



Azure

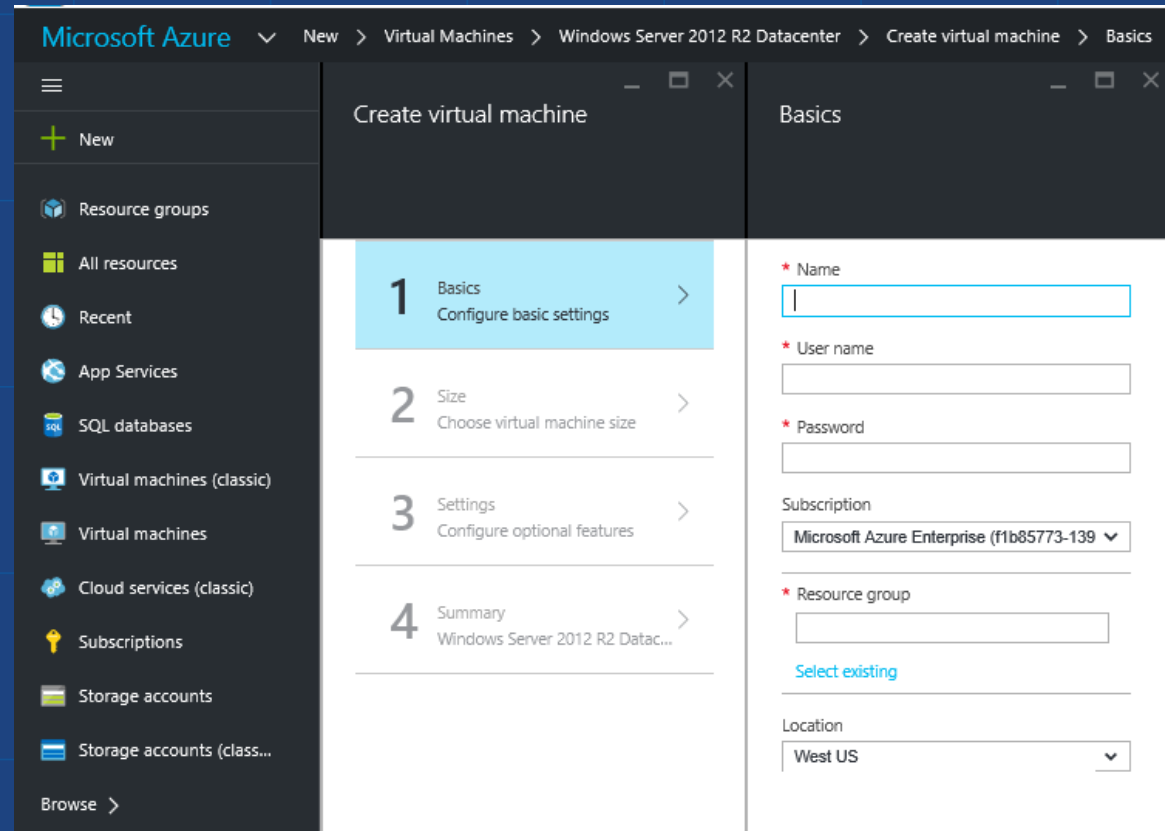
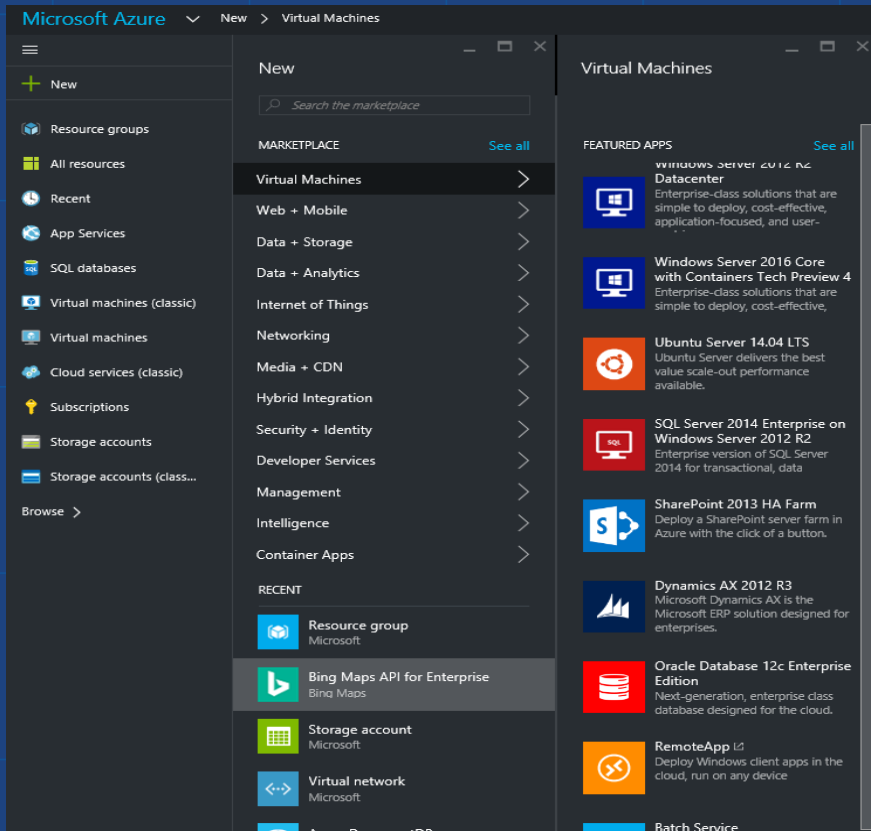
Management & Security

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Cloud Solutions Architect



Azure Management Portal

<https://portal.azure.com>




<https://blogs.msdn.microsoft.com/azureedu/2016/10/29/introduction-to-azure-enterprise-and-subscription-management/>


