Project ‘Bicep’

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“We’ve seen two years’ worth of digital transformation in two months”

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Microsoft Azure

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Blog / Updates

Update #2 on Microsoft cloud services continuity

Posted on March 28, 2020

Microsoft Azure

Since last week's update, the global health pandemic continues to impact every organization—large or small—their employees, and the customers they serve. Everyone is working tirelessly to support all our customers, especially critical health and safety organizations across the globe, with the cloud services needed to sustain their operations during this unprecedented time. Equally, we are hard at work providing services to support hundreds of millions of people who rely on Microsoft to stay connected and to work and play remotely.

As Satya Nadella shared, *"It's times like this that remind us that each of us has something to contribute and the importance of coming together as a community"*. In these times of great societal disruption, we are steadfast in our commitment to help everyone get through this.

For this week's update, we want to share common questions we're hearing from customers and partners along with insights to address these important inquiries. If you have any immediate needs, please refer to the following resources.

Azure Service Health – for tracking any issues impacting customer workloads and understanding Azure Service Health
Microsoft 365 Service health and continuity – for tracking and understanding M365 Service health
Xbox Live – for tracking game and service status

What have you observed over the last week?
In response to health authorities emphasizing the importance of social distancing, we've seen usage increases in services that support these scenarios—including Microsoft Teams, Windows Virtual Desktop, and Power BI.

- ~~We have seen a 775 percent increase of our cloud services in regions that have enforced social distancing or shelter in place orders~~.
- We have seen a 775 percent increase in Teams' calling and meeting monthly users in a one month period in Italy, where social distancing or shelter in place orders have been enforced.
- We have seen a very significant spike in Teams usage, and now have more than 44 million daily use[illegible] users generated over 900 million meeting and calling minutes on Teams daily in a single week. [illegible] read more about Teams data here.
- Windows Virtual Desktop usage has grown more than 3x.
- Government use of public Power BI to share COVID-19 dashboards with citizens has surged by 42 percent in a week.

"Windows Virtual Desktop usage has grown more than 3x!"

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Question:

What is the main driver behind automation in Azure?

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2017
Orlando, FL

Question:

What is the main driver behind automation in Azure?

+

Having fast, and consistent yet customizable deployments that are reproducible in any Azure Subscription in exactly the same way.

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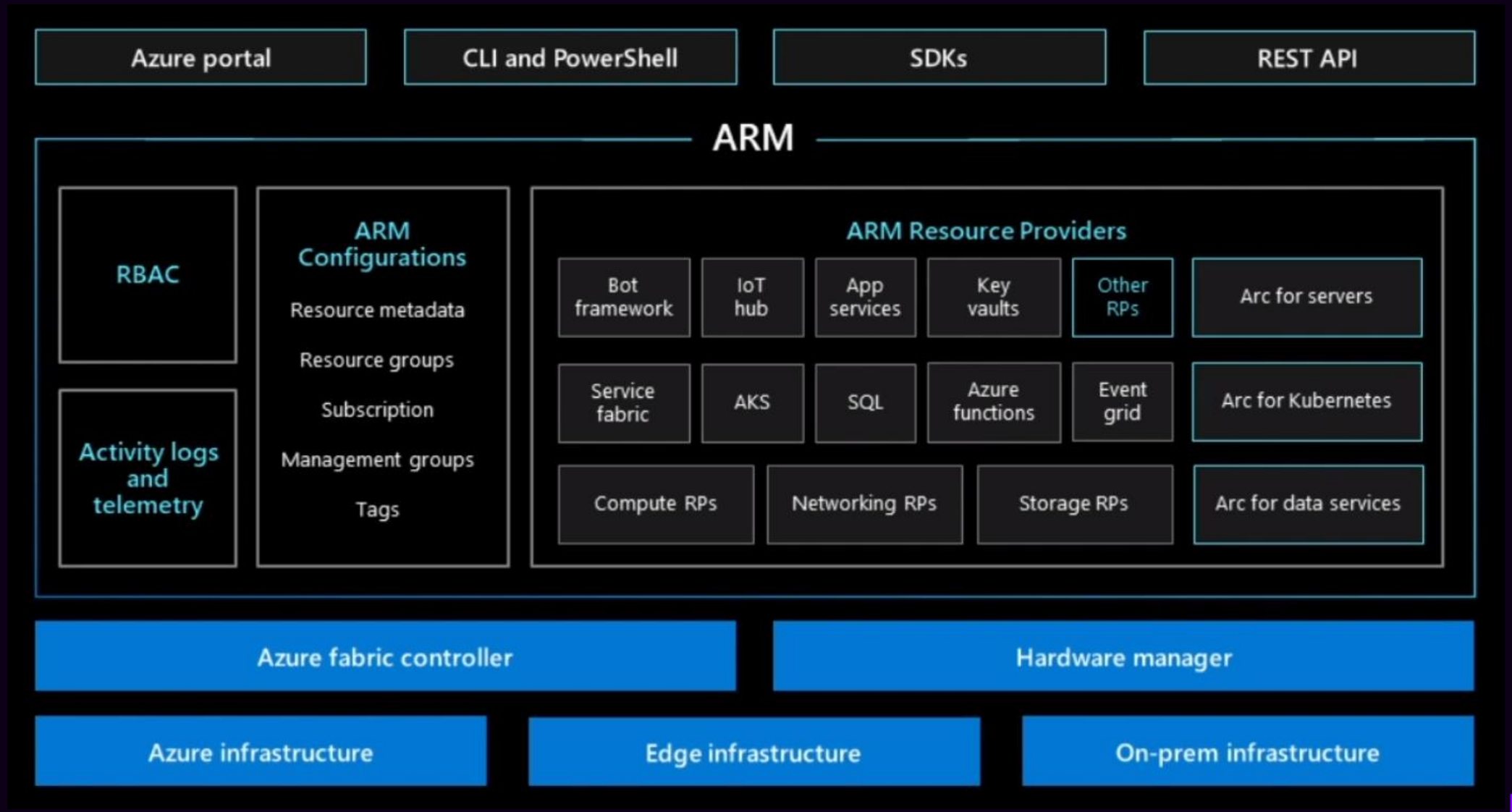
Azure Resource Manager



