



# Configuring Virtual Machine Tracker

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## Information About Virtual Machine Tracker

### Guidelines and Limitations for VM Tracker

VM Tracker has the following guidelines and limitations:

- VM Tracker supports up to four vCenter connections.
- VM Tracker supports high availability and the fault tolerance features of vCenter.
- VM Tracker supports up to 64 VMs per host.
- VM Tracker supports up to 350 hosts across all vCenters.
- VM Tracker supports up to 600 VLANs.
- VM Tracker supports only 507 VLANs in Per VLAN Rapid Spanning Tree (PVRST) mode due to hardware limitations. To enable more than 507 VLANs, use Multiple Spanning Tree (MST).
- The current version of VM Tracker is supported only on ESXi 5.1 and ESXi 5.5 on Windows and Linux.
- The current version of VM Tracker supports only VMware orchestration. It does not support orchestration with other hypervisors.
- For all ports on which VM Tracker is enabled, you must not perform any Layer 2 or Layer 3 configuration that is related to switchports and VLANs. However, you can update the native VLAN.
- VM Tracker does not support VLAN 4095.

- VM Tracker is not supported on the virtual port channel (vPC) switch although it can be configured on the downstream switch on the vPC setup.
- You must connect the host directly to the Cisco Nexus 3000 Series ports. Host connectivity through the IOM, fabric extender (FEX), or chassis is not supported.
- If you do not specify the virtual routing and forwarding (VRF) while configuring the remote IP address, the management VRF is used.
- If you do not configure a VLAN as a native VLAN on the interface, VM Tracker cannot remove this VLAN and disable VM Tracker.
- For vCenter version 5.1 and 5.5, the CDP information can contain a maximum of 32 characters for the name of the switch. If the name of the switch exceeds 32 characters, VM Tracker will not work.

## Enabling Virtual Machine Tracker

By default, the VM Tracker feature is enabled on all interfaces.

### SUMMARY STEPS

1. switch# **configure terminal**
2. switch(config)# **[no] feature vmtracker**

### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	switch# <b>configure terminal</b>	Enters global configuration mode.
<b>Step 2</b>	switch(config)# <b>[no] feature vmtracker</b>	Enables the VM Tracker feature on all interfaces.  The <b>no</b> form of the command disables the VM Tracker feature on all interfaces.

This example shows how to enable VM Tracker:

```
switch# configure terminal
switch(config)# feature vmtracker
switch(config)#
```

## Creating a New Connection to vCenter

### SUMMARY STEPS

1. switch# **configure terminal**
2. switch(config)# **[no] vmtracker connection connection-name**
3. switch(config-vmtr-conn)# **[no] remote {ip address ip\_address | port port\_number | vrf vrf\_name}**
4. switch(config-vmtr-conn)# **username username password password**
5. switch(config-vmtr-conn)# **[no] connect**

## DETAILED STEPS

	Command or Action	Purpose
Step 1	switch# <b>configure terminal</b>	Enters global configuration mode.
Step 2	switch(config)# <b>[no] vmtracker connection</b> <i>connection-name</i>	Enters VM Tracker connection configuration mode for the connection name specified.  The <b>no</b> form of the command disables the connection.
Step 3	switch(config-vmt-conn)# <b>[no] remote</b> { <b>ip address</b> <i>ip_address</i>   <b>port</b> <i>port_number</i>   <b>vrf</b> <i>vrf_name</i> }	Configures remote IP parameters.  The default value for <i>port_number</i> is 80. If <i>vrf_name</i> is not specified, the default value is <b>management</b> .
Step 4	switch(config-vmt-conn)# <b>username</b> <i>username</i> <b>password</b> <i>password</i>	Verifies the username and password to connect to vCenter.
Step 5	switch(config-vmt-conn)# <b>[no] connect</b>	Connects to vCenter.  The <b>no</b> form of the command disconnects VM Tracker from vCenter.

## Example

This example shows how to create a new connection to VMware vCenter:

```
switch# configure terminal
switch(config)# vmtracker connection conn1
switch(config-vmt-conn)# remote ip address 20.1.1.1 port 80 vrf management
switch(config-vmt-conn)# username user1 password abc1234
switch(config-vmt-conn)# connect
```

## Synchronizing Information with VMware vCenter

By default, VM Tracker tracks all asynchronous events from VMware vCenter and updates the switchport configuration immediately. Optionally, you can also configure a synchronizing mechanism that synchronizes all host, VM, and port group information automatically with VMware vCenter at a specified interval.

Command	Purpose
<b>[no] set interval find-new-host</b> <i>val</i>	Sets the interval, in seconds, for finding hosts that are newly connected to vCenter. The <b>no</b> form of the command disables the previously configured interval.  The default duration is 3600 seconds.
<b>[no] set interval sync-full-info</b> <i>val</i>	Sets the interval, in seconds, for synchronizing all host, VM, and port group related information with vCenter. The <b>no</b> form of the command disables the previously configured interval.  The default duration is 3600 seconds.

Command	Purpose
<b>vmtracker connection <i>connection-name</i> refresh</b>	Synchronizes all host, VM, and port group related information with vCenter immediately for the specified connection.

