



## Installation Requirements

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## System Requirements

You can deploy a Cisco ICFPP virtual appliance on a system that meets the following requirements:

Requirement	Description
Four Virtual CPUs	1.8 GHz
Memory	8 GB RAM
Disk Space	Disk space on shared NFS that is configured as follows: <ul style="list-style-type: none"><li>• Disk 1—100 GB for Cisco ICFPP.</li><li>• Disk 2—As much memory as required to support concurrent virtual machines being moved to the provider cloud.</li></ul> <p><b>Note</b> If NFS is not configured, Cisco ICFPP stores VM images uploaded from Cisco Intercloud Fabric Director on the local disk.</p>
One vNIC	Management network interface

## Hypervisor Requirements

Cisco ICFPP is a virtual appliance that can be deployed on VMware vSphere Client or OpenStack KVM Hypervisor.

Hypervisor	Version
<b>VMware</b>	
VMware vSphere Client	5.1 (including update 1) and 5.5
<b>OpenStack</b>	
Red Hat Enterprise Linux OpenStack Platform	Icehouse

## Port Requirements

Ports must be configured as described in the following tables to ensure that Cisco ICFPP can communicate effectively on the internal private network and the public network (Internet).

**Table 1: Public Internet Inbound**

Protocol	Port	Allow / Deny	Description
TCP	443	ALLOW	Allows inbound HTTPS traffic from the Internet so that Cisco Intercloud Fabric for Business can reach Cisco ICFPP.

**Table 2: Public Internet Outbound**

Protocol	Port	Allow / Deny	Description
All	All	DENY	Cisco ICFPP does not need to send outbound traffic to the Internet.

**Table 3: Internal Network Inbound**

Protocol	Port	Allow / Deny	Description
TCP	443	ALLOW	Allows inbound HTTPS traffic from the internal network, so that the Cisco ICFPP web-based GUI can be accessed.
TCP	22	ALLOW	Allows inbound SSH traffic from the internal network for Cisco ICFPP administration.
TCP	3306	ALLOW	Allows inbound MySQL traffic from the internal network. Required if Cisco ICFPP is configured in a multiple-node cluster.

Protocol	Port	Allow / Deny	Description
TCP	8080	ALLOW	Allows inbound HTTP traffic for template uploads to CloudStack. Required if using the CloudStack adapter.

**Note**

The ports in the following table must be open on any firewalls on the internal network between Cisco ICFPP and destination systems to ensure that the destination systems receive communications from Cisco ICFPP.

**Table 4: Internal Network Outbound**

Protocol	Firewall Port	Allow / Deny	Description
TCP	443	ALLOW	Allows HTTPS traffic to the internal network. Required to reach the cloud provider API/SDK gateway if it is running on HTTPS.
TCP	80	ALLOW	Allows HTTP traffic to the internal network. Required to reach the cloud provider API/SDK gateway if it is running on HTTP.
TCP	3306	ALLOW	Allows outbound MySQL traffic to other Cisco ICFPP nodes on the internal network. Required if Cisco ICFPP is configured in a multiple-node cluster.
TCP/UDP	514	ALLOW	Allows syslog traffic from Cisco ICFPP to the syslog server.

## Information Required for Configuration and Installation

Before installation, collect the following information:

Required Information	Mandatory / Optional	Your Information / Notes
<b>For Preinstallation Configuration</b>		
Cisco ICFPP image location	Mandatory	
Cisco ICFPP OVA or QCOW2 image name	Mandatory	
VM name	Mandatory	

Required Information	Mandatory / Optional	Your Information / Notes
VMware datastore location	Mandatory for VMware	
Network / Port Profile for VM management	Mandatory	
KVM flavor name	Mandatory for OpenStack	
KVM Instance Security Group	Mandatory for OpenStack	
<b>For Cisco ICFPP Installation</b>		
Installation type: Standalone, Primary, or Service Node For OpenStack environments, you can install in Standalone mode only.	Mandatory	
Hostname	Mandatory	
Admin / root / ShellAdmin account password	Mandatory	
Static IP address For OpenStack environments, this must be a public IP address.	Mandatory	
Subnet mask	Mandatory	
Gateway IP address	Mandatory	
Primary node IP address	Mandatory for service node installations only.	
NFS server IP address	Optional <sup>1</sup>	
NFS directory to mount	Optional	
Domain name.	Optional	
DNS server IP address	Mandatory	
NTP server IP address or fully qualified domain name (FQDN)	Mandatory	

- <sup>1</sup> If you do not configure NFS in a cluster deployment, template creation and VM migration can fail if a service node fails.

