

Data Centre Virtualisation



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VMware



VMware, Inc. is an American cloud computing and virtualization technology company headquartered in California. VMware was the first commercially successful company to virtualize the x86 architecture.

VMware's desktop software runs on Microsoft Windows, Linux, and macOS, while its enterprise software hypervisor for servers, VMware ESXi, is a bare-metal hypervisor that runs directly on server hardware without requiring an additional underlying operating system. [1]

VMware



Explanation on the importance of VMware technology

- Agility
- Flexibility
- Scalability
- Cost-saving
- Workload mobility
- Increased performance
- Availability of resources
- Automated operation

VMware Vision

The Essential, Ubiquitous Digital Foundation

Any Device



Any Application



Traditional



Cloud Native



SaaS

Any Cloud



vmworld 2019

[3] Figure 1

Benefits of the uses of VMware to an organization that needs to use cloud computing



- Enhance ROI
- More effective utilization of space and energy
- Better security
- Simplified management of data centre
- Improved provisioning of application and resources
- An effective platform for cloud management

Windows VMs



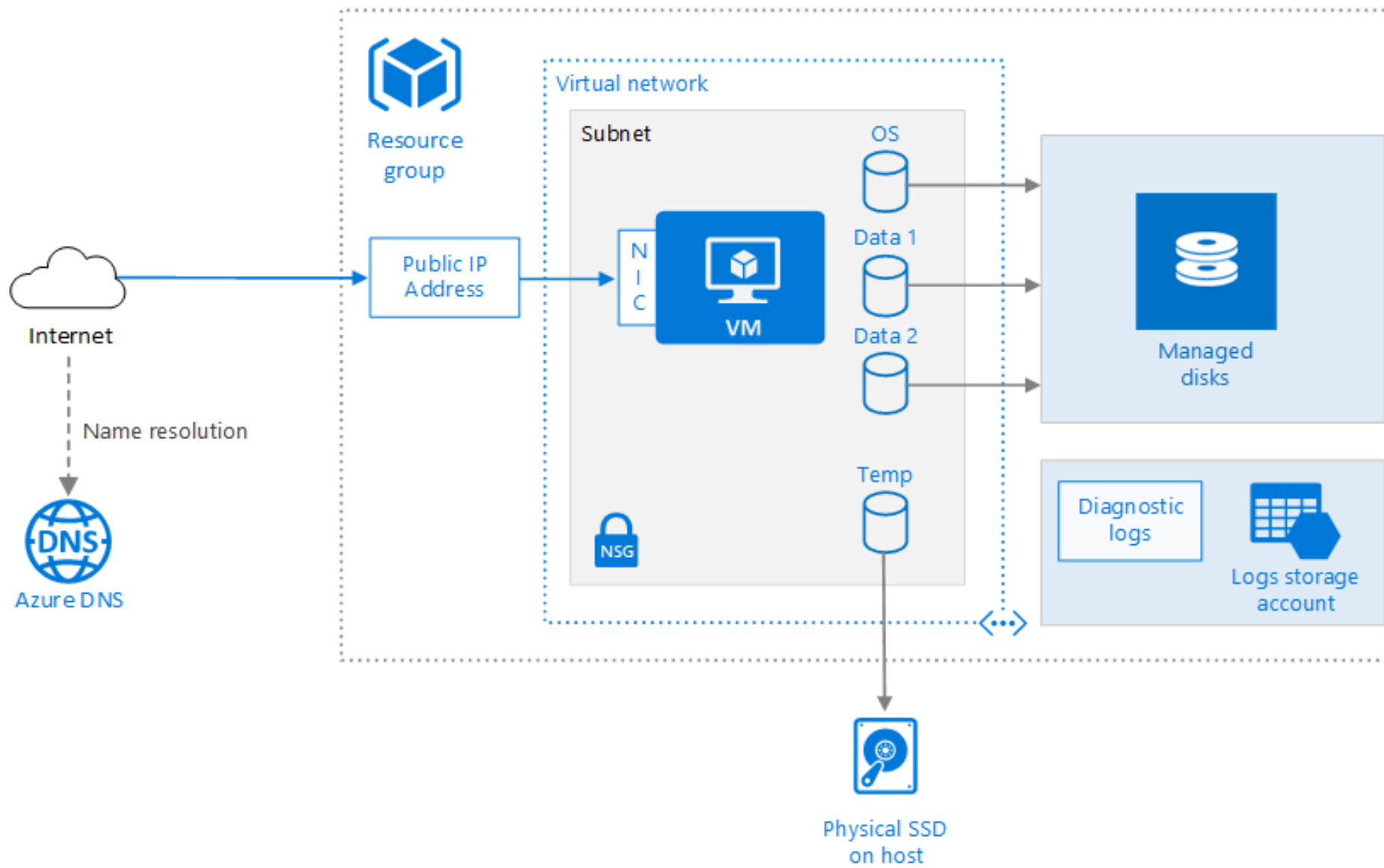
Azure Virtual Machines (VM) is one of several types of on-demand, scalable computing resources that Azure offers. Typically, you choose a VM when you need more control over the computing environment than the other choices offer. This article gives you information about what you should consider before you create a VM, how you create it, and how you manage it.[5]

