Migrating Service Console to VEM

**From sv-wiki**

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* Currently the initial install of ESX 3.5Ux or ESX 4.0 will result in the **Service Console** behind the vSwitch, and since you may want to change that....



* Ensure the vlan associated with the Service Console's port group is already being sent to the VEM from the physical switch before attempting migration.

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Migrating the Service Console Virtual NIC from vSwitch to VEM

Step-by-Step

* Create a port-profile on the VSM that has the Service Console's vlan in it.

port-profile servicecon

 vmware port-group

 switchport mode access

 switchport access vlan 104<---

 no shutdown

 system vlan 104

 state enabled

* Make sure there is an uplink port-profile that already has the service console vlan.

port-profile sysuplink1

 capability uplink

 vmware port-group

 switchport mode trunk

 switchport trunk allowed vlan 104,110,120,130<---

 no shutdown

 system vlan 110,120,130

 state enabled

* Migrate the Service Console by going to Host's Configuration Tab and follow the steps below

|  |  |  |
| --- | --- | --- |
| http://sv-wiki/images/thumb/0/0d/Cselink07.jpg/289px-Cselink07.jpgManage Virtual Adapters  | http://sv-wiki/images/thumb/8/8a/Cselink08.jpg/300px-Cselink08.jpgAdd  | http://sv-wiki/images/thumb/4/48/Cselink09.jpg/300px-Cselink09.jpgMigrate Existing Virtual Adapters  |
| http://sv-wiki/images/thumb/f/f4/Cselink10.jpg/300px-Cselink10.jpgPick the port-profile for Service Console  | http://sv-wiki/images/thumb/5/5f/Cselink11.jpg/203px-Cselink11.jpgLooking Good  |  |

VI Client Before/After

|  |  |
| --- | --- |
| **Before**  | **After**  |
| http://sv-wiki/images/thumb/d/d7/Cselink05.jpg/400px-Cselink05.jpg | http://sv-wiki/images/thumb/9/9d/Cselink12.jpg/400px-Cselink12.jpg |
| http://sv-wiki/images/thumb/9/9d/Cselink06.jpg/400px-Cselink06.jpg | http://sv-wiki/images/thumb/0/03/Cselink13.jpg/400px-Cselink13.jpg |

VSM Before/After (no change here)

|  |  |
| --- | --- |
| **Before**  | **After**  |
| port-profile sysuplink1 capability uplink vmware port-group switchport mode trunk switchport trunk allowed vlan 104,110,120,130 no shutdown system vlan 110,120,130 state enabledport-profile servicecon vmware port-group switchport mode access switchport access vlan 104 no shutdown system vlan 104 state enabled | port-profile sysuplink1 capability uplink vmware port-group switchport mode trunk switchport trunk allowed vlan 104,110,120,130 no shutdown system vlan 110,120,130 state enabledport-profile servicecon vmware port-group switchport mode access switchport access vlan 104 no shutdown system vlan 104 state enabled |

