



## What is new in Azure Bicep language?

Elkhan Yusubov – Cloud Architect | MVP & MCT

Saturday, May 7<sup>th</sup>, 08:00 – 09:00 EDT





### **Elkhan Yusubov**

Speaker | Author | Cloud Architect  
Founder at #cloudmarathoner



Elkhan is a Cloud Architect Manager, Microsoft Azure MVP and 15+ MCT with experience in cloud solutions, enterprise healthcare systems and healthcare data, and API standards (HL7 FHIR, EDI X12).

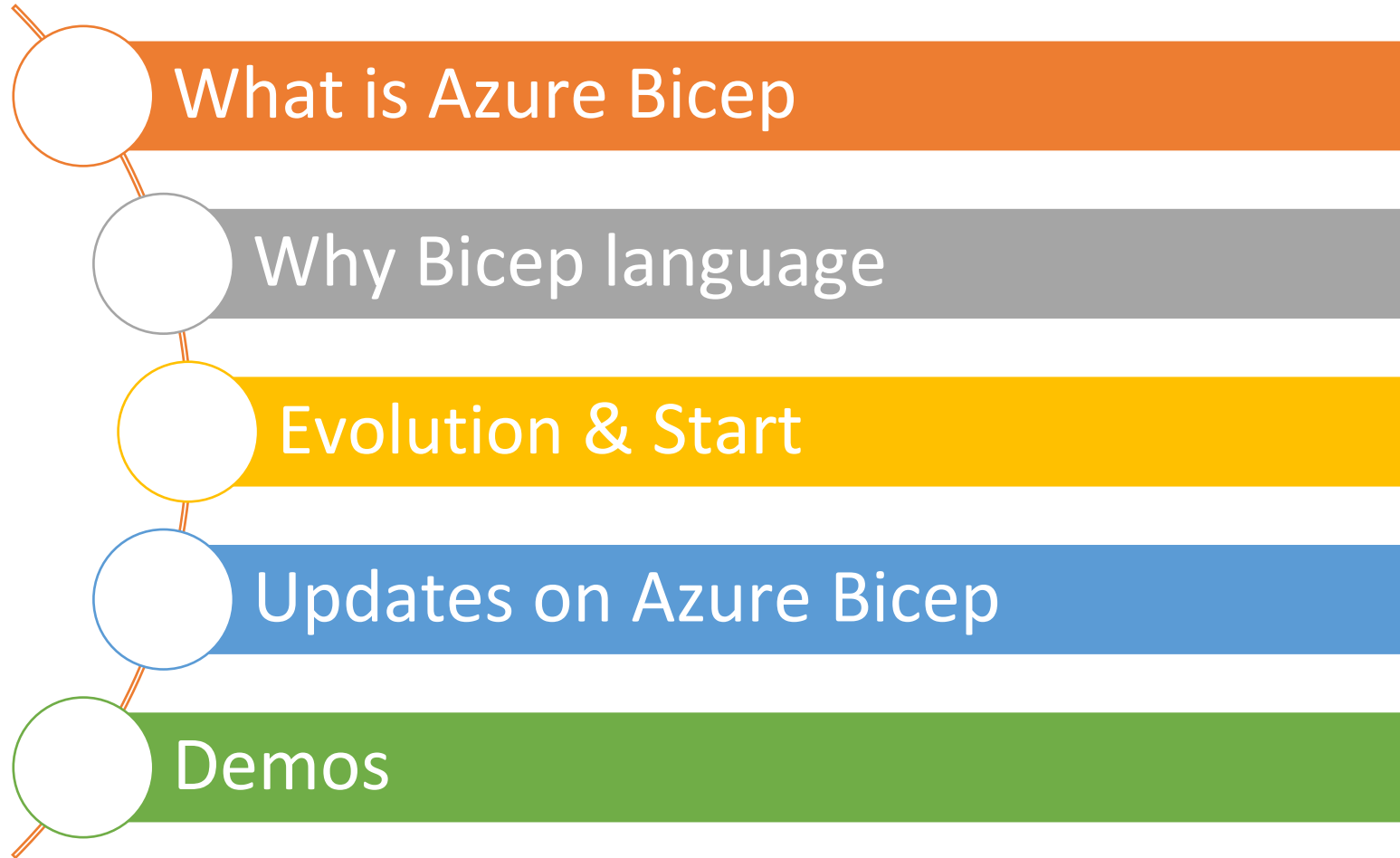
He is an active Microsoft Tech Community Contributor, Cloud Lunch and Learn Speaker and Co-Organizer, and LinkedIn instructor with interests in Architecture, DevOps & Security.

