



*Freek Berson*

*Principal Outbound Product Manager*

*Alludo / Parallels*

*@fberson*

*github.com/fberson*

*Microsoft MVP*



*My journey to Bicep,  
and how you can get  
started!*



# Back to 2017...





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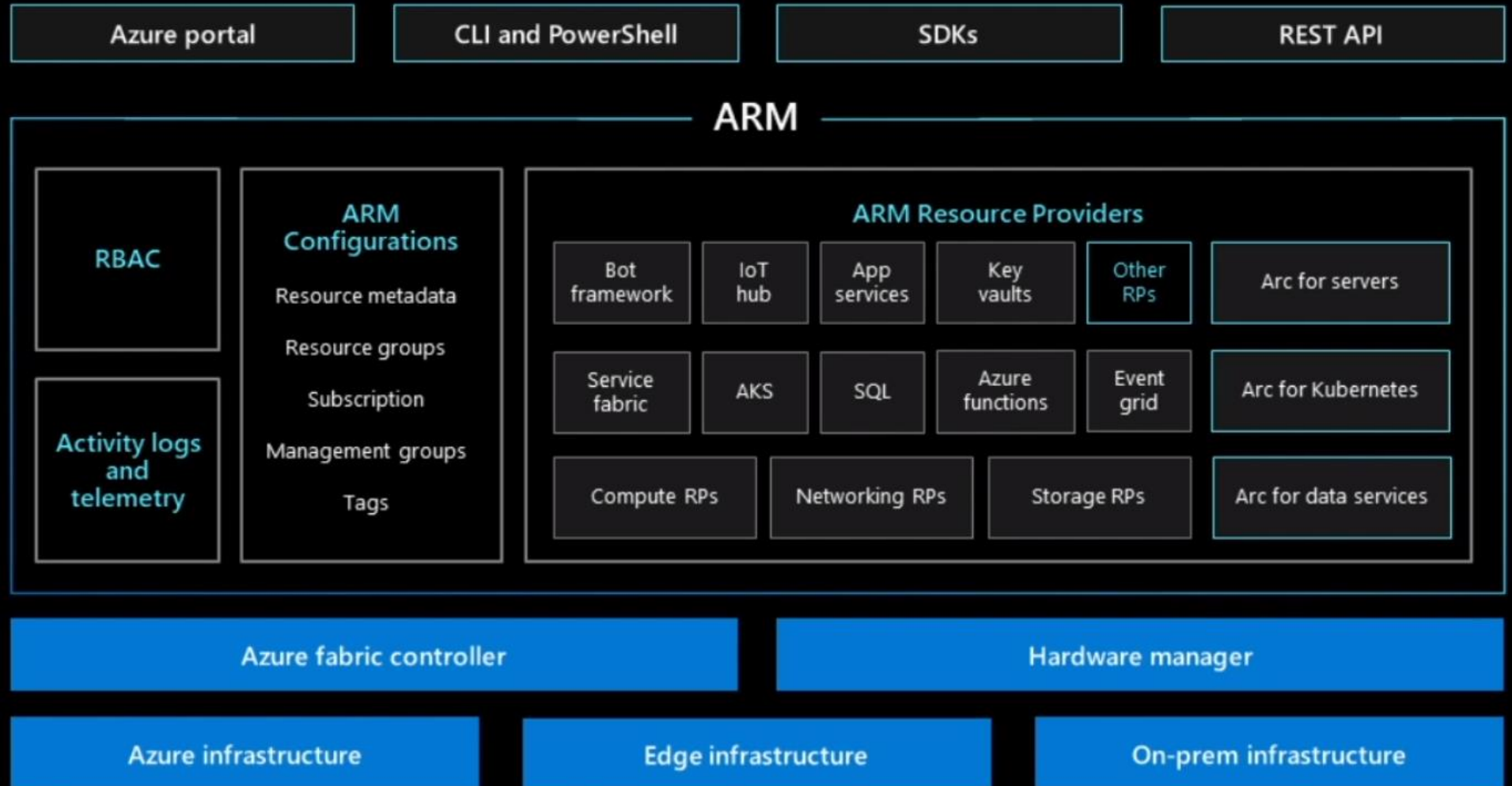
## RECAP, WHAT HAS BEEN CREATED? #1/2

- 6 Managed Disks
- 6 NIC's
- 6 VM's
- 3 Availability Sets
- Azure SQL Database
- Static public IP Address
- 2 load balancers