ESX Host Vemcmd Before/After

|  |  |
| --- | --- |
| **Before**  | **After**  |
| [root@server51 /]# vemcmd show port LTL IfIndex Vlan Bndl SG\_ID Pinned\_SGID Type Admin State CBL Mode Name 1 15f00010 3968 0 2 2 VIRT UP UP 4 Access inband 2 7000000 1 0 2 2 VIRT UP UP 0 Access aipc 3 15f00020 1 0 2 2 VIRT UP UP 4 Access span 5 15f00040 3968 0 2 2 VIRT UP UP 4 Access inband port security 8 0 3969 0 2 2 VIRT UP UP 4 Access l20 9 0 3969 0 2 2 VIRT UP UP 4 Access l21 10 0 110 0 2 2 VIRT UP UP 4 Access l22 11 0 3968 0 2 2 VIRT UP UP 4 Access l23 12 0 120 0 2 2 VIRT UP UP 4 Access l24 13 0 1 0 2 2 VIRT UP UP 0 Access l25 14 0 1 0 2 2 VIRT UP UP 0 Access l26 16 1a040100 1 T 0 2 2 PHYS UP UP 1 Trunk vmnic1 | [root@server51 /]# vemcmd show port LTL IfIndex Vlan Bndl SG\_ID Pinned\_SGID Type Admin State CBL Mode Name 1 15f00010 3968 0 2 2 VIRT UP UP 4 Access inband 2 7000000 1 0 2 2 VIRT UP UP 0 Access aipc 3 15f00020 1 0 2 2 VIRT UP UP 4 Access span 5 15f00040 3968 0 2 2 VIRT UP UP 4 Access inband port security 8 0 3969 0 2 2 VIRT UP UP 4 Access l20 9 0 3969 0 2 2 VIRT UP UP 4 Access l21 10 0 110 0 2 2 VIRT UP UP 4 Access l22 11 0 3968 0 2 2 VIRT UP UP 4 Access l23 12 0 120 0 2 2 VIRT UP UP 4 Access l24 13 0 1 0 2 2 VIRT UP UP 0 Access l25 14 0 1 0 2 2 VIRT UP UP 0 Access l26 16 1a040100 1 T 0 2 2 PHYS UP UP 1 Trunk vmnic1 47 1b040000 104 0 2 2 VIRT UP UP 4 Access vswif0 |
| [root@server51 /]# vemcmd show trunkTrunk port 16 native\_vlan 1 CBL 1vlan(1) cbl 1, vlan(104) cbl 4, vlan(110) cbl 4, vlan(120) cbl 4, vlan(130) cbl 4,  | [root@server51 /]# vemcmd show trunkTrunk port 16 native\_vlan 1 CBL 1vlan(1) cbl 1, vlan(104) cbl 4, vlan(110) cbl 4, vlan(120) cbl 4, vlan(130) cbl 4, |
| [root@server51 /]# vss status VSS modules are loaded Switch Name Num Ports Used Ports Configured Ports MTU Uplinks vSwitch0 32 3 32 1500 vmnic0 DVS Name Num Ports Used Ports Configured Ports Uplinks nexus 256 8 256 vmnic1  DPA is running | [root@server51 /]# vss status VSS modules are loaded Switch Name Num Ports Used Ports Configured Ports MTU Uplinks vSwitch0 32 2 32 1500 vmnic0 DVS Name Num Ports Used Ports Configured Ports Uplinks nexus 256 9 256 vmnic1  DPA is running |
| [root@server51 /]# vemcmd show bd 110BD 110, vdc 1, vlan 110, 2 portsPortlist: 10 l22 16 vmnic1[root@server51 /]# vemcmd show bd 120BD 120, vdc 1, vlan 120, 2 portsPortlist: 12 l24 16 vmnic1[root@server51 /]# vemcmd show bd 104BD 104, vdc 1, vlan 104, 2 portsPortlist: 16 vmnic1Multicast Group Table:Group 0.0.0.0 RID 5 Multicast LTL 4409 16 | [root@server51 /]# vemcmd show bd 110BD 110, vdc 1, vlan 110, 2 portsPortlist: 10 l22 16 vmnic1[root@server51 /]# vemcmd show bd 10[root@server51 /]# vemcmd show bd 120BD 120, vdc 1, vlan 120, 2 portsPortlist: 12 l24 16 vmnic1[root@server51 /]# vemcmd show bd 104BD 104, vdc 1, vlan 104, 2 portsPortlist: 16 vmnic1 47 vswif0Multicast Group Table:Group 0.0.0.0 RID 5 Multicast LTL 4409 16 |

ESX Host esxcfg Before/After

|  |  |
| --- | --- |
| **Before**  | **After**  |
| [root@server51 /]# esxcfg-vswitch -lSwitch Name Num Ports Used Ports Configured Ports MTU Uplinks vSwitch0 32 3 32 1500 vmnic0  PortGroup Name VLAN ID Used Ports Uplinks  Service Console 104 1 vmnic0 DVS Name Num Ports Used Ports Configured Ports Uplinks nexus 256 8 256 vmnic1  DVPort ID In Use Client  160 1 vmnic1  161 0  162 0  163 0  164 0  165 0  166 0  167 0  168 0  169 0  170 0  171 0  172 0  173 0  174 0  175 0  | [root@server51 /]# esxcfg-vswitch -lSwitch Name Num Ports Used Ports Configured Ports MTU Uplinks vSwitch0 32 2 32 1500 vmnic0  PortGroup Name VLAN ID Used Ports Uplinks DVS Name Num Ports Used Ports Configured Ports Uplinks nexus 256 9 256 vmnic1  DVPort ID In Use Client  160 1 vmnic1  161 0  162 0  163 0  164 0  165 0  166 0  167 0  168 0  169 0  170 0  171 0  172 0  173 0  174 0  175 0  66 1 vswif0  |
| [root@server51 /]# esxcfg-vswif -lName Port Group/DVPort IP Family IP Address Netmask Broadcast Enabled TYPE vswif0 Service Console IPv4 14.17.104.136 255.255.255.0 14.17.104.255 true STATIC  | [root@server51 /]# esxcfg-vswif -lName Port Group/DVPort IP Family IP Address Netmask Broadcast Enabled TYPE vswif0 66 IPv4 14.17.104.136 255.255.255.0 14.17.104.255 true STATIC  |

