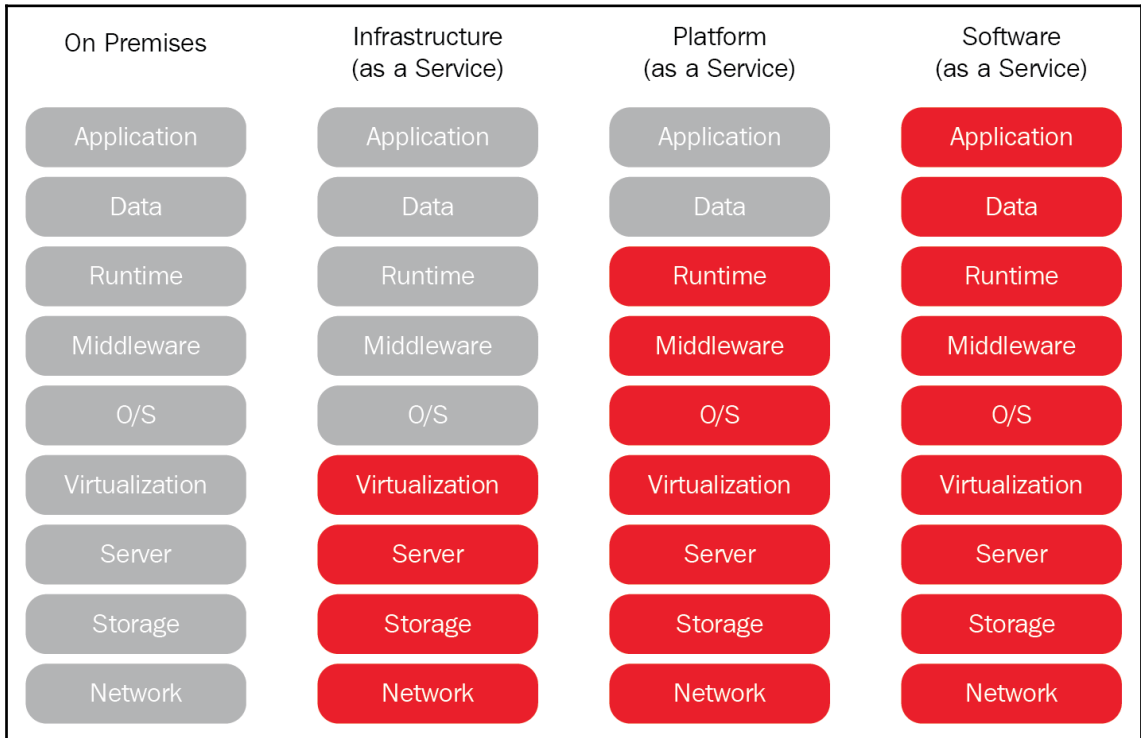
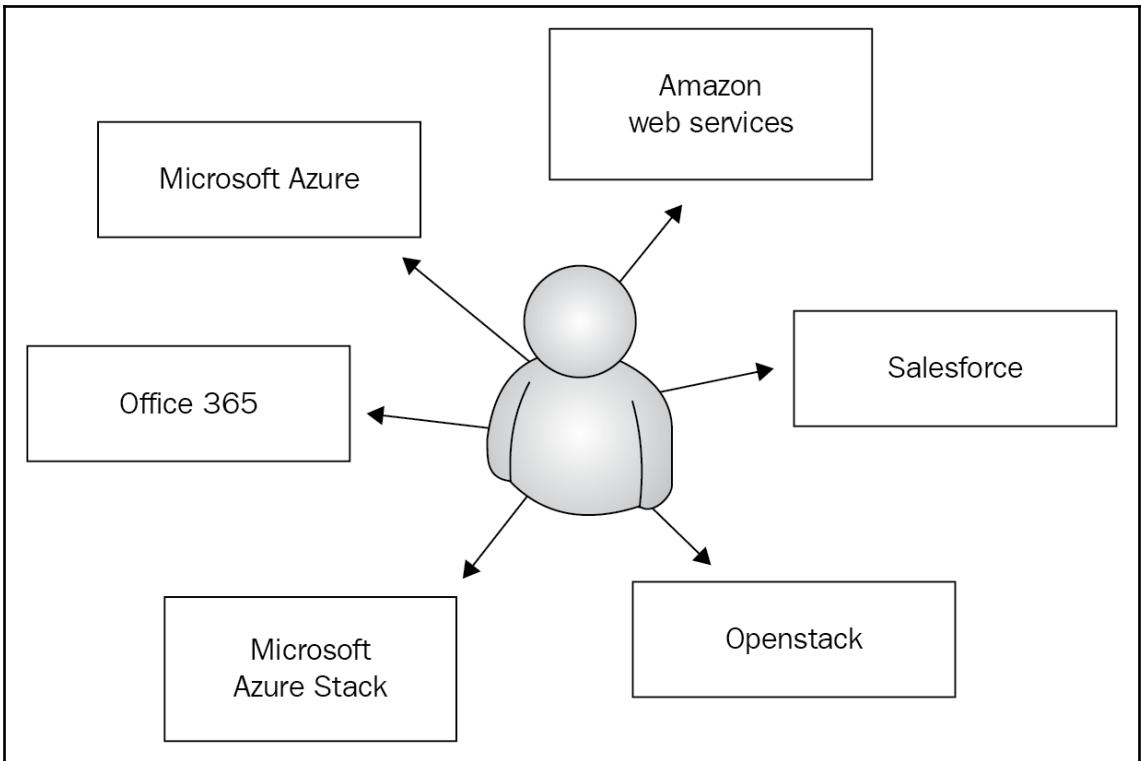
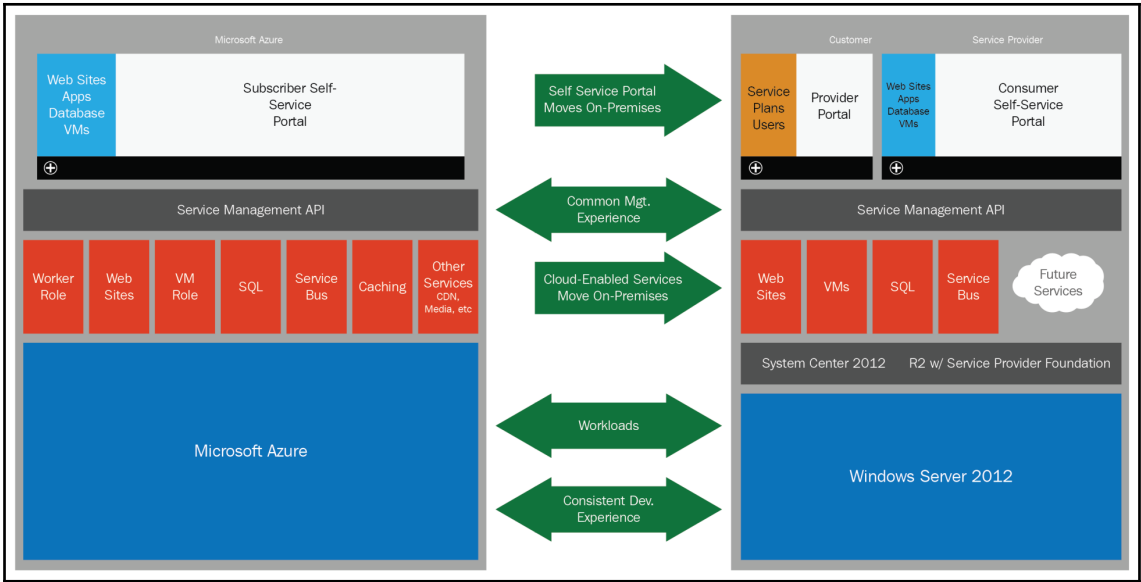
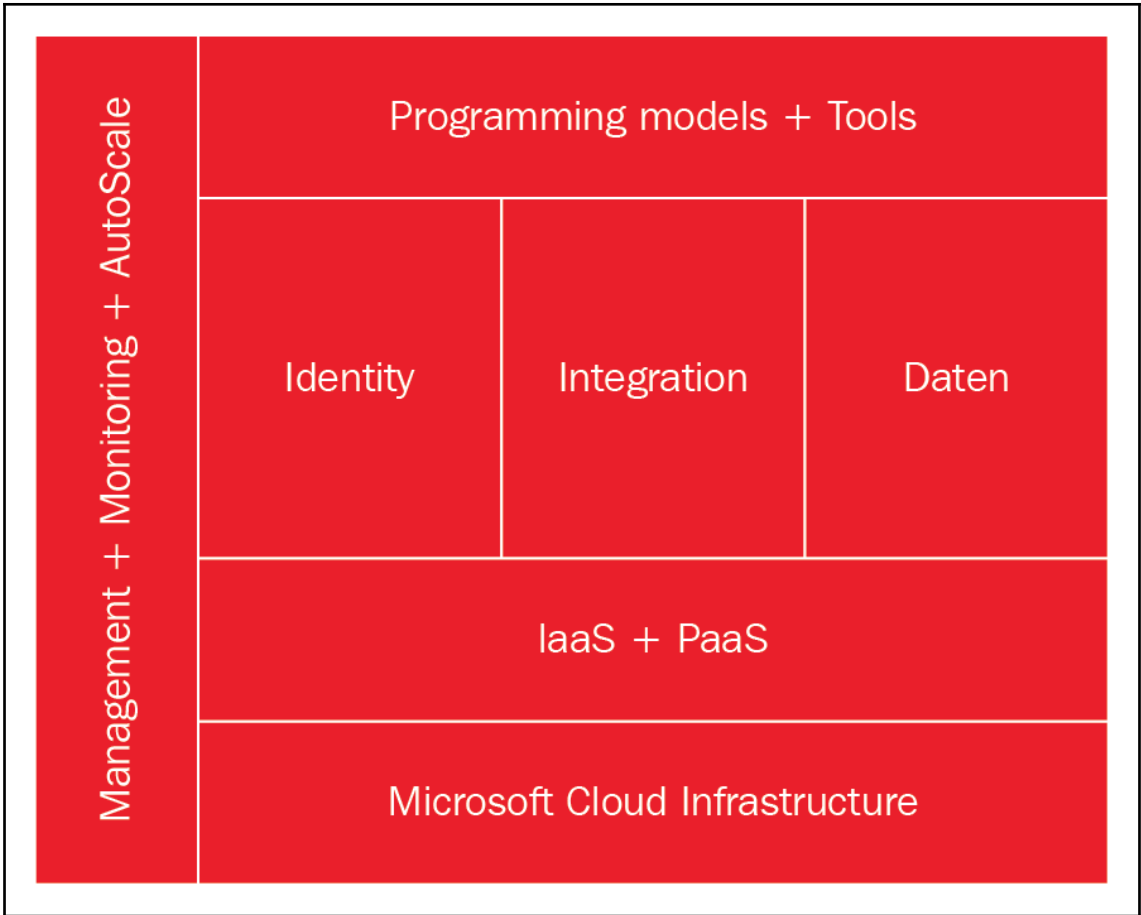
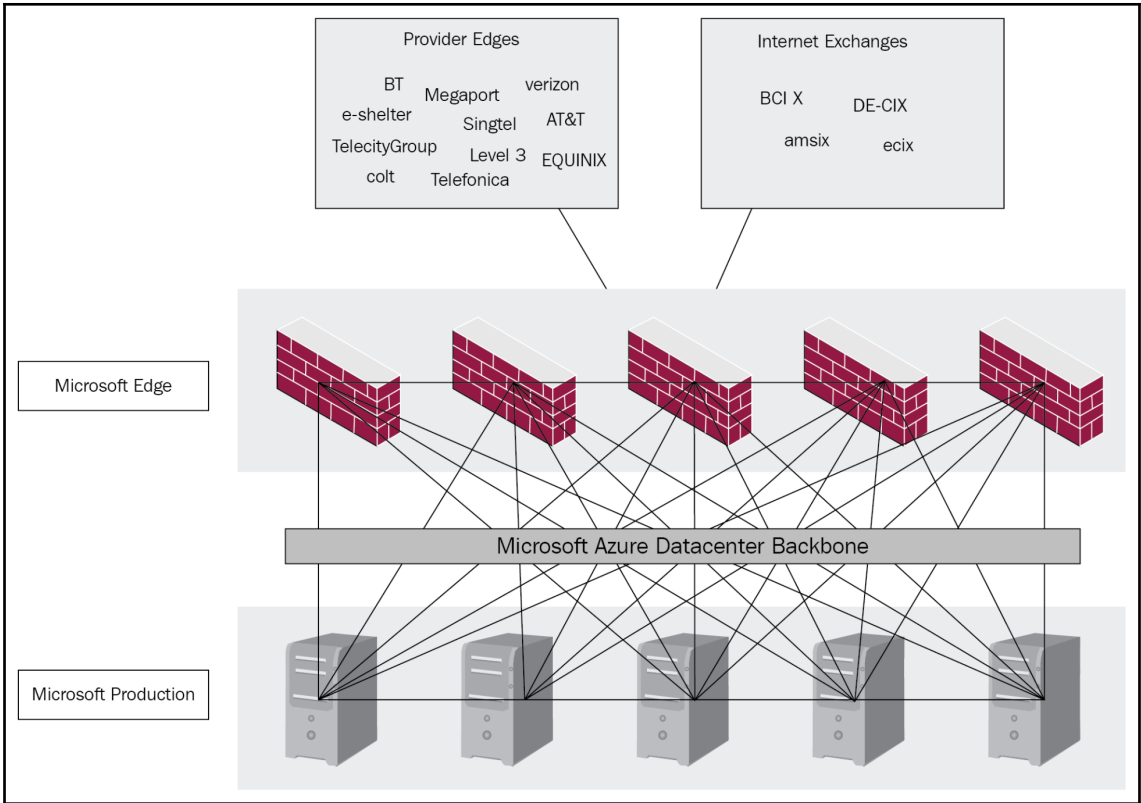


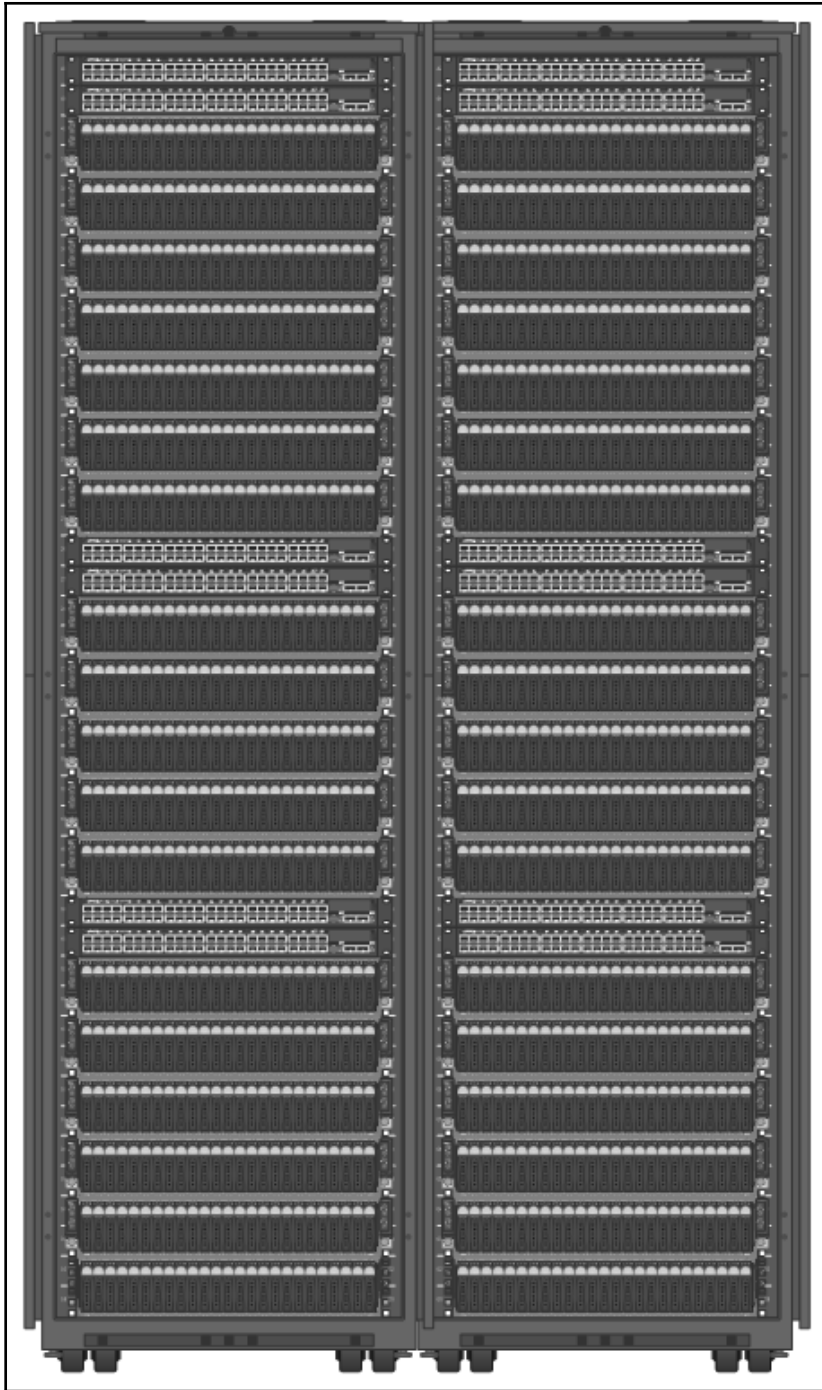
Chapter 1: Getting Started with Azure Implementation



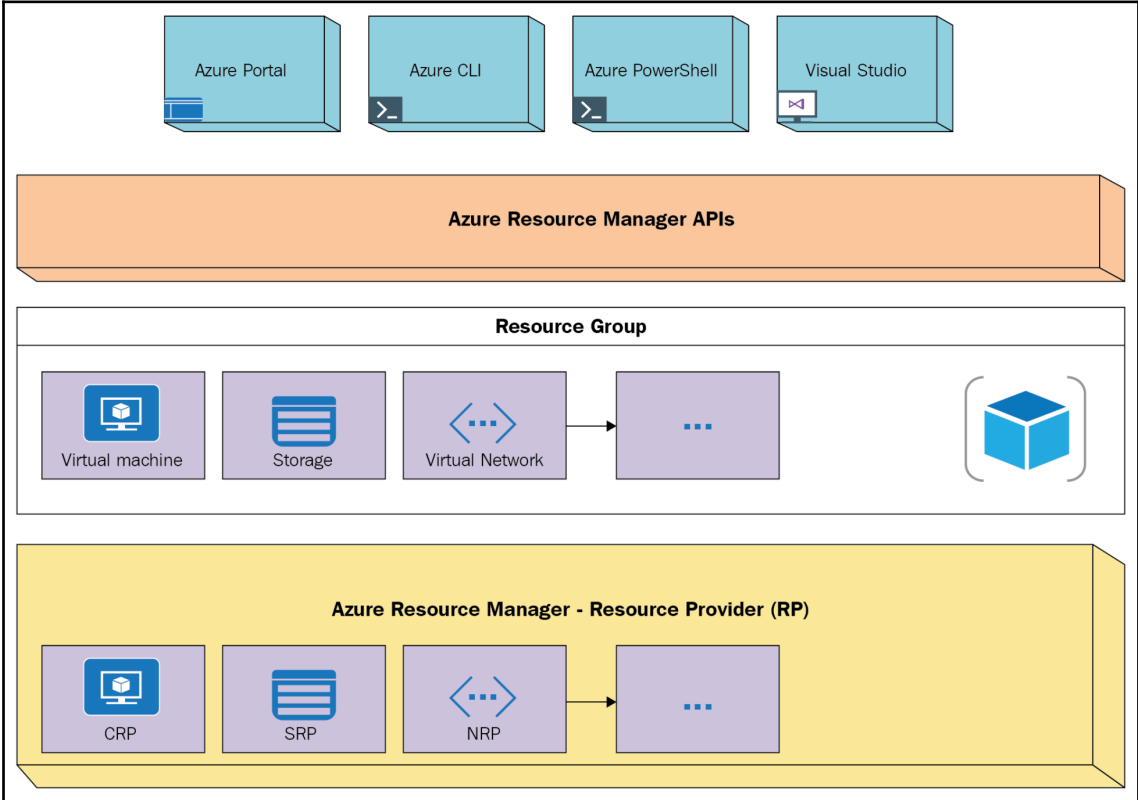


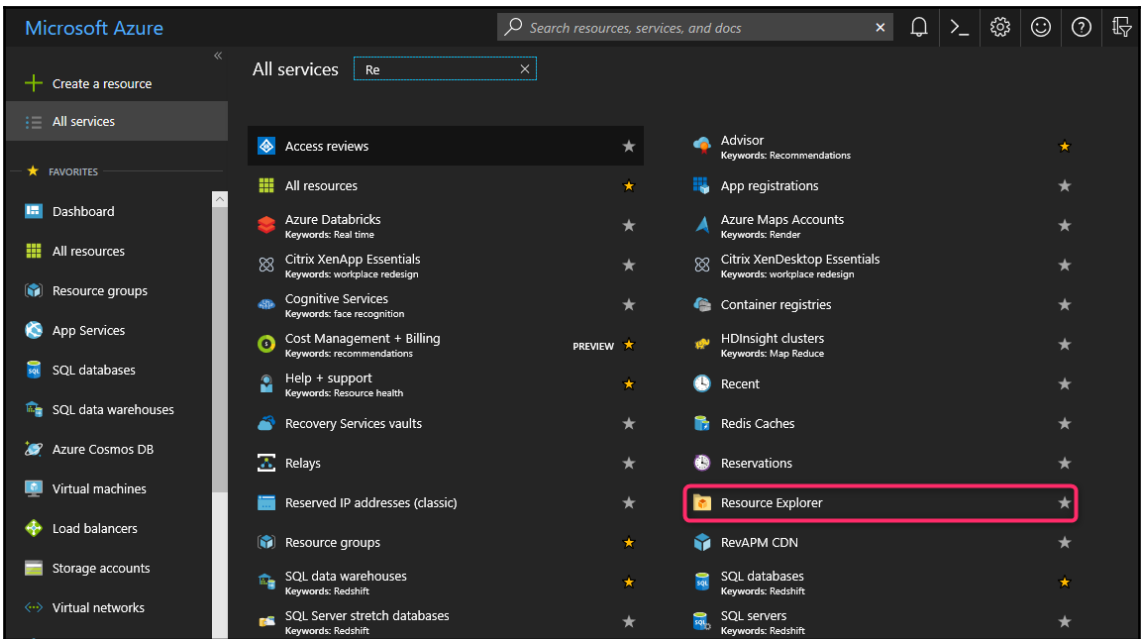
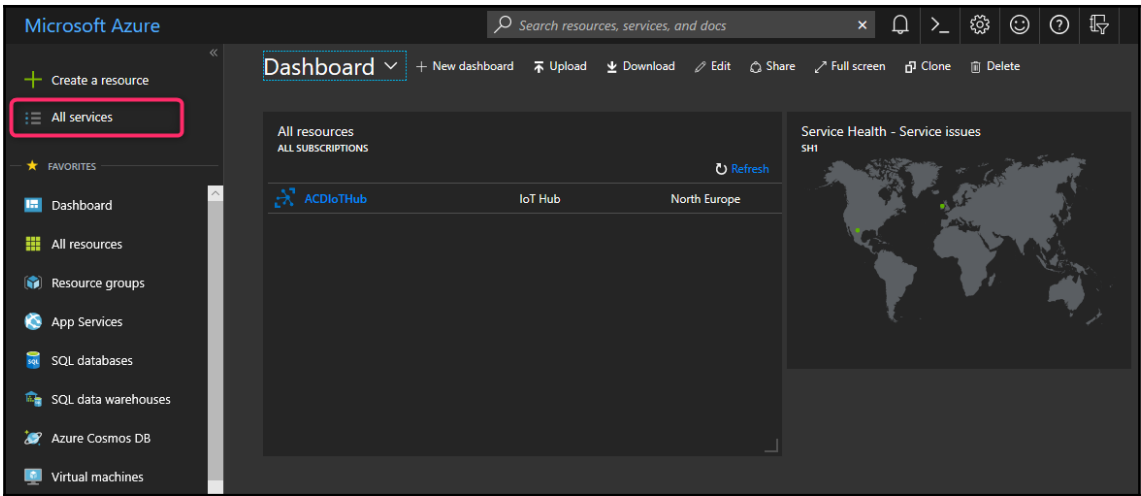


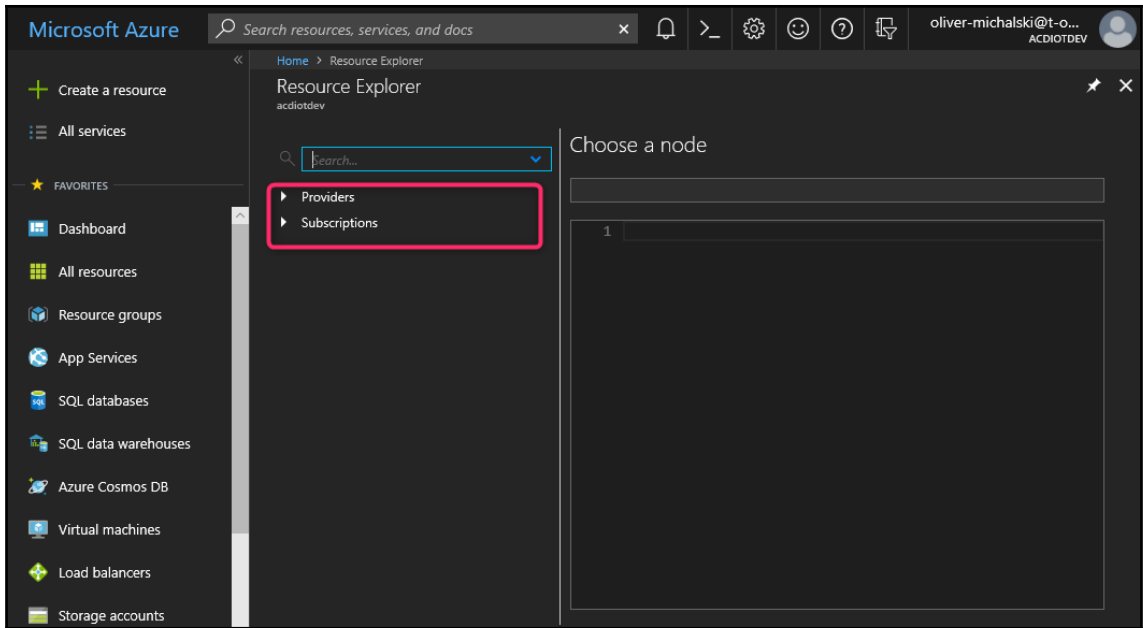




Chapter 2: Azure Resource Manager and Tools







Home > Resource Explorer

Resource Explorer

acdiotdev

Search...

- Microsoft.AzureCloudDirectory
- Microsoft.AzureStack
- Microsoft.Batch
- Microsoft.BatchAI
- Microsoft.Billing
- Microsoft.BingMaps
- Microsoft.BizTalkServices
- Microsoft.Blueprint**
 - blueprintAssignments
 - blueprintAssignments/operations
 - blueprints
 - blueprints/artifacts
 - blueprints/versions
 - blueprints/versions/artifacts
- Microsoft.BotService
- Microsoft.Cache
- Microsoft.Capacity
- Microsoft.Cdn
- Microsoft.CertificateRegistration
- Microsoft.ClassicCompute

Microsoft.Blueprint (Response Time 106ms)

/providers/Microsoft.Blueprint?api-version=2014-04-01-preview

```
1 {
2   "namespace": "Microsoft.Blueprint",
3   "resourceTypes": [
4     {
5       "resourceType": "blueprints",
6       "locations": [],
7       "apiVersions": [
8         "2017-11-11-preview",
9         "2017-11-11-alpha"
10      ]
11    },
12    {
13      "resourceType": "blueprints/artifacts",
14      "locations": [],
15      "apiVersions": [
16        "2017-11-11-preview",
17        "2017-11-11-alpha"
18      ]
19    }
20  ]
21 }
```

Home > Resource Explorer

Resource Explorer

acdiotdev

Search...

- Providers
- Subscriptions
 - Microsoft Azure Sponsorship**
 - Providers
 - Microsoft.Devices
 - ResourceGroups
 - ACDIOTDev1
 - Microsoft Azure Sponsorship

Microsoft Azure Sponsorship (Response Time 165ms)

Open blade /subscriptions/3d78356a-4844-445b-a8f1-b01fe443106b?api-version=2016-06-01

```
1 {
2   "id": "/subscriptions/3d78356a-4844-445b-a8f1-b01fe443106b",
3   "subscriptionId": "3d78356a-4844-445b-a8f1-b01fe443106b",
4   "displayName": "Microsoft Azure Sponsorship",
5   "state": "Enabled",
6   "subscriptionPolicies": {
7     "locationPlacementId": "Public_2014-09-01",
8     "quotaId": "Sponsored_2016-01-01",
9     "spendingLimit": "Off"
10  },
11  "authorizationSource": "Legacy"
12 }
```

Microsoft Azure

Search resources, services, and docs

Dashboard

+ New dashboard | Upload | Download | Edit | Share | Full screen | Clone | Delete

All resources
ALL SUBSCRIPTIONS

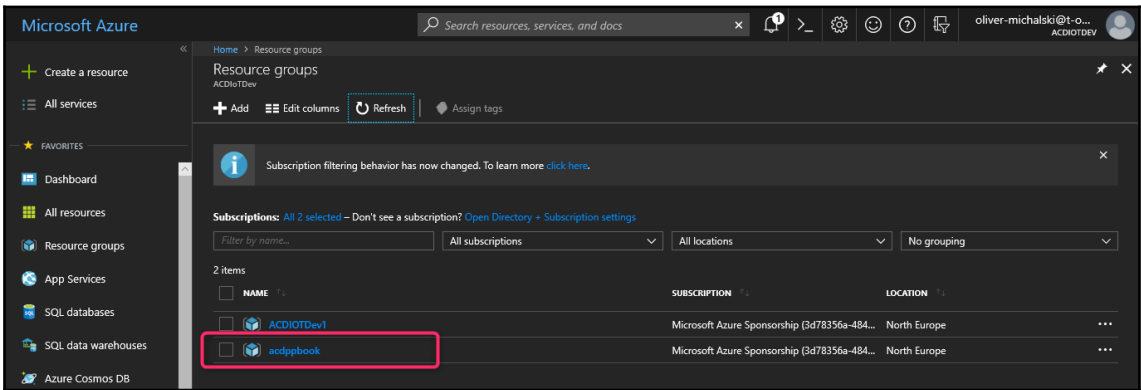
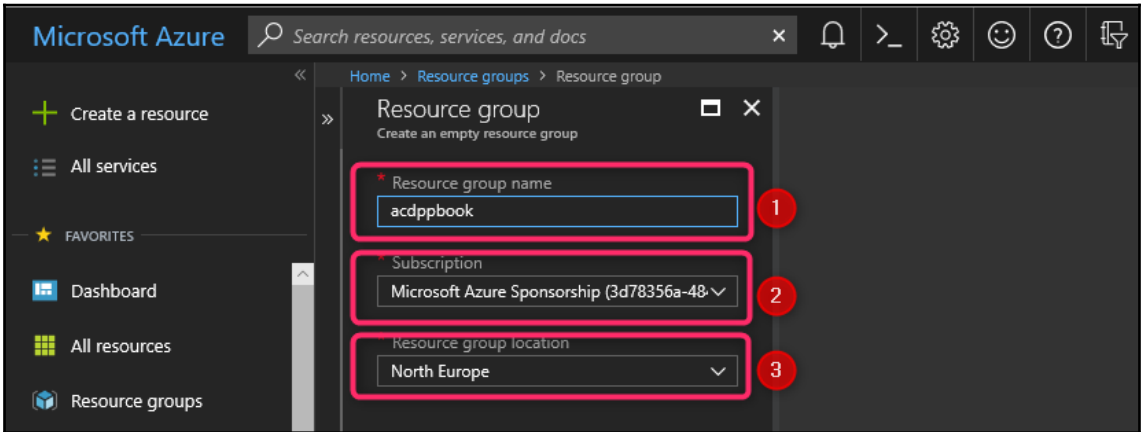
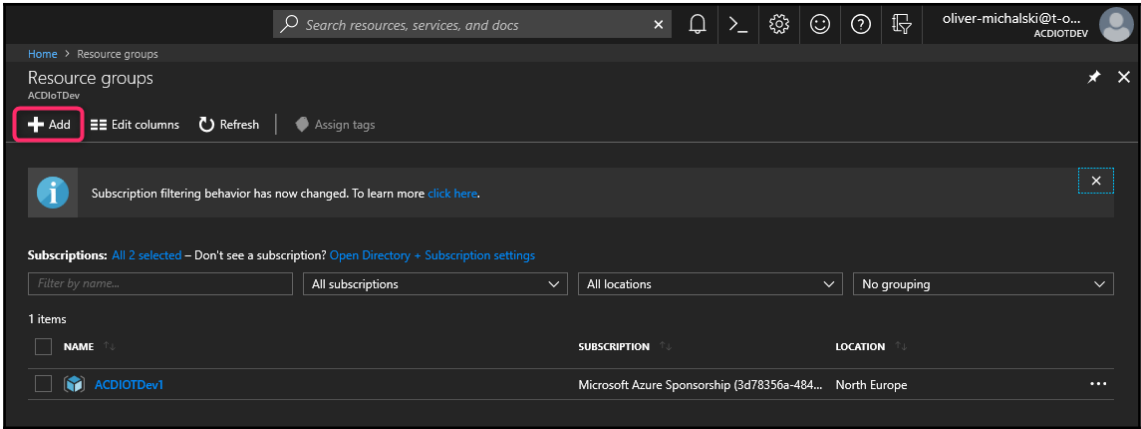
ACDIoTHub | IoT Hub | North Europe

Refresh

Service Health - Service issues
SH1

Resource groups

- Create a resource
- All services
- FAVORITES
- Dashboard
- All resources
- Resource groups**
- App Services
- SQL databases
- SQL data warehouses
- Azure Cosmos DB
- Virtual machines



+ Create a resource

All services

FAVORITES

- Dashboard
- All resources
- Resource groups
- App Services
- SQL databases
- SQL data warehouses
- Azure Cosmos DB
- Virtual machines
- Load balancers
- Storage accounts
- Virtual networks

Home > New

New

Search the Marketplace

Azure Marketplace

See all

Featured

See all

- Get started
- Recently created
- Compute
- Networking
- Storage
- Web
- Mobile
- Containers
- Databases
- Analytics
- AI + Machine Learning
- Internet of Things
- Integration

- Storage account - blob, file, table, queue
Quickstart tutorial
- Azure File Sync (preview)
Quickstart tutorial
- Data Lake Store
Quickstart tutorial
- StorSimple Physical Device Series
Learn more
- StorSimple Virtual Device Series
Learn more
- Backup and Site Recovery (OMS)
Quickstart tutorial

Search resources, services, and docs

Home > New > Create storage account

Create storage account

The cost of your storage account depends on the usage and the options you choose below.

[Learn more](#)

* Name ⓘ

acdppbookstoring × ✓
.core.windows.net

Deployment model ⓘ

Resource manager Classic

Account kind ⓘ

Storage (general purpose v1) ▾

* Location

North Europe ▾

Replication ⓘ

Read-access geo-redundant storage (RA-... ▾

Performance ⓘ

Standard Premium

* Secure transfer required ⓘ

Pin to dashboard

Create

[Automation options](#)

[+ Create a resource](#)[☰ All services](#)

★ FAVORITES

[Dashboard](#)[All resources](#)[Resource groups](#)[App Services](#)[SQL databases](#)[SQL data warehouses](#)[Azure Cosmos DB](#)[Virtual machines](#)[Load balancers](#)[Storage accounts](#)[Virtual networks](#)[Home](#) > [New](#) > Create storage account

Create storage account



The cost of your storage account depends on the usage and the options you choose below.

[Learn more](#)

* Name ⓘ

acdppbookstoring



.core.windows.net

Deployment model ⓘ

Resource manager

Classic

Account kind ⓘ

Storage (general purpose v1)



* Location

North Europe



Replication ⓘ

Read-access geo-redundant storage (RA-...)



Performance ⓘ

Standard

Premium

* Secure transfer required ⓘ



Pin to dashboard

Create

[Automation options](#)

Create storage account

Replication ⓘ

Read-access geo-redundant storage (RA-... ▾

Performance ⓘ

Standard Premium

* Secure transfer required ⓘ

Disabled Enabled

* Subscription

Microsoft Azure Sponsorship (3d78356a-48... ▾

* Resource group

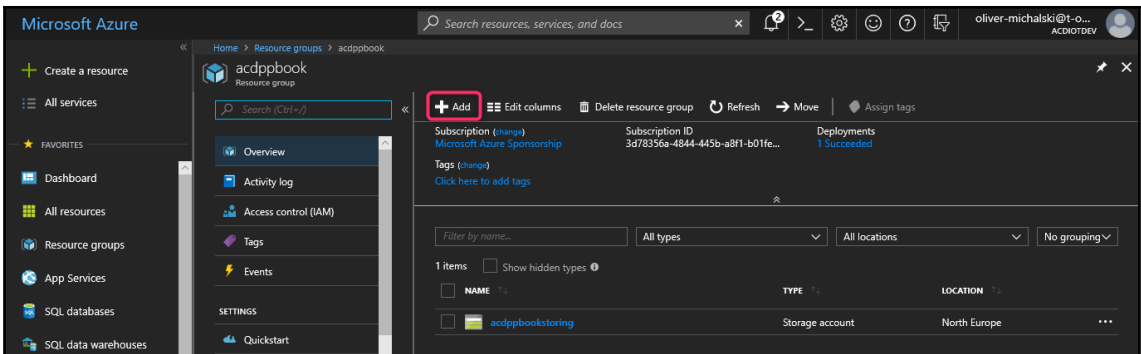
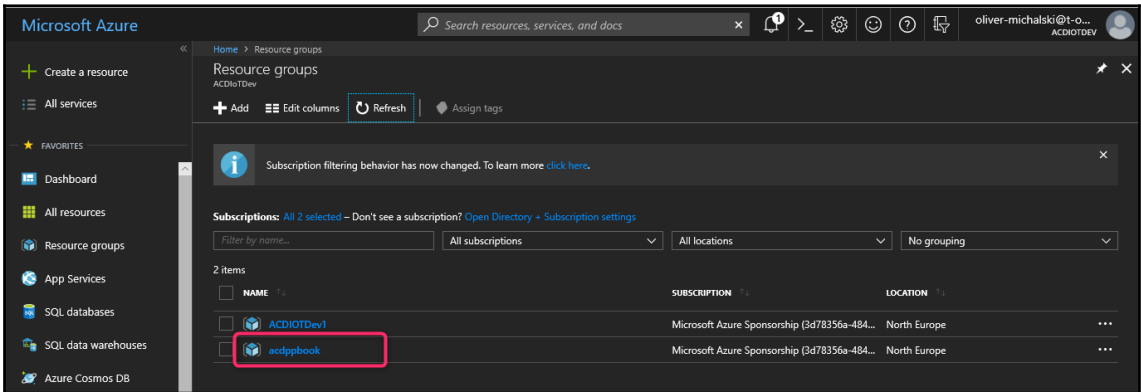
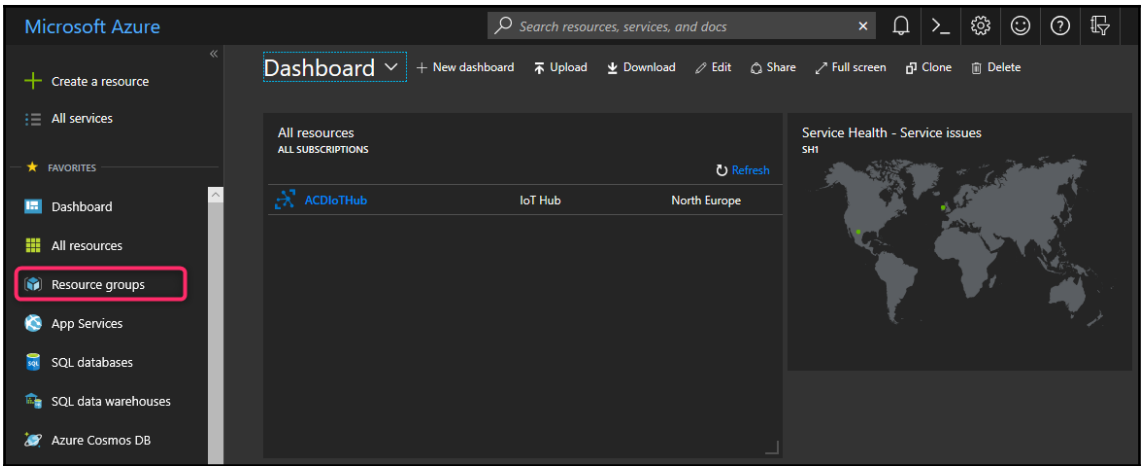
Create new Use existing

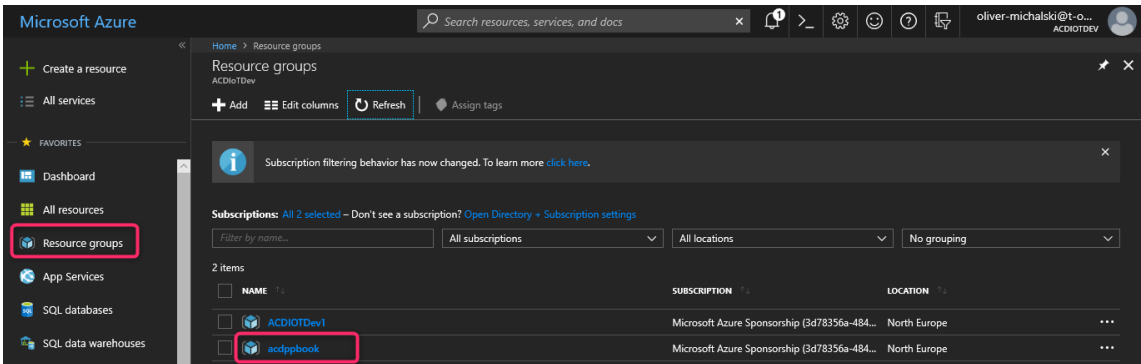
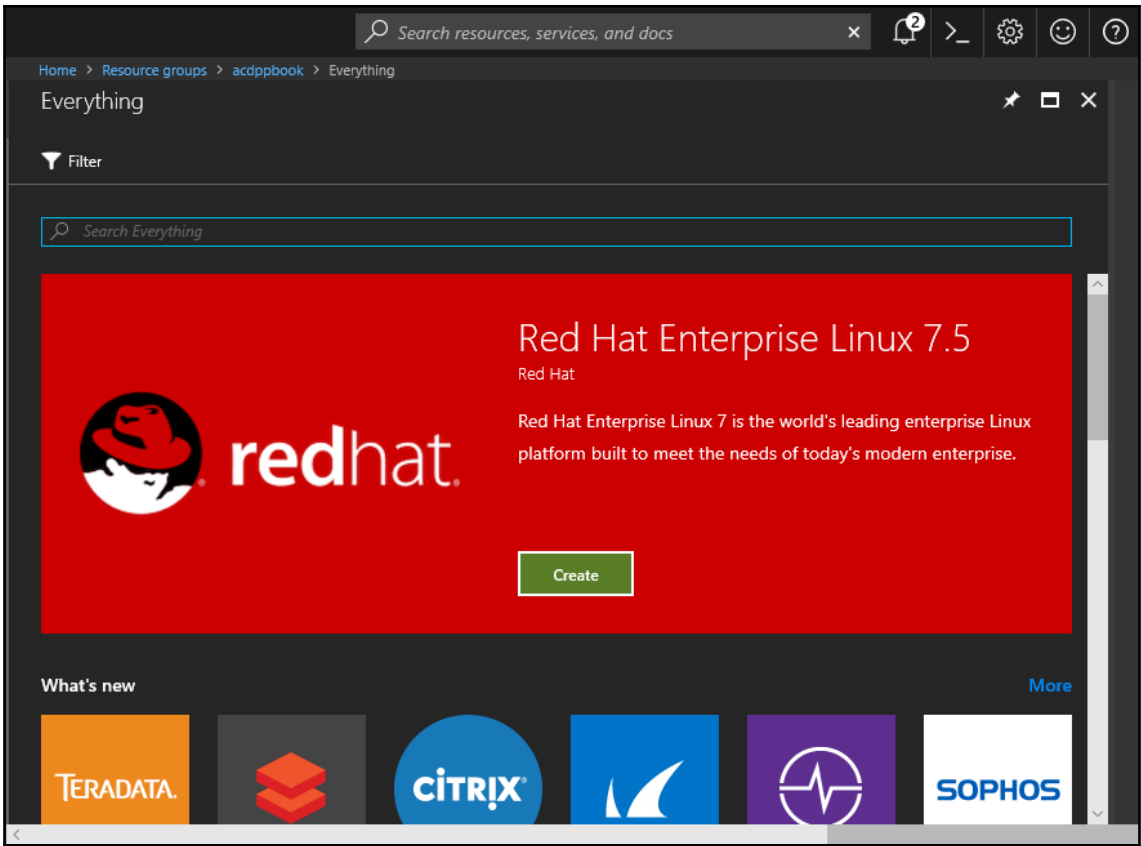
ACDIOTDev1
acdppbook

Disabled Enabled

Pin to dashboard

Create Automation options





Microsoft Azure

Home > Resource groups > acdppbook

acdppbook
Resource group

Subscription (change)
Microsoft Azure Sponsorship

Subscription ID
3d78356a-4844-445b-a8f1-b01fe...

Deployments
1 Succeeded

Tags (change)
Click here to add tags

Filter by name... All types All locations No grouping

1 items Show hidden types

NAME	TYPE	LOCATION
acdppbookstoring	Storage account	North Europe

Microsoft Azure Resource groups > acdppbook - Tags

acdppbook - Tags
Resource group

Save

Tags are key/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. [Learn more](#)

* Key * Value

Name : ppbook

No tags

Home > Resource groups > acdppbook

acdppbook
Resource group

Subscription (change)
Microsoft Azure Sponsorship

Subscription ID
3d78356a-4844-445b-a8f1-b01fe...

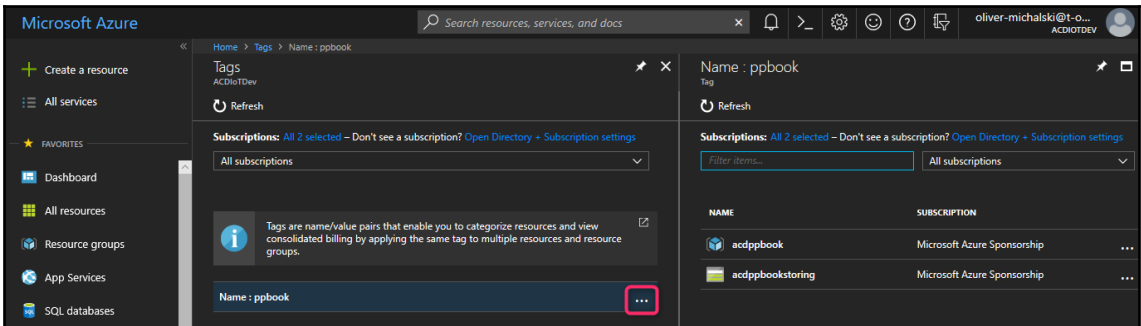
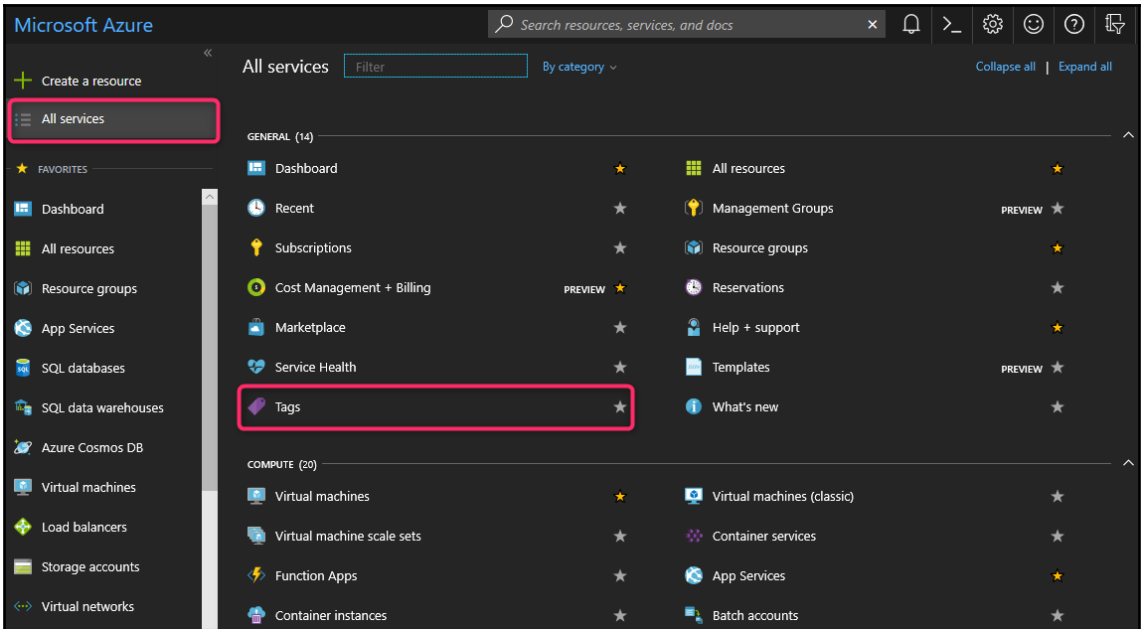
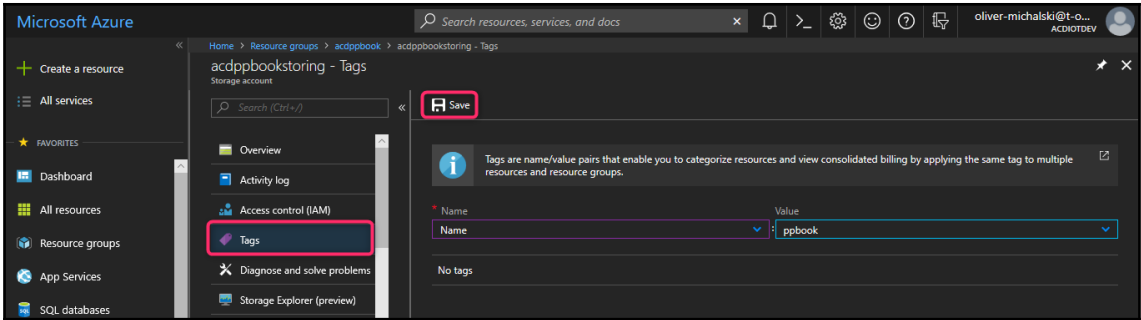
Deployments
1 Succeeded

Tags (change)
Name : ppbook

Filter by name... All types All locations No grouping

1 items Show hidden types

NAME	TYPE	LOCATION
acdppbookstoring	Storage account	North Europe



Microsoft Azure

Search resources, services, and docs

Home > Resource groups

Resource groups
ACDIOTDev

+ Add Edit columns Refresh Assign tags

Subscription filtering behavior has now changed. To learn more [click here](#).

Subscriptions: All 2 selected – Don't see a subscription? [Open Directory](#) + [Subscription settings](#)

Filter by name... All subscriptions All locations No grouping

2 items

NAME	SUBSCRIPTION	LOCATION
ACDIOTDev1	Microsoft Azure Sponsorship (3d78356a-484...	North Europe
acdppbook	Microsoft Azure Sponsorship (3d78356a-484...	North Europe

Search resources, services, and docs

Home > Resource groups > acdppbook - Locks

acdppbook - Locks
Resource group

Search (Ctrl+/) + Add Subscription Refresh

LOCK NAME LOCK TYPE SCOPE NOTES

This resource has no locks.

Overview
Activity log
Access control (IAM)
Tags
Events

SETTINGS

Quickstart
Resource costs
Deployments
Policies
Properties
Locks

Search resources, services, and docs

Home > Resource groups > acdppbook - Locks

acdppbook - Locks

Resource group

Search (Ctrl+/)

- Overview
- Activity log
- Access control (IAM)
- Tags
- Events

SETTINGS

- Quickstart
- Resource costs
- Deployments
- Policies
- Properties
- Locks**

+ Add Subscription Refresh

Add lock

Lock name:

Lock type:
Delete

Notes:

OK Cancel

Search resources, services, and docs

Home > Resource groups > acdppbook - Locks

acdppbook - Locks

Resource group

Search (Ctrl+/) << + Add Subscription Refresh

LOCK NAME	LOCK TYPE	SCOPE	NOTES
ppbookdemo	Read-only	Resource group	

Overview

Activity log

Access control (IAM)

Tags

Events

SETTINGS

Quickstart

Resource costs

Deployments

Policies

Properties

Locks

Search resources, services, and docs

Home > Resource groups > acdppbook > acdppbookstoring - Locks

acdppbookstoring - Locks

Storage account

Search (Ctrl+/)

Storage Explorer (preview)

SETTINGS

- Access keys
- Configuration
- Encryption
- Shared access signature
- Firewalls and virtual networks
- Properties
- Locks**
- Automation script

+ Add Resource group Subscription Refresh

⚠ Parent resource locks can't be edited here. Use the buttons above to go to the parent's locks.

LOCK NAME	LOCK TYPE	SCOPE	NOTES
ppbookdemo	Read-only	Resource group	

Home > Resource groups

Resource groups

ACDIOTDev

+ Add Edit columns Refresh Assign tags

Subscription filtering behavior has now changed. To learn more [click here](#).

Subscriptions: All 2 selected – Don't see a subscription? [Open Directory](#) • [Subscription settings](#)

Filter by name...

All subscriptions All locations No grouping

2 items

NAME	SUBSCRIPTION	LOCATION
ACDIOTDev	Microsoft Azure Sponsorship (3d78356a-484...	North Europe
acdppbook	Microsoft Azure Sponsorship (3d78356a-484...	North Europe

Home > Resource groups > acdppbook

acdppbook
Resource group

Search (Ctrl+V)

- Activity log
- Access control (IAM)
- Tags
- Events

SETTINGS

- Quickstart
- Resource costs
- Deployments
- Policies
- Properties
- Locks
- Automation script**

+ Add Edit columns Delete resource group Refresh Move Assign tags

Subscription (change) Subscription ID: 3d78356a-4844-445b-a8f1-b01fe... Deployments: 1 Succeeded

Tags (change)
Name: ppbook

Filter by name... All types All locations No grouping

1 items Show hidden types

NAME	TYPE	LOCATION
acdppbookstoring	Storage account	North Europe

Search resources, services, and docs

Home > Resource groups > acdppbook - Automation script

acdppbook - Automation script
Resource group - PREVIEW

Search (Ctrl+V)

- Activity log
- Access control (IAM)
- Tags
- Events

SETTINGS

- Quickstart
- Resource costs
- Deployments
- Policies
- Properties
- Locks
- Automation script**

Download Add to library Deploy

Automate deploying resources with Azure Resource Manager templates in a single, coordinated operation. Define resources and configurable input parameters and deploy with script or code. [Learn more about template deployment.](#)

Template Parameters CLI PowerShell .NET Ruby

- Parameters (1)
- Variables (0)
- Resources (1)
 - [parameters('storageAccounts_acd...)]

```
1 {
2   "$schema":
3   "https://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#",
4   "contentVersion": "1.0.0.0",
5   "parameters": {
6     "storageAccounts_acdppbookstoring_name": {
7       "defaultValue": "acdppbookstoring",
8       "type": "String"
9     },
10  "variables": {},
11  "resources": [
12    {
13      "comments": "Generalized from resource:
14      '/subscriptions/3d78356a-4844-445b-a8f1-b01fe443106b/resourceGroup
15      ps/acdppbook/providers/Microsoft.
```


Home > Resource groups > acdppbook - Automation script

acdppbook - Automation script

Resource group - PREVIEW

Search (Ctrl+V) << Download **Add to library** Deploy

Activity log
Access control (IAM)
Tags
Events

SETTINGS

- Quickstart
- Resource costs
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7       "defaultValue": "acdppbookstoring",
8       "type": "String"
9     }
10  },
11  "variables": {},
12  "resources": [
13    {
14      "comments": "Generalized from resource:
15      '/subscriptions/3d78356a-4844-445b-a8f1-b01fe443106b/resourceGroups/acdppbook/providers/Microsoft.
```

Create a resource

All services

FAVORITES

Dashboard

All resources

Resource groups

App Services

SQL databases

SQL data warehouses

Azure Cosmos DB

Virtual machines

Load balancers

Storage accounts

Virtual networks

Save template

* Name

acdppbookdemo

* Description

ARM Demo



Once you select Save, the template will be saved to More services > Templates.

Save

+ Create a resource

☰ All services

★ FAVORITES

- Dashboard
- All resources
- Resource groups
- App Services
- SQL databases
- SQL data warehouses
- Azure Cosmos DB
- Virtual machines
- Load balancers
- Storage accounts
- Virtual networks

All services By category ▾ Collapse all | Expand all

GENERAL (14)

- Dashboard
- Recent
- Subscriptions
- Cost Management + Billing PREVIEW
- Marketplace
- Service Health
- Tags
- All resources
- Management Groups PREVIEW
- Resource groups
- Reservations
- Help + support
- Templates PREVIEW
- What's new

COMPUTE (20)

- Virtual machines
- Virtual machine scale sets
- Function Apps
- Container instances
- Virtual machines (classic)
- Container services
- App Services
- Batch accounts

[Home](#) > [Templates](#)


Templates

ACDloTDev - PREVIEW

+ Add ☰ Edit columns ↻ Refresh ◆ Assign tags

Directory: ACDloTDev – **Subscriptions:** [Open Directory + Subscription settings](#)

1 items

<input type="checkbox"/>	NAME ↑↓	DESCRIPTION	MODIFIED	SHARED WITH
<input type="checkbox"/>	 acdppbookdemo	ARM Demo	6/26/2018	Only me ⋮

Home > Resource groups > acdppbook - Automation script

acdppbook - Automation script

Resource group - PREVIEW

Search (Ctrl+F)

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Template Parameters CLI PowerShell .NET Ruby

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- Variables (0)
- Resources (1)
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8       "type": "String"
9     },
10  "variables": {},
11  "resources": [
12    {
13      "comments": "Generalized from resource:
14      '/subscriptions/3d78356a-4844-445b-a8f1-b01fe443106b/resourceGroups/acdppbook/providers/Microsoft."

