Patch Management

Ivanti Endpoint Security (IES formerly HEMMS) Admin Guide
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Prerequisites for joining IES

In order to join the IES automated patching, the following conditions have to be met:

a. Outgoing ports 443 and 80 on the endpoint network are open. IES uses pull technology, agents check with the IES server for any patch updates. Note that ports 80 and 443 on the IES server are open to all UBC networks, but any new networks (UBC) may require firewall rule changes.

b. Admins must have an EAD Admin account for access to the IES console.

c. Supported OS’s include Windows Server 2012-2019, RHEL 6-7, Ubuntu 16-18.

d. The IES agent needs to be installed on the endpoint.

e. Submit a ticket in Service Now for access to the IES console. Click on this link to submit a ticket to the UBCIT Systems: http://web.it.ubc.ca/forms/systems/

NOTE: Please note that at this time only OS patches are supported in IES. Application patches are available but not supported.

Logging on to IES:

Logon to IES at https://patching.it.ubc.ca/ using your EAD Admin account- format EAD\cwluser.adm

Please note that you will only see the endpoints that you have access to. Contact UBCIT Systems if you are not able to see your group.
Endpoint Installation

Windows

Supported versions:
2012/2016/2019

Add Windows Endpoint

Windows agent can be installed from the IES console, but it requires additional firewall ports to be opened (Windows Print File Sharing ports). To avoid that, download the appropriate Windows agent and install it on the endpoint.

a. Login to the IES console (https://patching.it.ubc.ca) with your EAD Admin account (EAD\<username.adm>) on the Endpoint you wish to add to Ivanti.

b. Download the agent from the IES console, click on Tools/Download Agent Installer... select OS and click Download.
c. Open a **Command Prompt (Admin)** and navigate to the directory you downloaded the executable to.

d. **Run** the command using your department group name in the **GROUPLIST** field:

```
Imsetupx64.exe install SERVERIPADDRESS="patching.it.ubc.ca"
MODULELIST="VulnerabilityManagement" GROUPLIST="GRP – YOUR GROUP"
```

To find your group name, login to IES ([https://patching.it.ubc.ca](https://patching.it.ubc.ca))
Click on **Manage/Groups**. In the left pane, expand **My Groups/University of British Columbia**

**Please Note:** During the agent install if the endpoint group was not specified, or for some reason the endpoint was not added to your group it will end up in **My Groups\System Groups\Ungrouped**. You will need to move it manually to your specific group. (See Managing Groups)

e. From the menu click on **Manage\Groups** and select the group you specified. Make sure “Endpoint Membership” is selected under “View” if it is not.

f. Once the agent is installed it will check in with the IES server. Once it shows in IES click on the endpoint and make sure that PR is enabled. “**Yes**” in the **“PR Installed”** column confirms that PR in enabled, but if you see “**No**” then you need to enable it. It may also still be **“Pending Install”** state so check back in a few minutes.

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g. To enable PR, select the endpoint, and click on “Manage Modules”

h. Select check box next to the appropriate endpoint (under Patch), click OK. You will see the endpoint go into “Pending Install”. After a few minutes you will see PR status change to YES.
   NOTE: Click on “Update View” button to refresh the display (on the listing of Endpoint page).
Remove Windows Endpoint

a. Go into Program and Features and uninstall the “LMAgent”, “Heat Endpoint Management”, “Security Suite Agent” or “Ivanti Endpoint Security Agent” (Depending on how old your version of Ivanti Endpoint Security is)

b. Go to the Heat\Ivanti portal and click on Manage\Endpoints and locate the endpoint name under the All tab.

c. Ensure that your filter for Agent Status is set to “--- All ---”

**NOTE:** If it’s not there then it removed itself during the agent uninstall and you can STOP here.
d. Disable the endpoint by selecting it and choosing “Disable”

![Image of Ivanti Endpoint Security interface showing disable option]

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Linux

Supported versions:
Red Hat Enterprise Linux: 6.x/7.x
Ubuntu Linux: 16/18

Add Linux Endpoint

a. Issue the following command as root:
   # wget http://patch.it.ubc.ca/download/UnixPatchAgent.pl
   This will download the agent script on your server (endpoint)

b. Run script:
   # perl UnixPatchAgent.pl

c. When prompted, enter the group this server should be joined to.
   a. Alternatively, you can provide the group as the first argument to the program
      # perl UnixPatchAgent.pl "TST - Test Provisioning"

To find your group name click on Manage\Groups. In the left pane, expand My Groups\University of British Columbia.

d. After a few seconds you should see your endpoint in the appropriate group. Note that under column named “PR Installed” you should see “Yes”. See the screenshot below.