- This example shows how to set an interval for finding hosts that are newly connected to vCenter:

```
switch(config-vmt-conn)# set interval find-new-host 300
```

- This example shows how to set an interval for synchronizing all host, VM, and port group information with vCenter:

```
switch(config-vmt-conn)# set interval sync-full-info 120
```

- This example shows how to immediately synchronize all host, VM, and port group information with vCenter:

```
switch(config-vmt-conn)# vmtracker connection conn1 refresh
```

## Verifying the Virtual Machine Tracker Configuration

Use the following commands to display and verify VM Tracker configuration information:

Command	Purpose
<b>show running-config vmtracker [all]</b>	Displays the VM Tracker configuration.
<b>show vmtracker [connection <i>conn_name</i>] {{info [interface <i>intf_id</i>] {summary   detail   host   vm   port-group}}   event-history}</b>	Displays the VM Tracker configuration based on the following: <ul style="list-style-type: none"> <li>• Connection</li> <li>• Interface</li> <li>• Event history</li> </ul>
<b>show vmtracker [connection <i>conn_name</i>] status</b>	Displays the IP address and connection status of the vCenter connection specified.
<b>show logging level vmtracker</b>	Displays the logging level of the syslog messages for VM Tracker.
<b>show system internal vmtracker info all</b>	Displays the complete configuration information of VM Tracker.

## Enabling Virtual Machine Tracker on Specific Interfaces

When VM Tracker is enabled by using the **[no] feature vmtracker** command, it is enabled on all interfaces by default. You can optionally disable and enable it on specific interfaces by using the **[no] vmtracker enable** command.

**SUMMARY STEPS**

1. switch# **configure terminal**
2. switch(config)# **interface** *type slot/port*
3. switch(config-if)# **[no] vmtracker enable**

**DETAILED STEPS**

	<b>Command or Action</b>	<b>Purpose</b>
<b>Step 1</b>	switch# <b>configure terminal</b>	Enters global configuration mode.
<b>Step 2</b>	switch(config)# <b>interface</b> <i>type slot/port</i>	Enters the interface configuration mode for the specified interface.
<b>Step 3</b>	switch(config-if)# <b>[no] vmtracker enable</b>	Enables the VM Tracker feature on the specified interface. The <b>no</b> form of the command disables the VM Tracker feature on the specified interface.

**Example**

This example shows how to enable VM Tracker on a specified interface:

```
switch# configure terminal
switch(config)# interface ethernet 1/3/1
switch(config-if)# vmtracker enable
```

# Configuring Dynamic VLAN Creation

## Enabling Dynamic VLAN Creation

Dynamic creation and deletion of VLANs globally is enabled by default. When dynamic VLAN creation is enabled, if a VM is moved from one host to another and the VLAN required for this VM does not exist on the switch, the required VLAN is automatically created on the switch. You can also disable this capability. However, if you disable dynamic VLAN creation, you must manually create all the required VLANs.

**Before you begin**

Ensure that the VM Tracker feature is enabled.

**SUMMARY STEPS**

1. switch# **configure terminal**
2. switch(config)# **vmtracker connection** *connection-name*
3. switch(config-vmt-conn)# **[no] autovlan enable**

## DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	switch# <b>configure terminal</b>	Enters global configuration mode.
<b>Step 2</b>	switch(config)# <b>vmtracker connection</b> <i>connection-name</i>	Enters VM Tracker connection configuration mode for the connection name specified.
<b>Step 3</b>	switch(config-vmt-conn)# <b>[no] autovlan enable</b>	Enables dynamic VLAN creation and deletion.  The <b>no</b> form of the command disables dynamic VLAN creation and deletion.

This example shows how to enable dynamic VLAN creation:

```
switch# configure terminal
switch(config)# vmtracker connection conn1
switch(config-vmt-conn)# autovlan enable
```

## Configuring an Allowed VLAN List

By default, all VLANs can be configured dynamically on interfaces. You can also define a restricted list of such VLANs.

### Before you begin

Ensure that the VM Tracker feature is enabled.

## SUMMARY STEPS

1. switch# **configure terminal**
2. switch(config)# **vmtracker connection** *connection-name*
3. switch(config-vmt-conn)# **allowed-vlans** {*allow-vlans* | **add** *add-vlans* | **except** *except-vlans* | **remove** *remove-vlans* | **all**}

## DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	switch# <b>configure terminal</b>	Enters global configuration mode.
<b>Step 2</b>	switch(config)# <b>vmtracker connection</b> <i>connection-name</i>	Enters VM Tracker connection configuration mode for the connection name specified.
<b>Step 3</b>	switch(config-vmt-conn)# <b>allowed-vlans</b> { <i>allow-vlans</i>   <b>add</b> <i>add-vlans</i>   <b>except</b> <i>except-vlans</i>   <b>remove</b> <i>remove-vlans</i>   <b>all</b> }	Configures a list of VLANs that can be dynamically configured on interfaces.