```

Home > Resource groups > acdppbook

acdppbook

Resource group

Search (Ctrl+F)

+ Add Edit columns Delete resource group Refresh Move Assign tags

Subscription (change) Microsoft Azure Sponsorship Subscription ID 3d78356a-4844-445b-a8f1-b01fe... Deployments 1 Succeeded

Tags (change) Name: ppbook

Filter by name... All types All locations No grouping

1 items Show hidden types

NAME	TYPE	LOCATION
acdppbookstoring	Storage account	North Europe

Home > Resource groups > acdppbook > acdppbookstoring - Automation script

acdppbookstoring - Automation script

Storage account - PREVIEW

Search (Ctrl+V)

- SETTINGS
- Access keys
- Configuration
- Encryption
- Shared access signature
- Firewalls and virtual networks
- Properties
- Locks
- Automation script

BLOB SERVICE

- Containers
- CORS
- Custom domain

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Template Parameters CLI PowerShell .NET Ruby

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8       "type": "String"
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10  },
11  "variables": {},
12  "resources": [
13    {
14      "comments": "Generalized from resource:
15      '/subscriptions/3d78356a-4844-445b-a8f1-b01fe443106b/resourceGroups/acdppbook/providers/Microsoft.Storage/storageAccounts/acdppbookstoring'"
16    }
17  ]
18 }
```

Home > Resource groups > acdppbook - Automation script

acdppbook - Automation script

Resource group - PREVIEW

Search (Ctrl+V)

- Activity log
- Access control (IAM)
- Tags
- Events

SETTINGS

- Quickstart
- Resource costs
- Deployments
- Policies
- Properties
- Locks
- Automation script

Download Add to library **Deploy**

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4   "contentVersion": "1.0.0.0",
5   "parameters": {
6     "storageAccounts_acdppbookstoring_name": {
7       "defaultValue": "acdppbookstoring",
8       "type": "String"
9     }
10  },
11  "variables": {},
12  "resources": [
13    {
14      "comments": "Generalized from resource:
15      '/subscriptions/3d78356a-4844-445b-a8f1-b01fe443106b/resourceGroups/acdppbook/providers/Microsoft.Storage/storageAccounts/acdppbookstoring'"
16    }
17  ]
18 }
```

Microsoft Azure

Search resources, services, and docs

Home > Resource groups > acdppbook - Automation script > Custom deployment

Custom deployment

Deploy from a custom template

TEMPLATE

1 resource

[Edit template](#) [Edit parameters](#) [Learn more](#)

BASICS

* Subscription: Microsoft Azure Sponsorship (3d78356a-4844-445b-a8f1-b01fe443106b)

* Resource group: Create new Use existing
Create a resource group

* Location: North Europe

SETTINGS

Storage
Accounts_acdppbookstoring_name: acdppbookstoring

Pin to dashboard

[Purchase](#)

Home > Resource groups > acdppbook - Automation script > Custom deployment > Edit template

Edit template

Edit your Azure Resource Manager template

[+](#) Add resource [↑](#) Quickstart template [↕](#) Load file [↓](#) Download

- Parameters (1)
- Variables (0)
- Resources (1)
 - [parameters]storageAccounts_acd...

```
1 {
2   "$schema": "https://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#",
3   "contentVersion": "1.0.0.0",
4   "parameters": {
5     "storageAccounts_acdppbookstoring_name": {
6       "defaultValue": "acdppbookstoring",
7       "type": "String"
8     }
9   },
10  "variables": {},
11  "resources": [
12    {
13      "comments": "Generalized from resource:
14      '/subscriptions/3d78356a-4844-445b-a8f1-b01fe443106b/resourceGroups/acdppbook/providers/Microsoft.Storage/storageAccounts/acdppbookstoring'.",
15      "type": "Microsoft.Storage/storageAccounts",
16      "sku": {
17        "name": "Standard_RAGRS",
18        "tier": "Standard"
19      },
20      "kind": "Storage",
```

[Save](#) [Discard](#)

Home > Resource groups > acdppbook - Automation script > Custom deployment > Edit template

Edit template

Edit your Azure Resource Manager template

+ Add resource ↑ Quickstart template ↶ Load file ↴ Download

Add a resource to the template

Select a resource

- App Service plan (server farm)
- Availability set
- MySQL database
- SQL database
- SQL server
- Storage account
- Ubuntu virtual machine
- Virtual network
- Web app
- Windows virtual machine

```
ts": "Generalized from resource:
8356a-4844-445b-a8f1-b01fe443106b/resourceGroups/acdppbook/providers/Microsoft.
unts/acdppbookstoring".",
"Microsoft.Storage/storageAccounts",
{
  "name": "Standard_RAGRS",
  "tier": "Standard"
},
"kind": "Storage".
```

Save Discard

Home > Resource groups > acdppbook - Automation script > Custom deployment > Edit template

Edit template

Edit your Azure Resource Manager template

+ Add resource **↑ Quickstart template** ↶ Load file ↴ Download

Load a quickstart template

Select a template (disclaimer) ⓘ

Type to start filtering...

- 100-blank-template
- 100-marketplace-sample
- 101-1vm-2nics-2subnets-1vnet
- 101-Telegraf-InfluxDB-Grafana
- 101-aci-dynamicsnav
- 101-aci-linuxcontainer-public-ip
- 101-aci-storage-file-share
- 101-acs-dcos
- 101-acs-kubernetes
- 101-acs-swarm
- 101-acsengine-swarmmode
- 101-aks
- 101-api-management-create-with-msi
- 101-app-service-certificate-standard
- 101-app-service-certificate-wildcard

```
ts": "Generalized from resource:
8356a-4844-445b-a8f1-b01fe443106b/resourceGroups/acdppbook/providers/Microsoft.
unts/acdppbookstoring".",
"Microsoft.Storage/storageAccounts",
{
  "name": "Standard_RAGRS",
  "tier": "Standard"
},
"Storage".
```

Save Discard

Home > Resource groups > acdppbook - Automation script > Custom deployment > Edit template

Edit template

Edit your Azure Resource Manager template

+ Add resource ↑ Quickstart template ↶ Load file ↴ Download

- Parameters (1)
 - Variables (0)
 - Resources (1)
 - (parameters/storageAccounts_acd...

```
1 {
2   "$schema": "https://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#",
3   "contentVersion": "1.0.0.0",
4   "parameters": {
5     "storageAccounts_acdppbookstoring_name": {
6       "defaultValue": "acdppbookstoring",
7       "type": "String"
8     }
9   },
10  "variables": {},
11  "resources": [
12    {
13      "comments": "Generalized from resource:
14      '/subscriptions/3d78356a-4844-445b-a8f1-b01fe443106b/resourceGroups/acdppbook/providers/Microsoft.
15      Storage/storageAccounts/acdppbookstoring'.",
16      "type": "Microsoft.Storage/storageAccounts",
17      "sku": {
18        "name": "Standard_RAGRS",
19        "tier": "Standard"
20      },
21      "kind": "Storage",
```

Save Discard

Custom deployment

Deploy from a custom template

TEMPLATE



1 resource



BASICS

* Subscription

* Resource group Create new Use existing

* Location

SETTINGS

Storage
Accounts_acdppbookstoring_name

Pin to dashboard

[Purchase](#)

Custom deployment

Deploy from a custom template

* Location

North Europe

SETTINGS

Storage

Accounts_acdppbookstoring_name

acdppbookstoring

TERMS AND CONDITIONS

[Azure Marketplace Terms](#) | [Azure Marketplace](#)

By clicking "Purchase," I (a) agree to the applicable legal terms associated with the offering; (b) authorize Microsoft to charge or bill my current payment method for the fees associated the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I discontinue use of the offering(s); and (c) agree that, if the deployment involves 3rd party offerings, Microsoft may share my contact information and other details of such deployment with the publisher of that offering.

I agree to the terms and conditions stated above

Pin to dashboard

Purchase

Custom deployment

Deploy from a custom template

* Location

North Europe

SETTINGS

Storage

Accounts_acdppbookstoring_name

acdppbookstoring

TERMS AND CONDITIONS

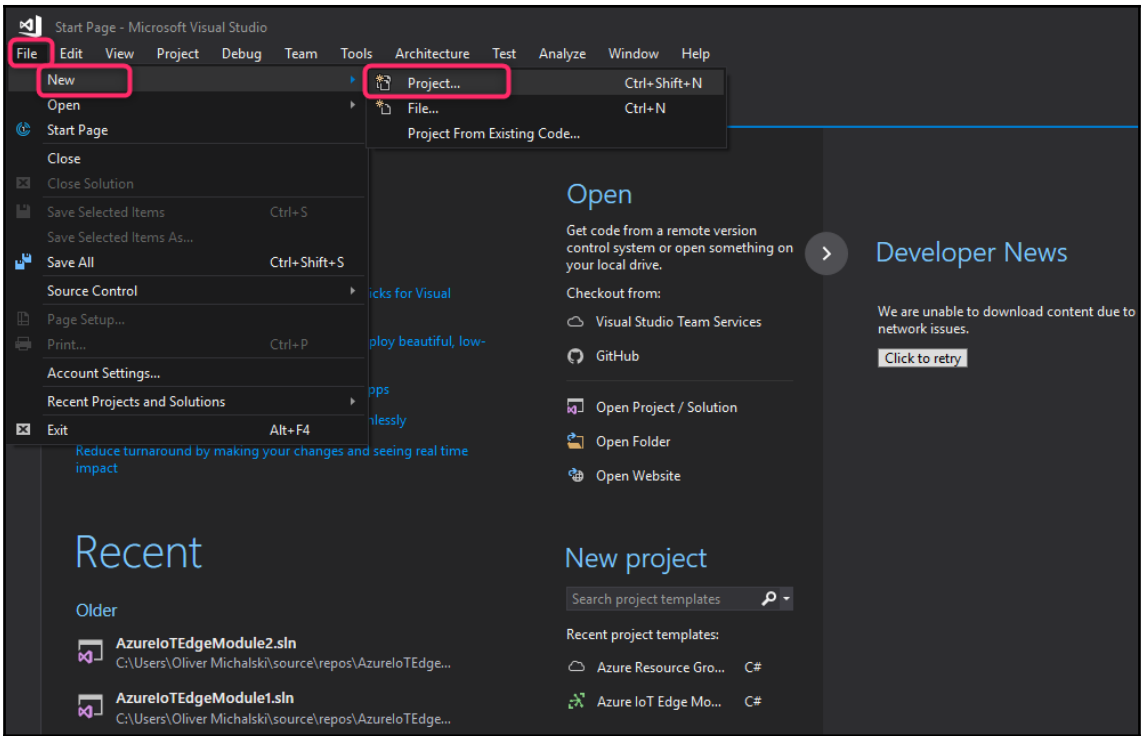
[Azure Marketplace Terms](#) | [Azure Marketplace](#)

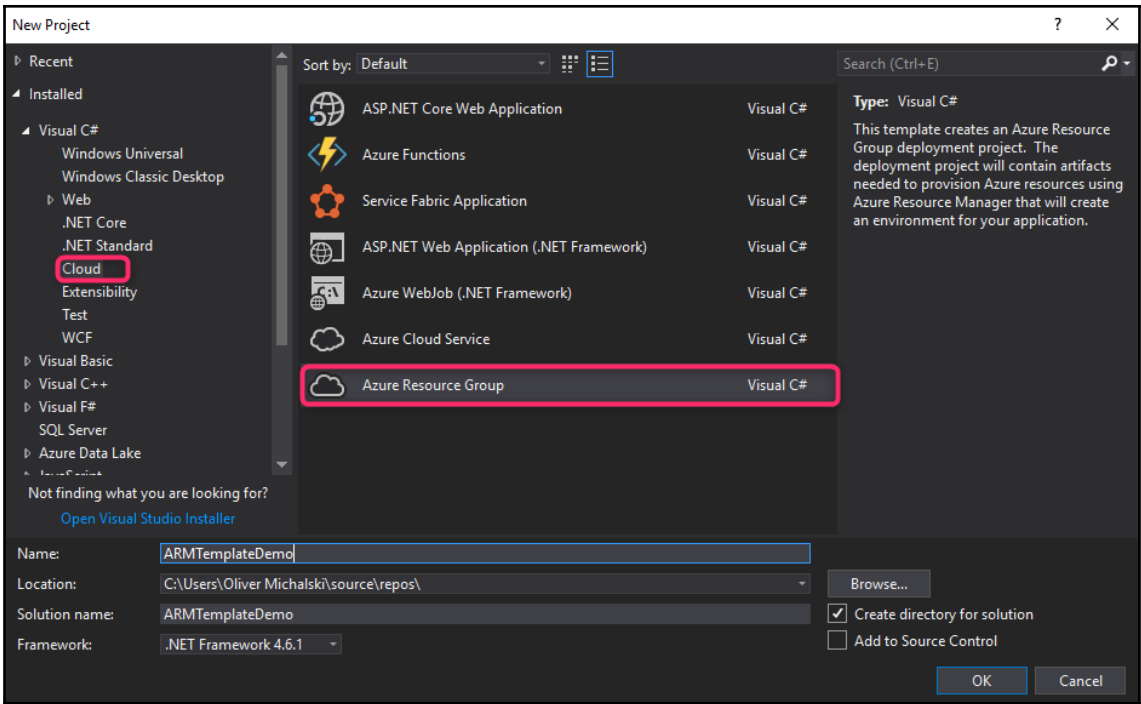
By clicking "Purchase," I (a) agree to the applicable legal terms associated with the offering; (b) authorize Microsoft to charge or bill my current payment method for the fees associated the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I discontinue use of the offering(s); and (c) agree that, if the deployment involves 3rd party offerings, Microsoft may share my contact information and other details of such deployment with the publisher of that offering.

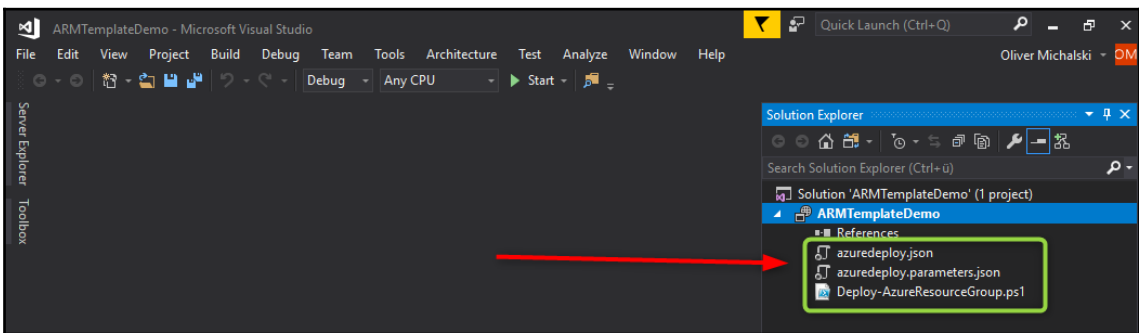
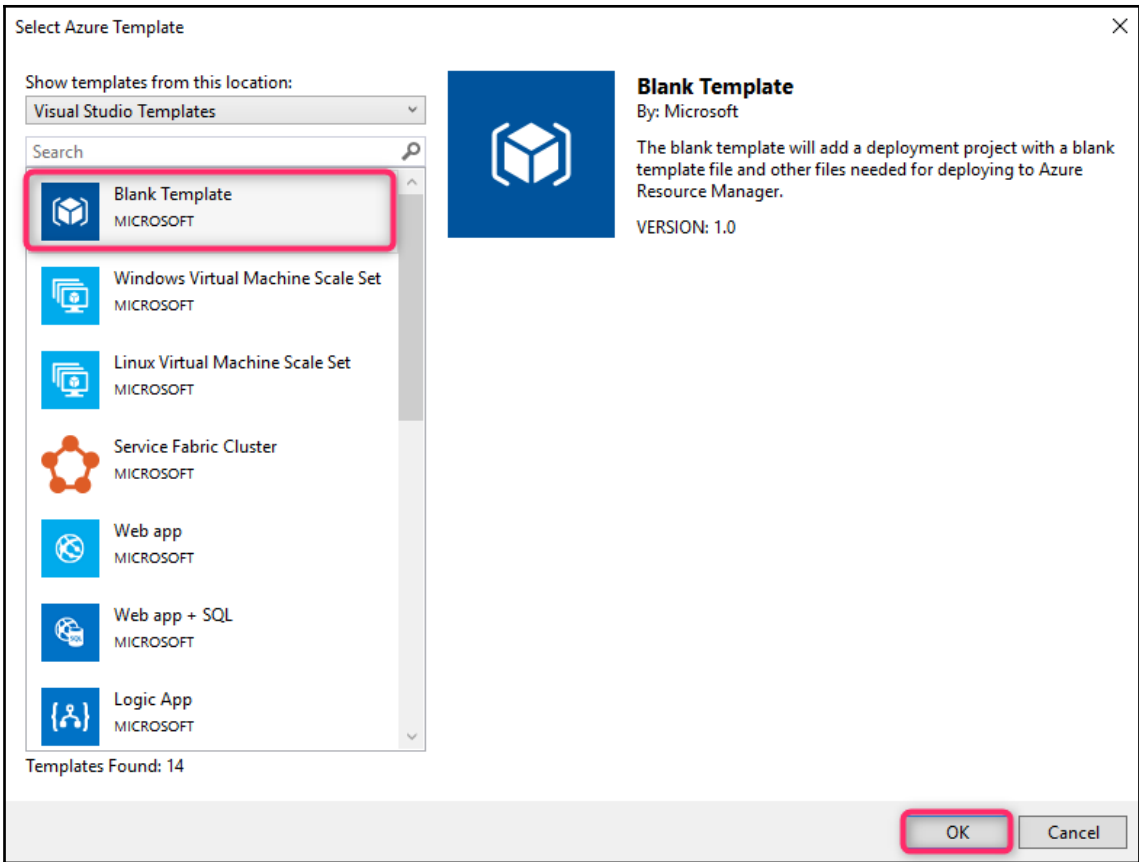
I agree to the terms and conditions stated above

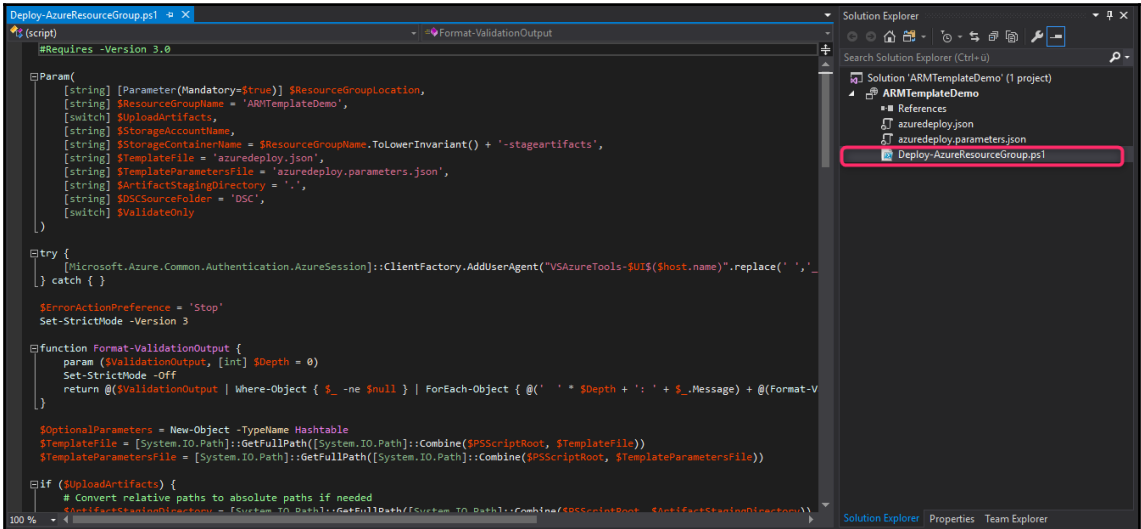
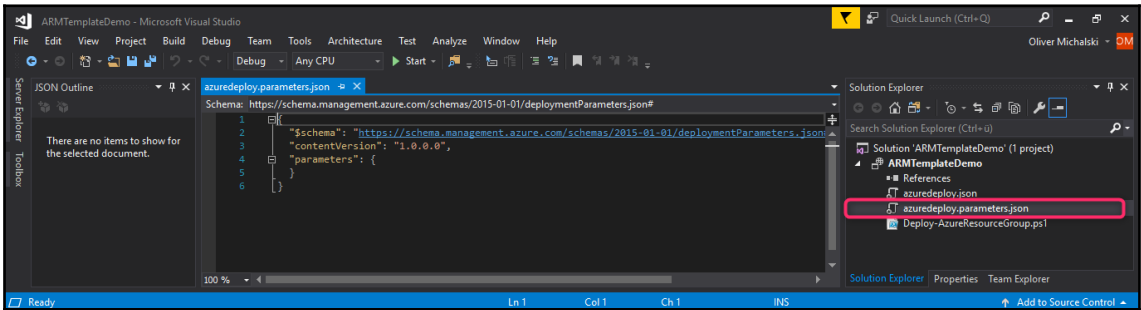
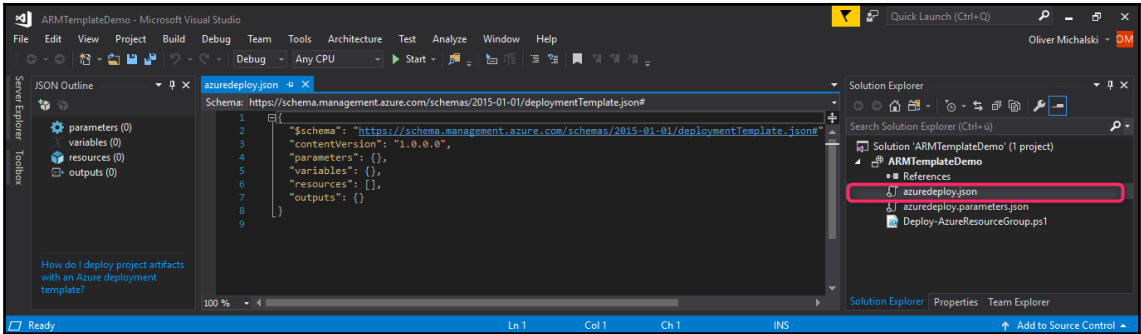
Pin to dashboard

Purchase

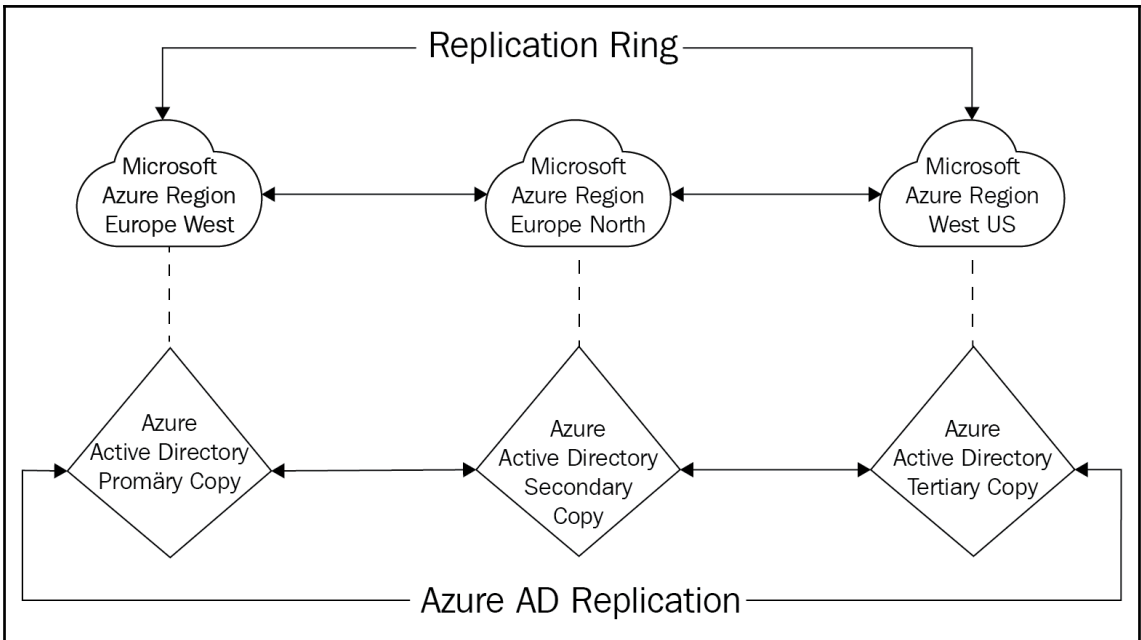
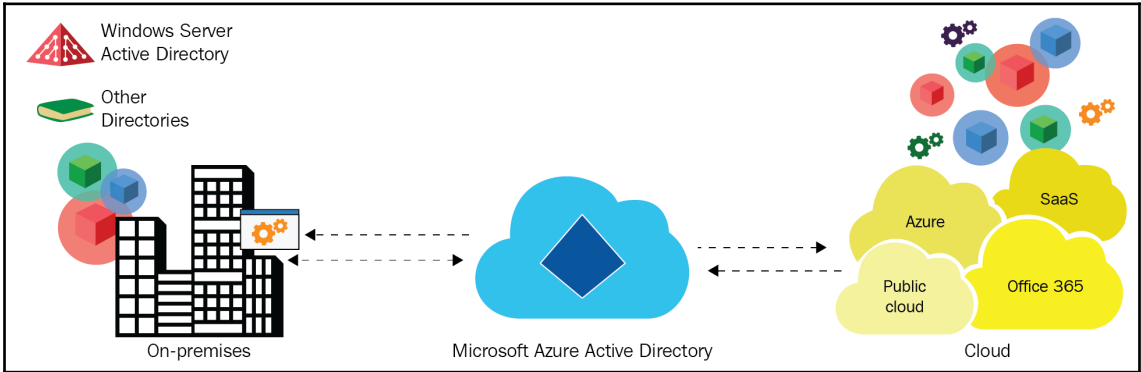








Chapter 3: Deploying and Synchronizing Azure Active Directory



Preview Microsoft Azure


Home > Create directory

Create directory

* Organization name ⓘ
Bookdemo ✓

* Initial domain name ⓘ
bookdemopackt ✓
bookdemopackt.onmicrosoft.com

Country or region ⓘ
United States ▼

 Directory creation will take about one minute.

Create

- Create a resource
- All services
- FAVORITES
- Dashboard
- All resources
- Resource groups
- App Services
- Function Apps
- SQL databases
- Azure Cosmos DB
- Virtual machines
- Load balancers
- Storage accounts
- Virtual networks
- Azure Active Directory
- Monitor
- Advisor
- Security Center
- Cost Management + Billing
- Help + support

Office 365 | Admin center preview

> Home > Active users

[+ Add a user](#) [More](#) ∨

Display name ∧

The image shows a portion of the Office 365 Admin Center interface. At the top, there is a dark header with the Office 365 logo and the text 'Office 365 | Admin center preview'. Below this is a navigation bar with a breadcrumb trail 'Home > Active users'. The main content area is mostly blank, with a few elements visible: a button labeled '+ Add a user' which is highlighted with a red rectangular box, a 'More' button with a downward arrow, and a 'Display name' label with an upward arrow. On the left side, there is a vertical sidebar with icons for navigation, home, and user management.



New

azure |

2



Resource groups



All resources



Recent



App Services



Virtual machines (classic)



Virtual machines



SQL databases



Cloud services (classic)



Security Center



Subscriptions



Azure Active Directory



Monitor



Billing



Help + support

More services >

1



Azure Active Directory

PREVIEW



Azure AD B2C



Azure AD Cloud App Discovery



Azure AD Connect Health



Azure AD Identity Protection



Azure AD Privileged Identity Management



Azure Information Protection

PREVIEW



MyCloudIT - Azure Desktop Hosting



Search (Ctrl+/)

Overview

Quick start

MANAGE

Users and groups

Enterprise applications

App registrations

Azure AD Connect

Domain names

Password reset

Company branding

User settings

Properties

ACTIVITY

Sign-ins

Audit logs

The Azure AD management experience is in preview. Learn more →

Users and groups



Quick tasks

Add a user

Add a group

Find a user

Find a group

Find an enterprise app

Enterprise applications

Azure AD application access management

Azure AD Connect

Sync not enabled



App registrations

2



Recommended



Sync with Windows Server AD

Sync users and groups from your on-premises directory to your Azure AD



Self-service password reset

Enable your users to reset their forgotten passwords



Company branding

Customize the text and graphics your users see when they sign in to your Azure AD

Other capabilities

Identity Protection

Privileged Identity Management

Cloud App Discovery

What's new

General Availability of Azure AD Premium P2

Microsoft partners with Ping Identity on Secure Remote Access



Shift+Space to toggle favorites



Users and groups

PREVIEW





Users and groups

DataCenter-Flo - Azure Active Directory - PREVIEW

Search (Ctrl+/)

Overview

MANAGE

- All users
- All groups
- Password reset
- Company branding
- User settings
- Group settings
- Device Settings

ACTIVITY

- Sign-ins
- Audit logs

Essentials

Directory
DataCenter-Flo

Access

Users Sign Ins

SIGN-INS FOR 'ALL USERS' BETWEEN 1/19/2017 AND 2/18/2017.

ALL USERS

Start a free trial to use this feature.


1 AM

ALL USERS

-

Users

6

AC  FK   

Groups

0

Microsoft Azure Users and groups - All users

Users and groups - All users
DataCenter-Flo - Azure Active Directory - PREVIEW

Search (Ctrl+/)

Overview

All users

All groups

Password reset

Company branding

User settings

Group settings

Device Settings

ACTIVITY

Sign-ins

Audit logs

+ Add Columns Multi-Factor Authentication Filter

Search users

NAME	USER NAME
AC AD Connect Synch Admin	

Microsoft Azure Users and groups - All users

Users and groups - All users
DataCenter-Flo - Azure Active Directory - PREVIEW

Search (Ctrl+/)

+ Add Columns Multi-Factor Authentication Filter

User

DataCenter-Flo - PREVIEW

* Name ⓘ

Peter Pan ✓

* User name ⓘ

peter@pan.cloud ✓



peter@pan.cloud will be added as...
guest

Include a personal message with the invitation

Profile ⓘ

Not configured >

Properties ⓘ

Default >

Groups ⓘ

0 groups selected >

Profile

User - PREVIEW

General

First name

Last name

Work info

Job title

Department

Properties

User - PREVIEW

Source of Authority

Groups

select groups to join

+ Invite

Select ⓘ

- +
- Overview
- MANAGE
 - All users
 - All groups
 - Password reset
 - Company branding
 - User settings
 - Group settings
 - Device Settings
- ACTIVITY
 - Sign-ins
 - Audit logs

Users and groups - All users

DataCenter-Flo - Azure Active Directory - PREVIEW

Search (Ctrl+/)

Overview


+ Add Columns Multi-Factor Authentication Filter


Search users

NAME	USER NAME
AC AD Connect Synch Admin	[REDACTED]
[REDACTED]	[REDACTED]
FK	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]


AD Connect Synch Admin - Directory role


User - PREVIEW


 Search (Ctrl+*/*)

 Overview


MANAGE

 Profile


 Directory role


 Groups

 Devices

 Azure resources

ACTIVITY

 Sign-ins

 Audit logs



 Save  Discard


Directory role

- User
- Global administrator
- Limited administrator

Global administrators have full control over all directory resources.

[Learn More](#)


 Save  Discard


Directory role 


- User
- Global administrator
- Limited administrator


Select the administrative role or roles for this user.


[Learn More](#)


Password administrator 


Service administrator 


Billing administrator 


Exchange administrator 


Skype for Business administrator 


User administrator 


SharePoint administrator 


Compliance administrator 

Security reader 

Security administrator 

Privileged role administrator 

Intune Service administrator 

Guest inviter 



Shift+Space to toggle favorites



Filter

By category ▾



GENERAL

Resource groups

All resources

Subscriptions

Billing PREVIEW

Help + support

COMPUTE

Virtual machines

Microsoft Azure Subscriptions

Subscriptions
DataCenter-Flo

+ Add

Role: All Status: All

Apply

Search to filter items...

SUBSCRIPTION	SUBSCRIPTION ID	MY ROLE	CURRENT SPEND	STATUS
Visual Studio Enterprise	[REDACTED]	Account admin	€64.83	Active
Visual Studio Premium...	[REDACTED]	Account admin	€4.08	Active

Visual Studio Premium with MSDN - Access control (IAM)

Subscription

Search (Ctrl+/)

Overview **1**

Access control (IAM)

Diagnose and solve problems

+ Add Roles **2**

You can control access to your

USER

Add access

Visual Studio Premium with MSDN

1 Select a role
None selected

2 Add users
None selected

Select a role

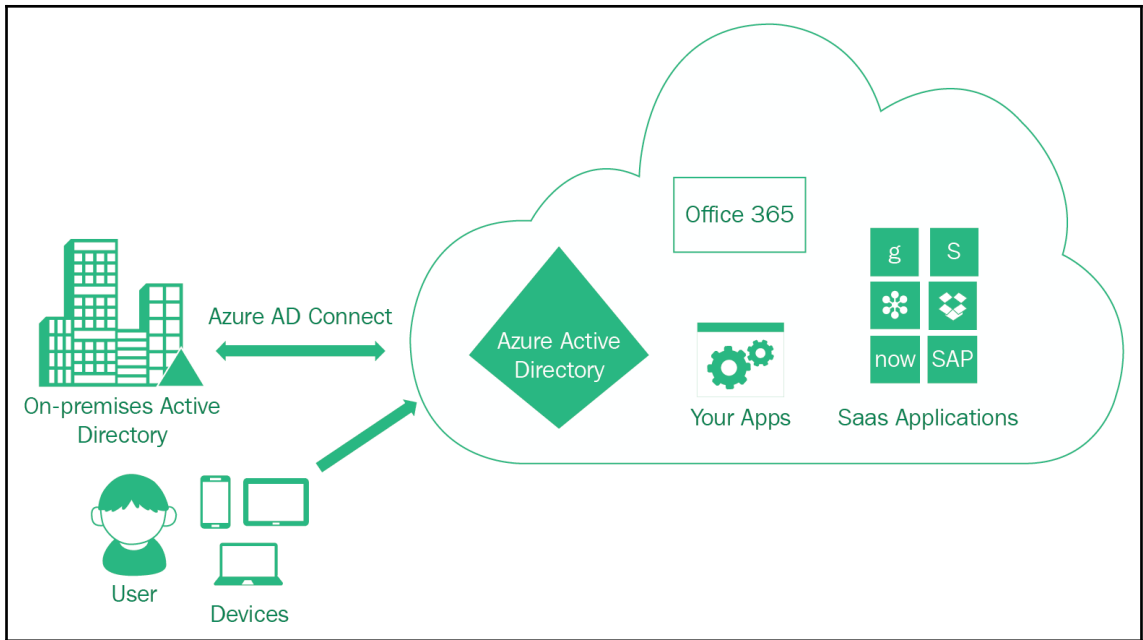
Add access

Lets you manage everything, including access to resources.

Owner

Contributor

Reader



Synchronization Rules Editor

View and manage your synchronization rules

Direction: MV Object Type: Connector: Connector Object Type:

Password Sync: MV attribute: Connector Attribute:

Name	Connector	Precedence	Connector Object Type	Metaverse Object Type

Type: Transformations: Disabled: Scoping filters: Join rules

Synchronization Service Manager on [REDACTED]

File Tools Actions Help

Operations Connectors Metaverse Designer Metaverse Search

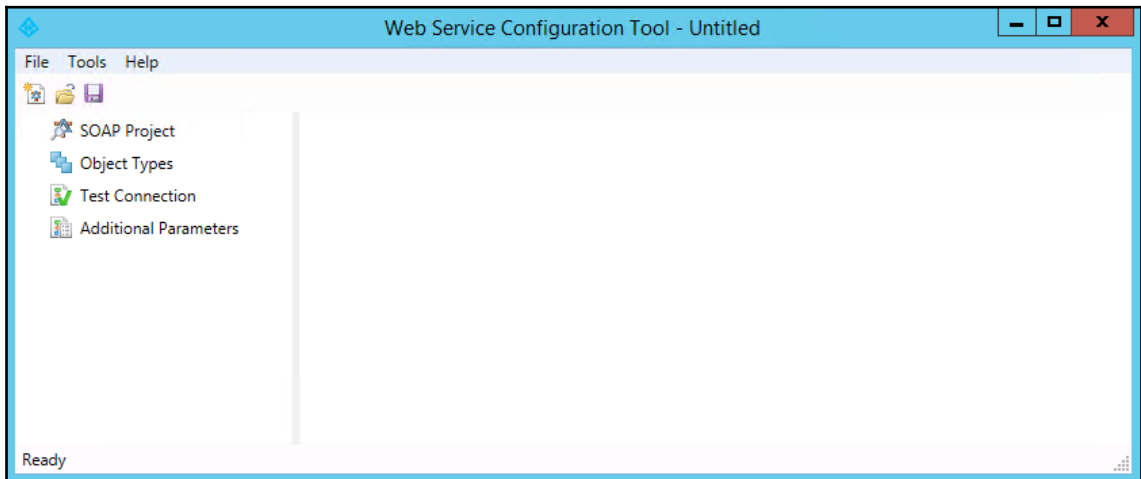
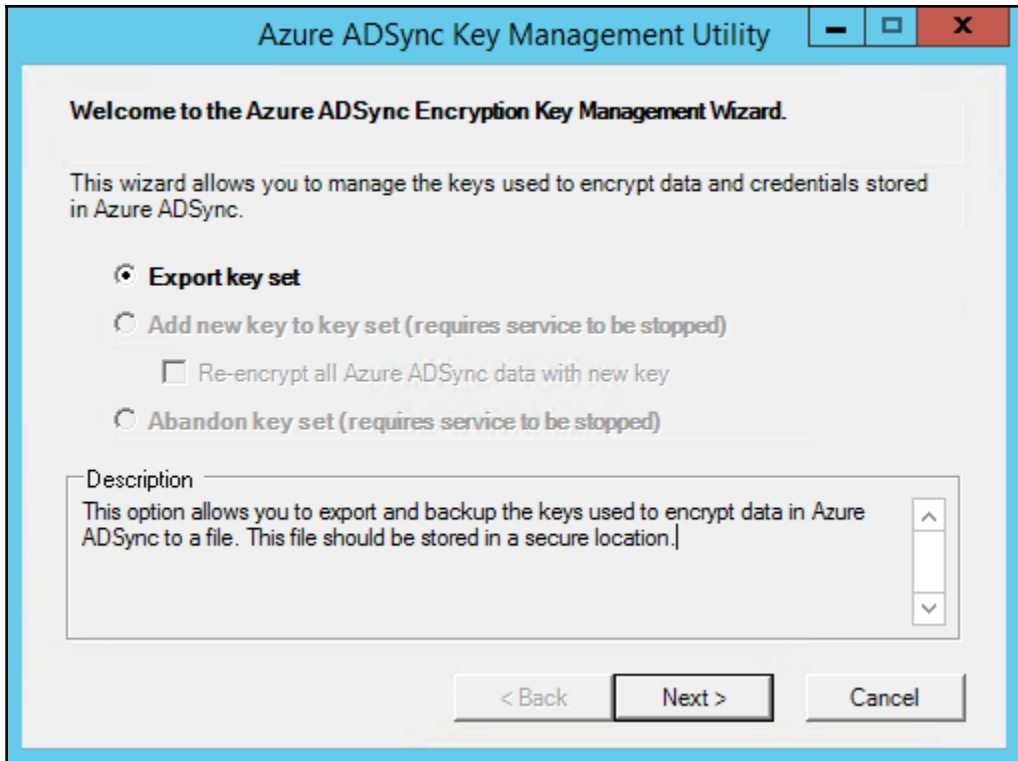
Connector Operations

Name	Profile Name	Status	Start Time	End Time
local	Export	success	7/24/2016 7:27:02 PM	7/24/2016 7:27:02 PM
onmicroso...	Export	success	7/24/2016 7:26:33 PM	7/24/2016 7:27:01 PM
onmicroso...	Delta Synchronization	success	7/24/2016 7:26:30 PM	7/24/2016 7:26:30 PM
local	Delta Synchronization	success	7/24/2016 7:26:28 PM	7/24/2016 7:26:30 PM
onmicroso...	Delta Import	success	7/24/2016 7:26:07 PM	7/24/2016 7:26:28 PM
local	Delta Import	success	7/24/2016 7:26:07 PM	7/24/2016 7:26:07 PM
local	Export	success	7/24/2016 6:56:43 PM	7/24/2016 6:56:43 PM
onmicroso...	Export	success	7/24/2016 6:56:14 PM	7/24/2016 6:56:42 PM
onmicroso...	Delta Synchronization	success	7/24/2016 6:56:11 PM	7/24/2016 6:56:12 PM
local	Delta Synchronization	success	7/24/2016 6:56:07 PM	7/24/2016 6:56:10 PM
onmicroso...	Delta Import	success	7/24/2016 6:55:45 PM	7/24/2016 6:56:05 PM
local	Delta Import	success	7/24/2016 6:55:44 PM	7/24/2016 6:55:44 PM
local	Export	success	7/24/2016 6:26:10 PM	7/24/2016 6:26:10 PM
onmicroso...	Export	success	7/24/2016 6:25:47 PM	7/24/2016 6:26:09 PM
onmicroso...	Delta Synchronization	success	7/24/2016 6:25:45 PM	7/24/2016 6:25:45 PM
local	Delta Synchronization	success	7/24/2016 6:25:43 PM	7/24/2016 6:25:44 PM
onmicroso...	Delta Import	success	7/24/2016 6:25:20 PM	7/24/2016 6:25:42 PM
local	Delta Import	success	7/24/2016 6:25:19 PM	7/24/2016 6:25:19 PM

Profile Name: User:

Step Type:	Partition:	Status:
Start Time:	End Time:	
Synchronization Statistics	Connection Status	
	Synchronization Errors	

Loading run step details...



User sign-in

Select the Sign On method.

- Password Synchronization [?](#)
- Pass-through authentication [?](#) (Preview)
- Federation with AD FS [?](#)
- Do not configure [?](#)

Select this option to enable single sign on for your corporate desktop users:

- Enable single sign on [?](#) (Preview)

PASSWORD SYNCHRONIZATION

This option allows your users to sign in to the cloud using the same passwords that they use on-premises.

Password synchronization does not store or send clear text passwords.

[Learn more](#)

PASS-THROUGH AUTHENTICATION

Pass-through authentication enables Azure Active Directory to authenticate users using your on-premises identity infrastructure.

[Learn more](#)

SINGLE SIGN ON

This option allows your users to do federated sign in using AD FS. While logged in to the corporate network, your users can access cloud resources without entering their passwords again.

[Learn more](#)

DO NOT CONFIGURE

This option allows your users to do federated sign in using a solution not managed by this wizard. While logged in to the corporate network, your users can access cloud resources without entering their passwords again.

[Learn more](#)

Single sign on

This option enables users on the corporate network to get a single sign on experience when accessing cloud services from their domain joined desktop machines.

[Learn more](#)

User

DataCenter-Flo - PREVIEW



* Name ⓘ

ADConnect Synch ✓

* User name ⓘ

azureadsynch@ [REDACTED] ✓



azureadsynch [REDACTED]
will be added as a guest

Include a personal message with the invitation

Profile ⓘ

Not configured >

Properties ⓘ

Default >

Groups ⓘ

0 groups selected >

AD Connect Synch Admin - Directory role

User - PREVIEW

🔍 Search (Ctrl+/)

i Overview

MANAGE

👤 Profile

👤 Directory role

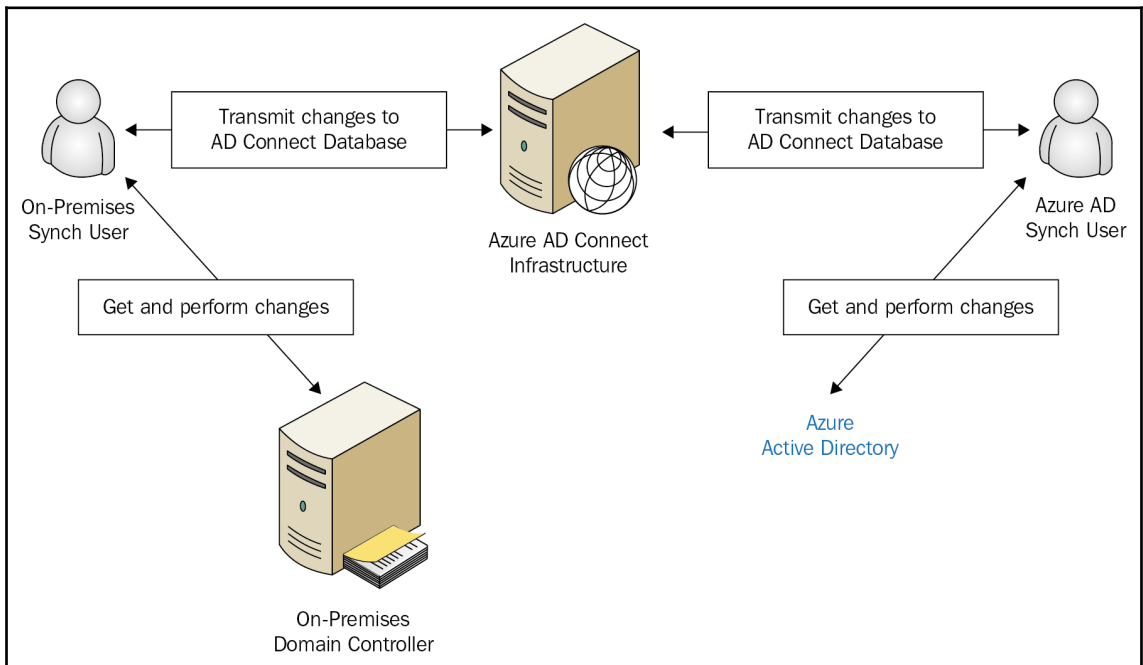
💾 Save ✕ Discard

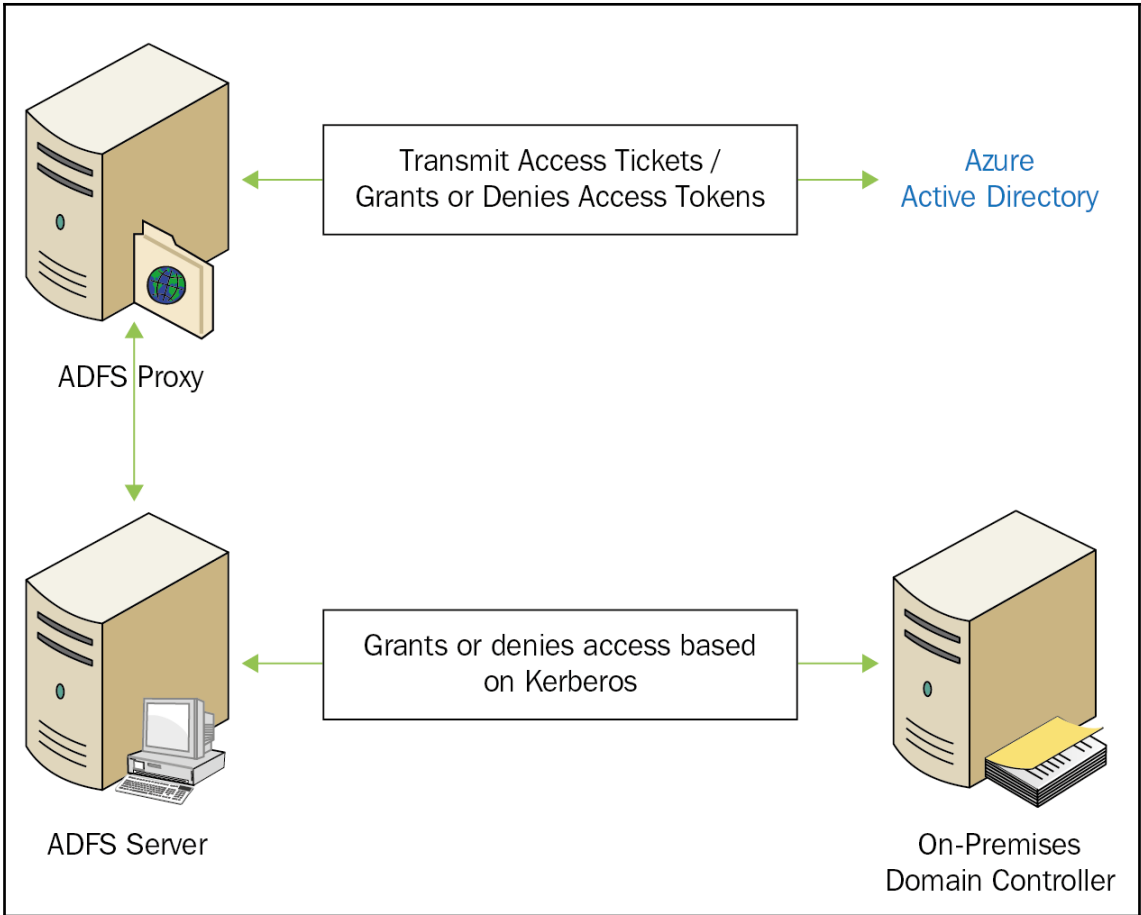
Directory role ⓘ

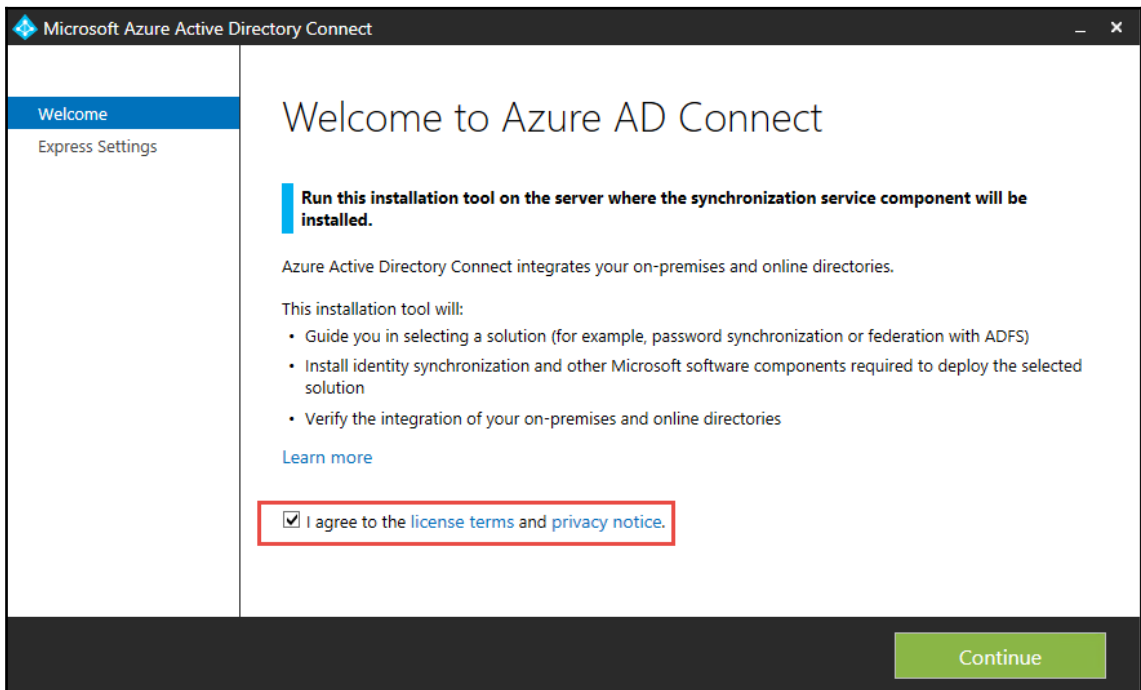
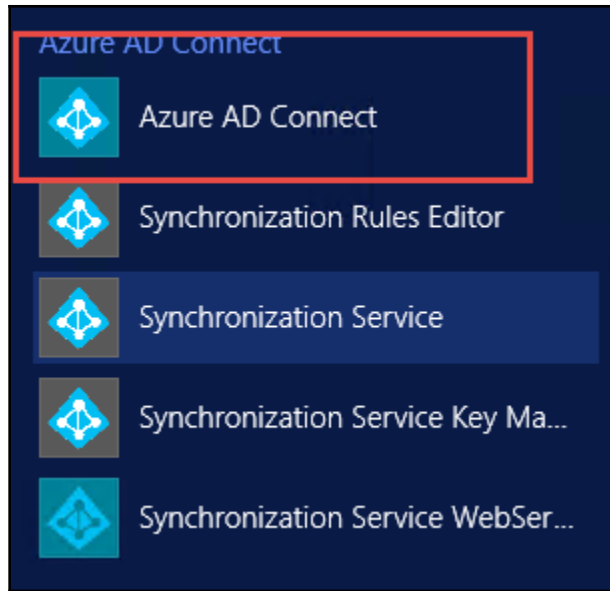
- User
- Global administrator
- Limited administrator

Global administrators have full control over all directory resources.

[Learn More](#)







Microsoft Azure Active Directory Connect

Welcome

Express Settings

If you have a **single** Windows Server Active Directory forest, we will do the following:

- Configure synchronization of identities in the current AD forest of DCF
- Configure password synchronization from on-premises AD to Azure AD
- Start an initial synchronization
- Synchronize all attributes
- Enable Auto Upgrade

[Learn more about express settings](#)

If you would like different settings, click Customize.

Datacenter-Flo.local is not a routable domain. It is recommended to use custom settings to configure user sign-in options.
[Learn more about non-routable domains and user sign-in settings.](#)

Customize Use express settings

User sign-in

Select the Sign On method.

Password Synchronization ?

Pass-through authentication ? (Preview)

Federation with AD FS ?

Do not configure ?

Select this option to enable single sign on for your corporate desktop users:

Enable single sign on ? (Preview)

Microsoft Azure Active Directory Connect

Welcome
Express Settings
User Sign-In
Connect to Azure AD
Sync
Connect Directories
Azure AD sign-in
Domain/OU Filtering
Identifying users
Filtering
Optional Features
Configure

Connect to Azure AD

Enter your Azure AD credentials: ?

USERNAME
[REDACTED]

PASSWORD
[REDACTED]

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Microsoft Azure Active Directory Connect

Welcome
Express Settings
User Sign-In
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Sync
Connect Directories
Azure AD sign-in
Domain/OU Filtering
Identifying users
Filtering
Optional Features
Configure

Connect your directories

Enter connection information for your on-premises directories or forests: ?

DIRECTORY TYPE
Active Directory

FOREST ?
Datacenter-Flo.local

USERNAME
DCFadministrator

PASSWORD
[REDACTED]

Add Directory

CONFIGURED DIRECTORIES
Datacenter-Flo.local (Active Directory) ✓

Remove

Previous Next

Microsoft Azure Active Directory Connect

Welcome

- Express Settings
- User Sign-in
- Connect to Azure AD
- Sync
 - Connect Directories
 - Azure AD sign-in**
 - Domain/OU Filtering
 - Identifying users
 - Filtering
 - Optional Features
- Configure

Azure AD sign-in configuration

To use on-premises credentials for Azure AD sign-in, UPN suffixes in username should match to one of the verified custom domains in Azure AD. The following table lists the UPN suffixes defined in your on-premises environment, along with the matching custom domain in Azure. ?

Active Directory UPN Suffix	Azure AD Domain
[REDACTED]	Not Added ?

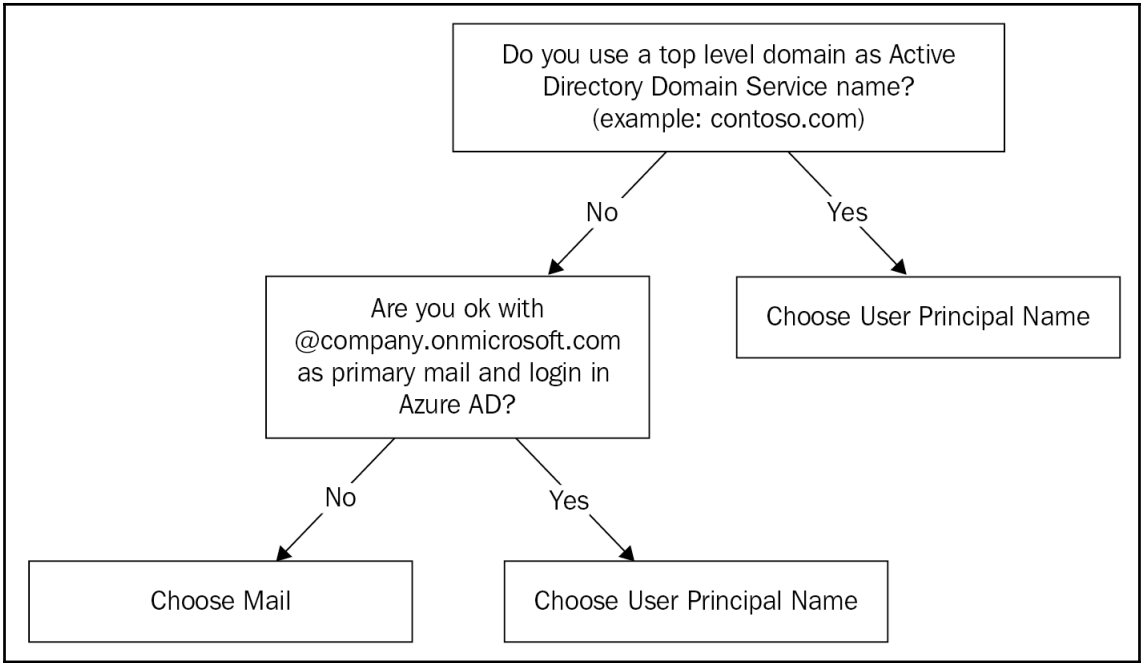
Select the on-premises attribute to use as the Azure AD username

USER PRINCIPAL NAME ?

- userPrincipalName
- textEncodedORAddress
- title
- treeName
- unicodePwd
- unixHomeDirectory
- userParameters
- userPrincipalName**
- userSharedFolder
- userWorkstations
- whenCreated
- wwwHomePage

g their on-premises credentials.

Previous Next



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Domain and OU filtering

Directory: [Redacted] Refresh Ou/Domain ?

Sync all domains and OUs
 Sync selected domains and OUs

- Datacenter-Flo.local
 - BuiltIn
 - Computers
 - Domain Controllers
 - ForeignSecurityPrincipals
 - Infrastructure
 - LostAndFound
 - Managed Service Accounts
 - NTDS Quotas
 - Program Data
 - System
 - Users
 - Configuration

Previous Next

Microsoft Azure Active Directory Connect

Welcome
Express Settings
User Sign-In
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 Connect Directories
 Azure AD sign-in
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Identifying users
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 Optional Features
 Configure

Uniquely identifying your users

Select how users should be identified in your on-premises directories. ?

- Users are represented only once across all directories.
- User identities exist across multiple directories. Match using:
 - Mail attribute
 - ObjectSID and msExchMasterAccountSID/msRTCSIP-OriginatorSID attributes
 - SAMAccountName and MailNickName attributes
 - A specific attribute

CUSTOM ATTRIBUTE

Select how users should be identified with Azure AD.

SOURCE ANCHOR ?

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Microsoft Azure Active Directory Connect

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Express Settings
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Connect Directories
Azure AD sign-in
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Configure

Filter users and devices

For a pilot deployment, specify a group containing your users and devices that will be synchronized.

Synchronize all users and devices
 Synchronize selected [?](#)

FOREST: [REDACTED] GROUP: [R-Synch-0365,CN=Users,DC=[REDACTED],DC=local] [Resolve](#)

[Previous](#) [Next](#)

Microsoft Azure Active Directory Connect

Welcome

Express Settings

User Sign-In

Connect to Azure AD

Sync

- Connect Directories
- Azure AD sign-in
- Domain/OU Filtering
- Identifying users
- Filtering
- Optional Features**
- Azure AD Apps
- Azure AD Attributes
- Directory Extensions

Configure

Optional features

Select enhanced functionality if required by your organization.

- Exchange hybrid deployment ?
- Azure AD app and attribute filtering ?
- Password synchronization ?
- Password writeback ?
- Group writeback (Preview) ?
- Device writeback ?
- Directory extension attribute sync ?

[Learn more about optional features](#)

Previous Next

Microsoft Azure Active Directory Connect

Welcome

Express Settings

User Sign-In

Connect to Azure AD

Sync

- Connect Directories
- Azure AD sign-in
- Domain/OU Filtering
- Identifying users
- Filtering
- Optional Features
- Azure AD Apps**
- Azure AD Attributes
- Directory Extensions

Configure

Azure AD apps

The information necessary to use the following apps will be exported to Azure AD. Remove an app only if required to meet strict organizational security policy.

AZURE AD APPS

- Office 365 ProPlus
- Exchange Online
- SharePoint Online
- Lync Online
- Azure RMS
- Intune
- Dynamics CRM
- 3rd party application

I want to restrict the list of applications. ?

Previous

Next

Microsoft Azure Active Directory Connect

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Domain/OU Filtering

Identifying users

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Optional Features

Azure AD Apps

Azure AD Attributes

Directory Extensions

Configure

Azure AD attributes

These attributes will be exported to Azure AD based on the previously selected application. Remove an individual attribute only if required to meet string organizational security policy.

EXPORTED ATTRIBUTES

- accountEnabled
- accountName
- assistant
- authOrig
- c
- cn
- co
- company
- countryCode
- dLMemRejectPerms
- dLMemSubmitPerms
- department

I want to further limit the attributes exported to Azure AD. ?

[View the list of attribute as comma-separated values](#)

Previous Next

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- Sync
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 - Domain/OU Filtering
 - Identifying users
 - Filtering
 - Optional Features
 - Azure AD Apps
 - Azure AD Attributes
 - Directory Extensions**
- Configure

Directory extensions

Synchronize directory extension attributes from on-premises to Azure AD to make them available to cloud-based apps.