Command Line & Dev Tools

Visual Studio, SQL Server Management
Studio etc

Azure Powershell, CLI



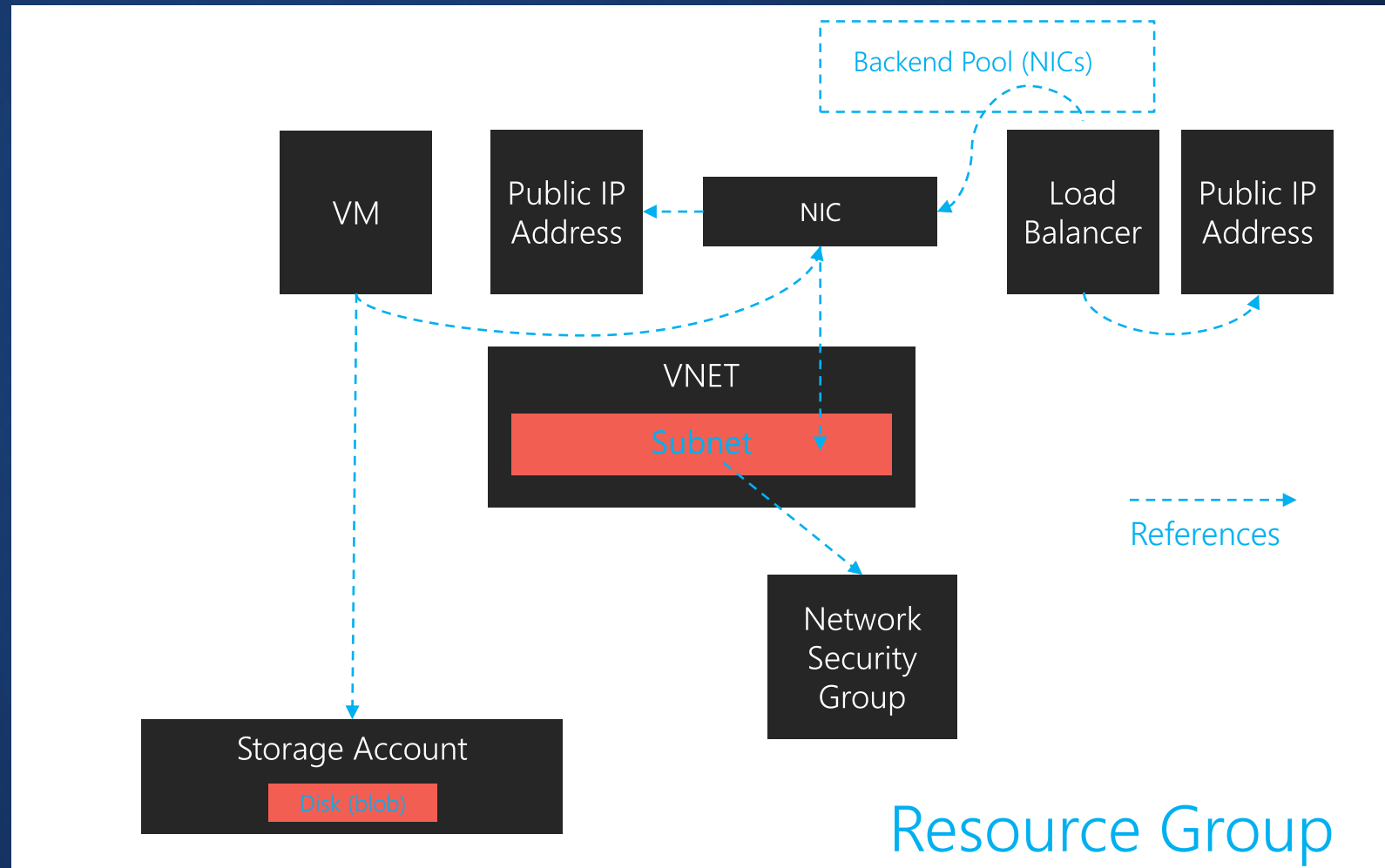
Microsoft Azure Management Libraries
(.net, Node.js, Java, php)



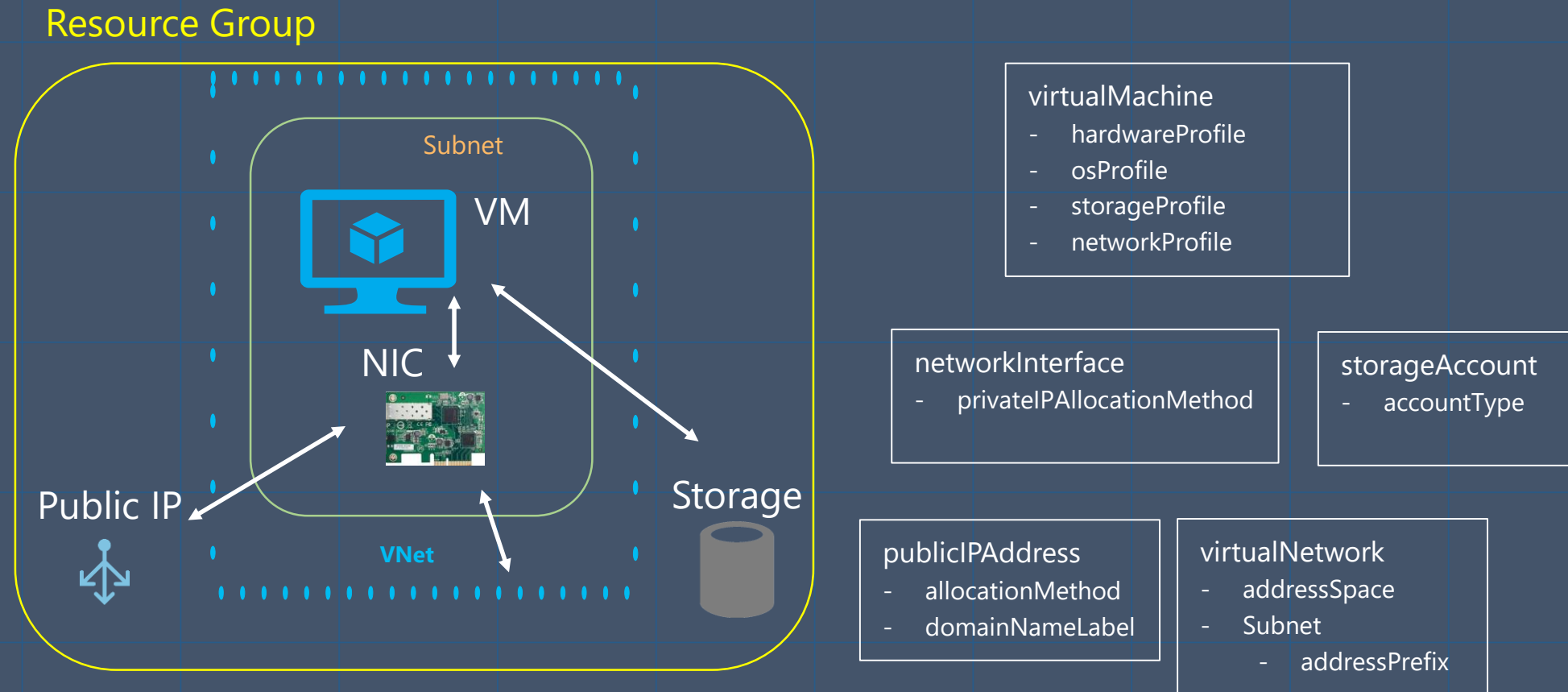
Service Management REST API
(HTTP-based)

