

Installation Guide for Horizon Peripherals Intelligence

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Overview

This is the overall installation guide for Horizon Peripherals Intelligence.

System Requirement

We now support Horizon windows client and Linux client with windows agent for device diagnosis.

The HorizonPeripheralsClient program can be deployed on both 32bits and 64bits windows OS or Linux OS that is compatible with VMware Horizon 7.x and later.

PowerShell - version 3.0 or above must be installed on Windows client and agent sides.

Python – version 3.6 or above when the client is Linux OS.

Browser - Firefox, Chrome, Edge (IE is not supported)

Window Client OS - Windows 7, 10

Linux Client OS – Ubuntu 18.04, 20.04 and Redhat 8.3, 8.4

Agent OS - Windows 7, 10, 2012R2, 2016, 2019, 2022

The web OVA is built on VMware Photon OS 3.0 which is compatible with ESXi 6.5 and later

Downloadable Components

There are several downloadable components in this project.

- 1) Web OVA template – device intelligence diagnosis web service host.
- 2) HorizonPeripheralsAgent_Win64 program – A light-weighted diagnosis agent with simplified UI for end user to start a diagnosis for peripheral devices. Installed on the 64bits Horizon Windows agent machine.
- 3) HorizonPeripheralsAgent_Win32 program – A light-weighted diagnosis agent with simplified UI for end user to start a diagnosis for peripheral devices. Installed on the 32bits Horizon Windows agent machine.
- 4) HorizonPeripheralsClient_Win64 program – A light-weighted diagnosis plugin to be installed on 64bits Horizon Windows client machine.
- 5) HorizonPeripheralsClient_Win32 program – A light-weighted diagnosis plugin to be installed on 32bits Horizon Windows client machine.
- 6) HorizonPeripheralsClient_Lin64 program – A light-weighted diagnosis plugin to be installed on 64bits Horizon Linux client machine.

Generally, there are two ways to deploy the services and components in your Horizon environment.

- 1) Skip the web OVA deployment part if you are inside VMware corporation network.
We have set up a local web service (djintelligence.eng.vmware.com) for VMware internal users. If you are inside VMware corporate network, you can skip the web OVA deployment part. It is sufficient to only install the HorizonPeripheralsAgent_xxx and HorizonPeripheralsClient_xxx. Follow the installation guides starting from HorizonPeripheralsAgent Install Guide.
- 2) Setup all the three components if you are outside VMware corporation network.
If you are external customer and users, you need to setup the web OVA server and install the HorizonPeripheralsClient_xxx and HorizonPeripheralsAgent_xxx programs in your local environment following the guides below.

Web OVA Deployment Guide

How to Install

Download the web OVA file to your local machine. The OVA file is compatible with vSphere 6.5 and later version. Follow the general workflow to deploy the OVA template. You can refer to [vSphere guide](#). Please pay special attention to below steps and values.

In the Select storage page, choose a valid datastore and Thin Provision for virtual disk format.

Deploy OVF Template

- ✓ 1 Select an OVF template
- ✓ 2 Select a name and folder
- ✓ 3 Select a compute resource
- ✓ 4 Review details
- ✓ 5 License agreements
- ✓ 6 Select storage**
- ✓ 7 Select networks
- 8 Customize template
- 9 Ready to complete

Select storage

Select the storage for the configuration and disk files

☐ Encrypt this virtual machine (Requires Key Management Server)

Select virtual disk format: **Thin Provision**

VM Storage Policy: **Datastore Default**

Name	Capacity	Provisioned	Free	Type
BJgroupISO	78779 GB	725.25 GB	62.54 GB	NF
datastore1 (2)	830.25 GB	1.04 TB	365.1 GB	VM

Compatibility

✓ Compatibility checks succeeded.

[CANCEL](#) [BACK](#) [NEXT](#)

In the Select Network, choose a valid virtual network name in your setup (In this example, it is VM Network). Choose Static-Manual as the IP allocation settings.

