Microsoft

Microsoft Azure

Accelerate Amsterdam Deployment with ARM templates and GIT

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Agenda

- Objectives
- Technology overview
- Lab environment and exercises

Objectives

You will:

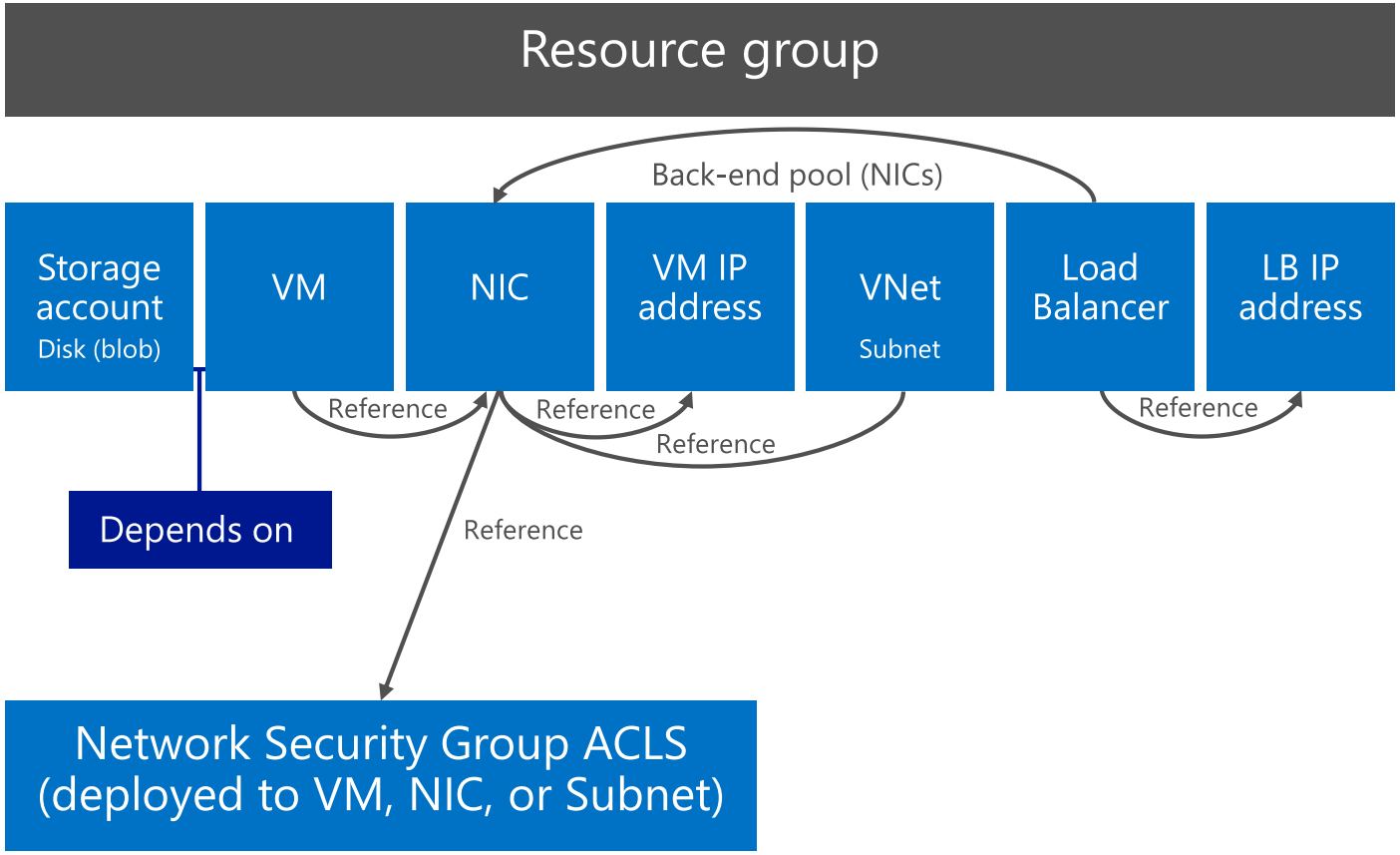
- Understand Azure Quickstart templates
- Learn about GitHub and GIT repositories
- Learn how to configure Visual Studio Code to use GIT
- Learn how to customize a template and its related parameters JSON file using Visual Studio Code to meet your specific and additional requirements
- Learn how to stage and commit changes to the local and remote GIT repository

