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Abstract

The Company is looking for a new infrastructure. It should be in Azure   
and this document describes the scenario they are looking for.  
  
Version: 1.1

Workshop Scenario Infrastructure

Scenario

The company scenario

The “company” is going to build an environment in Azure without connection to their existing datacenters. They have decided to use IaaS as a start and the environment will be in the West European Azure datacenter. They have decided on using the following setup in Azure:

* 2 Resource Groups
* 2 VNets with 1 subnet in each. The subnets should not be the same in the two VNets.
* 1 Windows application server with IIS installed
* 1 Linux RedHat server with apache installed with a simple web page (if running a free Azure account use CentOS)
* 1 Log Analytics Workspace
* 1 Azure Automation Account
* 1 Recovery and Backup vault
* Security Center
* Key Vault
* 1 Windows AD server (+)

# Assignment

The company have decided to use two Resource Groups. One to put all the network configuration in and one for the rest of the configuration. Your job is to create the two Resource Groups and give them names with the prefix “RG”.

Windows Server should use standard HDD storage in a storage account. Linux server should use standard HDD storage and use the feature managed disks.

The servers should be put in Network security groups (NSG) and you have to decide how they should be configured. The NSG should also have port 80 open so users on the internet can reach the webservers configured.

The VNets should be paired with VNet Pairing.

It is also decided that no one intentionally should be able to delete a VM. Because of that it is decided that Locks should be used. The Lock should be named VM and Lock type should be Delete.

The company have decided that the Windows application server only should be running between the hours 8:00 to 17:00 and for accomplish this they have will use Azure Automation. Your job will be to download an Azure Automation Runbook from the gallery and modify it if needed and implement the automation.

To deploy the IIS and apache (HTTPD) in to the application servers it has been decided to use Azure Automation Desired State Configuration (DSC). DSC should add the HTTPD to the Red Hat server (or CentOS) and IIS to the Windows server. In the Documentation document, you can find examples. The web page of the Linux server should be accessible from Internet.

As a backup solution for the VMs the company have decided to use Azure Backup. All VMs should be backed up and your job is to setup a backup schedule, trigger backup of one of the VMs yourself and then do a full VM restore or a file restore from the VM to verify the backup.

The company have also decided to use Log Analytics and Security Center to have insight into the services in Azure and VMs. Your job is to enable Security Center and solve the issues that shows up there and implement Log Analytics on the servers as well Audit Collection for Azure.

In Log Analytics you should enable and configure the following Solutions:

* Security and Audit
* System Update Assessment
* Change Tracking
* Audit Activity Logs
* AD Assessment
* Azure Network Security Group Analytics
* Agent Health
* Network Performance Monitoring
* Service Map

Log Analytics should be collecting Performance Counters for all servers. It should also collect Events from the Windows System and application logs and Auth from the Linux Syslog. You as an admin can also decide if more logs and performance counters should be collected.

For the Windows server Security Center JIT access should be used to block RDP ports when not used. When implemented create a request and log on to the DC server.

After some time, the company decides that they will need a Disaster Recovery solution for their Windows IIS server. They decide to use Azure Site Recovery to be able to fail over to the North European Azure datacenter. You need to implement ASR, create a plan and do a Test Failover of the plan to the East European Azure datacenter.

## Extra assignment

After some time, developers in the organization want an Azure Json Template that creates an VM that attaches itself to the production VNet. The template should include variables so computer name and resource group can be set for every time the template is ran. Please create this for the development team so they can script a VM and remove it fast to create a new one again. Verify that the template is working.