This example shows how to configure a list of allowed VLANs:

```
switch# configure terminal
switch(config)# vmtracker connection test
switch(config-vmt-conn)# allowed-vlans 100-101
```

# Example Configuration for Virtual Machine Tracker

This example shows how to create a connection with vCenter:

```
switch# configure terminal
switch(config)# feature vmtracker
switch(config)# vmtracker connection test
switch(config-vmt-conn)# remote ip address 20.1.1.1 port 80 vrf management
switch(config-vmt-conn)# username user1 password abc@123
switch(config-vmt-conn)# connect
switch(config-vmt-conn)# show vmtracker status
```

Connection	Host/IP	status
vc1	22.0.1.251	No Connect
vc2	22.0.1.247	Connected

```
switch# show vmtracker connection vc2 status
```

Connection	Host/IP	status
vc2	22.0.1.247	Connected

```
switch# show running-config vmtracker
```

```
!Command: show running-config vmtracker
!Time: Thu Oct 9 18:04:10 2014
```

```
version 7.1(0)N1(1)
feature vmtracker
```

```
vmtracker connection vc1
  remote ip address 22.0.1.251
  username administrator password 5 00rlUinh
  no autovlan enable
  connect
```

```
switch# show running-config vmtracker all
```

```
!Command: show running-config vmtracker all
!Time: Thu Oct 9 18:10:00 2014
```

```
version 7.1(0)N1(1)
feature vmtracker
```

```
vmtracker connection vc1
  set interval pending-task-polling 2
  set interval sync-full-info 3600
  set interval find-new-host 3600
  remote ip address 22.0.1.251 port 80 vrf management
  username administrator password 5 00rlUinh
  no autovlan enable
  allowed-vlans all
  connect
```

```
switch# show running-config interface port-channel 301
```

```
!Command: show running-config interface port-channel301
!Time: Thu Oct 9 18:06:23 2014
```

```

version 7.1(0)N1(1)

interface port-channel301
  switchport mode trunk
  switchport trunk allowed vlan 1,1001,1005
  vpc 301

switch# show vmtracker event-history

-----
Event History (Conn:vc2 NumEv:439 IP:22.0.1.247)
-----
EventId      Time                               Event Msg
-----
12505      Oct 09 2014 17:14:32:475968  Removed TCLI 102 28 on 22.0.2.102 from
                                         first-dc
12504      Oct 09 2014 17:14:32:475958  Removed TCLI 102 29 on 22.0.2.102 from
                                         first-dc
12501      Oct 09 2014 17:14:31:535716  Removed TCLI 102 26 on 22.0.2.102 from
                                         first-dc
12500      Oct 09 2014 17:14:31:535711  Removed TCLI 102 27 on 22.0.2.102 from
                                         first-dc

switch# show logging level vmtracker

Facility      Default Severity      Current Session Severity
-----
vmtracker      2                      7

0(emergencies)      1(alerts)      2(critical)
3(errors)           4(warnings)    5(notifications)
6(information)     7(debugging)

!How to disconnect from vcenter

switch# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# vmtracker connection vc2
switch(config-vmt-conn)# no connect

switch# show vmtracker connection vc2 status

Connection      Host/IP              status
-----
vc2              22.0.1.247          No Connect

switch# show running-config interface port-channel 301

!Command: show running-config interface port-channel301
!Time: Thu Oct 9 18:17:04 2014

version 7.1(0)N1(1)

interface port-channel301
  switchport mode trunk
  switchport trunk allowed vlan 1
  vpc 301

switch# show vmtracker info host

Switch: FOC1721R0UG
=====

```



```
-----
Interface                Host                VMNIC
-----
port-channel201          22.0.2.3           vmnic0
Switch: FOC1736R028
=====
```

```
-----
Interface                Host                VMNIC
-----
port-channel201          22.0.2.3           vmnic1
port-channel203          22.0.2.1           vmnic1
port-channel202          22.0.2.3           vmnic2
-----
```

switch# **show vmtracker info vm**

Switch: FOC1721R0UG  
=====

```
-----
Interface                VM                State
-----
port-channel201          ubuntu server 1   on
port-channel201          win7 1            on
Switch: FOC1736R028
=====
```

```
-----
Interface                VM                State
-----
port-channel201          ubuntu server 1   on
port-channel201          win7 1            on
port-channel203          TCL Inst 2.1 11   on
port-channel203          TCL Inst 2.1 12   on
port-channel202          TCL Inst 2.3 10   on
port-channel202          TCL Inst 2.3 8     off
port-channel202          TCL Inst 2.3 9     off
-----
```

switch# **show vmtracker info summary**

Switch: FOC1721R0UG  
=====

```
-----
Interface                VM                VLANs
-----
port-channel201          ubuntu server 1   91
port-channel201          win7 1            91
Switch: FOC1736R028
=====
```

```
-----
Interface                VM                VLANs
-----
port-channel201          ubuntu server 1   91
port-channel201          win7 1            91
port-channel203          TCL Inst 2.1 11   93
port-channel203          TCL Inst 2.1 12   93
port-channel202          TCL Inst 2.3 10   97
port-channel202          TCL Inst 2.3 8     97
port-channel202          TCL Inst 2.3 9     97
-----
```