Available Attributes

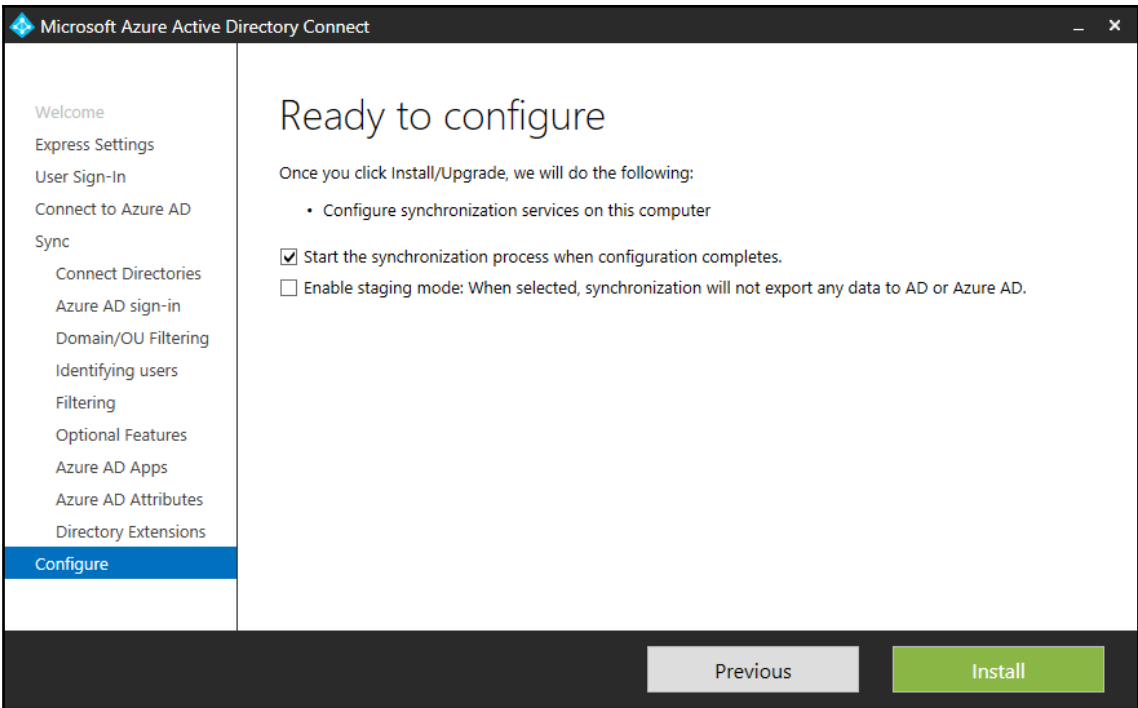
- accountExpires (user) [LargeInteger]
- accountNameHistory (group) [String]
- accountNameHistory (user) [String]
- aCSPolicyName (user) [String]
- adminCount (group) [Integer]
- adminCount (user) [Integer]
- adminDescription (group) [String]
- adminDescription (user) [String]
- adminDisplayName (group) [String]
- adminDisplayName (user) [String]
- altSecurityIdentities (group) [String]
- altSecurityIdentities (user) [String]

Selected Attributes



Previous

Next



Welcome

Express Settings

User Sign-In

Connect to Azure AD

Sync

Connect Directories

Azure AD sign-in

Domain/OU Filtering

Identifying users

Filtering

Optional Features

Azure AD Apps

Azure AD Attributes

Directory Extensions

Configure

Ready to configure

Once you click Install/Upgrade, we will do the following:

- Configure synchronization services on this computer

- Start the synchronization process when configuration completes.
- Enable staging mode: When selected, synchronization will not export any data to AD or Azure AD.

Previous

Install

Microsoft Azure Active Directory Connect

Tasks

- Connect to Azure AD
- Staging Mode**
- Configure

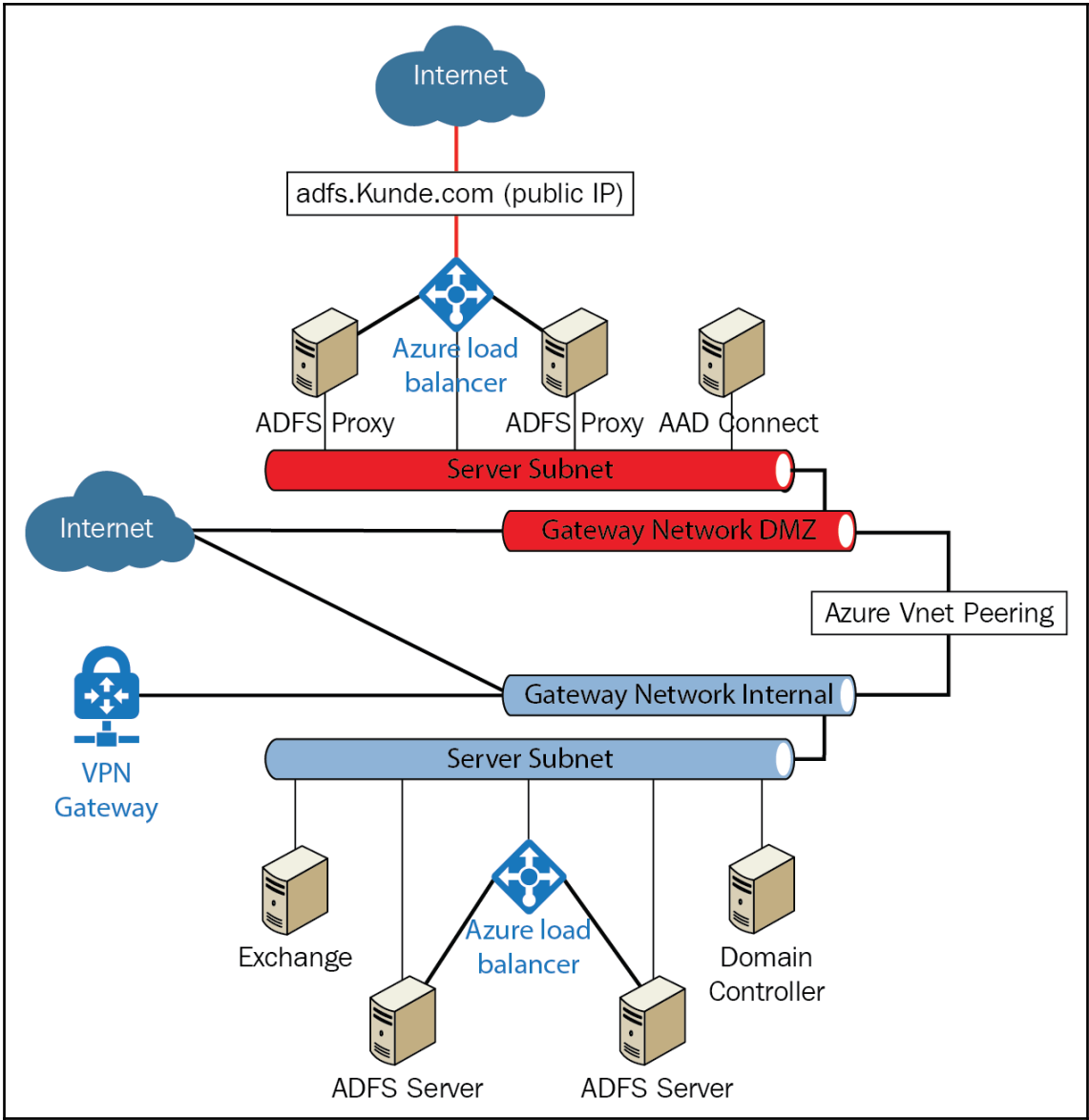
Configure staging mode

When staging mode is enabled, no data changes will be exported to Azure AD or on-premises AD DS. Password writeback and password synchronization will also be disabled.

Enable staging mode

Before you disable staging mode, ensure no other synchronization service is active and exporting to the same Azure AD directory.

Previous Next



+ Create a resource

All services

FAVORITES

Dashboard

Resource groups

All resources

Recent

App Services

Virtual machines (classic)

Virtual machines

SQL databases

Cloud services (classic)

Subscriptions

Azure Active Directory

Monitor

Security Center

Cost Management + Billing

Help + support

Advisor

Conditional access - Policies

Azure Active Directory

Policies

Manage

Named locations

Custom controls (preview)

Terms of use

VPN connectivity

Classic policies

Troubleshooting + Support

Troubleshoot

New support request

+ New policy

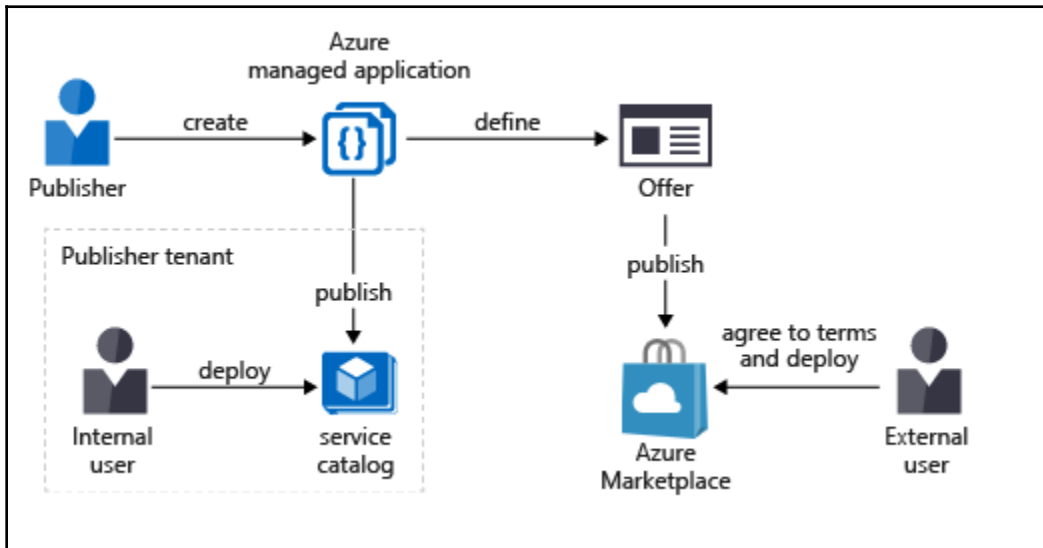
What If

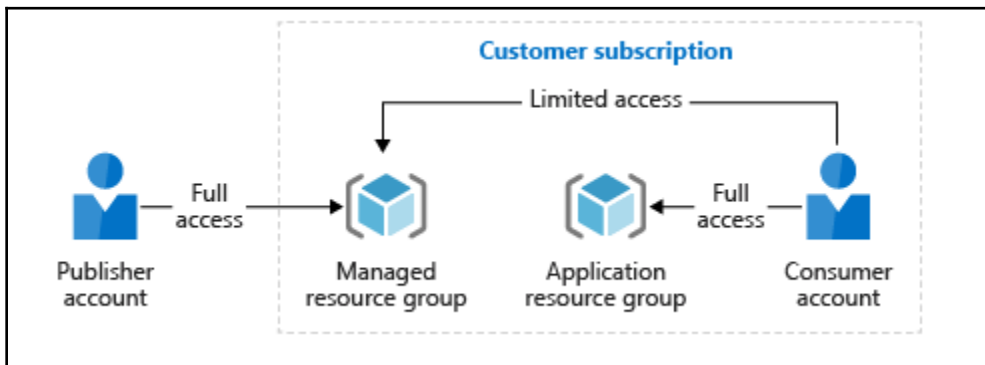
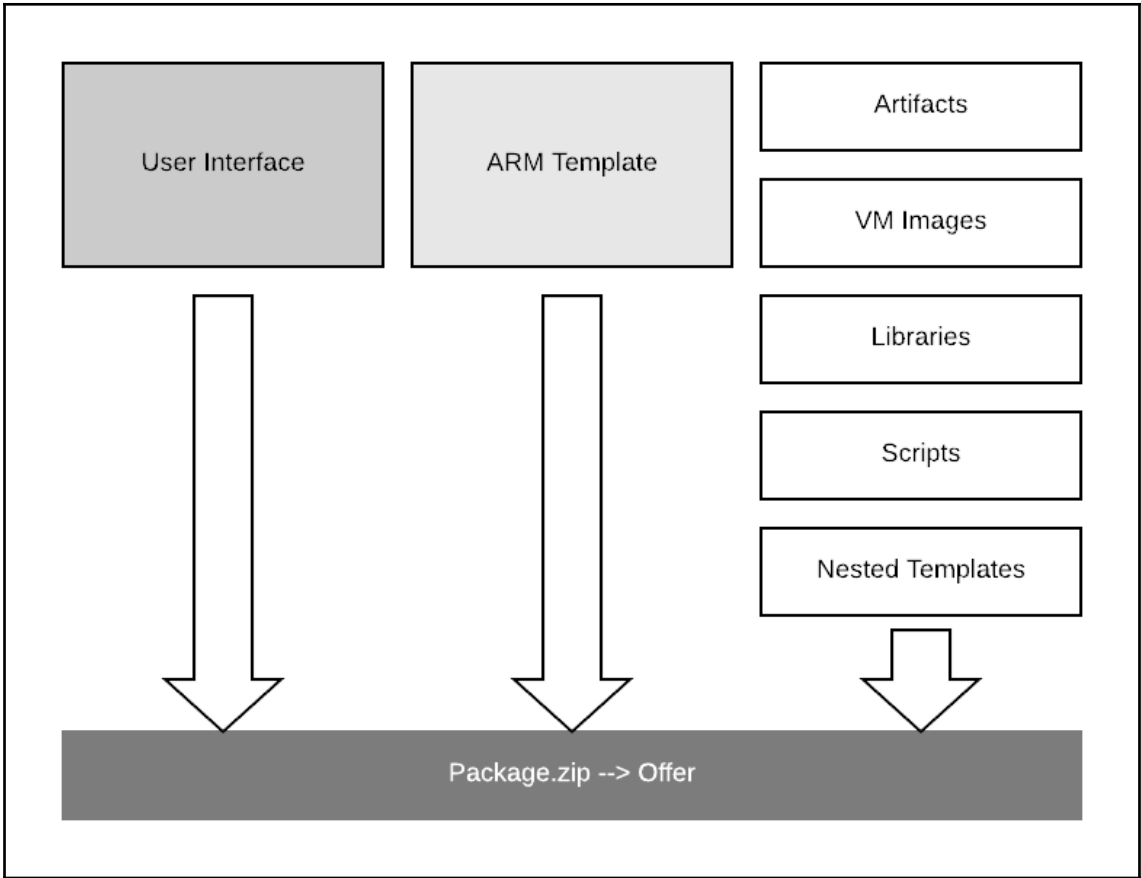
Interested in understanding the impact of the policies

POLICY NAME

Baseline policy: Require MFA for admins (Preview)

Chapter 4: Azure Managed Applications





Create Custom VM Managed ...

Basics

1 Basics
Configure basic settings >

2 VM Credential
Configure the VM credentials >

3 Virtual Machine settings
Configure the virtual machine s... >

4 Endpoint settings
Configure the VM endpoint >

5 Summary
Custom VM Managed Applicat... >

Subscription

Microsoft Partner Network

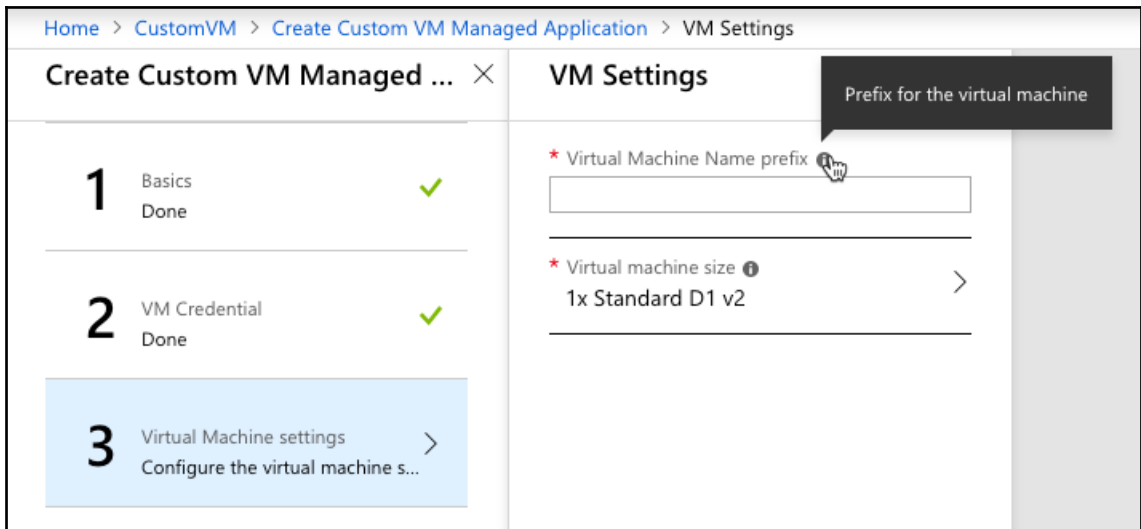
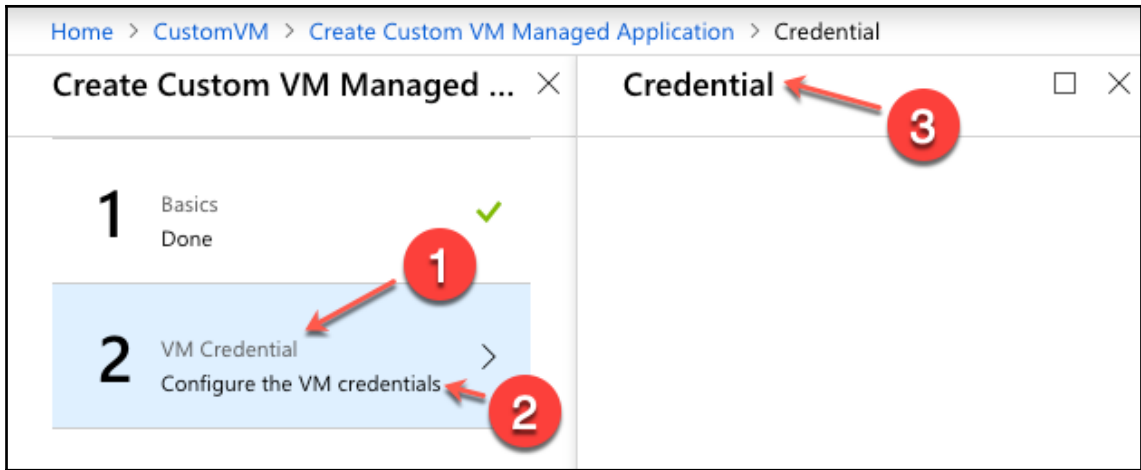
* Resource group ⓘ

Select existing...

[Create new](#)

* Location

East US



VM Settings

Virtual Machine Name prefix

Virtual machine size

1x Standard D1 v2

OK

Choose a size

Browse the available sizes and their features

Compute type
 Current generation

Disk type
 All disk types

vCPUs

RECOMM...	SKU	TYPE	COMPUT...	VCPUS	GB RAM	DATA DL...	MAX IOPS	LOCAL SS...	PREMIU...	ADDITIO...	ZONES	EUR/MO...
★	D1_v2	Standard	General purpo	1	3.5	4	4x500	50 GB	No		1,2,3	€83.45

Prices presented are estimates in your local currency that include only Azure infrastructure costs and any discounts for the subscription and location. The prices don't include any applicable software costs. Recommended sizes are determined by the publisher of the selected image based on hardware and software requirements.

Select

```

Sebastians-MBP:template-validation-tests sebastianhoppe$ npm --folder=../SimpleManagedTemplate/ run template
Testing template files...
SimpleManagedTemplate/mainTemplate.json

template files -
  parameters tests -
    ✓ maintemplate.json should have a "parameters" property
    ✓ parameter vmnameprefix that does not have a defaultValue in file mainTemplate.json, must have a corresponding output in createUiDefinition.json
    ✓ parameter location that does not have a defaultValue in file mainTemplate.json, must have a corresponding output in createUiDefinition.json
    ✓ parameter vmsize that does not have a defaultValue in file mainTemplate.json, must have a corresponding output in createUiDefinition.json
    ✓ parameter username that does not have a defaultValue in file mainTemplate.json, must have a corresponding output in createUiDefinition.json
    ✓ parameter pwd that does not have a defaultValue in file mainTemplate.json, must have a corresponding output in createUiDefinition.json
    ✓ parameter dnsname that does not have a defaultValue in file mainTemplate.json, must have a corresponding output in createUiDefinition.json
    ✓ parameter publicipaddressname that does not have a defaultValue in file mainTemplate.json, must have a corresponding output in createUiDefinition.json
    ✓ non-null default values must not be provided for secureStrings
    ✓ a parameter named "location" must exist and it must have a defaultValue of resourceGroup().location
    ✓ parameter vmnameprefix must be used in file mainTemplate.json
    ✓ parameter location must be used in file mainTemplate.json
    ✓ parameter vmsize must be used in file mainTemplate.json
    ✓ parameter username must be used in file mainTemplate.json
    ✓ parameter pwd must be used in file mainTemplate.json
    ✓ parameter dnsname must be used in file mainTemplate.json
    ✓ parameter publicipaddressname must be used in file mainTemplate.json
  resources tests -
    ✓ location value of resource vmVnet should be an expression or "global"
    ✓ location value of resource NSG should be an expression or "global"
    ✓ location value of resource [concat(parameters('publicIPAddressName'), 'IP')] should be an expression or "global"
    ✓ location value of resource [concat(parameters('vmNamePrefix'), 'nic')] should be an expression or "global"
    ✓ location value of resource [concat(parameters('vmNamePrefix'), '-app')] should be an expression or "global"
    ✓ resourceGroup().location must NOT be used in the template file ../SimpleManagedTemplate/mainTemplate.json.
    ✓ apiVersions must NOT be retrieved using providers().apiVersions[n] in the template file ../SimpleManagedTemplate/mainTemplate.json. This function is non-deterministic.
VM
  ✓ VM Image ref must not contain "-preview"

25 passing (20ms)

[mochawesome] Report JSON saved to /Users/sebastianhoppe/.mochawesome-reports/mochawesome-report/mainTemplateTestReport.json
[mochawesome] Report HTML saved to /Users/sebastianhoppe/.mochawesome-reports/mochawesome-report/mainTemplateTestReport.html

```

Summary - Microsoft A: x + v
https://portal.azure.com/

Microsoft Azure Search resources, services, and docs

Home > Create VM development mode > Summary

Create VM development mode

- 1 Basics Done ✓
- 2 VM Credential Done ✓
- 3 Virtual Machine settings Done ✓
- 4 Endpoint settings Done ✓
- 5 Summary >

Summary

Basics	
Subscription	Microsoft Partner Network
Resource group	NewRG
Location	West Europe
Credential	
User name	username
Password	*****
VM Settings	
Virtual Machine Name prefix	nvm12
Virtual machine size	Standard D1 v2
VM Endpoint settings	
Public IP address	ip01
DNS label	nvm12

OK

F12 Elements Console Debugger Network Performance Memory Emulation

All Errors Warnings Info Logs Preserve Log

```
{
  "location": {
    "value": "westeurope"
  },
  "vmSize": {
    "value": "Standard_D1_v2"
  },
  "vmNamePrefix": {
    "value": "nvm12"
  },
  "applicationResourceName": {
    "value": "nvm12"
  },
  "userName": {
    "value": "username"
  },
}
```


Service catalog managed application definition

Service catalog managed application definition

BASICS

* Name ⓘ

* Display Name ⓘ



Description ⓘ

* Subscription

* Resource group ⓘ Create new Use existing

* Location

PACKAGE

 Before you begin, you must have created an Azure managed application and placed all templates into a ZIP file. You will also need to have this package available in Azure blob storage. 

For details on creating this package, click here.

* Package File Uri

AUTHENTICATION AND LOCK LEVEL

* Lock Level ⓘ

[Add Authorization](#)

[Create](#)

[Automation options](#)

Create service catalog managed application

Filter by name and description...

NAME



DESCRIPTION



Custom VM Managed Application

This Managed Application deploys a custom VM Image

Home > New > Service Catalog Managed Application Definition > Service catalog managed application definition > Add Authorization > Add Authorization

Service catalog managed application definition

Service catalog managed application definition

NAME

* Display Name

Description

* Subscription

* Resource group Create new Use existing

* Location

PACKAGE

i Before you begin, you must have created an Azure managed application and placed all templates into a ZIP file. You will also need to have this package available in Azure blob storage.
For details on creating this package, click here.

* Package File Uri

AUTHENTICATION AND LOCK LEVEL

* Lock Level

[Add Authorization](#)

ROLE NAME	MEMBER NAME	EMAIL
No Data		

[Create](#) [Automation options](#)

Add Authorization

Service catalog managed application definition

* Roles

* Members or groups

NAME	OBJECTID	EMAIL
No Data		

[Invite](#)

Select

<input checked="" type="checkbox"/>	MA	ManagedAdmins
-------------------------------------	----	---------------

Selected ManagedAdmins


[Select](#)


[OK](#)


Service catalog managed application definition

Service catalog managed application definition


BASICS

* Name  ✓

* Display Name  ✓

Description  ✓



* Subscription ▼

* Resource group  Create new Use existing

✓

* Location ▼

PACKAGE

 Before you begin, you must have created an Azure managed application and placed all templates into a ZIP file. You will also need to have this package available in Azure blob storage. 

For details on creating this package, click here.

* Package File Uri ✓

AUTHENTICATION AND LOCK LEVEL

* Lock Level  ▼

[Add Authorization](#)

ROLE NAME	MEMBER NAME	EMAIL
Owner	ManagedAdmins	


Create


Automation options

Home > New > Service Catalog Managed Application > Create service catalog managed application

Create service catalog managed application

Filter by name and description...

NAME	DESCRIPTION
 Custom VM Managed Application	This Managed Application deploys a custom VM Image


 To add a service catalog definition, please see [service catalog getting started](#).

Create Custom VM Managed ...

Basics

- 1** Basics
Configure basic settings >
- 2** VM Credential
Configure the VM credentials >
- 3** Virtual Machine settings
Configure the virtual machine ... >
- 4** Endpoint settings
Configure the VM endpoint >
- 5** Summary
Custom VM Managed Applicat... >

Subscription
Microsoft Partner Network

* Resource group 
Select existing...
[Create new](#)

* Location
East US

Create Custom VM Managed ...

1 Basics ✓
Done

2 VM Credential >
Configure the VM credentials

3 Virtual Machine settings >
Configure the virtual machine ...

4 Endpoint settings >
Configure the VM endpoint

5 Summary >
Custom VM Managed Applicat...

Credential

* User name ⓘ

* Password ⓘ

* Confirm password

Create Custom VM Managed ...

1 Basics ✓
Done

2 VM Credential ✓
Done

3 Virtual Machine settings >
Configure the virtual machine ...

4 Endpoint settings >
Configure the VM endpoint

5 Summary >
Custom VM Managed Applicat...

VM Settings

* Virtual Machine Name prefix ⓘ

* Virtual machine size ⓘ

1x Standard D1 v2 >

Create Custom VM Managed ...

1 Basics ✓
Done

2 VM Credential ✓
Done

3 Virtual Machine settings ✓
Done

4 Endpoint settings >
Configure the VM endpoint

5 Summary >
Custom VM Managed Applicat...

VM Endpoint settings

* Public IP address ! >
(new) ip01

* DNS label !

westeurope.cloudapp.azure.com

Create Custom VM Managed ... ×

Summary □ ×

1 Basics Done ✓

2 VM Credential Done ✓

3 Virtual Machine settings Done ✓

4 Endpoint settings Done ✓

5 Summary Custom VM Managed Applicat... >

i Validation passed

Basics

Subscription	MSDN Platforms
Resource group	MyManagedApplication
Location	West Europe

Credential

User name	testuser
Password	*****

VM Settings

Virtual Machine Name prefix	myvm4
Virtual machine size	Standard D1 v2

VM Endpoint settings

Public IP address	ip01
DNS label	mymanagedapp

OK Download template and parameters

Home > MyManagedApplication > myvm4

myvm4
Managed application

Search (Ctrl+/) << Move Delete

Overview

- Activity log
- Access control (IAM)
- Tags

Settings

- Parameters and Outputs
- Properties
- Locks
- Automation script

Monitoring


- Alerts

Support + troubleshooting

- Resource Health
- New support request

Resource group: MyManagedApplication
Managed resource group: MyManagedApplication04lmbnta556w6

Location: West Europe
Subscription: MSDN Platforms
Subscription ID: [REDACTED]



Welcome to your Managed Application

Managed Applications allow developers to deliver out-of-the box applications and services that live in your subscription and can be maintained by a Managed Service Provider.

Your Managed Service Provider will maintain the resources, so you do not need to maintain application-specific domain knowledge of running the service. [Learn more](#)

Home > MyManagedApplication > myvm4 - Parameters and Outputs

myvm4 - Parameters and Outputs
Managed application

Search (Ctrl+/) <<

Overview

- Activity log
- Access control (IAM)
- Tags

Settings

- Parameters and Outputs**
- Properties
- Locks
- Automation script

Monitoring

- Alerts

Support + troubleshooting

- Resource Health
- New support request

7 parameters

NAME	TYPE	PARAMETER
vmNamePrefix	String	myvm4
location	String	westeurope
vmSize	String	Standard_D1_v2
userName	String	testuser
pwd	SecureString	*****
dnsName	String	mymanagedapp
publicIPAddressName	String	ip01

1 output

NAME	TYPE	OUTPUT
vmEndpoint	String	mymanagedapp.westeurope.cloudapp.azure.com

Home > MyManagedApplication > myvm4

myvm4
Managed application

Search (Ctrl+F)

Move Delete

- Overview
- Activity log
- Access control (IAM)
- Tags

Settings

- Parameters and Outputs
- Properties
- Locks
- Automation script

Monitoring

- Alerts

Support + troubleshooting

- Resource Health
- New support request


Resource group
MyManagedApplication

Location
West Europe

Subscription
MSDN Platforms

Subscription ID
[REDACTED]

Managed resource group MyManagedApplication04Imbnta556w6



Welcome to your Managed Application

Managed Applications allow developers to deliver out-of-the box applications and services that live in your subscription and can be maintained by a Managed Service Provider.

Your Managed Service Provider will maintain the resources, so you do not need to maintain application-specific domain knowledge of running the service. [Learn more](#)

MyManagedApplication04Imbnta556w6

Resource group

- Search (Ctrl+F)
- Overview
- Activity log
- Access control (IAM)
- Tags
- Events
- Settings
 - Quickstart
 - Resource costs
 - Deployments
 - Policies
 - Properties
 - Locks
 - Automation script
- Monitoring
 - Insights (preview)
 - Alerts
 - Metrics
 - Diagnostic settings
 - Advisor recommendations
- Support + troubleshooting
 - New support request

+ Add | Edit columns | Delete resource group | Refresh | Move | Assign tags | Delete

Subscription (change) | Subscription ID | Deployments
MSDN Platforms | | 1 Succeeded
Tags (change)
[Click here to add tags](#)

Filter by name... | All types | All locations | No group...

6 items Show hidden types

<input type="checkbox"/>	NAME	TYPE	LOCATION	
<input type="checkbox"/>	ip01IP	Public IP address	West Europe	...
<input type="checkbox"/>	myvm4-app	Virtual machine	West Europe	...
<input type="checkbox"/>	myvm4nic	Network interface	West Europe	...
<input type="checkbox"/>	myvm4-osDisk	Disk	West Europe	...
<input type="checkbox"/>	NSG	Network security group	West Europe	...
<input type="checkbox"/>	vmVnet	Virtual network	West Europe	...

Microsoft Azure

Contact Sales: 1-800-967-1389 Search Portal

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Azure Feedback Edit Share Dark Sign in

Filter by title

- Azure applications
 - Dev center account registration
 - Author managed application**
 - Author solution template
 - Publish a Management Solution
 - SEO guidance
 - Make offer live
 - Update existing offer
 - Delete offer
 - Migrate offers
- SaaS applications
 - Containers
 - IoT edge module offer
- Manage leads
 - Dynamics 365 for Customer Engagement
 - Dynamics 365 for Business Central
 - Dynamics 365 for Operations
- Test Drive
 - Consulting services
 - Manage publisher profile
 - Manage users
 - GDPR compliance

Download PDF

Publish an Azure-Managed Application to Azure Marketplace

13/09/2018 • 8 minutes to read • Contributors

This article lists the various steps involved in publishing a Managed Application offer to Azure Marketplace.

Pre-requisites for publishing a Managed Application

Prerequisites to listing on Azure Marketplace

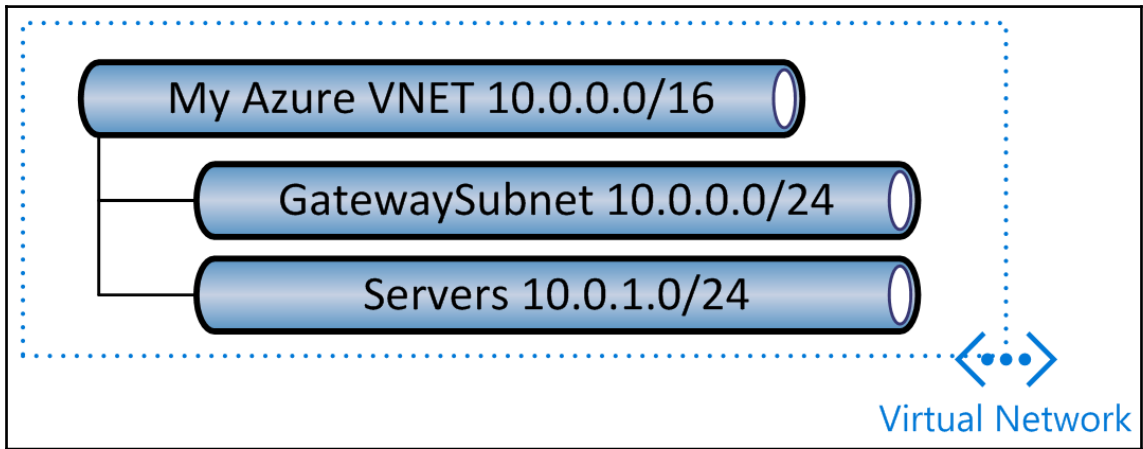
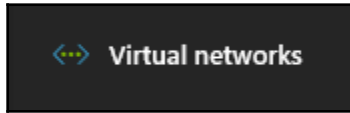
1. Technical
 - [Author Azure Resource Manager templates](#)
 - Azure Quickstart templates:
 - <https://azure.microsoft.com/documentation/templates/>
 - <https://github.com/azure/azure-quickstart-templates>
 - Create UI Definition
 - [Create user interface definition file](#)
2. Non-technical (business requirements)
 - Your company (or its subsidiary) must be located in a sell origin country supported by the Azure Marketplace
 - Your product must be licensed in a way that is compatible with billing models supported by the Azure Marketplace
 - You are responsible for providing technical support to your customers: free, paid, or through community support.
 - You are responsible for licensing your software and any dependencies on third-party software.

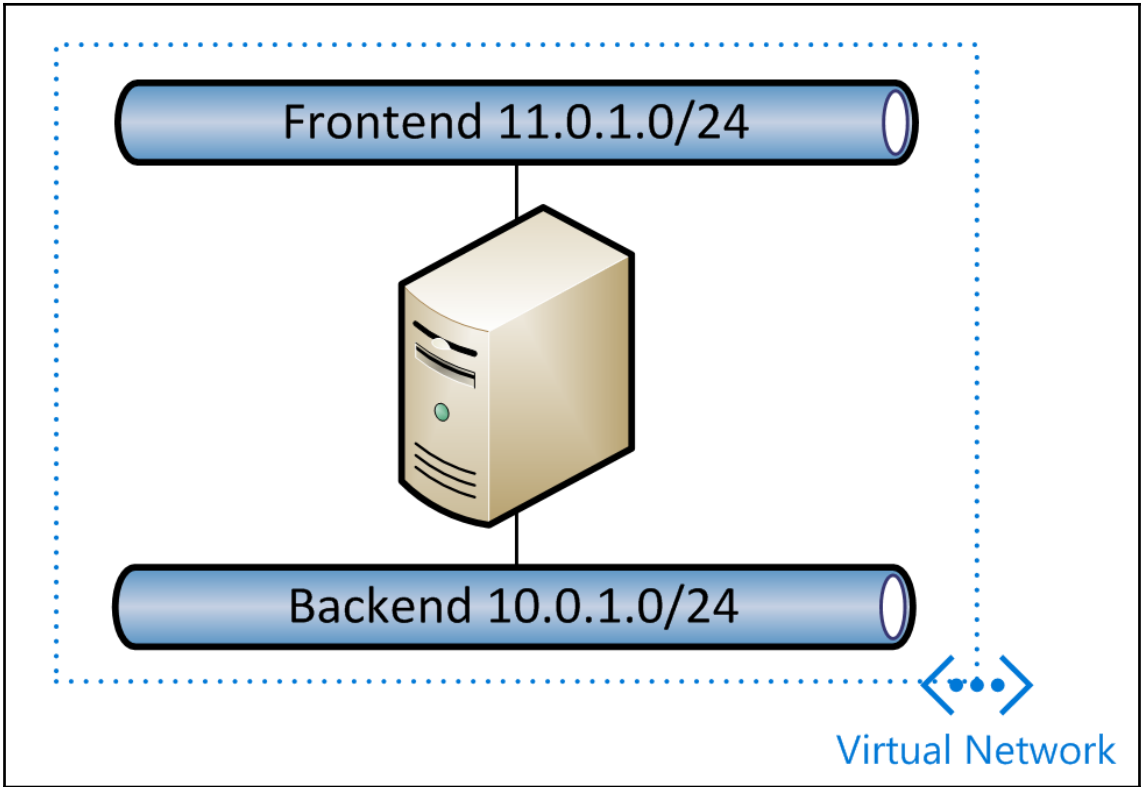
In this article

- [Pre-requisites for publishing a Managed Application](#)
- [How to create a new Azure Application offer](#)
- [How to fill out the Offer Settings form](#)
- [How to create SKUs Marketplace Form](#)
- [Support Form](#)
- [How to publish an offer](#)

Is this page helpful? Yes No

Chapter 5: Implementing Azure Networks







DCF-AWE-VN01 - Diagram

DCF-AWE-VN01

Refresh

Overview

Activity log

Access control (IAM)

Tags

SETTINGS

Address space

Connected devices

Subnets

DNS servers

Peerings

Properties

Locks

Automation script

MONITORING

Diagram

SUPPORT + TROUBLESHOOTING

New support request



GatewaySubnet 10.0.0.0/24



DCF-AWE-GW01

Gateway type
VPN

Public IP address
104.46.38.148

[open](#)



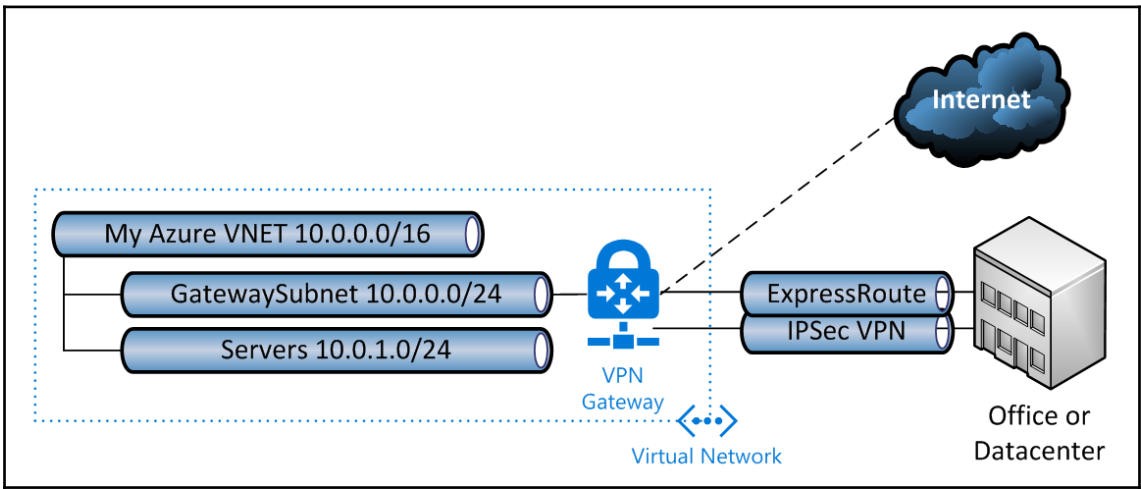
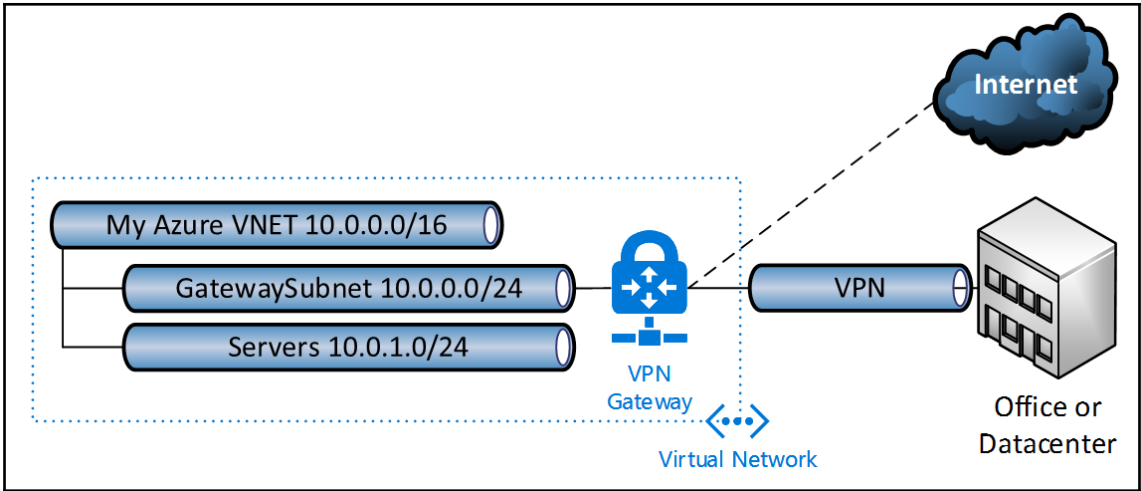
Server 10.0.1.0/24



No connected devices



Virtual network gateways

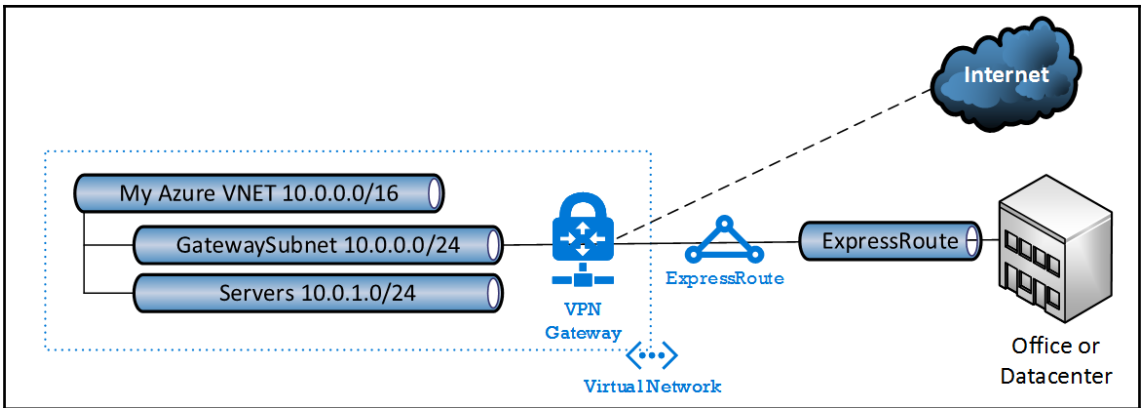
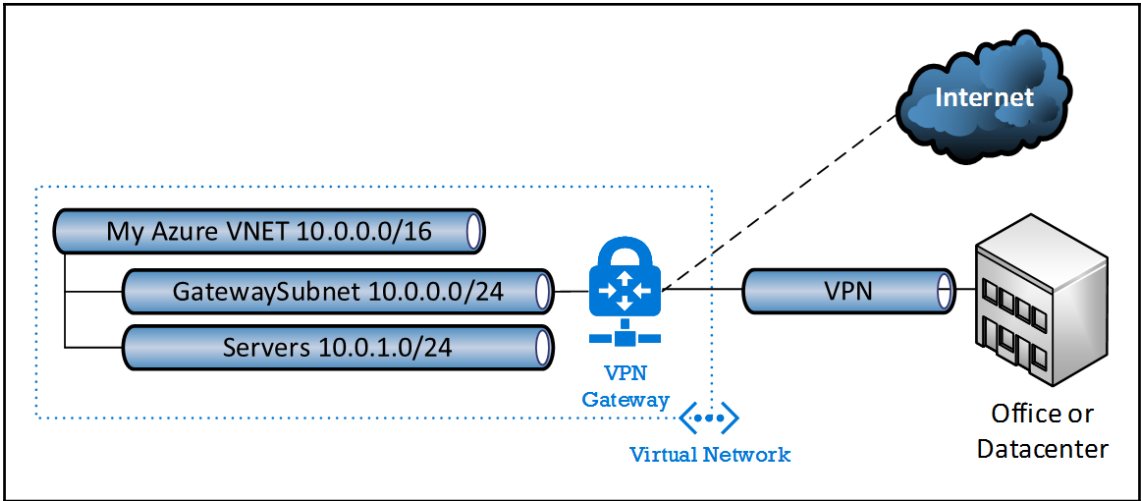


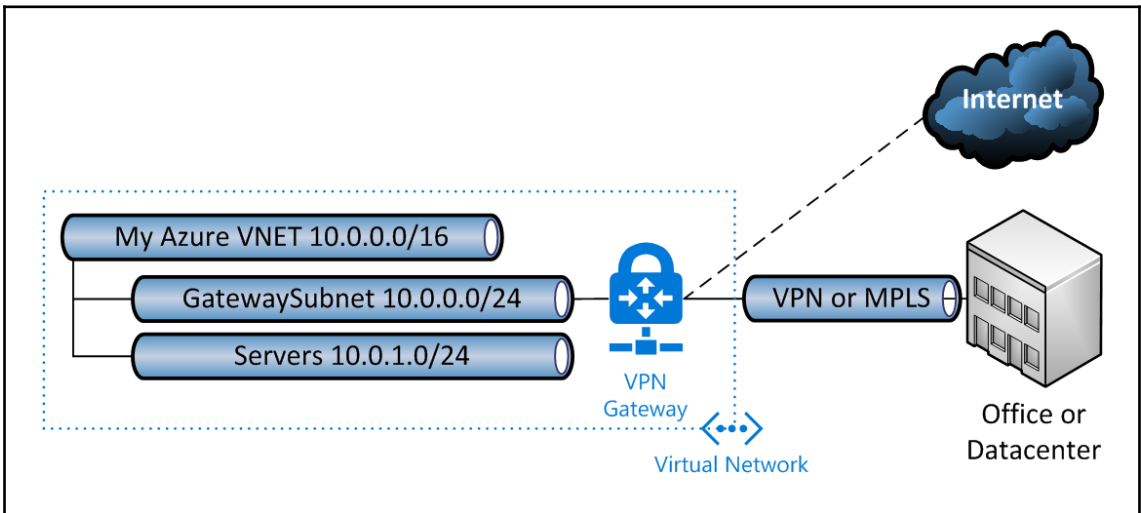
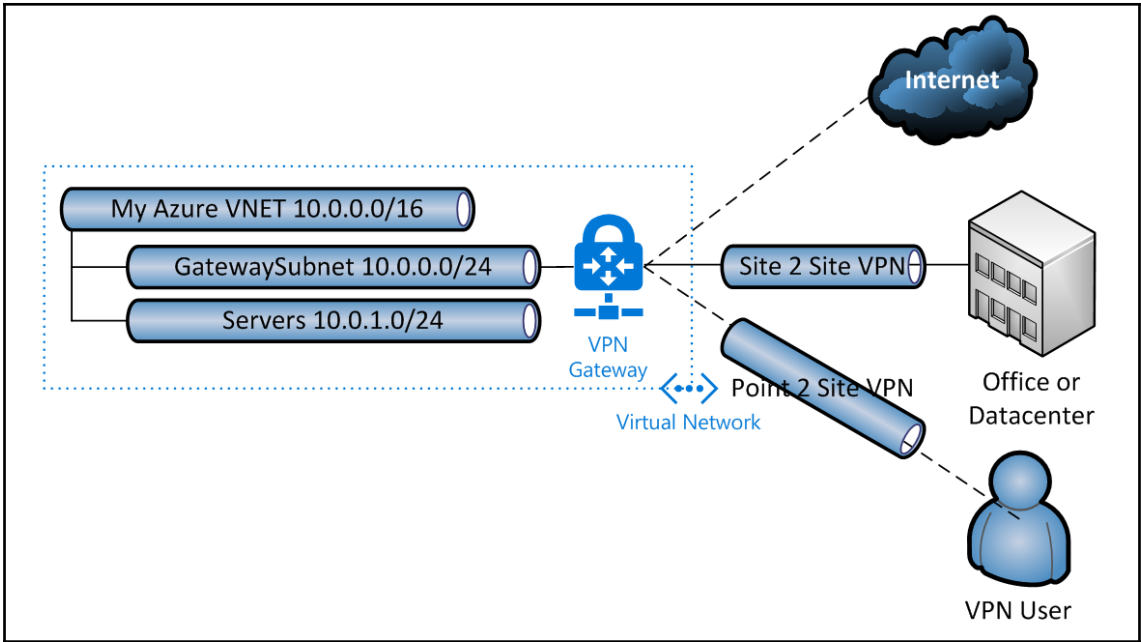
Gateway type ⓘ

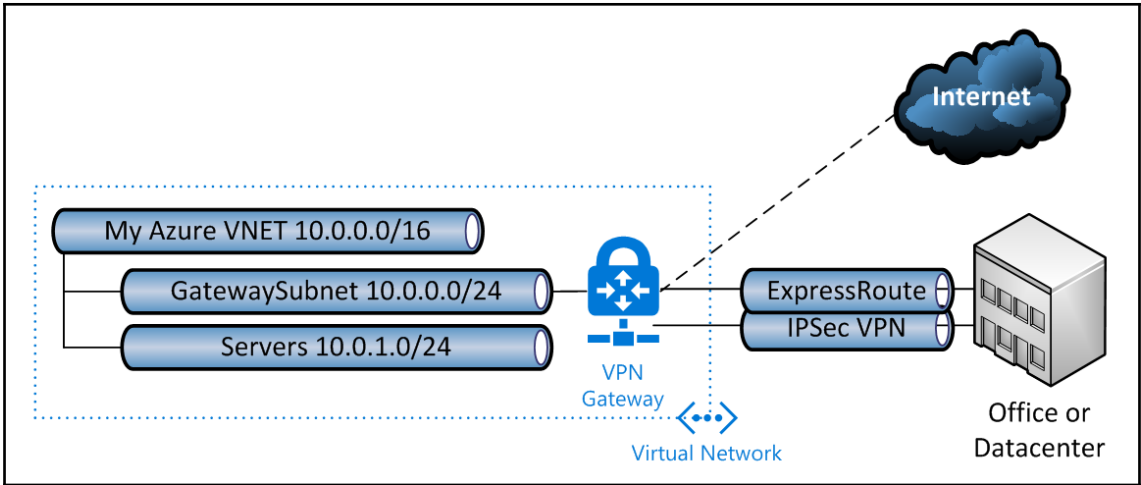
VPN ExpressRoute


VPN type ⓘ

Route-based Policy-based







 Local network gateways

Create local network g... _ □ ×

* Name

LocalNetworkGateway ✓

* IP address ⓘ

Address space ⓘ

192.168.10.0/24 ...

16.0.0.0/16 ...

Add additional address range ...