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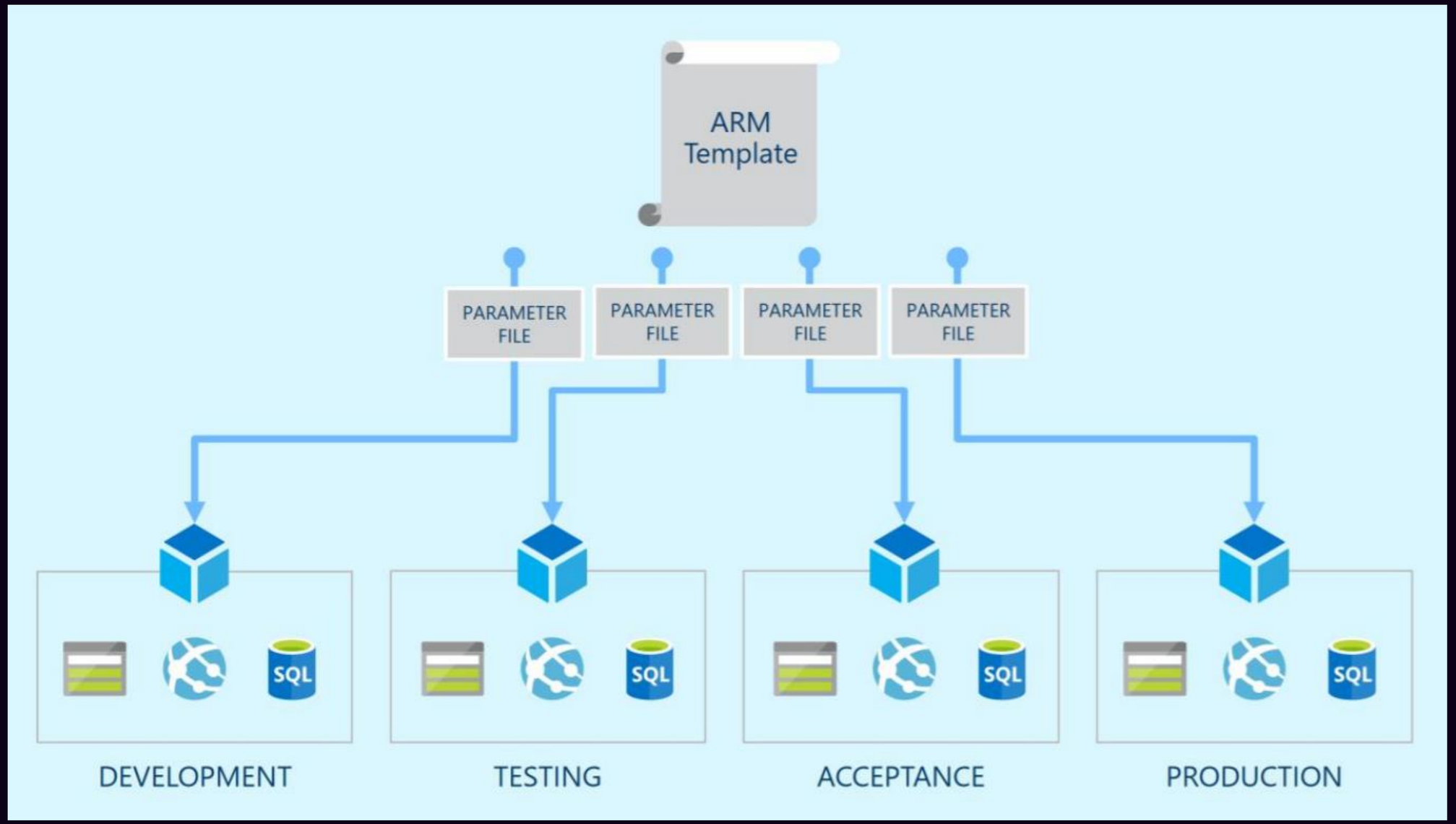
Infrastructure as code