switch# **sh vmtracker info port-group**

Switch: FOC1721R0UG

```

=====
-----
Interface                PortGroup                Type                VLANs
-----
port-channel201          VM Network 3 vpc po      vSwitch             91
port-channel201          VM Network 3 vpc po      vSwitch             91
Switch: FOC1736R028
=====
-----
Interface                PortGroup                Type                VLANs
-----
port-channel201          VM Network 3 vpc po      vSwitch             91
port-channel201          VM Network 3 vpc po      vSwitch             91
port-channel203          VM Network 200 2lvpc AA-FEX vSwitch             93
port-channel203          VM Network 200 2lvpc AA-FEX vSwitch             93
port-channel202          VM Network 4 AA FEX HIF PO vSwitch             97
port-channel202          VM Network 4 AA FEX HIF PO vSwitch             97
port-channel202          VM Network 4 AA FEX HIF PO vSwitch             97
-----

```

```
switch# show vmtracker info detail
```

```
Switch: FOC1721R0UG
=====
```

```

-----
Interface                Host                VMNIC  VM                State PortGroup
                VLAN-Range
-----
port-channel201          22.0.2.3            vmnic0 ubuntu server 1    on    VM Network
  3 vpc po                91
port-channel201          22.0.2.3            vmnic0 win7 1            on    VM Network
  3 vpc po                91
Switch: FOC1736R028
=====

```

```

-----
Interface                Host                VMNIC  VM                State PortGroup
                VLAN-Range
-----
port-channel201          22.0.2.3            vmnic1 ubuntu server 1    on    VM Network
  3 vpc po                91
port-channel201          22.0.2.3            vmnic1 win7 1            on    VM Network
  3 vpc po                91
port-channel203          22.0.2.1            vmnic1 TCL Inst 2.1 11    on    VM Network
  200 2lvpc AA-FEX        93
port-channel203          22.0.2.1            vmnic1 TCL Inst 2.1 12    on    VM Network
  200 2lvpc AA-FEX        93
port-channel202          22.0.2.3            vmnic2 TCL Inst 2.3 10    on    VM Network
  4 AA FEX HIF PO        97
port-channel202          22.0.2.3            vmnic2 TCL Inst 2.3 8      off   VM Network
  4 AA FEX HIF PO        97
port-channel202          22.0.2.3            vmnic2 TCL Inst 2.3 9      off   VM Network
  4 AA FEX HIF PO        97
-----

```

```
switch# show system internal vmtracker info all
```

```
VM-Interface Mapping (Device:50:87:89:a1:f0:de)
```

```

-----
Interface                Host                VMNIC  VM                State PortGroup  VLAN-Range
-----
port-channel2            10.193.174.213     vmnic7 Site-1-Hos on    dvPortGrou 1-100
port-channel2            10.193.174.213     vmnic7 Site-1-Hos on    dvPortGrou 1-100
VM-Interface Mapping (Device:50:87:89:a1:f0:df)
-----

```

```

-----
Interface                Host                VMNIC  VM                State PortGroup  VLAN-Range
-----

```

```
-----
port-channel3 10.193.174.214 vmnic7 Site-1-Hos on dvPortGrou 1-100
port-channel3 10.193.174.214 vmnic7 Site-1-Hos on dvPortGrou 1-100
VM-Interface Mapping (Device:50:87:89:a1:f0:e1)
-----
```

Interface	Host	VMNIC	VM	State	PortGroup	VLAN-Range
-----------	------	-------	----	-------	-----------	------------

```
-----
Host VM Info (Conn:conn1 IP:10.193.174.215)
-----
```

Host	VM	State	PortGroup
10.193.174.213	Site-1-Host-1-VM-1-Ubuntu	on	VM Network
10.193.174.213	Site-1-Host-1-VM-1-Ubuntu	on	dvPortGroup
10.193.174.213	Site-1-Host-1-VM-10-Ubunt	on	VM Network
10.193.174.213	Site-1-Host-1-VM-2-Ubuntu	on	VM Network
10.193.174.213	Site-1-Host-1-VM-2-Ubuntu	on	dvPortGroup
10.193.174.213	Site-1-Host-1-VM-3-Ubuntu	on	VM Network
10.193.174.213	Site-1-Host-1-VM-4-Ubuntu	on	VM Network
10.193.174.213	Site-1-Host-1-VM-5-Ubuntu	on	VM Network
10.193.174.213	Site-1-Host-1-VM-6-Ubuntu	on	VM Network
10.193.174.213	Site-1-Host-1-VM-7-Ubuntu	on	VM Network
10.193.174.213	Site-1-Host-1-VM-8-Ubuntu	on	VM Network
10.193.174.213	Site-1-Host-1-VM-9-Ubuntu	on	VM Network
10.193.174.213	Site-1-vCenter-Server	on	VM Network
10.193.174.214	Site-1-Host-2-VM-1-Ubuntu	on	VM Network
10.193.174.214	Site-1-Host-2-VM-1-Ubuntu	on	dvPortGroup
10.193.174.214	Site-1-Host-2-VM-2-Ubuntu	on	VM Network
10.193.174.214	Site-1-Host-2-VM-2-Ubuntu	on	dvPortGroup
10.193.174.214	Site-1-Host-2-VM-3-Ubuntu	on	VM Network
10.193.174.214	Site-1-Host-2-VM-4-Ubuntu	on	VM Network
10.193.174.214	Site-1-Host-2-VM-5-Ubuntu	on	VM Network
10.193.174.214	Site-1-Host-2-VM-6-Ubuntu	on	VM Network
10.193.174.214	Site-1-Host-2-VM-7-Ubuntu	on	VM Network
10.193.174.214	Site-1-Host-2-VM-8-Ubuntu	on	VM Network

```
-----
Host CDP Info (Conn:conn1 IP:10.193.174.215)
-----
```

