# Azure Foundation Lite – Deployment Guide

Deployment times (estimates based on the default VM sizes in the ARM template):

* Azuredeploy.json: 1 hour and 4 minutes (The DSC CreateAdForest takes about 40 min)
* azuredeploymanagement.json 19 minutes
* azuredeployvmdiagnostics.json: 6 minutes ( Three deployments in total (one for each VM), each taking 2 minutes)

Total deployment time: 1 hour and 30 minutes

Preparation:

* Create one user in Azure AD and assign Contributor role on subscription level. This account will be used for automation purpose. Used in 4) d. in this guide.

Deployment guide:

1. Open the Azure-Foundation-Lite project folder: “Azure-Foundation-Lite\project”
2. Open “AzureFoundationLite.sln” in Visual Studio
3. Edit all the relevant parameters in “**azuredeploy.parameters.json**”:
   1. adVmName: Name of the Domain Controller virtual machine
   2. adVmSize: Size of the Domain Controller virtual machine
      1. If you want to use premium disk, you have to change the “storageAccountTypedOsDisk” and “storageAccountTypeDataDisk1” variables found in nested\domaincontroller.json and set a VM size that support premium disk
   3. domainName: Name of the new domain
   4. domainUsername: Domain account user name in the new domain
   5. domainPassword: domainUserName password
   6. rdsVmName: Name of the RDS virtual machine
   7. rdsVmSize: Size of the RDS virtual machine
      1. If you change the size of the RDS VM to one that does NOT support premium disks, you have to change the “storageAccountTypedOsDisk” and “storageAccountTypeDataDisk1” variables found in nested\rds.json
   8. rdsDnsPrefix: DNS name of the RDS PublicIP. This value must be globally unique!
   9. appVmName: Name of the application virtual machine
   10. appDnsPrefix: DNS name of the application PublicIP. This value must be globally unique!
   11. appVmSize: Size of the application virtual machine
       1. If you want to use premium disk, you have to change the “storageAccountTypedOsDisk” and “storageAccountTypeDataDisk1” variables found in nested\appr.json and set a VM size that support premium disk
   12. localAdminUsername: Local administrator username on the virtual machines
   13. localAdminPassword localAdminUsername password
4. Edit all the relevant parameters in “**azuredeploymanagement.parameters.json**”
   1. omsRecoveryServicesVaultName: Name of the Recovery Services Vault (Must be unique in the resource group)
   2. omsAutomationAccountName: Name of the Automation account created (Must be unique in the resource group. Possible issue with name shorter than 8 characters)
   3. omsAutomationAccountLocation: The region to deploy OMS Recovery Services Vault in
   4. azureServiceAccountUserName: The username for service account in Azure. The account will be used in Azure Automation to perform tasks on Azure Resources.
      1. This account must be created in either Azure Active Directory, on premises or in office 365 and be given Contributor permissions on the subscription (<https://docs.microsoft.com/en-us/azure/billing/billing-add-change-azure-subscription-administrator>. Remember to assign a password policy to the account, so the password does not expire (https://docs.microsoft.com/en-us/azure/active-directory/active-directory-passwords-set-expiration-policy).
   5. azureServiceAccountPassword: azureServiceAccountUserName Password
   6. keyVaultName: Name of the key vault (Must be globally unique)
5. (Optional) Edit the default parameters and/or variables in **“azuredeploy.json”, “azuredeploymanagement.json”, “azuredeployvmdiagnostics.json”, “app.json”, “backupvault.json”, “domaincontroller.json”, “networking.json”, “rds.json”, “updatenetwork.json” and “deploy.ps1”** to suit any specific naming conventions the customer needs.
   1. For example, if you want to change the daily retention duration for the backup policy, edit the “dailyRetentionDurationCount” variable in the deploy.ps1 file (line 215)
   2. For example, if you want to change the name of the adAvailabilitySetName, edit the “adAvailabilitySetName” variable in the nested\domaincontroller.json.
   3. For example, if you want to add or remove NSG rules, open the complex variable “networkSecurityGroups” in nested\networking.json and add or remove security rules.
6. When finished with editing of settings in parameter JSON and deploy.ps1 you can run deployment from Powershell with this command:  
   ***PS C:\Repo\Azure-Foundation-Lite> .\deploy.ps1 -ResourceGroupName ahdemorg1 -ResourceGroupLocation "West Europe" -MGMTResourceGroupName ahdemomgmtrg1***  
   or  
   Open deploy.ps1 located under the root project folder in PowerShell ISE. Define values for the three input variables “ResourceGroupName”, “ResourceGroupLocation” and “MGMTResourceGroupName”
7. Run the deployment and verify that all steps of the deployment completed successfully. Any faults during the deployment process will stop the deployment script.
8. Log on to the public IP of the rdsLoadBalancer and verify that you have access to the environment
9. (Optional) the ADVM does not need to be as big as Standard\_A2\_v2, so a good idea for cost saving is to scale this server down to Standard\_A1\_v1 after the deployment. The reason it’s A2 in the first place is to heavily cut down on the deployment time.
10. Remember, the public IP addresses are assigned dynamically, you therefore have to create a CNAME record to point to the “appDNSPrefix” name and the “rdsDnsPrefix” name. Do not use A records to point to the PIPs, as they might change. The DNS Name will be <appDnsPrefix>.region.cloudapp.azure.com. Example: Myawesomeappserver.westeurope.cloudapp.azure.com
11. Configure the environment to suit the customers need