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Infrastructure as code

Language Azure Resource Manager accepts JavaScript Object Notation (JSON) templates that comply with a JSON schema. JSON is an industry standard, human readable language.

```
{
    "$schema": "https://schema.management.azure.com/schemas/2015-01-
       01/deploymentTemplate.json#",
    "contentVersion": "1.0.0.0",
    "parameters": {},
    "variables": {},
    "resources": [],
    "outputs": {}
}
```

Tooling Although it is possible to create a template for a complete application in simple text editor, there is sophisticated tooling available that provides you with a better authoring experience for Azure Resource Manager templates.

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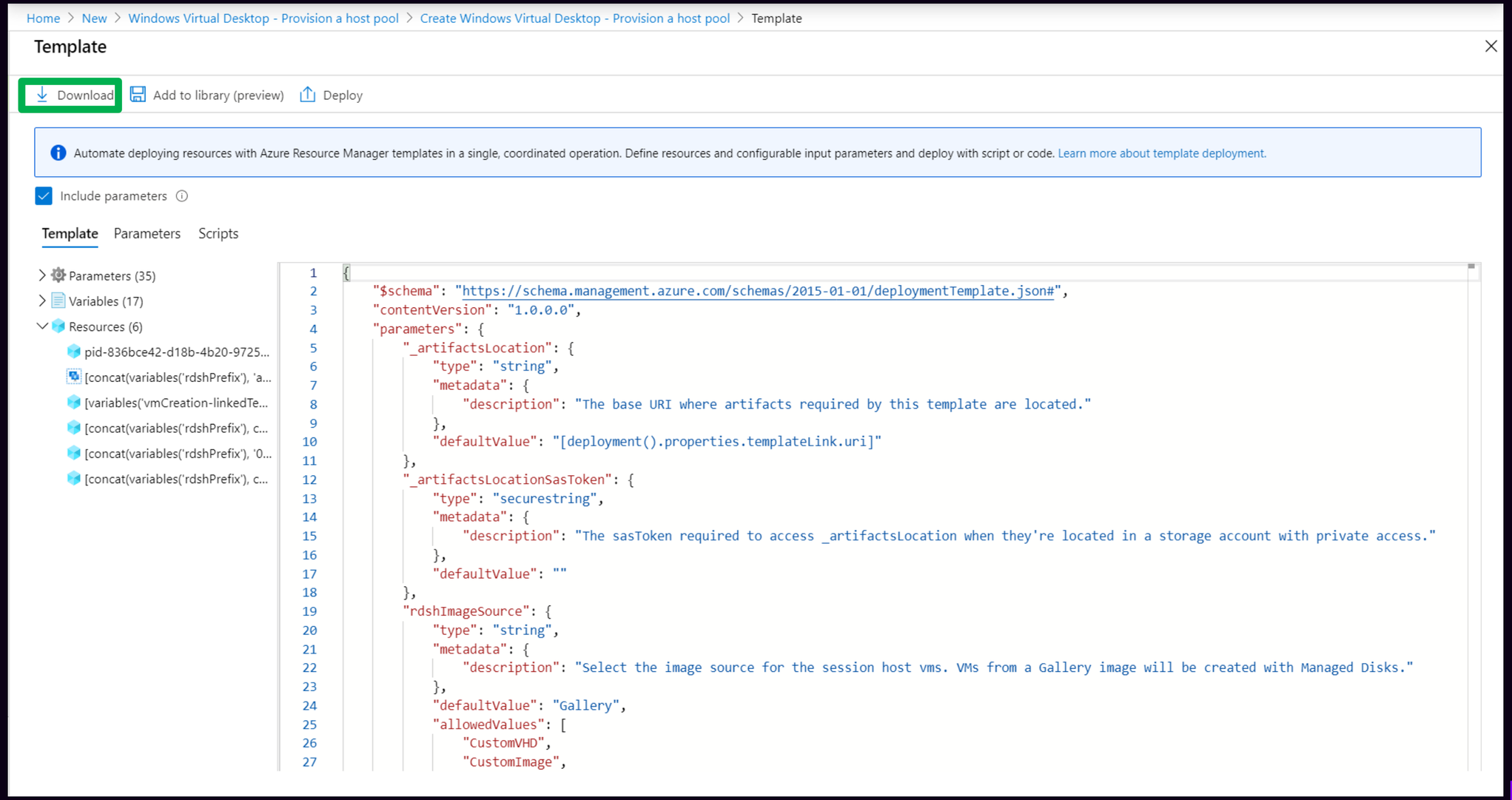
ARM Templates from portal