Azure Resource Model

- Deploy, manage & monitor resources as a group
- Orchestrate Deployment using Template
- Organize Resources with tags



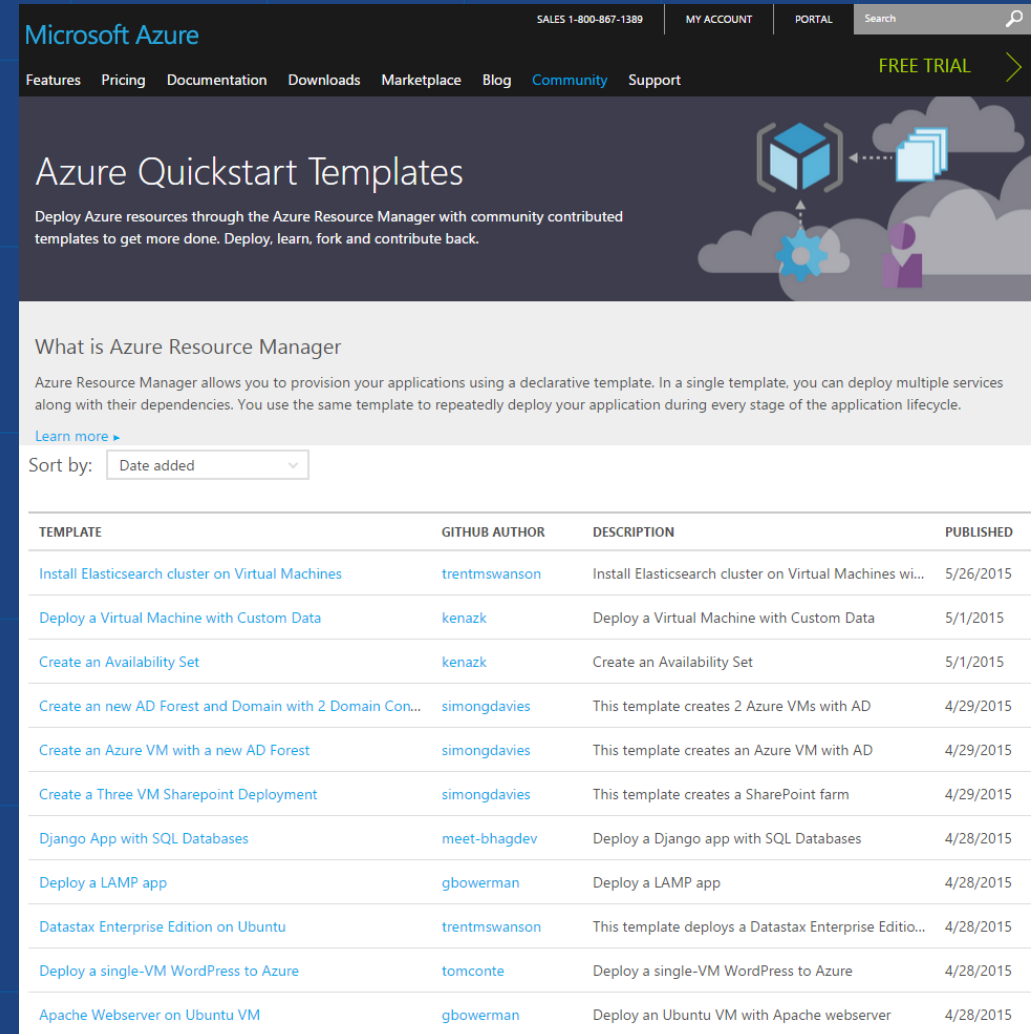
Azure Resource Manager: Building a Virtual Machine



<https://github.com/Azure/azure-quickstart-templates/tree/master/101-vm-simple-windows>

Getting Started with Azure Templates

- Wide range of Quickstart Templates
 - Indexed on Azure.com
 - Github Repo - <https://github.com/Azure/azure-quickstart-templates>
 - Community & Microsoft contributed
- Integration of IaaS with Azure Services
- Azure Resource Explorer
- <https://resources.azure.com/>



Microsoft Azure

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Azure Quickstart Templates

Deploy Azure resources through the Azure Resource Manager with community contributed templates to get more done. Deploy, learn, fork and contribute back.

What is Azure Resource Manager

Azure Resource Manager allows you to provision your applications using a declarative template. In a single template, you can deploy multiple services along with their dependencies. You use the same template to repeatedly deploy your application during every stage of the application lifecycle.