Host	Switch	Port	VMNIC	Status
------	--------	------	-------	--------

```
-----
Host LLDP Info (Conn:conn1 IP:10.193.174.215)
-----
```

Host	Switch	Port	VMNIC	Status
10.193.174.213	50:87:89:a1:f0:df	Ethernet1/2	vmnic5	connected
10.193.174.213	50:87:89:a1:f0:de	Ethernet1/1	vmnic7	connected
10.193.174.214	50:87:89:a1:f0:e1	Ethernet1/4	vmnic5	connected
10.193.174.214	50:87:89:a1:f0:e0	Ethernet1/3	vmnic7	connected

```
-----
Host vSwitch Port Group Info (Conn:conn1 IP:10.193.174.215)
-----
```

Host	vSwitch	PortGroup
10.193.174.213	vSwitch0	Management Network
10.193.174.213	vSwitch0	VM Network
10.193.174.214	vSwitch0	Management Network
10.193.174.214	vSwitch0	VM Network

## Example Configuration for Virtual Machine Tracker

Host vSwitch VMNIC Info (Conn:conn1 IP:10.193.174.215)

Host	vSwitch	VMNIC
10.193.174.213	vSwitch0	vmnic6
10.193.174.214	vSwitch0	vmnic6

Host DVS Switch Port Group Info (Conn:conn1 IP:10.193.174.215)

Host	DVS-Name	PortGroup	Vlan-Range
10.193.174.213	dvSwitch-1-Site-1	dvPortGroup	1-100
10.193.174.213	dvSwitch-1-Site-1	dvSwitch-1-Site--DVUplinks-464	1-100
10.193.174.214	dvSwitch-1-Site-1	dvPortGroup	1-100
10.193.174.214	dvSwitch-1-Site-1	dvSwitch-1-Site--DVUplinks-464	1-100

Host DVS Switch VMNIC Info (Conn:conn1 IP:10.193.174.215)

Host	DVS-Name	VMNIC
10.193.174.213	dvSwitch-1-Site-1	vmnic3
10.193.174.213	dvSwitch-1-Site-1	vmnic4
10.193.174.213	dvSwitch-1-Site-1	vmnic5
10.193.174.213	dvSwitch-1-Site-1	vmnic7
10.193.174.214	dvSwitch-1-Site-1	vmnic3
10.193.174.214	dvSwitch-1-Site-1	vmnic4
10.193.174.214	dvSwitch-1-Site-1	vmnic5
10.193.174.214	dvSwitch-1-Site-1	vmnic7

Host Port Group Info (Conn:conn1 IP:10.193.174.215)

Host	PortGroup	VLAN
10.193.174.213	Management Network	0
10.193.174.213	VM Network	0
10.193.174.214	Management Network	0
10.193.174.214	VM Network	0

Distributed Switch Info (Conn:conn1 IP:10.193.174.215)

DVS Name	PortGroup	VLAN Range
dvSwitch-1-Site-1	dvPortGroup	1-100
dvSwitch-1-Site-1	dvSwitch-1-Site--DVUplink	1-100
dvSwitch2	dvPortGroup	12-12
dvSwitch2	dvSwitch2-DVUplinks-221	0-4094

Event History (Conn:conn1 NumEv:6 IP:10.193.174.215)

EventId	Time	Event Msg
19631	Sep 02 2014 11:34:53:799161	Network connectivity restored on DVPorts: "2/00 d1 2c 50 0c d6 4c f6-48 6e 3 c 4b b0 13 83 bf". Physical NIC vmnic5 is up.
19630	Sep 02 2014 11:34:52:890965	Physical NIC vmnic5 linkstate is up.
19624	Sep 02 2014 11:31:17:453523	Network connectivity restored on DVPorts: "2/00 d1 2c 50 0c d6 4c f6-48 6e 3 c 4b b0 13 83 bf". Physical NIC vmnic5

```

19618      Sep 02 2014 01:44:08:66653      is up.
Network connectivity restored on DVPorts: "2/00 d1 2c 50 0c d6 4c f6-48 6e 3c 4b b0 13 83 bf". Physical NIC vmnic5 is up.
19612      Sep 02 2014 01:32:04:930919      Network connectivity restored on DVPorts: "2/00 d1 2c 50 0c d6 4c f6-48 6e 3c 4b b0 13 83 bf". Physical NIC vmnic5 is up.
19611      Sep 02 2014 01:32:04:930862      Physical NIC vmnic5 linkstate is up.
    
```