Deploy OVF Template

- ✓ 1 Select an OVF template
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Select networks

Select a destination network for each source network.

Source Network	Destination Network
VM Network	VM Network

1 items

IP Allocation Settings

IP allocation: **Static - Manual**

IP protocol: IPv4

[CANCEL](#) [BACK](#) [NEXT](#)

In the Customize template, there are 6 optional settings provided.

Networking	
Hostname	Set the VM hostname. Optional <input type="text" value="webovatest"/>
DNS Server	Set the DNS server. Optional <input type="text" value="10.117.46.150"/>
IP Address	Set the IP address. Optional. If not set, DHCP method will be applied to network setting profile. <input type="text" value="10.117.45.133"/>
Netmask	PhotonOS does not use the traditional netmask value (e.g. 255.255.255.0), it expects the input to be CIDR notation (e.g. 24). Optional. If not set, DHCP method will be applied to network setting profile. <input type="text" value="22"/>
DNS Domain	Set the domain. Optional <input type="text"/>
Gateway	Set the gateway. Optional. If not set, DHCP method will be applied to network setting profile. <input type="text" value="10.117.47.253"/>

Hostname:

If not configured, the default name `djintelligence.eng.vmware.com` will be used. We suggest set the hostname to a DNS resolvable name in your network environment.

IP Address/Netmask/Gateway:

If any of these 3 settings are not configured, the default DHCP network profile will be used for the OVA deployment. Namely, you should either configure the three settings all together to set a static network profile or leave all of them empty to utilize the DHCP service in your network.

DNS Domain: Optional.

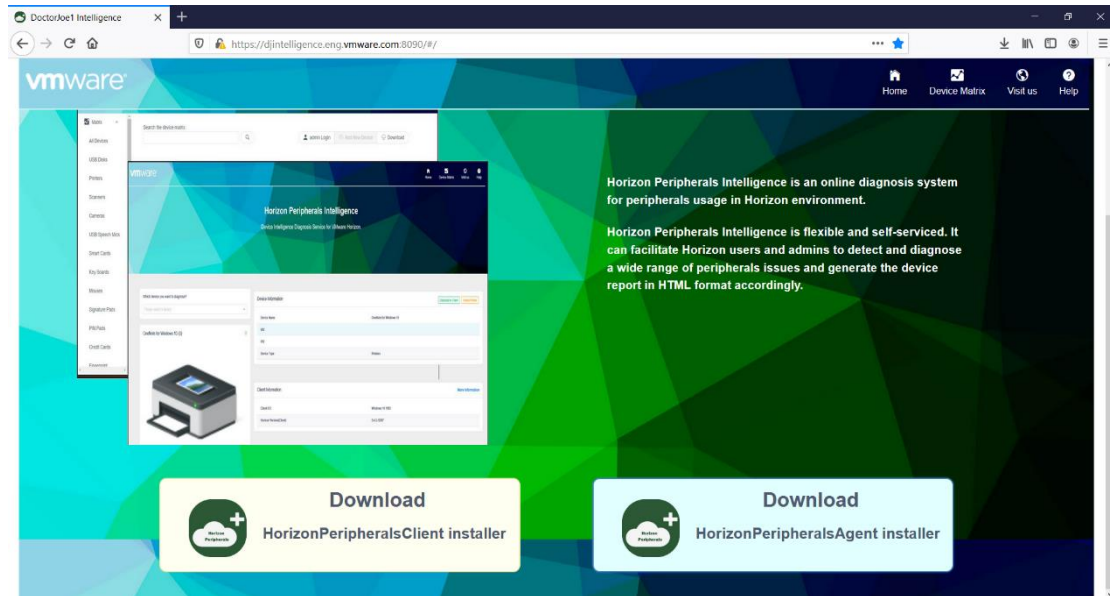
DNS Server: Optional.