* Subscription

Visual Studio Premium with MSDN ▾

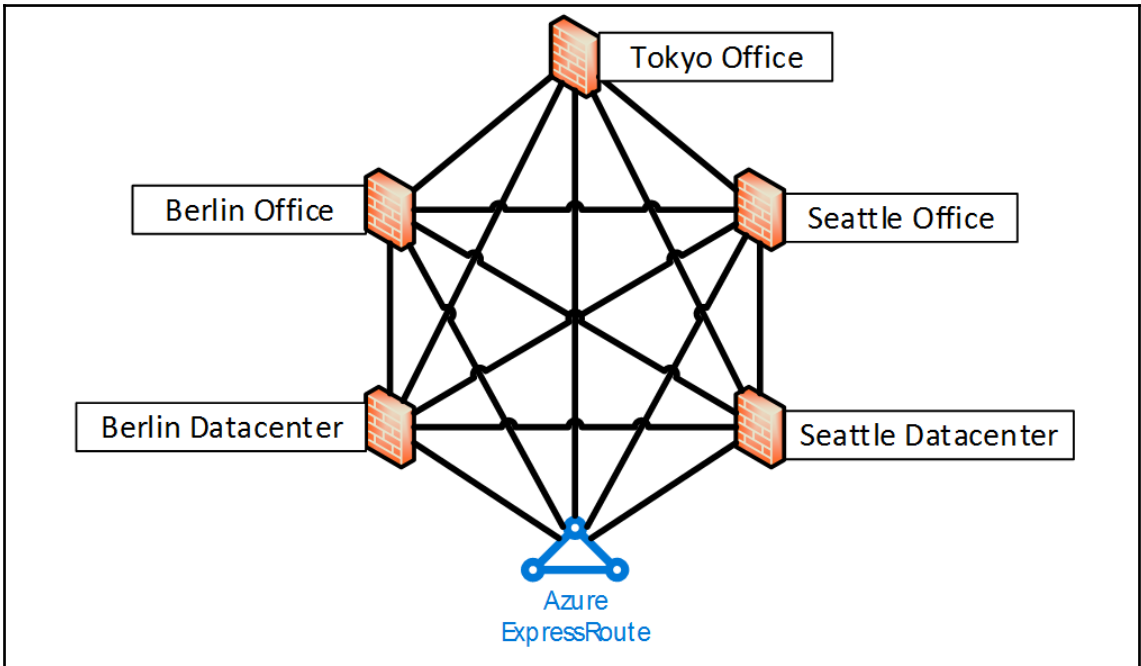
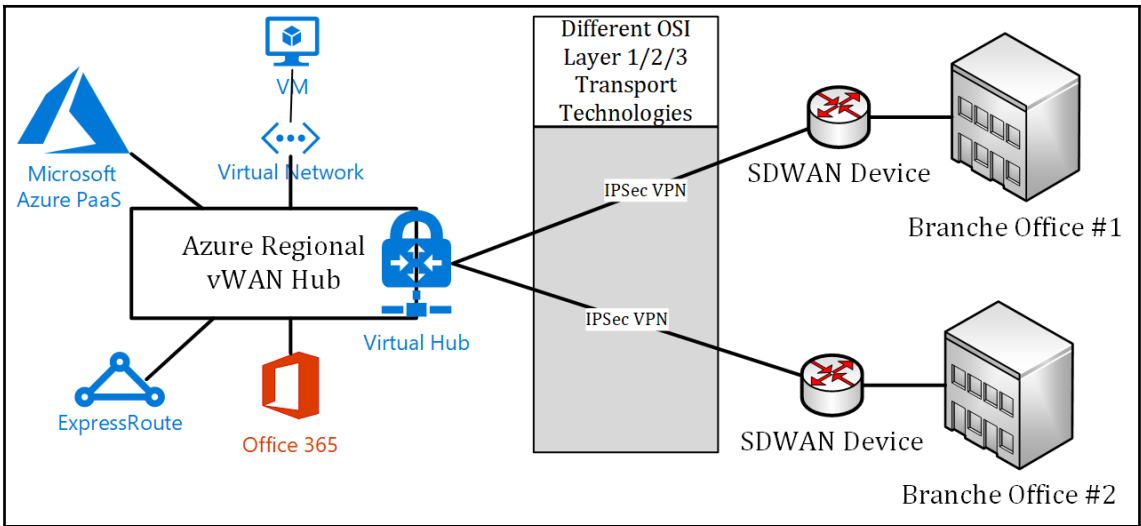
* Resource group ⓘ

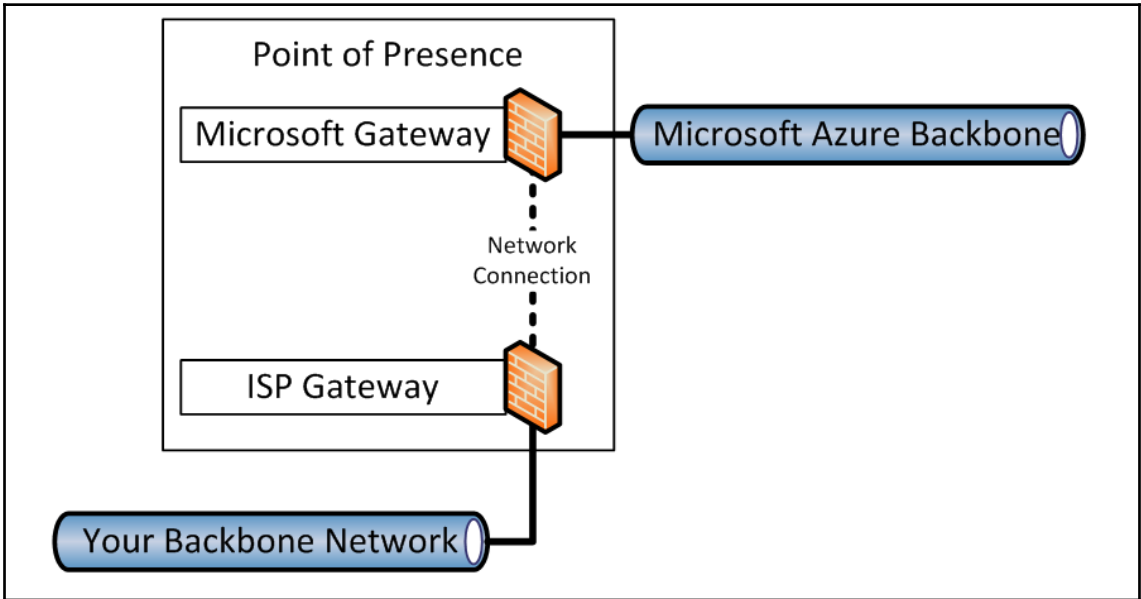
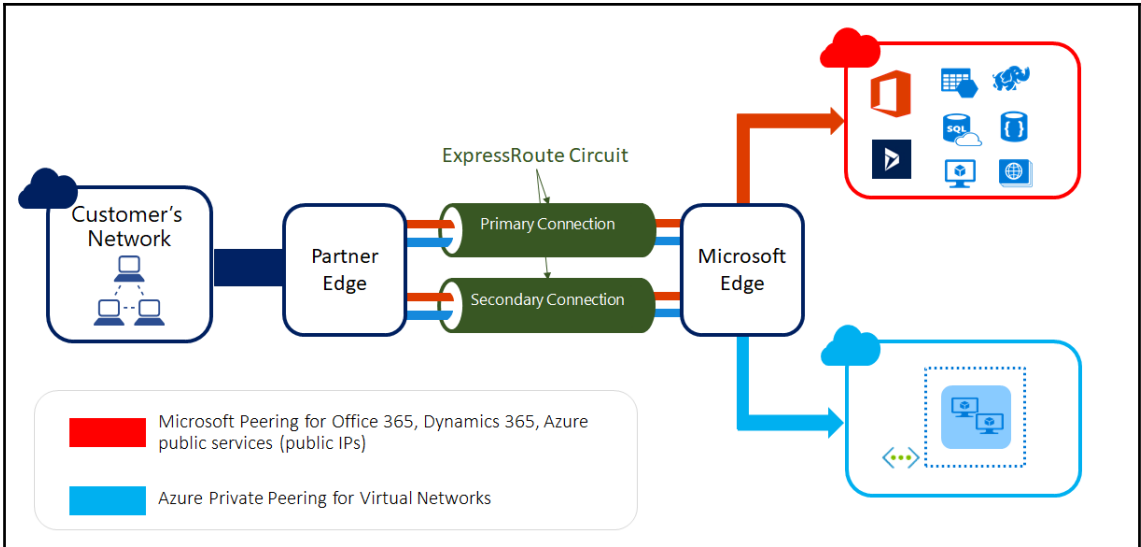
Create new Use existing

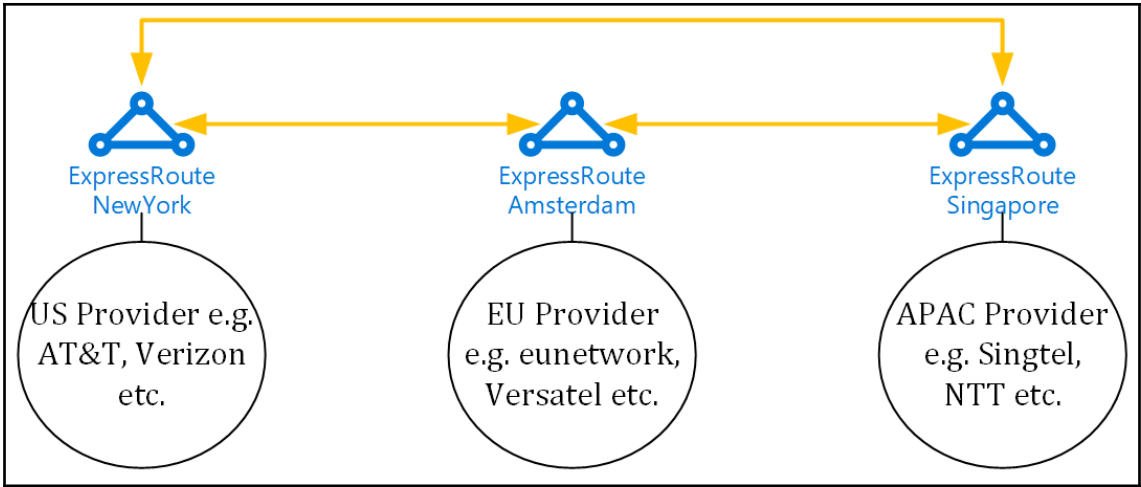
DCF-AWE-RG01 ▾


* Location

West Europe ▾








 **Connections**

- * Connection type ⓘ
- VNet-to-VNet**
 - Site-to-site (IPsec)
 - ExpressRoute

 **Route tables**

* Route name

test ✓

* Address prefix ⓘ

192.168.16.0/24 ✓

Next hop type ⓘ

Virtual network gateway

Virtual network

Internet













Virtual appliance

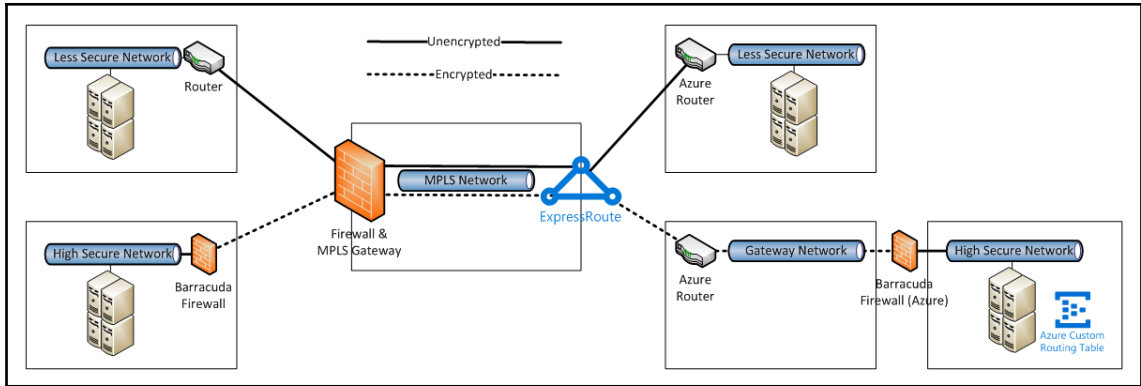
None

Filter

🔍 barracuda

Results

NAME	PUBLISHER	CATEGORY
 Barracuda NextGen Control Center (BYOL)	Barracuda Networks, Inc.	Virtual Machines
 Barracuda Message Archiver (BYOL)	Barracuda Networks, Inc.	Virtual Machines
 Barracuda Web Application Firewall (BYOL)	Barracuda Networks, Inc.	Virtual Machines
 Barracuda Web Application Firewall (PAYG)	Barracuda Networks, Inc.	Virtual Machines
 Barracuda NextGen Firewall F-Series (PAYG)	Barracuda Networks, Inc.	Virtual Machines
 Barracuda Email Security Gateway (BYOL)	Barracuda Networks, Inc.	Virtual Machines
 Barracuda Email Security Gateway (PAYG)	Barracuda Networks, Inc.	Virtual Machines
 Barracuda NextGen Firewall F-Series (BYOL)	Barracuda Networks, Inc.	Virtual Machines
 Barracuda Web Application Firewall Solution (PAYG)	Barracuda Networks, Inc.	Virtual Machines
 Barracuda Web Application Firewall Solution (BYOL)	Barracuda Networks, Inc.	Virtual Machines
 VNS3:net Lite (Firewall/VPN)	Cohesive Networks	Virtual Machines
 VNS3:vpn (Firewall/VPN)	Cohesive Networks	Virtual Machines

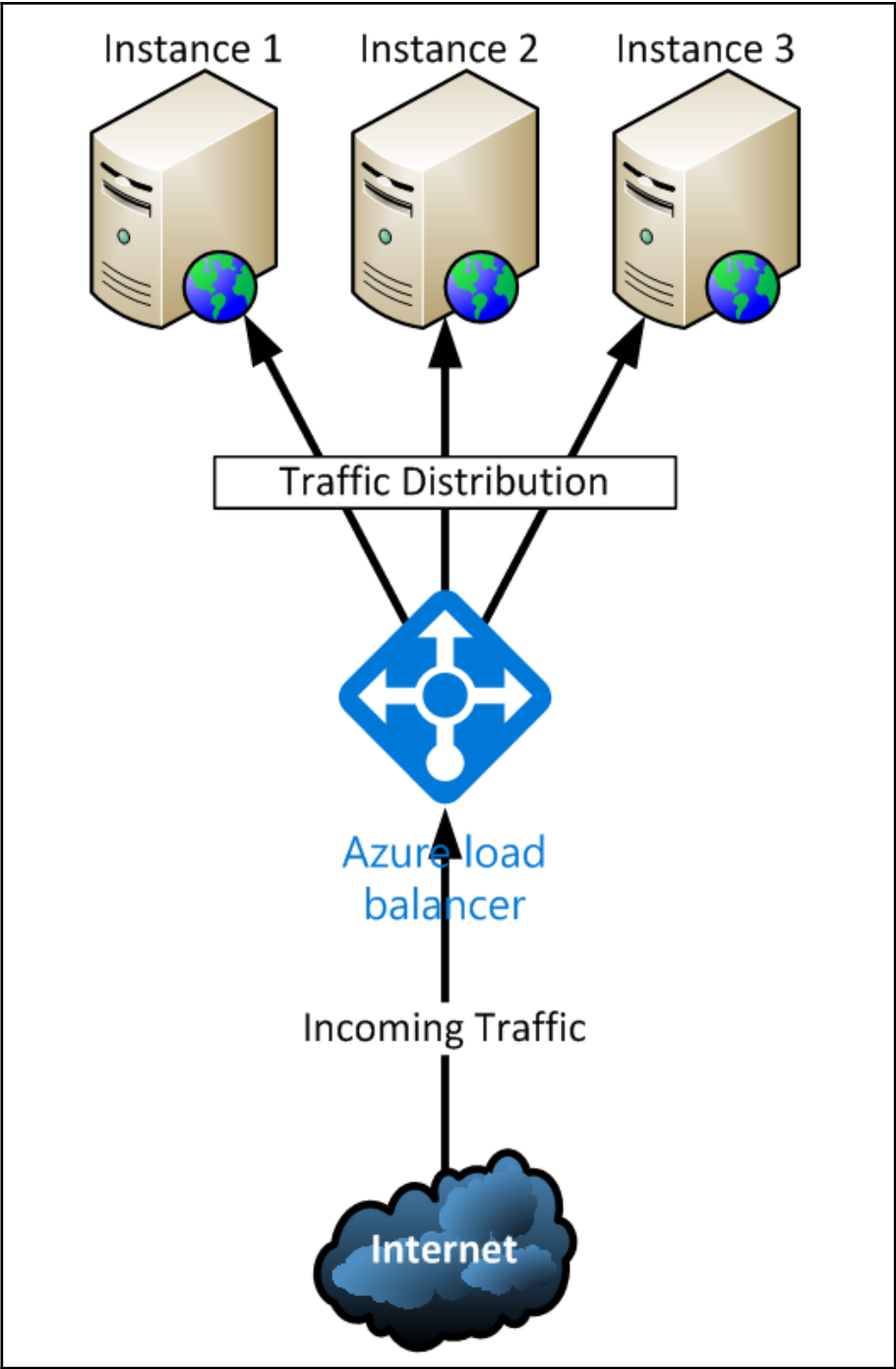


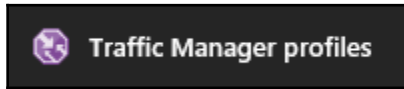
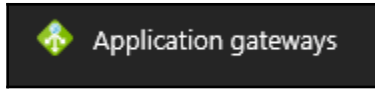
Barracuda NextGen Control Center (BYOL)

Barracuda Networks, Inc.

Bring Your Own License enabled.

- This Barracuda NextGen Control Center is licensed using the Bring-Your-Own-License (BYOL) model. [Fill out the evaluation form](#) to receive a 30-day evaluation license or purchase one of the licenses depending on your requirement.





Home > Resource groups > ways-to-the.cloud

ways-to-the.cloud

Resource group

Search (Ctrl+/) + Add Edit columns Delete resource group Refresh Move Assign tags Delete

Overview
Activity log
Access control (IAM)
Tags
Events

Settings
Quickstart
Resource costs

Subscription (change)
Visual Studio Enterprise

Subscription ID
8c7ad8e1-a309-4c3f-ac66-ec3455f89419

Deployments
1 Succeeded

Tags (change)
[Click here to add tags](#)

Filter by name... All types All locations No grouping

1 items Show hidden types

NAME	TYPE	LOCATION
<input type="checkbox"/> ways-to-the.cloud	DNS zone	global

Home > Resource groups > ways-to-the.cloud > Everything

Everything

virtual network

Pricing: All Operating System: All Publisher: All

Results

NAME	PUBLISHER	CATEGORY
<input type="checkbox"/> Virtual network	Microsoft	Networking
<input type="checkbox"/> Virtual network gateway	Microsoft	Networking

Select a deployment model 

Resource Manager



Create

Create virtual network



* Name

* Address space

10.1.0.0 - 10.1.255.255 (65536 addresses)

* Subscription

* Resource group

[Create new](#)

* Location

Subnet

* Name

* Address range

10.1.0.0 - 10.1.0.255 (256 addresses)

DDoS protection

Basic Standard

Service endpoints

Firewall

[Automation options](#)

+ Add Columns Delete Refresh Move

Essentials ^

Subscription name: **Visual Studio Enterprise**
 Last deployment: **No deployments**

Subscription ID: **43b8966b-fc55-463a-835c-c3f6181b9382**
 Location: **North Europe**

Filter items...

NAME	TYPE	LOCATION
DCF-ANE-VN01	Virtual network	North Europe

DCF-ANE-VN01 Virtual network

+ Add Columns Delete Refresh Move

Essentials ^

Subscription name: **Visual Studio Enterprise**
 Last deployment: **No deployments**

Subscription ID: **43b8966b-fc55-463a-835c-c3f6181b9382**
 Location: **North Europe**

Filter items...

NAME	TYPE	LOCATION
DCF-ANE-VN01	Virtual network	North Europe

Search (Ctrl-F)
 Overview
 Activity log
 Access control (IAM)
 Tags

SETTINGS

- Address space
- Connected devices
- Subnets
- DNS servers
- Peerings
- Properties
- Locks
- Automation script

MONITORING

- Diagram

SUPPORT + TROUBLESHOOTING

- New support request

Delete


Essentials ^


Resource group: **DCF-ANE-RG01**
 Address space: **16.0.0/16**
 Location: **North Europe**
 DNS servers: **Azure provided DNS service**

Subscription name: **Visual Studio Enterprise**
 Subscription ID: **43b8966b-fc55-463a-835c-c3f6181b9382**


0 connected devices

DEVICE	TYPE	IP ADDRESS	SUBNET
No results.			

 Search (Ctrl+*f*)


 Overview


 Activity log


 Access control (IAM)


 Tags


SETTINGS

 Address space


 Connected devices


 Subnets

 DNS servers


 Peerings

 Properties


 Locks

 Automation script

MONITORING

 Diagram

SUPPORT + TROUBLESHOOTING

 New support request

+ Subnet + Gateway subnet

Search subnets

NAME	ADDRESS RANGE	AVAILABLE ADDR...	SECURITY GROUP
Server	16.0.1.0/24	251	-

* Name
GatewaySubnet

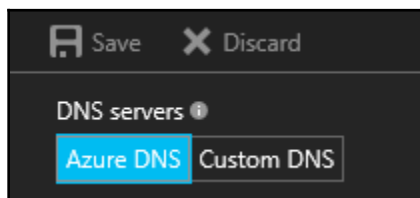
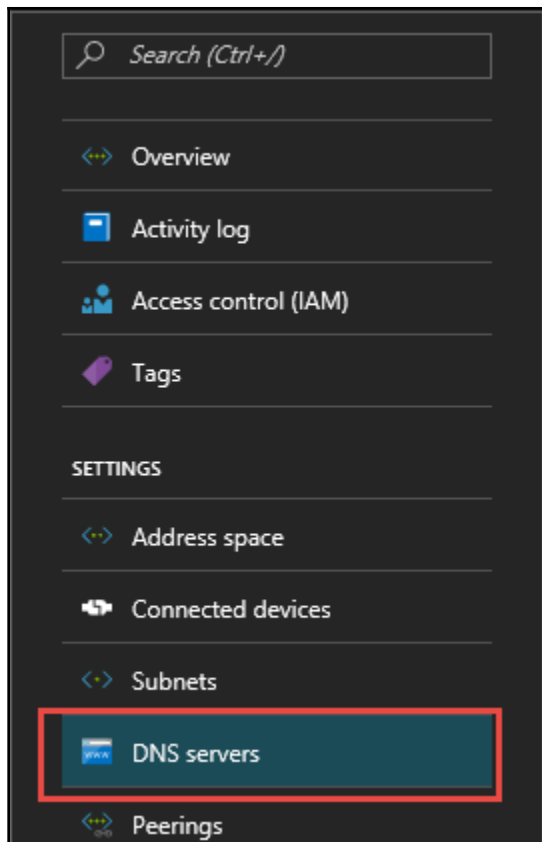
* Address range (CIDR block) ⓘ
16.0.0.0/24
16.0.0.0 - 16.0.0.255 (256 addresses)

Route table
None

+ Subnet + Gateway subnet

Search subnets

NAME	ADDRESS RANGE	AVAILABLE ADDR...	SECURITY GROUP
Server	16.0.1.0/24	251	-
GatewaySubnet	16.0.0.0/24	251	-



Save Discard

DNS servers ⓘ

Azure DNS Custom DNS

* Primary DNS server

16.0.1.10 ✓

Secondary DNS server

16.0.1.11 ✓

Home > Resource groups > ways-to-the.cloud > Everything

Everything

Local network gateway

Pricing: All Operating System: All Publisher: All

Results

NAME	PUBLISHER	CATEGORY
Local network gateway	Microsoft	Networking

Create local network g... — □

* Name

DCF-ANE-LG01 ✓

* IP address ⓘ

Address space ⓘ

192.168.0.0/16 ...

172.25.0.0/16 ...

Add additional address range ...

* Subscription

Visual Studio Enterprise ▼

* Resource group ⓘ

Create new Use existing

DCF-ANE-RG01 ▼

* Location

North Europe ▼

Pin to dashboard

Create

[Automation options](#)

Everything

Pricing

All

Operating System

All

Publisher


All

Results


NAME	PUBLISHER	CATEGORY
 Virtual network gateway	Microsoft	Networking

Create virtual network gateway

* Name

Gateway type 

VPN ExpressRoute


VPN type 


Route-based Policy-based

* SKU 

Enable active-active mode 

* Virtual network 

Choose a virtual network 

* Public IP address 

Create new Use existing

^ Configure public IP address

SKU

* Assignment

Dynamic Static

Configure BGP ASN 

* Subscription

Resource group 

-

* Location 

Create

Automation options

Visual Studio Enterprise

Subscription name (changed)
Visual Studio Enterprise
Deployments
1 Deploying, 1 Failed, 16 Succeeded

Subscription ID
43b8966b-fc55-463a-835c-c3f6181b9382
Location
West Europe

Filter by name...

NAME	TYPE	LOCATION
DCF-Demo-RV01	Recovery Services vault	West Europe
GW01	Virtual network gateway	West Europe
GW01-PIP	Public IP address	West Europe
VN01	Virtual network	West Europe

GW01
Virtual network gateway

Search (Ctrl+F)

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems

SETTINGS
Configuration
Connections
Point-to-site configuration



GW01 - Configuration

Virtual network gateway

Search (Ctrl+/)

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

SETTINGS

Configuration

Connections

Point-to-site configuration

Properties

Locks

Automation script

SUPPORT + TROUBLESHOOTING

Resource health

Reset

New support request

Save

Discard

* SKU

Basic

Standard

High performance

2

1

connection

Pricing: All

Operating System: All

Publisher: All

Results

NAME	PUBLISHER	CATEGORY
Connection	Microsoft	Networking

Create connection

- 1** Basics
 Configure basic settings >
- 2** Settings
 Configure connection settings >
- 3** Summary
 Review and create >

Basics

- * Connection type ⓘ
- * Subscription
- * Resource group ⓘ

[Create new](#)
- * Location

Create connection

- 1 Basics ✓
Configure basic settings
- 2 Settings >
Configure connection settings
- 3 Summary >
Review and create

Settings

- * Virtual network gateway ⓘ >
Choose a virtual network gateway
- * Local network gateway ⓘ >
Choose a local network gateway

* Connection name

* Shared key (PSK) ⓘ

Enable BGP ⓘ

DCF-ANE-RG01
Resource group
✦ - □ ×

+ Add
☰ Columns
🗑 Delete
🔄 Refresh
➡ Move

- 🏠 Overview
- 📄 Activity log
- 👤 Access control (IAM)
- 🏷 Tags

SETTINGS

- 🏠 Quickstart
- 💰 Resource costs

Essentials ^

Subscription name: **Visual Studio Enterprise** | Subscription ID: 43b8966b-fc55-463a-835c-c3f6181b9382

Last deployment: 9/10/2016 (Succeeded) | Location: North Europe

NAME	TYPE	LOCATION	
DCF-ANE-GW01-DCF-ANE-LG01	Connection	North Europe	...
DCF-ANE-LG01	Local network...	North Europe	...
DCF-ANE-GW01-PIP	Public IP addr...	North Europe	...

DCF-ANE-GW01-DCF-ANE-LG01
Connection

Search (Ctrl+/)

Overview
Activity log
Access control (IAM)
Tags

SETTINGS

Delete

Essentials ^

Resource group
DCF-ANE-RG01

Status
Connecting

Location
North Europe

Subscription name
Visual Studio Enterprise

Subscription ID
43b8966b-fc55-463a-835c-c3f6181b9382

Data in
0 B

Data out
0 B

Virtual network
DCF-ANE-VN01

Virtual network gateway
DCF-ANE-GW01 (52.178.159.75)

Local network gateway
DCF-ANE-LG01 (91.65.84.40)

NAME		TYPE	LOCATION	
DCF-ANE-GW01-DCF-ANE-LG01	4	Connection	North Europe	...
DCF-ANE-GW01-DCF-ANE-LG02		Connection	North Europe	...
DCF-ANE-LG01	3	Local network...	North Europe	...
DCF-ANE-LG02		Local network...	North Europe	...
DCF-ANE-GW01-PIP	2	Public IP addr...	North Europe	...
DCF-ANE-GW01	1	Virtual networ...	North Europe	...
DCF-ANE-VN01		Virtual network	North Europe	...

Create virtual network gateway



* Name

Gateway type

 VPN ExpressRoute

* SKU

Enable active-active mode

* Virtual network

Choose a virtual network



* Public IP address

 Create new Use existing

^ Configure public IP address

SKU

* Assignment

 Dynamic Static

Configure BGP ASN

* Subscription

Resource group

-

* Location

Create

Automation options

Everything



ExpressRoute

Pricing

All

Operating System

All

Publisher

All

Results

NAME

PUBLISHER

CATEGORY



ExpressRoute

Microsoft

Networking

Create ExpressRoute circuit □ ✕

Create new Import

* Circuit name

* Provider ⓘ

* Peering location ⓘ

* Bandwidth ⓘ

* SKU ⓘ

Standard Premium

* Billing model ⓘ

Unlimited Metered

Allow classic operations ⓘ

* Subscription

Visual Studio Enterprise ▼

* Resource group

Select existing... ▼

[Create new](#)

* Location

West Europe ▼

Create

Automation options

DCF-ANE-EX01
ExpressRoute circuit

Delete

Search (Ctrl+/)

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems

SETTINGS

- Configuration
- Connections
- Peerings
- Properties
- Locks
- Automation script

SUPPORT + TROUBLESHOOTING

- New support request

Initiate the provisioning process with your service provider.

Essentials ^

Resource group	Provider
DCF-ANE-RG01	Equinix
Circuit status	Provider status
Enabled	Not provisioned
Location	Peering location
North Europe	Amsterdam
Subscription name	Bandwidth
Visual Studio Enterprise	50 Mbps
Subscription ID	Service key
43b8966b-fc55-463a-835c-c3f6181b9382	2c3b3488-2f70-48d6-a2c0-8a0d0e7db148

Peerings

TYPE ^	STATUS ^	PRIMARY SUBNET ^	SECONDARY SUBNET ^	
Azure private	Disabled	-	-	...
Azure public	Disabled	-	-	...
Microsoft	Disabled	-	-	...

Resource group	Provider
[REDACTED]	Equinix
Circuit status	[REDACTED]
Enabled	
Location	Peering location
West Europe	Amsterdam
Subscription name	Bandwidth
Azure in Open	200 Mbps
Subscription ID	Service key
[REDACTED]	[REDACTED]

* Peer ASN ⓘ

0

* Primary subnet ⓘ

* Secondary subnet ⓘ

* VLAN ID ⓘ

0

* Advertised public prefixes ⓘ

Status: Not configured

Customer ASN ⓘ

0

Routing registry name ⓘ

None



Shared key

Essentials ^

Resource group

[REDACTED]

Circuit status

Enabled

Location

West Europe

Subscription name

[Azure in Open](#)

Subscription ID

[REDACTED]

Provider

Equinix

Provider status

Provisioned

Peering location

Amsterdam

Bandwidth

200 Mbps

Service key

[REDACTED]

Peerings

TYPE ^	STATUS ^	PRIMARY SUBNET ^	SECONDARY SUBNET ^	
Azure private	Enabled	[REDACTED]	[REDACTED]	...
Azure public	Disabled	-	-	...
Microsoft	Disabled	-	-	...

Private peering

WH-AWE-ER01

Save

Discard

Delete

* Peer ASN ⓘ

9999

* Primary subnet ⓘ

213.56.34.15/30

* Secondary subnet ⓘ

203.66.34.15/30

* VLAN ID ⓘ

99

Shared key

Resource group DCF-AWE-RG01	Address space 10.0.0.0/16
Location West Europe	DNS servers Azure provided DNS service
Subscription name Visual Studio Premium with MSDN	
Subscription ID [REDACTED]	

Resource group DCF-AWE-RG02	Address space 17.0.0.0/16
Location West Europe	DNS servers Azure provided DNS service
Subscription name Visual Studio Enterprise	
Subscription ID [REDACTED]	

+ Add
Columns
Delete
Refresh
Move

Essentials ^

Subscription name
Visual Studio Enterprise

Subscription ID
43b8966b-fc55-463a-835c-c3f6181b9382

Last deployment
9/17/2016 (Succeeded)

Location
West Europe

Filter items...

NAME	TYPE	LOCATION	
<-> DCF-AWE-VN01	Virtual network	West Europe	...

Virtual network

Search (Ctrl+/)

- <-> Overview
- Activity log
- Access control (IAM)
- Tags

SETTINGS

- <-> Address space
- Connected devices
- <-> Subnets
- DNS servers
- <-> Peering
- Properties**

DCF-AWE-VN01 - Properties

Virtual network

Search (Ctrl+/)

- Overview
- Activity log
- Access control (IAM)

RESOURCE ID

`/subscriptions/43b8966b-fc55-463a-835c-4a88a0611-bc01-4199-0a5e-2ca0700a0c54`

[Change subscription](#)

LOCATION

West Europe

DCF-AWE-VN01 - Peerings

Virtual network

+ Add Columns Delete Refresh Move

Essentials

Subscription name: **Visual Studio Premium with MSDN** | Subscription ID: `4a88a0611-bc01-4199-0a5e-2ca0700a0c54`

Last deployment: **8/29/2016 (Succeeded)** | Location: West Europe

Filter items...

NAME	TYPE	LOCATION	
DCF-AWE-GW01-DCF-AWE-LG01	Connection	West Europe	...
DCF-AWE-LG01	Local network...	West Europe	...
DCF-AWE-GW01-PIP	Public IP addr...	West Europe	...
route	Route table	West Europe	...
DCF-AWE-GW01	Virtual networ...	West Europe	...
DCF-AWE-VN01	Virtual network	West Europe	...

SETTINGS

- Address space
- Connected devices
- Subnets
- DNS servers
- Peerings**
- Properties

DCF-AWE-VN01 - Peerings
Virtual network

+ Add

Search (Ctrl+/)

Search peerings

NAME	PEERING STATUS
No results.	

Overview

Activity log

Access control (IAM)

Add peering
DCF-AWE-VN01

* Name
DCF-AWE-PR01

Peer details

Virtual network deployment model ⓘ

Resource manager Classic

I know my resource ID ⓘ

Add peering

DCF-AWE-VN01

* Name

 ✕

Peer details

Virtual network deployment model ⓘ

Resource manager Classic

I know my resource ID ⓘ

* Resource ID ⓘ

t.Network/virtualNetworks/DCF-AWE-VN ✓

Configuration

Allow virtual network access ⓘ

Enabled Disabled

Allow forwarded traffic ⓘ

Allow gateway transit ⓘ

Use remote gateways ⓘ

DCF-AWE-VN01 - Peerings
Virtual network

+ Add

Search (Ctrl+/)

Search peerings

NAME	PEERING STATUS	PEER	GATEWAY TRANSIT	
DCF-AWE-PR01	Initiated	DCF-AWE-VN01	Disabled	...

DCF-AWE-VN01 - Peerings
Virtual network

+ Add

Search (Ctrl+/)

Search peerings

NAME	PEERING STATUS	PEER	GATEWAY TRANSIT	
DCF-AWE-PR02	Connected	DCF-AWE-VN01	Disabled	...

DCF-AWE-VN01 - Peerings
Virtual network

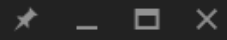
+ Add

Search (Ctrl+/)

Search peerings

NAME	PEERING STATUS	PEER	GATEWAY TRANSIT	
DCF-AWE-PR01	Connected	DCF-AWE-VN01	Disabled	...



Everything



Filter

Route table

Results

NAME	PUBLISHER	CATEGORY
 Route table	Microsoft	Networking
 Cisco ASAv - BYOL 4 NIC	Cisco Systems, Inc.	Virtual Machines

Route table

You can add routes to this table after it's...

* Name

DCF-ANE-RT01

* Subscription

Visual Studio Enterprise

* Resource group ⓘ

Create new Use existing

DCF-ANE-RG01

* Location

North Europe

Pin to dashboard

Create

[Automation options](#)

Search (Ctrl+/)

- Overview
- Activity log
- Access control (IAM)
- Tags
- SETTINGS
- Quickstart
- Resource costs
- Deployments
- Properties
- Locks
- Automation script
- SUPPORT + TROUBLESHOOTING
- New support request

Essentials ^

Subscription name: Visual Studio Enterprise
Subscription ID: 43b8966b-fc55-463a-835c-c3f6181b9382
Last deployment: 9/14/2016 (Deploying)
Location: North Europe

Filter items...

NAME	TYPE	LOCATION	
DCF-ANE-GW01-DCF-ANE-LG01	Connection	North Europe	...
DCF-ANE-GW01-DCF-ANE-LG02	Connection	North Europe	...
DCF-ANE-EX01	ExpressRoute...	North Europe	...
DCF-ANE-LG01	Local network...	North Europe	...
DCF-ANE-LG02	Local network...	North Europe	...
DCF-ANE-GW01-PIP	Public IP addr...	North Europe	...
DCF-ANE-GW02-PIP	Public IP addr...	North Europe	...
DCF-ANE-GW03-PIP	Public IP addr...	North Europe	...
DCF-ANE-RT01	Route table	North Europe	...

DCF-ANE-RT01
Route table

Delete

Search (Ctrl+F)

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

SETTINGS

Routes

Subnets

Properties

Locks

Automation script

SUPPORT + TROUBLESHOOTING

New support request

Essentials

Resource group
DCF-ANE-RG01

Associations
0 subnet associations

Location
North Europe

Subscription name
Visual Studio Enterprise

Subscription ID
[REDACTED]

Routes

NAME	ADDRESS PREFIX	NEXT HOP
No results.		

Subnets

NAME	ADDRESS RANGE	VIRTUAL NETWO...	SECURITY GROUP
No results.			

Subnets

DCF-ANE-RT01

Associate

Search subnets

NAME	ADDRESS RANGE	VIRTUAL NETWO...	SECURITY GROUP
No results.			

Associate subnet

DCF-ANE-RT01

- Virtual network
DCF-ANE-VN01
- Subnet
Choose a subnet

Resource

DCF-ANE-VN01 northeurope
DCF-ANE-VN02 northeurope
DCF-ANE-VN03 northeurope

Associate subnet

DCF-ANE-RT01

- 1 Virtual network
DCF-ANE-VN01 ✓
- 2 Subnet
Choose a subnet >

Choose subnet

DCF-ANE-RG01

- GatewaySubnet
- Server

Routes

NAME	ADDRESS PREFIX	NEXT HOP
No results.		

Subnets

NAME	ADDRESS RANGE	VIRTUAL NETWO...	SECURITY GROUP
Server	16.0.1.0/24	DCF-ANE-VN01	-

Routes

DCF-ANE-RT01

+ Add

Search routes

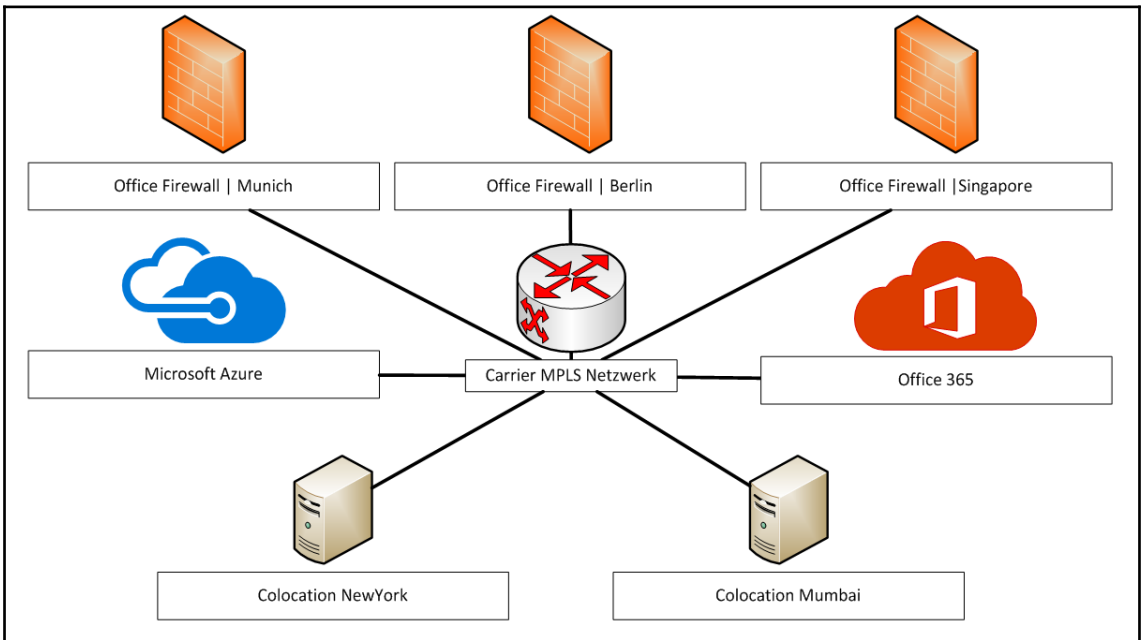
NAME	ADDRESS PREFIX	NEXT HOP
No results.		

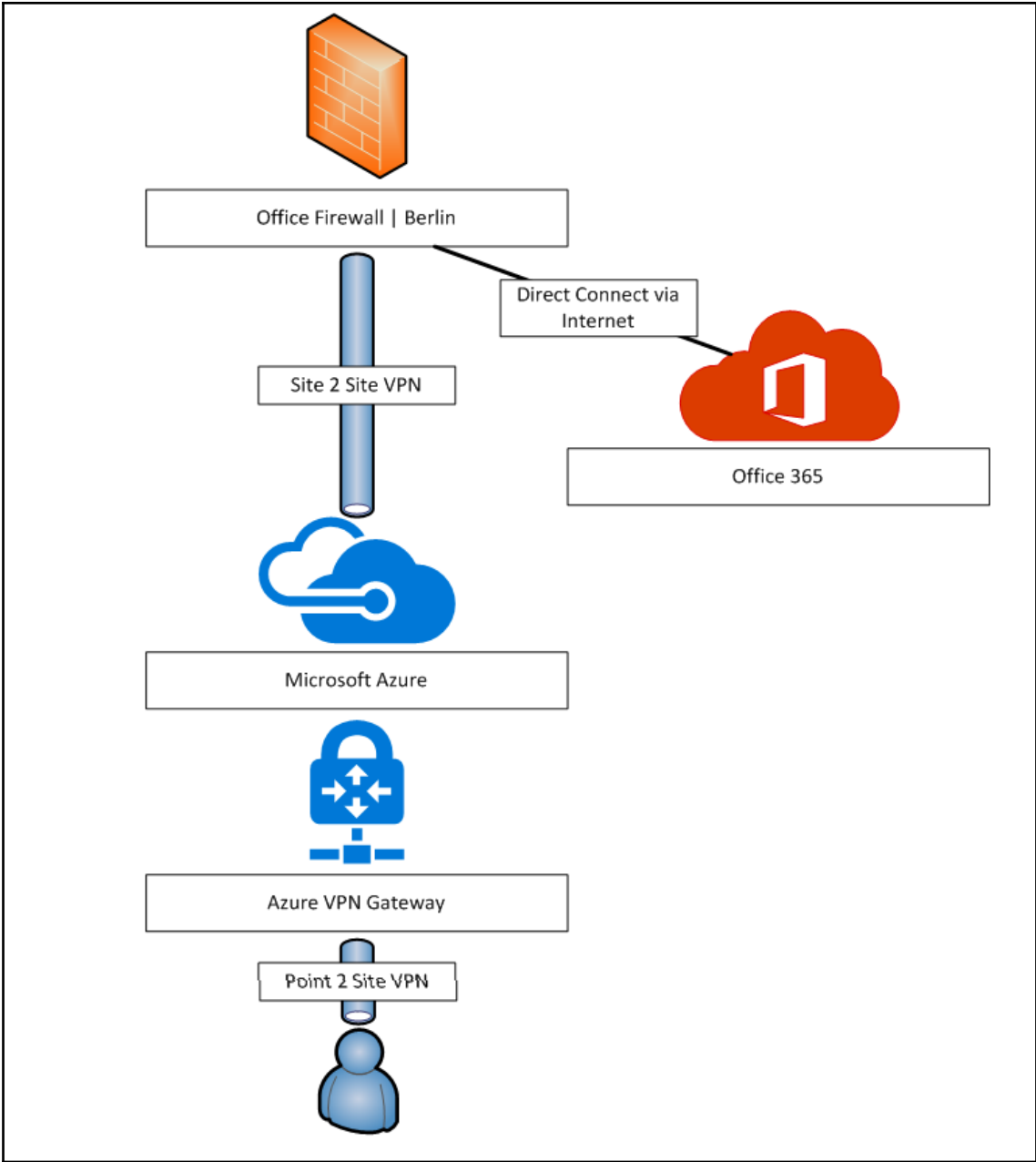
Add route

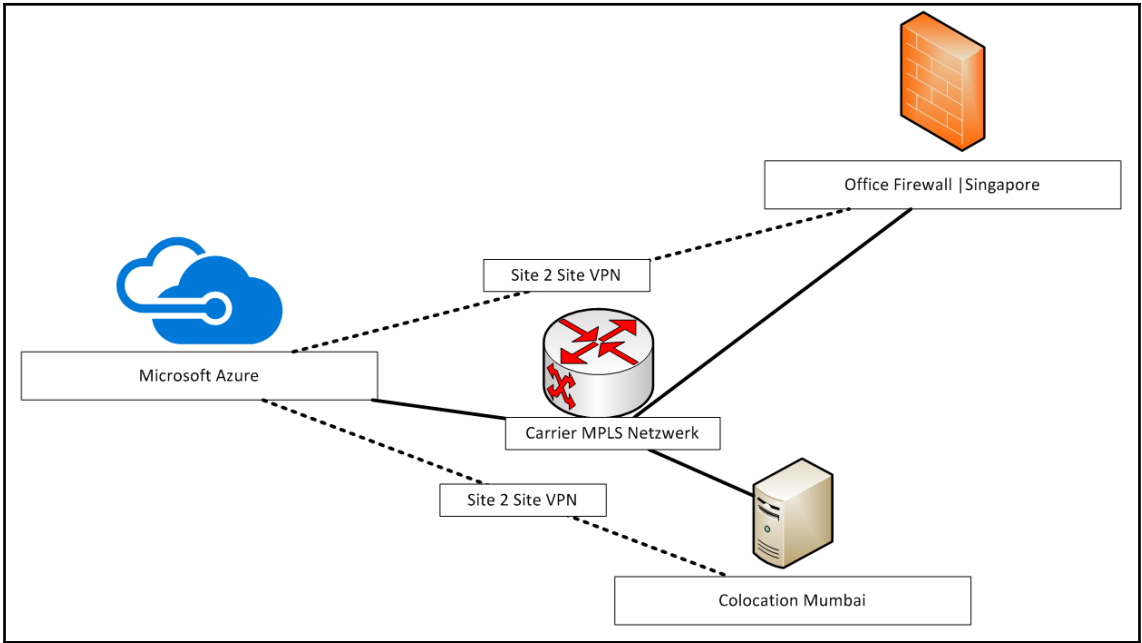
DCF-ANE-RT01

- * Route name: ✓
- * Address prefix: ✓
- Next hop type: ▼
- * Next hop address: ✓

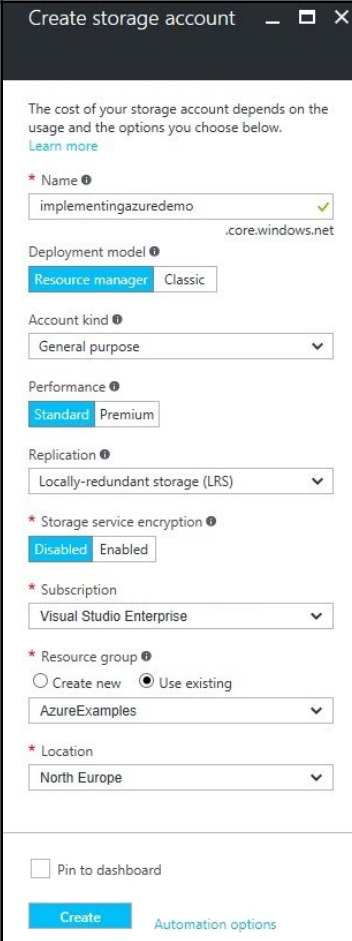
Ensure you have IP forwarding enabled on your virtual appliance. You can enable this by navigating to the respective network interface's IP address settings.







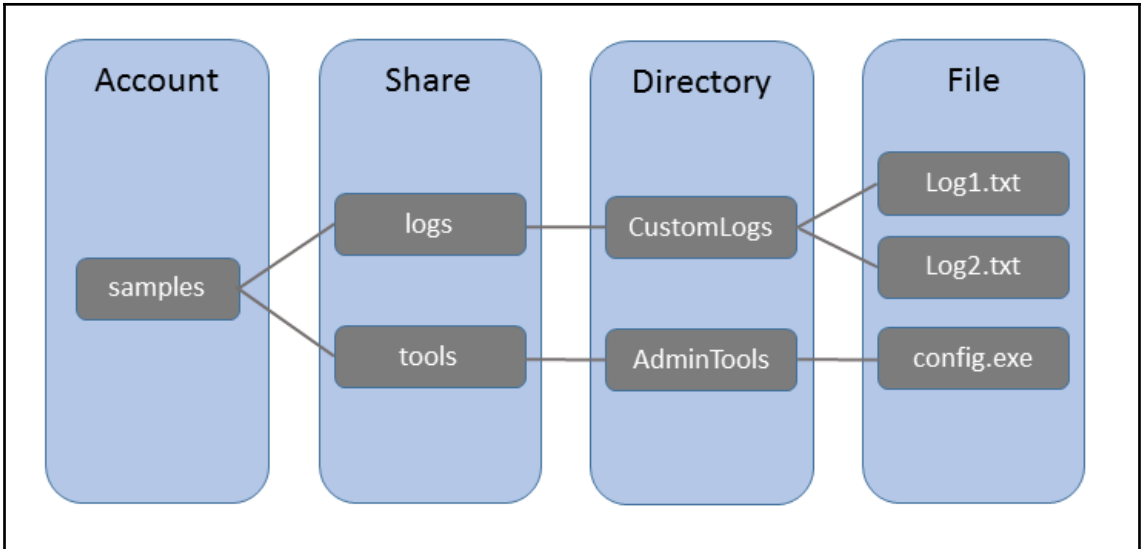
Chapter 6: Implementing Azure Storage



The screenshot shows the 'Create storage account' form in the Azure portal. The form is titled 'Create storage account' and includes a close button (X) and a maximize button. The form contains the following fields and options:

- Name:** A text input field containing 'implementingazuredemo' with a green checkmark and a '.core.windows.net' domain suggestion.
- Deployment model:** Radio buttons for 'Resource manager' (selected) and 'Classic'.
- Account kind:** A dropdown menu set to 'General purpose'.
- Performance:** Radio buttons for 'Standard' (selected) and 'Premium'.
- Replication:** A dropdown menu set to 'Locally-redundant storage (LRS)'.
- Storage service encryption:** Radio buttons for 'Disabled' (selected) and 'Enabled'.
- Subscription:** A dropdown menu set to 'Visual Studio Enterprise'.
- Resource group:** Radio buttons for 'Create new' and 'Use existing' (selected), with a dropdown menu set to 'AzureExamples'.
- Location:** A dropdown menu set to 'North Europe'.

At the bottom of the form, there is a checkbox for 'Pin to dashboard' and a blue 'Create' button. Below the 'Create' button is a link for 'Automation options'.



implementingazuredemo - Access keys
Storage account

Search (Ctrl+/)

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems

SETTINGS

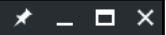
- Access keys
- Configuration
- Shared access signature
- Properties

Use access keys to authenticate your applications when making requests to this Azure storage account. Store your access keys securely - for example, using Azure Key Vault - and don't share them. We recommend regenerating your access keys regularly. You are provided two access keys so that you can maintain connections using one key while regenerating the other.

When you regenerate your access keys, you must update any Azure resources and applications that access this storage account to use the new keys. This action will not interrupt access to disks from your virtual machines. [Learn more](#)

Storage account name:

NAME	KEY			
key1	3tgZqLfIJUNETVBnfwecvGNC6FMp4rwyiKa8qcHdVRdg53MxZ1'			
key2	aiKeflrA1uCqdMF0GKNjaHbmqlR7cA50w5WBWYaKTO4t4uf			



Search (Ctrl+/)

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems

SETTINGS

- Access keys
- Configuration
- Shared access signature
- Properties

Use access keys to authenticate your applications when making requests to this Azure storage account. Store your access keys securely - for example, using Azure Key Vault - and don't share them. We recommend regenerating your access keys regularly. You are provided two access keys so that you can maintain connections using one key while regenerating the other.

When you regenerate your access keys, you must update any Azure resources and applications that access this storage account to use the new keys. This action will not interrupt access to disks from your virtual machines. [Learn more](#)

Storage account name

NAME	KEY
key1	<input type="text" value="3tgZqLfIJNETVBNfwecvGNC6FMp4rwyiKa8qcHdVRdg53MxZ1'"/> ...
key2	<input type="text" value="aiKefLrA1uCqdMF0GKNjaHbmqhLR7cA50w5WBWYaKTO4t4uI"/> ...

Edit Help

 Microsoft Azure



Show resources from these subscriptions:

[Add an account...](#)

Apply

Cancel



Activities

[What do you like about this tool?](#)

[What don't you like or feel is missing?](#)

Microsoft Azure

Work or school, or personal Microsoft account

[Redacted]

[Redacted]

Sign in

Back

[Can't access your account?](#)

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Search for resources

Collapse All

- Quick Access
- (Local and Attached)
 - Storage Accounts
- Visual Studio Enterprise [Redacted]
 - Storage Accounts
- Visual Studio Enterprise [Redacted]
 - Storage Accounts

Storage Accounts

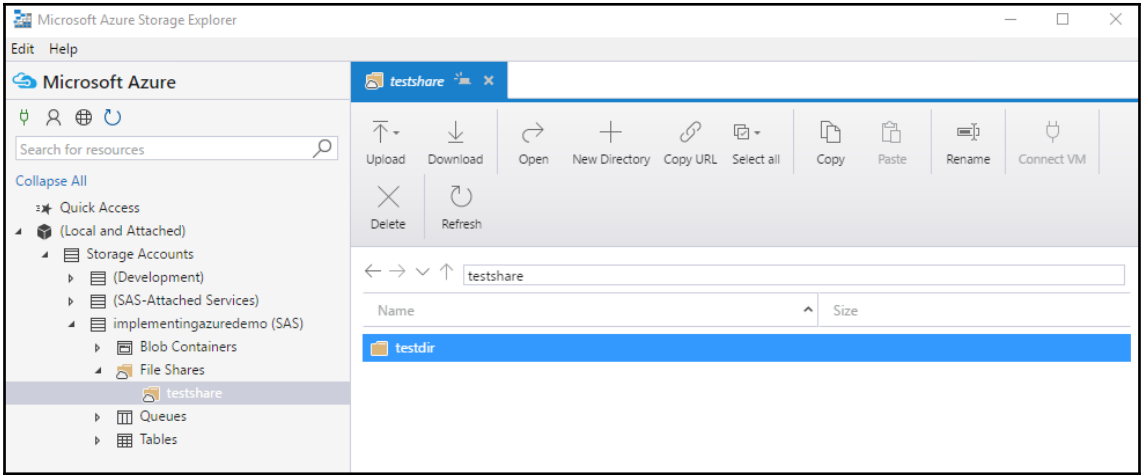
Microsoft Azure Storage Explorer

Edit Help


Microsoft Azure


Search for resources

Collapse All








 Create a resource


 All services


 FAVORITES


 Dashboard


 All resources


 Resource groups


 App Services


 Function Apps


 SQL databases

 Azure Cosmos DB


 Virtual machines


 Load balancers


 Storage accounts


 Virtual networks


 Azure Active Directory

 Monitor

 Advisor

 Security Center

 Cost Management + Billing

 Help + support

All services

- Data Lake Storage Gen1 ★
- Storage accounts** ★
- Storage explorer PREVIEW ★
- Free services
Keywords: free storage ★
- Storage accounts (classic) ★
- Storage Sync Services ★

Home > Storage accounts

Storage accounts

Microsoft

+ Add
 ☰ Edit columns
 ↻ Refresh
 |
 🏷️ Assign tags
 🗑️ Delete

Subscriptions: All 2 selected – Don't see a subscription? [Open Directory + Subscription](#)

0 items

<input type="checkbox"/>	NAME ↑↓	TYPE ↑↓
--------------------------	---------	---------

Create storage account

[Basics](#) [Advanced](#) [Tags](#) [Review + create](#)

Azure Storage is a Microsoft-managed service providing cloud storage that is highly available, secure, durable, scalable, and redundant. Azure Storage includes Azure Blobs (objects), Azure Data Lake Storage Gen2, Azure Files, Azure Queues, and Azure Tables. The cost of your storage account depends on the usage and the options you choose below. [Learn more](#)

PROJECT DETAILS

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

* Subscription 1

* Resource group 2

[Create new](#)

INSTANCE DETAILS

The default deployment model is Resource Manager, which supports the latest Azure features. You may choose to deploy using the classic deployment model instead. [Choose classic deployment model](#)

* Storage account name ⓘ 3 ✓

* Location 4

Performance ⓘ Standard Premium 5

Account kind ⓘ 6

Replication ⓘ 7

Access tier (default) ⓘ Cool Hot 8

[Review + create](#)

[Previous](#)

[Next : Advanced >](#)

Basics Advanced Tags Review + create

SECURITY

Secure transfer required ⓘ Disabled Enabled

VIRTUAL NETWORKS

Allow access from All networks Selected network
 ⓘ All networks will be able to access this storage account. [Learn more](#)

DATA LAKE STORAGE GEN2 (PREVIEW)

Hierarchical namespace ⓘ Disabled Enabled

[Review + create](#) [Previous](#) [Next : Tags >](#)

Basics Advanced Tags Review + create

Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. [Learn more](#)

Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.

<input type="checkbox"/>	KEY	VALUE	RESOURCE TYPE
<input checked="" type="checkbox"/>	Costcenter ✓	0815 ✓	Storage account ▼
<input type="checkbox"/>			Storage account ▼

[Review + create](#) [Previous](#) [Next : Review + create >](#)

Create storage account

✓ Validation passed

Basics Advanced Tags **Review + create**

BASICS

Subscription	Visual Studio Enterprise
Resource group	(new) Packt
Location	West Europe
Storage account name	packt
Deployment model	Resource manager
Account kind	StorageV2 (general purpose v2)
Replication	Locally-redundant storage (LRS)
Performance	Standard
Access tier (default)	Hot

ADVANCED

Secure transfer required	Enabled
Allow access from	All networks
Hierarchical namespace	Disabled

TAGS

Costcenter	0815 (Storage account)
------------	------------------------

Create

Previous

Next

[Download a template for automation](#)

 Delete  Cancel  Redeploy  Refresh

⋮ Your deployment is underway


Click the status of your deployment, manage resources, or troubleshoot deployment issues. Pin this page to your dashboard to easily find it next time.



Deployment name: Microsoft.StorageAccount-20181021232041
Subscription: [Visual Studio Enterprise](#)
Resource group: [Packt](#)

DEPLOYMENT DETAILS [\(Download\)](#)

Start time: 21.10.2018 23:48:03
Duration: 22 seconds
Correlation ID: c34f9a90-8844-4fd1-81a7-4484a053d825

RESOURCE	TYPE	STATUS	OPERATION DETAILS
 packt	Microsoft.Storage/storag...	Accepted	Operation details

✔ Your deployment is complete


[Go to resource](#)



Deployment name: Microsoft.StorageAccount-20181021232041
Subscription: [Visual Studio Enterprise](#)
Resource group: [Packt](#)

DEPLOYMENT DETAILS [\(Download\)](#)

Start time: 21.10.2018 23:48:03
Duration: 33 seconds
Correlation ID: c34f9a90-8844-4fd1-81a7-4484a053d825

RESOURCE	TYPE	STATUS	OPERATION DETAILS
 packt	Microsoft.Storage/storag...	OK	Operation details

packt
Storage account

Search (Ctrl+**/**)

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Events
- Storage Explorer (preview)

Settings

- Access keys
- CORS
- Configuration
- Encryption
- Shared access signature
- Firewalls and virtual networks
- Advanced Threat Protection...
- Static website (preview)
- Properties
- Locks
- Automation script

Blob service

- Blobs
- Custom domain

Open in Explorer → Move Delete Refresh

Resource group (change)
Packt

Status
Primary: Available

Location
West Europe

Subscription (change)
Visual Studio Enterprise

Subscription ID
8c7ad8e1-a309-4c3f-ac66-ec3455f89419

Tags (change)
[Click here to add tags](#)

Performance/Access tier
Standard/Hot

Replication
Locally-redundant storage (LRS)

Account kind
StorageV2 (general purpose v2)

Services

- Blobs**
REST-based object storage for unstructured data
[Learn more](#)
- Files**
File shares that use the standard SMB 3.0 protocol
[Learn more](#)
- Tables**
Tabular data storage
[Learn more](#)
- Queues**
Effectively scale apps according to traffic
[Learn more](#)

Monitoring

Show data for last: 1 hour 6 hours 12 hours 1 day 7 days

Show data for: Account

Total egress Total ingress

Services

- Blobs**
REST-based object storage for unstructured data
[Learn more](#)
- Files**
File shares that use the standard SMB 3.0 protocol
[Learn more](#)
- Tables**
Tabular data storage
[Learn more](#)
- Queues**
Effectively scale apps according to traffic
[Learn more](#)



File share



Refresh

File share



* Name



Quota 




GB

Create

Discard

 File share

 Refresh

Storage account: [packt](#)

 *Search file shares by prefix*

NAME

MODIFIED

QUOTA

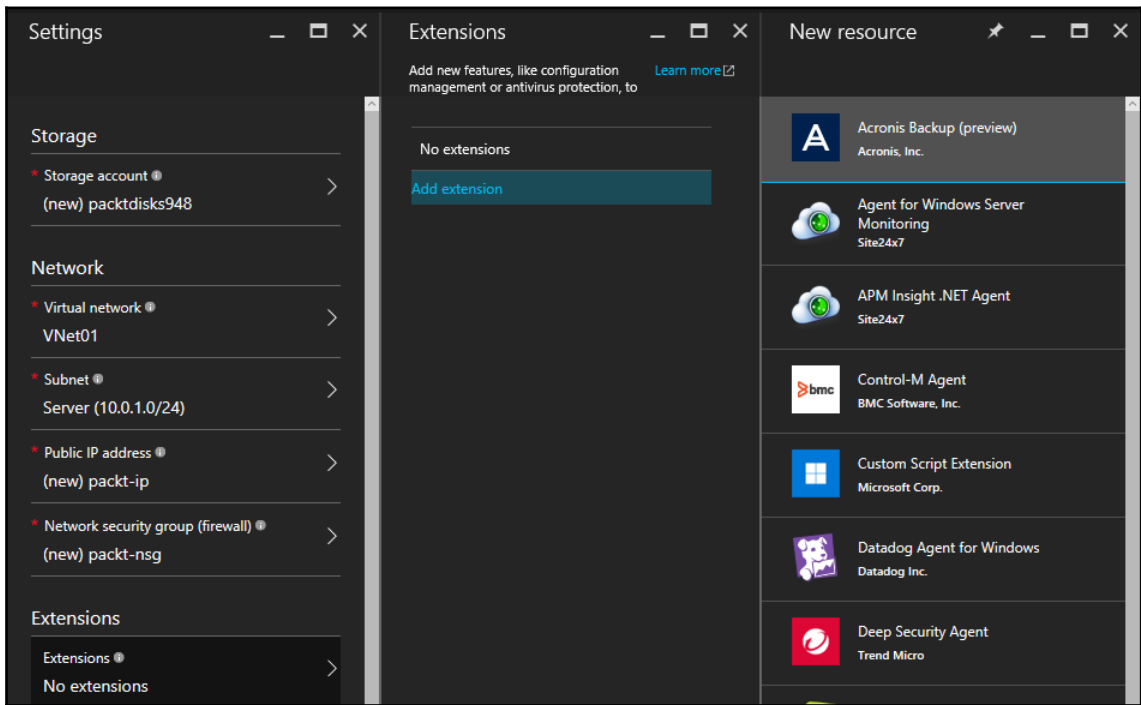
packt

22.10.2018 12:06:16

500 GiB

...

Chapter 7: Virtual Machines in Azure



Create virtual machine



1

Basics
Done



2

Size
Done



3

Settings
Configure optional features



4

Summary
Windows Server 2016 Datacent...



Settings



Storage

Disk type ⓘ

HDD

SSD

Use managed disks ⓘ

No

Yes

Network

* Virtual network ⓘ

VN01



* Subnet ⓘ

Server (10.100.1.0/24)



CHE-VM1 - Disks

Virtual machine

Search (Ctrl+*/*)

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems

SETTINGS

- Availability set
- Disks**
- Extensions
- Network interfaces
- Size
- Backup
- Properties

Edit

NAME	SIZE	STORAGE ACCOUNT TYPE
CHE-VM1		Standard_LRS

Data disks

None

+ Add data disk

1

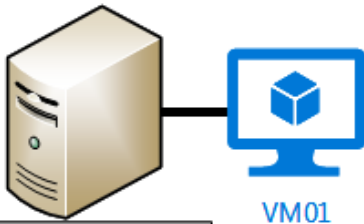
2

3



Fault Domain 01

Update Domain 01



Physical Host

Update Domain 02



Physical Host



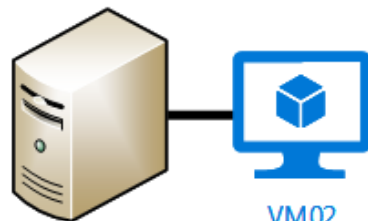
Fault Domain 02

Update Domain 01

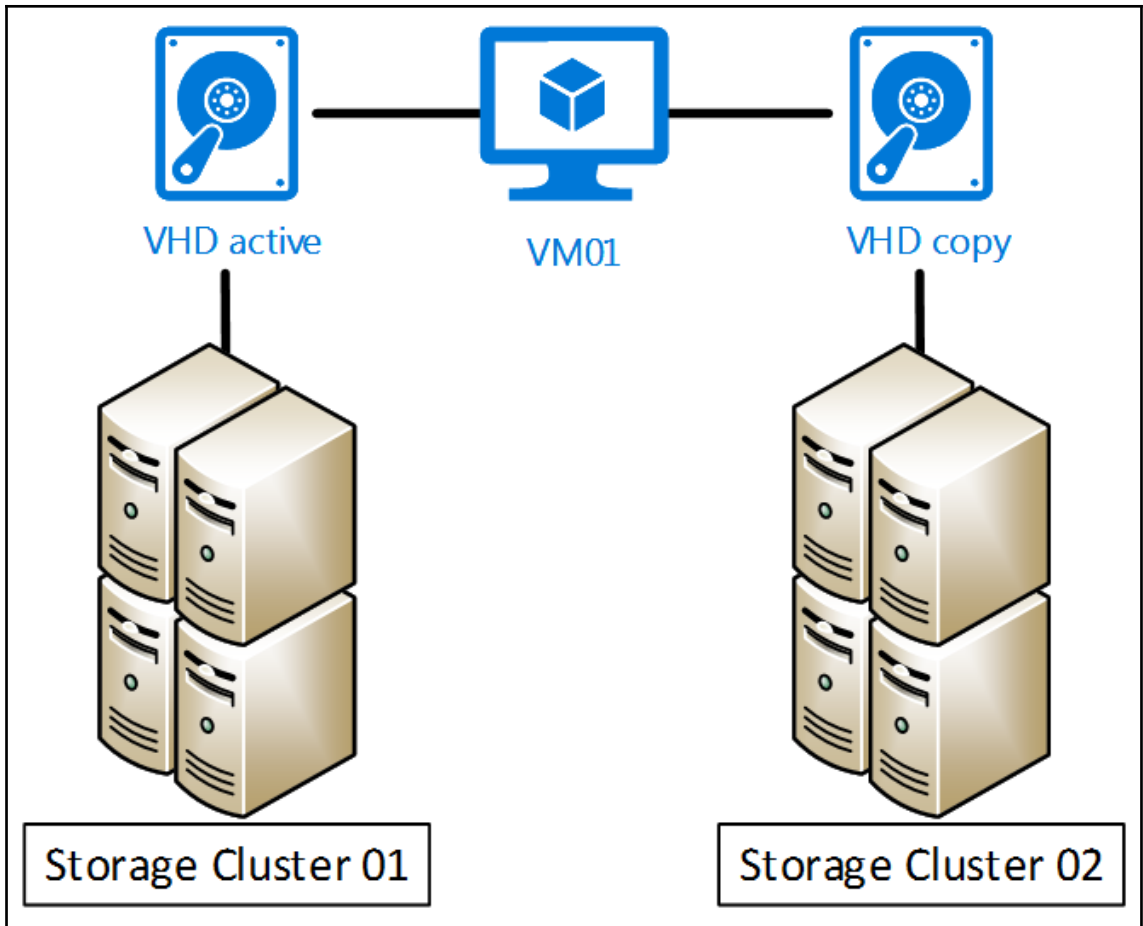


Physical Host

Update Domain 02




Physical Host




Preview


Microsoft Azure




 Create a resource

 All services

 FAVORITES


 Dashboard

 All resources


 Resource groups


 App Services


 Function Apps


 SQL databases

 Azure Cosmos DB

 Virtual machines

 Load balancers

 Storage accounts

 Virtual networks

 Azure Active Directory

 Monitor

 Advisor

 Security Center

 Cost Management + Billing

[Home](#) > Virtual machines

Virtual machines

Microsoft



Add



Edit columns



Refresh



Subscriptions: [2 of 3 selected](#) – Don't see a subscription

Filter by name...

