Workspot

Workspot VDI 2.0 on Nutanix AHV

Solution Note

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Executive Summary

This solution note provides an overview of Workspot's VDI 2.0 solution on the Nutanix enterprise cloud platform. Workspot is verified *Nutanix Ready for Desktop Virtualization and AHV*.

In this solution, Workspot's cloud native control plane architecture moves the VDI operational "smarts" to the cloud and simplifies VDI's footprint in datacenter. Virtual desktops run on the Nutanix AHV platform. The advantage of running Workspot with Nutanix is that IT gets a VDI solution with unlimited scalability, data locality, AHV clones, and a single data store. As a result, IT can deploy Workspot VDI on Nutanix clusters in as little as an hour.

Introduction

In today's environment, businesses look to IT for the competitive edge. They place great demands on IT to deliver critical applications, data, and desktops to an increasingly mobile and distributed workforce. With business conditions changing rapidly, IT needs to deploy and scale faster while transforming operations to increase efficiency, contain costs, and adapt to future needs.

Virtual Desktop Infrastructure (VDI) is an essential tool to meet the demands of modern businesses. VDI enables IT to securely deliver desktop, applications, and data to any user on any device. It is also one of the primary drivers for moving to the modern data center.

Thanks to the modern data center, it is possible to completely reinvent VDI. This next generation VDI technology, called VDI 2.0, delivers the full benefits of the cloud and hyperconvergence. It enables IT to deploy and scale VDI faster than previous architectures while decreasing the demands on IT resources to manage on-going VDI operations. The result is modern and agile IT with simplified operations.

Working closely with Nutanix, Workspot has integrated VDI 2.0 with Nutanix enterprise cloud platform running AHV. Taken together, this solution delivers a truly integrated VDI stack that:

- Accelerates VDI deployments from start to production in under a day
- Simplifies the migration to a scalable and responsive hybrid cloud architecture, built on Workspot Cloud and AHV
- Streamlines IT operations by automating configuration and ongoing maintenance tasks
- Decreases the number of IT resources to deliver and operate VDI
- Scales instantly to more users and locations by simply adding additional Nutanix nodes. The Workspot cloud matches the instant scalability of Nutanix enterprise cloud platform. No additional complicated infrastructure capacity planning and re-architecture required.
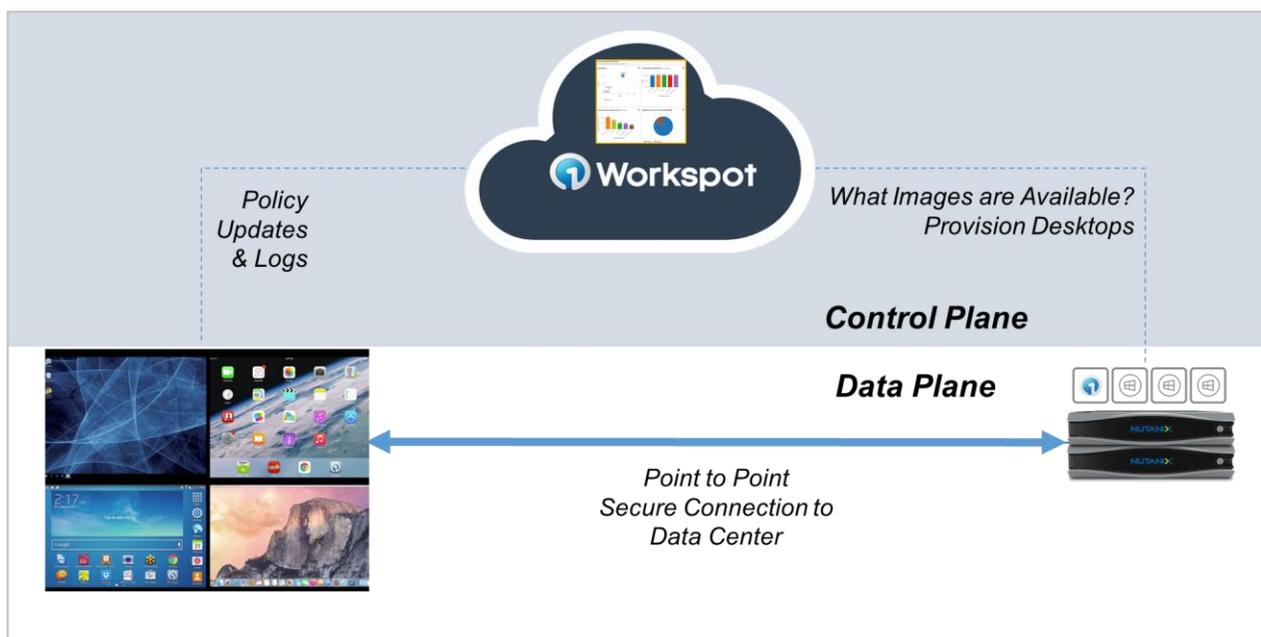
Solution Overview