He is a frequent speaker at tech meetups and has volunteered for Give Camps, Azure Data Fest, SQL Saturdays and Microsoft community events, like this one.

And please, checkout his blog posts at Cloud Marathoner site below.

<https://theCloudMarathoner.com>   

# What we will cover



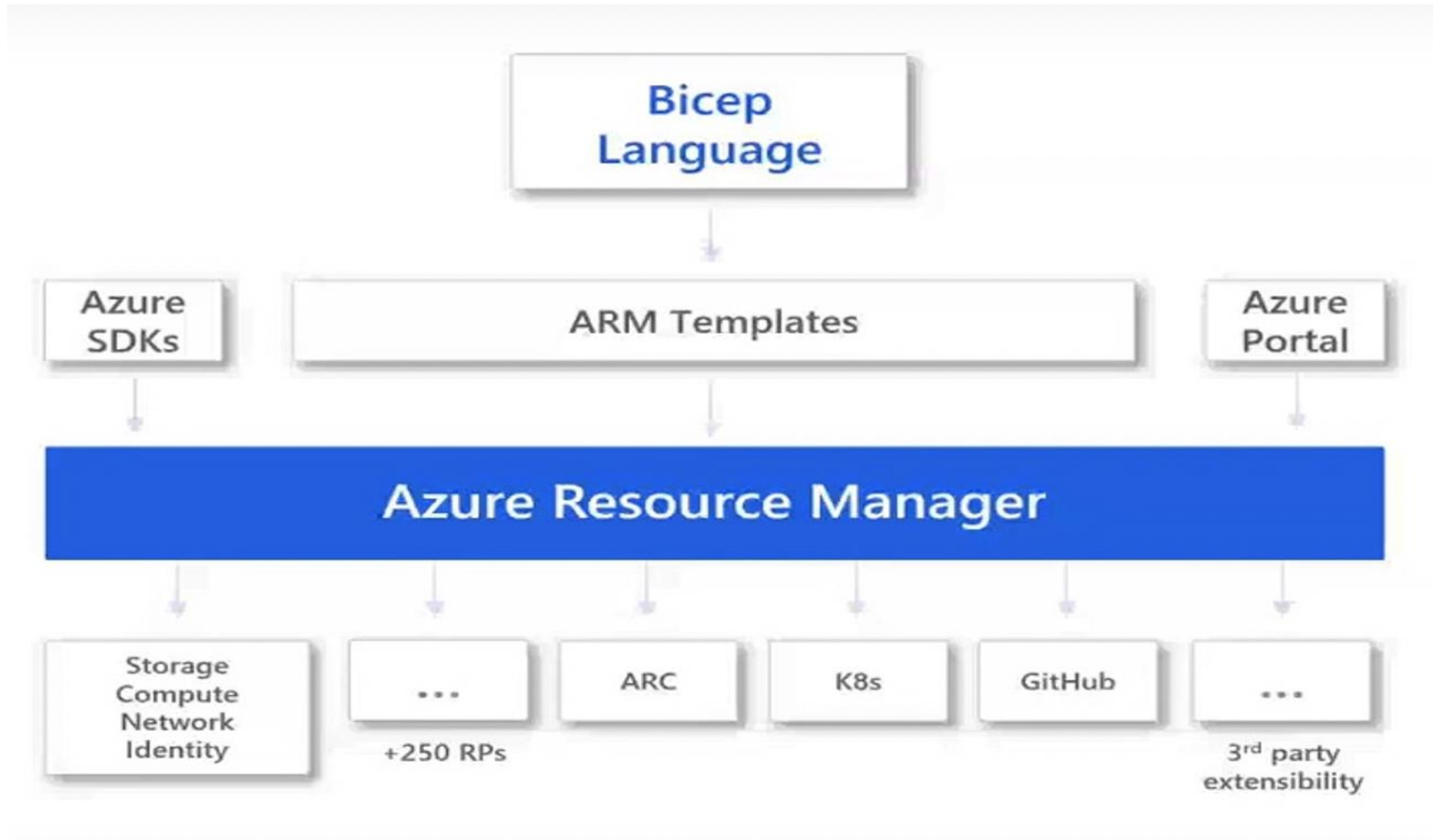
# What is Azure Bicep?