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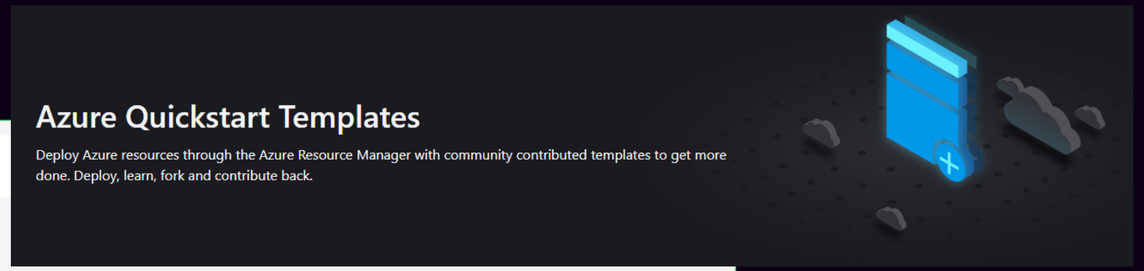
ARM Templates from portal



Sort by:

Date updated

Template name

Author name

Most popular

Resource Types:

All

Microsoft.Aad (1)

Microsoft.Analysisservices (1)

Microsoft.Authorization (5)

Microsoft.Automation (8)

Microsoft.Backup (1)

Microsoft.Cdn (11)

Microsoft.Compute (394)

Microsoft.Consumption (1)

Microsoft.Containerinstance (15)

Microsoft.Resources (153)

Microsoft.Web (81)

Search

872 templates match your filter.

Deploy a simple Windows VM

This template allows you to deploy a simple Windows VM using a few different options for the Windows version, using the latest patched version. This will deploy an A2 siz...

by Brian Moore,

Last updated: 10/31/2019

Deploy a simple Ubuntu Linux VM 18.04-LTS.

This template deploy a Ubuntu Server with a few options for the VM. You can provide the VM Name, OS Version, VM size, admin username and password. As default the V...

by Brian Moore,

Last updated: 3/7/2020

Deploy an Ubuntu VM with Docker Engine

This template allows you to deploy an Ubuntu VM with Docker (using the Docker Extension). You can later SSH into the VM and run Docker containers.

by Corey Sanders,

Last updated: 12/11/2019

Create an Azure VM with a new AD Forest

This template creates a new Azure VM, it configures the VM to be an AD DC for a new Forest

by Simon Davies,

Last updated: 4/6/2019

Deploy a simple Windows VM with tags

This template allows you to deploy a simple Windows VM with tags using a few different options for the Windows version, using the latest patched version. This will deploy in ...

by Meagan McCrory,

Last updated: 11/13/2019

Joins an existing Windows VM to AD Domain

This template allows you to join an already exitsing Windows virtual machine into an existing Active Directory Domain. For this template to work you need an existing virt...

by Paulo Marques,

Last updated: 4/24/2017

https://azure.microsoft.com/en-us/resources/templates/

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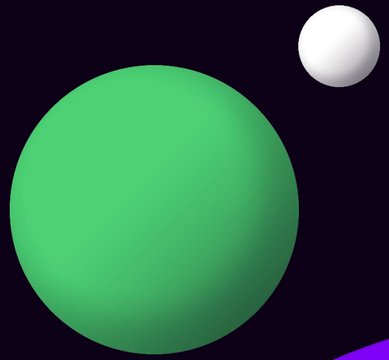
DEMO