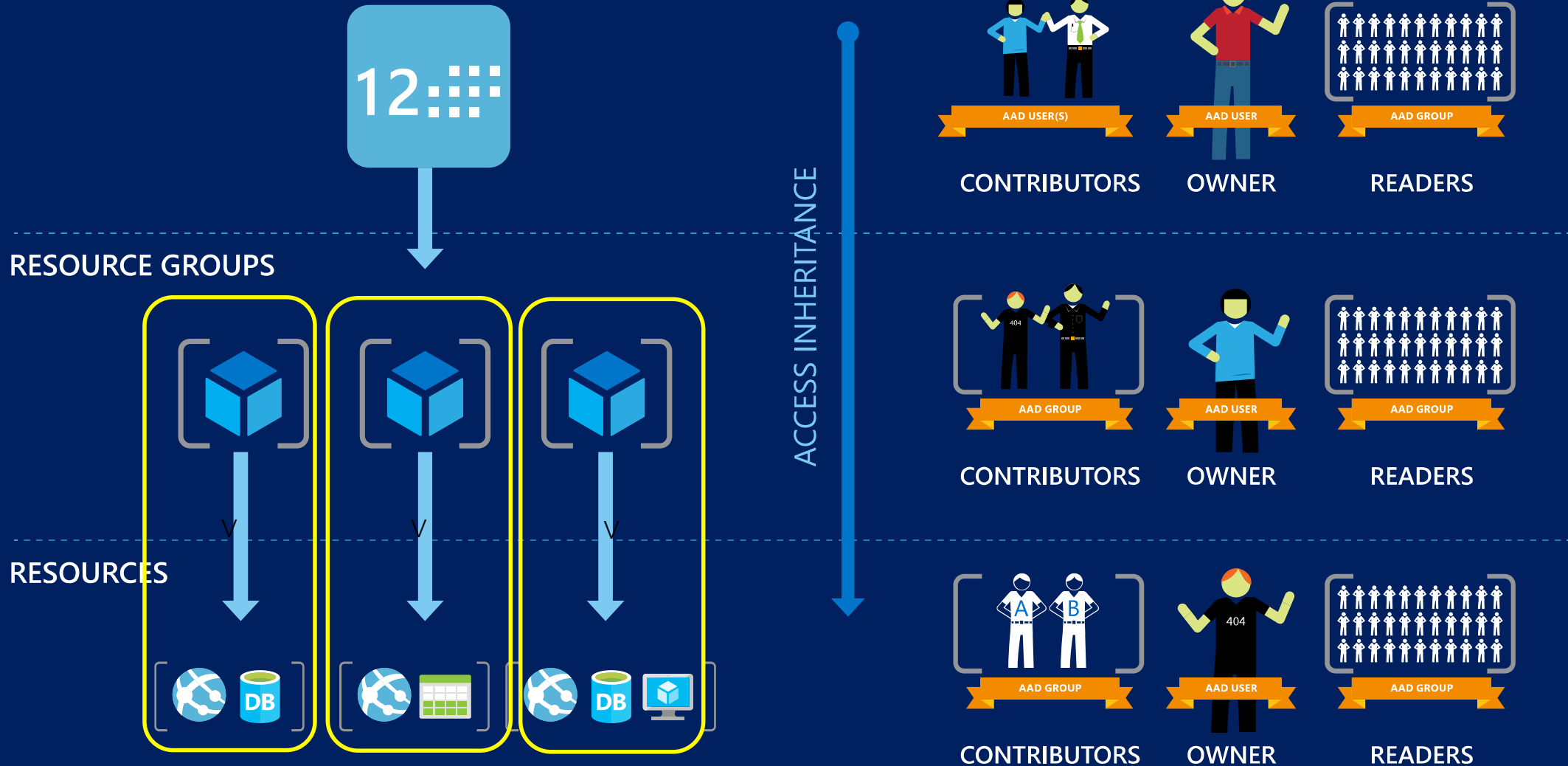
[Learn more](#)

Sort by:

TEMPLATE	GITHUB AUTHOR	DESCRIPTION	PUBLISHED
Install Elasticsearch cluster on Virtual Machines	trentmswanson	Install Elasticsearch cluster on Virtual Machines wi...	5/26/2015
Deploy a Virtual Machine with Custom Data	kenazk	Deploy a Virtual Machine with Custom Data	5/1/2015
Create an Availability Set	kenazk	Create an Availability Set	5/1/2015
Create an new AD Forest and Domain with 2 Domain Con...	simongdavies	This template creates 2 Azure VMs with AD	4/29/2015
Create an Azure VM with a new AD Forest	simongdavies	This template creates an Azure VM with AD	4/29/2015
Create a Three VM Sharepoint Deployment	simongdavies	This template creates a SharePoint farm	4/29/2015
Django App with SQL Databases	meet-bhagdev	Deploy a Django app with SQL Databases	4/28/2015
Deploy a LAMP app	gbowerman	Deploy a LAMP app	4/28/2015
Datastax Enterprise Edition on Ubuntu	trentmswanson	This template deploys a Datastax Enterprise Editio...	4/28/2015
Deploy a single-VM WordPress to Azure	tomconte	Deploy a single-VM WordPress to Azure	4/28/2015
Apache Webserver on Ubuntu VM	gbowerman	Deploy an Ubuntu VM with Apache webserver	4/28/2015