## RECAP, WHAT HAS BEEN CREATED? #2/2

- All VM's joined to AD Domain
- Anti-virus & Anti Malware configured
- Bginfo configured
- Full HA RDS Deployment
- 2 RD Connection Broker / Licensing
- 2 RD Gateway / Web Access
- 2 RD Session Host
- SSL Certificates configured for all roles
- Session Collection created
- Sample RemoteApp published
- RD Web Access branding
- RD CAP / RAP Policies
- Session Time Out settings configured

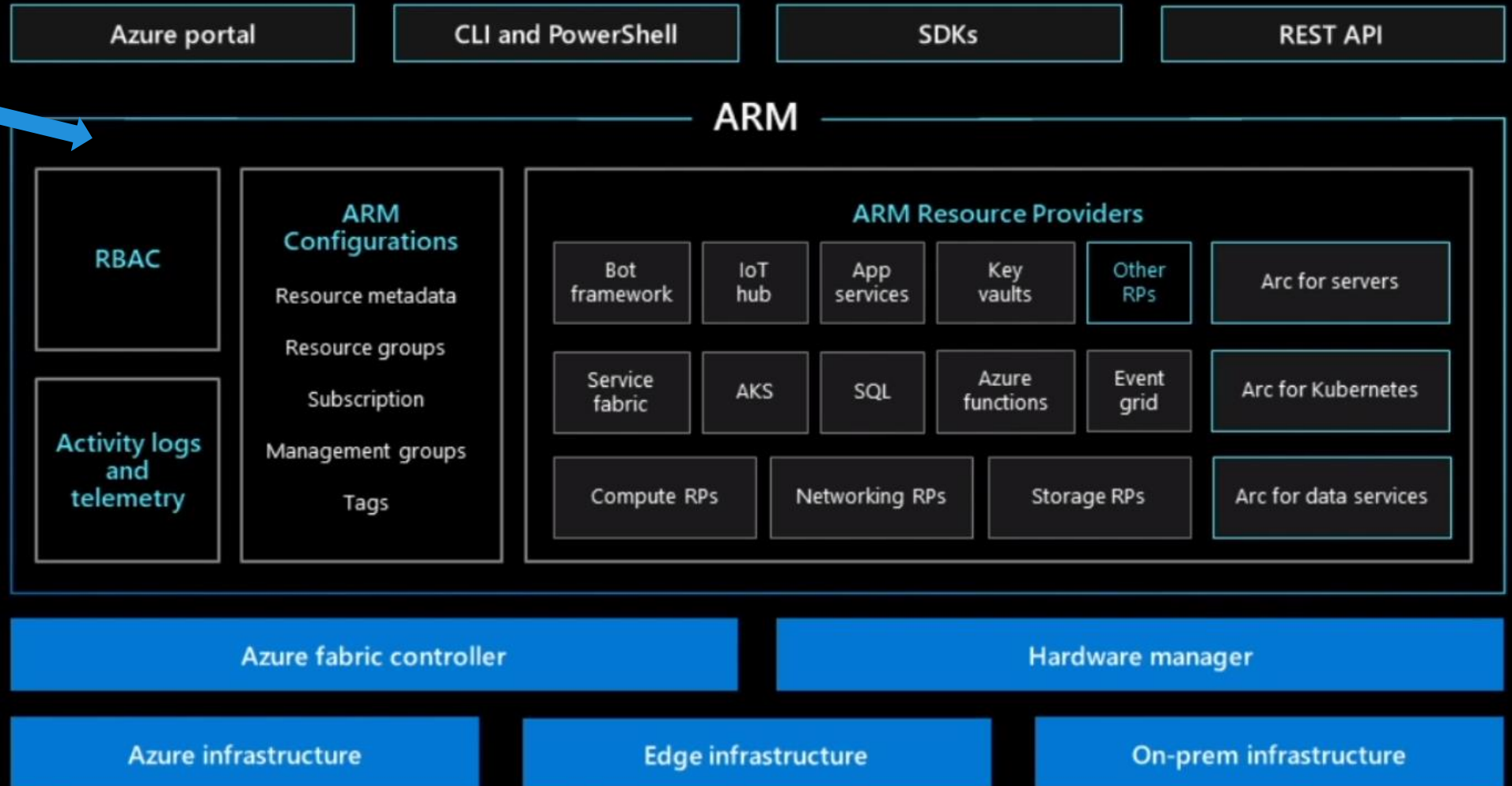
# Azure Resource Manager



# Azure Resource Manager



ARM Template




# Infrastructure as code

## Template format

In its simplest structure, a template has the following elements:

JSON

 Copy

```
{
  "$schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentTemplate.json#",
  "contentVersion": "",
  "apiProfile": "",
  "parameters": {  },
  "variables": {  },
  "functions": [  ],
  "resources": [  ],
  "outputs": {  }
}
```