2 subscriptions

INSTANCE DETAILS

* Virtual machine name 

* Region 

West Europe



Availability options 

No infrastructure redundancy required



* Image 

Ubuntu Server 18.04 LTS



[Browse all images and disks](#)

* Size 

Standard D2s v3

2 vcpus, 8 GB memory

[Change size](#)

INSTANCE DETAILS

* Virtual machine name ⓘ

* Region ⓘ

West Europe



Availability options ⓘ

No infrastructure redundancy required ^

No infrastructure redundancy required

Availability zone

Availability set

* Image ⓘ

* Size ⓘ

Standard D2s v3

2 vcpus, 8 GB memory

[Change size](#)

* Image ⓘ

Windows Server 2016 Datacenter



[Browse all images and disks](#)

* Size ⓘ

Standard DS1 v2

1 vcpu, 3.5 GB memory

[Change size](#)

Select a VM size

Browse available virtual machine sizes and their features

Search by VM size... [Clear all filters](#)


Size: **Small** | Generation: **Current** | Family: **General purpose** | Premium disk: **Supported**


Showing 12 of 210 VM sizes. | Subscription: Visual Studio Enterprise | Region: West Europe


VM SIZE	OFFERING	FAMILY	VCPUS	RAM (GB)	DATA DISKS	MAX IOPS	TEMPORARY STORA...	PREMIUM DISK SUP...	COST/MONTH (ESTI...
B1ms	Standard	General purpose	1	2	2	1600	4 GB	Yes	€15.25
B1s	Standard	General purpose	1	1	2	800	4 GB	Yes	€7.65
B2ms	Standard	General purpose	2	8	4	4800	16 GB	Yes	€60.98
B2s	Standard	General purpose	2	4	4	3200	8 GB	Yes	€30.49
B4ms	Standard	General purpose	4	16	8	7200	32 GB	Yes	€121.97
D2s_v3	Standard	General purpose	2	8	4	3200	16 GB	Yes	€75.29
D4s_v3	Standard	General purpose	4	16	8	6400	32 GB	Yes	€150.58
D51_v2	Standard	General purpose	1	3,5	4	3200	7 GB	Yes	€42.66
D52_v2	Standard	General purpose	2	7	8	6400	14 GB	Yes	€85.33
D52_v2	Promo	General purpose	2	7	8	6400	14 GB	Yes	€85.33
D53_v2	Standard	General purpose	4	14	16	12800	28 GB	Yes	€170.66
D53_v2	Promo	General purpose	4	14	16	12800	28 GB	Yes	€170.66

[Select](#) Prices presented are estimates in your local currency that include only Azure infrastructure costs and any discounts for the subscription and location. The prices don't include any applicable software costs. [View Azure pricing calculator.](#)

ADMINISTRATOR ACCOUNT

* Username 

* Password 

* Confirm password 

SAVE MONEY

Save up to 49% with a license you already own using Azure Hybrid Benefit for Windows Server. [Learn more](#)

* Already have a Windows license? Yes No

[Review + create](#)

[Previous](#)

[Next : Disks >](#)

Create a virtual machine

[Basics](#) [Disks](#) [Networking](#) [Management](#) [Guest config](#) [Tags](#) [Review + create](#)

Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. [Learn more](#)

DISK OPTIONS

* OS disk type 

Premium SSD

Use unmanaged disks 

Yes No

DATA DISKS

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

LUN	NAME	SIZE (GIB)	DISK TYPE	HOST CACHING
-----	------	------------	-----------	--------------

[Create and attach a new disk](#)

[Attach an existing disk](#)

[Review + create](#)

[Previous](#)

[Next : Networking >](#)

Configure a new or existing virtual network for your VM as well as how your VM will be accessed on the virtual network. [Learn more](#)

NETWORK INTERFACE

When creating a virtual machine, a network interface will be created for you.

* Virtual network ⓘ

* Subnet ⓘ

Public IP ⓘ

Network security group Basic Advanced

* Public inbound ports ⓘ None Allow selected ports

Select inbound ports

Accelerated networking ⓘ On Off

i All traffic from the internet will be blocked by default. You will be able to change inbound port rules in the VM > Networking page.

The selected VM size does not support accelerated networking.

Review + create

Previous

Next : Management >

Basics

Disks

Networking

Management

Guest config

Configure monitoring and management options for your VM.

MONITORING

Boot diagnostics 

On Off

OS guest diagnostics 

On Off

* Diagnostics storage account 

(new) acktdiag

[Create new](#)

IDENTITY

Managed service identity 

On Off

AUTO-SHUTDOWN

Enable auto-shutdown 

On Off

BACKUP

Enable backup 

On Off

Review + create

Previous

Next : Guest config >

Basics Disks Networking Management **Guest config** Tags Review + create

Add additional configuration, agents, scripts or applications via virtual machine extensions or cloud-init.

EXTENSIONS

Extensions provide post-deployment configuration and automation.

Extensions ⓘ

[Select an extension to install](#)

CLOUD INIT

Cloud init is a widely used approach to customize a Linux VM as it boots for the first time. You can use cloud-init to install packages and write files or to configure users and security. [Learn more](#)



The selected image does not support cloud init.

New resource



Acronis Backup (preview)
Acronis, Inc.



Datadog Agent for Windows
Datadog Inc.



Kaspersky Hybrid Cloud Security
Agent
Kaspersky Lab



Custom Script Extension
Microsoft Corp.



PowerShell Desired State
Configuration
Microsoft Corp.



Octopus Deploy Tentacle Agent
Octopus Deploy Pty. Ltd.



Puppet Agent (preview)
Puppet



APM Insight .NET Agent
Site24x7



Agent for Windows Server
Monitoring
Site24x7



Agent for Cloud Workload
Protection (Windows)
Symantec Corp.



Control-M Agent
BMC Software, Inc.

Review + create Previous Next : Tags >

Create a virtual machine

Basics Disks Networking Management Guest config **Tags** Review + create

Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. [Learn more](#)

Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.

<input type="checkbox"/>	KEY	VALUE	RESOURCE TYPE
<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	All resources to be created ▼

Review + create Previous Next : Review + create >

Create Previous Next

Create a virtual machine

! Validation failed. Required information is missing or not valid.

Basics • Disks Networking Management Guest config Tags Review + create

PRODUCT DETAILS

Standard DS1 v2

by Microsoft

[Terms of use](#) | [Privacy policy](#)

Subscription credits apply ⓘ

0.0573 EUR/hr

[Pricing for other VM sizes](#)

TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details.

BASICS

Subscription	Visual Studio Enterprise
Resource group	(new) Packt
Virtual machine name	packt-test
Region	West Europe
Availability options	No infrastructure redundancy required
Username	None
Public inbound ports	None

DISKS

OS disk type	Premium SSD
Use unmanaged disks	No

NETWORKING

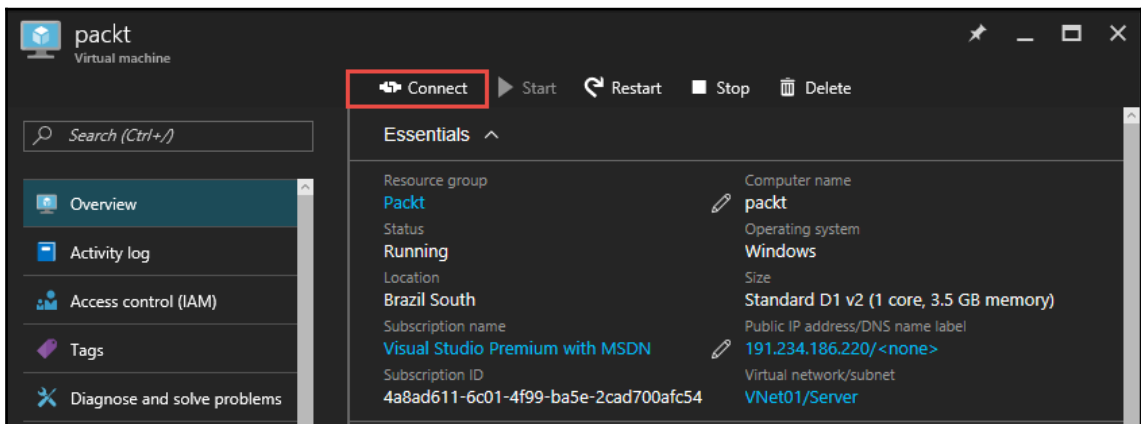
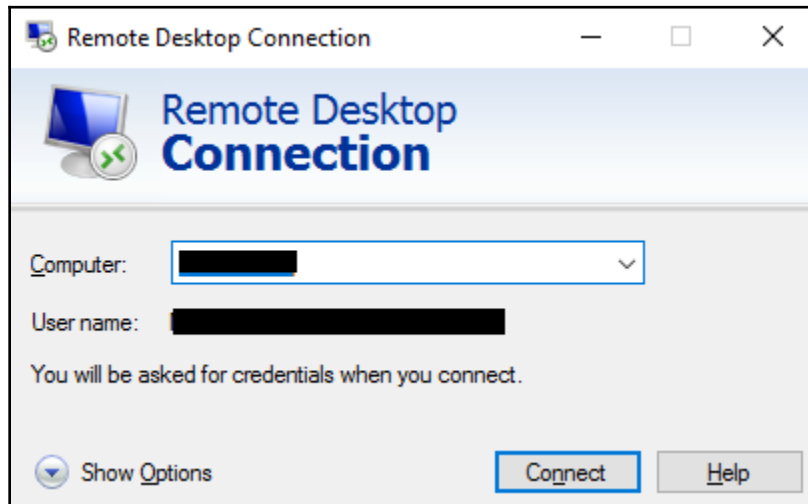
Create

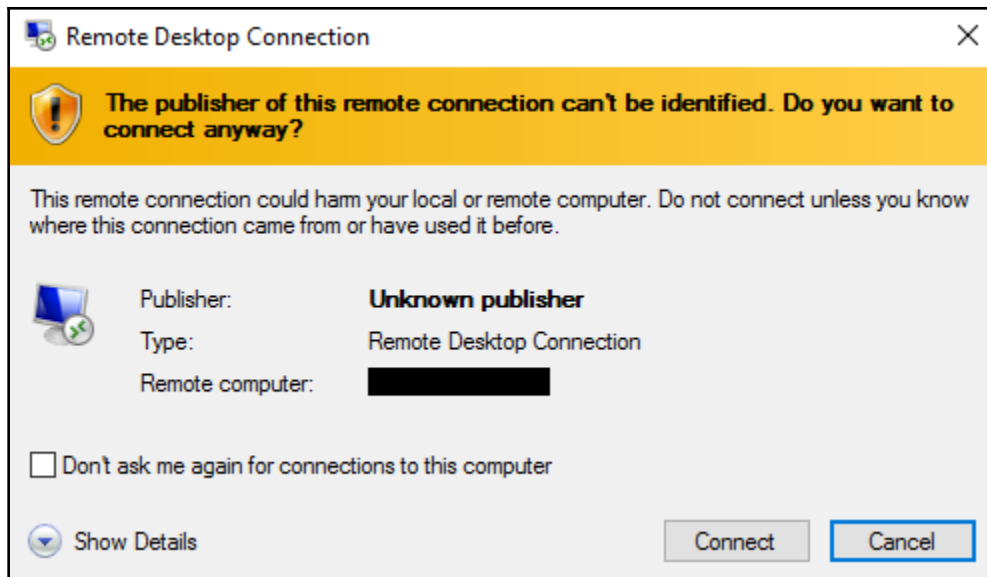
Previous






Next

[Download a template for automation](#)

Download a template for automation





NAME	TYPE	LOCATION	
 packt	Virtual machine	Brazil South	...
 packt710	Network inter...	Brazil South	...
 packt-nsg	Network secu...	Brazil South	...
 packt-ip	Public IP addr...	Brazil South	...
 VNet01	Virtual network	Brazil South	...
 packtdiag392	Storage accou...	Brazil South	...
 packtdisks948	Storage accou...	Brazil South	...
 packtsrg	Storage accou...	Brazil South	...

packt710
Network interface

Search (Ctrl+*/*)

- Overview
- Activity log
- Access control (IAM)
- Tags

SETTINGS

Delete

Essentials ^

Resource group	Packt	Private IP address	10.0.1.4
Location	Brazil South	Virtual network/subnet	VNet01/Server
Subscription name	Visual Studio Premium with MSDN	Public IP address	191.234.186.220 (packt-ip)
Subscription ID	4a8ad611-6c01-4f99-ba5e-2cad700afc54	Network security group	packt-nsg
		Attached to	packt

Windows Security



Enter your credentials

These credentials will be used to connect to [REDACTED]



Domain: MicrosoftAccount

Remember me

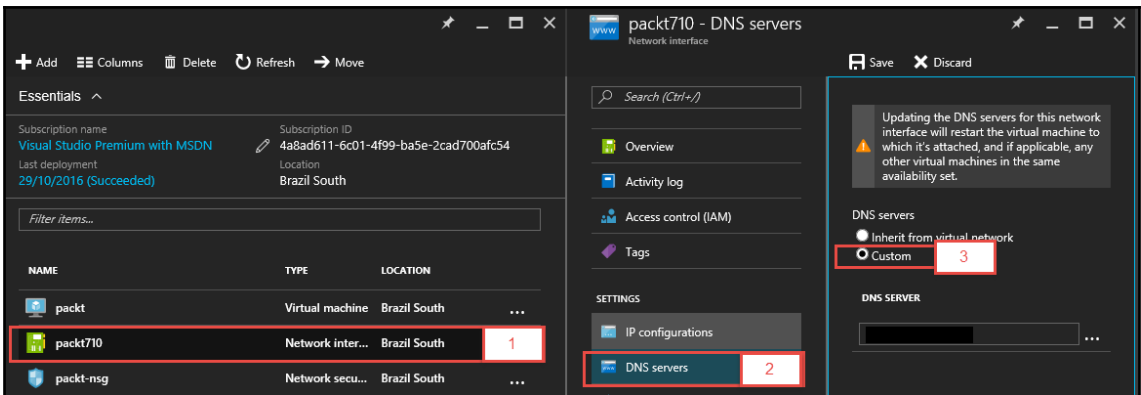
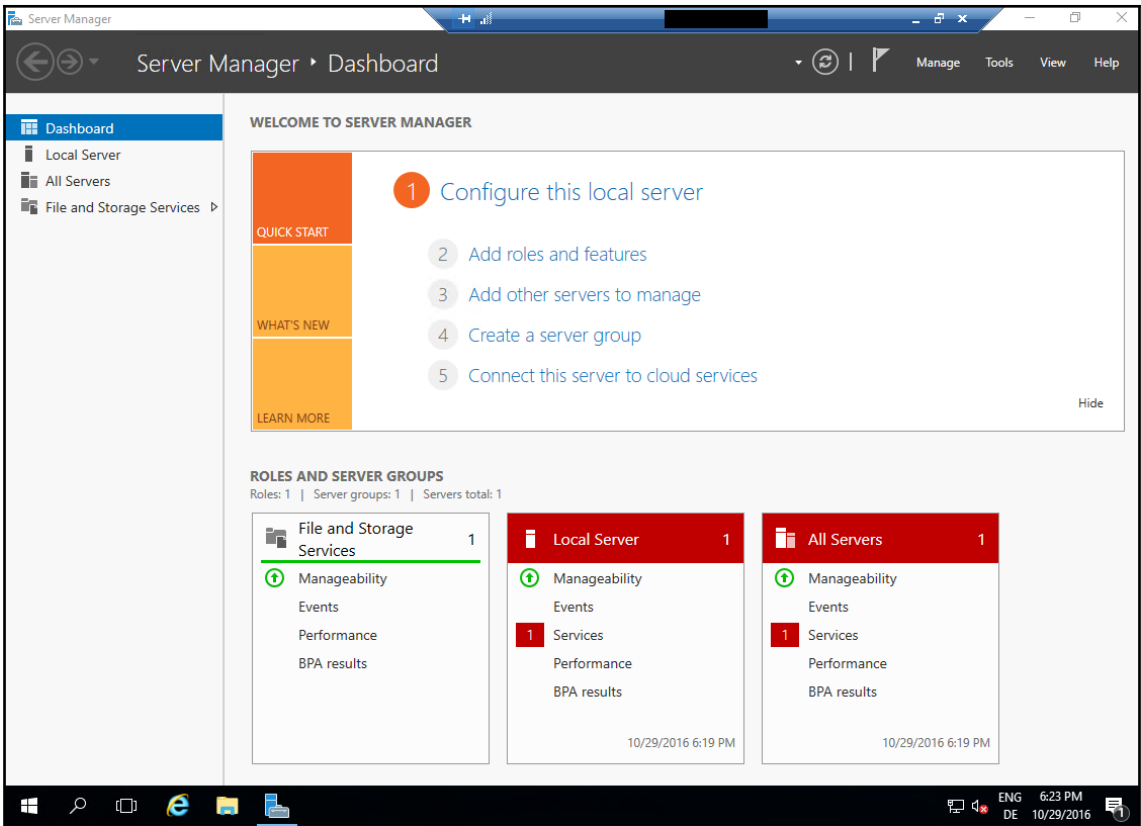
More choices



Use a different account

OK

Cancel



packt710 - IP configurations
Network interface

Search (Ctrl+F)

Overview

Activity log

Access control (IAM)

Tags

SETTINGS

IP configurations 1

DNS servers

Network security group

Properties

Locks

Automation script

SUPPORT + TROUBLESHOOTING

Effective security rules

Effective routes

New support request

Save Discard

IP forwarding settings

IP forwarding **Disabled** Enabled

Virtual network VNet01

IP configurations

Subnet Server (10.0.1.0/24)

Search IP configurations

NAME	TYPE	PRIVATE IP ADDRESS	PUBLIC IP ADDRESS
ipconfig1	Primary	10.0.1.4 (Dynamic)	191.234.186.220 (p 2

ipconfig1
packt710

Save Discard

Public IP address settings

Public IP address **Disabled** Enabled

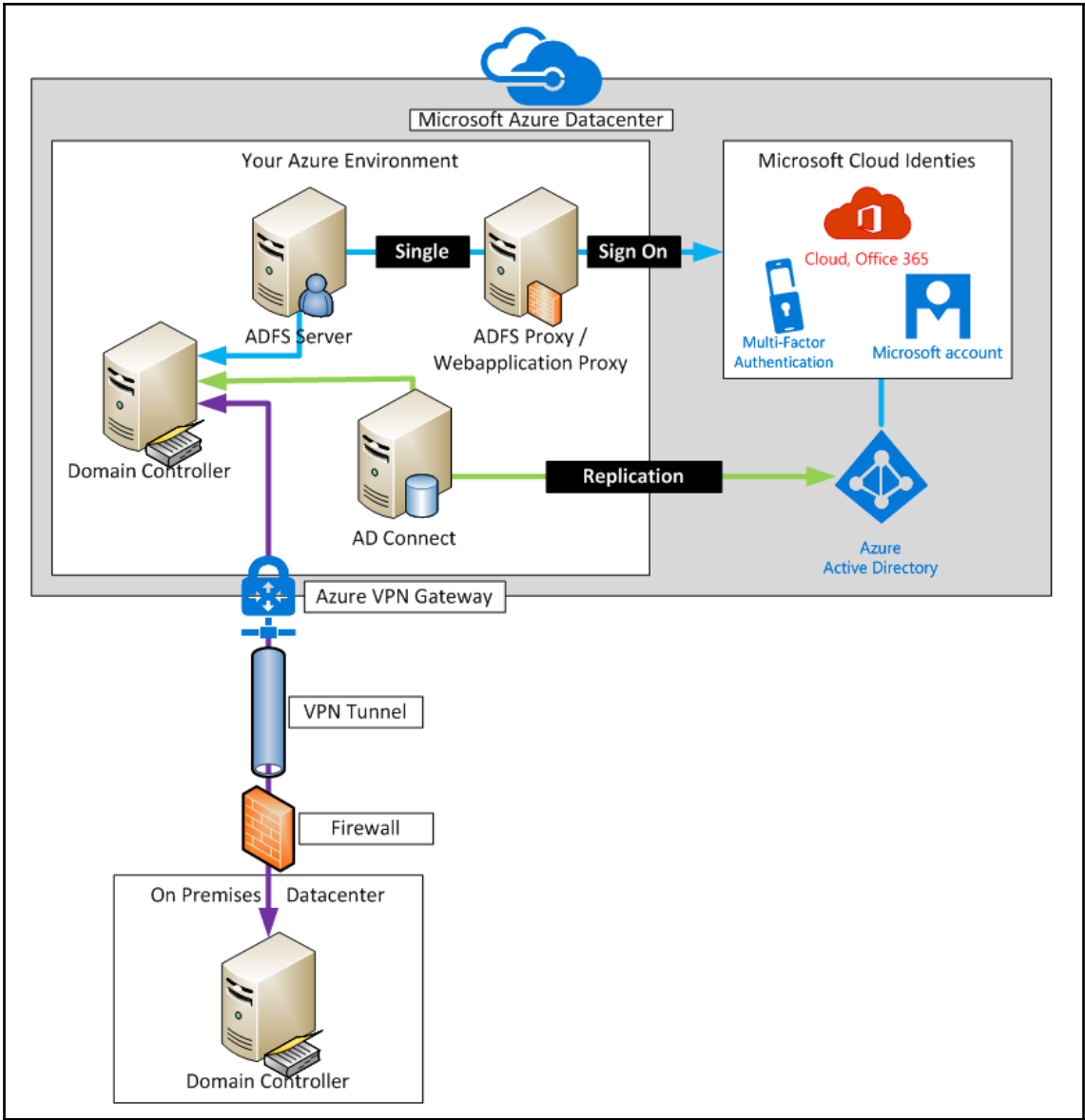
Private IP address settings

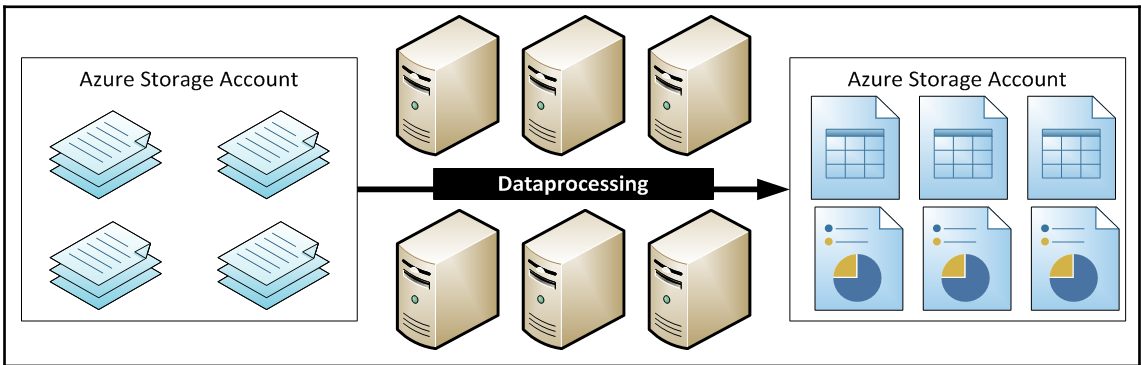
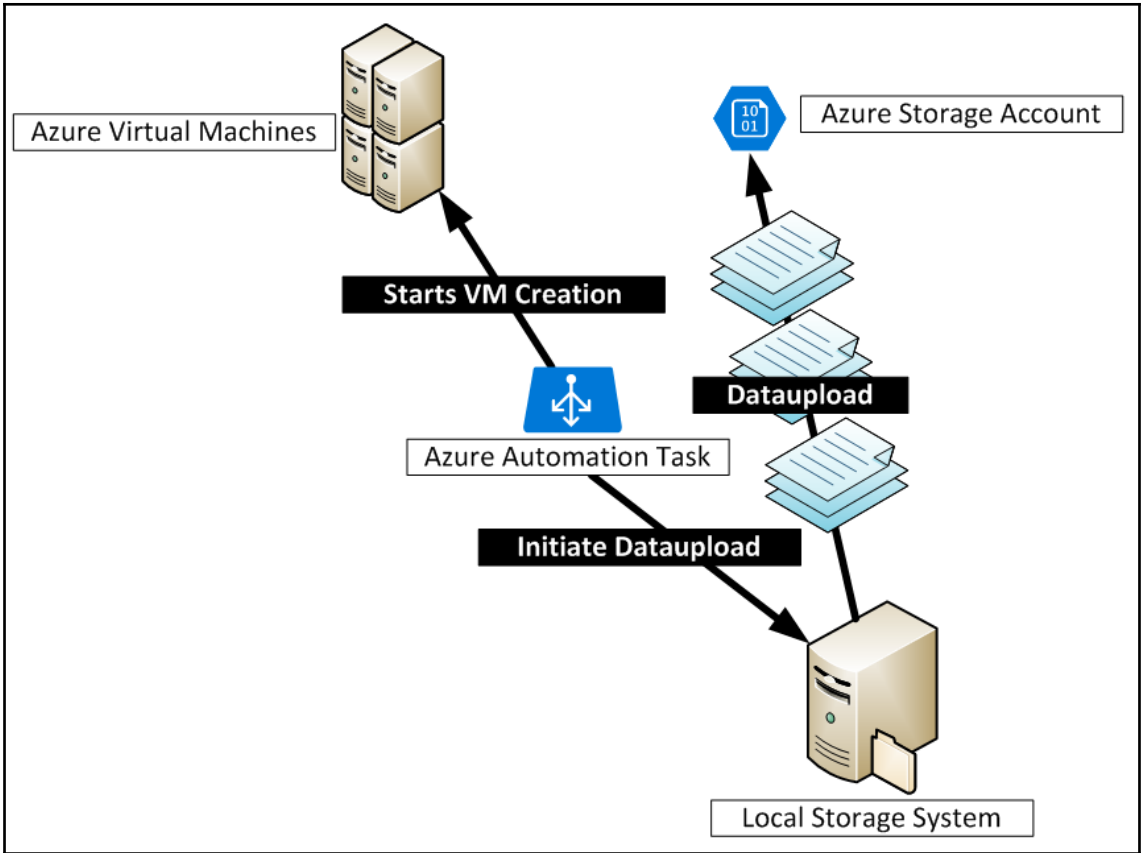
Virtual network/subnet VNet01/Server

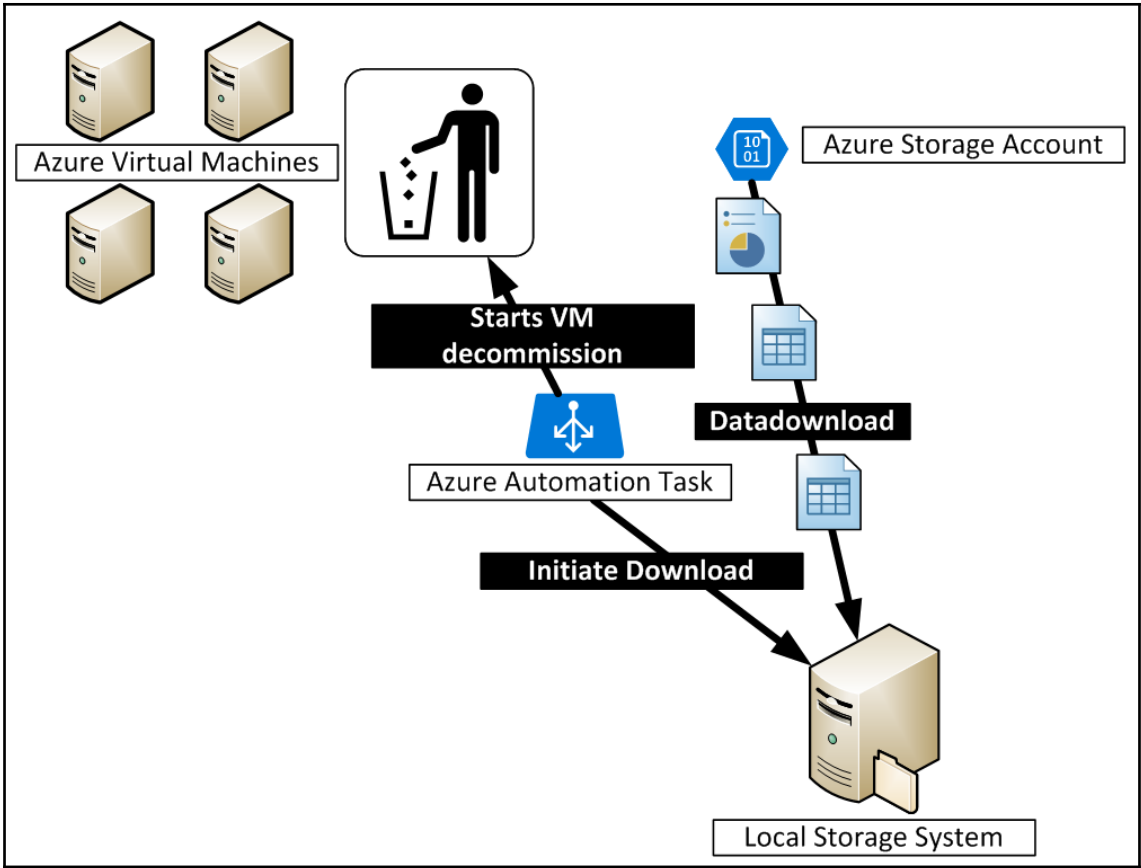
Assignment

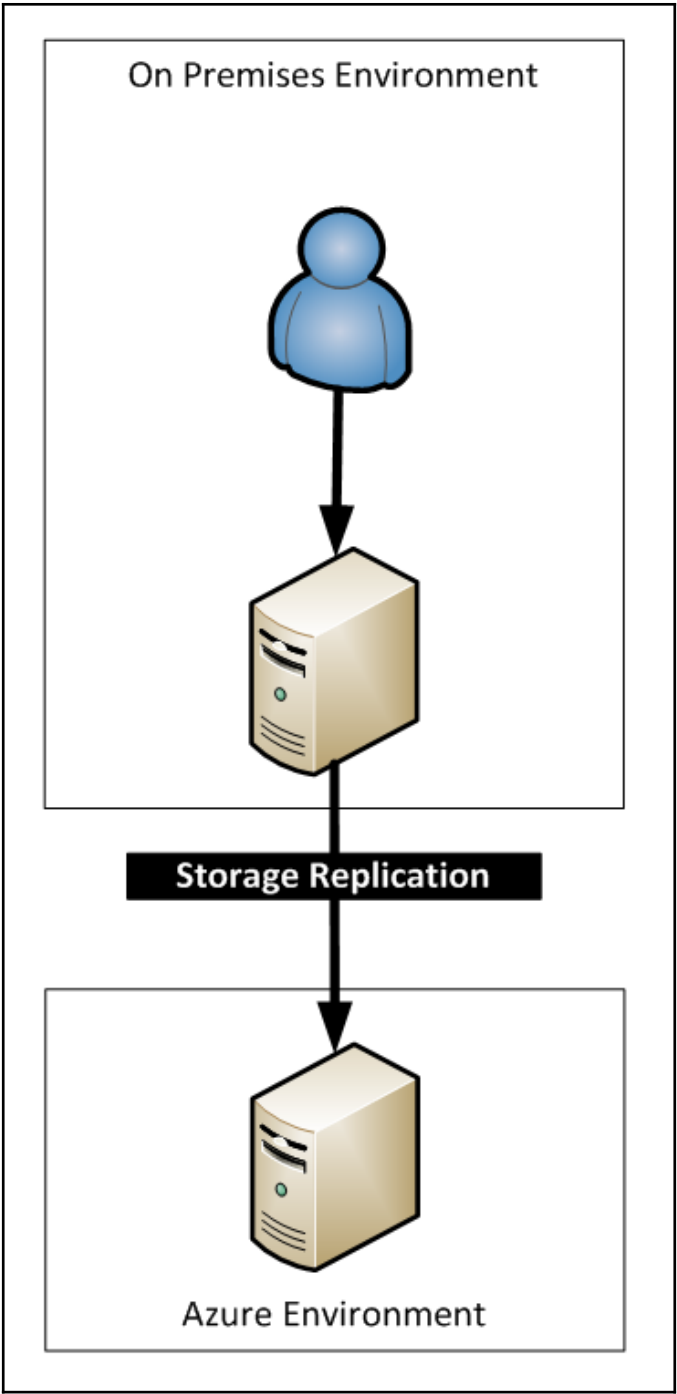
Dynamic **Static** 3

* IP address 10.0.1.4

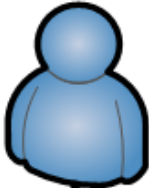








On Premises Environment

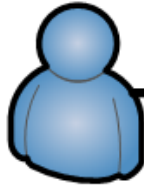


Storage Replication

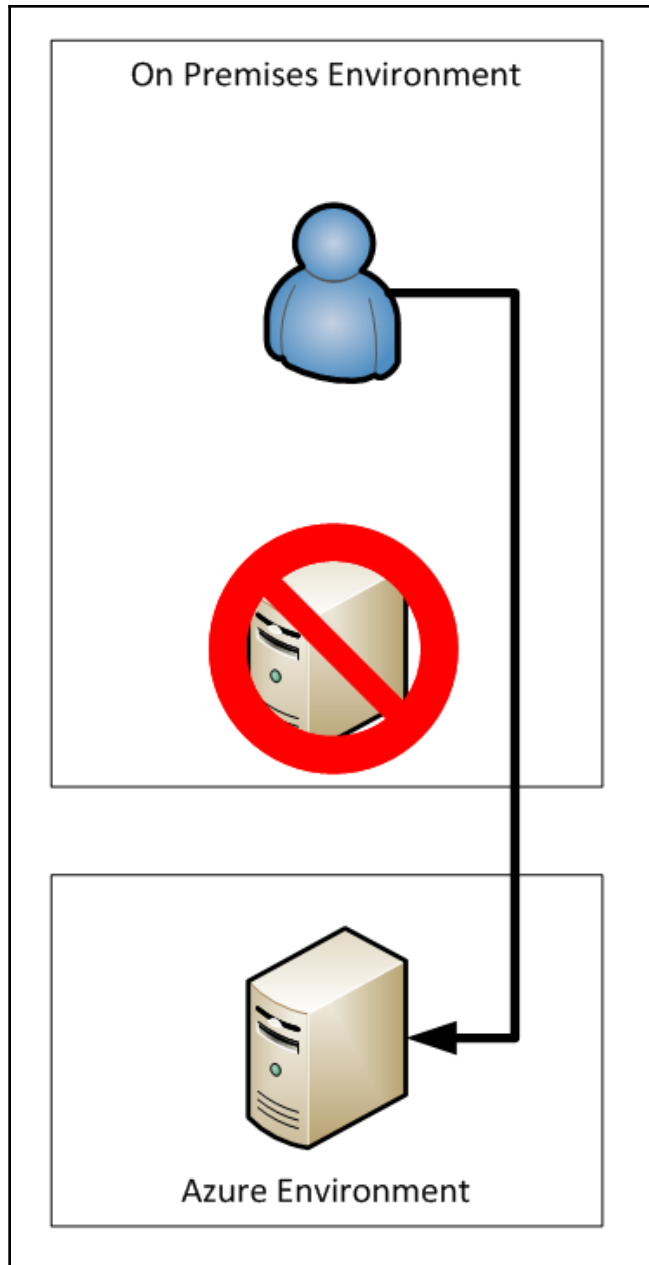


Azure Environment

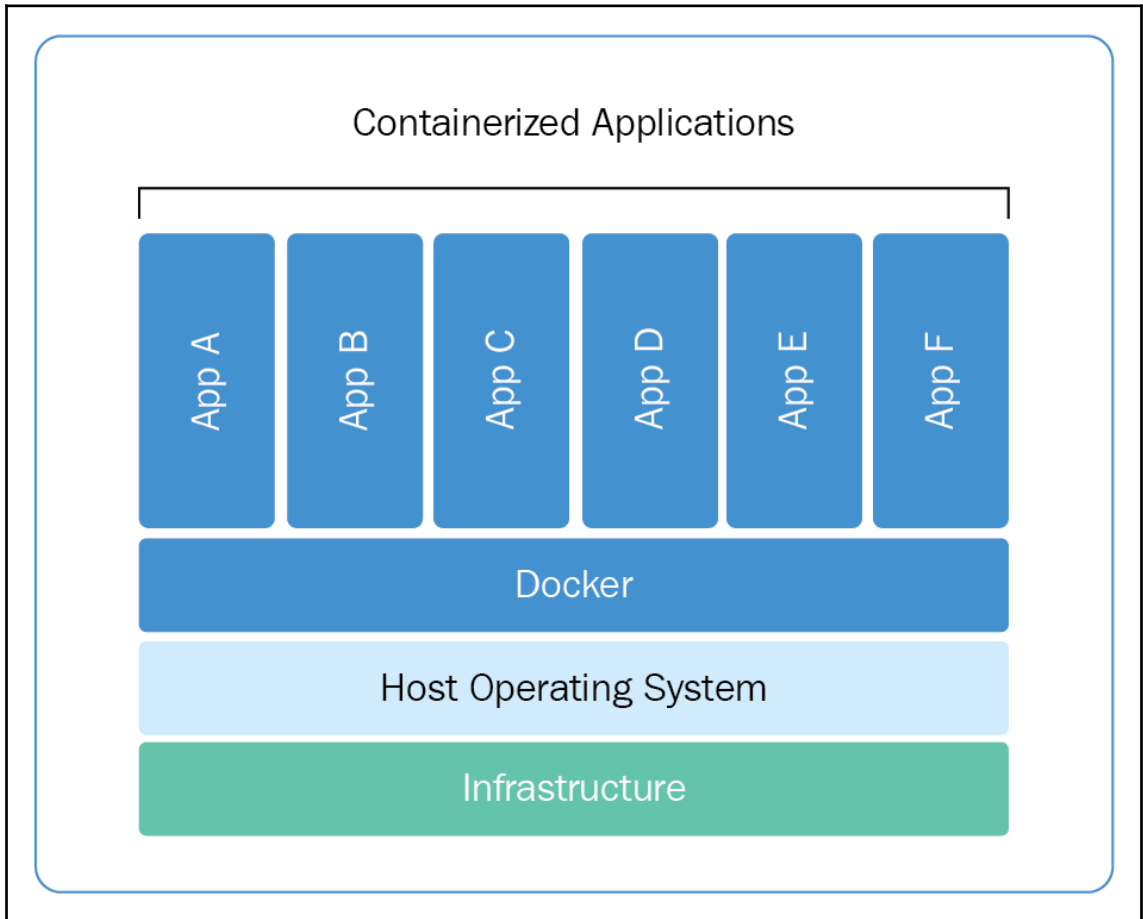
On Premises Environment

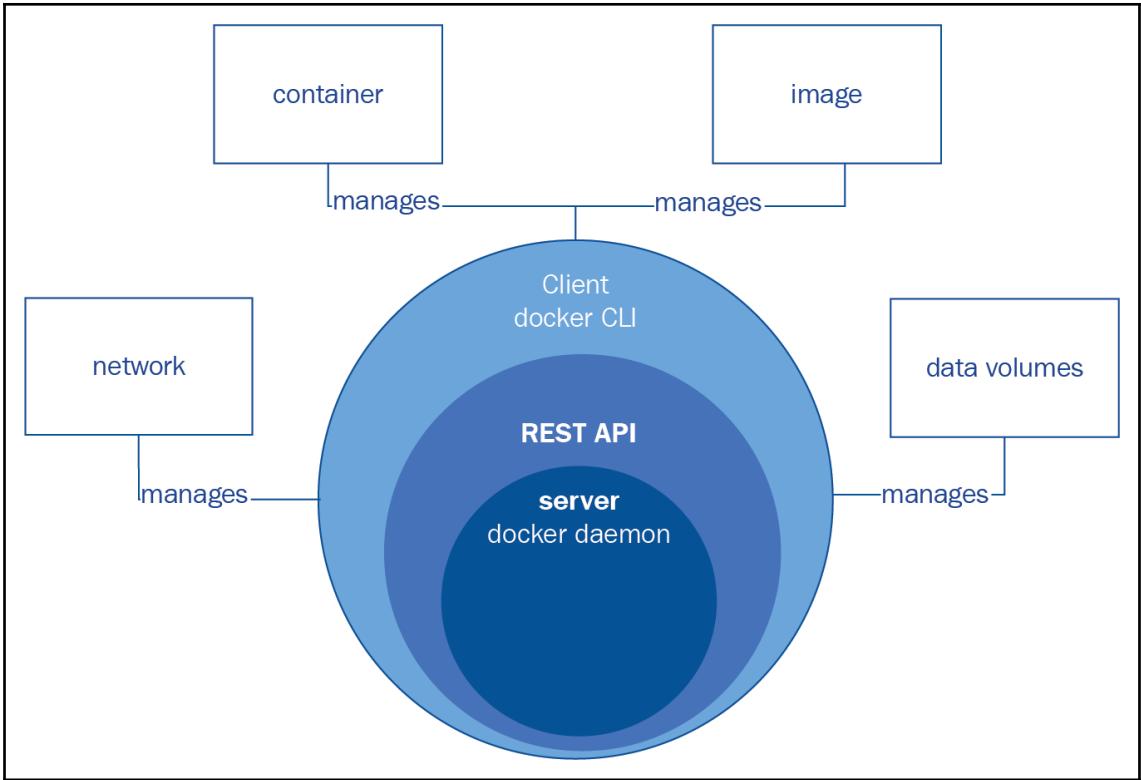


Azure Environment



Chapter 8: Implementing Azure-Managed Kubernetes and Azure Container Service

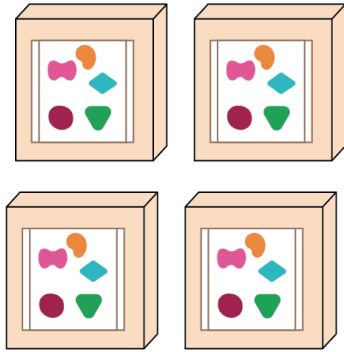




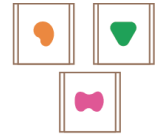
A monolithic application puts all its functionality into a single process...



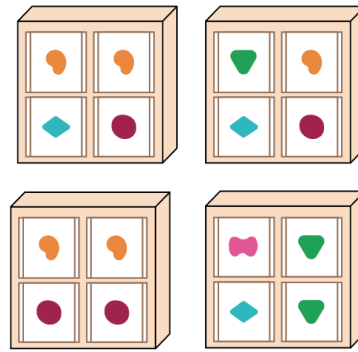
... and scales by replicating the monolith on multiple servers



A microservices architecture puts each element of functionality into a separate service...



... and scales by distributing these services across servers, replicating as needed.



Home > New > Marketplace > Everything > Docker on Ubuntu Server

Marketplace ★ × Everything ★ ×

My Saved List 0

- Everything
- Compute
- Networking
- Storage
- Web
- Mobile
- Containers
- Databases
- Analytics
- AI + Machine Learning
- Internet of Things
- Integration
- Security

Filter

docker

Results

NAME	PUBLISHER	CATEGORY
Docker EE for Azure (Basic) - [17.06]	Docker, Inc.	Compute
Docker EE for Azure (Standard/Advanced)-[17.06.2]	Docker, Inc.	Compute
Docker EE for Azure (Basic) - [17.06.2]	Docker, Inc.	Compute
Atomic Secure Docker for CentOS	Atomicorp	Compute
Atomic Secure Docker for Ubuntu	Atomicorp	Compute
Docker on Ubuntu Server	Canonical + Microsoft	Compute
postgres	Docker	Compute
Stackato	ActiveState	Compute
Container Registry	Microsoft	Compute

Marketplace

My Saved List 0

- Everything
- Compute
- Networking
- Storage
- Web
- Mobile
- Containers
- Databases
- Analytics
- AI + Machine Learning
- Internet of Things
- Integration
- Security

Everything

Filter

Results

NAME	PUBLISHER
SQL Server 2016 SP1 Enterprise on Windows Server 2016	Microsoft
Windows Server 2016 Datacenter - with Containers	Microsoft
Windows Server, version 1803 with Containers	Microsoft
Windows Server, version 1709 with Containers	Microsoft
Windows 10 Enterprise N (x64)	Microsoft
Hardened BeYourMarket on Windows 2012 R2	Cognosys Inc.
SQL Server 2017 Standard on Windows Server 2016	Microsoft
Windows 8.1 Enterprise N (x64)	Microsoft
Windows 7 Enterprise N with SP1 (x64)	Microsoft

Home > New > Container Registry > Create container registry

Container Registry

Microsoft

Azure Container Registry is a private registry for hosting container images. Using the Azure Container Registry, you can store Docker-formatted images for all types of container deployments. Azure Container Registry integrates well with orchestrators hosted in Azure Container Service, including Docker Swarm, DC/OS, and Kubernetes. Users can benefit from using familiar tooling capable of working with the open source Docker Registry v2.

Use Azure Container Registry to:

- Store and manage container images across all types of Azure deployments
- Use familiar, open-source Docker command line interface (CLI) tools
- Keep container images near deployments to reduce latency and costs
- Simplify registry access management with Azure Active Directory
- Maintain Windows and Linux container images in a single Docker registry

[Save for later](#)

PUBLISHER	Microsoft
USEFUL LINKS	Learn more Documentation Pricing details

[Create](#)

Create container registry

* Registry name
MyContainerRegistry ✓
azurecr.io

* Subscription
Visual Studio Ultimate bei MSDN

* Resource group
 Create new Use existing
AzureBook ✓

* Location
West Europe

* Admin user ⓘ
[Enable](#) [Disable](#)

* SKU ⓘ
Standard ^
Basic
Standard
Premium

[Create](#) [Automation options](#)

Home > New > Marketplace > Everything > Container Instances

Marketplace ★ × Everything ★ ×

My Saved List ♥ 0

Everything

Compute

Networking

Storage

Web

Mobile

Containers

Databases

Analytics

AI + Machine Learning

Internet of Things

Integration

Security












Identity

Developer tools

Filter

container

Results

NAME	PUBLISHER	CATEGORY
 Container Service	Microsoft	Compute
 Container Instances	Microsoft	Containers
 Container Registry	Microsoft	Compute
 Container Monitoring Solution	Microsoft	Management Tools
 Neo4j Container Image	Bitnami	Containers
 Nginx Container Image	Bitnami	Containers
 RabbitMQ Container Image	Bitnami	Containers
 etcd Container Image	Bitnami	Containers
 WordPress Container Image	Bitnami	Containers
 SuiteCRM Container Image	Bitnami	Containers
 Heapster Container Image	Bitnami	Containers

Home > New > Marketplace > Everything > Container Instances > Create Container Instances > Basics

Create Container Instances

- 1 Basics
Configure basic settings
- 2 Configuration
Specify container requirements
- 3 Summary
Container Instances

Basics

- * Container name
myazurecontainer ✓
- Container image type
 Public Private
- * Container image ⓘ
microsoft/aci-helloworld ✓
- Subscription
Visual Studio Ultimate bei MSDN
- * Resource group ⓘ
 Create new Use existing
mycontainer ✓
- * Location
West Europe

OK

Left Sidebar:

- Create a resource
- All services
- FAVORITES
- Dashboard
- Resource groups
- All resources
- Recent
- App Services
- Virtual machines (class...)
- Virtual machines
- SQL databases
- Cloud services (classic)
- Subscriptions
- Azure Active Directory
- Monitor
- Security Center
- Cost Management + B...

+ Create a resource

All services

★ FAVORITES

Dashboard

Resource groups

All resources

Recent

App Services

Virtual machines (classic)

Virtual machines

SQL databases

Cloud services (classic)

Subscriptions

Azure Active Directory

Monitor

Security Center

Cost Management + Billing

Help + support

Advisor

Log Analytics

Create Container Instances

1 Basics Done ✓

2 Configuration Specify container requirements >

3 Summary Container Instances >

Configuration

OS Type

Windows Linux

Number of cores

1

* Memory (GB)

1.5

Networking

Public IP address

Yes No

DNS name label ⓘ

myazurecontainer ✓

* Port ⓘ

80 ✓

Open additional ports

Yes No

Port protocol ⓘ

TCP

Advanced

Restart policy ⓘ

Always

Environment variable ⓘ

Add additional environment variables

Yes No

Command override ⓘ

OK

Home > mycontainer > myazurecontainer

myazurecontainer
Container instances

Search (Ctrl+F) << Delete Refresh

Resource group (change)
mycontainer

Status
Running

Location
West Europe

Subscription (change)
[Visual Studio Ultimate bei MSDN](#)

Subscription ID
b5d7bcf6-99d7-421e-b752-4a35a6b768d0

Tags (change)
[Click here to add tags](#)

OS type
Linux

IP address
40.114.143.100

FQDN
myazurecontainer.westeurope.azurecontainer.io

Container count
1

SETTINGS

- Containers
- Properties
- Locks
- Automation script

MONITORING

- Alerts
- Metrics (preview)

SUPPORT + TROUBLESHOOTING

- New support request

CPU

Memory

Welcome to Azure Container Instances!



Home > Subscriptions > Visual Studio Enterprise - Resource providers

Subscriptions

Standardverzeichnis

Visual Studio Enterprise - Resource providers

Subscription

Add

Showing subscriptions in standardverzeichnis.
Don't see a subscription?
[Switch directories](#)

My role ⓘ Status ⓘ

7 selected ▼ 3 selected ▼

Apply

Show only subscriptions selected in the [global subscriptions filter](#) ⓘ

SUBSCRIP... ↕	SUBSCRIPTION ID ↕
Visual Studio...	f3248cad-78cf-4116... ...

- External services
- Payment methods
- Partner information

SETTINGS

- Programmatic deployment
- Resource groups
- Resources
- Usage + quotas
- Policies
- Management certificates
- My permissions
- Resource providers**
- Properties
- Resource locks

SUPPORT + TROUBLESHOOTING

- New support request

Refresh

PROVIDER	STATUS
Microsoft.ContainerInstance	NotRegistered Register
Microsoft.ContainerRegistry	NotRegistered Register
Microsoft.ContainerService	NotRegistered Register

WordPress Container Image

Bitnami

WordPress is the world's most popular blogging and content management platform. Powerful yet simple, everyone from students to global corporations use it to build beautiful, functional websites.

Why use Bitnami Container Images?

Bitnami container images are secure, up-to-date, and packaged using industry best practices. With Bitnami you can trust what's in that image you're launching. We monitor all the software we package for vulnerabilities and updates. When any of these are identified, we publish new container images and updated version tags.

Bitnami container images use a container-optimized Debian base image.

Available WordPress Container Image versions: 4, 4-debian-8, 4.9.5, 4.9.6, 4.9.7-debian-8, latest

[Save for later](#)

PUBLISHER	Bitnami
USEFUL LINKS	Launching on AKS README Get started with ACI Support Learn More
SUPPORT	https://bitnami.com/support/azure

Create

Subscribe

WordPress Container Image

* Subscription
Visual Studio Enterprise

* Azure Container Registry
 Create new Use existing

acrweb01

* Resource group
 Create new Use existing

acrweb01

* Location
West Europe

* Tag
4.9.6

Auto-update ⓘ

ⓘ Deploying an Azure container registry will incur charges. See pricing details [here](#)

Offer details

WordPress Container Image
by Bitnami
[Terms of use](#) | [privacy policy](#)

Subscribe

Home > Resource groups > arcweb01 > acrweb01

acrweb01
Container registry

Search (Ctrl+/) << → Move Delete Update

Essentials ^

Resource group arcweb01	Login server acrweb01.azurecr.io
Location West Europe	Creation date 8/17/2018, 2:05 PM GMT+2
Subscription name Visual Studio Enterprise	SKU Basic
Subscription ID f3248cad-78cf-4116-bee1-01151da2d51d	Provisioning state Succeeded

Registry usage

Registry quota usage

USED
0.0 GiB

AVAILABLE IN SKU
10.0 GiB

10 GiB
SIZE QUOTA

Container security integrations

Aqua Security
Aqua provides development-to-production lifecycle controls for securing containerized applications.

Twistlock
Providing vulnerability management and runtime protection across your environments.
[Azure Marketplace](#)

SETTINGS

- Access keys
- Locks
- Automation script

SERVICES

- Repositories
- Webhooks
- Replications

POLICIES

Update container registry

Save Discard

Registry name

acrweb01

.azurecr.io

Admin user ⓘ

Enable

Disable

SKU ⓘ

Basic

Basic

Standard

Premium

+ Create a resource

All services

FAVORITES

Dashboard

Resource groups

All resources

Recent

App Services

SQL databases

Virtual machines (class...)

Virtual machines

Cloud services (classic)

Subscriptions

Azure Active Directory

Monitor

Home > Resource groups > arcweb01 > acrweb01 - Repositories

acrweb01 - Repositories

Container registry

Search (Ctrl+)

Refresh

Tags

Quick start

Events

SETTINGS

Access keys

Locks

Automation script

SERVICES

Repositories

Webhooks

Replications

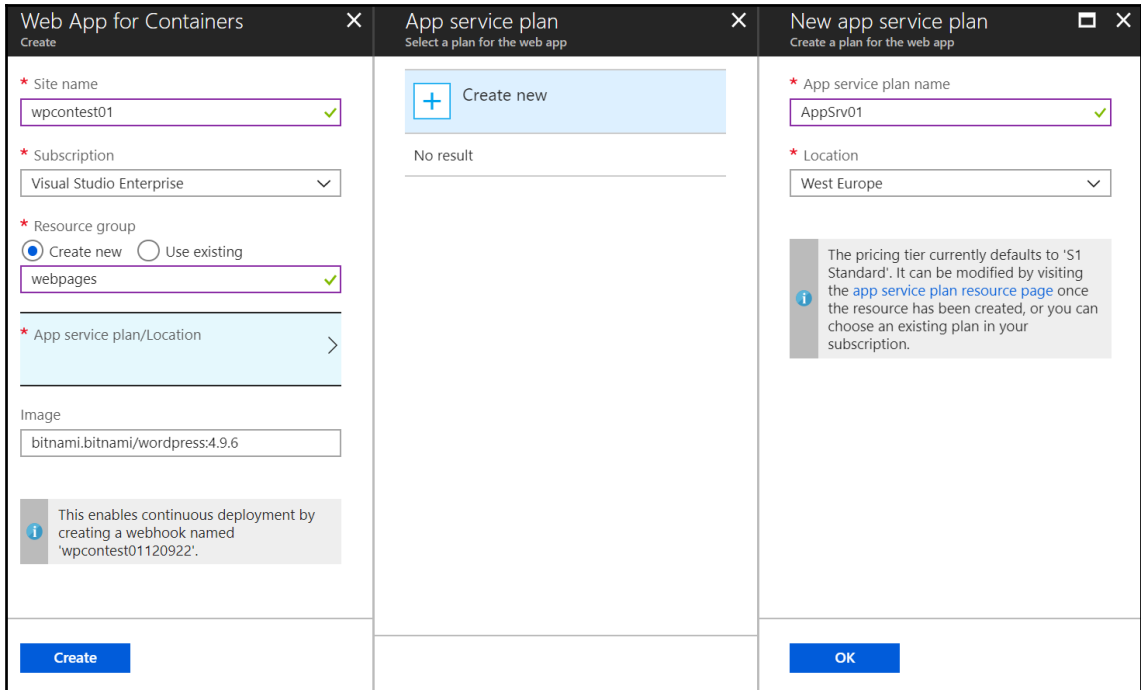
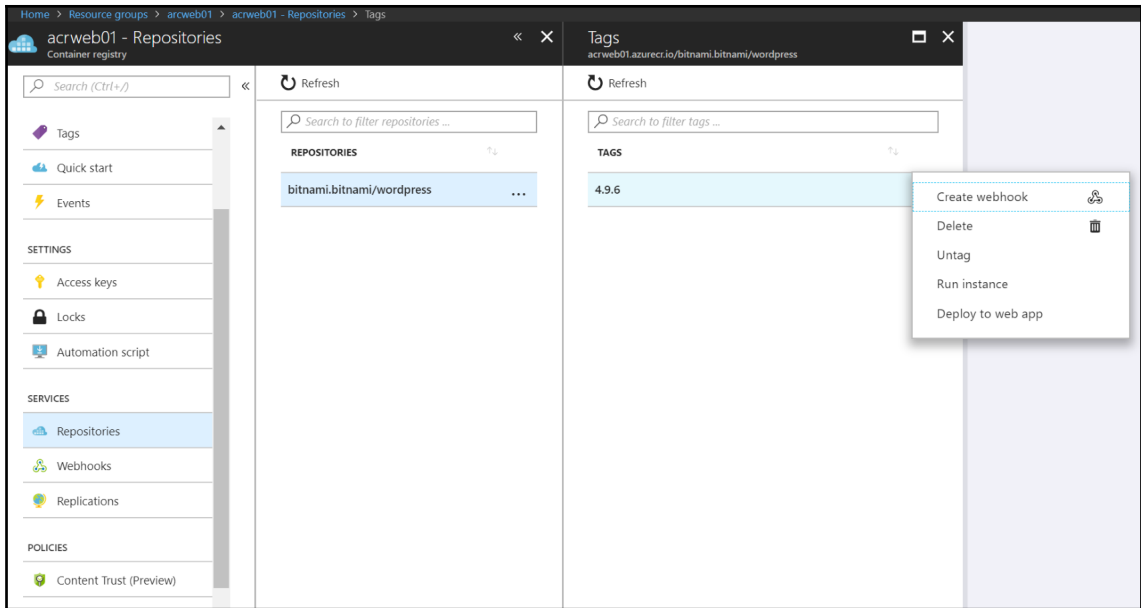
POLICIES

Content Trust (Preview)

Search to filter repositories ...

REPOSITORIES

bitnami.bitnami/wordpress



Home > wpcontest01

wpcontest01
App Service

Search (Ctrl+/)

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems

DEPLOYMENT

- Quickstart
- Deployment credentials
- Deployment slots
- Deployment options
- Deployment Center (Preview)

SETTINGS

- Application settings
- Container settings
- Authentication / Authorizati...
- Application Insights

[Browse](#)
■ Stop
↺ Swap
↺ Restart
🗑 Delete
📄 Get publish profile
🔄 Reset publish profile

Resource group (change)
webpages

Status
Running

Location
West Europe

Subscription (change)
Visual Studio Enterprise

Subscription ID
f3248cad-78cf-4116-bee1-01151da2d51d

URL
<https://wpcontest01.azurewebsites.net>

App Service plan/pricing tier
AppSrv01 (Standard: 1 Small)

FTP/deployment username
wpcontest01\dd-user-softed

FTP hostname
ftp://waws-prod-am2-085.ftp.azurewebsit...

FTPS hostname
ftps://waws-prod-am2-085.ftp.azurewebs...

Diagnose and solve problems
 Our self-service diagnostic and troubleshooting experience helps you identify and resolve issues with your web app.

App Service Advisor
 App Service Advisor provides insights for improving app experience on the App Service platform. Recommendations are sorted by freshness, priority and impact to your app.