Please Note: During the agent install if the endpoint group was not specified, or for some reason the endpoint was not added to your group it will end up in My Groups\System Groups\Ungrouped. You will need to move it manually to your specific group. (See Managing Groups)
e. If PR is not installed, select the endpoint, and click on “Manage Modules”

![Image showing the Manage Modules button selected]

f. Select check box next to the appropriate endpoint (under Patch), click OK. You will see the endpoint go into “Pending Install”. After a few minutes you will see PR status change to YES.

**NOTE:** Click on “Update View” button to refresh the display (on the listing of Endpoint page)

---

Remove Linux Endpoint

a. Run the EMSS agent uninstaller on the endpoint:

```bash
#/usr/local/patchagent/uninstall
```

b. Delete the patchagent directory:

```bash
# rm -rf /usr/local/patchagent
```

c. Go to the Heat\lvanti portal and click on Manage\Endpoints and locate the endpoint name under the All tab.

**NOTE:** If it’s not there then it removed itself during the agent uninstall and you can STOP here.
- Disable the endpoint by selecting it and choosing "Disable"

- **Delete** the endpoint from the endpoints page so it does not show up in the Heat\ivanti web interface.

  If you do not see the agent, ensure your filter for Agent Status is set to "--- All ---"
Migrate Endpoints

If you have any endpoints in the Heat portal that you need migrated to the new Ivanti portal you can follow this guide.

Prerequisites

a. Document the Group your endpoint is in before migrating.
   • To find your group name, login to HEMSS (https://patch.it.ubc.ca).
   • Click on Manage/Groups. Write down the Group your endpoint is in.

b. Enter this Group in the GROUPLIST field during installation step (e) below.

Migrate Windows Endpoints

a. On your Windows endpoint download the new agent from the Ivanti Portal at (https://patching.it.ubc.ca) Tools>Download Agent Installer...

b. Open Command Prompt (Admin) and navigate to the directory you downloaded the install executable to.

c. Run command: (To uninstall old HEMSS Patch Agent)
   lmsetupx64.exe uninstall

d. Wait and verify/confirm the current Heat Agent has been uninstalled.

e. Run command: (To install new Ivanti Patch Agent. Use the group name in the GROUPLIST field)
   lmsetupx64.exe install SERVERIPADDRESS="patching.it.ubc.ca" MODULELIST="VulnerabilityManagement" GROUPLIST="GRP – YOUR GROUP"

Please Note: This process will uninstall the endpoint agent and remove it from Heat and install to Ivanti. The endpoint may end up in My Groups[System Groups]Ungrouped. You will need to move it manually to your specific group. (See Managing Groups)
Migrate Linux Endpoints

Linux Endpoints need to download and install the new agent which will unregister the endpoint from Heat and register it in the new Ivanti Service:

- Be careful that the previous version of `UnixPatchAgent.pl` is not still there. Otherwise, you will get whatever version it was for - delete it first if necessary.

  a. On your linux endpoint download the new agent script:

    ```
    wget http://bootstrap.it.ubc.ca/download/UnixPatchAgent.pl
    ```

  b. Once downloaded run the script to uninstall/unregister the endpoint from Heat, Install the new Agent, and register in Ivanti.

    ```
    # perl UnixPatchAgent.pl
    ```

  c. It will ask you to enter the Group you want to register the patch agent to.

    (Use the same group it was in Heat)
It should now complete the change. The endpoint should be removed from Heat and now show up in your group in Ivanti.

**Please Note:** This process will set the endpoint agent to no longer talk to Heat and start talking to Ivanti. *The endpoint may end up in My Groups|System Groups|Ungrouped.* You will need to move it manually to your specific group. (See Managing Groups)
Managing Groups

Create a Group:

You can create a sub-group by right clicking on your group and selecting **Create Group**.