-----  
Time Info (Conn:conn1 IP:10.193.174.215)  
-----

Type	Time (ms)
Total Fetching Time for All Host	: 660
Total Fetching Time for All DVS	: 112
Max Time to Sync Full Host Info	: 57882
Max Time to Sync vShield Info	: 0
Max Time to Check unconnected Host Info	: 3091
Max Time to Sync Host Info	: 15162
Max Time to get one Host info	: 3152
Max Time to get one Virtual Machine info	: 3080
Max Time to get one CDP info	: 3102
Max Time to get VM port group Info	: 3580
Max Time to get task info	: 0
Max Time to process recv event	: 0
Max Time to get dvs info	: 3021
Max Time to get dvs port group info	: 3043

-----  
Counters Info (Conn:conn1 IP:10.193.174.215)  
-----

Type	Counter
Property Retrieval Fail	: 0
Wait for Update Fail	: 0
Wait for Update Timeout	: 7157
Create Task Collector Fail	: 0
Create Event Collector Fail	: 0
Create Event Filter Fail	: 0
CDP Info Retrieval Fail	: 0
Connect to vCenter Fail	: 0
SOAP Memory Alloc Fail	: 0
Num Datacenter Property Retrieval	: 88
Num Connection Verification	: 2227
Num Host Property Retrieval	: 1311
Num VM Property Retrieval	: 11267
Num CDP/LLDP Info Retrieval	: 1248
Num Task Info Retrieval	: 0
Num DVS Info Retrieval	: 1228
Num DVS PG Info Retrieval	: 2456
Num Switch Info Retrieval	: 0
Num Interface Configuration Time	: 0
Num of VLAN Creation Time	: 0
Num of VLAN Removal Time	: 0
Wait for Update Success	: 10
Num Recv Event VmPoweredOnEvent	: 0
Num Recv Event VmPoweredOffEvent	: 0
Num Recv Event VmBeingHotMigratedEvent	: 0
Num Recv Event VmMigratedEvent	: 0
Num Recv Event VmFailedMigrateEvent	: 0
Num Recv Event VmReconfiguredEvent	: 0

## Example Configuration for Virtual Machine Tracker

```

Num Recv Event VmCreatedEvent           : 0
Num Recv Event VmClonedEvent             : 0
Num Recv Event VmRenamedEvent            : 0
Num Recv Event VmRemovedEvent            : 0
Num Recv Event VmSuspendedEvent          : 0
Num Recv Event VmRelocatedEvent          : 0
Num Recv Event TaskEvent                  : 0
Num Recv Event EventEx                   : 10
Num Recv Event HostConnectionLostEvent   : 0
Num Recv Event HostDisconnectedEvent     : 0
Num Recv Event HostConnectedEvent        : 0
Num Recv Event HostShutdownEvent         : 0
Num Recv Event HostRemovedEvent          : 0
Num Recv Event HostIpChangedEvent        : 0
Num Recv Event DVPortgroupCreatedEvent   : 0
Num Recv Event DVPortgroupReconfiguredEvent : 0
Num Recv Event DVPortgroupDestroyedEvent : 0
Num Recv Event DVPortgroupRenamedEvent   : 0
Num Recv Event DvsCreatedEvent           : 0
Num Recv Event DvsDestroyedEvent         : 0
Num Recv Event DvsRenamedEvent           : 0
Num Recv Event DvsReconfiguredEvent      : 0
Num Recv Event DvsMergedEvent            : 0
Num Recv Task UpdateNetworkConfig        : 0
Num Recv Task UpdatePortGroup            : 0
Num Recv Task RemovePortGroup            : 0
Num Recv Task UpdateVirtualSwitch        : 0

```

-----  
Global Counters Info  
-----

Type	Counter
Num Elem VMTrackerElemRoot	: 3
Num Elem VMTrackerElemConn	: 1
Num Elem VMTrackerCluster	: 0
Num Elem VMTrackerElemHost	: 3
Num Elem VMTrackerElemHostCDP	: 0
Num Elem VMTrackerElemHostLLDP	: 4
Num Elem VMTrackerElemHostVM	: 19
Num Elem VMTrackerElemHostVMPortGroup	: 23
Num Elem VMTrackerElemHostvSwitch	: 2
Num Elem VMTrackerElemHostvSwitchVMNIC	: 2
Num Elem VMTrackerElemHostvSwitchPortGroup	: 4
Num Elem VMTrackerElemHostPortGroup	: 4
Num Elem VMTrackerElemHostDVSSwitch	: 2
Num Elem VMTrackerElemHostDVSSwitchVMNIC	: 8
Num Elem VMTrackerVirtWire_Type	: 0
Num Elem VMTrackerElemHostVirtWire	: 0
Num Elem VMTrackerElemHostVirtualNic	: 0
Num Elem VMTrackerElemDVS	: 2
Num Elem VMTrackerElemDVSPortGroup	: 4
Num Elem VMTrackerElemDVSPortGroupVlanRange	: 4
Num Elem VMTrackerElemDeviceID	: 4
Num Elem VMTrackerElemDevicePort	: 4
Num Elem VMTrackerElemDevicePortHost	: 4
Num Elem VMTrackerElemDevicePortVM	: 8
Num Elem VMTrackerElemDevicePortVMPortGroup	: 8
Num Elem VMTrackerElemDevicePortVMPortGroupVlanRange	: 8
Num Elem VMTrackerElemSwitchDeviceID	: 2
Num Elem VMTrackerElemSwitchDeviceIntf	: 87
Num Elem VMTrackerElemIfRunTimeRoot	: 1
Num Elem VMTrackerElemIfDeviceId	: 4
Num Elem VMTrackerElemIfSwitchPort	: 4

```
-----
Unconnected Host Info (Conn:conn1 IP:10.193.174.215)
-----
```

```
Host Name
```

```
-----
172.23.40.129
-----
```

```
-----
```