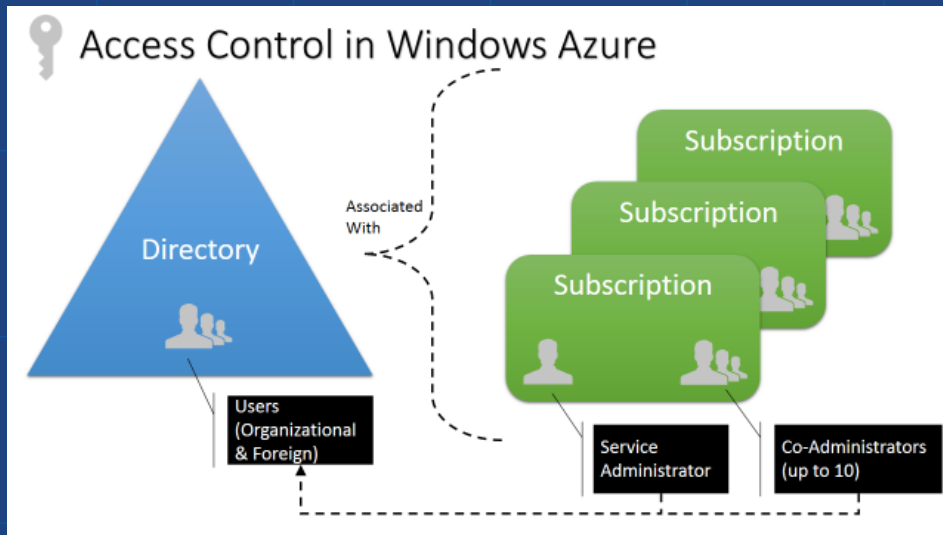
Role Based Access Control

SUBSCRIPTION



Azure Active Directory

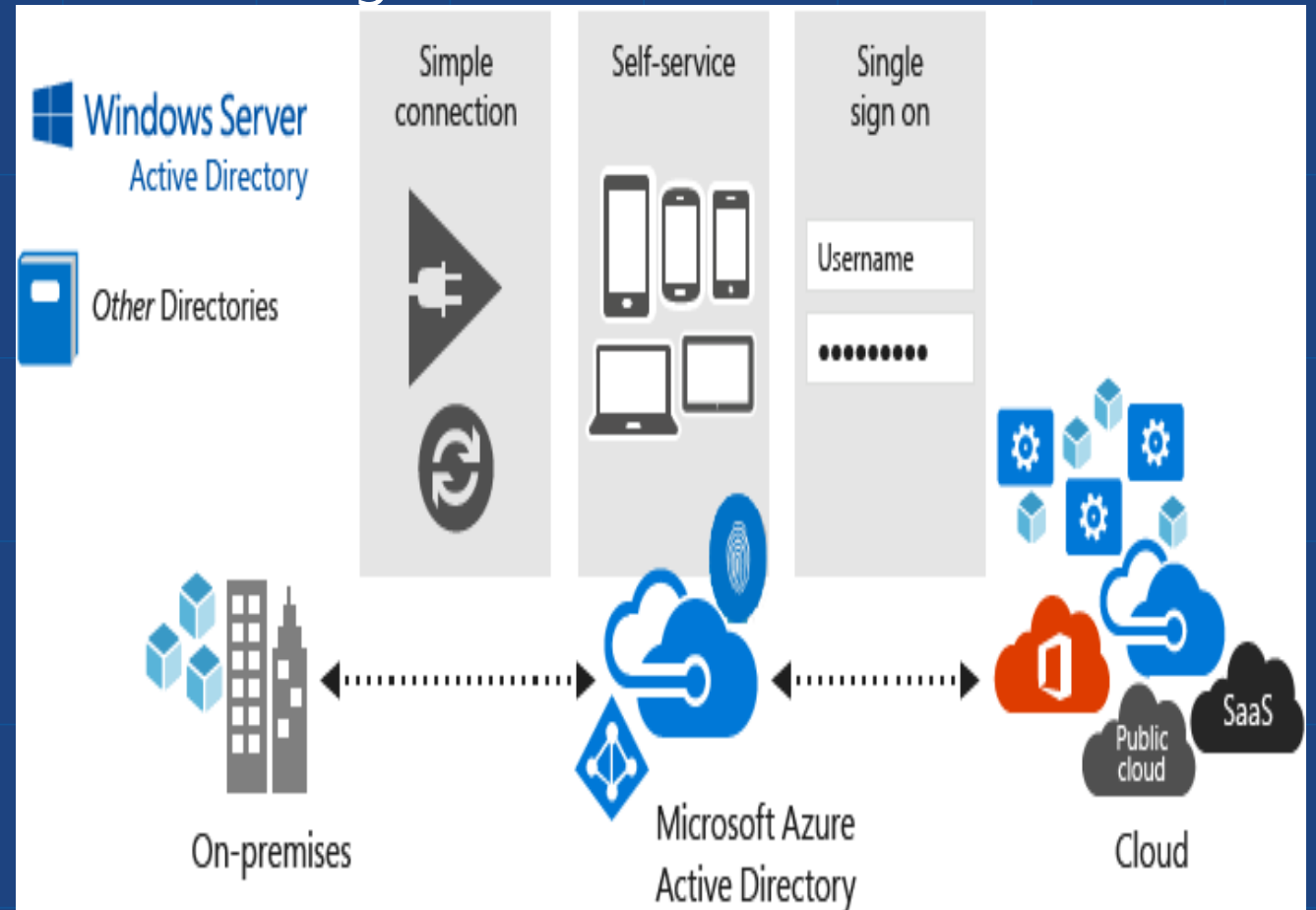
Every Azure Subscription has a trust relationship with an Azure AD instance which can be synced with On-premise and used to integrate other SaaS