Name the group and click Save Icon:
Add/Remove Endpoints from a group

a. Click on **Manage\Groups**.

b. Right click on the group that you want to add an endpoint and select “**Add Endpoints to Group...**”.

c. Select your main group from the drop-down list and click on **Search**.

d. Select the endpoints you wish to add to the group and hit the **arrow** to add.

e. Click **OK**

f. Follow this same procedure to remove an Endpoint from a group by using the arrow to move it out.
Assign Agent Policy to a group

d. Click on Manage\Groups.

e. Right click on the group that you want to add a policy and select “Agent Policy Sets”

f. Click Assign and choose a Policy from the drop down list and click the Save icon

Note: Agent Policies applied to a group will apply to below sub-groups. If no policy is applied to a group or sub-group the Global Agent Policy is applied.
Schedule Patching

Patching can be scheduled by group or by individual endpoints. In this example we will show how to schedule patching by group.

**NOTE:** Please note that at this time only OS patches should be deployed using IES. Third party application patches are available, but not supported by UBCIT at this time.

a. Click **Manage, Groups**
b. Right click on the appropriate group, and select **Vulnerabilities/Patch Content**.
While viewing the **Vulnerabilities/Patch Content** for your group, we **recommend** you select the following filters:

c. **Content Type:** Critical and Not Superseded  
d. **Vendor:** Microsoft Corp./Red Hat (Windows/Red Hat)  
e. **Applicability:** Applicable  
f. **State:** Enabled  
g. **Detection Status:** Not Patched  
h. Click **Update View** to refresh the list  
i. **Select** the patches you wish to deploy  
j. Click **Deploy...**

k. In the **Deployment Wizard** click **Next**.
I. Now you can select the whole group or just specific endpoints within the group that you want to receive the deployment and click **Next**
m. In **Available Packages** it shows the specific number of packages already "**Selected**" under **Microsoft Corp./Red Hat**. Just click **Next** to continue.

(If you click on Microsoft Corp./Red Hat it could list thousands of available packages so don't click here since you selected the packages earlier)

<table>
<thead>
<tr>
<th>Package</th>
<th>Microsoft Corp.</th>
<th>Lumensian</th>
<th>Martin Preihi</th>
<th>Mozilla</th>
<th>Opera Software ASA</th>
<th>Oracle Corporation</th>
<th>RealVNC Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
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<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Select a vendor to display their available packages.**
n. Click **I ACCEPT** to accept package EULA and click **Next**.
o. **Click Change** button to change deployment time if required and click **Next**  
(If you click **Finish** instead it will use the Endpoints Policy Defaults)
p. **Optional**: Edit Package Deployment Order and Behavior option

Package Deployment Order and Behavior
Set the deployment order and behavior for each individual package.

<table>
<thead>
<tr>
<th>Action Order</th>
<th>Package Name</th>
<th>Selected Options</th>
<th>Reboot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2020-01 Cumulative Update for .NET Framework 3.5, 4.7.2 and 4.8 for Windows Server 2019 for x64 (KB4535101)(0001)(x64)(all)</td>
<td>![Option]</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2020-01 Cumulative Update for Windows Server 2019 x64 (KB4534273)(0000)(x64)(all)</td>
<td>![Option]</td>
<td></td>
</tr>
</tbody>
</table>

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q. Once you have **reviewed and confirmed** packages for deployment click **Next**
r. In the **Notification Options** select if you wish to notify users and, if **Yes**, set **Options** or choose notifications based on Agent policies by checking the **Use Policies** box and click **Next**
s. Review the **Deployment Confirmation** and click **Finish** to schedule/deploy packages.

![Deployment Confirmation](image)

- s. Review the **Deployment Confirmation** and click **Finish** to schedule/deploy packages.

![Deployment Confirmation](image)

- t. Click **Close** to close the window.

- u. You can monitor the progress by going to **Manage/Deployments and Tasks**

![Manage/Deployments and Tasks](image)
v. If you are connected to the **Windows endpoint** you should see an update notification (if selected) like below during the update time:

![Update notification](image1)

Each update will have its own notification

w. This will allow you to install now, snooze, or cancel the update depending on your agent policy.

x. When all patches are completed the endpoint will reboot or ask for user response beforehand depending what was specified in your job settings or agent policy.

![Restart notification](image2)
y. If you are on a **Linux Endpoint** you can check the patch agent status by running:

```
(/usr/local/patchagent/)
./patchservice checknow
```

![Command output image]

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**POF**