Http 5xx

Data In

Data Out

Create Kubernetes cluster

Basics Authentication Networking Monitoring Tags Review + create

Azure Kubernetes Service (AKS) manages your hosted Kubernetes environment, making it quick and easy to deploy and manage containerized applications without container orchestration expertise. It also eliminates the burden of ongoing operations and maintenance by provisioning, upgrading, and scaling resources on demand, without taking your applications offline. [Learn more about Azure Kubernetes Service](#)

Project details

Select a subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

* Subscription ⓘ ✓

* Resource group ⓘ Create new Use existing
 ✓

Cluster details

* Kubernetes cluster name ⓘ ✓

* Region ⓘ ✓

* Kubernetes version ⓘ ✓

* DNS name prefix ⓘ ✓

Scale

The number and size of nodes in your cluster. For production workloads, at least 3 nodes are recommended for resiliency. For development or test workloads, only one node is required. You will not be able to change the node size after cluster creation, but you will be able to change the number of nodes in your cluster after creation. [Learn more about scaling in Azure Kubernetes Service](#)

Review + create

Next: Authentication >

Download a template for automation

Home > New > Marketplace > Everything > Kubernetes Service > Create Kubernetes cluster

Create Kubernetes cluster

is the quickest path from zero to Kubernetes on Azure. This new service control plane, automated upgrades, self-healing, easy scaling, and a simple developers and cluster operators. With AKS, customers get the benefits of without complexity or operational overhead.

th AKS, the managed Kubernetes service is free. You only pay for the VMs frastructure resources consumed like storage and networking. This means hing for the management of your Kubernetes cluster.

for Linux virtual machines.

ically takes a few minutes. Once complete, you can access and manage ks" and "kubectl".

Microsoft

[Learn more](#)
[Documentation](#)

Basics Authentication Networking Monitoring Tags Review + create

The **cluster infrastructure** service principal is used by the Kubernetes cluster to manage cloud resources attached to the cluster. [Learn more](#)

Kubernetes authentication and authorization is used by the Kubernetes cluster to control user access to the cluster as well as what the user may do once authenticated. [Learn more](#)

Cluster infrastructure

* Service principal ⓘ (new) default service principal
[Configure service principal](#)

Kubernetes authentication and authorization

Enable RBAC ⓘ

Home > New > Marketplace > Everything > Kubernetes Service > Create Kubernetes cluster

Create Kubernetes cluster

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Microsoft

[Learn more](#)
[Documentation](#)

Basics Authentication Networking Monitoring Tags Review + create

You can enable HTTP application routing and choose between two networking options: "Basic" or "Advanced".

- **"Basic"** networking creates a new VNet for your cluster using default values.
- **"Advanced"** networking allows clusters to use a new or existing VNet with customizable addresses. Application pods are connected directly to the VNet, which allows for native integration with VNet features.

[Learn more about networking in Azure Kubernetes Service](#)

HTTP application routing ⓘ

Network configuration ⓘ Basic Advanced

[Download a template for automation](#)

Home > New > Marketplace > Everything > Kubernetes Service > Create Kubernetes cluster

Create Kubernetes cluster

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Microsoft

[Learn more](#)
[Documentation](#)

Basics Authentication Networking **Monitoring** Tags Review + create

With Azure Kubernetes Service, you will get CPU and memory usage metrics for each node. In addition, you can enable container monitoring capabilities and get insights into the performance and health of your entire Kubernetes cluster. You will be billed based on the amount of data ingested and your data retention settings.

[Learn more about container performance and health monitoring](#)
[Learn more about pricing](#)

Azure Monitor

Enable container monitoring

Log Analytics workspace (new) DefaultWorkspace-f3248cad-78cf-4116-bee1-01151da2d51d-WEU

[Download a template for automation](#)

Home > New > Marketplace > Everything > Kubernetes Service > Create Kubernetes cluster

Create Kubernetes cluster

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for Linux virtual machines.

pically takes a few minutes. Once complete, you can access and manage ks" and "kubectl".

Microsoft

[Learn more](#)
[Documentation](#)

Basics Authentication Networking Monitoring **Tags** Review + create

Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. [Learn more](#)

Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.

KEY	VALUE
<input type="text"/>	<input type="text"/>

[Download a template for automation](#)

Home > New > Marketplace > Everything > Kubernetes Service > Create Kubernetes cluster

Create Kubernetes cluster

Running final validation...

Basics Authentication Networking Monitoring Tags **Review + create**

BASICS

Subscription	Visual Studio Enterprise
Resource group	(new) AKS01
Region	West Europe
Kubernetes cluster name	kubecluster
Kubernetes version	1.11.1
DNS name prefix	myaks
Node count	3
Node size	Standard_DS1_v2

AUTHENTICATION

Enable RBAC	No
-------------	----

NETWORKING

HTTP application routing	Yes
Network configuration	Basic

MONITORING

Enable container monitoring	Yes
Log Analytics workspace	(new) DefaultWorkspace-f3248cad-78cf-4116-bee1-01151da2d51d-WEU

TAGS

[Create](#)
[« Previous: Tags](#)
[Download a template for automation](#)

Microsoft
[Learn more](#)
[Documentation](#)



→ Move Delete Refresh

Resource group ([change](#))
AKS01

Status
Succeeded

Location
West Europe

Subscription ([change](#))
Visual Studio Enterprise

Subscription ID
f3248cad-78cf-4116-bee1-01151da2d51d

Tags ([change](#))
[Click here to add tags](#)

Kubernetes version
1.11.1

API server address
myaks-900c6fe3.hcp.westeurope.azmk8s.io

Total cores
3

Total memory
10.5

HTTP application routing domain
0c67c6a16d994ed4b7a5.westeurope.aksa...



Monitor container health

Get health and performance insights

[Go to Azure Monitor container health](#)



Search logs

Search and analyze logs using ad-hoc queries

[Go to Azure Monitor logs](#)



View Kubernetes dashboard

Learn how to connect to the Kubernetes dashboard

[View connection steps](#)

Kubernetes dashboard



To open your Kubernetes dashboard, complete the following steps:

1 Open Azure CLI version 2.0.27 or later. This will not work in cloud shell and must be running on your local machine. [How to install the Azure CLI](#)

2 If you do not already have kubectl installed in your CLI, run the following command:

```
az aks install-cli
```



3 Get the credentials for your cluster by running the following command:

```
az aks get-credentials --resource-group AKS01 --name kubecluster
```



4 Open the Kubernetes dashboard by running the following command:

```
az aks browse --resource-group AKS01 --name kubecluster
```



Useful links

[What is Kubernetes dashboard?](#)

[Full instructions for opening the Kubernetes dashboard](#)

```
Administrator: Eingabeaufforderung - az aks install-cli
Microsoft Windows [Version 10.0.17134.228]
(c) 2018 Microsoft Corporation. Alle Rechte vorbehalten.

C:\WINDOWS\system32>az aks install-cli
Downloading client to "C:\Users\maklei\.azure-kubectl\kubectl.exe" from "https://storage.googleapis.com/kubernetes-release/release/v1.11.2/bin/windows/amd64/kubectl.exe"
```

kubernetes + CREATE

Search

Overview

Cluster

- Namespaces
- Nodes
- Persistent Volumes
- Roles
- Storage Classes

Namespace: default

Overview

- Workloads
- Cron Jobs
- Daemon Sets
- Deployments
- Jobs
- Pods
- Replica Sets
- Replication Controllers
- Stateful Sets
- Discovery and Load Balancing

Discovery and Load Balancing

Services

Name	Labels	Cluster IP	Internal endpoints	External endpoints	Age
✓ kubernetes	component: apiserver provider: kubernetes	10.0.0.1	kubernetes:443 TCP kubernetes:0 TCP	-	21 minutes

Config and Storage

Secrets

Name	Type	Age
default-token-jq5lm	kubernetes.io/service-account-token	21 minutes

Home > kubecluster - Upgrade

kubecluster - Upgrade
Kubernetes service

Search (Ctrl+/) Save Discard

Overview

Activity log

Access control (IAM)

Tags

SETTINGS

- Upgrade
- Scale
- Properties
- Locks
- Automation script

MONITORING

- Metrics (preview)
- Health (preview)
- Logs

You can upgrade your cluster to a newer version of Kubernetes. The upgrade will roll out safely in stages so your containers are not disrupted. Upgrading your cluster may take up to 10 minutes per node.
[Learn more about upgrading your AKS cluster](#)
[View the Kubernetes changelog](#)

Kubernetes Version

1.11.1 (current) ✓ This cluster is using the latest available version of Kubernetes.

Home > kubecluster - Scale

kubecluster - Scale

Kubernetes service

Search (Ctrl+/) Save Discard Refresh

- Overview
- Activity log
- Access control (IAM)
- Tags

SETTINGS

- Upgrade
- Scale**
- Properties
- Locks
- Automation script

MONITORING


- Metrics (preview)
- Health (preview)
- Logs

You can scale the number of nodes in your cluster to increase the total amount of cores and memory available for your container cluster.

[Learn more about scaling your AKS cluster](#)

Total cluster capacity

Cores	3 vCPUs	➔	100 vCPUs (new)
Memory	10.5 GB	➔	350 GB (new)

 100 x Standard DS1 v2 (1 vcpu, 3.5 GB memory)

Search (Ctrl+/)

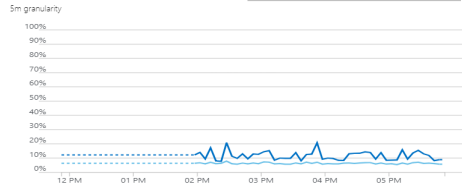
- Overview
- Activity log
- Access control (IAM)
- Tags
- SETTINGS
 - Upgrade
 - Scale
 - Properties
 - Locks
 - Automation script
- MONITORING
 - Metrics (preview)
 - Health (preview)
 - Logs
- SUPPORT + TROUBLESHOOTING

Namespace: <All> Service: <All> Node: <All> Time range: Last 6 hours

Cluster Nodes Controllers Containers [Learn more](#)

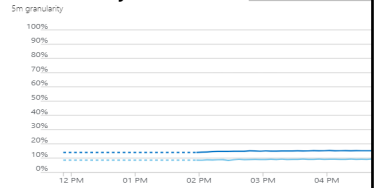
Node CPU utilization %

Avg Min 50th 90th 95th Max



Node memory utilization %

Avg Min 50th 90th 95th



Node count

Total Ready Not Ready



Active pod count

Total Pending Run



Home > kubecluster - Health (preview)

kubecluster - Health (preview)

Kubernetes service

Namespace: <All> Service: <All> Node: <All> Time range: Last 6 hours

Cluster Nodes **Controllers** Containers [Learn more](#) [Feedback](#)

Search by name... Metric: CPU Usage (millicores) Min Avg 50th 90th **95th** Max

NAME	STATUS	95TH %	95TH	CONTAINERS	UPTIME	CONTROLLER	TREND 95TH % (1 B)
aks-agentpool-3124485...	Ok	15%	152 mc	17	4 hours	-	
aks-agentpool-3124485...	Ok	7%	67 mc	5	4 hours	-	
aks-agentpool-3124485...	Ok	7%	66 mc	3	4 hours	-	

aks-agentpool-3124...
Node

[View Kubernetes event logs](#)

Node Name
aks-agentpool-31244857-1

Status
Ready

Cluster Name
kubecluster

Kubelet Version
v1.11.1

Kube Proxy Version
v1.11.1

Docker Version
1.13.1

Operating System
Ubuntu 16.04.5 LTS

Node IP
40.114.215.226

Computer Environment
Azure

Agent Image
oms

Home > kubecluster - Health (preview)

kubecluster - Health (preview)

Kubernetes service

Namespace: <All> Service: <All> Node: <All> Time range: Last 6 hours

Cluster Nodes **Controllers** Containers [Learn more](#) [Feedback](#)

Search by name... Metric: CPU Usage (millicores) Min Avg 50th 90th **95th** Max

NAME	STATUS	95TH %	95TH	CONTAINERS	RESTARTS	UPTIME
omsagent-rs-55847b4c4 (ReplicaSet)	1	5%	8 mc	1	0	4 hours
tunnelfront-6b6989567f (ReplicaSet)	1	4%	41 mc	1	0	4 hours
omsagent (DaemonSet)	3	4%	7 mc	3	0	4 hours
kube-svc-redirect (DaemonSet)	3	3%	26 mc	3	0	4 hours
heapster-6c9777d684 (ReplicaSet)	1	1%	0.9 mc	2	0	4 hours
azureproxy-776884fb9 (ReplicaSet)	1	0.9%	9 mc	1	0	4 hours
addon-http-application-routing-defaul...	1	0.5%	0.1 mc	1	0	4 hours
kubernetes-dashboard-5f8444858 (Re...	1	0.5%	0.5 mc	1	0	4 hours
kube-proxy (DaemonSet)	3	0.3%	3 mc	3	0	4 hours
addon-http-application-routing-rnginx...	1	0.3%	3 mc	1	0	4 hours
metrics-server-789c47657d (ReplicaSet)	1	0.1%	1 mc	1	0	4 hours
kube-dns-v20-56b5b568d (ReplicaSet)	2	0.1%	0.9 mc	6	0	4 hours

omsagent-rs-55847b...
Controller

[View Kubernetes event logs](#)

Controller Name
omsagent-rs-55847b4c4

Namespace
kube-system

Controller Kind
ReplicaSet

Pod Count
1

Container Count
1

Service Name
-

Search (Ctrl+F)

- Overview
- Activity log
- Access control (IAM)
- Tags

SETTINGS

- Upgrade
- Scale
- Properties
- Locks
- Automation script

MONITORING

- Metrics (preview)
- Health (preview)**
- Logs

SUPPORT + TROUBLESHOOTING

- Search (Ctrl+J)
- Overview
 - Activity log
 - Access control (IAM)
 - Tags
 - SETTINGS
 - Upgrade
 - Scale
 - Properties
 - Locks
 - Automation script
 - MONITORING
 - Metrics (preview)
 - Health (preview)**
 - Logs
 - SUPPORT + TROUBLESHOOTING

Namespace: <All> Service: <All> Node: <All> Time range: Last 6 hours

Cluster Nodes Controllers **Containers** [Learn more](#) [Feedback](#)

Search by name... Metric: CPU Usage (millicores) @ Min Avg 50th 90th **95th** Max

NAME	STATUS	95TH %	95TH	POD	NODE	RESTARTS	UPT
omsagent	Ok	11%	16 mc	omsagent-5f78b	aks-agentpool-312...	0	4 h
omsagent	Ok	5%	8 mc	omsagent-rs-55847...	aks-agentpool-312...	0	4 h
tunnel-front	Ok	4%	41 mc	tunnelfront-6b6989...	aks-agentpool-312...	0	4 h
redirector	Ok	3%	27 mc	kube-svc-redirect-4...	aks-agentpool-312...	0	4 h
redirector	Ok	3%	26 mc	kube-svc-redirect-x...	aks-agentpool-312...	0	4 h
redirector	Ok	3%	25 mc	kube-svc-redirect-n...	aks-agentpool-312...	0	4 h
heapster-nanny	Ok	1%	0.7 mc	heapster-6c9777d5...	aks-agentpool-312...	0	4 h
omsagent	Ok	1%	2 mc	omsagent-hrpr2	aks-agentpool-312...	0	4 h
omsagent	Ok	1%	2 mc	omsagent-gsvz7	aks-agentpool-312...	0	4 h
heapster	Ok	1%	1 mc	heapster-6c9777d5...	aks-agentpool-312...	0	4 h
azureproxy	Ok	0.9%	9 mc	azureproxy-776884f...	aks-agentpool-312...	0	4 h
addon-http-application-routing.d...	Ok	0.5%	0.1 mc	addon-http-applica...	aks-agentpool-312...	0	4 h

omsagent
Container

[View container logs](#)

Container Name
omsagent

Container ID
df76025e9d4a61405782adbf101c3736e1b27f0539d6423e58e24cd455

Container Status
running

Image
oms

Image Tag
ciprod07312018

Container Creation Time Stamp
18.8.2018, 13:55:24

Start Time
18.8.2018, 13:55:24

Finish Time
-

CPU Limit
150 mc

CPU Request



→ Move Delete Refresh

Resource group [\(change\)](#)
AKS01

Status
Succeeded

Location
West Europe

Subscription [\(change\)](#)
Visual Studio Enterprise

Subscription ID
f3248cad-78cf-4116-bee1-01151da2d51d

Tags [\(change\)](#)
[Click here to add tags](#)

Kubernetes version
1.11.1

API server address
myaks-900c6fe3.hcp.westeurope.azmk8s.io

Total cores
3

Total memory
10.5

HTTP application routing domain
0c67c6a16d994ed4b7a5.westeurope.aksa...



Monitor container health

Get health and performance insights

[Go to Azure Monitor container health](#)



Search logs

Search and analyze logs using ad-hoc queries

[Go to Azure Monitor logs](#)

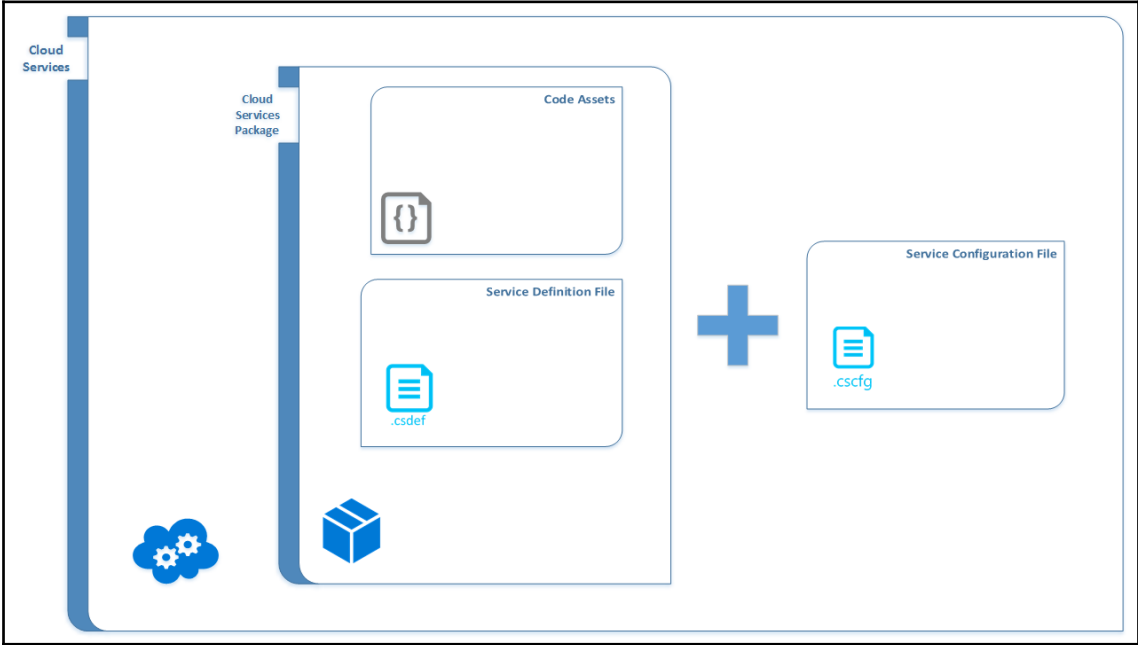


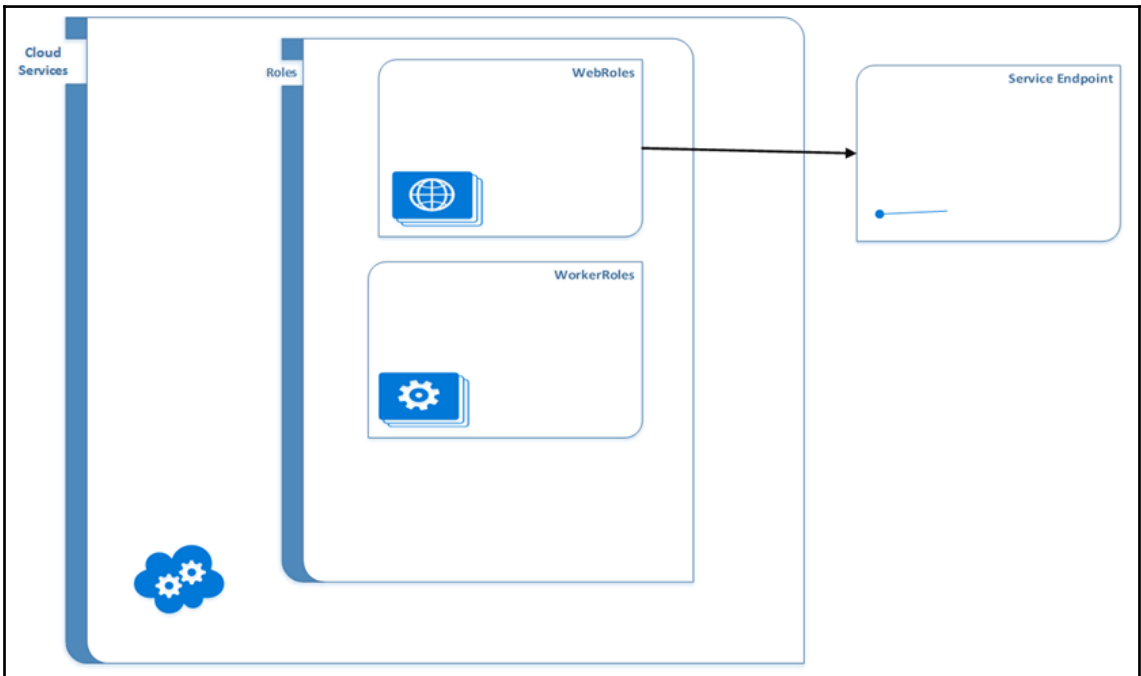
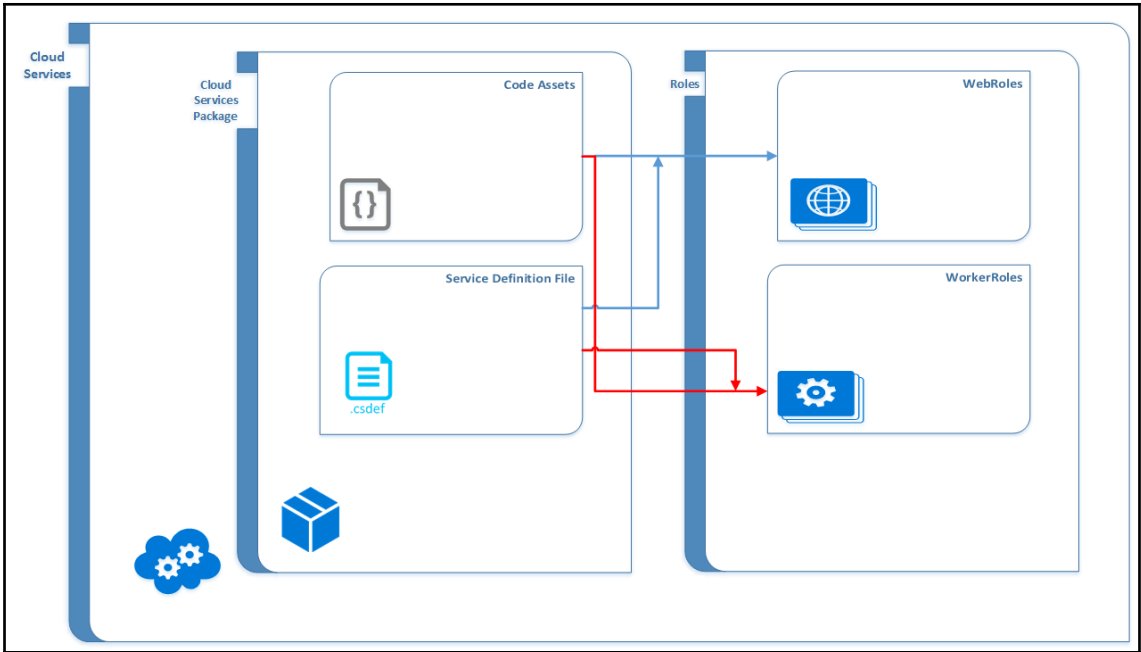
View Kubernetes dashboard

Learn how to connect to the Kubernetes dashboard

[View connection steps](#)

Chapter 9: Implementing Azure Cloud Services





Dashboard

Create a resource

All services

FAVORITES

- Dashboard
- All resources
- Resource groups
- Recent
- App Services
- Virtual machines (classic)
- Virtual machines
- SQL databases
- Cloud services (classic)
- Subscriptions
- Azure Active Directory
- Monitor
- Security Center
- Cost Management + Billing
- Help + support

All resources

All subscriptions Refresh

myvm4	Managed application
managedappstore	Storage account
DevM20181	Virtual machine
CustomVM	Service catalog managed ...
feedy-bdd9	App Service
DevVSEm1	Virtual machine
Testlab	Lab Account
onenotemigration	Azure Cosmos DB account
Test-Client	Virtual machine
sebastianhoppe	Storage account
DevVSEm1-nsg	Network security group
devvsem1872	Network interface
DEV-vnet	Virtual network
LogicApp1	Logic app
Win10VMDev	Virtual machine

Service Health

Personalized guidance and support when issues in Azure services affect you. [Learn more](#)

Marketplace

Help + support

New



Azure Marketplace

[See all](#)

Featured

[See all](#)

Get started

Recently created

Compute

Networking

Storage

Web

Mobile

Containers

Databases

Analytics

AI + Machine Learning

Internet of Things

Integration

Security

Identity

Developer tools

Management Tools

Software as a service (SaaS)

Blockchain



Windows Server 2016 Datacenter
[Quickstart tutorial](#)



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Ubuntu Server 18.04 LTS
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SQL Server 2017 Enterprise Windows Server 2016
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Reserved VM Instances
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Service Fabric Cluster
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Web App for Containers
[Quickstart tutorial](#)



Function App
[Quickstart tutorial](#)



Batch Service
[Quickstart tutorial](#)



Cloud service
[Learn more](#)

1

2

[Home](#) > [New](#) > Cloud service (classic)

Cloud service (classic) □ ×

* DNS name

.cloudapp.net

* Subscription

MSDN Platforms ▾

* Resource group

Select existing... ▾

[Create new](#)

* Location

West Europe ▾

Package

(Optional) Select a package >

Certificates

(Optional) Add certificates 🔒

[Create](#)

[Automation options](#)

Home > New > Cloud service (classic)

Cloud service (classic)

* DNS name

acdppbookcsse ✓

.cloudapp.net

* Subscription

MSDN Platforms

* Resource group

Select existing...

[Create new](#)

* Location

West Europe

Package

(Optional) Select a package >

Certificates

(Optional) Add certificates

Create

Automation options

Home > New > Cloud service (classic)

Cloud service (classic)

* DNS name

acdppbookcsse



.cloudapp.net

* Subscription

MSDN Platforms



* Resource group

Select existing...



[Create new](#)

* Location

West Europe



Package

(Optional) Select a package



Certificates

(Optional) Add certificates



Create

[Automation options](#)

Home > New > Cloud service (classic)

Cloud service (classic)

* DNS name

acdppbookcsse ✓

.cloudapp.net

* Subscription

MSDN Platforms

* Resource group

acdppbookse

[Create new](#)

* Location

West Europe

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(Optional) Select a package >

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(Optional) Add certificates

Create

[Automation options](#)

Cloud service (classic)

* DNS name

acdppbookcsse ✓

.cloudapp.net

* Subscription

MSDN Platforms

* Resource group

acdppbookse

[Create new](#)

* Location

West Europe ^

Australia East

Australia Southeast

Brazil South

UK West

West Central US

West Europe

Create

Automation options

1

2

Home > New > Cloud service (classic)

Cloud service (classic)

* DNS name

acdppbookcsse ✓

.cloudapp.net

* Subscription

MSDN Platforms

* Resource group

acdppbookse

[Create new](#)

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[Automation options](#)

Home > New > Cloud service (classic)

Cloud service (classic)

* DNS name
acdppbookcsse ✓
.cloudapp.net

* Subscription
MSDN Platforms

* Resource group
acdppbookse
[Create new](#)

* Location
West Europe

Package
(Optional) Select a package >

Certificates
(Optional) Add certificates 🔒

Create Automation options

Home > Cloud services (classic)

Cloud services (classic)

Standardverzeichnis

+ Add Edit columns Refresh Assign tags Start production Stop production Start staging Stop staging Swap More

Subscriptions: All 4 selected – Don't see a subscription? [Open Directory](#) + [Subscription settings](#)

Filter by name... All subscriptions All resource groups All locations All tags No grouping

1 items

NAME	RESOURCE GROUP	LOCATION	SUBSCRIPTION
acdppbookcsse	acdppbookse	West Europe	MSDN Platforms

Home > Cloud services (classic) > acdppbookcsse

acdppbookcsse

Cloud service (classic)

Search (Ctrl+/)

Production Upload Start Swap Move Delete Refresh

Overview

- Activity log
- Access control (IAM)
- Diagnose and solve problems
- Operation log (classic)

Settings

- Antimalware
- Certificates
- Configuration
- Extensions
- Roles and Instances
- Remote Desktop

Production

Staging

Site URL

Public IP addresses

Deployment name

Deployment label

Deployment ID

Subscription

MSDN Platforms

Subscription ID

Search to filter items...

NAME	STATUS	SIZE	UPDA...	FAULT
You have nothing deployed to the current environment.				

Home > Cloud services (classic) > acdppbookcsse

acdppbookcsse

Cloud service (classic)

Search (Ctrl+/)

Production Upload Start Swap Move Delete Refresh

No deployment

Resource group (change)

acdppbookcsse

Site URL

Public IP addresses

Deployment name

Deployment label

Deployment ID

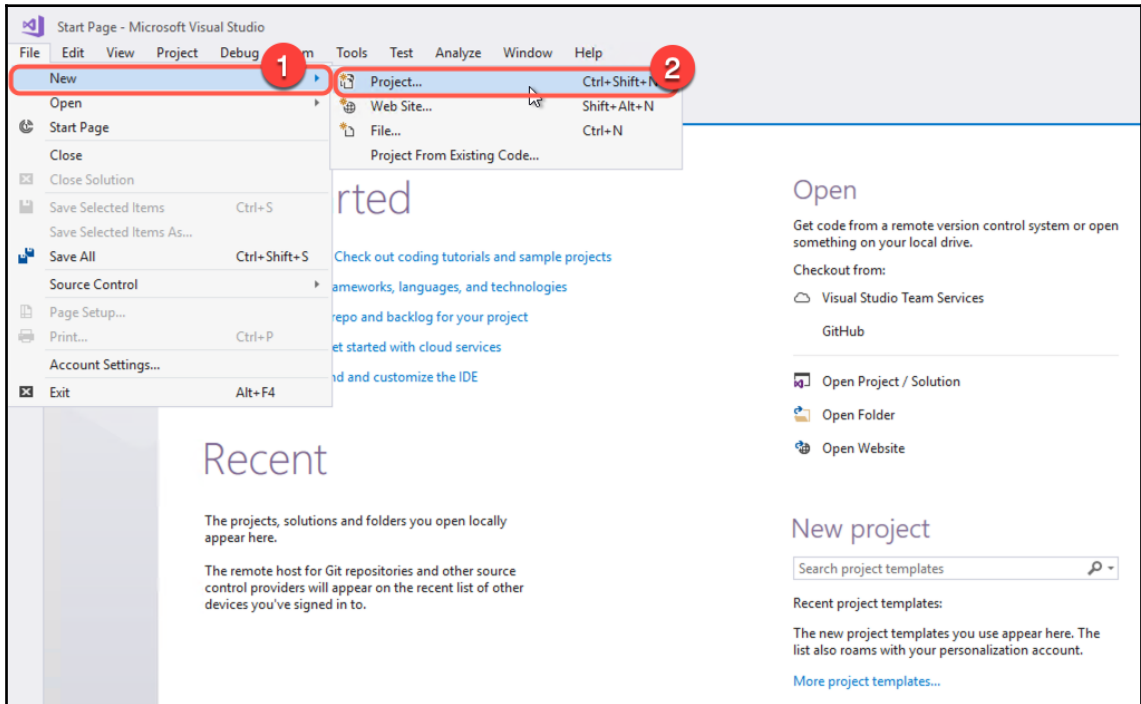
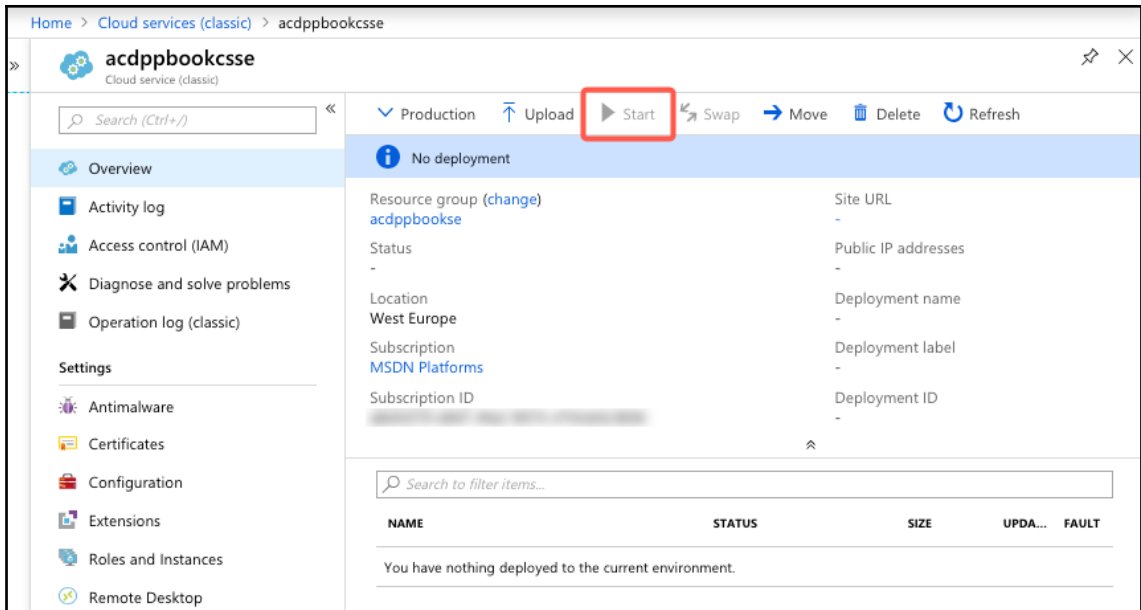
Subscription

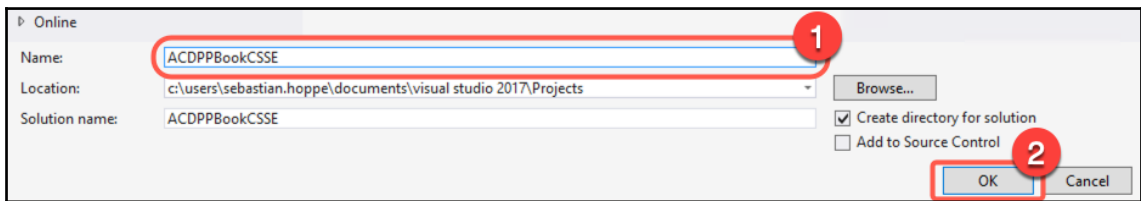
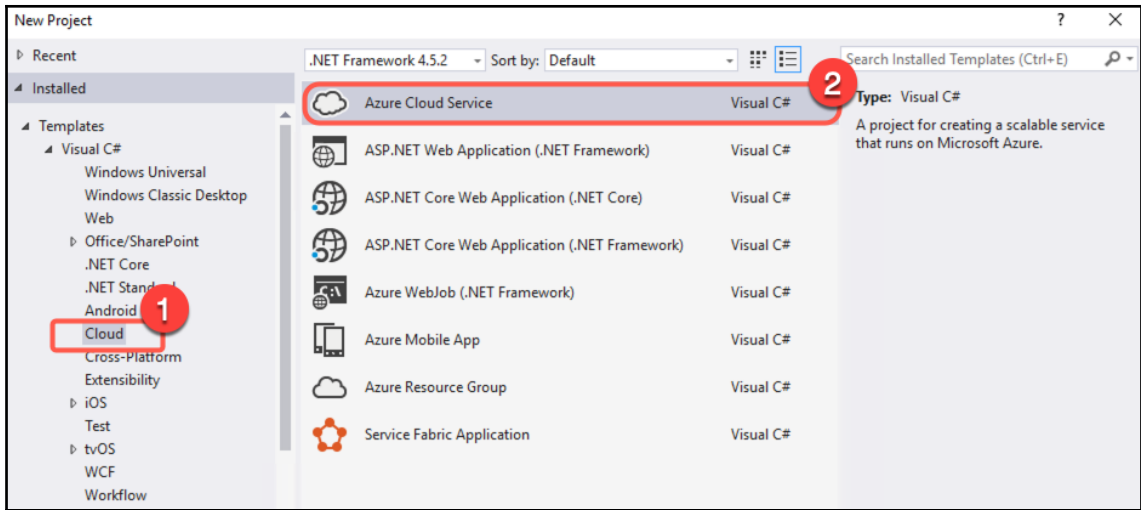
MSDN Platforms

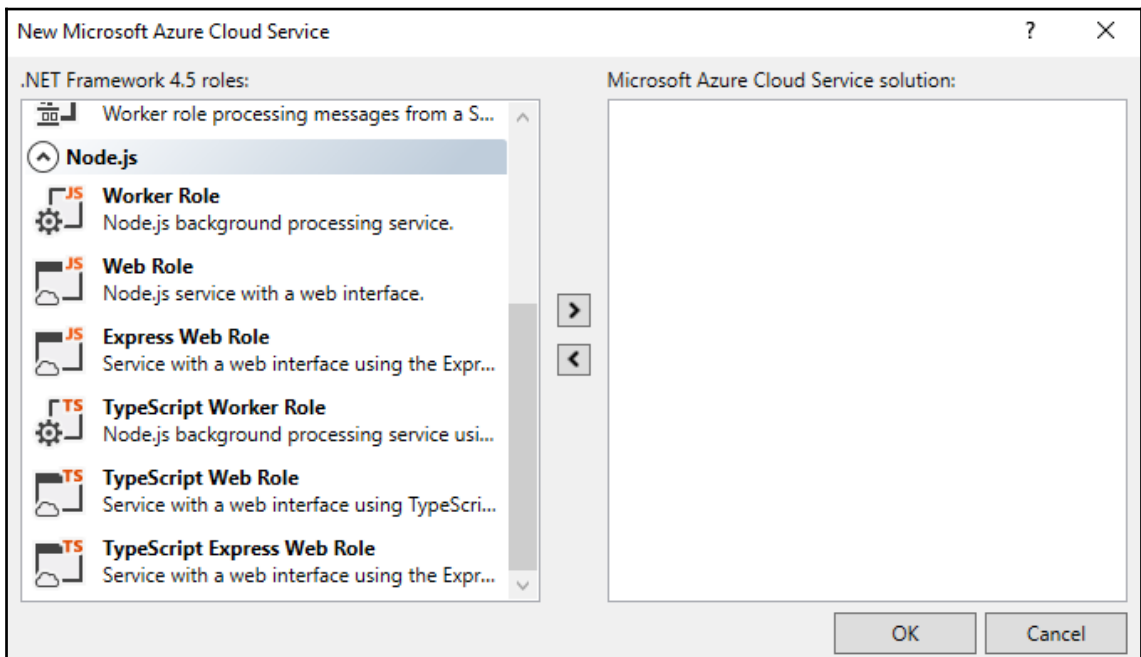
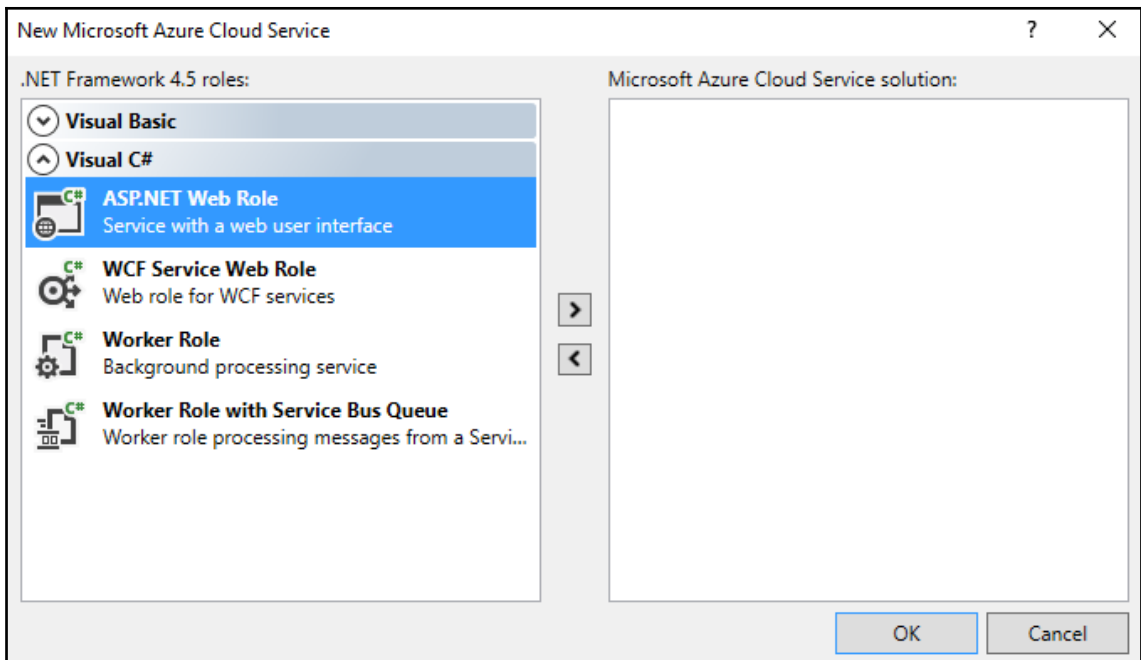
Subscription ID

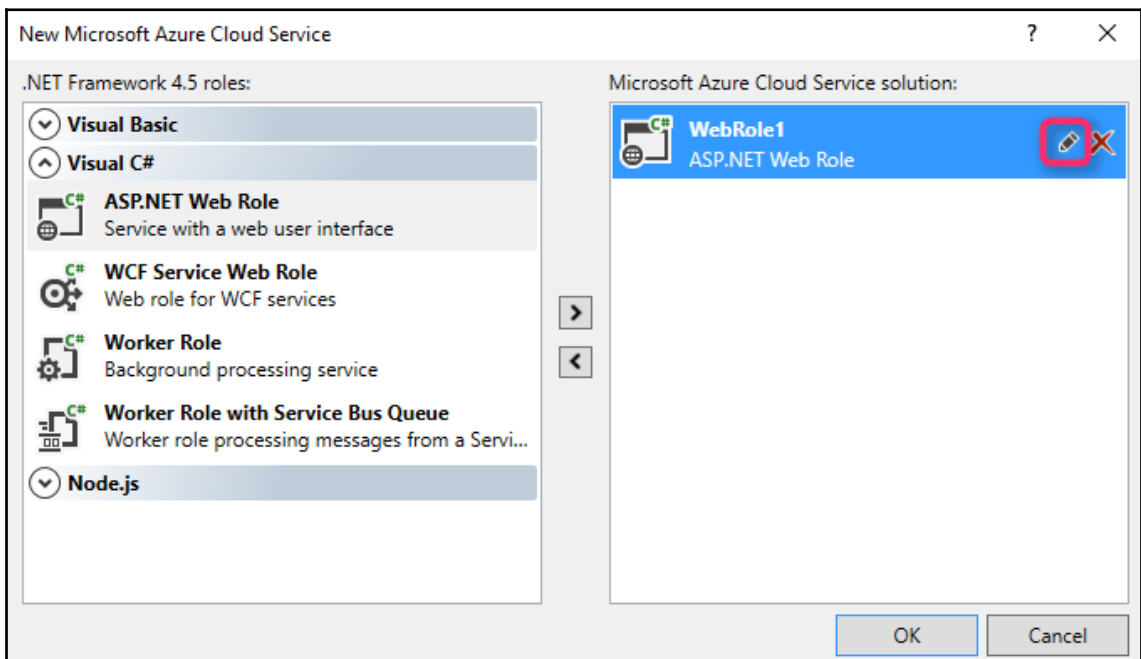
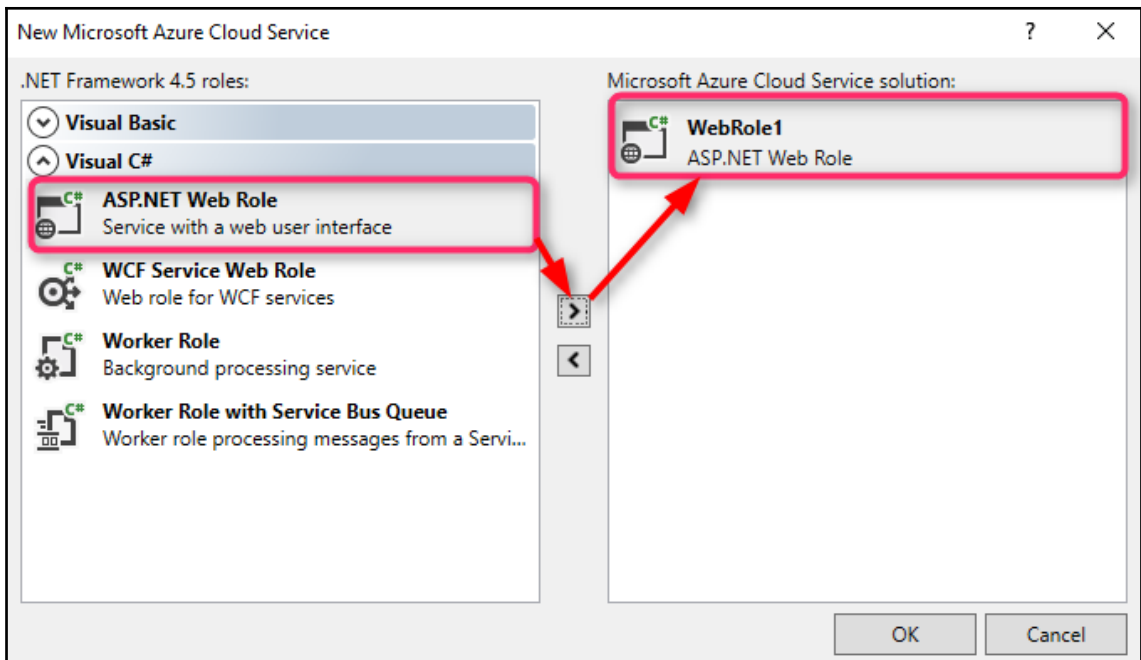
Search to filter items...

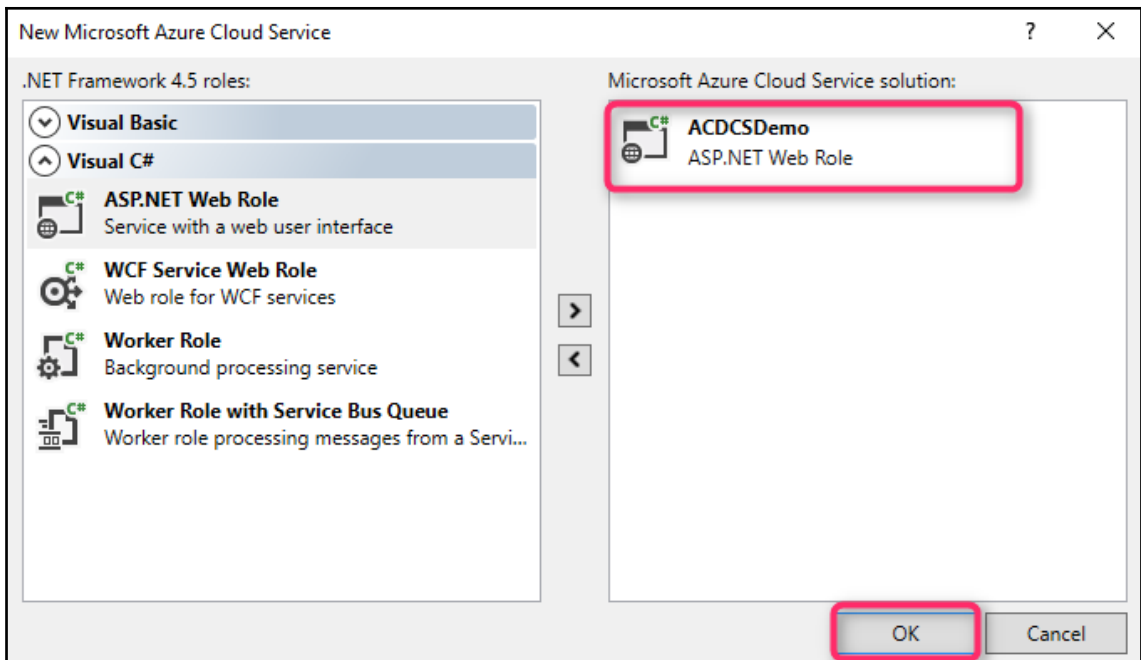
NAME	STATUS	SIZE	UPDA...	FAULT
You have nothing deployed to the current environment.				

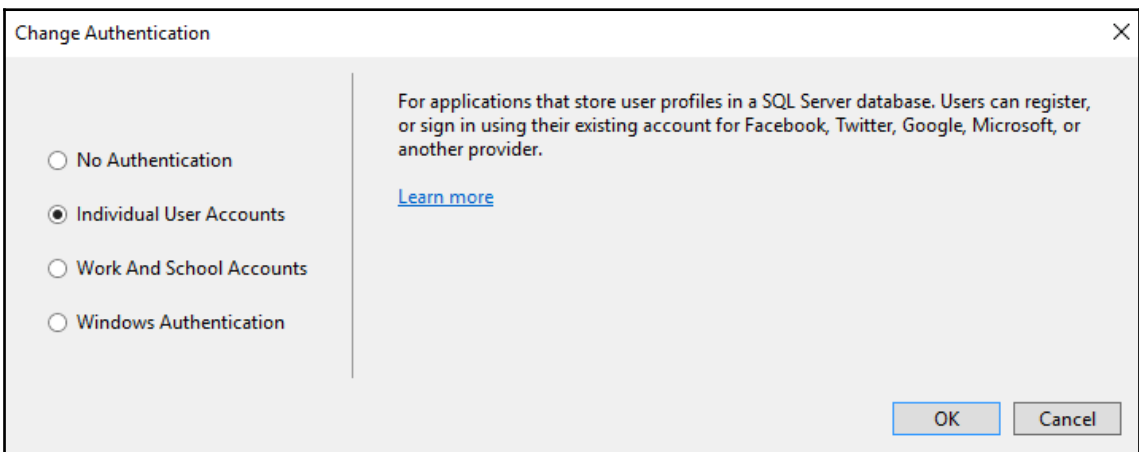
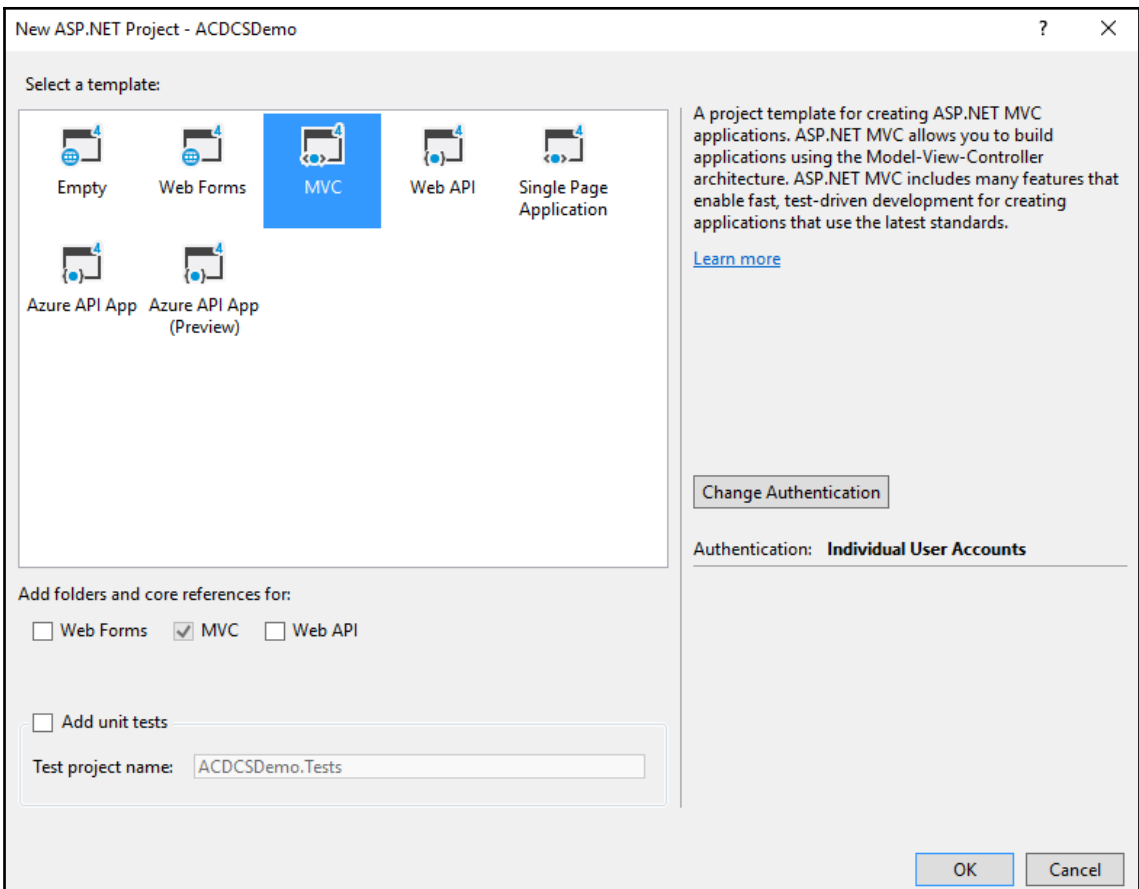


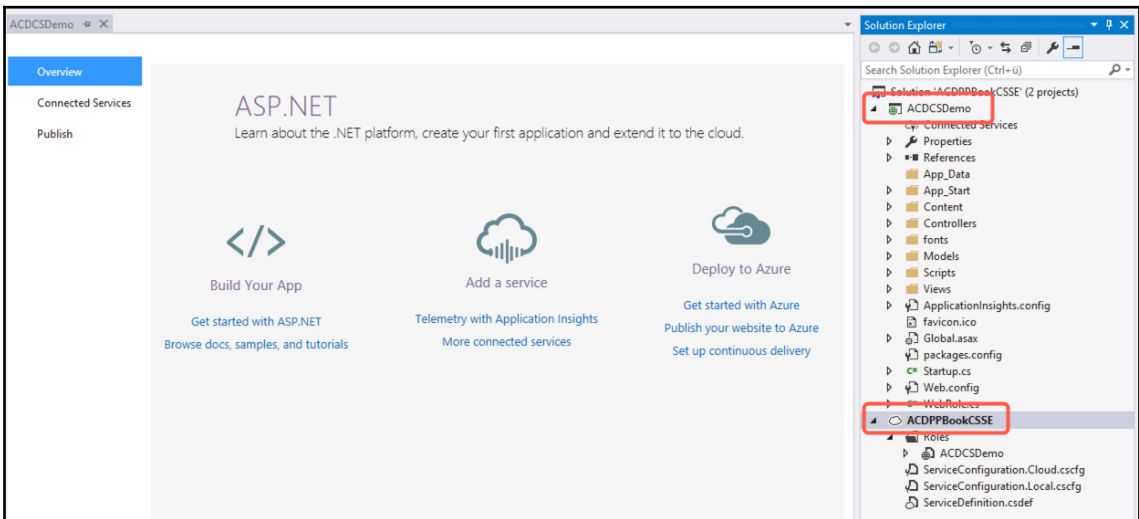
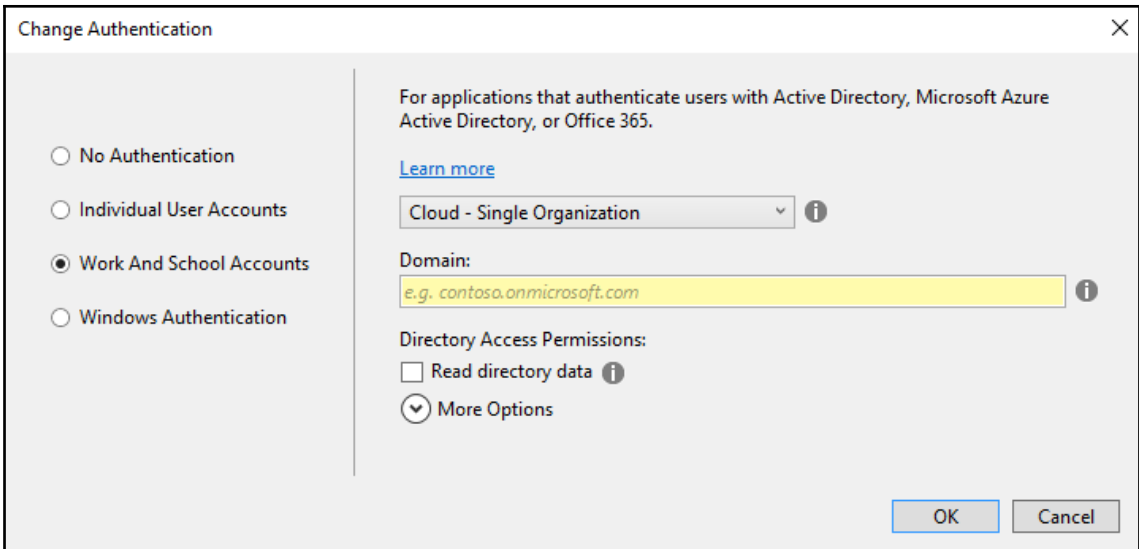


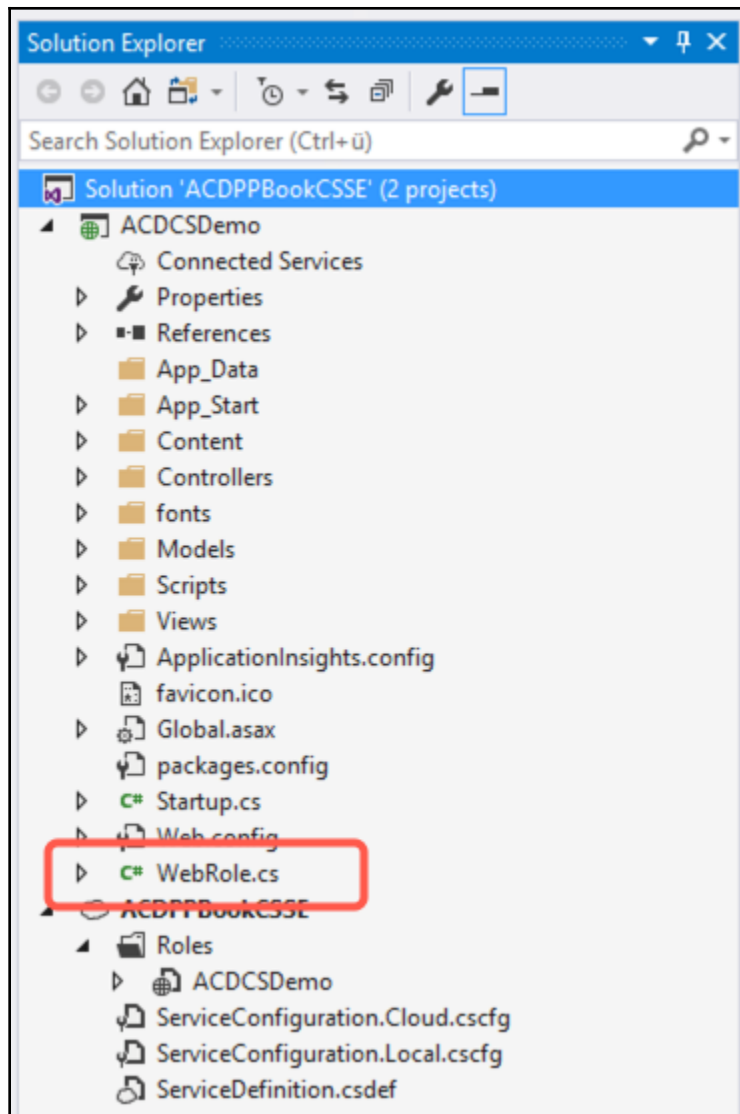












```
WebRole.cs  ACDCSDemo
ACDCSDemo
ACDCSDemo.WebRole
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using Microsoft.WindowsAzure;
5 using Microsoft.WindowsAzure.Diagnostics;
6 using Microsoft.WindowsAzure.ServiceRuntime;
7
8 namespace ACDCSDemo
9 {
10 public class WebRole : RoleEntryPoint
11 {
12 public override bool OnStart()
13 {
14 // For information on handling configuration changes
15 // see the MSDN topic at https://go.microsoft.com/fwlink/?LinkId=166357.
16
17 return base.OnStart();
18 }
19 }
20 }
21
```

