

MiaRec

Installation on VMWare ESXi

Revision 1.0 (2014-09-18)

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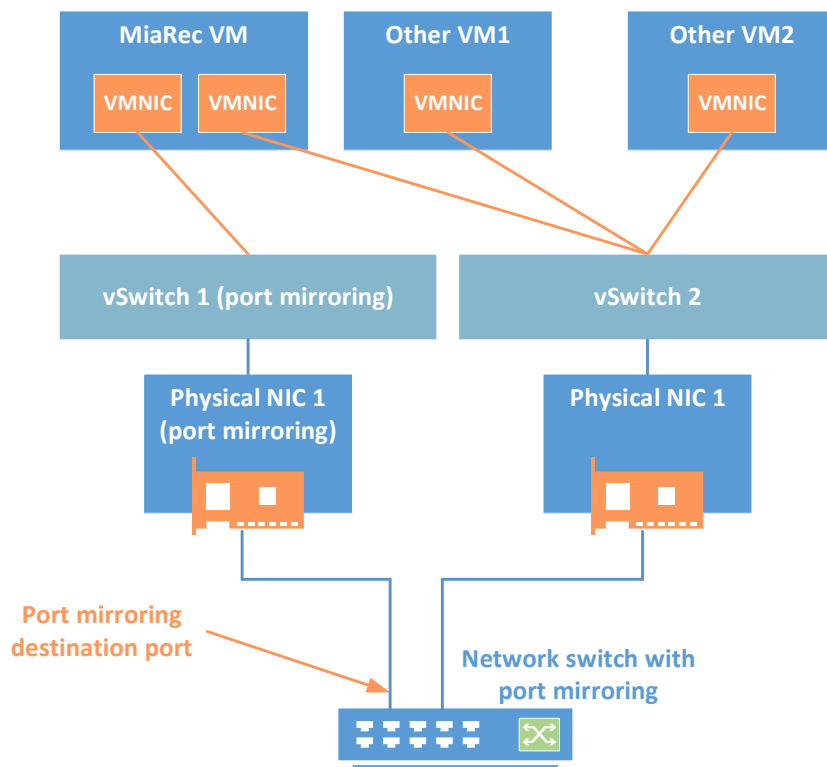
1 Purpose

This guide describes the configuration procedures required for deployment of MiaRec call recording software on VMWare ESXi virtual machine.

2 Use a dedicated physical network adapter for port mirroring

It is highly recommended to allocate a dedicated physical network adapter solely for call recording purposes (port mirroring). And enable promiscuous mode only on that adapter. Otherwise a network performance of other virtual machines may degrade when promiscuous mode is enabled on their virtual network adapters. Especially this is recommended when other virtual machines run DNS or DHCP services. These services work incorrectly when network adapter is opened in promiscuous mode, and this causes a distortion in audio on IP phone side.

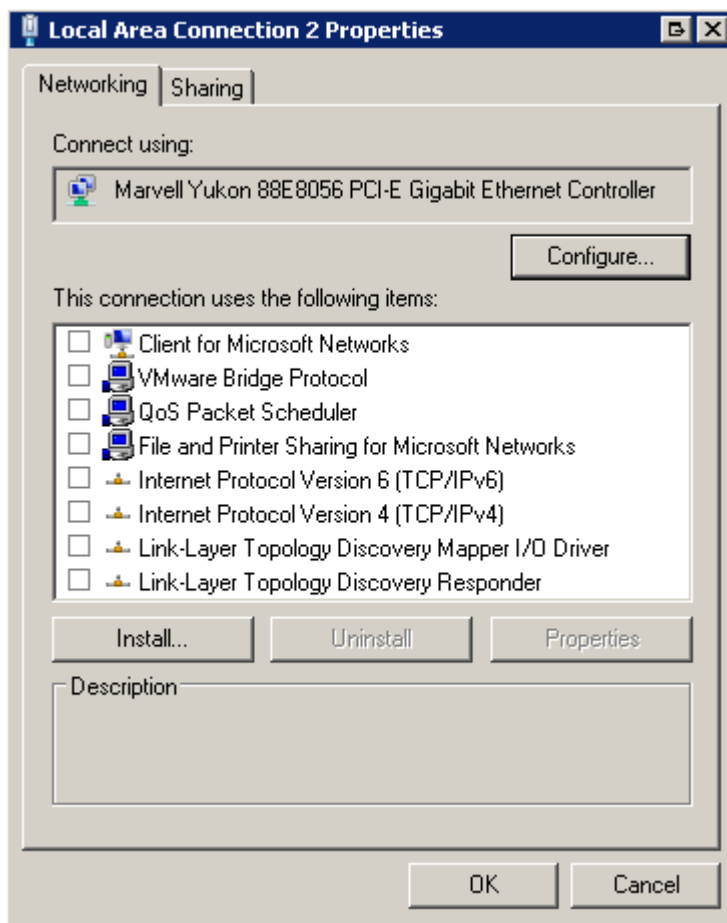
The following figure shows a network configuration of VMWare ESXi with multiple physical network adapters.