Nutanix Overview

Nutanix delivers an enterprise cloud platform that natively converges compute, virtualization and storage into a resilient, software-defined solution. It brings the performance and economic benefits of web-scale architecture to a wide range of enterprise workloads, including VDI.

Attributes include:

- Hyperconverged infrastructure natively converging storage and compute on state of art x86 systems.
- 100% software defined model
- Web-scale engineering with data, metadata, and operations distributed across the cluster
- Self-healing to tolerate and adjust to component failures.
- API-based automation and rich analytics.

Nutanix enterprise cloud platform replaces traditional SAN or NAS storage and expensive storage network interconnects. It combines highly dense storage and server compute (CPU and RAM) into a solution. Each building block is based on industry-standard Intel processor technology and delivers a unified, scale-out, shared-nothing architecture with no single points of failure.

Nutanix enterprise cloud platform The Nutanix solution has no volumes or LUNs to manage, no RAID groups to configure, and no complicated multipathing to set up. All storage management is VM-centric and the Acropolis Distributed Storage Fabric (DSF) optimizes I/O at the VM virtual disk level. There is one shared pool of storage that includes flash-based SSDs for high performance and low latency and HDDs for affordable capacity. The file system automatically tiers data across different types of storage devices using Nutanix intelligent data placement algorithms. These algorithms make sure the most frequently used data is available in memory or in flash for the fastest possible performance.

Workspot's VDI 2.0

Workspot's unique control plane architecture moves the VDI operational "smarts" to the cloud and reduces the footprint in the data center to just the Nutanix cluster. The Workspot Control, which is a cloud control plane, provisions desktops and applications, sets security policies, manages user profiles and access, and collects analytics. This architecture eliminates the need to install the operational front end of load balancing, brokering, databases, web portal, and provisioning services, which are typically found in traditional VDI, onto the Nutanix cluster. Without the extra components consuming resources, the cluster can host more desktops. As a cloud service, Workspot Control scales instantly, is highly available, and always up-to-date.

The separation between the control and data planes in Workspot's architecture has four critical benefits for IT. Workspot's solution:

1. Minimizes the VDI footprint in the datacenter to Nutanix clusters that host VDI sessions.
2. Increases security, compared to a hosted solution
   - Corporate data does not flow through the cloud, which means that all data flows directly between the client and the VDI host.
3. Delivers a higher performance
   - Users connect directly to the host, there is nothing to impede the end-user experience.
4. Ensures high availability
   - Workspot cloud is not in the data path. As a result, the availability of desktops and applications is independent of the availability of the cloud service.

Workspot's core components include:

Workspot Control

> A cloud control plane, Workspot Control provisions desktops and applications, sets security policies, manages user profiles and access, and collects analytics. It replaces the operational front end of load balancing, brokering, databases, web portal, and provisioning services found in traditional VDI. As cloud service, Workspot Control scales instantly, is highly available, and always up-to-date.