ARM Templates & JSON code



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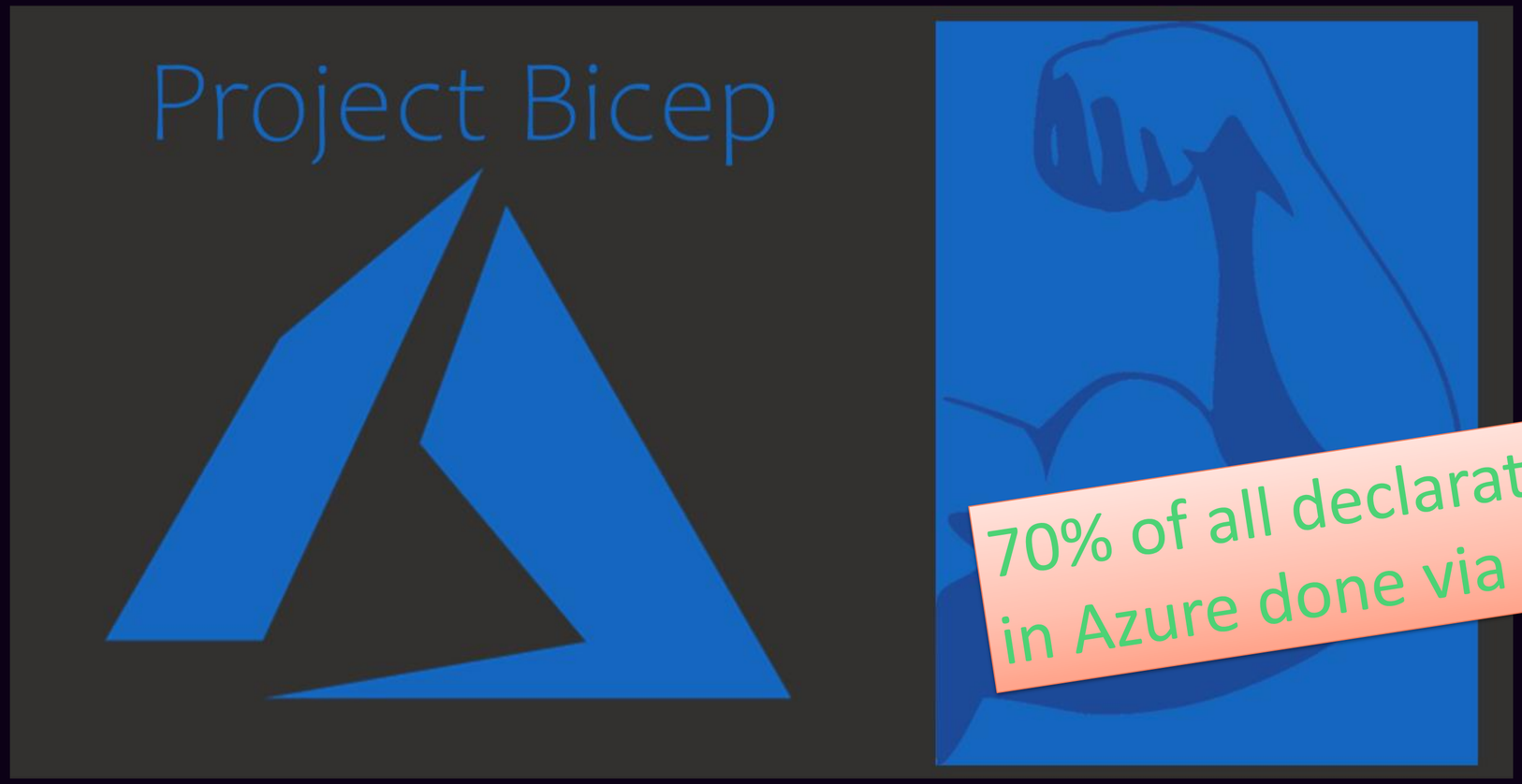
Project ‘Bicep’



70% of all declarative resource created in Azure done via ARM Templates!

"..Bicep is a Domain Specific Language (DSL) for deploying Azure resources declaratively. It aims to drastically simplify the authoring experience with a cleaner syntax and better support for modularity and code re-use. Bicep is a transparent abstraction over ARM and ARM templates.

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Project ‘Bicep’