- MiaRec VM has two virtual network adapters (shown as “VMNIC” in figure).
 - One of them is linked to vSwitch1, which is used for port mirroring only
 - Other NIC is linked vSwitch2, which is used for network access (management, access of web-interface etc)
- All other virtual machines are linked to vSwitch2
- vSwitch1 (port mirroring) is linked to physical NIC, which is used solely for port mirroring purposes

Procedure:

1. Login to ESXi host using vSphere Client
2. Click **Configuration** tab and then **Networking** under **Hardware**
3. Create new Virtual Switch and assign it to the physical NIC, which is used for port mirroring
4. In the properties of this Virtual Switch change **Promiscuous Mode** to **Accept**
5. Edit MiaRec virtual machine and create two virtual Network Adapters. One of them should link to the newly created Virtual Switch and other should be linked to regular network access virtual switch
6. Login into MiaRec VM and edit properties of the network adapter, which is used for port mirroring. Uncheck IP services (see screenshot below). This will switch the network adapter to listen-only mode.



3 Enable promiscuous mode on network adapter

Skip this step if you created a dedicated vSwitch as described in previous step.

MiaRec leverages port mirroring function on the network switch. A virtual network adapter should be switched to promiscuous mode, otherwise MiaRec will not receive network packets from IP phones.

To configure promiscuous mode on VMWare ESXi:

1. Log in to the ESXi host or vCenter Server using VI Client/vSphere Client.
2. Select the ESXi host and click the **Configuration** tab.
3. Under Hardware, click **Networking**.
4. Click **Properties** of the virtual switch for which you want to enable promiscuous mode.
5. To allow promiscuous mode on the virtual switch or portgroup, select the name of the virtual switch or portgroup and click **Edit** (note: the setting on the portgroup overrides the virtual switch setting).
6. Click the **Security** tab.
7. From the dropdown for Promiscuous Mode, select **Accept**.
8. Additionally, you need to set the VLAN 4095 at the port group level, which allows the port group to see the traffic on any VLAN while leaving the VLAN tags intact. If this configuration is not done, then port mirroring may not work at all or the mirrored traffic will be sent to recorder only partially (for example, only one direction). As a result call recording will work incorrectly.

References:

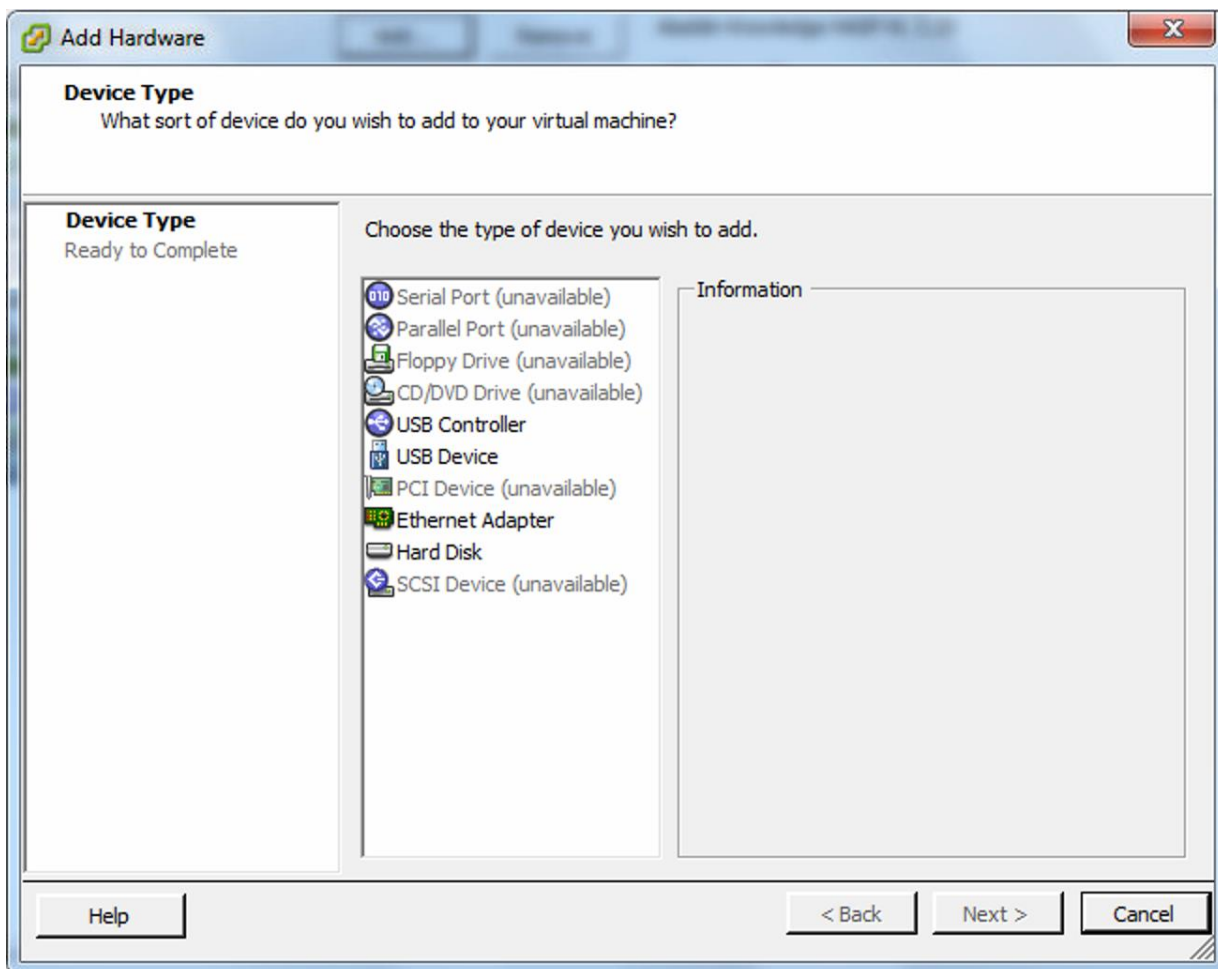
- [VMWare KB: Configuring promiscuous mode on a virtual switch or portgroup](#)
- [Wikipedia: Promiscuous mode](#)

4 Enable USB devices support

MiaRec uses HASP dongle for licensing purposes. It is necessary to connect this dongle to MiaRec virtual machine.

Procedure:

1. Connect MiaRec dongle to VMWare ESXi physical server.
2. In the vSphere Client inventory, right-click the MiaRec virtual machine and select **Edit Settings**
3. Click the **Hardware** tab and click **Add**.
4. Select **USB Device** and click **Next**.