Technology overview

Resource Manager example

Classic model (v1)

Resource Manager (v2)



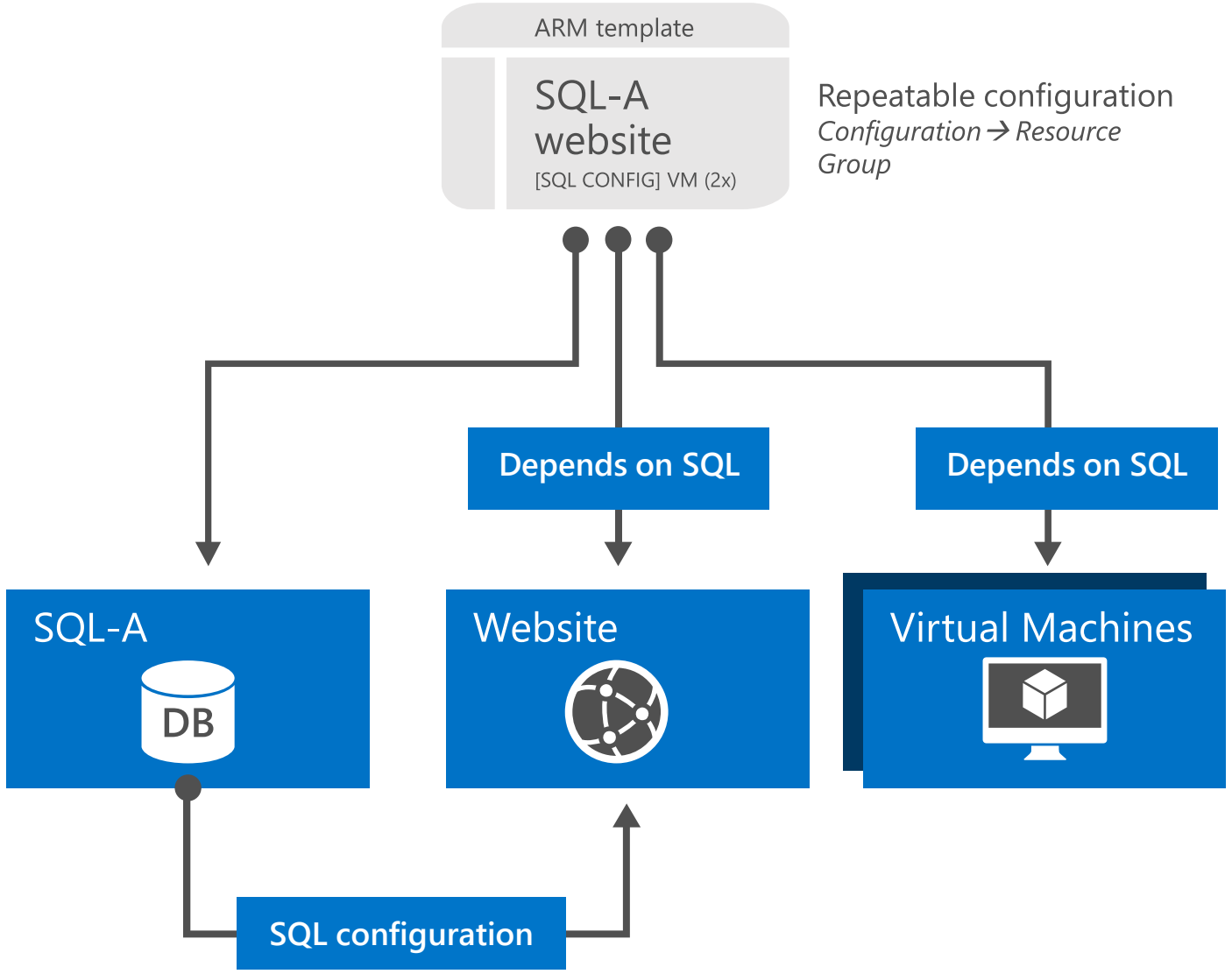
Azure Resource Manager templates

ARM templates can:

- Simplify deployment
- Simplify roll-back
- Provide cross-resource configuration and update support
- Be used as a learning tool to build to suit

Azure templates are:

- Source file, checked-in
- Specifies resources and dependencies (VMs, websites, DBs) and connections (configuration, LB sets)
- Configurable parameters for input/output



Common use cases for ARM templates

Enterprises and system integrators

- Internal software development teams
  - Delivering an application
- Corporate IT
  - Delivering a capability or cloud capacity

Cloud Service Vendors (CSVs)

- Support different multi-tenancy approaches
  - Distinct deployments per customer
    - Within the CSV's subscription
    - "Bring your own subscription" model that uses customer subscriptions
  - Scale units within a central multi-tenant system
- Support ability to make available via the marketplace

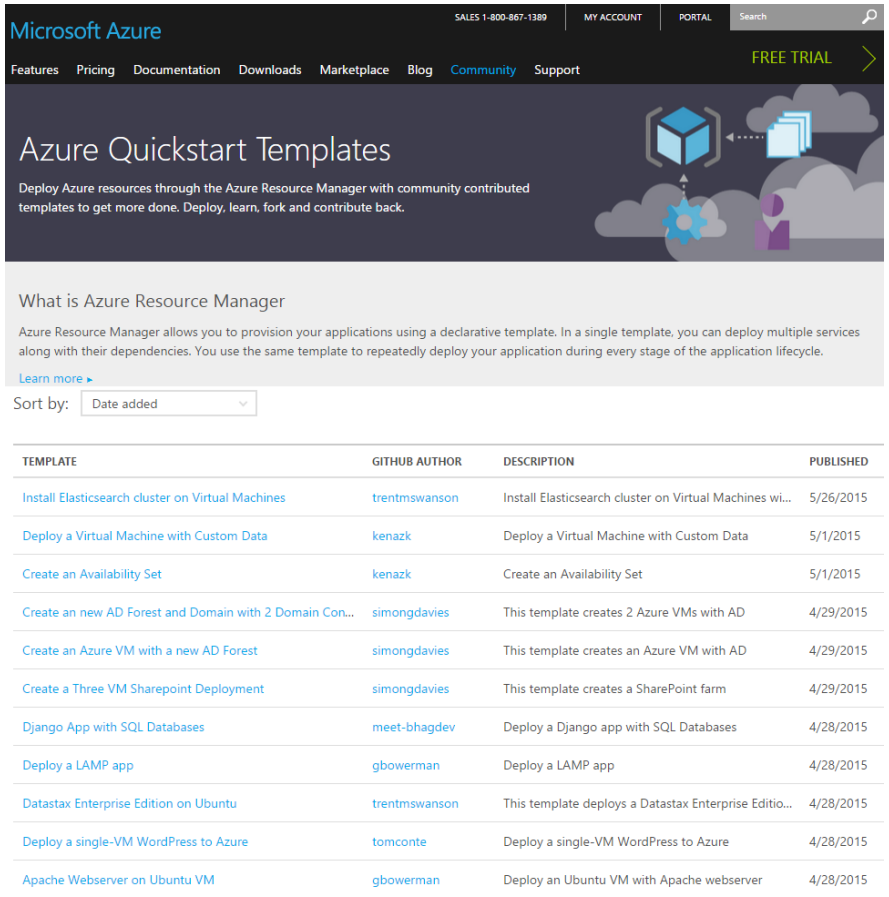
All deploy known configurations/SKUs/VM sizes