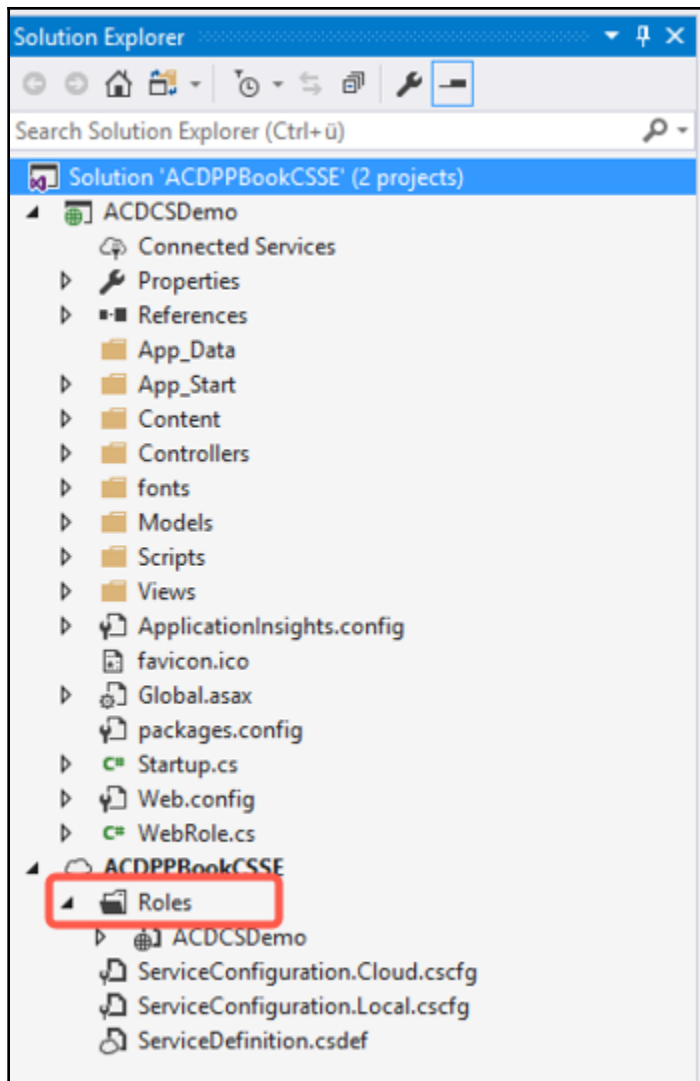
```
WebRole.cs  ACDCSDemo
ACDCSDemo
ACDCSDemo.WebRole
OnStart()
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using Microsoft.WindowsAzure;
5 using Microsoft.WindowsAzure.Diagnostics;
6 using Microsoft.WindowsAzure.ServiceRuntime;
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16
17 return base.OnStart();
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19 }
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21
```

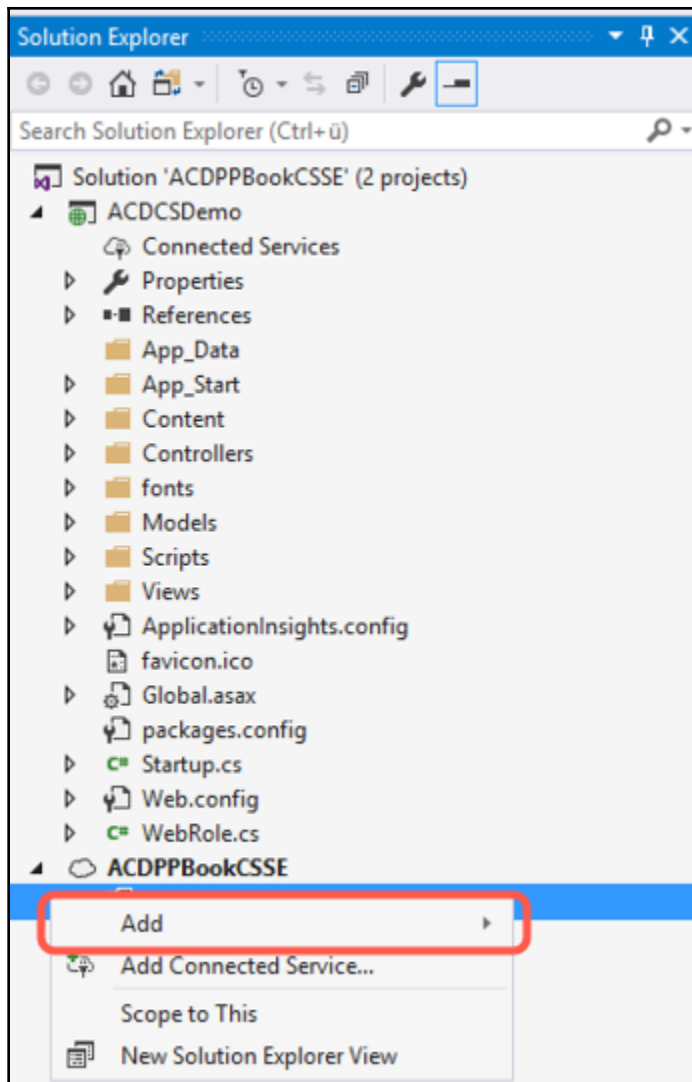
Solution Explorer

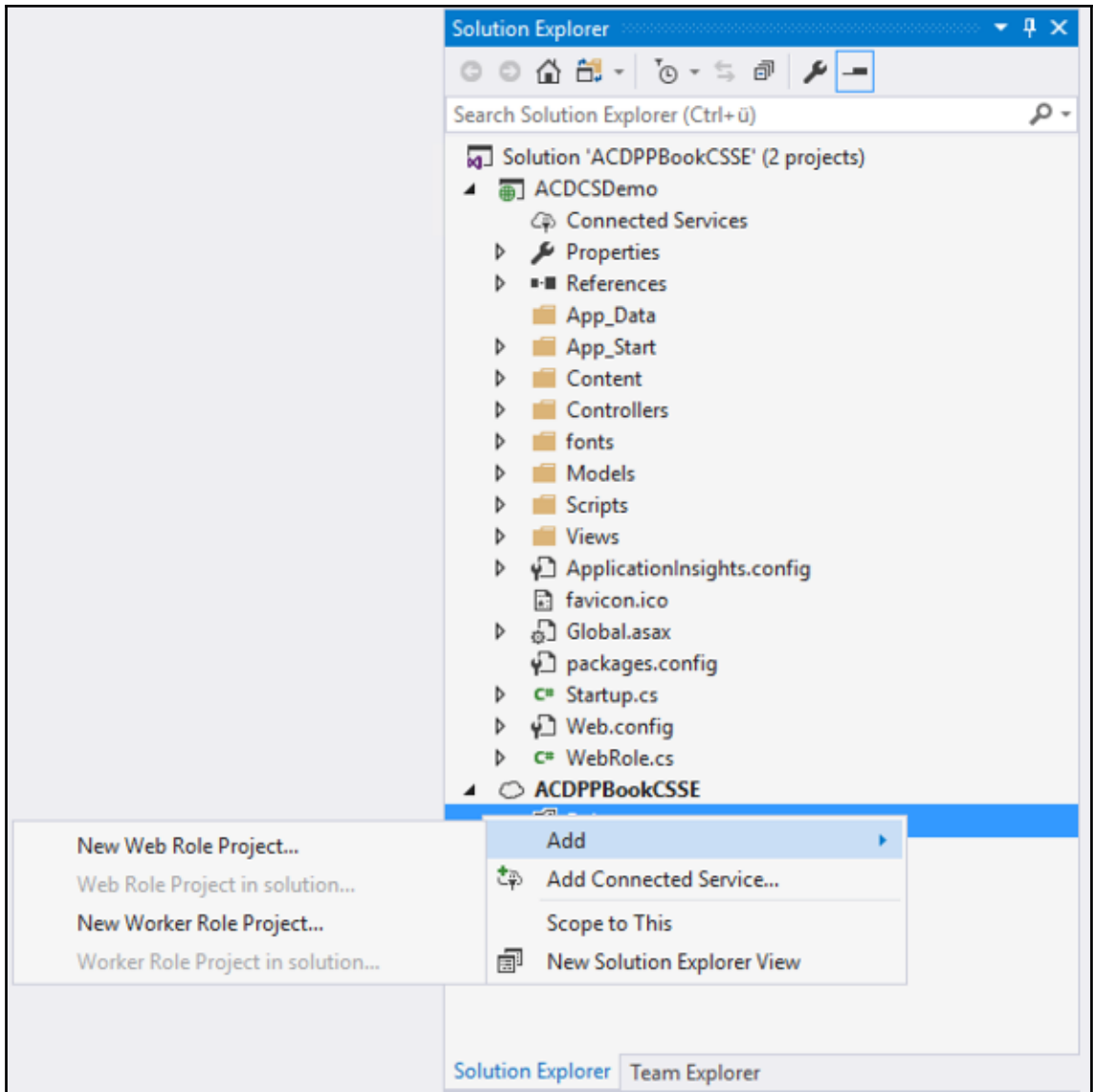
Search Solution Explorer (Ctrl+ü)

- Solution 'ACDPPBookCSSE' (2 projects)
 - ACDCSDemo
 - Connected Services
 - Properties
 - References
 - App_Data
 - App_Start
 - Content
 - Controllers
 - fonts
 - Models
 - Scripts
 - Views
 - ApplicationInsights.config
 - favicon.ico
 - Global.asax
 - packages.config
 - Startup.cs
 - Web.config
 - WebRole.cs
 - ACDPPBookCSSE
 - Roles
 - ACDCSDemo
 - ServiceConfiguration.Cloud.cscfg
 - ServiceConfiguration.Local.cscfg
 - ServiceDefinition.csdef









ACDCSDemo [Role] + X

Configuration Service Configuration: All Configurations

Settings

Endpoints Instance count: 1

Local Storage VM size: Small (1 cores, 1792 MB)

Certificates

Startup action

Launch browser for:

HTTP endpoint

HTTPS endpoint

Diagnostics

Enable Diagnostics

Configure...

How to configure continuous delivery for Cloud Services in Azure

Specify the storage account credentials for the Diagnostics results:

UseDevelopmentStorage=true

Don't remove storage key secret from project configuration (.csfg) file

Send diagnostics data to Application Insights

Connection strings

Update development storage connection strings for Diagnostics and Caching with Microsoft Azure storage account credentials v

Solution Explorer

Search Solution Explorer (Ctrl+U)

Solution 'ACDPPBookCSSE' (2 projects)

- ACDCSDemo
 - Connected Services
 - Properties
 - References
 - App_Data
 - App_Start
 - Content
 - Controllers
 - fonts
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 - ApplicationInsights.config
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- ACDPPBookCSSE
 - Roles
 - ACDCSDemo
 - ServiceConfiguration.Cloud.csfg
 - ServiceConfiguration.Local.csfg
 - ServiceDefinition.csdef

ACDCSDemo [Role] + X

Configuration Service Configuration: All Configurations

Settings

Endpoints **Add Endpoint** X Remove Endpoint

Local Storage Configure the endpoints for this role. Select the certificate to use for each HTTPS endpoint when the Microsoft Azure Cloud Service project is deployed to Microsoft Azure (not applicable when running on the local Microsoft Azure compute emulator).

Certificates

Name	Type	Protocol	Public Port	Private Port	SSL Certificate Name
Endpoint1	Input	http	80	Input value(s) like *, 8080, or/and 8000-8080. (not applicable)	

ACDCSDemo [Role] + X

Configuration Service Configuration: All Configurations

Settings

Endpoints **Add Endpoint** X Remove Endpoint

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Certificates

Name	Type	Protocol	Public Port	Private Port	SSL Certificate Name
Endpoint1	Input	http	80	Input value(s) like *, 8080, or/and 8000-8080. (not applicable)	
Endpoint2	Input	http	8080	Input value(s) like *, 8080, or/and 8000-8080. (not applicable)	

ACDCSDemo [Role] * X

Configuration Service Configuration: All Configurations

Settings

Endpoints Add Endpoint Remove Endpoint

Local Storage Configure the endpoints for this role. Select the certificate to use for each HTTPS endpoint when the Microsoft Azure Cloud Service project is deployed to Microsoft Azure (not applicable when running on the local Microsoft Azure compute emulator).

Certificates

Name	Type	Protocol	Public Port	Private Port	SSL Certificate Name
Endpoint1	Input	http	80	Input value(s) like *, 8080, or/and 8000-8080. (not applicable)	
Endpoint2	Input	http	8080	Input value(s) like *, 8080, or/and 8000-8080. (not applicable)	

ACDCSDemo [Role] * X

Configuration Service Configuration: All Configurations

Settings

Endpoints Add Endpoint Remove Endpoint

Local Storage Configure the endpoints for this role. Select the certificate to use for each HTTPS endpoint when the Microsoft Azure Cloud Service project is deployed to Microsoft Azure (not applicable when running on the local Microsoft Azure compute emulator).

Certificates

Name	Type	Protocol	Public Port	Private Port	SSL Certificate Name
Endpoint1	Input	http	80	Input value(s) like *, 8080, or/and 8000-8080. (not applicable)	
Endpoint2	Internal	http	Dynamic	Input value(s) like *, 8080, or/and 8000-8080. (not applicable)	

ACDCSDemo [Role] * X

Configuration Service Configuration: All Configurations

Settings

Endpoints Add Endpoint Remove Endpoint

Local Storage Configure the endpoints for this role. Select the certificate to use for each HTTPS endpoint when the Microsoft Azure Cloud Service project is deployed to Microsoft Azure (not applicable when running on the local Microsoft Azure compute emulator).

Certificates

Name	Type	Protocol	Public Port	Private Port	SSL Certificate Name
Endpoint1	Input	http	80	Input value(s) like *, 8080, or/and 8000-8080. (not applicable)	
Endpoint2	Input	http	8081	Input value(s) like *, 8080, or/and 8000-8080. (not applicable)	

ACDCSDemo [Role] + X

Configuration Service Configuration: All Configurations

Settings

Endpoints **Add Endpoint** ~~Remove Endpoint~~

Local Storage Configure the endpoints for this role. Select the certificate to use for each HTTPS endpoint when the Microsoft Azure Cloud Service project is deployed to Microsoft Azure (not applicable when running on the local Microsoft Azure compute emulator).

Certificates

Name	Type	Protocol	Public Port	Private Port	SSL Certificate N
Endpoint1	Input	http	80	Input value(s) like *, 8080, or/and 8000-8080.	(not applicable)
Endpoint2	Input	https	8081	Input value(s) like *, 8080, or/and 8000-8080.	< Not Set >

ServiceDefinition.csdef ACDCSDemo [Role]

```

1 <?xml version="1.0" encoding="utf-8"?>
2 <ServiceDefinition name="ACDPPBookCSSE" xmlns="http://schemas.microsoft.com/ServiceHosting/2008/10/ServiceDefini
3 <WebRole name="ACDCSDemo" vmSize="Small">
4   <Sites>
5     <Site name="Web">
6       <Bindings>
7         <Binding name="Endpoint1" endpointName="Endpoint1" />
8         <Binding name="Endpoint2" endpointName="Endpoint2" />
9       </Bindings>
10    </Site>
11  </Sites>
12  <ConfigurationSettings>
13    <Setting name="Microsoft.WindowsAzure.Plugins.Diagnostics.ConnectionString" />
14  </ConfigurationSettings>
15  <Endpoints>
16    <InputEndpoint name="Endpoint1" protocol="http" port="80" />
17    <InputEndpoint name="Endpoint2" protocol="https" port="8081" />
18  </Endpoints>
19 </WebRole>
20 </ServiceDefinition>

```

ACDCSDemo [Role] + X

Configuration Service Configuration: All Configurations

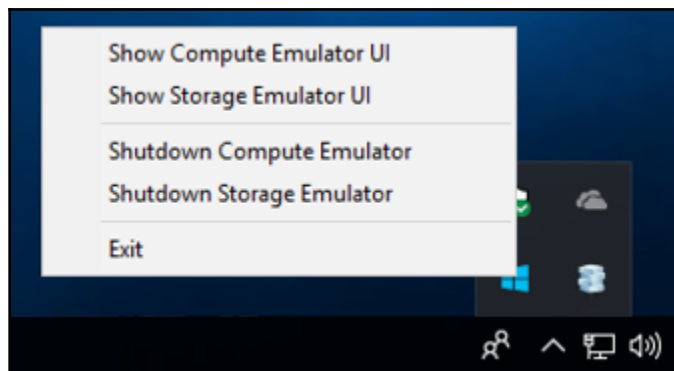
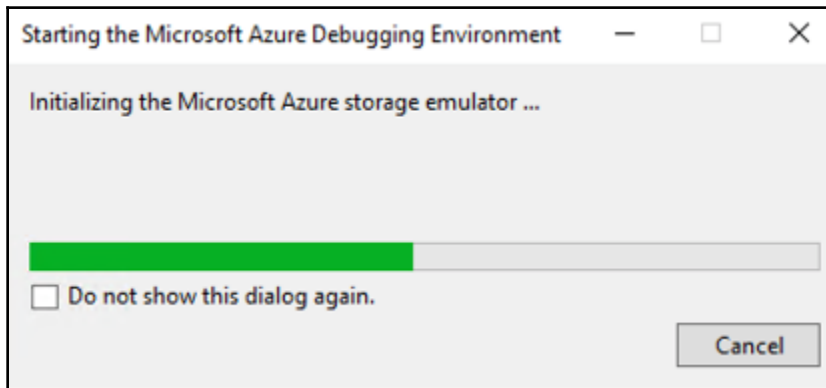
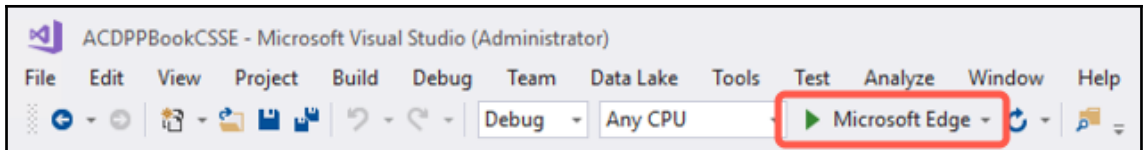
Settings

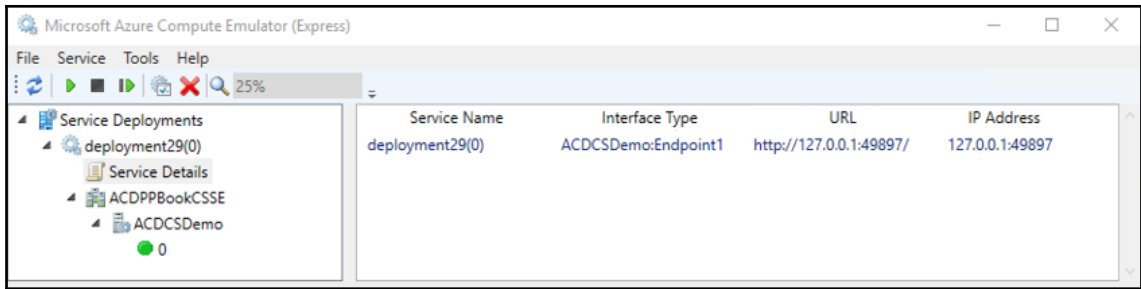
Endpoints **Add Endpoint** ~~Remove Endpoint~~

Local Storage Configure the endpoints for this role. Select the certificate to use for each HTTPS endpoint when the Microsoft Azure Cloud Service project is deployed to Microsoft Azure (not applicable when running on the local Microsoft Azure compute emulator).

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Name	Type	Protocol	Public Port	Private Port	SSL Certificate
Endpoint1	Input	http	80	Input value(s) like *, 8080, or/and 8000-8080.	(not applica
Endpoint2	Input	https	8081	Input value(s) like *, 8080, or/and 8000-8080.	< Not Set >





```
Windows Azure Storage Emulator 5.0.0.0 command line tool
Usage:
  AzureStorageEmulator.exe init           : Initialize the emulator database and configuration.
  AzureStorageEmulator.exe start         : Start the emulator.
  AzureStorageEmulator.exe stop          : Stop the emulator.
  AzureStorageEmulator.exe status        : Get current emulator status.
  AzureStorageEmulator.exe clear         : Delete all data in the emulator.
  AzureStorageEmulator.exe help [command] : Show general or command-specific help.

See the following URL for more command line help: http://go.microsoft.com/fwlink/?LinkId=392235

C:\Program Files (x86)\Microsoft SDKs\Azure\Storage Emulator>AzureStorageEmulator.exe status
Windows Azure Storage Emulator 5.0.0.0 command line tool
IsRunning: True
BlobEndpoint: http://127.0.0.1:10000/
QueueEndpoint: http://127.0.0.1:10001/
TableEndpoint: http://127.0.0.1:10002/

C:\Program Files (x86)\Microsoft SDKs\Azure\Storage Emulator>_
```

→ ↻ 🏠 localhost:49897/ 📖 ☆ ⚙️ 🖋️ ↗️

Application name Home About Contact Register Log in

ASP.NET

ASP.NET is a free web framework for building great Web sites and Web applications using HTML, CSS and JavaScript.

[Learn more »](#)

Getting started

ASP.NET MVC gives you a powerful, patterns-based way to build dynamic websites that enables a clean separation of concerns and gives you full control over markup for enjoyable, agile development.

[Learn more »](#)

Get more libraries

NuGet is a free Visual Studio extension that makes it easy to add, remove, and update libraries and tools in Visual Studio projects.

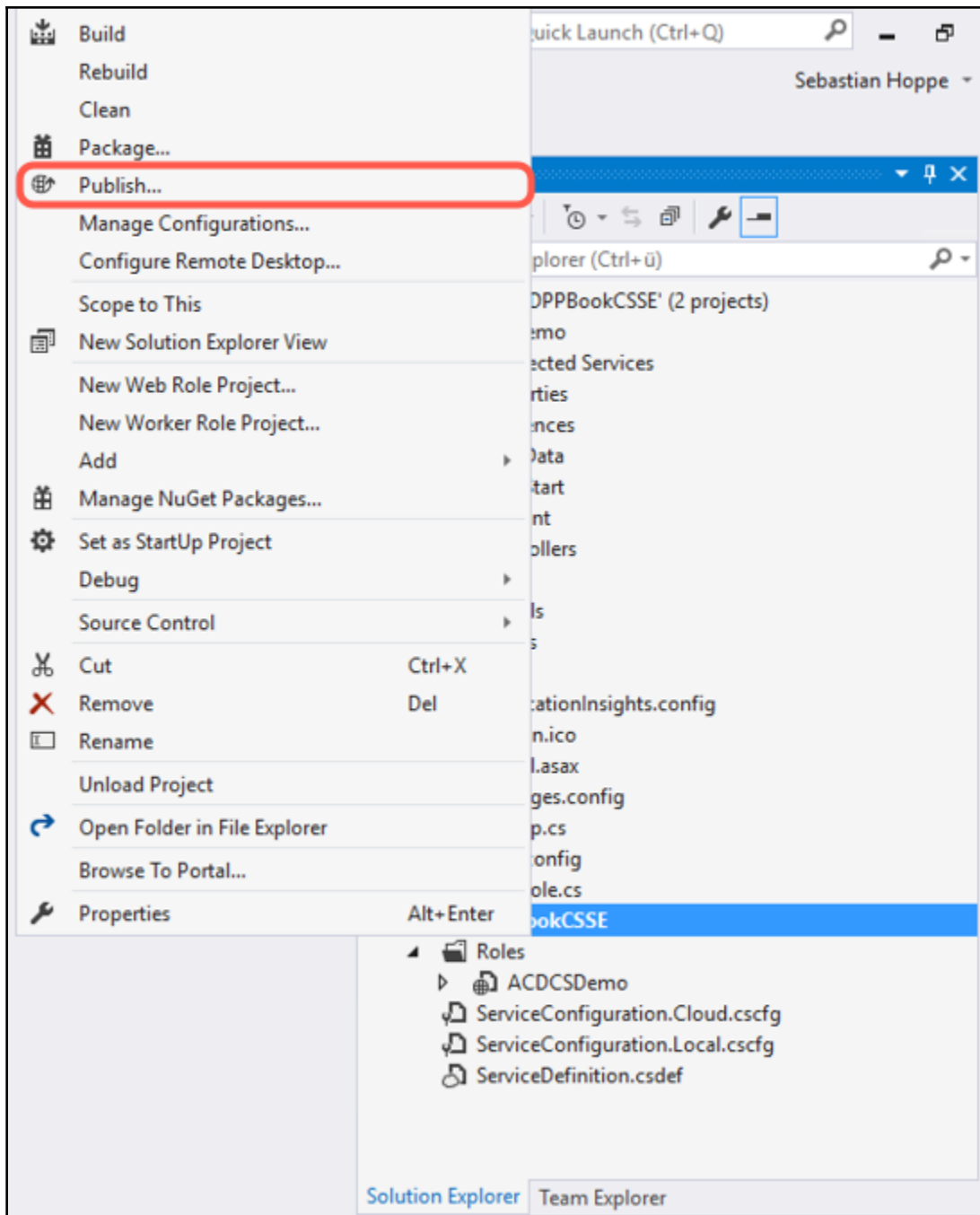
[Learn more »](#)

Web Hosting


You can easily find a web hosting company that offers the right mix of features and price for your applications.

[Learn more »](#)

© 2018 - My ASP.NET Application



Publish Azure Application ? X

 **Microsoft Azure Publish Sign In**

Sign in

Settings

Diagnostics

Summary

Microsoft account
sebastian.hoppe@

Choose your subscription:
MSDN Platforms

[Online privacy statement](#)

Create Storage Account X

Microsoft account
sebastian.hoppe@

Subscription:
MSDN Platforms

Name:
acdppbookcsse

Region or Affinity Group:
West Europe

Replication:
Locally Redundant

[Read more about replication services and pricing details.](#)



Microsoft Azure Publish Settings

Sign in

Settings

Diagnostics

Summary

Common Settings | Advanced Settings

Cloud Service:

acdppbookcsse (West Europe) v

Environment:

Staging v

Build configuration:

Release v

Service configuration:

Cloud v

Enable Remote Desktop for all roles [Settings...](#)

Enable Web Deploy for all web roles (requires Remote Desktop)

[Online privacy statement](#)

< Previous

Next >

Publish

Cancel



Microsoft Azure Publish Settings

Sign in

Settings

Diagnostics

Summary

Common Settings **Advanced Settings**

Deployment label:

ACDPPBookCSSE

Append current date and time

Storage account:

acdppbookcsse (West Europe)

Delete deployment on failure

Deployment update [Settings...](#)

Enable profiling

Enable Remote Debugger for all roles

[Online privacy statement](#)

< Previous

Next >

Publish

Cancel



Diagnostics Settings

Sign in

Settings

Diagnostics

Summary

Send diagnostics data to Application Insights

Sending diagnostics data to Application Insights will enable you to easily diagnose issues with your Cloud Service like role startup error and recycling.

Enabling this option will update the diagnostics configuration (diagnostics.wadcfgr) for all roles to send diagnostics errors to Application Insights. You can make further updates to the diagnostics configuration from the Role designer. This option will not install the Application Insights SDK to your project.

[Learn more about Application Insights](#)

Send telemetry to:

ACDPPBookCSSE (New resource)



[Configure settings...](#)

[Online privacy statement](#)

< Previous

Next >

Publish

Cancel



Microsoft Azure Publish Summary

- Sign in
- Settings
- Diagnostics
- Summary**

Target profile:

Deployment update:	Enabled
Subscription:	MSDN Platforms
Cloud Service:	acdppbookcsse (West Europe)
Environment:	Staging
Build configuration:	Release
Service configuration:	Cloud
Remote Desktop:	Disabled
Web Deploy:	Disabled
Deployment label:	ACDPPBookCSSE - 10/29/2018 11:14:11 PM
Storage account:	acdppbookcsse (West Europe)
Delete deployment on failure:	Disabled
Profile:	Disabled

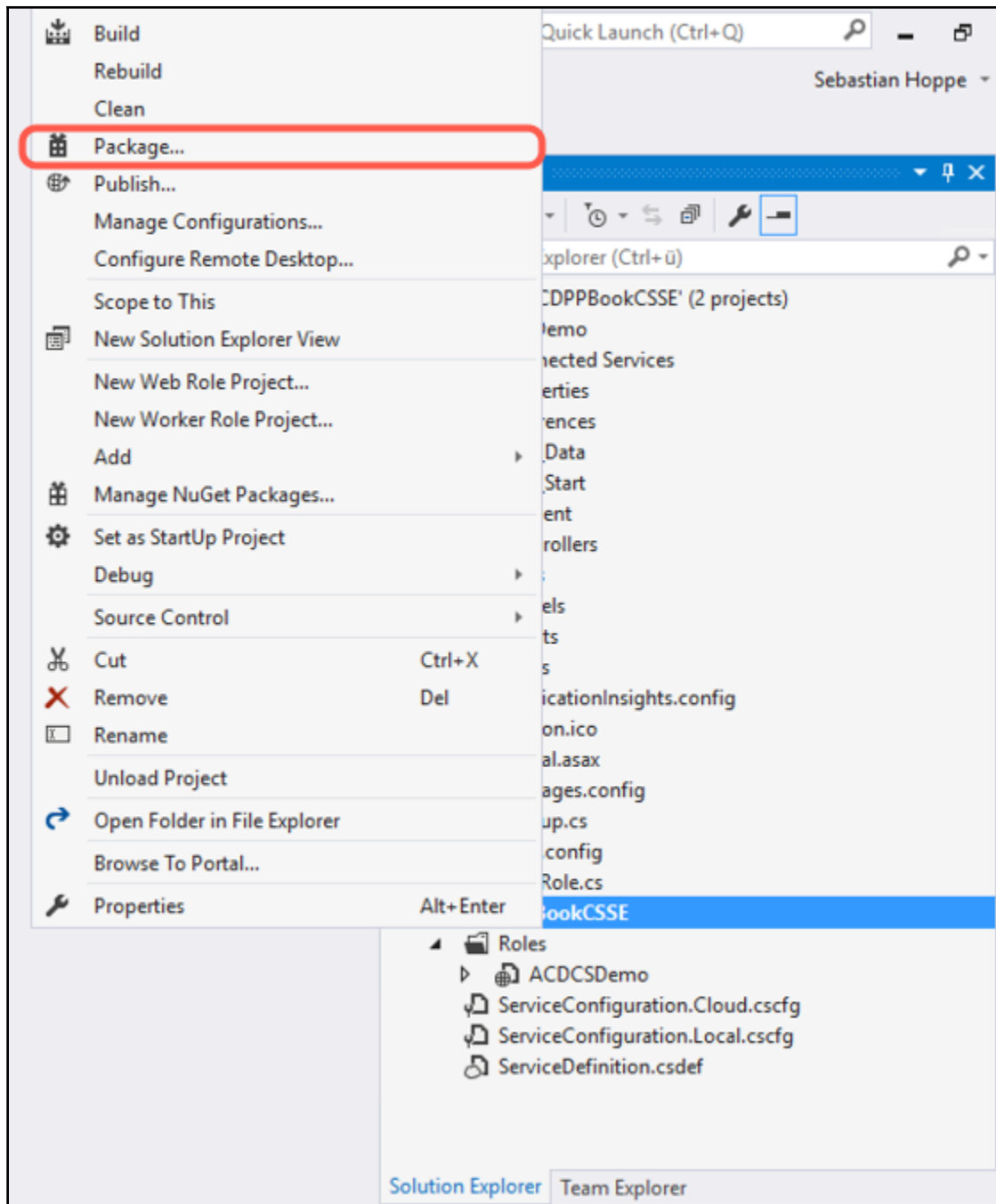
[Online privacy statement](#)

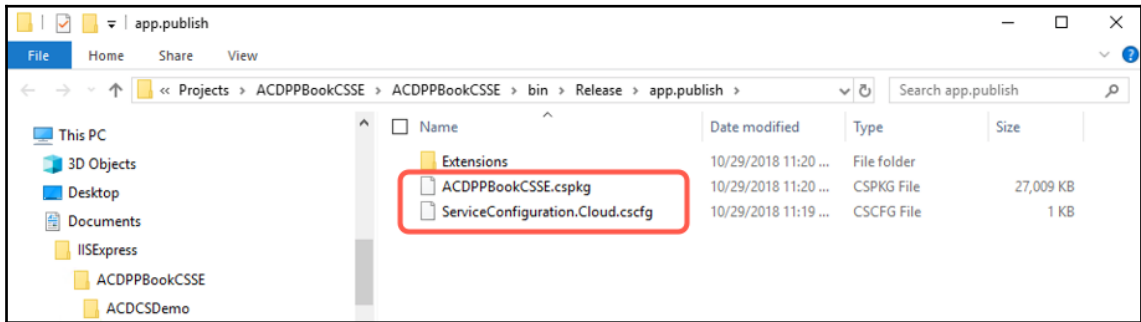
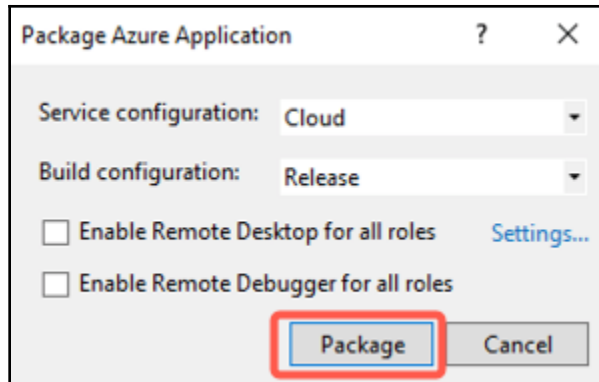
< Previous

Next >

Publish

Cancel





acdppbookcsse

Cloud service (classic)

Search (Ctrl+/)

◀ **1** Staging Upload **2** ▶ Start ↺ Swap → Move 🗑️ Delete ↻ Refresh

- Overview
- Activity log
- Access control (IAM)
- Diagnose and solve problems
- Operation log (classic)
- Settings
 - Antimalware
 - Certificates
 - Configuration
 - Extensions
 - Roles and Instances
 - Remote Desktop

i No deployment **2**

Resource group (change)	Site URL
acdppbookse	-
Status	Public IP addresses
-	-
Location	Deployment name
West Europe	-
Subscription	Deployment label
MSDN Platforms	-
Subscription ID	Deployment ID
a8efc019-e847-4fa2-9073-cf10cb0c3836	-

Search to filter items...

NAME	STATUS	SIZE	UPDA...	FAULT
------	--------	------	---------	-------

You have nothing deployed to the current environment.

Upload a package

acdppbookcsse - Staging

This will create a new 'Staging' deployment

* Deployment label

azbookdeploy ✓

Package/configuration location

from local from blob

* Storage account ⓘ

Configure required settings >

Upload a package (.cspkg, .zip)

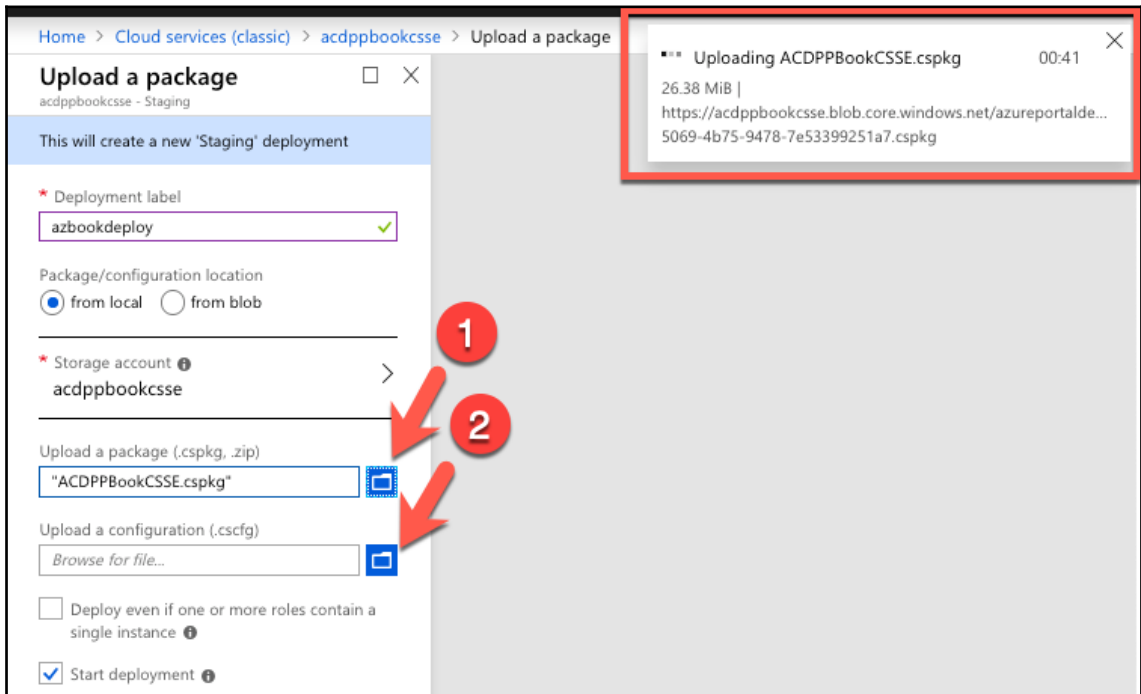
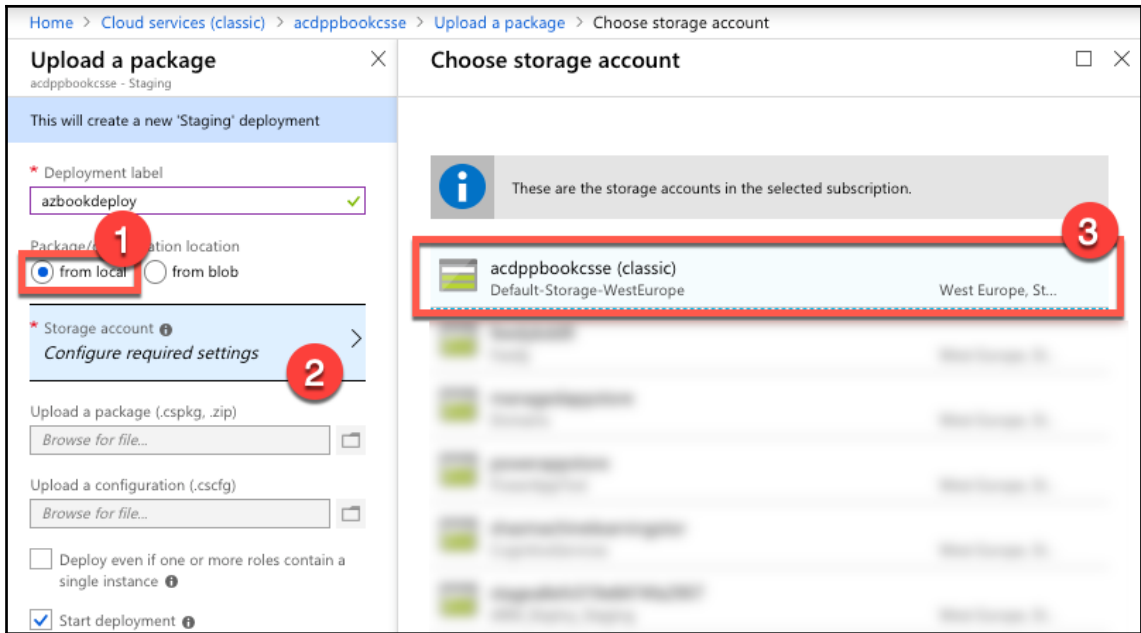
Browse for file...

Upload a configuration (.cscfg)

Browse for file...

Deploy even if one or more roles contain a single instance ⓘ

Start deployment ⓘ



Upload a package

acdppbookcsse - Staging

This will create a new 'Staging' deployment

* Deployment label

azbookdeploy

Package/configuration location

from local from blob

* Storage account

acdppbookcsse

Upload a package (.cspkg, .zip)

"ACDPPBookCSSE.cspkg"

Upload a configuration (.cscfg)

"ServiceConfiguration.Cloud.cscfg"

Deploy even if one or more roles contain a failed instance

Start deployment

OK

Upload a package

acdppbookcsse - Staging

This will create a new 'Staging' deployment

* Deployment label

azbookdeploy ✓

Package/configuration location

from local from blob

* Storage account ⓘ

acdppbookcsse >

Upload a package (.cspkg, .zip)

"ACDPPBookCSE.cspkg" 

Upload a configuration (.cscfg)

"ServiceConfiguration.Cloud.cscfg" 

Deploy even if one or more roles contain a single instance ⓘ

Start deployment ⓘ

OK

Home > Cloud services (classic) > acdppbooksse

acdppbooksse
Cloud service (classic)

Search (Ctrl+F)

Staging Update Stop Swap Move Delete Refresh

Resource group (change)
acdppbookse

Site URL
<http://71fa0988a0604409b8cbd165e0709689.cloudapp.net/>

Public IP addresses
137.117.231.6

Status
Running

Location
West Europe

Deployment name
ef99a1f1854f4973bfd5b3225de97c78

Deployment label
azbookdeploy

Subscription ID
71fa0988a0604409b8cbd165e0709689

Subscription
MSDN Platforms

Subscription ID
[REDACTED]

Search to filter items...

NAME	STATUS	SIZE	UPDA...	FAULT
ACDCSDemo	Unknown	Small	0	0

ACDCSDemo.IN @

Show data for last 1 hour 6 hours 12 hours 1 day 7 days

CPU percentage

Percentage CPU (Avg)
ACDCSDemo

Disk read and write

Disk Read Bytes/sec
ACDCSDemo

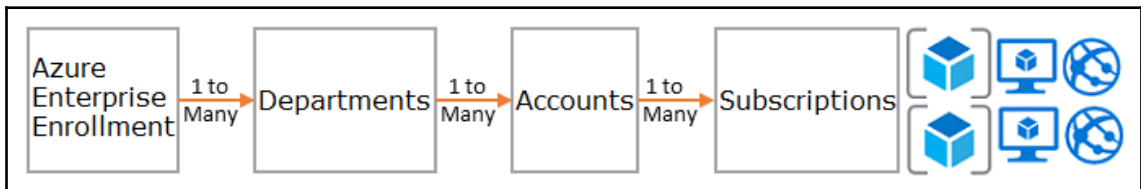
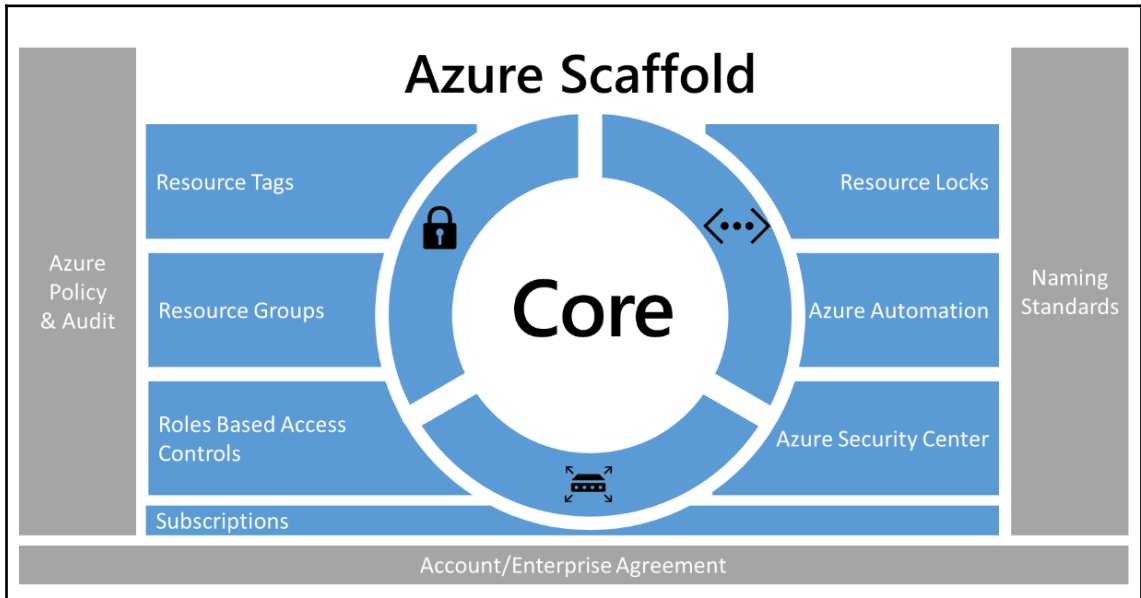
Disk Write Bytes/sec
ACDCSDemo

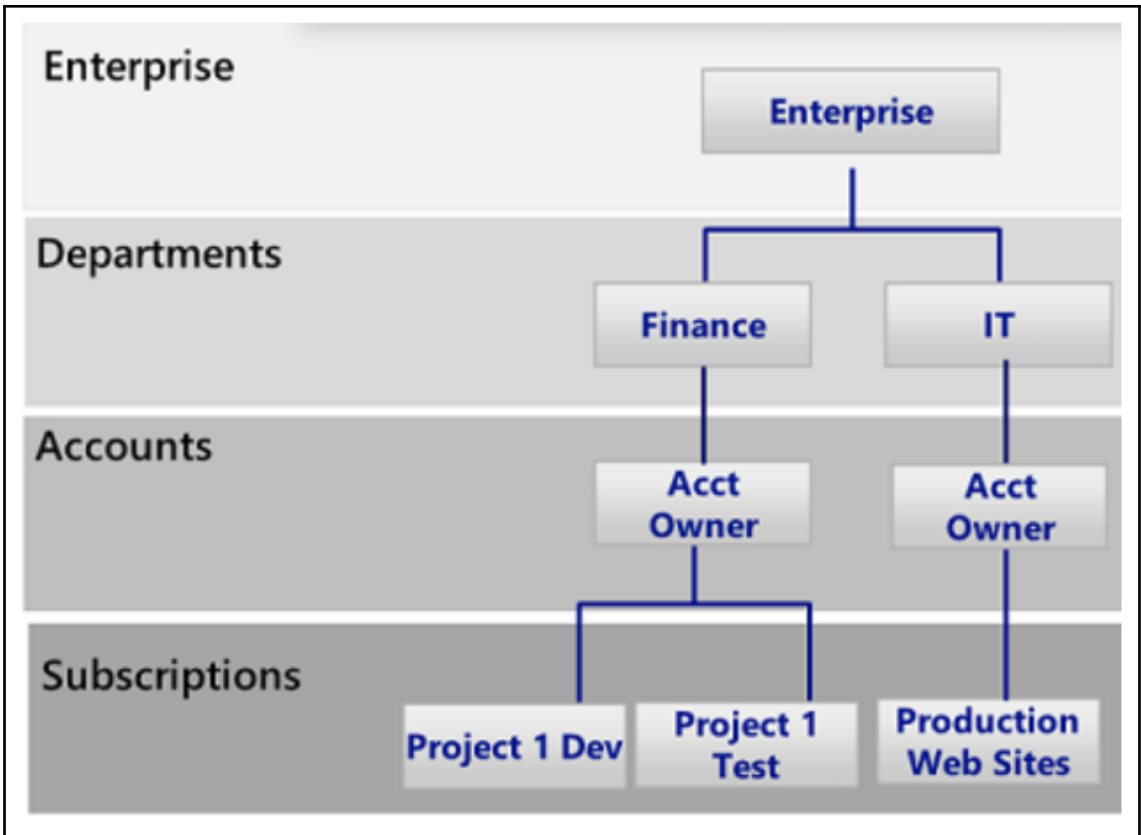
Network in and out

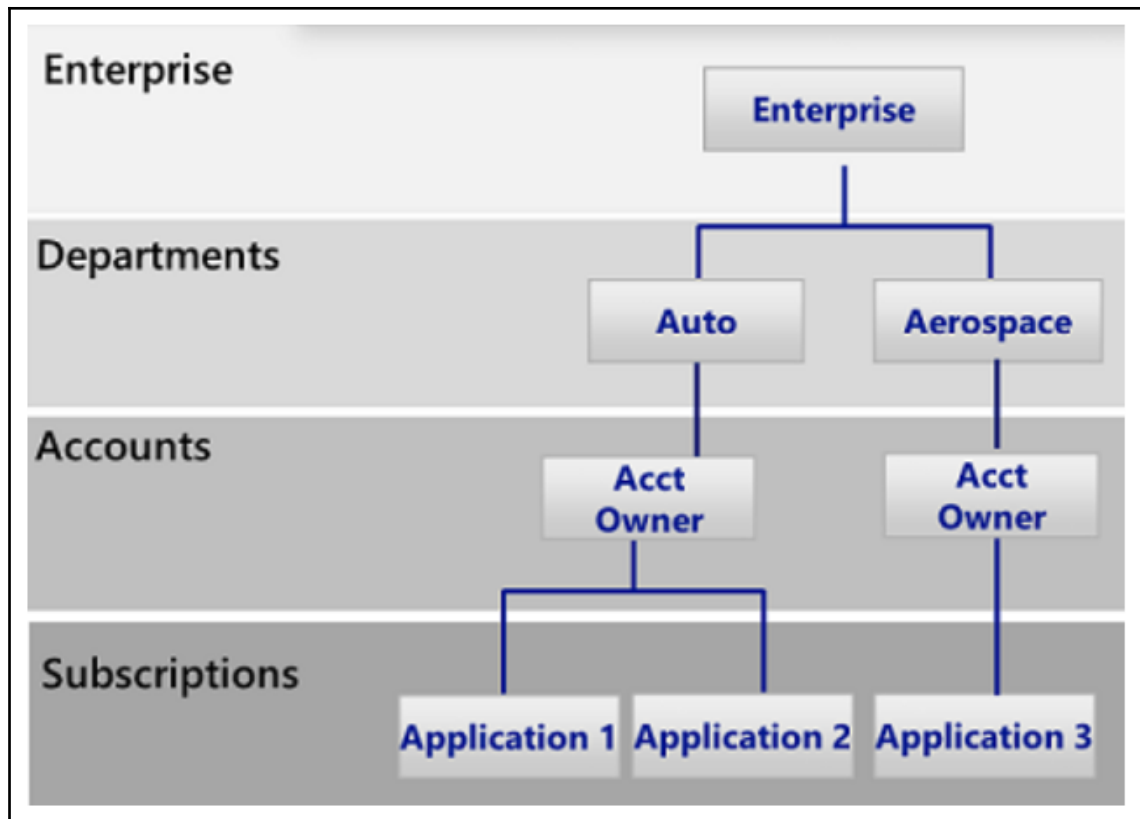
Network In (Sum)
ACDCSDemo

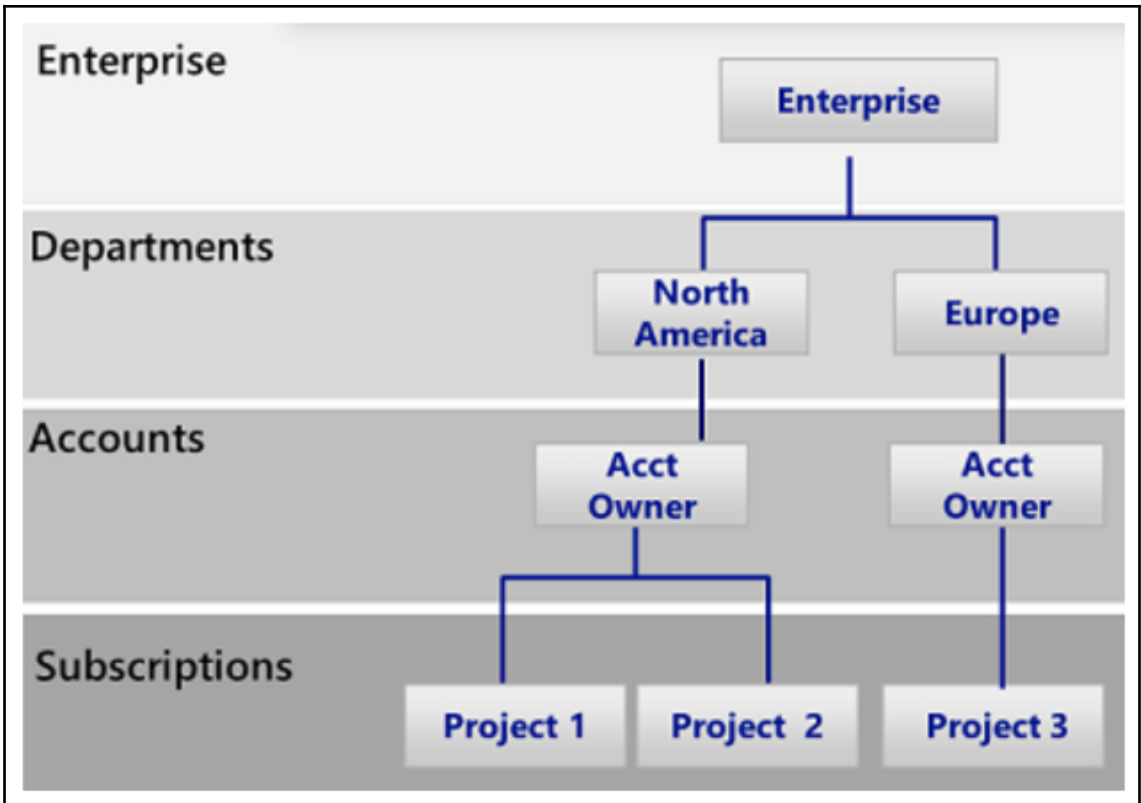
Network Out (Sum)
ACDCSDemo

Chapter 10: Implementing Azure Governance









Home > New > Marketplace > Everything > Resource group

Everything

Filter

resource group

Results

NAME	PUBLISHER	CATEGORY
Resource group	Microsoft	VM Extensions
Hyperglance up to 2000 resources	Hyperglance	Compute
Hyperglance up to 500 resources	Hyperglance	Compute
Hyperglance up to 1,000 resources	Hyperglance	Compute
Hyperglance up to 100 resources	Hyperglance	Compute
Hyperglance up to 5000 resources	Hyperglance	Compute
Hyperglance up to 250 resources	Hyperglance	Compute
Resource Central – Meeting Room Booking System	Add-On Products	Compute
Network security group	Microsoft	Networking

Related to your search

- Log Analytics
Microsoft

Resource group

Microsoft

Resource groups enable you to manage all your resources groups are enabled by Azure Resource Manager. Resource resources as a logical group which serves as the lifecycle bo within it. Typically a group will contain resources related to group may contain a Website resource that hosts your publ relational data used by the site, and a Storage Account that

[Save for later](#)

PUBLISHER: Microsoft

USEFUL LINKS: [Documentation](#)

[Create](#)

Home > New > Marketplace > Everything > Resource group > Resource group

Resource group

Create an empty resource group

* Resource group name

MyFirstResourceGroup ✓

* Subscription

Visual Studio Enterprise

* Resource group location

West Europe

Create

Home > Resource groups

Resource groups

Standardverzeichnis

+ Add | Edit columns | Refresh | Assign tags

Subscriptions: Visual Studio Enterprise – Don't see a subscription? [Open Directory](#) + [Subscription settings](#)

Filter by name... | All locations | All tags | No grouping

1 of 4 items selected

<input type="checkbox"/>	NAME	SUBSCRIPTION	LOCATION	
<input type="checkbox"/>	AKS01	Visual Studio Enterprise	West Europe	
<input type="checkbox"/>	DefaultResourceGroup-WEU	Visual Studio Enterprise	West Europe	
<input type="checkbox"/>	MC_AKS01_kubecluster_westeurope	Visual Studio Enterprise	West Europe	
<input checked="" type="checkbox"/>	MyFirstResourceGroup	Visual Studio Enterprise	West Europe	Pin to dashboard Delete resource group

Home > Resource groups > Are you sure you want to delete "MyFirstResourceGroup"?

Resource groups

Standardverzeichnis

+ Add Edit columns More

Filter by name...

NAME ↑↓

- AKS01
- DefaultResourceGroup-WEU
- MC_AKS01_kubecluster_westeurope
- MyFirstResourceGroup

Warning! Deleting the "MyFirstResourceGroup" resource group is irreversible. The action you're about to take can't be undone. Going further will delete this resource group and all the resources in it permanently.

TYPE THE RESOURCE GROUP NAME:

MyFirstResourceGroup ✓

AFFECTED RESOURCES

There are 0 resources in this resource group that will be deleted.

NAME	TYPE	LOCATION
------	------	----------

Delete Cancel

Home > kubecluster - Tags

kubecluster - Tags

Kubernetes service

Search (Ctrl+J) Save

Overview
Activity log
Access control (IAM)
Tags
SETTINGS
Upgrade

Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups.

* Name Value

manager John Doe

cost center : 4711 ...

department : production ...

Home > Resource groups > MyFirstResourceGroup - Locks

Resource groups

Standardverzeichnis

MyFirstResourceGroup - Locks
Resource group

+ Add Edit columns More

Filter by name...

NAME ↑↓

- AKS01
- DefaultResourceGroup-WEU
- MC_AKS01_kubecluster_westeurope
- MyFirstResourceGroup

Overview

Activity log

Access control (IAM)

Tags

Events

SETTINGS

Quickstart

Resource costs

Deployments

Policies

Properties

Locks

Automation script

+ Add Subscription Refresh

Add lock

Lock name: Lock1 ✓

Lock type: Read-only

Notes:

OK Cancel

Home > Resource groups > MyFirstResourceGroup - Activity log

MyFirstResourceGroup - Activity log

Resource group

Search (Ctrl+V)

Columns Export Log Analytics

Quick Insights: Failed deployments | Role assignments | Errors | Alerts fired | Outage notifications

Subscription: 1 selected

Resource group: MyFirstResourceGroup

Resource: All resources

Resource type: All resource types

Operation: 0 selected

Timespan: Last 6 hours

Event category: All categories

Event severity: 4 selected

Event initiated by: Search

Apply Reset

Query returned 1 items. [Click here to download all the items as csv.](#)

OPERATION NAME	STATUS	TIME	TIME STAMP	SUBSCRIPTION	EVENT INITIATED BY
Update resource group	Succeeded	1 h ago	Mon Aug 27 ...	Visual Studio Enterprise	

Default Directory - Properties

Azure Active Directory

Search (Ctrl+/) << Save Discard

- Organizational relationships
- Roles and administrators
- Enterprise applications
- Devices
- App registrations
- Application proxy
- Licenses
- Azure AD Connect
- Custom domain names
- Mobility (MDM and MAM)
- Password reset
- Company branding
- User settings
- Properties**
- Notifications settings

Security

- Identity Secure Score (Previe...