Dev-Id	Intf	IfIndex	Member of PO	NativeVlan	VMT Enable	bia-mac
SAL1819SALX	Ethernet1/1	1a000000	port-channel2	1	1	
50:87:89:a1:f0:de						
SAL1819SALX	Ethernet1/10	1a001200		1	1	
50:87:89:a1:f0:e7						
SAL1819SALX	Ethernet1/11	1a001400		1	1	
50:87:89:a1:f0:e8						
SAL1819SALX	Ethernet1/12	1a001600		1	1	
50:87:89:a1:f0:e9						
SAL1819SALX	Ethernet1/13	1a001800		1	1	
50:87:89:a1:f0:ea						
SAL1819SALX	Ethernet1/14	1a001a00		1	1	
50:87:89:a1:f0:eb						
SAL1819SALX	Ethernet1/15	1a001c00		1	1	
50:87:89:a1:f0:ec						
SAL1819SALX	Ethernet1/16	1a001e00		1	1	
50:87:89:a1:f0:ed						
SAL1819SALX	Ethernet1/17	1a002000		1	1	
50:87:89:a1:f0:ee						
SAL1819SALX	Ethernet1/18	1a002200		1	1	
50:87:89:a1:f0:ef						
SAL1819SALX	Ethernet1/19	1a002400		1	1	
50:87:89:a1:f0:f0						
SAL1819SALX	Ethernet1/2	1a000200	port-channel2	1	1	
50:87:89:a1:f0:df						
SAL1819SALX	Ethernet1/20	1a002600		1	1	
50:87:89:a1:f0:f1						
SAL1819SALX	Ethernet1/21	1a002800		1	1	
50:87:89:a1:f0:f2						
SAL1819SALX	Ethernet1/22	1a002a00		1	1	
50:87:89:a1:f0:f3						
SAL1819SALX	Ethernet1/23	1a002c00		1	1	
50:87:89:a1:f0:f4						
SAL1819SALX	Ethernet1/24	1a002e00		1	1	
50:87:89:a1:f0:f5						
SAL1819SALX	Ethernet1/25	1a003000		1	1	
50:87:89:a1:f0:f6						
SAL1819SALX	Ethernet1/26	1a003200		1	1	
50:87:89:a1:f0:f7						
SAL1819SALX	Ethernet1/27	1a003400		1	1	
50:87:89:a1:f0:f8						
SAL1819SALX	Ethernet1/28	1a003600		1	1	
50:87:89:a1:f0:f9						
SAL1819SALX	Ethernet1/29	1a003800		1	1	
50:87:89:a1:f0:fa						
SAL1819SALX	Ethernet1/3	1a000400	port-channel3	1	1	
50:87:89:a1:f0:e0						
SAL1819SALX	Ethernet1/30	1a003a00		1	1	
50:87:89:a1:f0:fb						
SAL1819SALX	Ethernet1/31	1a003c00		1	1	
50:87:89:a1:f0:fc						
SAL1819SALX	Ethernet1/32	1a003e00		1	1	
50:87:89:a1:f0:fd						

```
-----
```