Notice:

1. Only IPv4 network is supported.
2. We don't provide complete format and compatibility checks for these settings. Please pay attention to your inputs while configuring these settings carefully. For instance, wrong format of the IP address will result in invalid IP network after importing the OVA which makes the web service unavailable after OVA deployment.
3. After the OVA is imported, power it on. The above customized network settings will be applied automatically in minutes. The web service will be auto-started as well.
4. The web OVA root default password is `vmwareca$h0w`. You may use it to login the VM console to do some configurations.

After the Installation

Open the https://<webova_servername>:8090 , with your configured hostname of the web OVA server.



In the home page, users could download the HorizonPeripheralsAgent and HorizonPeripheralsClient installers. This is a convenient way for Horizon admin to distribute the HorizonPeripheralsClient and HorizonPeripheralsAgent programs to end users instead of asking them to download from the VMware Fling web site.

HorizonPeripheralsAgent Install Guide

Cmdline Installation

Run the following command in your command line:

```
msiexec /i C:/YourMsiLocation /quiet /qn APPDIR="C:/Program Files/HorizonPeripheralsAgent" HOSTNAME="djintelligence.eng.vmware.com" PORT="8090"
```

- All the bold texts can be changed accordingly. For default silent installation, run:
msiexec /i C:/YourMsiLocation /quiet /qn
- /quiet /qn can be changed.
 - Full UI: /qf (this is the default parameter used by the package)
 - Reduced UI: /qr (the user interface dose not show any wizard dialogs)
 - Basic UI: /qb, /passive (only a progress bar will be shown during the installation)
 - No UI: /qn, /quiet (no UI will be showed during the installation)
- HOSTNAME: Your web server address. This should be your self-deployed web OVA hostname. We provide a default web server address: djintelligence.eng.vmware.com.
- PORT: Port number for diagnosis web service. Do not need to change unless this port is occupied. By default, it is 8090.

Normal Installation

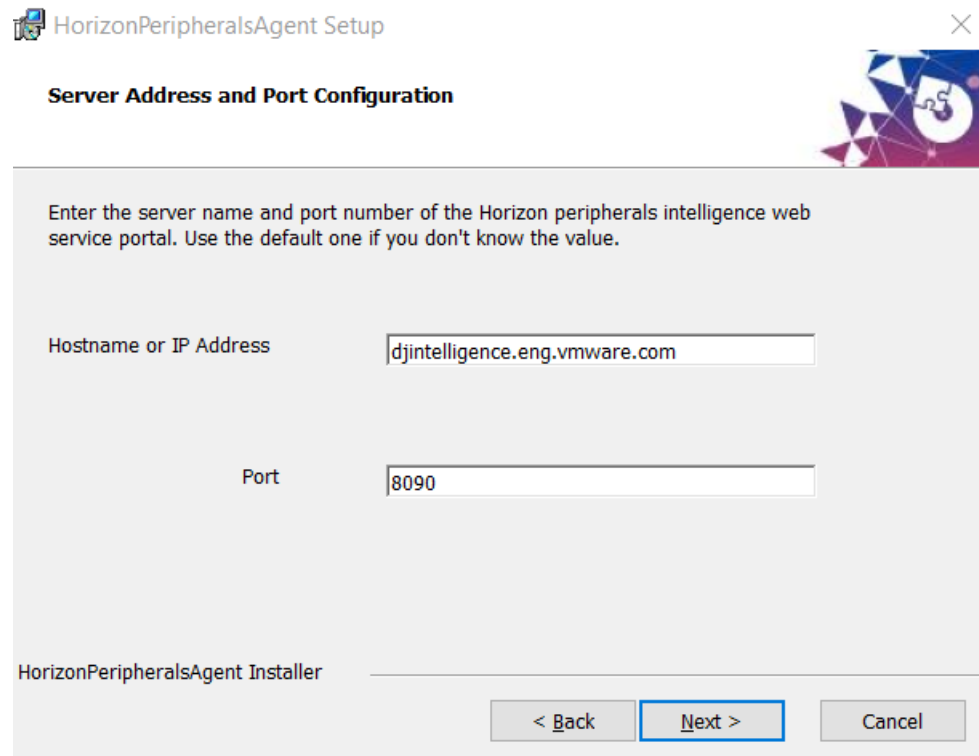
There are two files in the downloaded HorizonPeripheralsAgent.zip installer – a zip file (HorizonPeripheralsAgent.zip) and a msi installer (HorizonPeripheralsAgent.msi). Use the zip file if you only have normal user permission in the remote agent desktop. Use the msi installer if you have admin user permission.