Simple declarative language to provision infrastructure on Azure

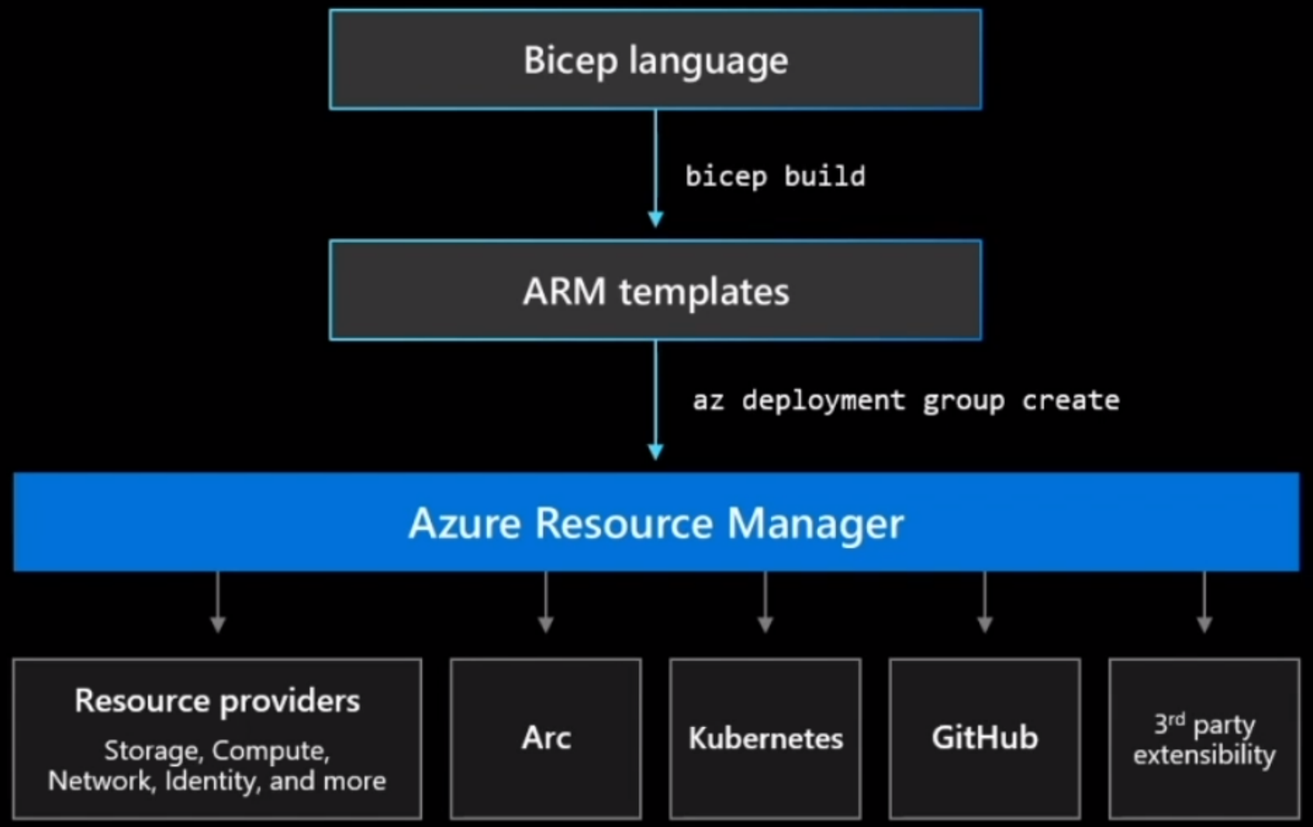
INTUITIVE
Easy to read as it is to author

TRANSPILES TO ARM TEMPLATES
Leverage ARM template knowledge and investments

MODULAR
Abstract common blocks of config into reusable elements

OPEN SOURCE
Transparency and community

aka.ms/Bicep



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Goals & non goals

GOALS

- Reduce current pain
- Ease of adoption
- Compatible with exiting templates
- Transparent Abstraction: Leverage all the benefits of the platform
- Modular: Abstract common blocks of config into reusable elements

NON-GOALS

- One language to rule them all
- General purpose language to meet any need
- Invent new technology

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Installing Project ‘Bicep’

1. Install the Bicep CLI (required)

```
# Create the install folder
$installPath = "$env:USERPROFILE\.bicep"
$installDir = New-Item -ItemType Directory -Path $installPath -Force
$installDir.Attributes += 'Hidden'
# Fetch the latest Bicep CLI binary
(New-Object Net.WebClient).DownloadFile("https://github.com/Azure/bicep/releases/latest/download/bicep-win-x64.exe", "$installPath\bicep.exe")
# Add bicep to your PATH
$currentPath = (Get-Item -path "HKCU:\Environment" ).GetValue('Path', '', 'DoNotExpandEnvironmentNames')
if (-not $currentPath.Contains("%USERPROFILE%\.bicep")) { setx PATH ($currentPath + ";%USERPROFILE%\.bicep") }
if (-not $env:path.Contains($installPath)) { $env:path += ";$installPath" }
# Verify you can now access the 'bicep' command.
bicep --help
# Done!
```

2. Install the Bicep VS Code extension(optional)

```
# Fetch the latest Bicep VSCode extension
$vsixPath = "$env:TEMP\vscode-bicep.vsix"
(New-Object Net.WebClient).DownloadFile("https://github.com/Azure/bicep/releases/latest/download/vscode-bicep.vsix", $vsixPath)
# Install the extension
code --install-extension $vsixPath
# Clean up the file
Remove-Item $vsixPath
# Done!
```