* Name: Default Directory ✓

Country or region: Germany

Location: EU Model Clause compliant datacenters

Notification language: English ✓

Global admin can manage Azure Subscriptions and Management Groups

Yes No

Directory ID: 063607a5-2b42-41f3-b9c3-7035811c6415

Technical contact: markus_klein01@hotmail.com ✓

Global privacy contact: ✓

Privacy statement URL: ✓

All services management

- API Management services ★
- Cost Management + Billing PREVIEW ★
- Azure AD Privileged Identity Management ★
- Machine Learning Model Management PREVIEW ★
- Citrix Virtual Apps Essentials Keywords: application management
- Management groups

Management groups

Standardverzeichnis



Using management groups helps you manage access, policy, and compliance by grouping multiple subscriptions together. [Learn more](#)

No management groups to display



Organize your subscriptions into groups called "management groups" to help you manage access, policy and compliance across your subscriptions. Management groups give you enterprise-grade management at a large scale no matter what type of subscriptions you might have. [Learn more](#)

[Start using management groups](#)

Add management group



Add a new or existing management group to be a child of 'Tenant Root Group'

Create new Use existing

* Management group ID (Cannot be updated after creation)

12345678987654321



Management group display name

MyfirstManagemnetGroup



e.g. Group1

RBAC Role Name	Create	Rename	Move	Delete	Assign Access	Assign Policy	Read
Owner	X	X	X	X	X	X	X
Contributor	X	X	X	X			X
MG Contributor*	X	X	X	X			X
Reader							X
MG Reader*							X
Resource Policy Contributor						X	
User Access Administrator					X		

Home > Management groups > MyfirstManagemnetGroup

MyfirstManagemnetGroup

Management group

⏪
✎ Rename Group
🗑 Delete
➡ Move
➕ Add management group
➕ Add subscription
🔄 Refresh

<ul style="list-style-type: none"> Overview Access control (IAM) Policies Cost Management Cost analysis 	<p>Name MyfirstManagemnetGroup</p> <p>ID 12345678987654321</p> <p>Access Level Owner</p> <p>Parent management group Tenant Root Group</p> <p>Child management groups 0</p> <p>⌆</p> <p><input type="text" value="Search by name or ID"/> ✕</p> <table border="1"> <thead> <tr> <th>NAME</th> <th>ID</th> </tr> </thead> <tbody> <tr> <td colspan="2">No results</td> </tr> </tbody> </table>	NAME	ID	No results	
NAME	ID				
No results					

All services

- Application security groups
Keywords: Policies ★
- Azure Maps Accounts
Keywords: Polyline ★
- Policy
- Service endpoint policies PREVIEW ★

Home > Policy

Policy

Search (Ctrl+/) << Scope: Visual Studio Enterprise

Overview

- Getting started
- Compliance
- Remediation

Authoring

- Assignments
- Definitions

Blueprints

- Blueprints (preview)

Overall resource compliance **100%**

Non-compliant initiatives **0** out of 0

Non-compliant policies **0** out of 0

Non-compliant resources **0** out of 0

[LEARN MORE](#)
Learn about Policy Onboarding tutorial

NAME	SCOPE	COMPLIANCE STATE	COMPLIANCE	NON-COMPLIANT RESOURCES	NON-COMPLIANT POLICIES
No assignments to display within the given scope					

[View all](#)

ASSIGNMENTS BY COMPLIANCE (LAST 7 DAYS)

Home > Policy - Remediation

Policy - Remediation

Search (Ctrl+/) << Refresh

Scope: Visual Studio Enterprise

Policies to remediate [Remediation tasks](#)

i This is a list of assigned policies with deployIfNotExists effect.

Filter by name or id...

POLICY DEFINITION	ASSIGNMENT	RESOURCES TO REMEDI...	SCOPE
No assignments found.			

Authoring

- Assignments
- Definitions

Blueprints

- Blueprints (preview)

Home > Policy - Assignments

Policy - Assignments

Search (Ctrl+/) <<

Assign policy Assign initiative Refresh

Scope: Visual Studio Enterprise

Definition type: All definition types

Search: Filter by name or id...

Total Assignments 0 Initiative Assignments 0 Policy Assignments 0

NAME	SCOPE	TYPE	POLICIES
No assignments to display within the given scope			

Home > Policy - Definitions

Policy - Definitions

Search (Ctrl+/) <<

+ Initiative definition + Policy definition Refresh

[Preview]: Deploy Log Analytics Agent for Linux ...	Built-in	Policy	Monitoring
Audit enabling of diagnostic logs in Azure Data ...	Built-in	Policy	Data Lake
Audit VMs that do not use managed disks	Built-in	Policy	Compute
Deploy default OMS VM Extension for Windows...	Built-in	Policy	Monitoring
[Preview]: Audit minimum number of owners fo...	Built-in	Policy	Security Center
[Preview]: Monitor unencrypted VM Disks in Az...	Built-in	Policy	Security Center
Audit resource location matches resource group...	Built-in	Policy	General
[Preview]: Audit Dependency Agent Deploymen...	Built-in	Policy	Monitoring
[Preview]: Deploy VM extension to audit Windo...	Built-in	Policy	Guest Configuration
Audit transparent data encryption status	Built-in	Policy	SQL
[Preview]: Deploy Dependency Agent for Windo...	Built-in	Policy	Monitoring
Audit use of classic virtual machines	Built-in	Policy	Compute
Enforce tag and its value	Built-in	Policy	General
Audit provisioning of an Azure Active Directory ...	Built-in	Policy	SQL
[Preview]: Monitor unprotected web application...	Built-in	Policy	Security Center
Audit enabling of only secure connections to yo...	Built-in	Policy	Cache
[Preview]: Deploy VM extension to audit Windo...	Built-in	Policy	Guest Configuration

Initiative definition

New Initiative definition

BASICS

* Definition location

Visual Studio Enterprise

* Name ⓘ

Enter the name for your initiative

Description ⓘ

Describe the initiative you are authoring

Category ⓘ

Create new Use existing

Category

POLICIES AND PARAMETERS

Initiatives are composed of one or more policies. Add policies to this Initiative from the list on the right.

Initiative parameters ⓘ

PARAMETER NAME	DISPLAY NAME	TYPE	ALLOWED VALUES
----------------	--------------	------	----------------

Save

Cancel

AVAILABLE DEFINITIONS

Type

Search

All types

Filter by name or l...

Policy Definitions (100)

- [Preview]: Deploy Log Analytics Agent for Linux VMs**
Built-in
Deploy Log Analytics Agent for Linux VMs if the VM Image (OS) is in the list defined and the agent is not installed.
- Audit enabling of diagnostic logs in Azure Data Lake Store**
Built-in
Audit enabling of logs and retain them up to a year. This enables you to recreate activity trails for investigation purposes when a security incident occurs or your network is compromised
- Audit VMs that do not use managed disks**
Built-in
This policy audits VMs that do not use managed disks
- Deploy default OMS VM Extension for Windows VMs**
Built-in
This policy deploys OMS VM Extensions on Windows VMs, and connects to the selected Log Analytics workspace
- [Preview]: Audit minimum number of owners for subscription**
Built-in
It is recommended to designate more than one subscription owner in order to have administrator access

Policy definition

New Policy definition

BASICS

* Definition location

* Name 

Description

Category 

Create new Use existing

Category

POLICY RULE

[↓ Import sample policy definition from GitHub](#)


[🔗 Learn more about policy definition structure](#)

```
1 {
2   "policyRule": {
3     "if": {
4       "not": {
5         "field": "location",
6         "in": "[parameters('allowedLocations')]"
7       }
8     },
9     "then": {
10      "effect": "audit"
11    }
12  },
13  "parameters": {
14    "allowedLocations": {
15      "type": "Array",
16      "metadata": {
17        "description": "The list of allowed locations for resources.",
18        "displayName": "Allowed locations",
19        "strongType": "location"
20      }
21    }
22  }
23 }
```


Blueprints - Getting started

Search (Ctrl+/) <<

- Getting started
- Blueprint Definitions
- Assigned Blueprints



Welcome to Blueprints

Blueprints enable quick creation of governed subscriptions. This allows Cloud Architects to design environments that comply with organizational standards and best practices – enabling your app teams to get to production faster.

[Blueprints Overview](#)
[Create a Blueprint in the Azure Portal](#)
[Create a Blueprint with the REST API](#)
[Report an issue with the Preview](#)

Create a Blueprint

Compose artifacts such as templates, policies, role assignments, and resource groups based on common or organization-based patterns into re-usable Blueprints.

[Create](#)

Apply to a Scope

Apply your Blueprint to one or more Subscriptions

[Apply](#)

Track Assignments

Track where Blueprints have been applied and share them across your organization

[Track](#)

Home > Policy > Blueprints - Getting started > Blueprint Definitions

Blueprint Definitions

Basics **Artifacts**

* Blueprint Name ⓘ

Blueprint01 ✓

Blueprint Description

Discription for Blueprint01 ✓

* Definition Location ⓘ

[Empty field with error icon]

The Definition Location is the place in the Management Group hierarchy where this Blueprint Definition will be stored. Once the definition is created, a Blueprint Assignment can be created at or below this location in the Management Group hierarchy. Management Groups are groups that can contain subscriptions, or other Management Groups. You can learn more at: aka.ms/BlueLocation

Definition Location

Management Group

- ▼ Tenant Root Group (063607a5-2b42-41f3-b9c3-7035811c6415)
 - MyfirstManagemnetGroup (12345678987654321)

Blueprint Definitions

Basics Artifacts

Add artifacts to the Blueprint. Add Resource Groups to organize where the artifacts should be deployed and assigned.

NAME

ARTIFACT TYPE

▼  Subscription

➕ Add artifact...

Add Artifact ✕

* Artifact type

Choose artifact type ^

Policy Assignment

Role Assignment

Resource Group

Add Artifact

* Artifact type

Policy Assignment

Type

All types

Search

Filter by name...

Policy Definitions (100)

[Preview]: Deploy Log Analytics Agent for Linux VMs

Built-in

Deploy Log Analytics Agent for Linux VMs if the VM Image (OS) is in the list defined and the a

Audit enabling of diagnostic logs in Azure Data Lake Store

Built-in

Audit enabling of logs and retain them up to a year. This enables you to recreate activity trails

Audit VMs that do not use managed disks

Built-in

This policy audits VMs that do not use managed disks

Deploy default OMS VM Extension for Windows VMs

Built-in

This policy deploys OMS VM Extensions on Windows VMs, and connects to the selected Log A

[Preview]: Audit minimum number of owners for subscription

Built-in

It is recommended to designate more than one subscription owner in order to have administr.

[Preview]: Monitor unencrypted VM Disks in Azure Security Center

Built-in

VMs without an enabled disk encryption will be monitored by Azure Security Center as recom

Audit resource location matches resource group location

Built-in

Audit that the resource location matches its resource group location

[Preview]: Audit Dependency Agent Deployment - VM Image (OS) unlisted

Built-in

Reports VMs as non-compliant if the VM Image (OS) is not in the list defined and the agent is

Add Artifact



* Artifact type

Role Assignment



You can choose to fill these parameters in now or when assigning the Blueprint.

Role 

Owner



Add User, App or Group 

Search by name or email



This value should be specified when the Blueprint is assigned

Add Artifact



* Artifact type

Resource Group



You can choose to fill these parameters in now or when assigning the Blueprint.

Resource Group Name

RG-



This value should be specified when the Blueprint is assigned

Location

West Europe



This value should be specified when the Blueprint is assigned

Home > Policy > Blueprints - Blueprint Definitions > Blueprint01

Blueprint01

Blueprints

Publish Blueprint
 Edit Blueprint
 Delete Blueprint

Name	State
Blueprint01	Draft
Management Group	Description
MyfirstManagemnetGroup	Discription for Blueprint01
Version	
Draft	

⤴

Latest Artifacts

ARTIFACT NAME	RESOURCE TYPE
Assigned Subscription	Subscription
ResourceGroup	Resource Group

Home > Subscriptions > Visual Studio Enterprise - Access control (IAM)

Subscriptions

Standardverzeichnis

+ Add

Showing subscriptions in Standardverzeichnis. Don't see a subscription? [Switch directories](#)

My role: 7 selected Status: 3 selected

[Apply](#)

Show only subscriptions selected in the global subscriptions filter

Search to filter items...

SUBSCRIP...	SUBSCRIPTION ID
Visual Studio...	f3248cad-78cf-4116...

Visual Studio Enterprise - Access control (IAM)

Subscription

+ Add Remove Roles Refresh Help

Search (Ctrl+J)

Overview

Access control (IAM)

Diagnose and solve problems

Security

Events

Cost Management

Cost analysis

Billing

Invoices

External services

Payment methods

Partner information

Name: Search by name or email

Type: All

Role: 2 selected

Scope: All scopes

Group by: Role
















2 items (2 Users)

NAME	TYPE	ROLE	SCOPE
OWNER			
Markus Klein markus_klein01@hot...	User	Owner	Service administrat... This resource
USER ACCESS ADMINISTRATOR			
Markus Klein markus_klein01@hot...	User	User Access Administrator	Root (Inherited)

Roles

















Visual Studio Enterprise



NAME	USERS	GROUPS
 Owner ⓘ	0	1
 Contributor ⓘ	0	0
 Reader ⓘ	0	0
 User Access Administrator ⓘ	1	0
 AcrImageSigner ⓘ	0	0
 AcrQuarantineReader ⓘ	0	0
 AcrQuarantineWriter ⓘ	0	0
 API Management Service Contributor ⓘ	0	0
 API Management Service Operator Role ⓘ	0	0
 API Management Service Reader Role ⓘ	0	0
 Application Insights Component Contributor ⓘ	0	0
 Application Insights Snapshot Debugger ⓘ	0	0
 Automation Job Operator ⓘ	0	0
 Automation Operator ⓘ	0	0
 Automation Runbook Operator ⓘ	0	0
 Azure Kubernetes Service Cluster Admin Role ⓘ	0	0

Permissions (preview)

Contributor

RESOURCE PROVIDER	MANAGEMENT	DATA
 84codes.CloudAMQP	All	--
 AppDynamicsPro AppDynamicsForAzure	All	--
 Aspera.Transfers	All	--
 Auth0 Cloud	All	--
 Azure Data Box	All	--
 Azure Database Migration Service	All	--
 Azure Log Analytics	All	--
 Azure Stack Resource Provider	All	--
 Bot Service Resource Provider	All	--
 Citrix.Cloud	All	--
 CloudSimple Private Cloud IAAS	All	--
 Cloudfyn.Analytics	All	--
 Conexlink MyCloudIT	All	--
 Crypteron DataSecurity	All	--
 Domain Services Resource Provider	All	--
 Dynatrace DynatraceSaaS	All	--

Home > MyRG01 - Access control (IAM)

MyRG01 - Access control (IAM)

Resource group

Search (Ctrl+/) Add Remove Roles Refresh Help

Overview
Activity log
Access control (IAM)
Tags
Events

Settings
Quickstart
Resource costs
Deployments
Policies
Properties
Locks

Name: Search by name or email Type: All Role: 2 selected Score: All

2 Items (2 Users)

NAME	TYPE	ROLE
OWNER		
Markus Klein markus_klein01@hotmail.com	User	Owner
USER ACCESS ADMINISTRATOR		
Markus Klein markus_klein01@hotmail.com	User	User Access Administ

Add permissions

Role: Select a role

- Owner
- Contributor
- Reader
- AcrImageSigner
- AcrQuarantineReader
- AcrQuarantineWriter
- API Management Service Contributor
- API Management Service Operator Role
- API Management Service Reader Role
- Application Insights Component Contributor
- Application Insights Snapshot Debugger
- Automation Job Operator
- Automation Operator
- Automation Runbook Operator
- Azure Kubernetes Service Cluster Admin Role
- Azure Kubernetes Service Cluster User Role
- Azure Stack Registration Owner

JSON







Copy

```
{
  "Name": "Virtual Machine Operator",
  "Id": "88888888-8888-8888-8888-888888888888",
  "IsCustom": true,
  "Description": "Can monitor and restart virtual machines.",
  "Actions": [
    "Microsoft.Storage/*/read",
    "Microsoft.Network/*/read",
    "Microsoft.Compute/*/read",
    "Microsoft.Compute/virtualMachines/start/action",
    "Microsoft.Compute/virtualMachines/restart/action",
    "Microsoft.Authorization/*/read",
    "Microsoft.Resources/subscriptions/resourceGroups/read",
    "Microsoft.Insights/alertRules/*",
    "Microsoft.Insights/diagnosticSettings/*",
    "Microsoft.Support/*"
  ],
  "NotActions": [
  ],
  "DataActions": [
  ],
  "NotDataActions": [
  ],
  "AssignableScopes": [
    "/subscriptions/{subscriptionId1}",
    "/subscriptions/{subscriptionId2}",
    "/subscriptions/{subscriptionId3}"
  ]
}
```

Property	Required	Type	Description
<code>Name</code>	Yes	String	The display name of the custom role. Must be unique to your tenant. Can include letters, numbers, spaces, and special characters. Maximum number of characters is 128.
<code>Id</code>	Yes	String	The unique ID of the custom role. For Azure PowerShell and Azure CLI, this ID is automatically generated when you create a new role.
<code>IsCustom</code>	Yes	String	Indicates whether this is a custom role. Set to <code>true</code> for custom roles.
<code>Description</code>	Yes	String	The description of the custom role. Can include letters, numbers, spaces, and special characters. Maximum number of characters is 1024.
<code>Actions</code>	Yes	String[]	An array of strings that specifies the management operations that the role allows to be performed. For more information, see Actions .
<code>NotActions</code>	No	String[]	An array of strings that specifies the management operations that are excluded from the allowed <code>Actions</code> . For more information, see NotActions .
<code>DataActions</code>	No	String[]	An array of strings that specifies the data operations that the role allows to be performed to your data within that object. For more information, see DataActions (Preview) .
<code>NotDataActions</code>	No	String[]	An array of strings that specifies the data operations that are excluded from the allowed <code>DataActions</code> . For more information, see NotDataActions (Preview) .
<code>AssignableScopes</code>	Yes	String[]	An array of strings that specifies the scopes that the custom role is available for assignment. Currently cannot be set to the root scope (<code>"/</code>) or a management group scope. For more information, see AssignableScopes and Organize your resources with Azure management groups .

Task	Operation	Description
Create/delete a custom role	<code>Microsoft.Authorization/roleDefinition/write</code>	Users that are granted this operation on all the <code>AssignableScopes</code> of the custom role can create (or delete) custom roles for use in those scopes. For example, Owners and User Access Administrators of subscriptions, resource groups, and resources.
Update a custom role	<code>Microsoft.Authorization/roleDefinition/write</code>	Users that are granted this operation on all the <code>AssignableScopes</code> of the custom role can update custom roles in those scopes. For example, Owners and User Access Administrators of subscriptions, resource groups, and resources.
View a custom role	<code>Microsoft.Authorization/roleDefinition/read</code>	Users that are granted this operation at a scope can view the custom roles that are available for assignment at that scope. All built-in roles allow custom roles to be available for assignment.

All services

 Application security groups ★	 Citrix Virtual Desktops Essentials ★ Keywords: remote desktop security
 Deep Security SaaS ★	 Firewalls ★ Keywords: Security
 Network security groups (classic) ★	 Security Center ★

Security Center - Getting started

Showing subscription: Visual Studio Enterprise

Upgrade

GENERAL

- Overview
- Getting started
- Events
- Search

POLICY & COMPLIANCE

- Coverage
- Security policy

RESOURCE SECURITY HYGIENE

- Recommendations
- Compute & apps
- Networking
- Data & storage
- Identity & access (Preview)
- Security solutions

THREAT PROTECTION

- Security alerts
- Custom alert rules (Preview)
- Security alerts map (Preview)


AUTOMATION & ORCHESTRATION

- Playbooks (Preview)


ADVANCED CLOUD DEFENSE

Get started with the Azure Security Center 60-day free trial


Find vulnerabilities, limit your exposure to threats, and detect and respond quickly to attacks with Security Center on all your subscriptions across hybrid cloud workloads. [Learn more >](#)




Resource Security Hygiene
Understand your security state across cloud workloads from recommendations and resource health monitoring and take action




Policy & compliance
Gain visibility into your security state and compliance from an organizational level instead of a subscription level




Intelligent threat detection
Built-in behavioral analytics and machine learning identify and notify you of attacks so you can quickly scope the impact of an attack



Network controls
Identify and remediate network vulnerabilities as well as limit access to your management ports



Security posture assessments for PaaS
Extend protection beyond virtual machines to protect against attacks targeting PaaS resources



Advanced threat protection
Enable actionable, adaptive protections powered by machine learning to reduce your overall surface area to attack

▼ Apply your trial on 1 subscriptions 0 Managed resources

Start trial
or skip

Change your plan anytime. After 60 days, Azure Security Center Standard will be applied \$15/node/month. For full threat protection and security management capabilities, start your trial with the Standard plan.

Security Center - Overview

Showing subscription: Visual Studio Enterprise

Subscriptions

Policy & compliance

Subscription coverage

10 Covered resources

Policy compliance

Overall compliance: 7%

Least compliant subscriptions: Visual Studio Enterprise (7%)

[Show policy compliance of your environment >](#)

Policy compliance over time

Resource security hygiene

Secure score

9 Active recommendations

Resource health monitoring

- 8 Compute & apps
- 0 Data & storage
- 1 Networking
- 1 Identity & access

Review and improve your secure score

Review and resolve security vulnerabilities to improve your secure score and secure your workload

[Learn more >](#)

Threat protection

Security alerts by severity

Customers who have turned on advanced threat detection gain visibility into their threat landscape

[Enable Advanced Threat Detection >](#)

0 Attacked resources

Security alerts over time

Customers who have turned on advanced threat detection gain visibility into their threat landscape

[Enable Advanced Threat Detection >](#)

Most attacked resources

No results

No security alerts

Security Center - Recommendations

Showing subscription: Visual Studio Enterprise

Filter

Secure score

4 Active recommendations

Resource health monitoring

- 0 Compute & apps
- 0 Data & storage
- 1 Networking
- 1 Identity & access

Review and improve your secure score

Review and resolve security vulnerabilities to improve your secure score and secure your workload

[Learn more >](#)

DESCRIPTION	SECURE SCORE IMPACT	RESOURCE	SEVERITY
Enable MFA for accounts with owner permissions on your subscription (Preview)	+50	1 subscription	High
Add a Next Generation Firewall	+10	1 endpoint	High
Designate more than one owner on your subscription (Preview)	+5	1 subscription	High
Restrict access through Internet facing endpoint	+20	3 virtual machines	Medium

Home > Security Center - Networking

Security Center - Networking

Showing subscription 'Visual Studio Enterprise'

[View Legacy Networking](#)

Overview

Network Map (Preview)

Riskiest resources

- 1 ENDPOINTS
- 3 VIRTUAL MACHINES

[See topology >](#)

NSG Hardening

Adaptive Network Hardening helps you harden the NSGs of your internet facing VMs

[Register to the preview →](#)

Reduce the attack surface of your VMs using JIT

Reduce the attack surface of your VMs using Just In Time VM Access by allowing network access only upon a specific need, and only for a limited amount of time, allowed source IPs, and authorized users.

[Learn more >](#)

RECOMMENDATION	RESOURCE TYPE	RESOURCE
Add a Next Generation Firewall	endpoints	1 of 1
Restrict access through Internet facing endpoint	virtual machines	3 of 3

Home > Security Center - Security solutions

Security Center - Security solutions

Showing subscription 'Visual Studio Enterprise'

[Filter](#)

Connected solutions

Partner security solutions were not connected yet

View all security solutions currently connected to Azure Security Center, monitor the health of solutions, and access the solutions' management tools for advanced configuration.

To learn more [go to documentation](#)

[Show recommendations to deploy solutions](#)

Add data sources (5)

Connect your security solution to Azure Security Center.

Non-Azure computers

MICROSOFT

Onboard your non-Azure computers to Azure Security Center and gain security assessment, recommendations and more powerful features

[ADD](#)

SIEM

SELECTED SIEMS

Integrate Azure Security Center alerts into SIEM for a central monitoring. See the list of supported SIEMs

[ADD](#)

Common Event Format

ANY PUBLISHER

Integrate any security solution that support Common Event Format (CEF), take advantage of Search & Custom Alert Rules, and Threat Intelligence enrichment for each log

[ADD](#)

Advanced Threat Analytics

MICROSOFT

Integrate Microsoft Advanced Threat Analytics suspicious activities along with other detections in your environment, and gain correlations and otherwise undetectable

[ADD](#)

Azure AD Identity Protec...

MICROSOFT

Integrate Microsoft Azure AD Identity Protection alerts along with other detections in your environment, gain fusion detection and otherwise undetectable attacks

[ADD](#)

Home > Cost Management + Billing

Cost Management + Billing

Microsoft - PREVIEW

Search (Ctrl+V)

- Overview
- Management groups
- Cost Management
- Diagnose and solve problems

Organization billing

- Account overview
- Cost analysis
- Usage + charges
- Credits

Individual billing

- Account overview
- Subscriptions
- Invoices
- Payment methods

Support + troubleshooting

- New support request

Organizations overview

Test Enrollment (Direct) (100)

CREDITS	0.00 USD	CHARGES	77,468.10 USD
ROLE	Enterprise administrator	TYPE	Billing account

SAB BVT (DO NOT USE) (6328843)

CREDITS	-	CHARGES	-
ROLE	Enterprise administrator	TYPE	Billing account

My subscriptions

NAME	SUBSCRIPTION ID	OFFER	STATUS	CURRENT COST
You don't have any subscriptions in the current directory. Don't see a subscription? Switch directories				

Other subscriptions

NAME	SUBSCRIPTION ID	OFFER	CURRENT COST
Contoso IT - demo	e4272367-5645-4c4e-9c67-3b74b59a6982	Microsoft Azure Internal Consumption	Not available
Trey Research Alpha Lab	586fd147-9dd9-43d5-b196-6e28f9405ffb	Enterprise Agreement	\$83.18
Cost Management Demo	1caaa5a3-2b66-438e-8ab4-bce37d518c5d	Enterprise Agreement	\$3,239.36
Trey Research Alpha Dev	64e355d7-997c-491d-b0c1-8414dcccfc42	Enterprise MSDN Dev/Test	\$1,078.82

Home > Cost Management + Billing > Test Enrollment (Direct) (100) - Overview

Test Enrollment (Direct) (100) - Overview

Billing account - Cost Management - PREVIEW

Search (Ctrl+V) Change scope

- Overview
- Scope: Test Enrollment (Direct) ...
- Access control
- Diagnose and solve problems

Cost Management


- Cost analysis
- Budgets
- Advisor recommendations
- Cloudyn

Settings

- Export
- New support request

Analyze and optimize cloud costs

Visualize and monitor your cloud costs and trends, improve your organizational accountability, and optimize your cloud efficiency. [Learn more](#)




Analyze cloud costs

Break down and analyze costs to identify anomalies and drive a deeper understanding of cost and usage patterns.

[Learn more](#)

[Open cost analysis](#)




Monitor with budgets

Create a budget to control costs and configure alerts to warn teams about impending budget overages.

[Learn more](#)

[Create budget](#)



Optimize with recommendations

View Advisor recommendations to identify unused or underutilized resources. Take action to reduce waste.

[Learn more](#)

[View recommendations](#)

Cross-cloud + cost allocation

Manage Azure, AWS, and GCP costs in one place and use cost allocation to distribute costs across your org.

[Go to Cloudyn](#) [Learn more](#)

Test Enrollment (Direct) (100) - Cost analysis

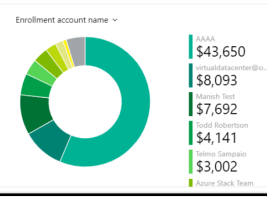
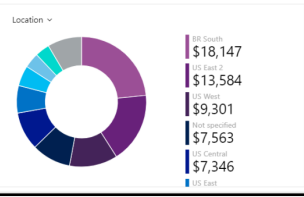
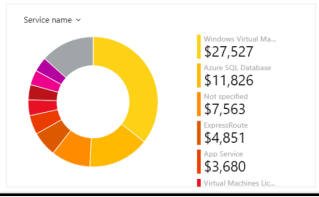
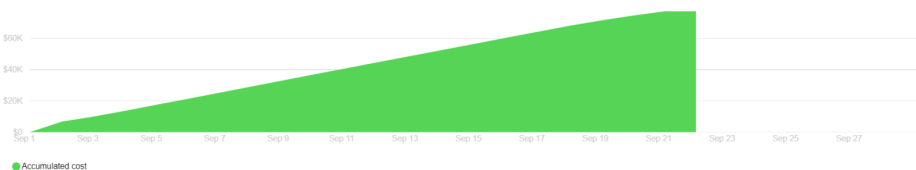
- Search (Ctrl+F)
- Overview
- Scope: Test Enrollment (Direct) ...
- Access control
- Diagnose and solve problems
- Cost Management
 - Cost analysis
 - Budgets
 - Advisor recommendations
 - Cloudyn
- Settings
- Export
- New support request

Change scope Refresh Tour Download

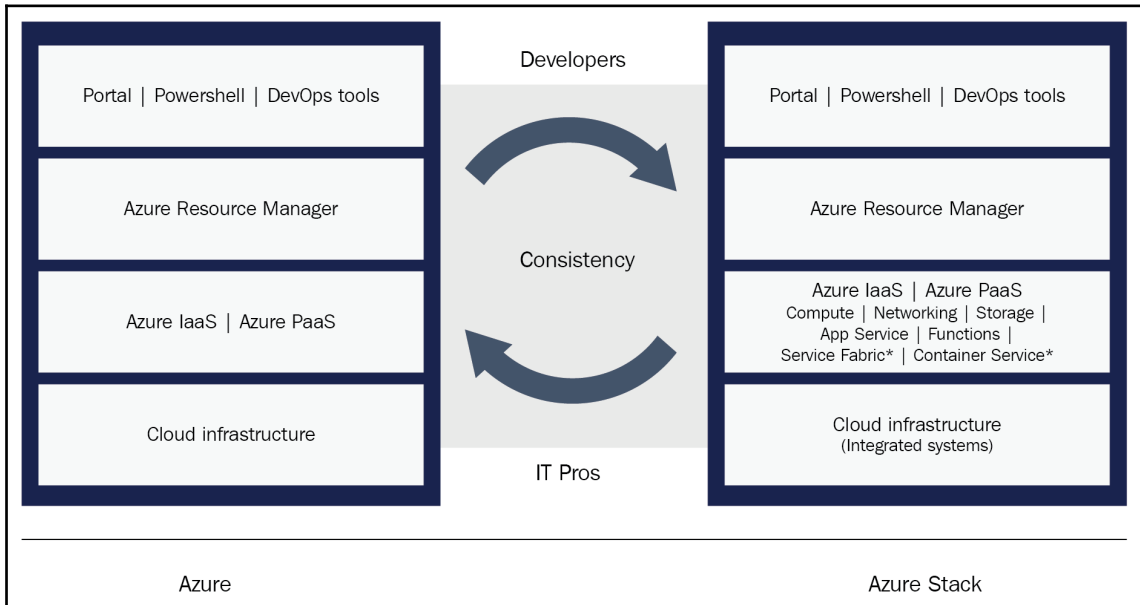
How satisfied are you with cost analysis? →

Sep 2018 Accumulated Group by: None Add filter

TOTAL: \$77,468 BUDGET: NONE



Chapter 11: Azure Hybrid Data Center Services



Azure services
everywhere





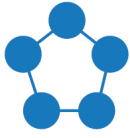







54 Azure regions



100s of service providers



1,000s of enterprises

<p><i>Web and API apps</i></p>	<p><i>Serverless computing</i></p>	<p><i>Microservices platform</i></p>	<p><i>Container orchestration</i></p>	<p><i>Pivotal and Open source</i></p>
 <p>Azure App Service</p>	 <p>Azure Functions</p>	 <p>Service Fabric</p>	 <p>Kubernetes</p>	 <p>Cloud Foundry OpenShift</p>
 <p>Virtual Machines</p>	 <p>Docker Containers</p>	 <p>Networking</p>	 <p>Storage</p>	 <p>Key Vault</p>
<p><i>Linux and Windows (including VM scale sets)</i></p>	<p><i>Linux and Windows</i></p>	<p><i>Virtual network, load balancer, VPN gateway</i></p>	<p><i>Blobs, tables, queues</i></p>	<p><i>Application keys and secrets</i></p>

Azure Stack Development Kit Downloader

Download the Azure Stack Development Kit (ASDK)

This will download the ASDK version **1.1808.0.97**

1. Read the [deployment prerequisites](#)
2. **Browse** to where you want to save the ASDK
Save to: C:\ASDK
Space required: 12.12 GB
3. **Download**

Cancel

ASDK

File Home Share View

← → ↕ ↑ > This PC > Local Disk (C:) > ASDK

Name	Date modified	Type	Size
CloudBuilder	8/27/2018 1:50 PM	Hard Disk Image F...	28,755,968...

Quick access

- Desktop
- Downloads
- Documents
- Pictures
- ASDK
- AzureStack_Installer
- Local Disk (C:)
- This PC
- Network

Microsoft Azure Stack Development Kit

Installer UI version: 1.0.06

Prepare for Deployment

Prepare Environment

Prepare the Cloudbuilder vhdX

Online documentation

Read the online documentation.

The installer UI for the Azure Stack Development Kit is an open sourced script based on WPF and PowerShell. Additions to the toolkit can be submitted as Pull Request to the [AzureStack-Tools repository](#).

Microsoft Azure Stack Development Kit

Installer UI version: 1.0.06

Select Cloudbuilder vhdx

Cloudbuilder.vhdx

C:\ASDK\CloudBuilder.vhdx

Browse

Add drivers

C:\driver\RSTe_AHCI_VROC_NVMe_Win_5.3.0.1413_2017.10.30(1)\F

Browse

Previous

Next

Microsoft Azure Stack Development Kit

Installer UI version: 1.0.06

Optional settings

Configure local admin account

Username: Administrator

Password: ●●●●●●●●

Confirm Password: ●●●●●●●●

Computername

Time Zone

Static IP configuration

Previous

Next

Microsoft Azure Stack Development Kit

Installer UI version: 1.0.06

Select Network Interface for the Azure Stack host

Select a network adapter

Name	Status	IPv4Address	Gateway	DHCP
eth0_team	Connected	192.168.143.1	192.168.143.254	Disabled
Ethernet 3	Disconnected	169.254.26.149		Enabled
Ethernet	Disconnected	169.254.101.173		Enabled
Ethernet 4				
Ethernet 2				

Select the network interface that will be configured for the host of the Azure Stack Development Kit. Ensure you have network connectivity to the selected network adapter before proceeding.

[Previous](#)[Next](#)

Microsoft Azure Stack Development Kit

Installer UI version: 1.0.06

Azure Stack host IP configuration

Ip Address:

Gateway:

DNS:

Time Server IP:

Previous

Next

Microsoft Azure Stack Development Kit

Installer UI version: 1.0.06

Preparing the environment



Mount VHDX..

Previous

Next

Microsoft Azure Stack Development Kit

Installer UI version: 1.0.06

Preparing the environment

The cloudbuilder vhd is prepared successfully. Please reboot. The server will boot from the CloudBuilder VHD and you can start the installation after signing in as the administrator.

Reboot later

Reboot now

Microsoft Azure Stack Development Kit

Installer UI version: 1.0.06

Installation

Install

Install the Microsoft Azure Stack Development Kit

Reboot

Select the Operating System to override the default boot order for this reboot.

The installer UI for the Azure Stack Development Kit is an open sourced script based on WPF and PowerShell. Additions to the toolkit can be submitted as Pull Request to the [AzureStack-Tools repository](#).

Microsoft Azure Stack Development Kit

Installer UI version: 1.0.06

Specify Identity Provider and Credentials

Identity Provider

Type:

AAD Directory:

Azure China Cloud

Local Administrator:

ADFS

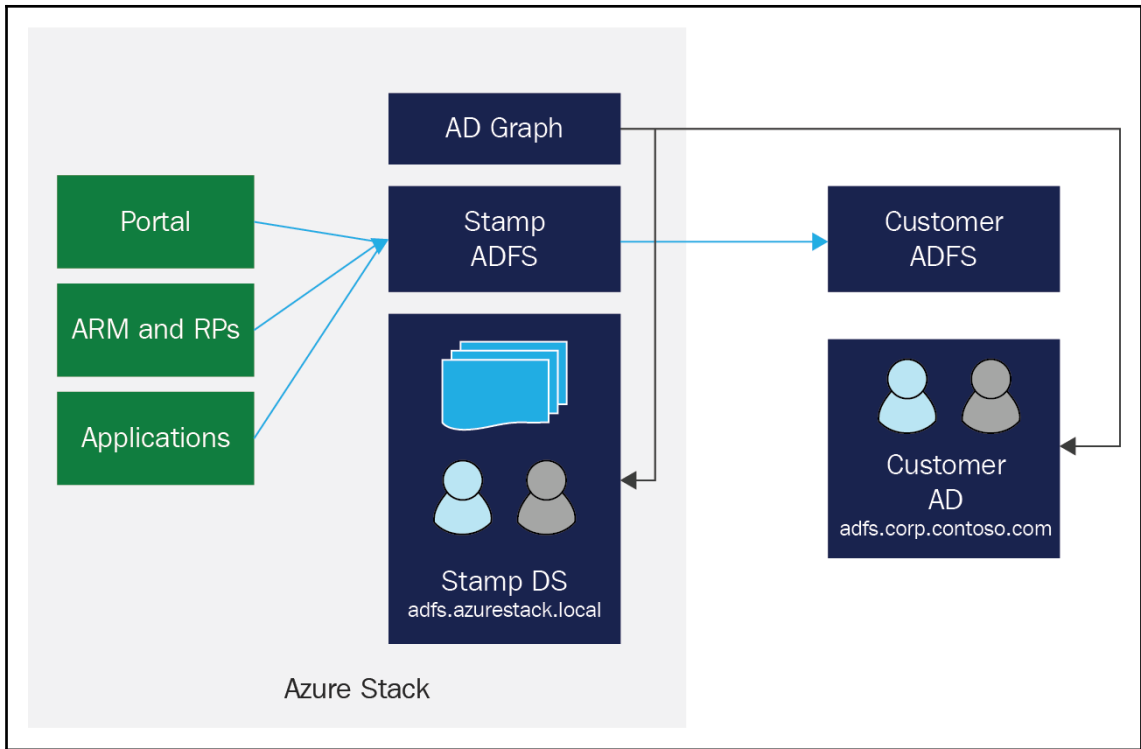
Password:

Azure Cloud

Previous

Next

When	Action	AAD account requirements	App registrations created	SPNs created
Install Azure Stack	Create App registrations and service principals	AAD account with Global Admin role	<ul style="list-style-type: none"> Azure Pack Connector Azure Stack Azure Stack - Administration Azure Stack - Bridge Azure Stack - Compute Azure Stack - Deployment Azure Stack - Hubs Azure Stack - Hubs Administration Azure Stack - KeyVault Azure Stack - Monitoring Azure Stack - Monitoring Administration Azure Stack - Policy Azure Stack - Policy Administration Azure Stack - Portal Azure Stack - Portal Administration Azure Stack - RBAC Azure Stack - RBAC Administration Azure Stack - RBAC Administration AzureStack KeyVault Internal 	<ul style="list-style-type: none"> Azure Stack Azure Stack - Administration Azure Stack - Bridge Azure Stack - Compute Azure Stack - Deployment Azure Stack - Hubs Azure Stack - Hubs Administration Azure Stack - KeyVault Azure Stack - Monitoring Azure Stack - Monitoring Administration Azure Stack - Policy Azure Stack - Policy Administration Azure Stack - Portal Azure Stack - Portal Administration Azure Stack - RBAC Azure Stack - RBAC Administration AzureStack KeyVault Internal AzureStack Monitoring Service
Register Azure Stack	Create <ul style="list-style-type: none"> A service principal to perform resource actions A resource group A registration resource in the created resource group in Azure 	For the resource group: subscription owner. For the service principal registration: If "Users can register applications" setting is enabled the any AAD member (without Global Admin role) can create app registrations. Otherwise an Azure AD global admin role is required.	<ul style="list-style-type: none"> Azure Bridge 	<ul style="list-style-type: none"> Azure Bridge
Install MySQL RP	-	-	-	-
Install SQL RP	-	-	-	-
Install App Service RP	Create App registrations and service principals	AAD account with Global Admin role	<ul style="list-style-type: none"> App Service 	<ul style="list-style-type: none"> App Service



	Disconnected from the internet	Connected to the internet
Billing	Must be Capacity Enterprise Agreement (EA) only	Capacity or Pay-as-you-use EA or Cloud Solution Provider (CSP)
Identity	Must be AD FS	Azure AD or AD FS
Marketplace	Supported BYOL licensing	Supported BYOL licensing
Registration	Recommended, requires removable media and a separate connected device.	Automated
Patch and update	Required, requires removable media and a separate connected device.	Update package can be downloaded directly from the Internet to Azure Stack.

Microsoft Azure Stack Development Kit

Installer UI version: 1.0.06

Select Network Interface for the Azure Stack host

Select a network adapter

Name	Status	IPv4Address	Gateway	DHCP
Ethernet 2	Connected	192.168.143.1	192.168.143.254	Disabled
Ethernet				
Ethernet 4				
Ethernet 3				

Only one adapter can be used for the Azure Stack Development Kit host. Select the adapter used for the deployment. All other adapters will be disabled by the installer. Ensure you have network connectivity to the selected network adapter before proceeding.

[Previous](#)[Next](#)

Microsoft Azure Stack Development Kit

Installer UI version: 1.0.06

Network Configuration for BGP NAT01

- DHCP
- Static

Ip Address:

Gateway:

Time Server IP:

Optional Configuration

VLAN ID:

DNS Forwarder IP:

Previous

Next

Microsoft Azure Stack Development Kit


Microsoft Azure Stack
Development Kit

Installer UI version: 1.0.06

Summary

The following script will be used for deploying the Development Kit

```
$adminpass = ConvertTo-SecureString '●●●●●●●●●●'-AsPlainText -Force
cd C:\CloudDeployment\Setup
.\InstallAzureStackPOC.ps1 -AdminPassword $adminpass -
InfraAzureDirectoryTenantName mklein01.onmicrosoft.com -NatIPV4Subnet
192.168.143.0/24 -NatIPV4Address 192.168.143.2 -NatIPV4DefaultGateway
192.168.143.254 -TimeServer 10.218.96.116
```

 You will be prompted for your Azure AD credentials 2-3 minutes after the installation starts

[Previous](#) [Deploy](#)

```
Administrator: Windows PowerShell
Expanding Microsoft.AzureStack.Solution.Deploy.CloudCommon. Copying content to C:\Program Files\WindowsPowerShell\Modules\
S.
Test-NetConnection :: 192.168.143.2
Ping/ICMP Test
waiting for echo reply
\Microsoft.AzureStack.Fabric.Backup.Client.
Expanding Microsoft.AzureStack.Solution.Deploy.AzureStackPXE. Copying content to C:\CloudDeployment\NetworkBootServer.
Expanding Microsoft.AzureStack.Solution.Deploy.EnterpriseCloudEngine.Client.Deployment. copying lib\net45 to C:\CloudDep
loyment\ECEServiceClient\bin.
Expanding Microsoft.AzureStack.Solution.Deploy.EnterpriseCloudEngine.Client.Deployment. Copying content to C:\CloudDeplo
yment\ECEServiceClient.
Expanding Microsoft.AzureStack.Solution.Deploy.PXEBootArtifacts. Copying content to C:\RemoteInstall\Boot.
Expanding Microsoft.AzureStack.Solution.Deploy.Security. Copying content\CodeIntegrity to C:\CloudDeployment\Security\Co
deIntegrity.
```

```
Administrator: C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe
VERBOSE: 3> [SQL:Deployment] AzS-Sql01 has finished OS deployment, but is still processing
SetupComplete. - 9/9/2018 11:33:31 AM

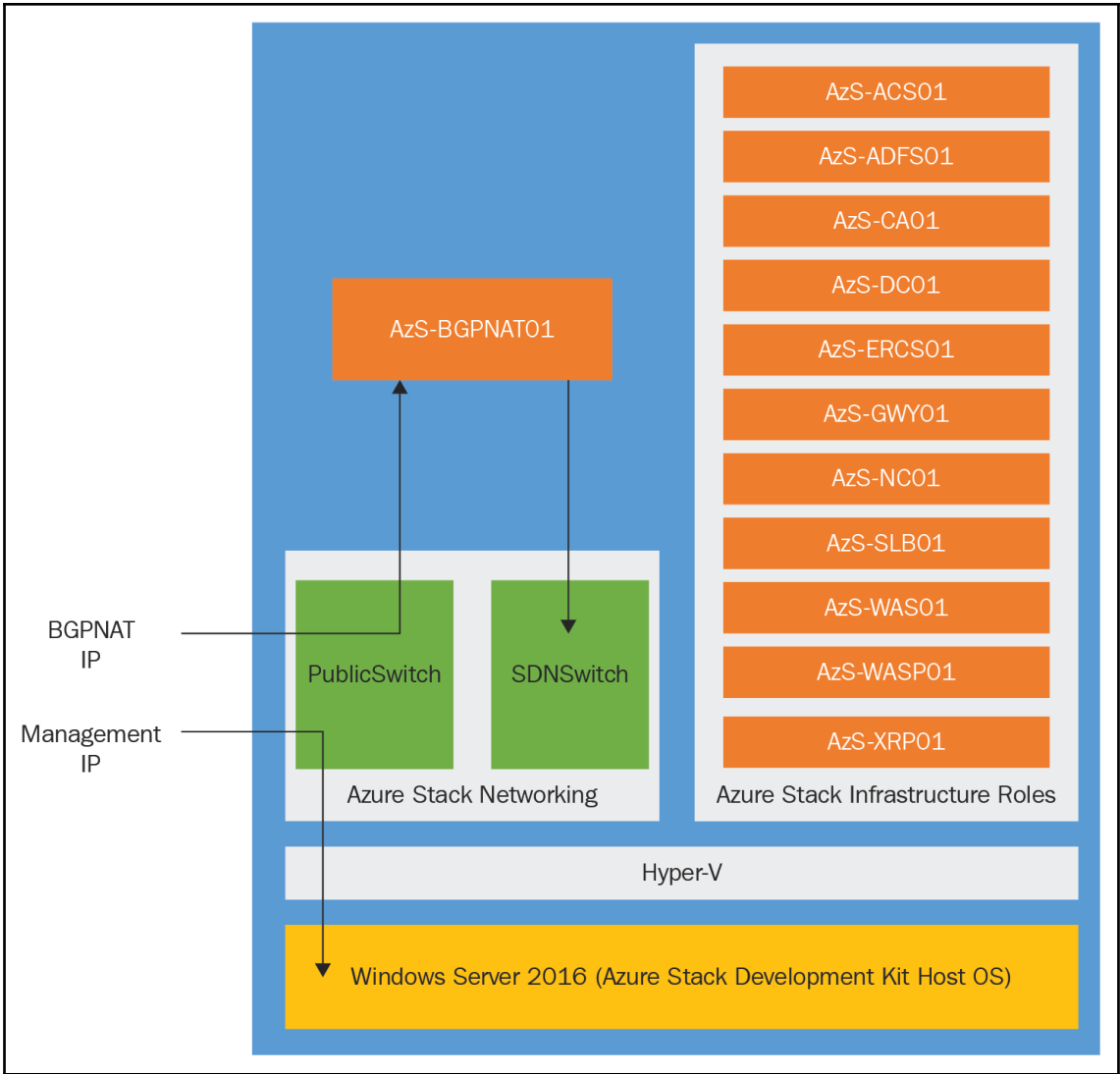
Action 'Deployment' 65% Running action plan...
  Step 40 - Phase 1 - CreateVMS 0% Management Vms.
    Task Cloud - Deployment-Phase1-CreateVms Running action
      Action 'Deployment-Phase1-CreateVms' 0% Running action plan...
        Step 40.41 - (CPI) Create guest VMS 0% Create the management VMS.
          Task Cloud\Fabric\ADFS - Deployment Running interface
          Task Cloud\Fabric\WAS - Deployment Running interface
          Task Cloud\Fabric\FabricRingServices - Deployment Running interface
          Task Cloud\Fabric\ACS - Deployment Running interface
          Task Cloud\Fabric\SeedRingServices - Deployment Running interface
          Task Cloud\Fabric\SQL - Deployment
            Running interface
          Task Cloud\Fabric\WASPUBLIC - Deployment
            Running interface

VERBOSE: 2> [ADFS:Deployment] Testing for presence of
C:\CompleteBootDSCStatus\AzS-ADFS01.1.1808.0.97.xml on WIN-1V1RV61ISN3 - 9/9/2018 11:33:58 AM
VERBOSE: 2> [ADFS:Deployment] AzS-ADFS01 is still being deployed. It will be reachable once OS
deployment is complete and execution of SetupComplete script has ended. - 9/9/2018 11:33:58 AM
VERBOSE: 4> [WAS:Deployment] Testing for presence of
C:\CompleteBootDSCStatus\AzS-WAS01.1.1808.0.97.xml on WIN-1V1RV61ISN3 - 9/9/2018 11:33:58 AM
VERBOSE: 4> [WAS:Deployment] AzS-WAS01 is still being deployed. It will be reachable once OS
deployment is complete and execution of SetupComplete script has ended. - 9/9/2018 11:33:58 AM
VERBOSE: 3> [SQL:Deployment] Testing for presence of
C:\CompleteBootDSCStatus\AzS-Sql01.1.1808.0.97.xml on WIN-1V1RV61ISN3 - 9/9/2018 11:34:01 AM
VERBOSE: 3> [SQL:Deployment] AzS-Sql01 has finished OS deployment, but is still processing
SetupComplete. - 9/9/2018 11:34:01 AM
VERBOSE: 7> [SeedRingServices:Deployment] Testing for presence of
C:\CompleteBootDSCStatus\AzS-ERCS01.1.1808.0.97.xml on WIN-1V1RV61ISN3 - 9/9/2018 11:34:14 AM
VERBOSE: 7> [SeedRingServices:Deployment] AzS-ERCS01 has finished OS deployment, but is still
processing SetupComplete. - 9/9/2018 11:34:14 AM
VERBOSE: 1> [ACS:Deployment] Testing for presence of
C:\CompleteBootDSCStatus\AzS-ACS01.1.1808.0.97.xml on WIN-1V1RV61ISN3 - 9/9/2018 11:34:14 AM
VERBOSE: 1> [ACS:Deployment] AzS-ACS01 is still being deployed. It will be reachable once OS
deployment is complete and execution of SetupComplete script has ended. - 9/9/2018 11:34:14 AM
VERBOSE: 5> [WASPUBLIC:Deployment] Testing for presence of
C:\CompleteBootDSCStatus\AzS-WASP01.1.1808.0.97.xml on WIN-1V1RV61ISN3 - 9/9/2018 11:34:17 AM
```

```
===== ValidateUpdate =====
MpsigStub successfully updated Microsoft Windows Defender (RS1+) using the Platform update
package.

    Original:          Updated to:
Platform: 4.10.14393.2273 4.18.1807.18075

End time: 2018-09-09 21:05:53Z
-----
- 9/9/2018 2:05:53 PM
VERBOSE: [Cloud:UpdateCloudSecurity] Done applying Windows Defender Platform update to individual
nodes - 9/9/2018 2:05:53 PM
VERBOSE: [Cloud:UpdateCloudSecurity] Done applying Windows Defender Platform update - 9/9/2018
2:05:55 PM
VERBOSE: [Cloud:UpdateCloudSecurity] Done updating Common Antimalware Platform (Windows Defender).
- 9/9/2018 2:05:55 PM
VERBOSE: Interface: Interface UpdateCloudSecurity completed. - 9/9/2018 2:05:55 PM
COMPLETE: Task Cloud - UpdateCloudSecurity
VERBOSE: Task: Task completed. - 9/9/2018 2:05:55 PM
COMPLETE: Step 305 - (SEC) Finalize cloud security
VERBOSE: Step: Status of step '305 - (SEC) Finalize cloud security' is 'Success'. - 9/9/2018
2:05:55 PM
VERBOSE: Checking if any of the in progress steps are complete. The following steps are currently
in progress: '305'. - 9/9/2018 2:05:55 PM
VERBOSE: Action: Step 305 completed successfully. - 9/9/2018 2:05:55 PM
VERBOSE: The following steps have completed and will be removed from the collection of in-progress
steps: '305'. - 9/9/2018 2:05:55 PM
VERBOSE: Action plan execution completed for action plan 'Deployment'. - 9/9/2018 2:05:55 PM
VERBOSE: Action: Action plan 'Deployment' completed. - 9/9/2018 2:05:55 PM
COMPLETE: Action 'Deployment'
PS C:\Windows\system32>
```



Microsoft Azure Stack - Administration

Search resources

Dashboard

Region management

1

REGION	CRITICAL	WARNING
local	0	0

Update

Update available

Version: 1.1808.0.97

Alerts

0

- Critical 0
- Warning 0

Resource providers

NAME	HEALTH	ALERTS
Capacity	Healthy	0
Compute	Healthy	0
Infrastructure backup	Healthy	0
Key Vault	Healthy	0
Network	Healthy	0
Storage	Healthy	0

Quickstart tutorials

- Create a virtual machine
- Offering services
- Populate the Azure Stack marketplace
- Manage infrastructure
- Use the Azure Stack portal

Microsoft Azure Stack

Search resources

Dashboard

Create a resource

All services

FAVORITES

- Dashboard
- All resources
- Resource groups
- Recent
- Monitor

Marketplace

Get a subscription

Feedback

All resources
ALL SUBSCRIPTIONS

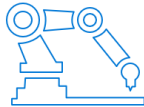
No resources to display

Create resources

Quickstart tutorials

- Getting started with Azure Stack
- Windows Virtual Machines
- Linux Virtual Machines
- Functions
- Use the Azure Stack portal

Hybrid use cases: Azure and Azure Stack



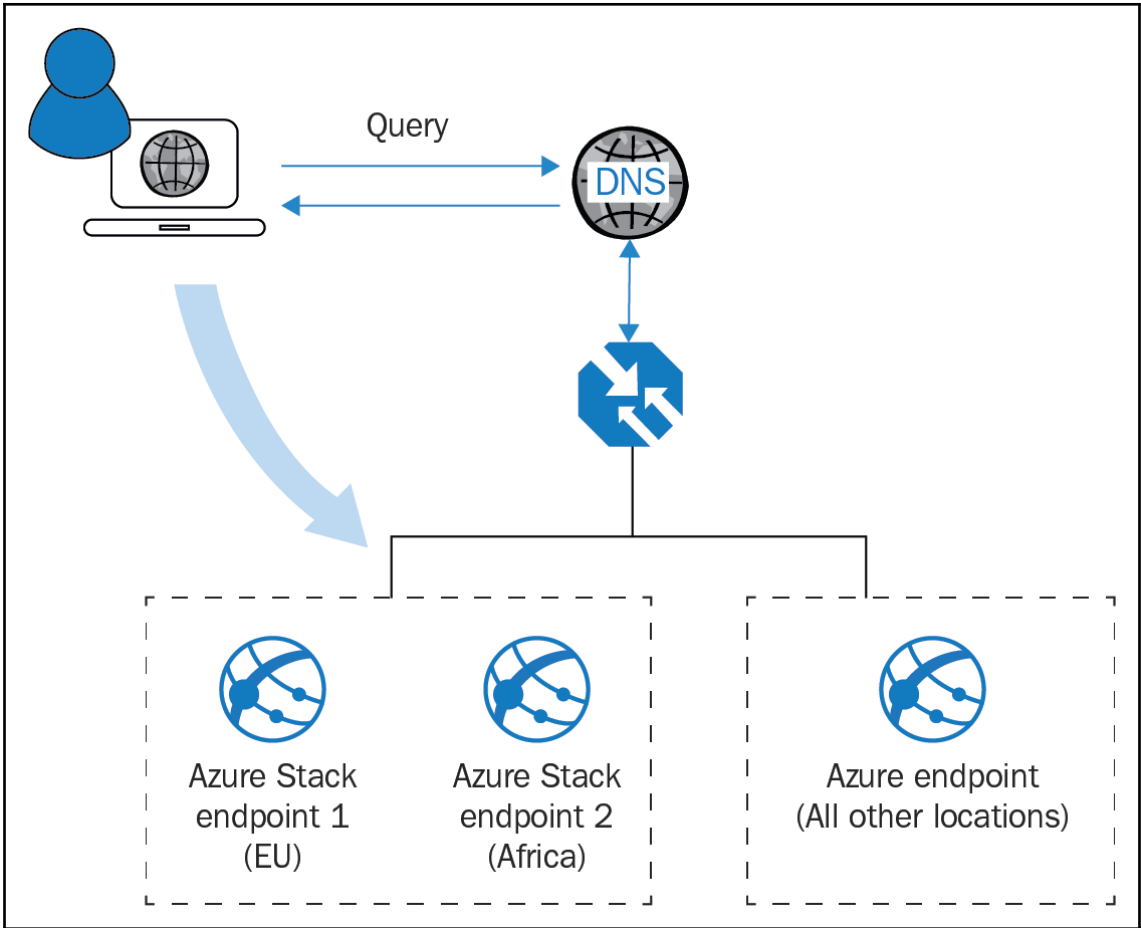
Edge and disconnected solutions



Cloud applications to meet varied regulations



Cloud application model on-premises



Capacity Dashboard - ITPOC - Operations Manager

File Edit View Go Tasks Tools Help

Search Scope Find Tasks

Monitoring

- Active Alerts
- Discovered Inventory
- Distributed Applications
- Maintenance Schedules
- Task Status
- UNIX/Linux Computers
- Windows Computers
- Agentless Exception Monitoring
- Application Monitoring
- Data Warehouse
- Microsoft Audit Collection Services
- Microsoft Azure Stack
 - Active Alerts
 - Capacity Dashboard**
 - Deployments
 - Health Dashboard
 - Regions
- Microsoft Windows Client
- Microsoft Windows Server
- Network Monitoring
- Operations Management Suite
- Operations Manager
- Synthetic Transaction
- UNIX/Linux Computers
- Web Application Transaction Monitoring
- Windows Service And Process Monitoring

Show or Hide Views...
New View

Monitoring
Authoring

Capacity Dashboard

Deployments (1)

Filter

Health	Display Name
✔	https://adminmanagement.local.azurestack.external

Regions

Filter

Health	Display Name	Additional Information	Auto Maintenance Mode
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Capacity

Nagios

Updated every 30 seconds
(Nagios Core™ 3.2.3 - www.nagios.org
Logged in as nagiosadm@

View History For all hosts
View Notifications For All Hosts
View Host Status Detail For All Hosts

OK	WARNING	CRITICAL	UNKNOWN	PENDING
2	0	0	0	0

All Problems All Types
0 2

OK	WARNING	CRITICAL	UNKNOWN	PENDING
5	1	5	0	0

All Problems All Types
6 15

Service Status Details For All Hosts

Host	Service	Status	Last Check	Duration	Attempt	Status Information
localhost	Current Load	OK	04-25-2011 09:50:09	16 11h 57m 13s	1/4	OK: load average: 0.00, 0.01, 0.05
	Current Users	OK	04-25-2011 09:49:57	16 11h 56m 35s	1/4	USERS OK: 4 users currently logged in
	HTTP	✘	04-25-2011 09:50:34	16 11h 55m 56s	1/4	HTTP OK: HTTP/1.1 200 OK - 290 bytes in 0.002 second response time
	PING	OK	04-25-2011 09:51:12	16 11h 55m 20s	1/4	PING OK - Packet loss = 0%, RTT = 0.10 ms
	Free Partition	OK	04-25-2011 09:48:31	16 11h 54m 43s	1/4	DISK OK - free space: 711362 MB (23% inode=54%)
	SSH	✘	04-25-2011 09:47:27	16 11h 54m 5s	1/4	SSH OK - OpenSSH 5.5 (protocol 2.0)
	Swap Usage	OK	04-25-2011 09:48:45	16 11h 53m 28s	1/4	SWAP OK - 100% free (8684 M out of 8685 M)
Total Processes	WARNING	04-25-2011 09:50:47	16 11h 52m 50s	4/4	PROCS WARNING: 290 processes with STATE = RSZDT	
winserver	C:\ Drive Space	OK	04-25-2011 09:49:46	06 0h 3m 46s	1/3	C: total: 1397.17 Gb - used: 710.33 Gb (51%) - free: 686.84 Gb (49%)
	CPU Load	OK	04-25-2011 09:50:45	06 0h 0m 47s	1/3	CPU Load 0% (5 min average)
	Spoke	UNKNOWN	04-25-2011 09:41:44	06 0h 26m 48s	3/3	NSClient - ERROR: Invalid password
	Memory Usage	UNKNOWN	04-25-2011 09:42:42	06 0h 28m 50s	3/3	NSClient - ERROR: Invalid password
	NSClient++ Version	UNKNOWN	04-25-2011 09:43:41	06 0h 37m 51s	3/3	NSClient - ERROR: Invalid password
	Uptime	UNKNOWN	04-25-2011 09:44:40	06 0h 36m 52s	3/3	NSClient - ERROR: Invalid password
WSVC	UNKNOWN	04-25-2011 09:45:38	06 0h 35m 54s	3/3	NSClient - ERROR: Invalid password	

15 Matching Service Entries Displayed