1) HorizonPeripheralsAgent.zip –

Use this zip file to deploy if the agent OS has some limitations to run MSI installer under normal user privilege. Unzip and extract the zip file to anywhere on your Horizon agent machine. In this way, the AutoLaunch registries and functions will not be available. You must manually launch the HorizonPeripheralsAgent.exe under the unzip folder. You will not be able to launch the program in Horizon remote app session since it cannot be auto launched.

2) HorizonPeripheralsAgent.msi

HorizonPeripheralsAgent.msi is the installer to be run on your Horizon agent machine. The web server address and port number need to be configured to the correct value firstly. If you don't know the value, you can use the default one and change it after the installation by editing the config file – hpagentconfig.ini.



HorizonPeripheralsAgent Setup

Server Address and Port Configuration

Enter the server name and port number of the Horizon peripherals intelligence web service portal. Use the default one if you don't know the value.

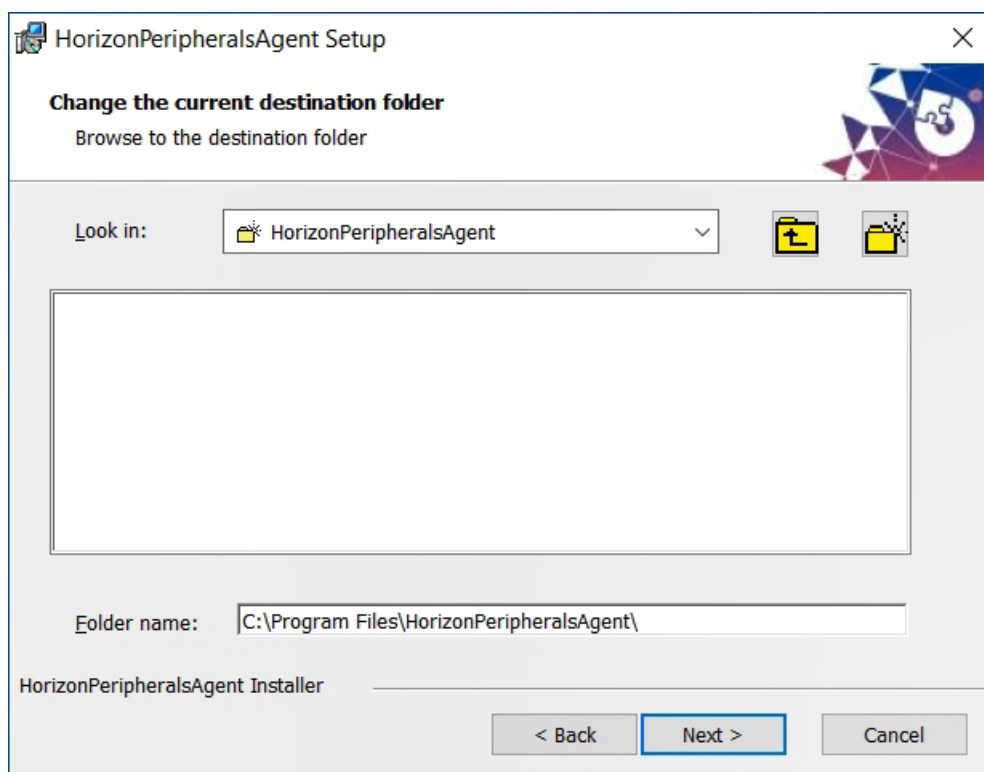
Hostname or IP Address:

Port:

HorizonPeripheralsAgent Installer

< Back Next > Cancel



You can change the installation directory. By default, it is **C:\Program Files\HorizonPeripheralsAgent** directory.



