields:  
**Name:** PATCH\_AIRGAP\_COLLECTOR  
**Value:** true
- 5 Click **OK** to add the variable to the list.



- 6 Click **OK** to save the list.

## Limiting the Patch Content Downloaded by the Subscription Service

Because you will be copying patches from your open zone (Airgap Collector) to your closed zone (Airgap Server), you should limit patch content downloads to only the languages and vendors your devices need. This reduces the amount of portable disk space required and speeds up the copy process. Only the Windows platform is currently supported for Airgap, so Windows should always be checked in the platform options of

both the Airgap Collector and Airgap Server. If you have Linux and Mac systems in your open zone, leave those platform types selected in the open zone, but these options are not applicable in the closed zone, because those patches will not be included.

To configure the Subscription Service Content Download in the Airgap Server (closed zone):

- 1 Launch the ZENworks Control Center in the Airgap Server and click **Configuration > Security** (in the **Management Zone Settings** panel) > **Subscription Service Content Download** to display the content download settings.
- 2 Select **Windows** for platforms to download.
- 3 Select the languages you want to download.
- 4 Click **OK** to save your patch download settings.

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**NOTE:** You can also configure the **Select vendors to use in the system** list to limit the number of vendor patches to only those that are required. However, the list is not populated until the first subscription update is complete after starting the Subscription Service. The Airgap Collector content will not reflect a change in this setting until another subscription download completes after configuring and saving the list.

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## Starting the Subscription Service

To ensure that you have all the required patches for your closed zone, you need to start the Subscription Service and wait for the subscription download to successfully complete. You can verify this in the Subscription Service History panel on the Patch Management Dashboard.

Information about caching patches after the subscription download completes is provided in Section 5 [Transferring Patches from the Open Zone to the Closed Zone](#).

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**IMPORTANT:** Ensure that you [enable the Airgap Collector](#) before starting the subscription service or caching of patches. Otherwise, you may have missing patches for the Airgap Server.

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To start the Subscription Service and initiate the patch download:

- 1 In ZENworks Control Center, click **Configuration > Patch Management** (in the **Management Zone Settings** panel) > **Subscription Service Settings** to display the Subscription Service Settings page.

The screenshot shows the 'Subscription Service Settings' page in ZENworks Control Center. The page is titled 'Configuration > Subscription Service Settings' and includes a close button (X) in the top right corner. Below the title bar, there is a subtitle 'ZPM server with any HTTP proxy and 3rd party subscription settings'. The main content area is divided into several sections:

- Subscription Service Settings:** This section contains a dropdown menu labeled 'Start the Subscription Service' with 'Select One' selected, and a 'Start Service' button. Below this are labels for 'Last Subscription Poll', 'Subscription Replication Status', and 'Subscription Host'. The 'Subscription Communication Interval(Every Day at)' is set to '00:00', with an 'Update Now' button to its right. At the bottom of this section are two buttons: 'Reset ZENworks Patch Management Settings' and 'Reset Subscription Service'.
- HTTP Proxy Server Details:** This section contains three input fields: 'Proxy Host', 'Port', and 'Http Credential'. The 'Http Credential' field has a search icon and a close icon (X).
- Patch Subscription Credentials:** This section contains two input fields: 'RedHat Network Credentials' and 'SUSE Network Credentials'. Both fields have a search icon and a close icon (X).

At the bottom of the page, there are four buttons: 'OK', 'Apply', 'Reset', and 'Cancel'.

- 2 In the **Start the Subscription Service** list, select the ZENworks Primary Server, and then click **Start Service** to start the subscription service on the Primary Server.
- 3 Click the **Update Now** button to initiate an immediate request for patches from the subscription service. The initial subscription service request will take some time to process. You can use the Patch Dashboard (**Security > Dashboard** tab) to monitor the request status.
- 4 By default, the Airgap Collector contacts the subscription service for patch updates at midnight each day. If desired, you can use the **Subscription Communication Interval** field to change the daily time.
- 5 Click **OK** to save your changes and exit the Subscription Service Settings page.

# Setting Up the Closed Zone

In your closed network, you need to configure the ZENworks Management Zone to enable the Primary Server to act as an Airgap Server. When you transfer downloaded patches from your open network to the closed network, the Airgap Server pulls them into the ZENworks Management Zone as if it had received them directly through the subscription service. You then deliver the patches using the standard ZENworks Patch Management methods.

- 1 Log in to ZENworks Control Center for the zone in your closed network.
- 2 Enable the Airgap Server by adding several system variables:
  - 2a Click **Configuration > Device Management** (in the **Management Zone Settings** panel) > **System Variables** to display the System Variables list.
  - 2b Click **Add** to display the Add Variable dialog box.
  - 2c Fill in the following fields:
    - Name:** PATCH\_AIRGAP\_SERVER
    - Value:** true
  - 2d Click **OK** to add the variable to the list.
  - 2e Repeat to add the following two variables:
    - ♦ **Name:** PATCH\_AIRGAP\_LICENSE
    - Value:** The Airgap license key you received from your Sales Representative.

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**NOTE:** This step validates licensing on the Airgap Server for the closed network. You do not need to activate a ZENworks Patch Management license for this zone in Product Licensing.