Workspot Enterprise Connector

Installed on a Windows Server 2008R2 or 2012R2 VM, the Workspot Enterprise Connector associates the Nutanix clusters with Workspot Control for the purpose of provisioning and assignment of desktop VMs. IT can associate multiple clusters with Workspot Control.

Workspot Client

In order to deliver direct access to the host, Workspot's rich-client architecture leverages a built-in toolkit of enterprise-grade secured browser, powerful Single-Sign On (SSO) technology and modular application engines. As a result, Workspot Client minimizes latency and hops between users and every class application -- SaaS, VDI, Web, HTML5, Windows client-server, and Network File Shares – to deliver high performance end user experience. Designed with future applications and workflows in mind, Workspot Client delivers a future-proof workspace to end users.

Extending VDI's Reach with Multi-Tenant Hybrid Cloud Architecture

Workspot's VDI 2.0 is a cloud native, multi-tenant service transforms IT into a service provider. With the operational components (management, brokering, load balancing, etc.) as a cloud service, IT can instantly create new tenants, scale up more users, and add more locations without having to "copy" a whole operation front end.
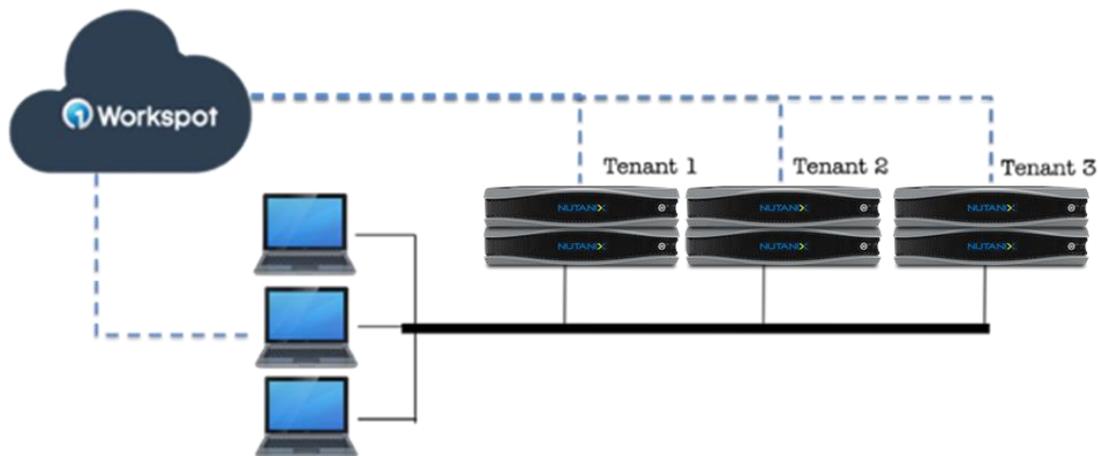
The benefits of a multi-tenant architecture:

- Onboard tenants in minutes
- Treat subsidiaries, geos, or LOBs as tenants
- Mix-and-match virtual desktops and apps from any private and public data center
- Support for heterogeneous infrastructure, commonly found in companies with a global footprint or growing through mergers and acquisitions
- Place Nutanix clusters closer to users for higher performance
- Manage all tenants from a single pane in the cloud.

The 4 Major Steps to Deploying Workspot on Nutanix AHV

Workspot VDI 2.0 deploys quickly with Nutanix AHV by automating the provisioning and control of VDI VMs through the AHV APIs.