# ARM Template complexity



```
605     "hostPoolArmPath": "[resourceId('Microsoft.DesktopVirtualization/hostPools', format('{0}-REMOTEAPP', parameters('hostpoolName')))]"
606   },
607   "dependsOn": [
608     "[resourceId('Microsoft.DesktopVirtualization/hostPools', format('{0}-REMOTEAPP', parameters('hostpoolName')))]"
609   ]
610 },
611 {
612   "type": "Microsoft.DesktopVirtualization/workspaces",
613   "apiVersion": "2019-12-10-preview",
614   "name": "[parameters('workspaceName')]",
615   "location": "[parameters('AVDbackplaneLocation')]",
616   "properties": {
617     "friendlyName": "[parameters('workspaceNameFriendlyName')]",
618     "applicationGroupReferences": [
619       "[resourceId('Microsoft.DesktopVirtualization/applicationGroups', parameters('appgroupName'))]",
620       "[if(parameters('createRemoteAppHostpool'), resourceId('Microsoft.DesktopVirtualization/applicationGroups', format('{0}-REMOTEAPP', parameters('appgroupName'))), '')]"
621     ]
622   },
623   "dependsOn": [
624     "[resourceId('Microsoft.DesktopVirtualization/applicationGroups', parameters('appgroupName'))]",
625     "[resourceId('Microsoft.DesktopVirtualization/applicationGroups', format('{0}-REMOTEAPP', parameters('appgroupName')))]"
626   ]
627 }
628 ]
629 }
630 },
631 "dependsOn": [
632   "[subscriptionResourceId('Microsoft.Resources/resourceGroups', format('{0}BACKPLANE{1}', parameters('resourceGroupProdPrefix'), parameters('resourceGroupPostfix')))]"
633 ]
634 },
635 {
636   "type": "Microsoft.Resources/deployments",
637   "apiVersion": "2020-06-01",
```

# Project 'Bicep'



Mark Russinovich ✓

@markrussinovich

We're working on an open source domain specific language for ARM codenamed Bicep that will greatly simplify Azure declarative modelling: "Microsoft flexes Bicep to strengthen ARM"



infoworld.com

**Microsoft flexes Bicep to strengthen ARM**

Azure gets a new infrastructure as code language that can help deploy and manage complex architectures