Windows VMs



Importance of Microsoft Hyper-V and how it is utilised by Microsoft

- For establishing or expanding a private cloud environment
- For achieving more effective uses of the hardware
- Support in enhancing business continuity
- For establishing or expanding a virtual desktop infrastructure



[5] Figure 2

Benefits of the uses of Microsoft Hyper-V to an organization that needs to use cloud computing



- Protect from system failure
- Hassle-free transfer of data
- Efficient firewall and security
- Cost-efficient strategy

Explanation of vSphere 7.0 and Microsoft Hyper-



Microsoft Hyper-V

- Native hypervisor
 - An optional component of the windows server
 - It runs directly
 - It is a bare-metal type-1 hypervisor
 - It can be found in the enterprise edition of Windows 8, 8.1 and 10 version
- It also found is x64-bit Pro

vSphere 7.0

- Virtualization platform
- A suite of virtualization products
- Comprises VMware ESXi hypervisor, type 1 hypervisor
- vSphere 7 is efficient in handling Kubernetes workloads
- Ideal for the development atmosphere

Azure



Azure supports open source technologies, so you can use the tools and technologies you prefer. Run virtually any application using your data source, with your operating system, on your device. With Azure, you have choices.[8]

Azure



- Explanation on the importance of Azure
- Easy mobility
- Reliable consistent platform
- Supports in building deploying and managing apps more quickly and easily

Key features of Azure



- Data resiliency
- Data security
- BCDR integration
- Capacity management
- Single-pane operation



Azure services

Create a
resource

All resources

Virtual
machines

App Services

Storage
accounts

SQL databases

Azure Database
for PostgreSQLAzure Cosmos
DBKubernetes
services

More services

Recent resources

Name	Type	Last Viewed
 arm	API Connection	Just now
 BuildApp	App Service	Just now
 AI-Downtown-bc93	Application Insights	3 min ago
 adventure-vm-3-ip	Public IP address	3 min ago
 adventure-vm	Virtual machine	6 min ago

Navigate



Subscriptions



Resource groups



All resources



Dashboard

Tools

Microsoft Learn 
Learn Azure with free online
training from MicrosoftAzure Monitor
Monitor your apps and
infrastructureSecurity Center
Secure your apps and
infrastructureCost Management
Analyze and optimize your
cloud spend for free

Benefits of the uses of Azure to an organization that needs to use cloud computing



- Consistent hybrid cloud service
- Unparalleled developer productivity
- Comprehensive multilayered security