Step 1: Connect Nutanix AHV to Workspot Cloud

- Create Datacenter in Workspot Control by providing the Integration key (fig.1) used for the Workspot Enterprise Connector installation.
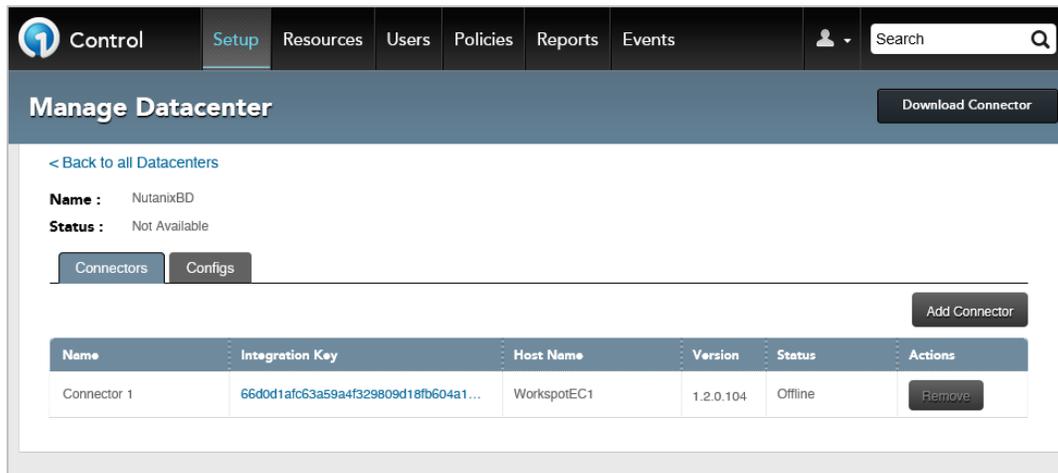
Fig 1. Creating a unique integration key

- Create Datacenter Config for Nutanix AHV integration. Provide Prism address (with port number) and Prism administrator account used for provisioning VDI desktops. (fig. 2)
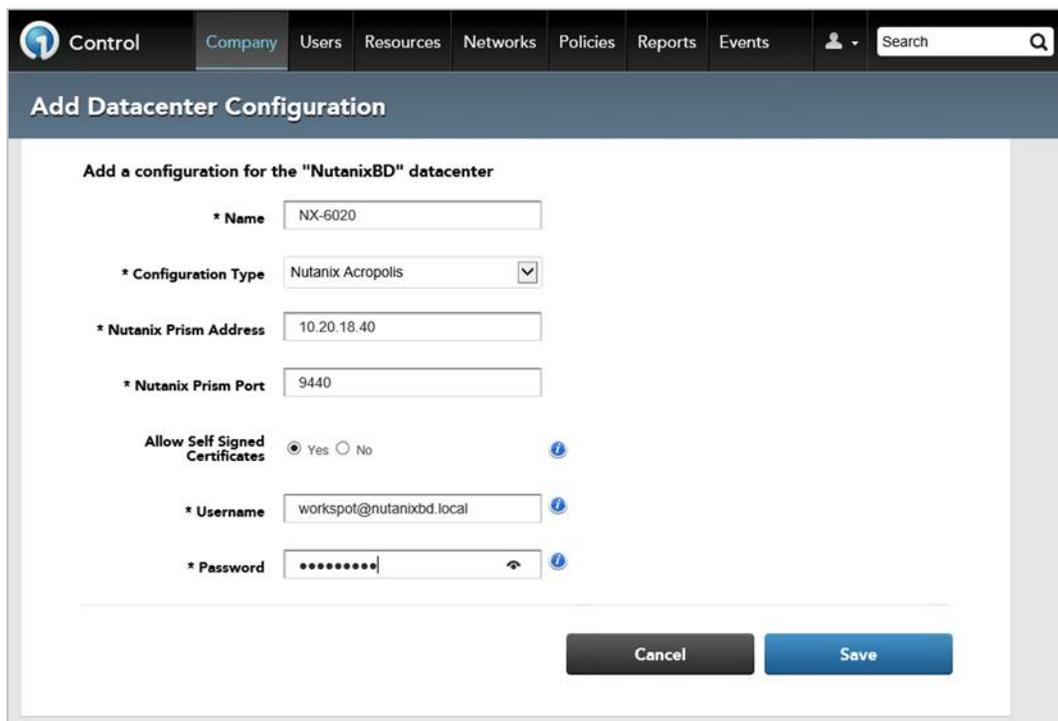
Fig 2. Associating the Workspot Cloud with Nutanix Cluster

Step 2: Customize desktop template and provisioning desktops

- With Nutanix and Workspot integration through the Enterprise Connector configured, you can now provision VDI desktops by going to Resources > VDI > Add Pool. Under *Select a Config*, then select the Nutanix cluster to provision VDI desktops.