HorizonPeripheralsAgent Setup

Change the current destination folder

Browse to the destination folder

Look in:  

Folder name:

HorizonPeripheralsAgent Installer

< Back Next > Cancel

There are two sub features of the msi installer – core and autolaunch. The zip file only contains the core feature.

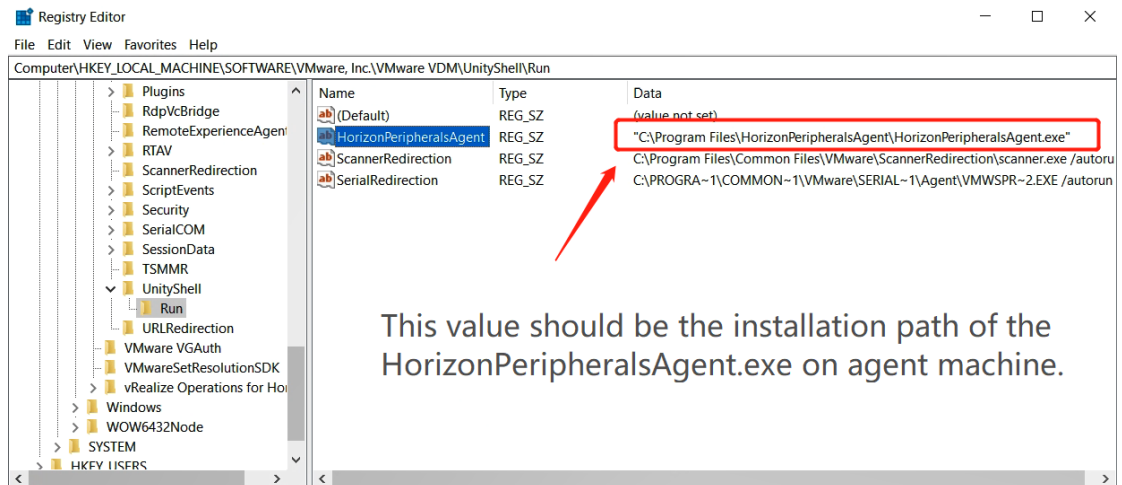
- Core feature will copy all necessary files to the installation directory you choose.
- Autolaunch feature will add registry entries in HKLM path. These registries make

HorizonPeripheralsAgent.exe launch automatically when you freshly login a Horizon desktop or app session.

- The registry entries are in the HKLM path. These registries make HorizonPeripheralsAgent.exe launch automatically whenever you freshly login a Horizon desktop or app session. The registries are –