Getting started with Azure templates

Wide range of Quickstart templates

- Indexed on Azure.com
- GitHub repo
- Community and Microsoft contributed

Integration of IaaS with Azure Services



Many examples available @
https://github.com/Azure/azure-quickstart-templates

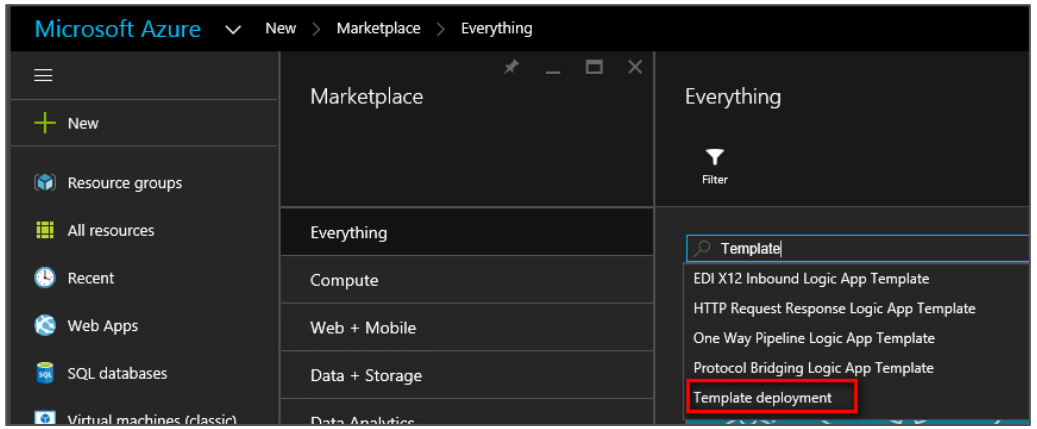
JSON files—simpler than they look

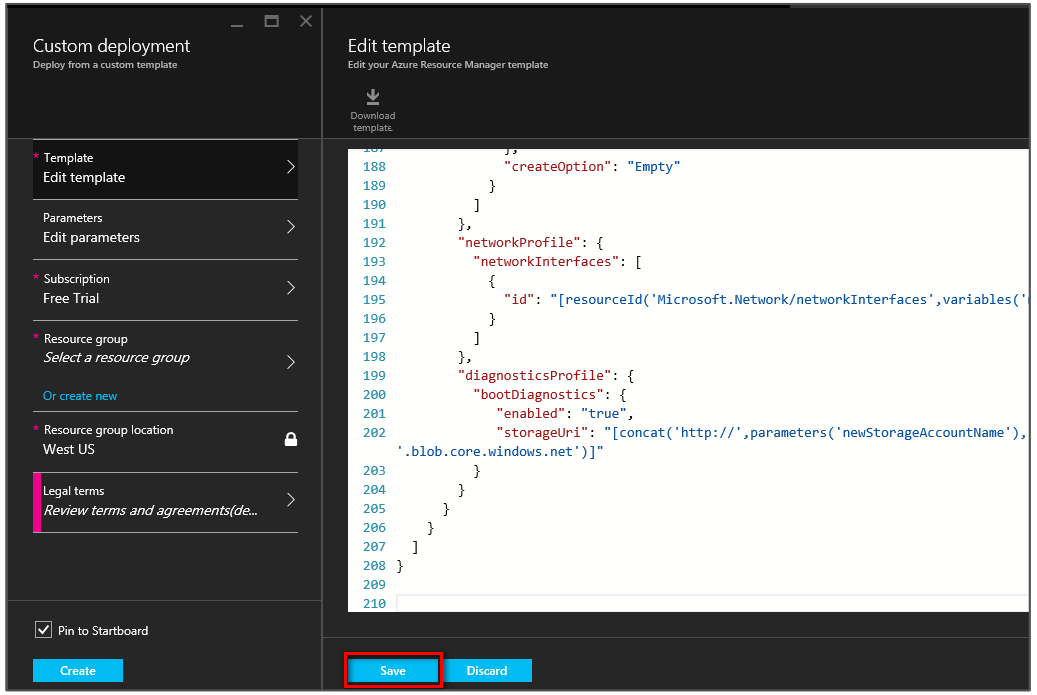
Schema, content version, parameters, variables, resources, and outputs