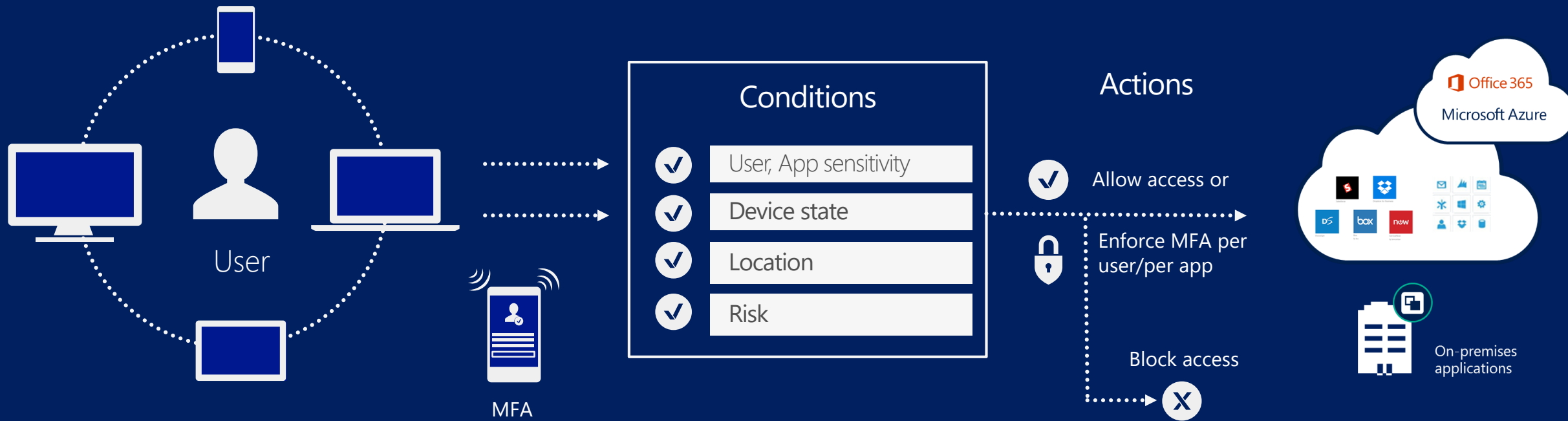
active directory

DIRECTORY ACCESS CONTROL NAMESPACES MULTI-FACTOR AUTH PROVIDERS RIGHTS MANAGEMENT

NAME	STATUS	ROLE	SUBSCRIPTION	DATACENTER REG...	COUNTRY OR REGION	
Microsoft	→ ✓ Active	User	Shared by all Microsof...	United States	United States	
AzMbNet	✓ Active	Global Administrator	Shared by all AzMcBN...	United States	United States	



Identity-driven security



IDENTITY
PROTECTION

NOTIFICATIONS, ANALYSIS, REMEDIATION,
RISK-BASED POLICIES



CLOUD APP DISCOVERY



PRIVILEGED IDENTITY MANAGEMENT



Compliance

Azure has the largest compliance portfolio in the industry

INDUSTRY

 ISO 27001	 SOC 1 Type 2	 SOC 2 Type 2
 SOC 3	 PCI DSS Level 1	 ISO 27018
 Content Delivery and Security Assoc.	 ISA/IEC 27017	 Cloud Controls Matrix v3.0.1
 MPAA	 Shared Assessments	

UNITED STATES

 FedRAMP JAB P-ATO	 HIPAA /HITECH	 FIPS 140-2
 21 CFR Part 11	 FERPA	 DISA Level 2 (DIACAP)
 CJIS	 IRS 1075	 ITAR-ready
 Section 508 VPATs	 FISMA	 NIST 800-171
 MARS-E	 GxP	 DIACAP

REGIONAL

 Argentine Data Protection Act 25.326	 European Union Model Clauses	 United Kingdom G-Cloud	 Canadian Privacy Laws
 China GB 18030	 China TRUCS	 Singapore MTCS Level 3	 Australian Signals Directorate
 New Zealand GCIO	 Japan Financial Services	 ENISA IAF	 Cloud Security Mark Gold
 Spain ENS	 FACT	 EU-US Privacy Shield	 NZCC Framework
 China Multi Layer Protection Scheme	 Japan My Number Act		