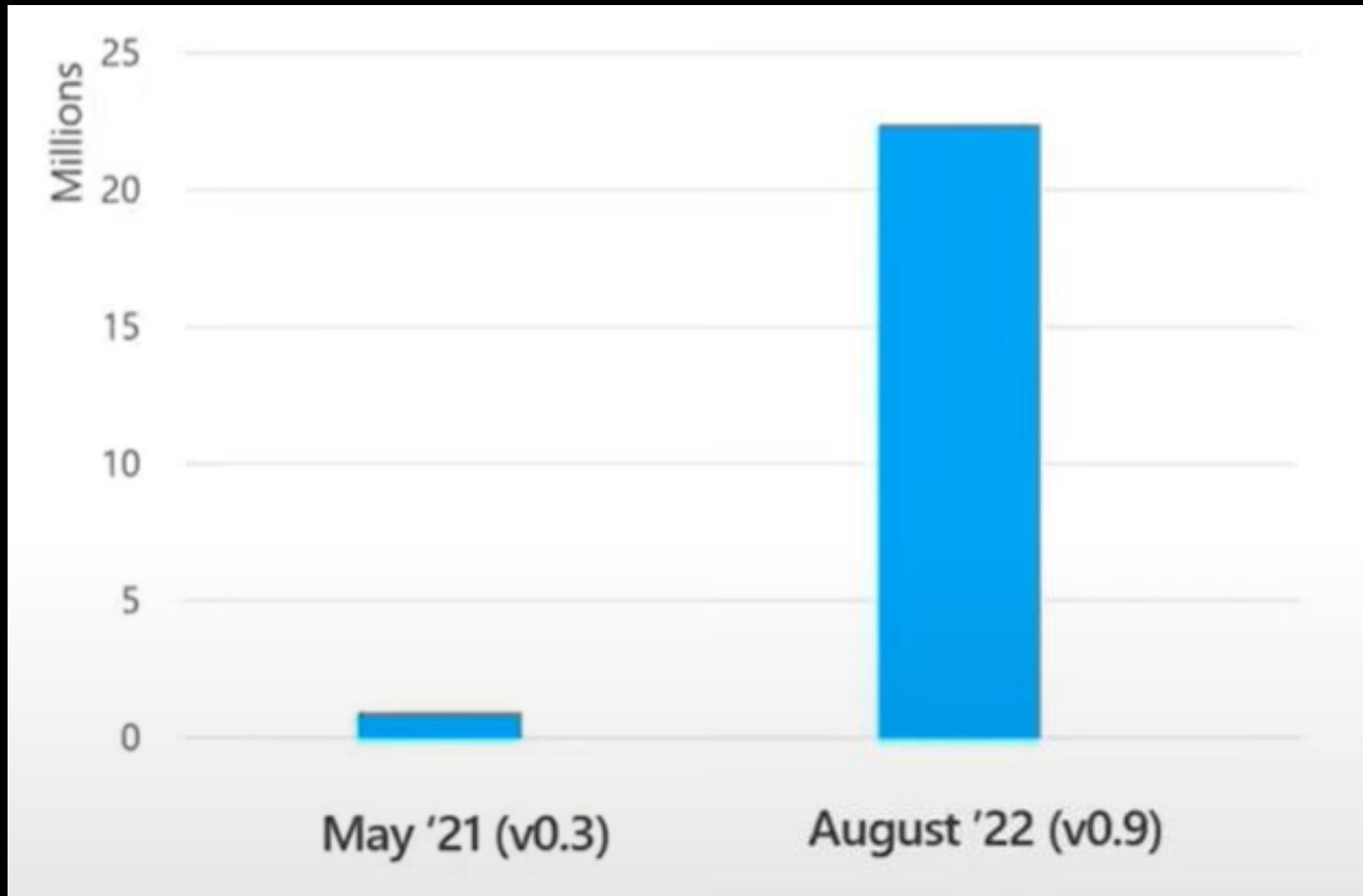
10:23 PM · Sep 8, 2020 · TweetDeck

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## *Total resources deployed*



# What is Bicep?



*"..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.*

# What is Bicep?

*Simple declarative language to provision infrastructure to Azure.*

## Intuitive

Easy to read and to author

## Transpiles to ARM Templates

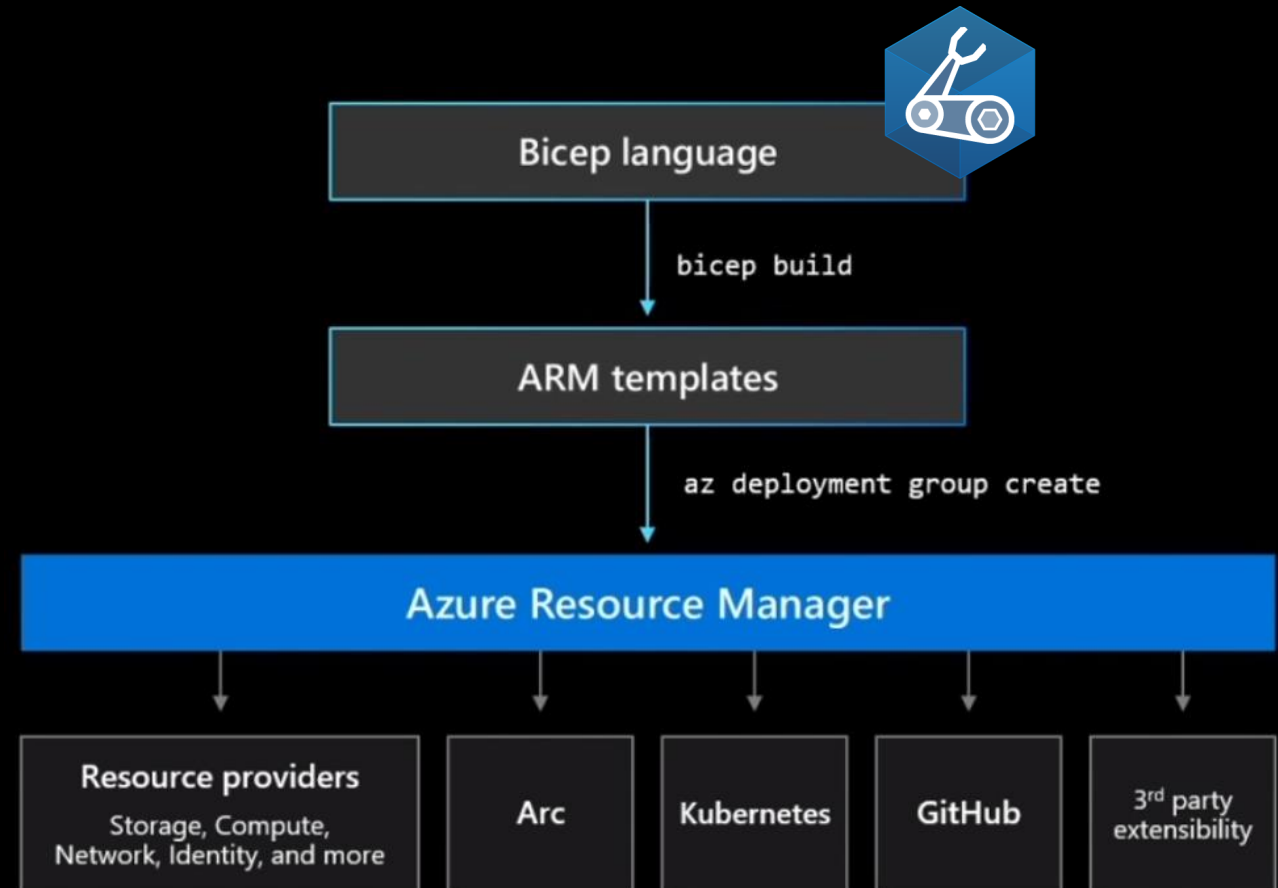
Leverage ARM template knowledge and investments