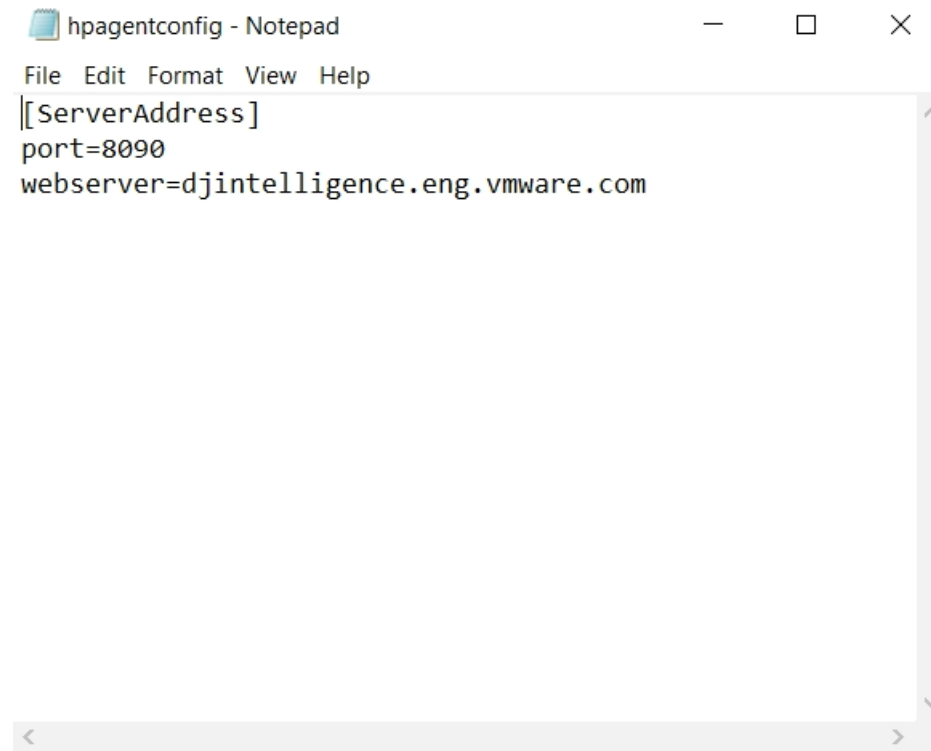
“HKLM\Software\VMware, Inc.\VMware VDM\UnityShell\Run”

“HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Run”



After the Installation

The hpagentconfig.ini under the installation folder contains the web server address and port which are configured during installation. If you don't input them correctly during installation, you could manually change them by editing this config file.



HorizonPeripheralsClient Install Guide

Windows

Cmdline Installation

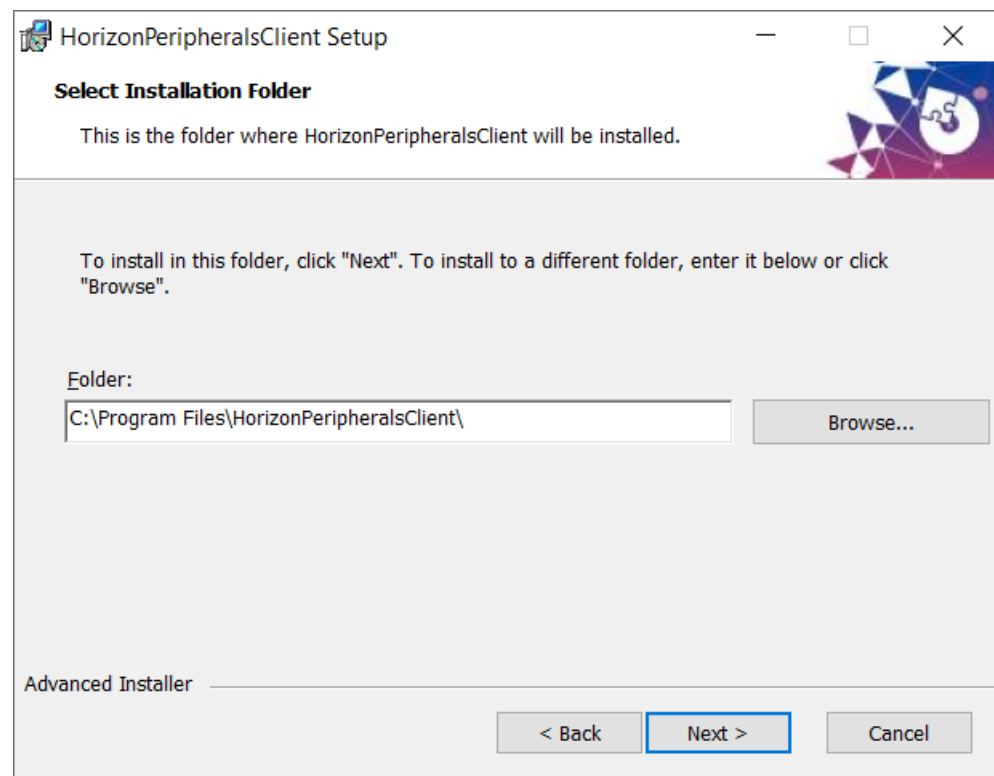
Run the following command in your command line:

```
msiexec /i C:/YourMsiLocation /quiet /qn APPDIR="C:/Program Files/HorizonPeripheralsClient"
```