- A new DSL for managing Azure resources
- Transparent abstraction over ARM
- Simple way to author Azure resources
- Transpiles into standard ARM Template JSON files

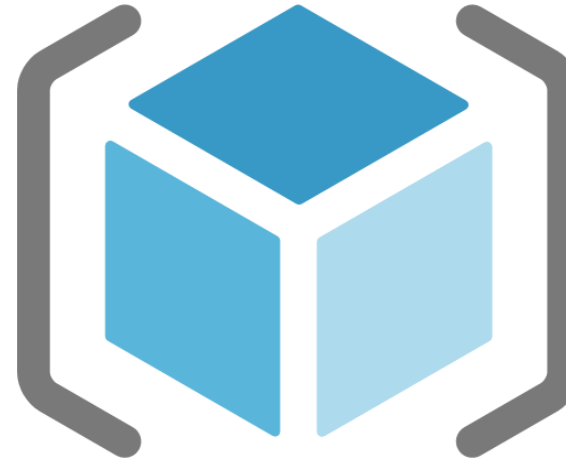


# Relationship between Bicep and ARM templates



# Why Bicep language?

- Easy to understand and maintain
- Day Zero support
- Transparent abstraction
- Awesome tooling in VS Code
- Clean code syntax
- Code re-use and modularity
- Deep integration with Azure
- Preflight validation
- No state management
- Production support



# Azure Bicep evolution from 2020

- Started as alpha version in 2020
- Supported version: v0.3.1
- Latest version: v0.6.1
- Expected version v1.0 TBD 😊

```
PS C:\Work\AWESOME-Azure-Bicep> az bicep list-versions
[
  "v0.6.1",
  "v0.5.6",
  "v0.4.1318",
  "v0.4.1272",
  "v0.4.1124",
  "v0.4.1008",
  "v0.4.613",
  "v0.4.451",
  "v0.4.412",
  "v0.4.63",
  "v0.4.1",
  "v0.3.539",
  "v0.3.255",
  "v0.3.126",
  "v0.3.1",
  "v0.2.328",
  "v0.2.317",
  "v0.2.212",
  "v0.2.59",
  "v0.2.14",
  "v0.2.3",
  "v0.1.226-alpha",
  "v0.1.223-alpha",
  "v0.1.37-alpha",
  "v0.1.1-alpha"
]
```



lunch  
& learn



# How to start with Azure Bicep?



☰ README.md

## 🔗 AWESOME Azure Bicep 💪

awesome Markdown Link Checker passing

A curated list of AWESOME blogs, videos, tips-and-tricks, codes, tools, scripts... Hand-picked tips and tricks to help you learn Azure Bicep and get you ready to start deploying Azure resources to your favorite environment(s).

Community contributions are very welcome! Check out the [contribution guide](#) and submit a [Pull Request](#) with your adds/removes/changes to the content!

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#### Contributors 4

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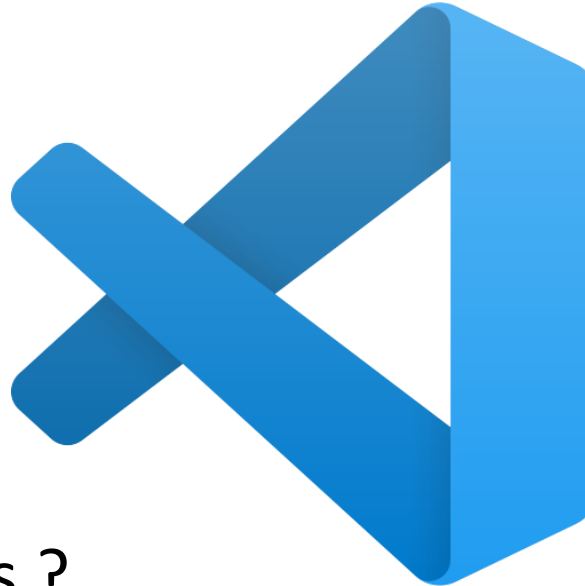
# Azure Bicep First Look video course



