



# Cisco HyperFlex Integration with Citrix Cloud and Citrix Workspace

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## Overview

The Cisco HyperFlex System supports the capability to connect to Citrix Workspaces and associated Citrix Cloud subscription services such as Citrix Virtual Apps and Desktops Services (formerly XenApp and XenDesktop services). You can register the Cisco HyperFlex environment as a Citrix resource location directly from the HyperFlex Connect GUI, and the automation built into Cisco HyperFlex management delivers hybrid-cloud flexibility without having to install, maintain, or upgrade the infrastructure.

The Citrix Ready HCI Workspace Appliance program enables a Cisco HyperFlex System deployed on Microsoft Hyper-V to connect to Citrix Cloud. In this application, the Cisco HyperFlex System operates as an integrated Citrix Workspace Appliance to automate the delivery of high-performance virtual applications and desktops to subscribers of Citrix Cloud services.

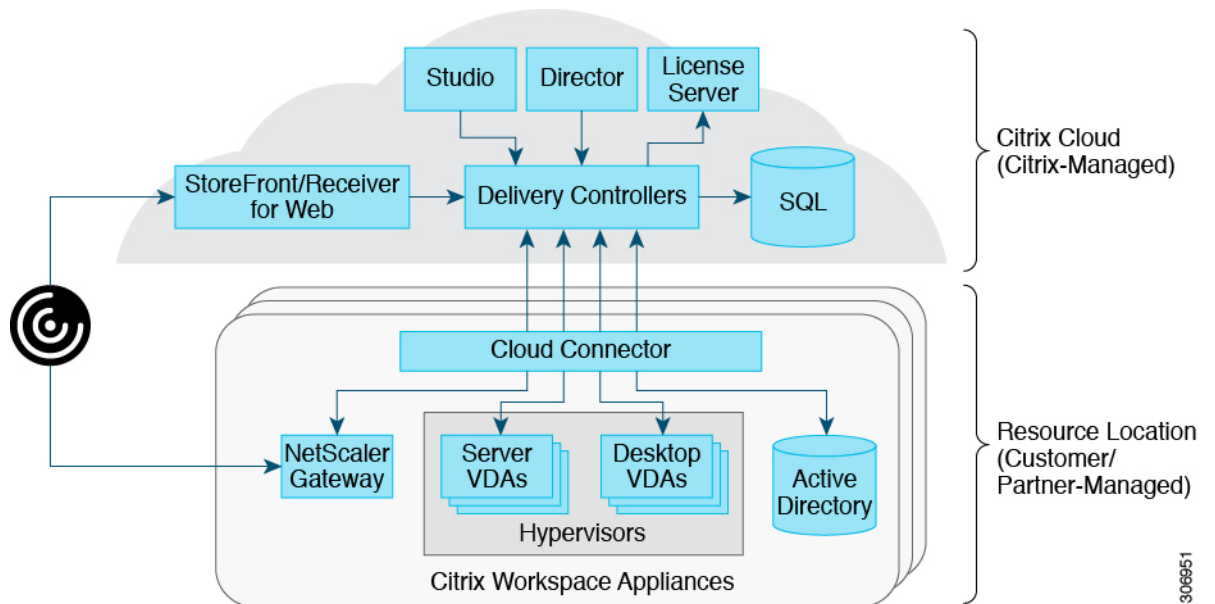
Citrix Virtual Apps and Desktops Services simplify the delivery of applications and desktops as a centrally managed cloud service by having the Citrix Cloud host these infrastructure components instead of those services being located on the on-premises data center. The Cisco HyperFlex System's ability to access the Citrix Cloud services enables subscribers to leverage Citrix Workspace subscription services while running their virtual application servers and virtual desktop workloads on-premises. This offloads management of the Virtual Desktop Infrastructure (VDI) process while maintaining control of where applications and data reside—on-premises and behind security layers.

The Citrix Ready HCI Workspace Appliance program requires two critical components to deliver high-performance virtual applications and desktops: the Citrix Cloud control plane and the on-premises Citrix Workspace Appliance. The Citrix Cloud Connector functions as a communications channel to connect the HyperFlex System and integrated Citrix Workspace Appliance as a resource location to the Citrix Cloud control plane. Installation of a Cloud Connector is mandatory at the on-premises side to act as a proxy and agent for communication between the Citrix Cloud control plane and the on-premises Citrix Workspace Appliance. Once the Cloud Connector is registered, the on-premises resource appears in the Citrix Cloud account as a registered resource location.

Based on the customer ID, client ID, and client secret obtained from a Citrix Cloud account, HyperFlex Connect initiates an installation sequence that automates the following Citrix Cloud Connector deployment sequence:

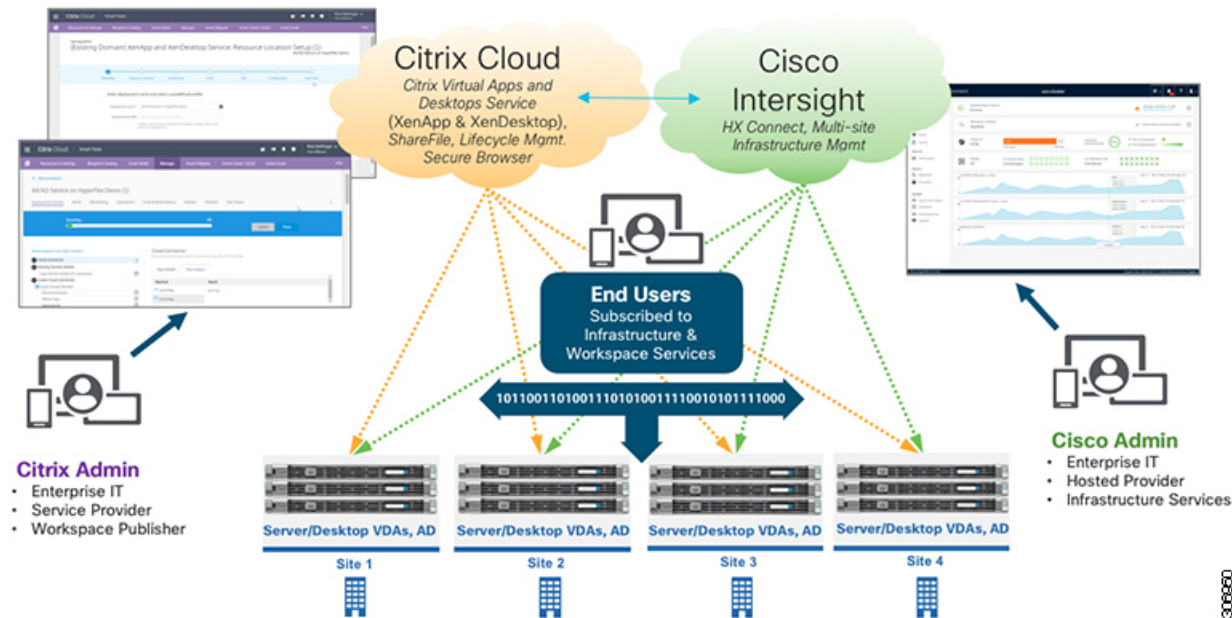
1. Exports the base VM by copying its contents.
2. Imports the copied base VM contents to create a new (cloned) connector VM. The connector agent is installed on the cloned connector VM.
3. Performs a series of networking configurations in the Microsoft Hyper-V cluster:
  - a. Attach the connector VM to a vSwitch in the HyperFlex System.
  - b. Join the connector VM to the Active Directory (AD) domain.
4. Registers the connector VM to the failover cluster.
5. Downloads the Citrix Cloud Connector.
6. Installs the Citrix Cloud Connector in the connector VM.

**Figure 1: Overview of Citrix Cloud and Citrix Workspace Appliances Architecture**



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Figure 2: HyperFlex System and Citrix Cloud Integration



## Components in Citrix Cloud Management

The following is a summary of the core components in a Citrix Cloud service deployment. Citrix manages these core components in Citrix Cloud.

- **Citrix Cloud**—Platform that hosts and administers all Citrix services. Citrix Cloud connects subscribers to their resources through the Citrix Cloud Connector that is installed on any cloud or infrastructure (on-premises, public cloud, private cloud, or hybrid cloud). Citrix Cloud enables IT administrators to create, manage, and deploy workspaces with apps and data to their subscribers from a single console. For background information, see [Citrix Cloud](#).
- **Citrix Workspace**—Client software that provides seamless and secure access to everything a subscriber requires to get their work done. Each subscriber that is logged into Citrix Workspace can securely have instant access to all their applications, desktops, and data from any device, including smartphones, tablets, PCs, and Macs. Citrix Workspace Suite is a collection of Citrix products that deliver secure access to desktops, data, applications and services to subscribers on any device, and on any network. For background information, see [Citrix Workspace Platform](#).
- **Citrix Cloud Connector**—Citrix component that operates as a channel for communication between Citrix Cloud and each subscriber's on-premises resource locations. The Cloud Connector provides simplified cloud management without requiring complex networking or infrastructure configurations such as VPNs or IPsec tunnels. You download the Cloud Connector software from Citrix Cloud, and you install the Cloud Connector on the machine running Windows Server 2016. This machine must be joined to your domain and able to communicate with the resources that you want to manage from Citrix Cloud. Connections from the Cloud Connector to Citrix Cloud use the standard HTTPS port (443) and TCP protocol. For background information, see [Citrix Cloud Connector](#).
- **Resource Locations**—Contains machines and other resources that are required to deliver applications and desktops to subscribers. You manage these resources from Citrix Cloud. Resource locations contain

different resources depending on the Citrix Cloud services that are required by subscribers. Typical resources can include: Active Directory domains, Hypervisors or cloud services, Virtual Delivery Agents (VDAs), Citrix Gateway (formerly NetScaler Gateway), and Citrix StoreFront servers.

To communicate with Citrix Cloud, every resource location must contain a Citrix Cloud Connector and access to Microsoft Active Directory domains. In each resource location, you will need enough Cloud Connectors to support your required load, plus at least one more Cloud Connector to ensure high availability. Citrix recommends at least two Cloud Connectors in each resource location. For background information, see [Resource Locations](#).

- **Citrix Workspace Appliances**—Simplify the configuration challenges a subscriber can encounter when connecting to the Citrix Cloud to deliver virtual applications and desktops by providing access to a secure and unified Citrix workspace. Citrix Workplace Appliance provides a direct connection between the Citrix Cloud and the subscriber's resource location to automate the deployment and management of applications, desktops, data, and devices.
- **Citrix Virtual Apps and Desktops Service**—Virtualization solution available from Citrix Cloud that provides secure access to virtual applications and desktops from on-premises and cloud-based deployments. Subscribers can use applications and desktops independently of the device's operating system and interface. You connect your resources to the Citrix Virtual Apps and Desktops Service through the Citrix Cloud Connector. For background information, see [Citrix Virtual Apps and Desktops service](#).