



Virtual Machine Tracker Overview

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Information About Virtual Machine Tracker

The growing adoption of server virtualization technologies has added to network configuration requirements. Virtual Machines (VMs) on a single physical server can belong to different Layer 2 domains and can require the Cisco Nexus device to provision multiple VLANs on the ports that connect to the physical servers. To provide seamless movement of VMs from one physical server to another, the servers must be reachable through the same Layer 2 domain so that the VMs can retain their IP addresses and network connectivity even after moving. A static predefined configuration requires provisioning of all possible VLANs that can be used by VMs in a server management domain on each port of the switch. This process can result in more logical port-based VLANs than the switch can support. Alternatively, you can dynamically provision VLANs on a Cisco Nexus device Layer 2 Ethernet or Layer 2 port-channel interface (attached to a server) based on the tracking of the VMs that are connected to the port and the VLAN requirements of these VMs.

Virtual Machine Tracker (VM Tracker) enables you to do the following:

- Identify the Cisco Nexus device port that is used for each VM
- Identify the VLAN requirements of each VM
- Track the movement of VMs from one host (ESXi) to another
- Track VM configuration changes such as additions, deletions, or modifications of VLANs, and configure VLANs on Cisco Nexus device ports accordingly
- Track the additions or deletions of VMs and hosts, and configure VLANs on Cisco Nexus device ports accordingly
- Track whether the VMs are in the power on or power off state, and configure VLANs on local Cisco Nexus device ports for a VM only if the VM is in the power on state

Virtual Machine Tracker and VMware vCenter

VM Tracker connects with VMware vCenter and collects information about the VMs that are running on each host. This information includes the number of VMs that are running on connected to the host and the Cisco Nexus device through which the VM receives network traffic.

After you enable VM Tracker on the switch, it automatically extracts the following information about VMs from vCenter:

- The host on which the VMs exist.
- The Cisco Nexus device ports through which the VM traffic flows.
- The virtual network interface card (vNIC) that connects the VM to a virtual switch.
- The power state of the VM.
- The VLAN information of port groups or distributed virtual switch (DVS) port groups.
- The port groups or DVS port groups that are required for the VM.