# VS Code & Bicep configuration file



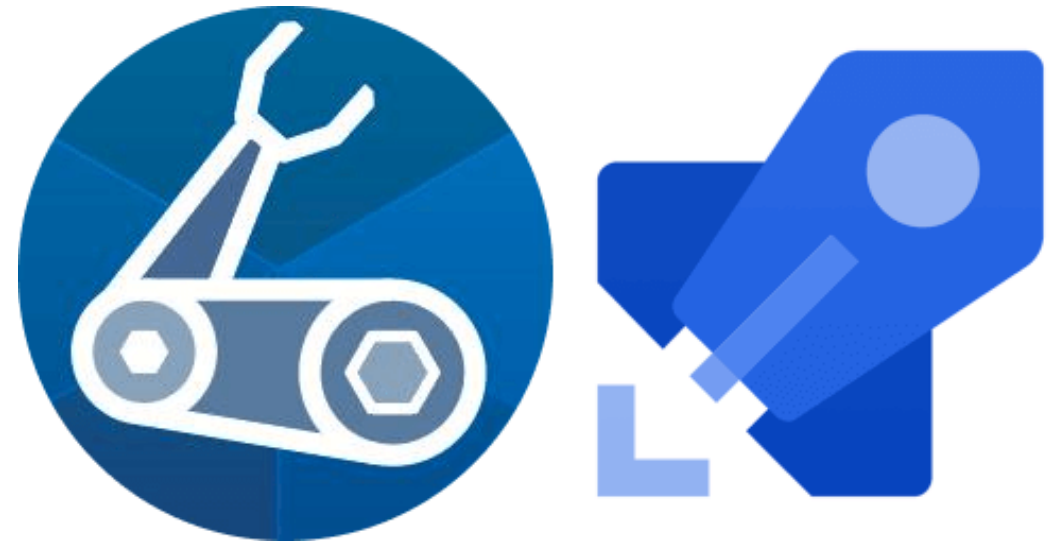
- What is Bicep config file ?
- Why you need one ?
- How is it organized (analyzer) ?
- What are the default configurations ?