Fig 3. Creating a desktop pool

- Customize the template (fig. 4).
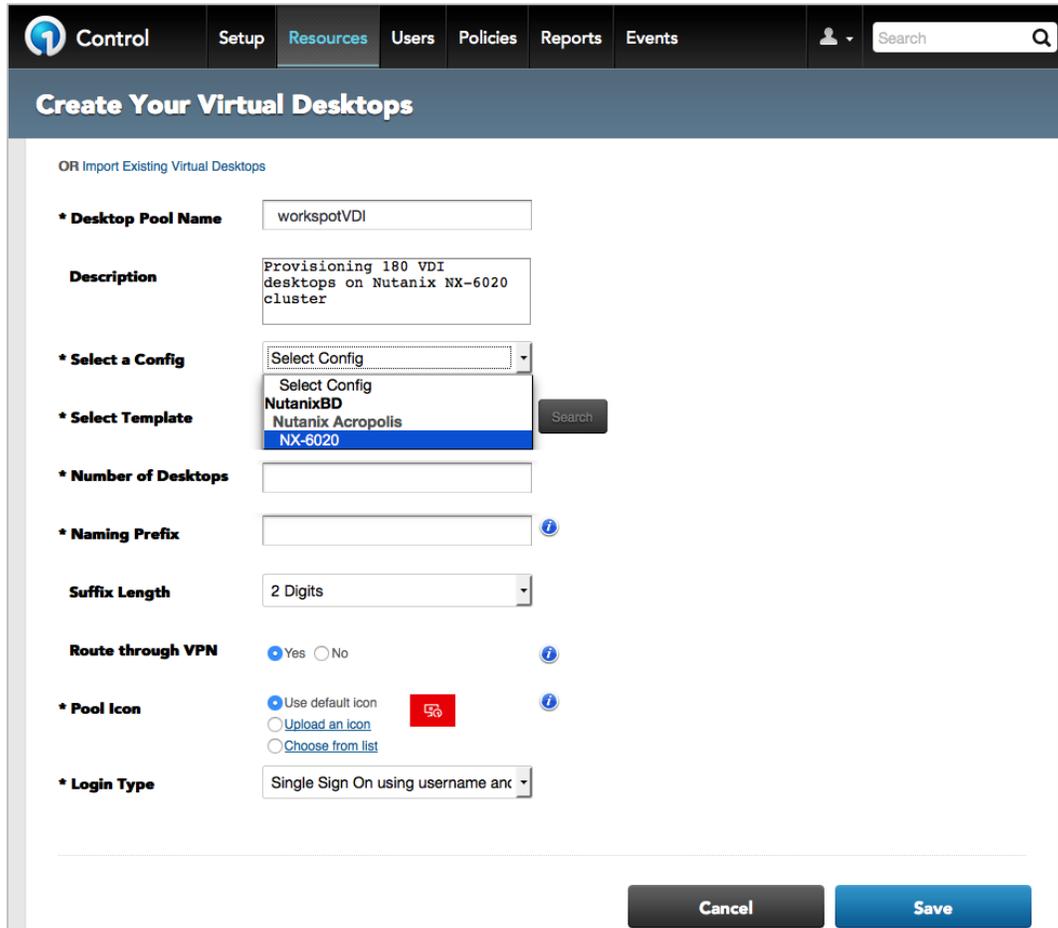