Citrix

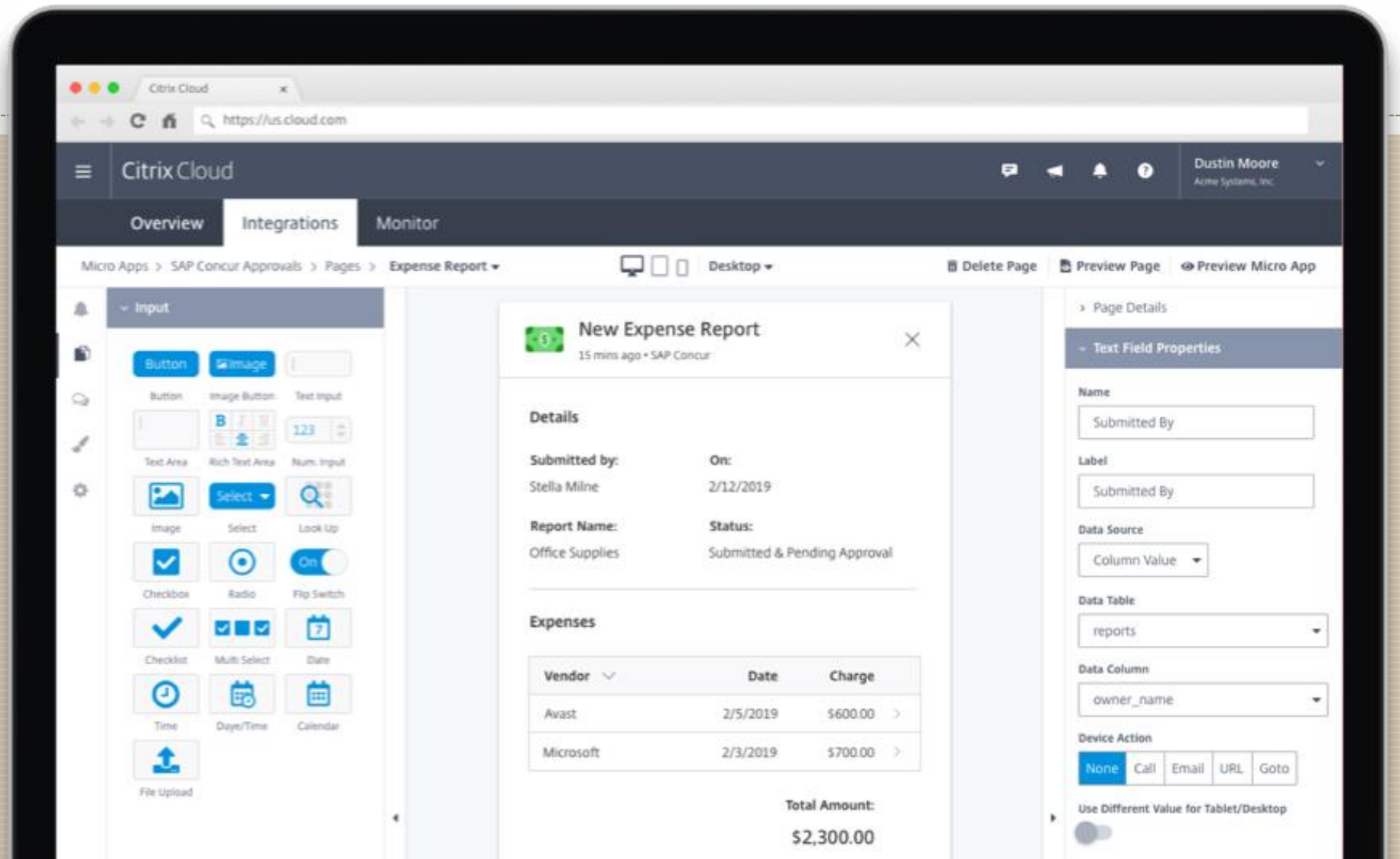


Citrix Client which is a program that allows secure access to cloud computers. It is often used for cloud applications or for enabling remote desktop access to certain servers within the cloud. It is primarily used within enterprise but there are a few programs installed for end users that utilize it too.[11]

Key applications of Citrix



- Maximizes voice delivery, as well as delivery of video plus telephony features
- Audio features
- Browser content redirection
- HDX video conferencing
- Webcam video compression
- HTML5 multimedia redirection
- Windows media redirection
- Monitor
- Troubleshoot
- Support Microsoft team



[11] Figure 4

References



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