Double-Take Cloud Migration Center (CMC) Tech Brief

VISION SOLUTIONS

Overview

Double-Take Cloud Migration Center is an online service that enables migrations from VMware vSphere and Amazon Web Services EC2 to Microsoft Azure Infrastructure as a Service (IaaS).

This document provides a detailed technical briefing on the functionality and use of the Double-Take Cloud Migration Center and assumes that the reader will have at least a basic understanding of Cloud IaaS.

Terms

- **Environment** - The information needed to connect to an infrastructure. This includes the combination of the type of infrastructure and the information to connect to that infrastructure. The connection information may be an access key and secret key (AWS), subscription information, or URL and username/password (vSphere).

- **Infrastructure as a Service** - Infrastructure as a Service (IaaS) is a form of cloud computing that provides virtualized computing resources over the Internet. IaaS is one of three main categories of cloud computing services, alongside Software as a Service (SaaS) and Platform as a Service (PaaS).*

- **Server** - A computing workload including an OS, applications, data and storage.

- **Proxy Server** - A server with Double-Take Proxy software installed on it that is used to communicate to an environment and servers that do not have public IP addresses. The proxy server is used for discovery of servers and creations of migration jobs.

- **Migration** - The process of transitioning a server to a secondary environment.

- **Cutover** - The final step of migration in which the server is discontinued in the original environment and begins operating in the new platform.

* http://searchcloudcomputing.techtarget.com/definition/Infrastructure-as-a-Service-IaaS

Requirements

To use the Cloud Migration Center, the production workloads and secondary infrastructure must meet or exceed the following requirements.

- **Production** - Each production workload must be a virtual server running on a vSphere Virtual Host or within Amazon Web Services EC2. The operating system running within the VM needs to be an operating system that is supported in Microsoft Azure.* The production virtual machine also needs to have remote desktop enabled so that after the migration the desktop will be accessible. There must be at least one TCP/IP network interface that is configured with a routable IP address that can send and receive data to and from the secondary infrastructure.

- **Target Infrastructure:**
  The target infrastructure will be Microsoft Azure IaaS. Users will need to have a subscription account created in Microsoft Azure that can be utilized for the migration process. An AWS account or a proxy server running in vSphere is also required.

How the Solution Works

Double-Take Cloud Migration Center provides a streamlined migration process for moving workloads to the cloud.

1. **Configure Environments**
   - First, the user creates environments, as defined in the preceding “Terms” section.
   - Then the user inputs information for their Azure subscription. CMC makes this easy by guiding the user through the process of downloading a subscription file and then uploading it into CMC.

2. **Discover eligible servers** - Double-Take Cloud Migration Center will use information provided during environment configuration to find all the servers that are able to be migrated to Azure. These servers will be marked as ready.

* At publication time, Microsoft Azure currently supports Windows 2008R2, 2012 and 2012R2. Check azure.microsoft.com for latest OS support information.

3. **Create Migration** - The user will select the source servers they would like to migrate and step through a simple wizard to create the migration. CMC will use information about the source server to select the instance size in Azure that best matches the source server. The user can change the instance to either scale up or scale down when the server is migrated. Once the wizard is complete, CMC will go through several automated steps to reach the point of ready for cutover.

    - Creating target service - CMC creates a Cloud Service in Azure that will hold the server that is being migrated.
    - Creating target instance - A Virtual Machine is created within the Azure Cloud Service.
    - Provisioning target instance - The Target Virtual Machine is automatically provisioned. This includes remapping the D: drive in the target instance if the source machine has a D: drive in use.
    - Creating install points - Firewall rules are set up to allow for remotely installing Double-Take Move on the Source and Target servers.
    - Copying Double-Take to the Source server.
    - Installing Double-Take on the Source server.
    - Activating Double-Take on the Source server.
    - Activating Double-Take on the Target server.
    - Activating Double-Take Move on the Source server.
    - Creating the migration job within Double-Take Move.
    - Synchronizing - The initial mirror is started to send the data from the Source server to the Target server.

4. **Cutover** - Once the initial mirror is complete, the migration job will be ready for cutover. If automatic cutover was selected in the migration wizard, then the cutover process will begin without any user intervention.

    If automatic cutover was not selected, then the migration job will remain in the ‘Ready for Cutover’ state until the user initiates cutover. Throughout the time that the migration job is in the ‘Ready for Cutover’ state, changes on the Source server are replicated in real-time to the Target server.

When cutover begins, CMC automatically completes the migration process, including:

- Shutting down the Source server, if that option was selected in the migration creation wizard.
- Utilizing Double-Take Move to apply the system state information on the Target VM.
- Rebooting the Target VM.
- Activating Windows on the Target VM to ensure that the Windows licensing is converted to Microsoft Azure licensing.

5. **Complete Migration** - Once Windows has been successfully activated on the Target VM, the migration is completed and the workload is running in Azure.

Conclusion

Equipped with powerful automation, the Double-Take Cloud Migration Center eliminates a multitude of steps required with typical migration tools. The Double-Take product installation, activation and target server provisioning are transparent as workloads are moved to the cloud. In just five clicks, anyone can perform an enterprise-level migration. By utilizing Vision Solutions' Double-Take Cloud Migration Center, migration with near-zero downtime has never been easier.

Migrate, Protect & Recover… Anywhere. Vision Solutions.

Vision Solutions is the premier provider of software solutions designed to protect data, minimize downtime and maximize resources for the modern data center.

We are the only company to deliver workload migrations, high availability, disaster recovery and data sharing – across multiple operating systems, on any hardware and on any physical, virtual or Cloud-based environment. Our solutions perform near-zero downtime migration of data, applications and systems to significantly reduce cost, risk and resource requirements.

We utilize real-time replication to prevent data loss and enable fast recovery to secondary servers in the event of a planned or unplanned failure at the primary site. Our software also enables different database platforms to seamlessly share and consolidate data in real-time for proactive, business critical decision-making.

Vision Solutions has been serving enterprises and managed service providers for over 25 years through our portfolio of Double-Take®, MIMIX® and iTERA® product brands.

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