Normal Installation

HorizonPeripheralsClient.msi is the installer to be run on your Horizon client machine. It requires the administrator privilege to run.

You can choose the installation directory for HorizonPeripheralsClient. By default, it is **C:\Program Files\HorizonPeripheralsClient** directory.



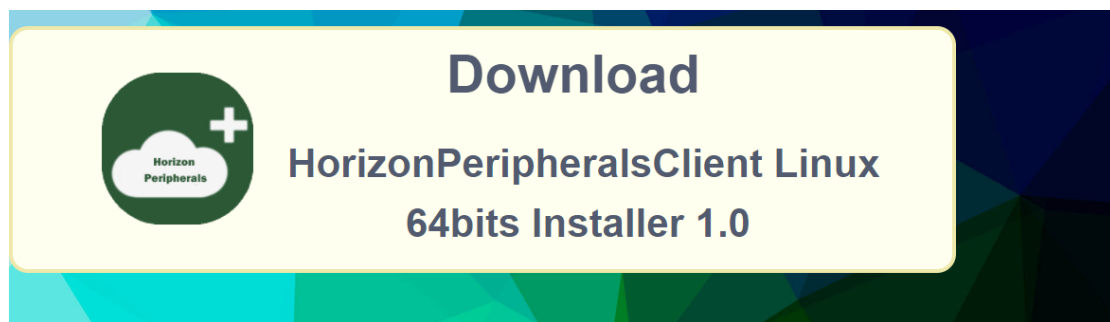
Linux

Before Installation

- The script is based on Python3.6 or Python3.6+
- The pyusb package is needed, install it by the following command:
sudo pip3 install pyusb
- The distro package is needed, install it by the following command:
sudo pip3 install distro

Cmdline Installation

Download HorizonPeripheralsClient Linux 64bits Installer 1.0 from Fling website or the home page of your web OVA server.