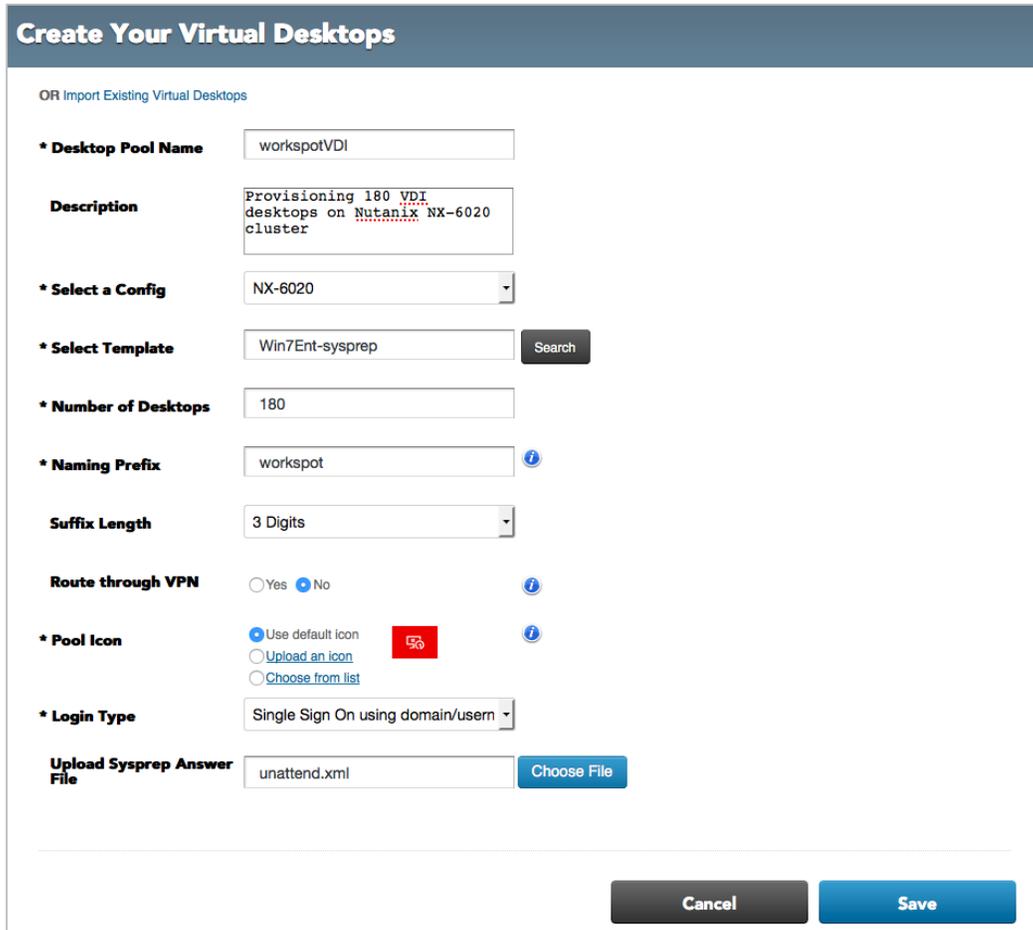
Create Your Virtual Desktops