Migrating vmnic0 from vSwitch to VEM

Step-by-step

* Migrate vmnic0 by going to Host's Configuration Tab and follow the steps below

|  |  |  |
| --- | --- | --- |
| http://sv-wiki/images/thumb/7/76/Cselink18.jpg/248px-Cselink18.jpgManage Physical Adapters  | http://sv-wiki/images/thumb/9/9c/Cselink19.jpg/217px-Cselink19.jpgClick to Add NIC  | http://sv-wiki/images/thumb/0/0a/Cselink20.jpg/225px-Cselink20.jpgSelect vmnic0  |
| http://sv-wiki/images/thumb/a/a2/Cselink21.jpg/226px-Cselink21.jpgYES  | http://sv-wiki/images/thumb/2/23/Cselink22.jpg/210px-Cselink22.jpgvmnic0 unders sysuplink2  | http://sv-wiki/images/thumb/b/b6/Cselink23.jpg/250px-Cselink23.jpgVswitch can be removed  |
| http://sv-wiki/images/thumb/2/2f/Cselink24.jpg/234px-Cselink24.jpgVswitch is gone  |  |  |

VI Client Before/After

|  |  |
| --- | --- |
| **Before**  | **After**  |
| http://sv-wiki/images/thumb/9/9d/Cselink12.jpg/400px-Cselink12.jpg | http://sv-wiki/images/thumb/2/2f/Cselink24.jpg/400px-Cselink24.jpg |
| http://sv-wiki/images/thumb/0/03/Cselink13.jpg/400px-Cselink13.jpg | http://sv-wiki/images/thumb/2/23/Cselink22.jpg/400px-Cselink22.jpg |

VSM Before/After (no change here)

|  |  |
| --- | --- |
| **Before**  | **After**  |
| port-profile sysuplink2 capability uplink vmware port-group switchport mode trunk switchport trunk allowed vlan 104 no shutdown system vlan 104 state enabledport-profile servicecon vmware port-group switchport mode access switchport access vlan 104 no shutdown system vlan 104 state enabled | port-profile sysuplink2 capability uplink vmware port-group switchport mode trunk switchport trunk allowed vlan 104 no shutdown system vlan 104 state enabledport-profile servicecon vmware port-group switchport mode access switchport access vlan 104 no shutdown system vlan 104 state enabled |