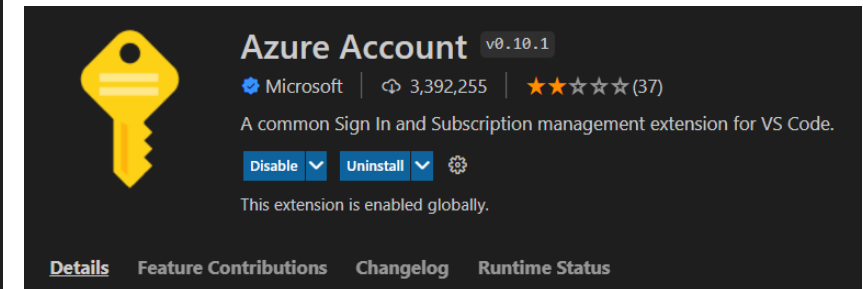
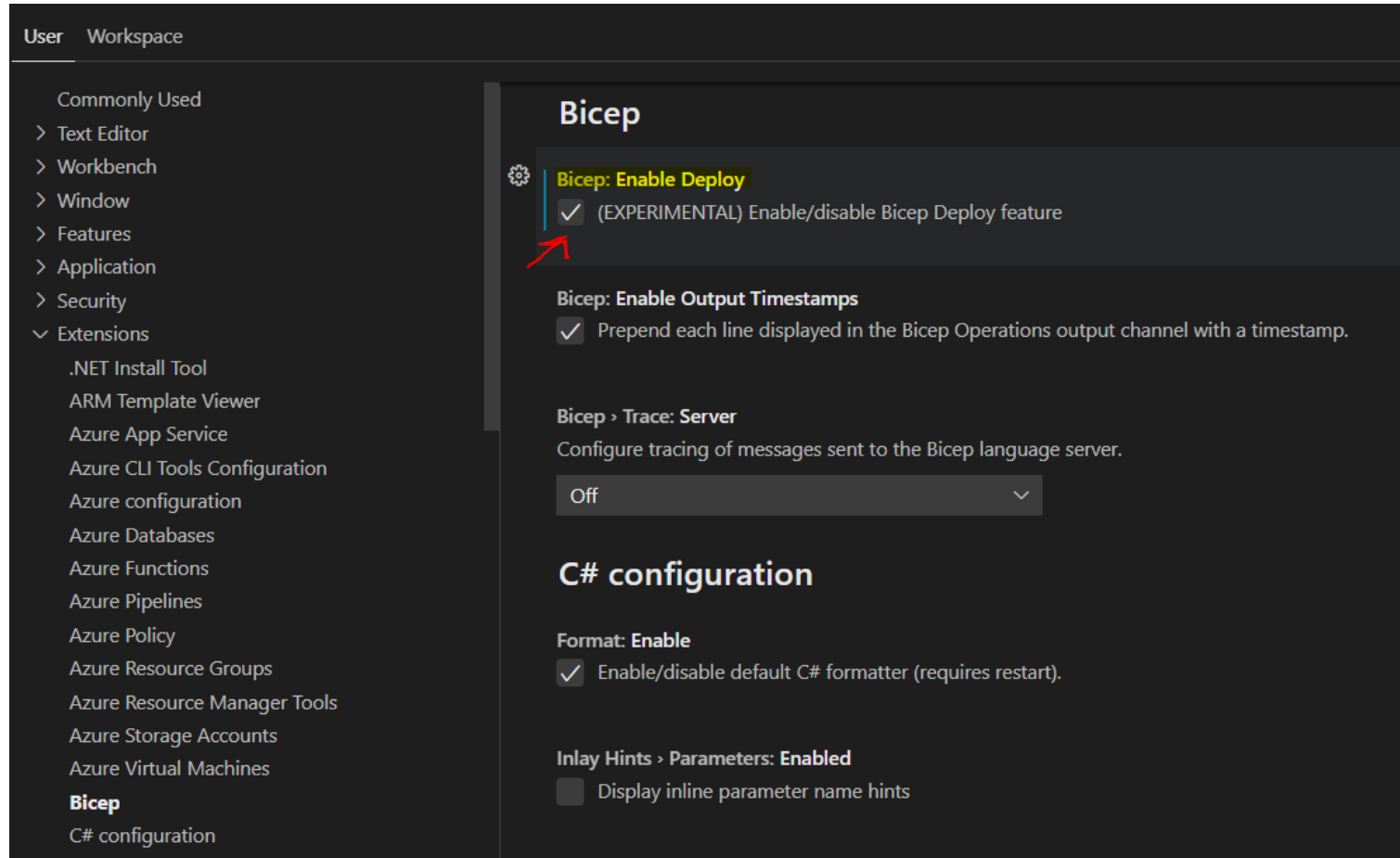
# What is new in Bicep ?



- Bicep Public Registry
- Deploy a Bicep file from VS Code
- `managementGroupResourceId()` func
- `--force` download option
- More efficient `json()` loader func