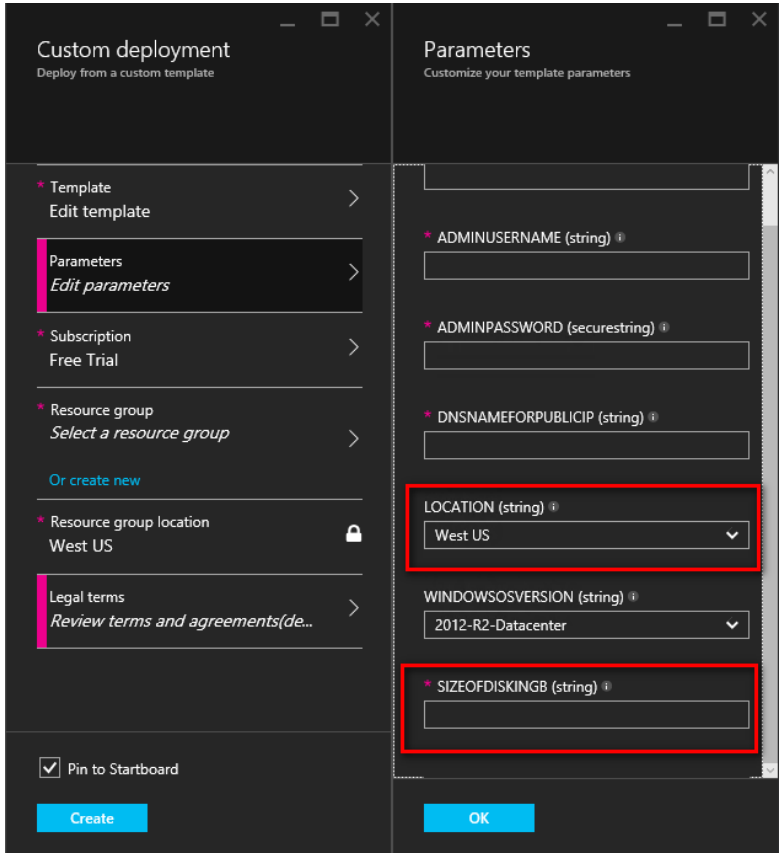
Passing state—common parameters

Name (string values)	Description
Location	The location where the resources will be deployed from a constrained list of Azure regions
storageAccountNamePrefix	Unique DNS name for the storage account where the VM's disks will be placed
virtualNetworkName	For deployments that create a new virtual network, the name to use for creating that resource. For deployments that use an existing virtual network, the name of the VNet to deploy into
username	User name for the virtual machine(s) and potentially the application(s). More than one user name can be requested from the end user, but at least one must be prompted
password	Password for the virtual machine(s) and potentially the application(s). More than one password can be requested from the end user for different VMs or applications, but at least one must be prompted
tshirtSize	The named scale unit size to provision from a constrained list of offered t-shirt sizes For example, "Small", "Medium", "Large"
enableJumpbox	Parameter that identifies whether to enable a jumpbox for the environment Values: "enabled", "disabled"

Deploying custom JSON files








```
New-AzureResourceGroupDeployment -DeploymentName
"Simple-VM" -ResourceGroupName
RG-AZITCAMP -TemplateFile "C:\GitHub\Templates\101-
simple-windows-vm\azuredeploy.json
```

Tools to help manage templates

- GitHub
- Visual Studio Code
- NotePad/NotePad++

GIT

- A widely used version control system for software development
- A distributed revision control system with an emphasis on speed, data integrity, and support for distributed, non-linear workflows
- A full-fledged repository with complete history and full version-tracking capabilities, independent of network access or a central server

GitHub

https://github.com

- The largest code host on the planet with over 27.6 million repositories
- Every repository comes with the same powerful tools
- Tools are open to the community for public projects and secure for private projects
- Allows for creation of a GIT Desktop and cloned repository

Visual Studio Code integration with GIT

- Open your team repository in Visual Studio
- Clone your repository
- Create a new app
- Confirm your settings and add the app
- Snapshot (commit) your code
- Pull changes from your team
- Push your local commits to the server

Lab 2 – Git, GitHub, ARM template en Apache/PHP cluster maken

- Tot 12:30 (lunch)
- Volgende sessie start om 13:30

Microsoft