10TH MAGNITUDE

ASR Deployment Planner

Setup Guide

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SUMMARY

This guide outlines the deployment of the ASR Deployment Planner Tool. Before beginning, please verify the requirements are met In the Support Matrix section In the ASR Deployment Planner Documentation.

PREREQUISITES

The ASR Deployment Planner will need the following prerequisites configured before deployment of the tool.

☐ A service account provisioned that will be used to access the VMware vCenter Server or VMware ESXi host(s) during profiling. This account will need at least read-only rights.

☐ For **Profiling and Throughput Measurement** - A server with the following configuration to host the deployment planner tool and components:

- Operating system: Windows Server 2016 or Windows Server 2012 R2
  (ideally matching at least the size recommendations for the configuration server)
- Machine configuration: 8 vCPUs, 16 GB RAM, 300 GB HDD
- .NET Framework 4.5
- VMware vSphere PowerCLI 6.0 R3
- Visual C++ Redistributable for Visual Studio 2012
- Internet access to Azure from this server
- Azure storage account for throughput calculation
- Administrator access on the server
- Minimum 100 GB of free disk space (assuming 1,000 VMs with an average of three disks each, profiled for 30 days)
- VMware vCenter statistics level settings can be 1 or higher level
- Allow vCenter port (default 443): Site Recovery Deployment Planner uses this port to connect to the vCenter server/ESXi host

☐ For **Report Generation** – A Windows PC or Windows Server with the following configuration:

- Excel 2013 or later.
- .NET Framework 4.5
- Visual C++ Redistributable for Visual Studio 2012
- VMware vSphere PowerCLI 6.0 R3 is required only when you pass -User option in the report generation command to fetch the latest VM configuration information of the VMs. The Deployment Planner connects to vCenter server. Allow vCenter port (default 443) port to connect to vCenter server.

Note: This machine is optional, the above server can be used for this purpose if desired.

DEPLOYMENT

To deploy the ASR Deployment Planner tool, follow the steps below.

1. Download the latest version of Site Recovery Deployment Planner. The tool is packaged in a .zip folder. The current version of the tool supports only the VMware to Azure scenario.
2. Copy the .zip folder to the Windows server from which you want to run the tool.
3. Extract the .zip folder to the destination location. This folder contains multiple files and subfolders. The executable file Is ASRDeploymentPlanner.exe In the parent folder.

   Example: Copy the .zip file to E:\ drive and extract it. E:\ASR Deployment Planner_v2.3.zip

   E:\ASR Deployment Planner_v2.3\ASRDeploymentPlanner.exe

SETUP INPUT DATA

Before running the tool, you'll need to create a list of the VMs that you want to be profiled. You can get all the names of VMs on a vCenter server/vSphere ESXi host by using the VMware vSphere PowerCLI commands. Alternatively, you can list in a file the friendly names or IP addresses of the VMs that you want to profile manually or from a vCenter export.

Before you start, ensure that the execution policy is set to allow running scripts. If it is disabled, launch the VMware vSphere PowerCLI console in administrator mode, and then enable it by running the following command:

```
Set-ExecutionPolicy -ExecutionPolicy AllSigned
```

1. Open the VMware vSphere PowerCLI console in administrator mode.
2. To get all the names of VMs on a vCenter server/vSphere ESXi host and store the list in a .txt file, run the two commands listed here. Replace ‹server name›, ‹user name›, ‹password›, ‹outputfile.txt›; with your inputs.

   ```
   Connect-VIServer -Server <server name> -User <user name> -Password
   <password>
   Get-VM |  Select Name | Sort Name >  <outputfile.txt>
   ```

   > *If the commands are not recognized as the name of cmdlet, you may need to import the VMware PowerShell module to your session by running the following command:*
   >
   > ```
   > Import-Module VMware.VimAutomation.Core
   > ```

3. Open the output file in Notepad, and then copy the names of all VMs that you want to profile to another file (for example, ProfileVMList.txt), one VM name per line. This file will be used as input to the *-VMListFile* parameter of the ASR Deployment Planner command-line tool.

START PROFILING

Now that a list of VMs to be profiled has been created, you can run the tool in profiling mode. Below are some common examples of how to run the tool. The full list of all parameters and options can be found in the ASR Deployment Planner Documentation.

1. Open an elevated command prompt
2. Change to the directory that you extracted the ASR Deployment Planner
3. Run ASRDeploymentPlanner.exe with the desired options

Examples

Note: We recommend that you run the profiling for more than 7 days for best results.

To save the profiling data locally to the server, you'd run with similar options:

```
ASRDeploymentPlanner.exe -Operation StartProfiling -Virtualization VMware -
Directory "<profile data directory>" -Server <VMware server name> -VMListFile
"<input file path>" -NoOfDaysToProfile  <number days to profile>  -User <vSphere
username> -StorageAccountName <name> -StorageAccountKey <access key>
```

To save the profiling data to a share or another server, you'd run with similar options:

```
ASRDeploymentPlanner.exe -Operation StartProfiling -Virtualization VMware -
Directory "<\\profile-data-share>" -Server <VMware server name> -VMListFile
"<input file path>" -NoOfDaysToProfile  <number days to profile>  -User <vSphere
username> -StorageAccountName <name> -StorageAccountKey <access key>
```

By default, the tool is configured to profile and generate report up to 1000 VMs. You can change limit by changing MaxVMsSupported key value in the ASRDeploymentPlanner.exe.config file. You can also run multiple instances of the tool with multiple input files.

```
<!-- Maximum number of vms supported-->
<add key="MaxVmsSupported" value="1000"/>
```

Note: If you have multiple vCenter servers, you need to run one instance of ASRDeploymentPlanner for each vCenter server for profiling.

GENERATE REPORTS

After profiling is complete, you need to run the tool in report generation mode. The tool generates a macro-enabled Microsoft Excel file (XLSM file) as the report output, which summarizes all the deployment recommendations. The report is named **DeploymentPlannerReport_<unique numeric identifier>.xlsm** and placed in the specified directory. Below are some common examples of how to run the tool. The full list of all parameters and options can be found in the ASR Deployment Planner Documentation.

1. Open an elevated command prompt
2. Change to the directory that you extracted the ASR Deployment Planner
3. Run ASRDeploymentPlanner.exe with the desired options

Examples

To generate a basic report for testing and save It locally to the server, you'd run with similar options:

```
ASRDeploymentPlanner.exe -Operation GenerateReport -Virtualization VMware -Server <VMware server name> -Directory "<profile data directory>" -VMListFile "<input file path>"
```

To generate a basic report for testing and save to a share or another server, you'd run with similar options:

```
ASRDeploymentPlanner.exe -Operation GenerateReport -Virtualization VMware -Server <VMware server name> -Directory "<\\profile-data-directory>" -VMListFile "<\\input-file-path>"
```

To generate a report with RPO, bandwidth, and subscription cost analysis:

```
ASRDeploymentPlanner.exe -Operation GenerateReport -Virtualization VMware -Server <VMware server name> -Directory "<profile data directory>" -VMListFile "<input file path>" -DesiredRPO <minutes> -Bandwidth <number of Mbps> -SubscriptionId <subscription Id>
```