OR Import Existing Virtual Desktops

* Desktop Pool Name	workspotVDI
Description	Provisioning 180 VDI desktops on Nutanix NX-6020 cluster
* Select a Config	NX-6020
* Select Template	Win7Ent-sysprep [Search]
* Number of Desktops	180
* Naming Prefix	workspot
Suffix Length	3 Digits
Route through VPN	○ Yes ● No
* Pool Icon	● Use default icon ○ Upload an icon ○ Choose from list
* Login Type	Single Sign On using domain/usern
Upload Sysprep Answer File	unattend.xml [Choose File]

[Cancel] [Save]

Fig 4. Customizing template

Step 3: Monitor progress of provisioning desktops

- With the AHV integration, you can check the progress of VDI provisioning in Workspot Control (fig. 5) or in Nutanix Prism (fig. 6).

Fig 5. Monitoring the progress of provisioning desktops in Workspot Control
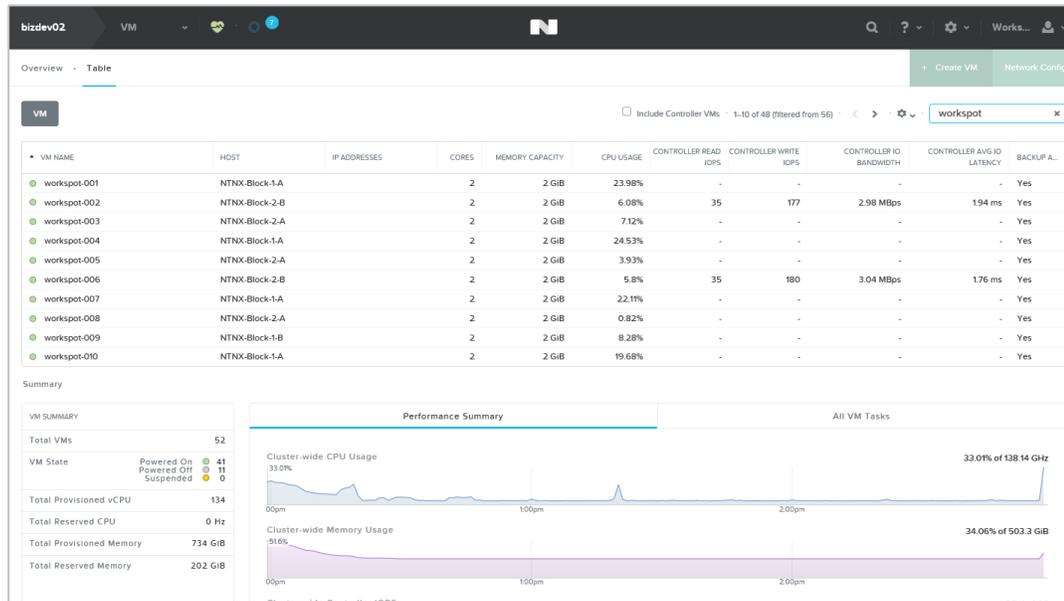
Fig 6. Monitoring the progress of provisioning desktops in Nutanix Prism

Step 4: Assign Desktops

- When VDI desktops are online, use Workspot to assign desktops to end users.

Fig 7. Desktops ready to be assigned to users.

Conclusion

The combination of Workspot's cloud native architecture with Nutanix AHV integration enables IT to quickly deploy VDI onto the Nutanix enterprise cloud in as little as an hour. This solution streamlines IT operations and reduces costs. Moreover, it also enables IT to become a service provider with the ability to quickly onboard subsidiaries, geos, and LOBs as tenants and manage them from a single pane of glass.

Resources

Learn more about VDI 2.0 technology

- www.workspot.com/VDI20

Technical resources for Workspot on Nutanix AHV:

- Workspot + Nutanix integration guide: https://workspot.zendesk.com/hc/en-us/articles/207445463
- Video demo of provisioning Workspot VDI on AHV: www.workspot.com/nutanix

For more information about Workspot on Nutanix, see www.workspot.com/nutanix or contact Workspot at sales@workspot.com.

About Workspot

Workspot is the leading 100% cloud-based Workspace as a Service platform. Built for the mobile, cloud and hyper-converged infrastructure era, Workspot is the fastest and simplest solution for solving IT's end user BYOx and mobility challenges. Workspot also solves the corporate challenge of securely delivering apps, desktops and data to any device with a single frictionless user experience across mobile, Mac and PC platforms. Workspot's 100% cloud-based platform simplifies IT's workload, requires zero maintenance, scales instantly, provides deep end user experience analytics and monitoring, and is always up to date with the latest features. Based in Cupertino, California, Workspot is recognized by Gartner as "Cool Vendor" in endpoint computing. For more information, visit www.workspot.com.

About Nutanix

Nutanix makes infrastructure invisible, elevating IT to focus on the applications and services that power their business. The Nutanix enterprise cloud platform leverages web-scale engineering and consumer-grade design to natively converge compute, virtualization and storage into a resilient, software-defined solution with rich machine intelligence. The result is predictable performance, cloud-like infrastructure consumption, robust security, and seamless application mobility for a broad range of enterprise applications. Engage with the Nutanix NEXT community at http://next.nutanix.com or follow us on Twitter @nutanix.