



USB Network Native Driver for ESXi

version 1.13 — September 21, 2023

USB

USB DRIVER

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ESXi80U1-VMKUSB-NIC-FLING-64098092-component-21669994.zip

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Release Date: February 06, 2019

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INSTRUCTIONS

Installation

Custom ESXi Image Profile/ISO

- See this [blog post](#) for creating custom ESXi ISO or Image Profile using vSphere Lifecycle Manager

Manual

- **Step 1** - Download the ZIP file for the specific version of your ESXi host and upload to ESXi host using SCP or Datastore Browser
- **Step 2** - Place the ESXi host into Maintenance Mode using the vSphere UI or CLI (e.g. `esxcli system maintenanceMode set -e true`)

- **Step 3** - Install the ESXi Offline Bundle (6.5/6.7) or Component (7.0)

For (7.0+) - Run the following command on ESXi Shell to install ESXi Component:

```
esxcli software component apply -d /path/to/the component zip
```

For (6.5/6.7) - Run the following command on ESXi Shell to install ESXi Offline Bundle:

```
esxcli software vib install -d /path/to/the offline bundle zip
```

- **Step 4** - Plug-in the USB NIC and reboot for the change to go into effect. Once the host has rebooted, ESXi should automatically pickup and claim the USB NIC (e.g. vusb0)

Note: Secure Boot can not be enabled if you need to use Option 2 to persist USB NIC bindings.

Multiple USB NIC Bindings

When multiple USB NICs are connected and used with ESXi, an ESXi PSOD *may* occur. To prevent the PSOD, the USB driver parameter **usbBusFullScanOnBootEnabled=0** is now the default value and will prevent ESXi from performing a full USB bus rescan during bootup.

The implication is that to persist the USB NIC bindings, you will need to use Option 2 in the *Persisting USB NIC Bindings* section below. For customers who only have a single USB NIC and does not wish to add the additional persistent script or wish to enable Secure Boot, then you can configure **usbBusFullScanOnBootEnabled=1** by using Option 1 in the *Persisting USB NIC Bindings* section below.

Persisting USB NIC Bindings

Option 1: Run the following ESXCLI command which will enable the driver parameter to perform a full USB bus scan during startup:

```
esxcli system module parameters set -p "usbBusFullScanOnBootEnabled=1" -m vmkusb_nic_fling
```

Option 2: Currently there is a limitation in ESXi where USB NIC bindings are picked up much later in the boot process and to ensure settings are preserved upon a reboot, the following needs to be added to **/etc/rc.local.d/local.sh** based on your configurations.

Standard Virtual Switch (VSS):

```

vusb0_status=$(esxcli network nic get -n vusb0 | grep 'Link Status' | awk
'{print $NF}')
count=0
while [[ $count -lt 20 && "${vusb0_status}" != "Up" ]]
do
    sleep 10
    count=$(( $count + 1 ))
    vusb0_status=$(esxcli network nic get -n vusb0 | grep 'Link Status' |
awk '{print $NF}')
done

esxcfg-vswitch -R

```

Distributed Virtual Switch (VDS):

```

VDS_0_NAME=vDS
VDS_0_PORT_ID=10
VDS_1_NAME=vDS-NSX
VDS_1_PORT_ID=2

vusb0_status=$(esxcli network nic get -n vusb0 | grep 'Link Status' | awk
'{print "v0:" $NF}') && vusb1_status=$(esxcli network nic get -n vusb1 | grep
'Link Status' | awk '{print "v1:" $NF}')
count=0
while [[ $count -lt 40 ]] && [[ "${vusb0_status}" != "v0:Up" ||
"${vusb1_status}" != "v1:Up" ]]
do
    sleep 5
    count=$(( $count + 1 ))
    vusb0_status=$(esxcli network nic get -n vusb0 | grep 'Link Status' |
awk '{print "v0:" $NF}') && vusb1_status=$(esxcli network nic get -n vusb1 |
grep 'Link Status' | awk '{print "v1:" $NF}')
done

if [ "${vusb0_status}" = "v0:Up" ]; then
    esxcfg-vswitch -P vusb0 -V ${VDS_0_PORT_ID} ${VDS_0_NAME}
fi

if [ "${vusb1_status}" = "v1:Up" ]; then
    esxcfg-vswitch -P vusb1 -V ${VDS_1_PORT_ID} ${VDS_1_NAME}
fi

```

Note: The vusbX vmkernel interface may not show up in either ESXi Embedded Host Client and/or vSphere HTML5 UI, this does not mean there is an issue. ESXi was never designed to

support USB-based NICs for Management Network and the UI may not properly detect these devices when using the UI. It is recommended to use the ESXi Shell for any operations requiring configuration of vusbX devices.

Persisting VMkernel to USB NIC mappings

When multiple USB NICs are connected, it is possible that the mapping between vmkX to physical MAC Address of the USB NIC could random change upon rebooting ESXi. To ensure this does not happen, customers can specify the mapping by adding custom parameter to USB NIC module.

Here is an example where we are mapping **vusb0** to 70:88:6b:85:c0:53 and **vusb1** to 58:ef:68:7f:2b:f7:

```
esxcli system module parameters set -p "vusb0_mac=70:88:6b:85:c0:53  
vusb1_mac=58:ef:68:7f:2b:f7" -m vmkusb_nic_fling
```

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