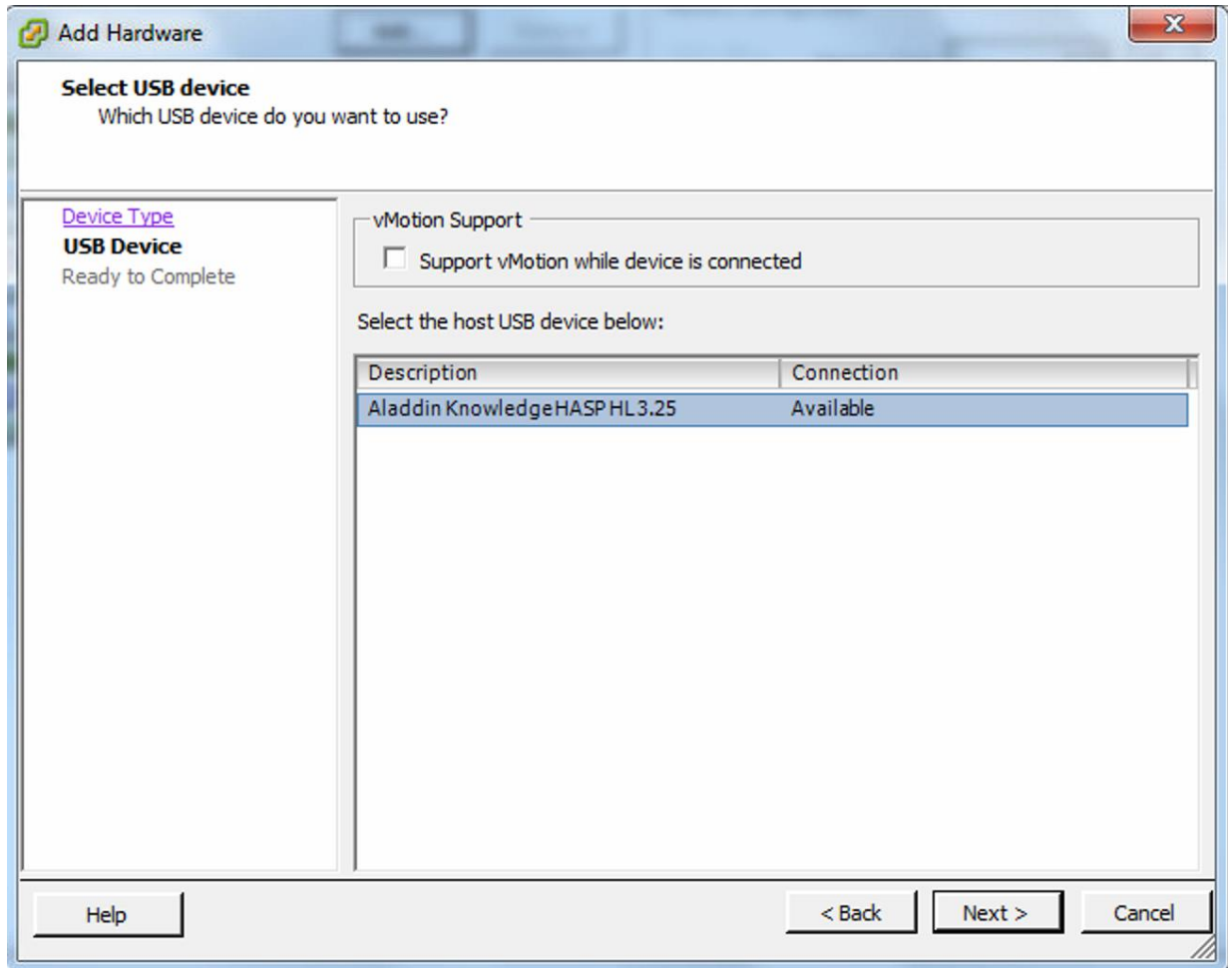


5. (Optional) Select **Support vMotion while device is connected**.