Operations Management Suite



On-premises datacenter

Public and hosted clouds

Azure or AWS

Insight & Analytics

Gain visibility across workloads

Automation & Control

Enable consistent control and compliance

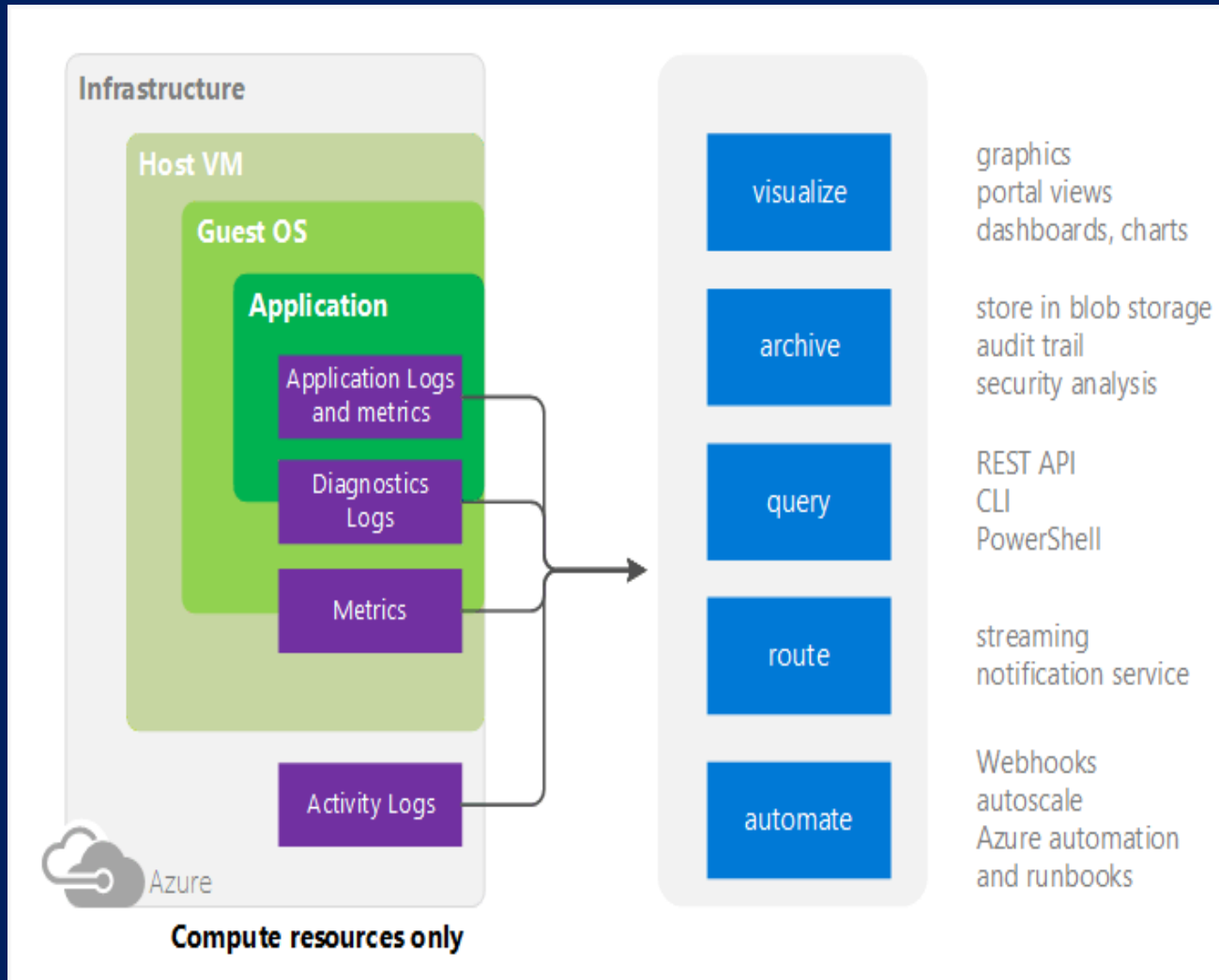
Security & Compliance

Respond faster to security threats

Protection & Recovery

Ensure availability of apps and data

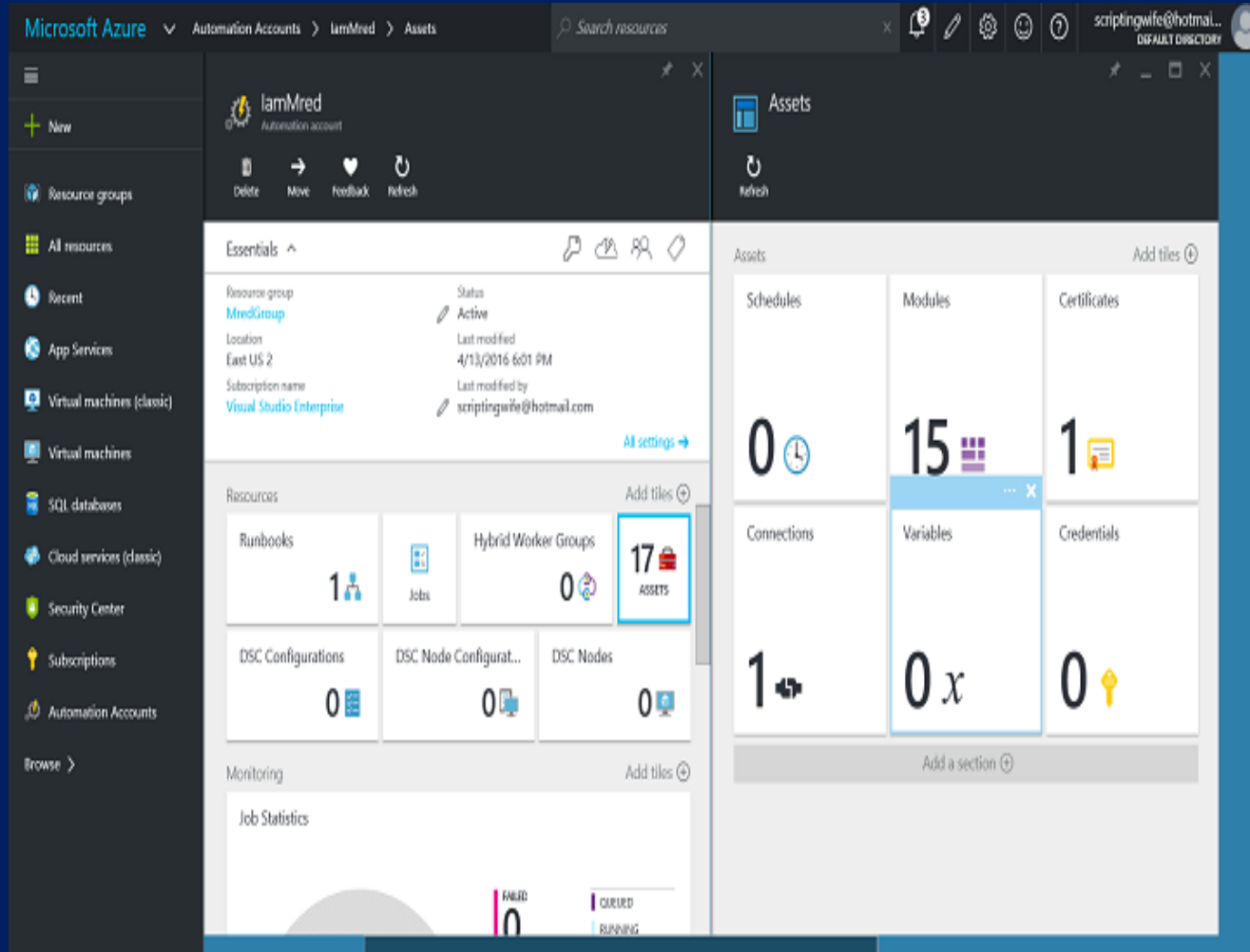
Monitoring & Logging



- Azure Monitor – Offers visualization, query, routing, alerting, autoscale, and automation on data both from the Azure infrastructure (Activity Log) and each individual Azure resource (Diagnostic Logs).
- Application Insights – Provides rich detection and diagnostics for issues at the application layer of your service, well-integrated on top of data from Azure Monitoring.
- OMS Log Analytics – Real-time insights using integrated search and custom dashboards to readily analyze millions of records across all of your workloads and servers regardless of their physical location.

Data is kept for 90 Days

Automation & Control



- Azure Automation Run As Account - A certificate, a connection, and a credential.
- A runbook is a set of tasks that perform some automated process in Azure Automation. Examples – Shutdown VMs, Truncate SQL DB, Scheduled file copies etc. Based on Windows PowerShell or Windows PowerShell Workflow. Runbooks can be scheduled to either run once or on a reoccurring hourly or daily
- OMS Automation enables you to set up automated processes, including remediation, that ensure you can meet tight SLAs and respond to business needs faster. OMS is designed to manage and control activities across a hybrid cloud, including support for Linux and AWS.