ESX Host Vemcmd Before/After

|  |  |
| --- | --- |
| **Before**  | **After**  |
| [root@server51 /]# vemcmd show port LTL IfIndex Vlan Bndl SG\_ID Pinned\_SGID Type Admin State CBL Mode Name 1 15f00010 3968 0 2 2 VIRT UP UP 4 Access inband 2 7000000 1 0 2 2 VIRT UP UP 0 Access aipc 3 15f00020 1 0 2 2 VIRT UP UP 4 Access span 5 15f00040 3968 0 2 2 VIRT UP UP 4 Access inband port security 8 0 3969 0 2 2 VIRT UP UP 4 Access l20 9 0 3969 0 2 2 VIRT UP UP 4 Access l21 10 0 110 0 2 2 VIRT UP UP 4 Access l22 11 0 3968 0 2 2 VIRT UP UP 4 Access l23 12 0 120 0 2 2 VIRT UP UP 4 Access l24 13 0 1 0 2 2 VIRT UP UP 0 Access l25 14 0 1 0 2 2 VIRT UP UP 0 Access l26 16 1a040100 1 T 0 2 2 PHYS UP UP 1 Trunk vmnic1 47 1b040000 104 0 2 2 VIRT UP UP 4 Access vswif0 | [root@server51 /]# vemcmd show port LTL IfIndex Vlan Bndl SG\_ID Pinned\_SGID Type Admin State CBL Mode Name 1 15f00010 3968 0 2 2 VIRT UP UP 4 Access inband 2 7000000 1 0 2 2 VIRT UP UP 0 Access aipc 3 15f00020 1 0 2 2 VIRT UP UP 4 Access span 5 15f00040 3968 0 2 2 VIRT UP UP 4 Access inband port security 8 0 3969 0 2 2 VIRT UP UP 4 Access l20 9 0 3969 0 2 2 VIRT UP UP 4 Access l21 10 0 110 0 2 2 VIRT UP UP 4 Access l22 11 0 3968 0 2 2 VIRT UP UP 4 Access l23 12 0 120 0 2 2 VIRT UP UP 4 Access l24 13 0 1 0 2 2 VIRT UP UP 0 Access l25 14 0 1 0 2 2 VIRT UP UP 0 Access l26 15 1a040000 1 T 0 2 2 PHYS UP UP 1 Trunk vmnic0 16 1a040100 1 T 0 2 2 PHYS UP UP 1 Trunk vmnic1 47 1b040000 104 0 2 2 VIRT UP UP 4 Access vswif0 |
| [root@server51 /]# vemcmd show trunkTrunk port 16 native\_vlan 1 CBL 1vlan(1) cbl 1, vlan(104) cbl 4, vlan(110) cbl 4, vlan(120) cbl 4, vlan(130) cbl 4, | [root@server51 /]# vemcmd show trunkTrunk port 15 native\_vlan 1 CBL 1vlan(1) cbl 1, vlan(104) cbl 4, Trunk port 16 native\_vlan 1 CBL 1vlan(1) cbl 1, vlan(104) cbl 4, vlan(110) cbl 4, vlan(120) cbl 4, vlan(130) cbl 4,  |
| [root@server51 /]# vss status VSS modules are loaded Switch Name Num Ports Used Ports Configured Ports MTU Uplinks vSwitch0 32 2 32 1500 vmnic0 DVS Name Num Ports Used Ports Configured Ports Uplinks nexus 256 9 256 vmnic1  DPA is running | [root@server51 /]# vss status VSS modules are loaded DVS Name Num Ports Used Ports Configured Ports Uplinks nexus 256 10 256 vmnic0,vmnic1 DPA is running |
| [root@server51 /]# vemcmd show bd 110BD 110, vdc 1, vlan 110, 2 portsPortlist: 10 l22 16 vmnic1[root@server51 /]# vemcmd show bd 120BD 120, vdc 1, vlan 120, 2 portsPortlist: 12 l24 16 vmnic1[root@server51 /]# vemcmd show bd 104BD 104, vdc 1, vlan 104, 2 portsPortlist: 16 vmnic1 47 vswif0Multicast Group Table:Group 0.0.0.0 RID 5 Multicast LTL 4409 16 | [root@server51 /]# vemcmd show bd 110BD 110, vdc 1, vlan 110, 2 portsPortlist: 10 l22 16 vmnic1[root@server51 /]# vemcmd show bd 120BD 120, vdc 1, vlan 120, 2 portsPortlist: 12 l24 16 vmnic1[root@server51 /]# vemcmd show bd 104BD 104, vdc 1, vlan 104, 3 portsPortlist: 15 vmnic0 16 vmnic1 47 vswif0 |

ESX Host esxcfg Before/After

|  |  |
| --- | --- |
| **Before**  | **After**  |
| [root@server51 /]# esxcfg-vswitch -lSwitch Name Num Ports Used Ports Configured Ports MTU Uplinks vSwitch0 32 2 32 1500 vmnic0  PortGroup Name VLAN ID Used Ports Uplinks DVS Name Num Ports Used Ports Configured Ports Uplinks nexus 256 9 256 vmnic1  DVPort ID In Use Client  160 1 vmnic1  161 0  162 0  163 0  164 0  165 0  166 0  167 0  168 0  169 0  170 0  171 0  172 0  173 0  174 0  175 0  66 1 vswif0  | [root@server51 /]# esxcfg-vswitch -lDVS Name Num Ports Used Ports Configured Ports Uplinks nexus 256 10 256 vmnic0,vmnic1 DVPort ID In Use Client  160 1 vmnic1  161 1 vmnic0  162 0  163 0  164 0  165 0  166 0  167 0  168 0  169 0  170 0  171 0  172 0  173 0  174 0  175 0  66 1 vswif0  |
| [root@server51 /]# esxcfg-vswif -lName Port Group/DVPort IP Family IP Address Netmask Broadcast Enabled TYPE vswif0 66 IPv4 14.17.104.136 255.255.255.0 14.17.104.255 true STATIC  | [root@server51 /]# esxcfg-vswif -lName Port Group/DVPort IP Family IP Address Netmask Broadcast Enabled TYPE vswif0 66 IPv4 14.17.104.136 255.255.255.0 14.17.104.255 true STATIC  |

Post Migration

* See [System Vlan Guidelines](http://sv-wiki/index.php/System_Vlan_Guidelines) to ensure manageability.