## Example Configuration for Virtual Machine Tracker

```

SAL1819SALX      Ethernet1/33      1a004000      1      1
50:87:89:al:f0:fe
SAL1819SALX      Ethernet1/34      1a004200      1      1
50:87:89:al:f0:ff
SAL1819SALX      Ethernet1/35      1a004400      1      1
50:87:89:al:f1:00
SAL1819SALX      Ethernet1/36      1a004600      1      1
50:87:89:al:f1:01
SAL1819SALX      Ethernet1/37      1a004800      1      1
50:87:89:al:f1:02
SAL1819SALX      Ethernet1/38      1a004a00      1      1
50:87:89:al:f1:03
SAL1819SALX      Ethernet1/39      1a004c00      1      1
50:87:89:al:f1:04
SAL1819SALX      Ethernet1/4      1a000600      port-channel3 1      1
50:87:89:al:f0:e1
SAL1819SALX      Ethernet1/40      1a004e00      1      1
50:87:89:al:f1:05
SAL1819SALX      Ethernet1/41      1a005000      1      1
50:87:89:al:f1:06
SAL1819SALX      Ethernet1/42      1a005200      1      1
50:87:89:al:f1:07
SAL1819SALX      Ethernet1/43      1a005400      1      1
50:87:89:al:f1:08
SAL1819SALX      Ethernet1/44      1a005600      1      1
50:87:89:al:f1:09
SAL1819SALX      Ethernet1/45      1a005800      1      1
50:87:89:al:f1:0a
SAL1819SALX      Ethernet1/46      1a005a00      1      1
50:87:89:al:f1:0b
SAL1819SALX      Ethernet1/47      1a005c00      1      1
50:87:89:al:f1:0c
SAL1819SALX      Ethernet1/48      1a005e00      1      1
50:87:89:al:f1:0d
SAL1819SALX      Ethernet1/5      1a000800      1      1
50:87:89:al:f0:e2
SAL1819SALX      Ethernet1/6      1a000a00      1      1
50:87:89:al:f0:e3
SAL1819SALX      Ethernet1/7      1a000c00      1      1
50:87:89:al:f0:e4
SAL1819SALX      Ethernet1/8      1a000e00      1      1
50:87:89:al:f0:e5
SAL1819SALX      Ethernet1/9      1a001000      1      1
50:87:89:al:f0:e6
SAL1819SALX      Ethernet2/1      1a006000      1      1
7c:69:f6:0f:eb:20
SAL1819SALX      Ethernet2/10     1a007200      1      1
7c:69:f6:0f:eb:29
SAL1819SALX      Ethernet2/11     1a007400      1      1
7c:69:f6:0f:eb:2a
SAL1819SALX      Ethernet2/12     1a007600      1      1
7c:69:f6:0f:eb:2b
SAL1819SALX      Ethernet2/2      1a006200      port-channel1 1      1
7c:69:f6:0f:eb:21
SAL1819SALX      Ethernet2/3      1a006400      port-channel1 1      1
7c:69:f6:0f:eb:22
SAL1819SALX      Ethernet2/4      1a006600      port-channel1 1      1
7c:69:f6:0f:eb:23
SAL1819SALX      Ethernet2/5      1a006800      port-channel1 1      1
7c:69:f6:0f:eb:24
SAL1819SALX      Ethernet2/6      1a006a00      port-channel1 1      1
7c:69:f6:0f:eb:25
SAL1819SALX      Ethernet2/7      1a006c00      1      1
7c:69:f6:0f:eb:26

```



```

SAL1819SALX    Ethernet2/8    1a006e00    1    1
7c:69:f6:0f:eb:27
SAL1819SALX    Ethernet2/9    1a007000    1    1
7c:69:f6:0f:eb:28
SAL1819SALX    Vlan1          9010001     0    1
00:00:7c:3d:fe:09
SAL1819SALX    Vlan2          9010002     0    1
00:00:7c:3d:fe:09
SAL1819SALX    Vlan3          9010003     0    1
00:00:7c:3d:fe:09
SAL1819SALX    Vlan4          9010004     0    1
00:00:7c:3d:fe:09
SAL1819SALX    Vlan5          9010005     0    1
00:00:7c:3d:fe:09
SAL1819SALX    Vlan6          9010006     0    1
00:00:7c:3d:fe:09
SAL1819SALX    Vlan7          9010007     0    1
00:00:7c:3d:fe:09
SAL1819SALX    Vlan8          9010008     0    1
00:00:7c:3d:fe:09
SAL1819SALX    ii1/1/1       4a000000    0    1
00:00:00:00:00:00
SAL1819SALX    ii1/1/10      4a000009    0    1
00:00:00:00:00:00
SAL1819SALX    ii1/1/11      4a00000a    0    1
00:00:00:00:00:00
SAL1819SALX    ii1/1/12      4a00000b    0    1
00:00:00:00:00:00
SAL1819SALX    ii1/1/2       4a000001    0    1
00:00:00:00:00:00
SAL1819SALX    ii1/1/3       4a000002    0    1
00:00:00:00:00:00
SAL1819SALX    ii1/1/4       4a000003    0    1
00:00:00:00:00:00
SAL1819SALX    ii1/1/5       4a000004    0    1
00:00:00:00:00:00
SAL1819SALX    ii1/1/6       4a000005    0    1
00:00:00:00:00:00
SAL1819SALX    ii1/1/7       4a000006    0    1
00:00:00:00:00:00
SAL1819SALX    ii1/1/8       4a000007    0    1
00:00:00:00:00:00
SAL1819SALX    ii1/1/9       4a000008    0    1
00:00:00:00:00:00
SAL1819SALX    lc-eth0/1     6201000    0    1
00:00:7c:3d:fe:09
SAL1819SALX    mgmt0         5000000    0    1

SAL1819SALX    port-channel1 16000000    1    1
00:00:00:00:00:00
SAL1819SALX    port-channel2 16000001    1    1
00:00:00:00:00:00
SAL1819SALX    port-channel3 16000002    1    1
00:00:00:00:00:00
SAL1819SALX    sup-eth0      15000000    0    1
00:00:7c:3d:fe:09
SAL1819SALX    sup-eth1      15010000    0    1
00:00:00:00:00:00

```

---