Security & Compliance



Azure Security Center delivers easy-to-use and effective threat prevention, detection, and response capabilities that are built in to Azure

- Prevent - Monitors the security state of your Azure resources
- Detect - Automatically collects and analyzes security data from your Azure resources, the network, and partner solutions like antimalware programs and firewalls
- Respond - Provides prioritized security incidents/alerts

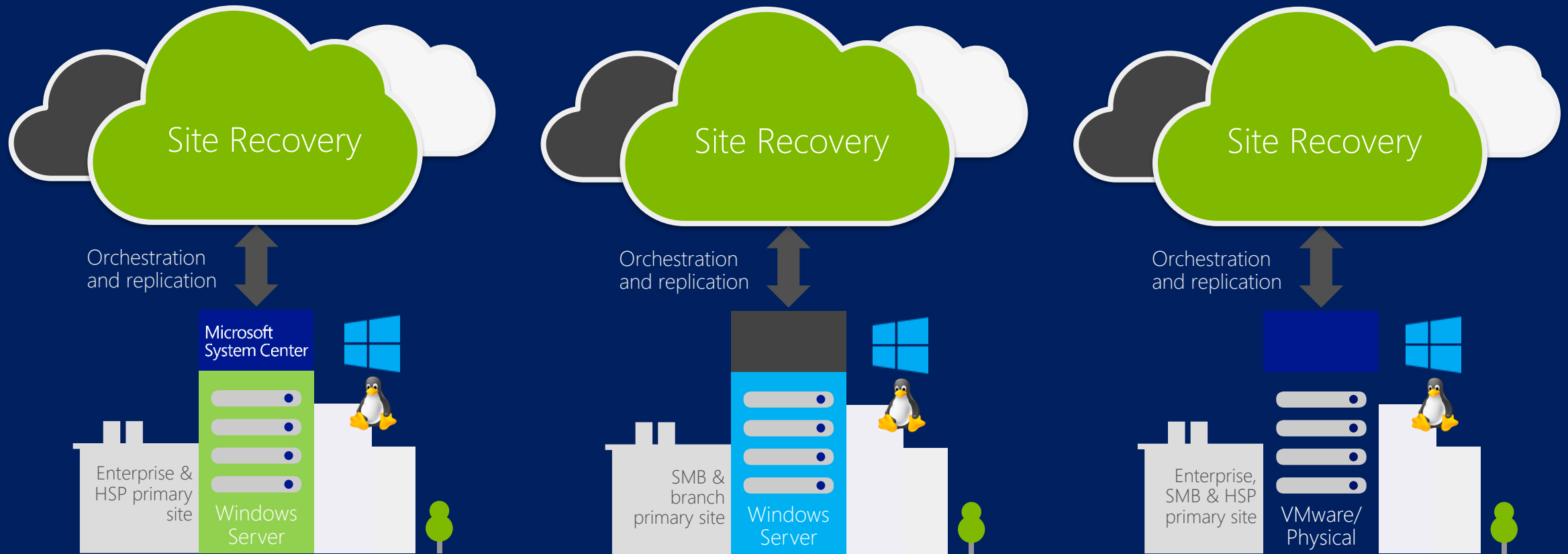
The Standard tier provides the Free tier features plus advanced detections: threat intelligence, behavioral analysis, crash analysis, and anomaly detection.

Azure Backup

Cloud Backup Solution

- **Backup as a Service**
- Supports Azure IaaS VM, Windows Client, Server file/folder, VMs (Linux & Windows), SQL Server, Exchange Server, SharePoint Server
- Integrates with SCDPM or download a lightweight agent
- Flexible long term retention policy
- Granular recovery

Azure Site Recovery: Protect



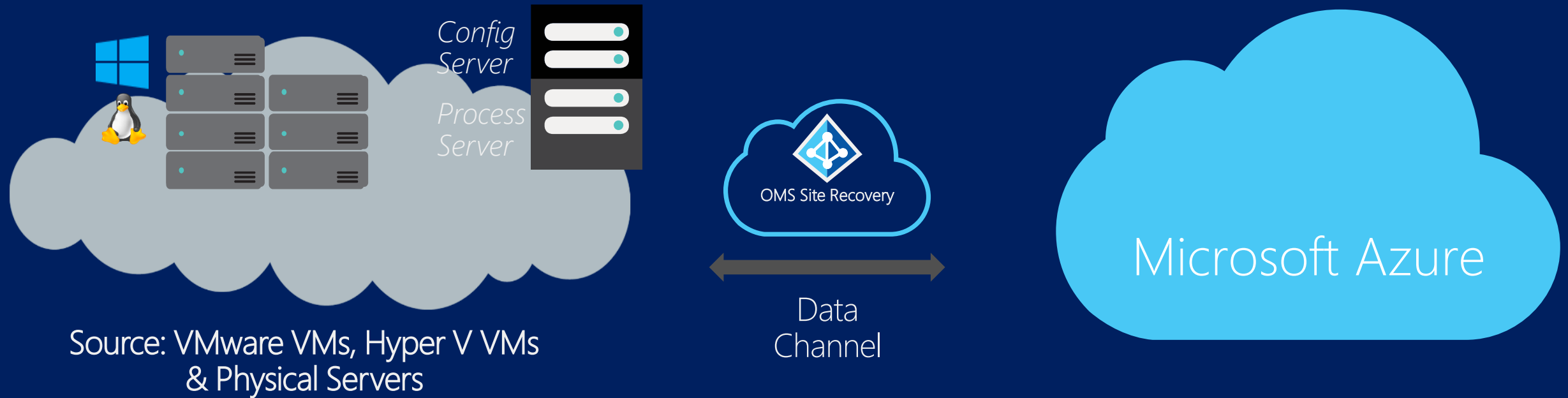
Key features include:

- Use Azure as your replication site
- Automated VM protection and replication
- Remote health monitoring

- Customizable recovery plans
- No-impact recovery plan testing
- Orchestrated recovery of tiered applications

- Replication into Azure for SMBs and remote branch offices without System Center
- Support for heterogeneous environments

Azure Site Recovery: Recover



Process Server

Used for caching, compression, and encryption



Configuration Server

Used for centralized management



Mobility Service

Captures all data writes from memory

Demo