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- ♦ **Name:** PATCH\_AIRGAP\_PATH
  - Value:** The directory path from which the Airgap Server will retrieve the patches you've transferred from the open network (the Airgap Collector) to your closed network. For example:
    - `c:\program files (x86)\novell\zenworks\zpm\airgap`
    - or
    - `/opt/novell/zenworks/zpm/airgap`
- 2f Click **OK** to save the list.
- 3 Start the Subscription Service:
  - 3a Click **Configuration > Security** (in the **Management Zone Settings** panel) > **Subscription Service Settings** to display the Subscription Service Settings page.
  - 3b In the **Start the Subscription Service** list, select the ZENworks Primary Server, then click **Start Service** to start the subscription service on the Primary Server.
  - 3c Click **OK** to exit the Subscription Service Settings page.

# Transferring Patches from the Open Zone to the Closed Zone

To transfer patches from the open zone to the closed zone:

- 1 On the Airgap Collector in the open zone:
  - 1a (Optional) Make sure you have the latest patches. To do so, click **Configuration > Security Management** (in the **Management Zone Settings** panel) > **Subscription Service Settings** to display the Subscription Service Settings page. Click the **Update Now** button to initiate an immediate request for patches from the subscription service.

Patches are updated daily at the time specified in the Subscription Service Settings. You only need to manually update if you want to ensure that you have any patches that might have been released since your last scheduled update. Use the Patch Dashboard (**Security > Dashboard** tab) to monitor the status of the patch update.
  - 1b Cache all patches that you want to copy. To do so, click **Patch Management > Patches** to display the patch list. Select the patches you want to cache, click **Actions > Update Cache**.

If you chose not to mirror your closed zone's devices in your open zone (see [Mirroring the Closed Zone's Managed Devices](#)), the **Patches** list does not display any applicable patches. In this case, deselect the **Not Patched** option in the Search box and click **Search** to display all available patches. Use this list to select the patches you want to cache. You will also need to do this if you mirrored some but not all of your closed zone's devices.
  - 1c After caching of the selected patches is complete, copy all contents (files and folders) from the following folder to your portable media:

**Windows Airgap Server:** `c:\program files (x86)\novell\zenworks\zpm\airgap`  
**Linux Airgap Server:** `/opt/novell/zenworks/zpm/airgap`
- 2 On the Airgap Server in the closed zone, copy the patch content from the portable media to the Airgap directory you specified with the `PATCH_AIRGAP_PATH` variable when setting up the Airgap Server (see [Step 2e on page 7](#)).

If you have previously copied patch content to the Airgap Server, do not remove that content. Add the new patch content to the existing content.
- 3 Log in to ZENworks Control Center for the Airgap Server zone (in your closed network).
- 4 Click **Configuration > Security** (in the **Management Zone Settings** panel) > **Subscription Service Settings > Update Now** to initiate an immediate patch content update.

The subscription service request will take some time to process. You can use the Patch Dashboard (**Security > Dashboard** tab) to monitor the request status.
- 5 After the subscription service request completes, go to the Patches tab (**Patch Management > Patches** tab) to check the device status for each patch.
- 6 Deploy the patches. If necessary, see the [ZENworks Patch Management Reference](#).

## Configuring Airgap Collection Server to view cached patches on the host Primary Server

To Configure Airgap Collector Server to view cached "airgap" folder patches, perform the following steps on ZENworks 2020 Update 2 Primary Server (Linux or Appliance):

- 1 Create a new airgap directory on the host Airgap Collector Primary Server by running the following command:

```
mkdir -p /var/opt/microfocus/zenworks/common/zpm/airgap
```

- 2 Copy the airgap contents inside the zenloader container to the following path under vastorage disk:

```
docker cp zenloader: /opt/microfocus/zenworks/zpm/airgap /var/opt/microfocus/zenworks/common/zpm/
```

- 3 Ensure that the airgap directory usage is within the expected size by running `du -sh /var/opt/microfocus/zenworks/common/zpm/airgap`

- 4 Before making any changes, backup the docker compose file by running `cp /opt/microfocus/zenworks/share/compose/docker-compose.yml /tmp`

- 5 Open `/opt/microfocus/zenworks/share/compose/docker-compose.yml` and add the following 3 lines under zenloader: image at the end of the volumes: section

```
- type: bind
```

```
source: /var/opt/microfocus/zenworks/common/zpm/airgap
```

```
target: /opt/microfocus/zenworks/zpm/airgap
```

- 6 Save the YML file and set the airgap directory group and user permissions to zenworks:zenworks by running `permissions.sh`.

- 7 Restart the ZENloader Service by running `systemctl restart microfocus-zenloader.service`

- 8 Ensure that the zenloader image status displays "Up" by using the `docker ps` command.

For example:

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
7f5795e6b55c	zenloader	"./entry-script.sh"	2 minutes ago	Up
2 minutes		zenloader		

Optionally, you can also check the disk usage using the `df -Th` command.

- 9 Any patches cached on this Collector Airgap Server should be copied or transferred from the following host path:

```
/var/opt/microfocus/zenworks/common/zpm/airgap
```

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