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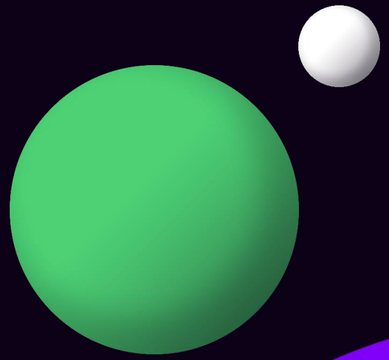
DEMO

Using Bicep to generate ARM code



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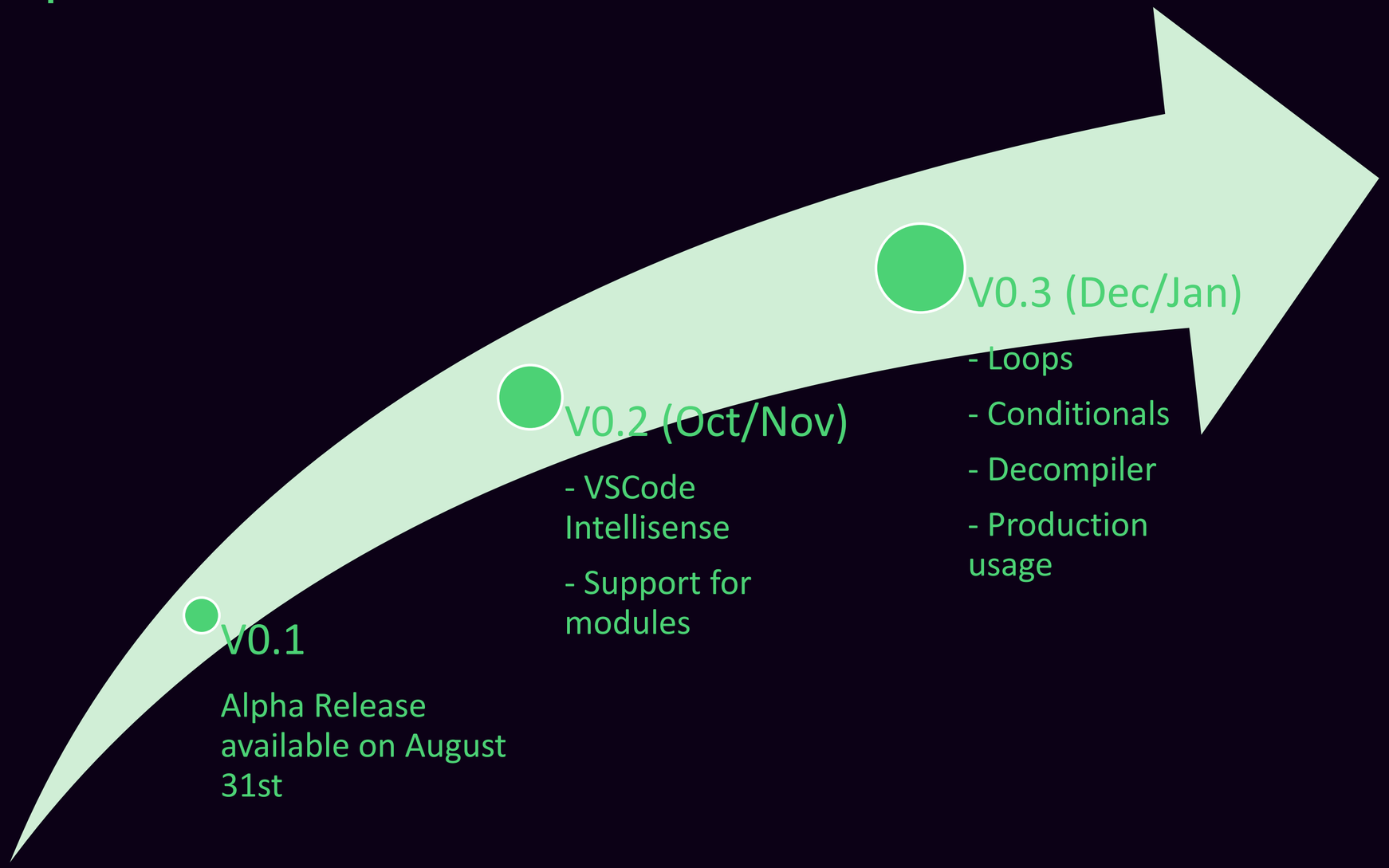
Road map