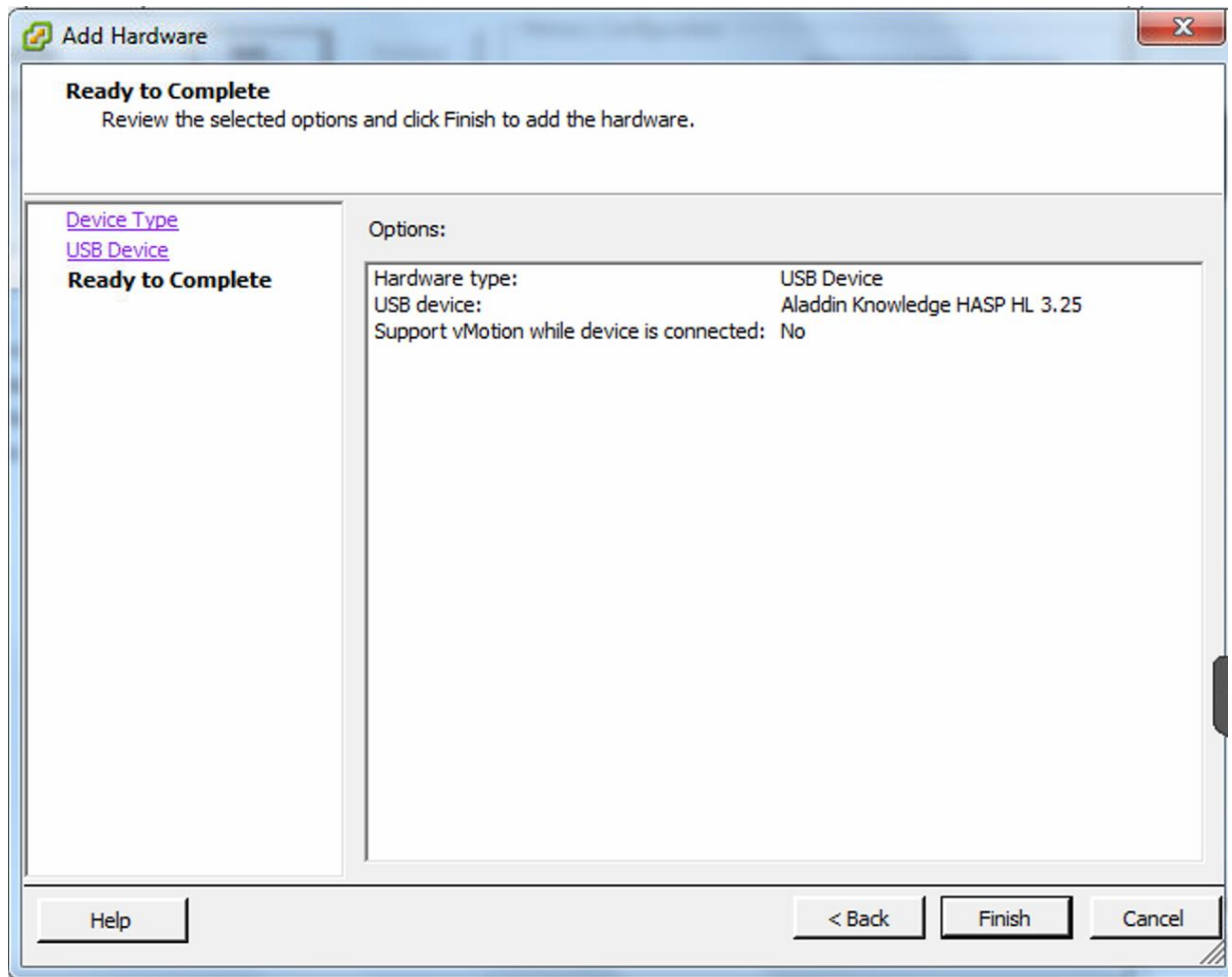
If you do not plan to migrate a virtual machine with USB devices attached, deselect the **Support vMotion** option.

This reduces migration complexity, which results in better performance and stability.

6. Select a device to add (Aladdin KnowledgeHASP HL).



7. Click **Finish**.



8. **New USB Device (adding)** appears in the hardware list as **Present**.
9. Click **OK** to save your changes and close the dialog box.