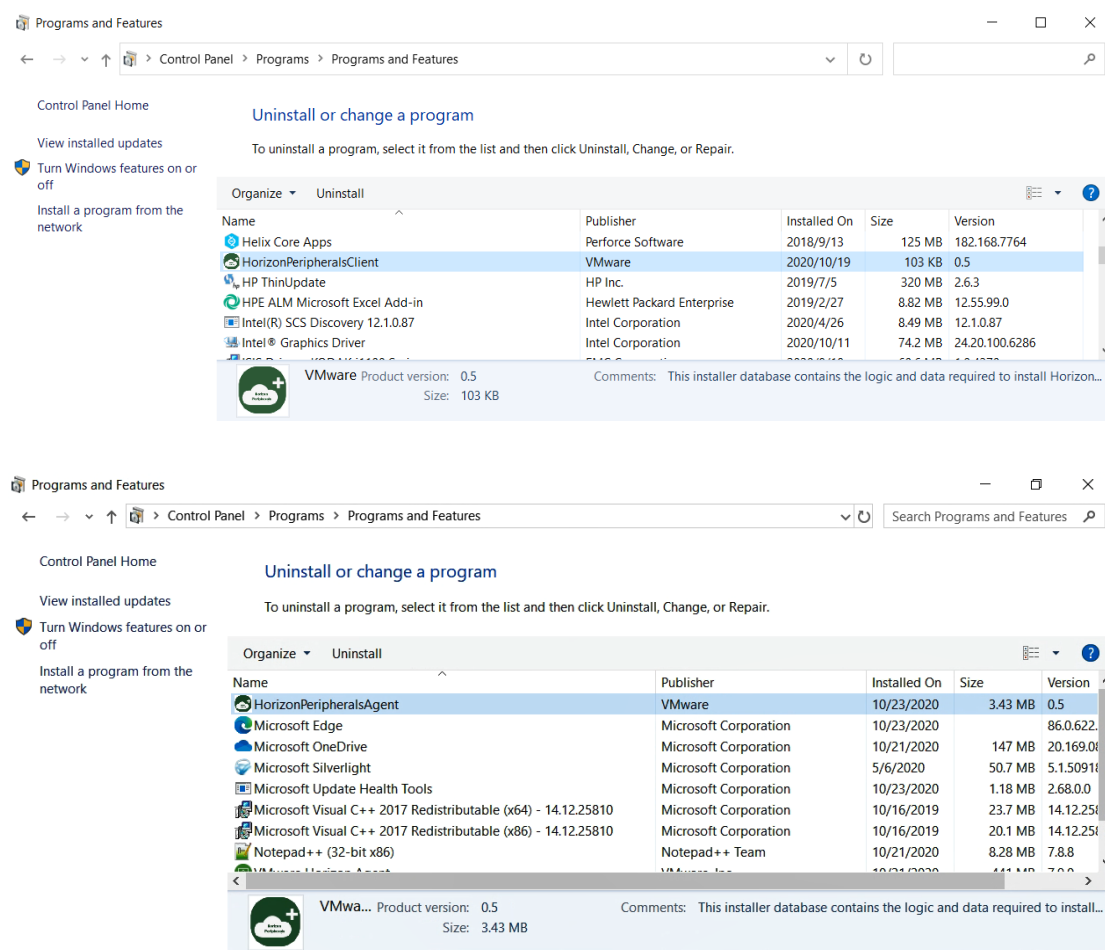
Extract the zip file and run the following command in file path with root privilege or sudo.

sudo ./hpilinux_install.sh

```
[root@localhost zmingyu]# ./hpilinux_install.sh
Environment checking...
You have installed python version >= 3.6
You have installed pyusb
Your pyusb version satisfied our program requirement
You have installed distro
Copy python files to - /usr/lib/vmware/hpiclient/
Copy libdjvchanclient.so to - /usr/lib/vmware/rdpvcbridge/
Finish HPI linux client installation.
```

Windows-Uninstall

Go to the Uninstall a program entry in Control Panel. Uninstall the HorizonPeripheralsClient and HorizonPeripheralsAgent programs.



Linux- Uninstall

Run the following command in file extraction path with root privilege or sudo.

```
[root@localhost zmingyu]# ./hpiLinux_install.sh -u
uninstall linux client...
Successfully uninstall hpi linux client...
```

Change HTTPS Security Certificate Settings (Optional)

By default, a valid certificate will be generated with the web OVA server's FQDN signed by a VMware internal rootCA after the deployment of Web OVA. This cert is then used by the HTTPS communication between HorizonPeripheralsAgent and web OVA server.

If you want to replace the auto-generated cert with another valid cert signed by another well-known rootCA instead of the VMware rootCA, please follow the steps below manually.

1. Apply for a valid cert from a well-known rootCA. Get the private key (<fqdn>.key) and cert file (<fqdn>.crt) ready.
2. On web OVA server, copy the key and cert files to /etc/nginx/ folder. Edit the /etc/nginx/nginx.conf to replace the ssl_certificate and ssl_certificate_key options with <fqdn>.crt and <fqdn>.key. Reboot the web OVA server to apply the change.
3. Get the public certificate of the well-known rootCA (rootca.pem). Copy it to the HorizonPeripheralsAgent install directory on Horizon agent machine.
4. Relaunch HorizonPeripheralsAgent.exe to apply the change.