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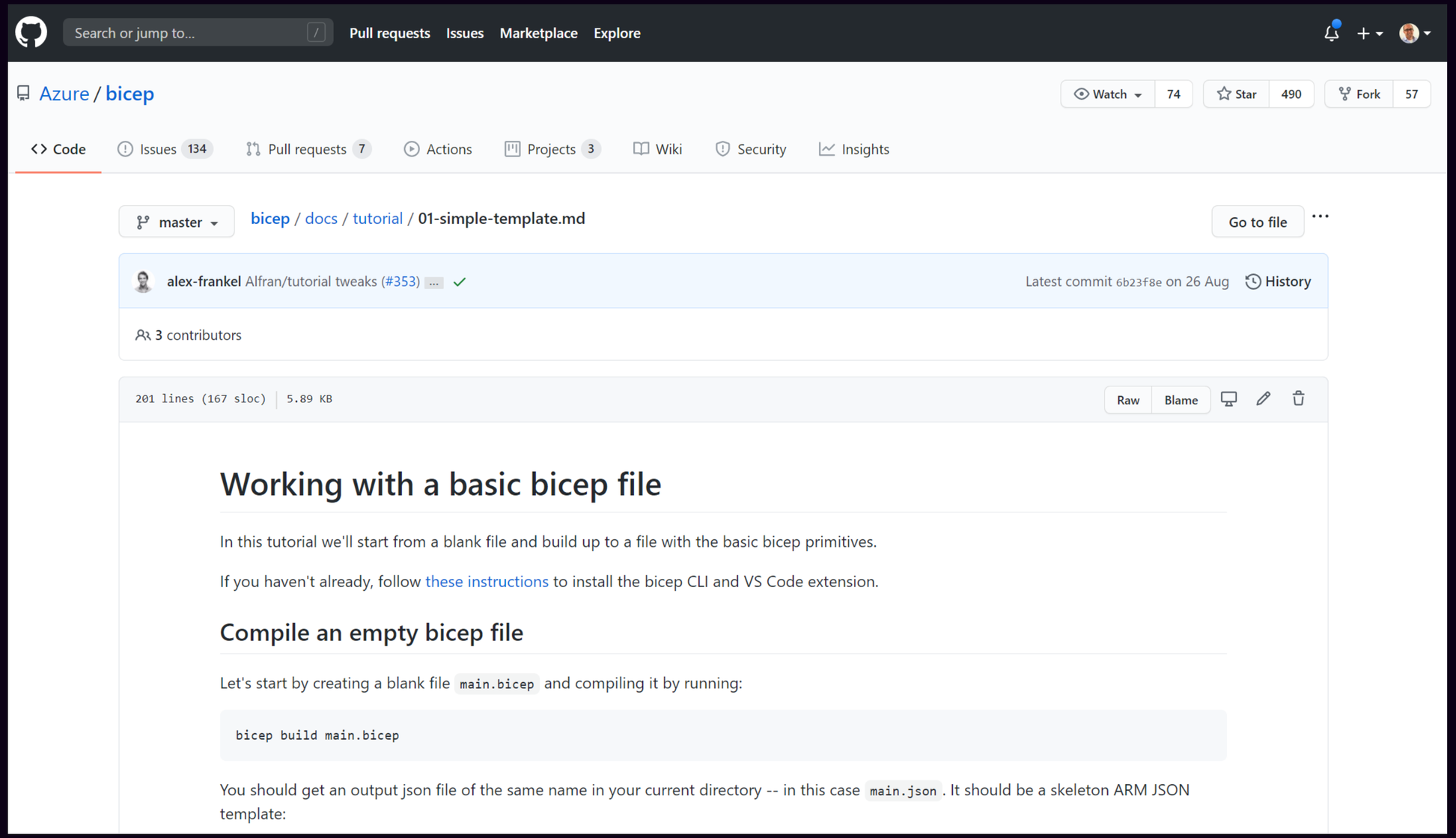
Where to get started?



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master wvd / Add-WVDHostToHostpoolSpring.ps1

fberson Token ExpirationTime ...

1 contributor

Add-WVDHostToHostpoolSpring.ps1

This script adds an WVD Session Host to an existing WVD Hostpool by performing th

- Download the W
- Download the W
- Install the WVD
- Install the WVD
- Set the WVD Ho
- Create the Work PowerShell Exte

fberson New Upload ...

1 contributor

Create-WVD-Backplane.bicep

This Azure .bicep file (based on 0.1.1 Alpha Preview rele create:

- A WVD Workspace
- A WVD Host pool
- A WVD App Group And connect the AppGroup with the Host pool

master wvd / WVD-Rest-Api-Functions.ps1

fberson Removed trailing newlines and corrected minor typo in comments area

1 contributor

WVD-Rest-Api-Functions.ps1

This script contains the following functions that use REST API for WVD

- Get-WorkSpace
- Get-Hostpool
- Get-AppGroup
- Get-Apps
- New-WorkSpace
- New-Hostpool
- New-AppGroup
- New-App

https://github.com/fberson/wvd

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Thank you!

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https://github.com/fberson/wvd
https://www.linkedin.com/in/freekberson