## Modular

Abstract common blocks of code into reusable parts

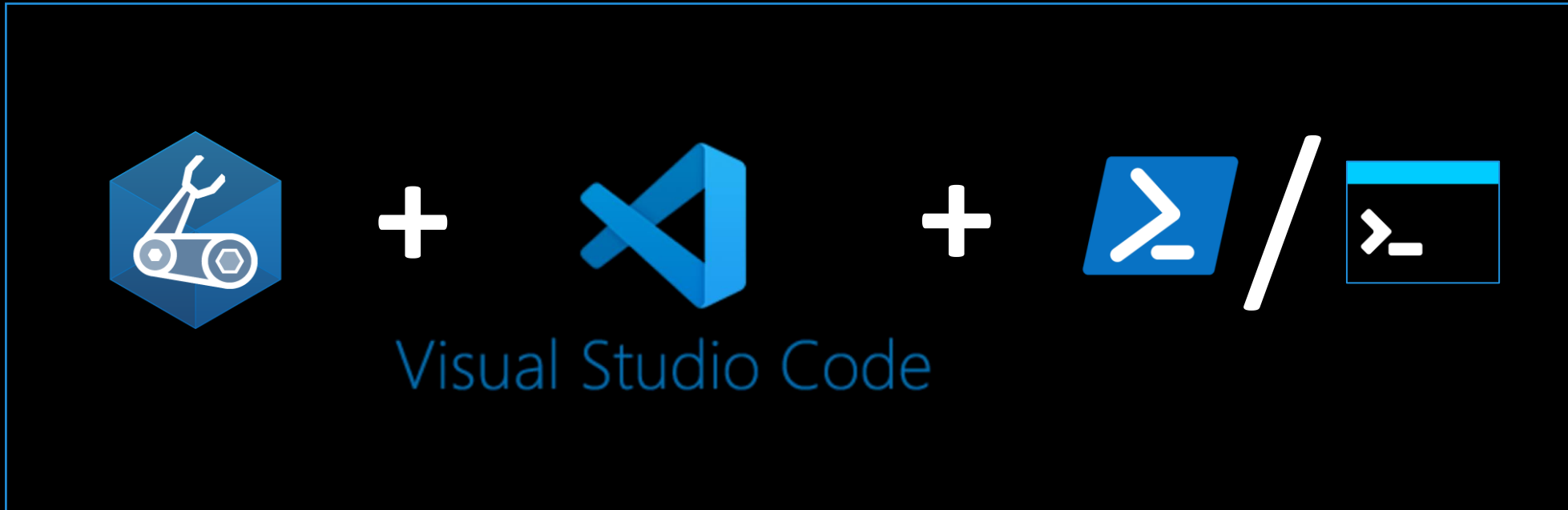
## Open Source

Transparency and community



# Get started with Bicep (<https://aka.ms/bicep>)

1. Install the tools (bicep.exe, Visual Studio Code, PowerShell/az cli)





*Demo!*



# Call to action!

- Bicep MS Docs:  
[Aka.ms/bicep](https://aka.ms/bicep)
- Bicep Monthly Community call  
[surveymonkey.com/r/ARMnews](https://surveymonkey.com/r/ARMnews)
- Bicep GitHub location  
[github.com/Azure/bicep](https://github.com/Azure/bicep)
- Bicep Learning path  
[docs.microsoft.com/en-us/azure/azure-resource-manager/bicep/learn-bicep](https://docs.microsoft.com/en-us/azure/azure-resource-manager/bicep/learn-bicep)





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*THANK YOU!*