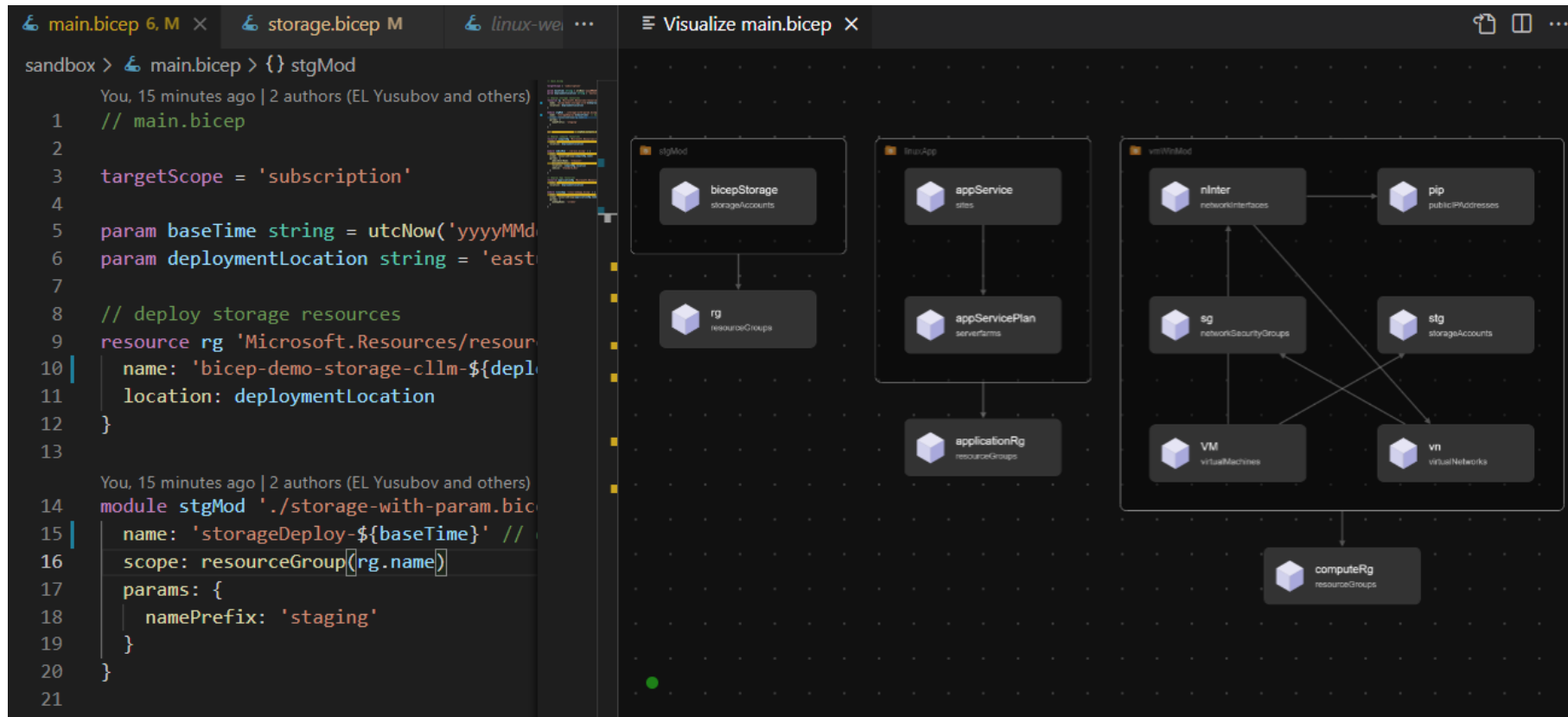
# Deploy a Bicep file from VS Code



# Bicep file visualizer



## Visualized Bicep file resources



# Azure Bicep IaC best practices



# Demos



```
2-deploy-param-storage.bicep 1, M  {} bicepconfig.json X
{} bicepconfig.json > {} analyzers > {} core > {} rules > {} secure-parameter-default
You, 3 weeks ago | 1 author (You)
1  {
2    "analyzers": {
3      "core": {
4        "enabled": true,
5        "verbose": true,
6        "rules": {
7          "no-hardcoded-env-urls": {
8            "level": "warning"
9          },
10         "no-unused-params": {
11           "level": "warning"
12         },
13         "no-unused-vars": {
14           "level": "error"
15         },
16         "prefer-interpolation": {
17           "level": "warning"
18         },
19         "secure-parameter-default": {
20           "level": "error"
21         },
22         "simplify-interpolation": {
23           "level": "warning"
24         }
25       }
26     }
27   }
```

```
9  @description('Azure region to deploy all resources')
10 @allowed([
11   'eastus'
12   'eastus2'
13   'westus'
14   'westus2'
15 ])
16 param environment: string
17 param environment string
18 resource myResourceGroup 'Microsoft.Resources/resourceGroups@2021-04-01'
19
20
```

Parameter "environment" is declared but never used. bicep core(

View Problem No quick fixes available

You, a minute ago • Uncommitted changes



# Automating with GitHub workflow



ElYusubov / Learn-Bicep Public

<> Code Issues **1** Pull requests **Actions** Projects **1** Wiki Security **12** Insights Settings

✓ Merge pull request #77 from ElYusubov/development deploy-main-site #47

Summary

Jobs

- ✓ lint
- ✓ validate
- ✓ deploy

Triggered via push 12 hours ago

ElYusubov pushed -> adf046c **main**

Status	Total duration	Artifacts
<b>Success</b>	<b>1m 46s</b>	—

**main.deployment.yaml**  
on: push

✓ lint 17s

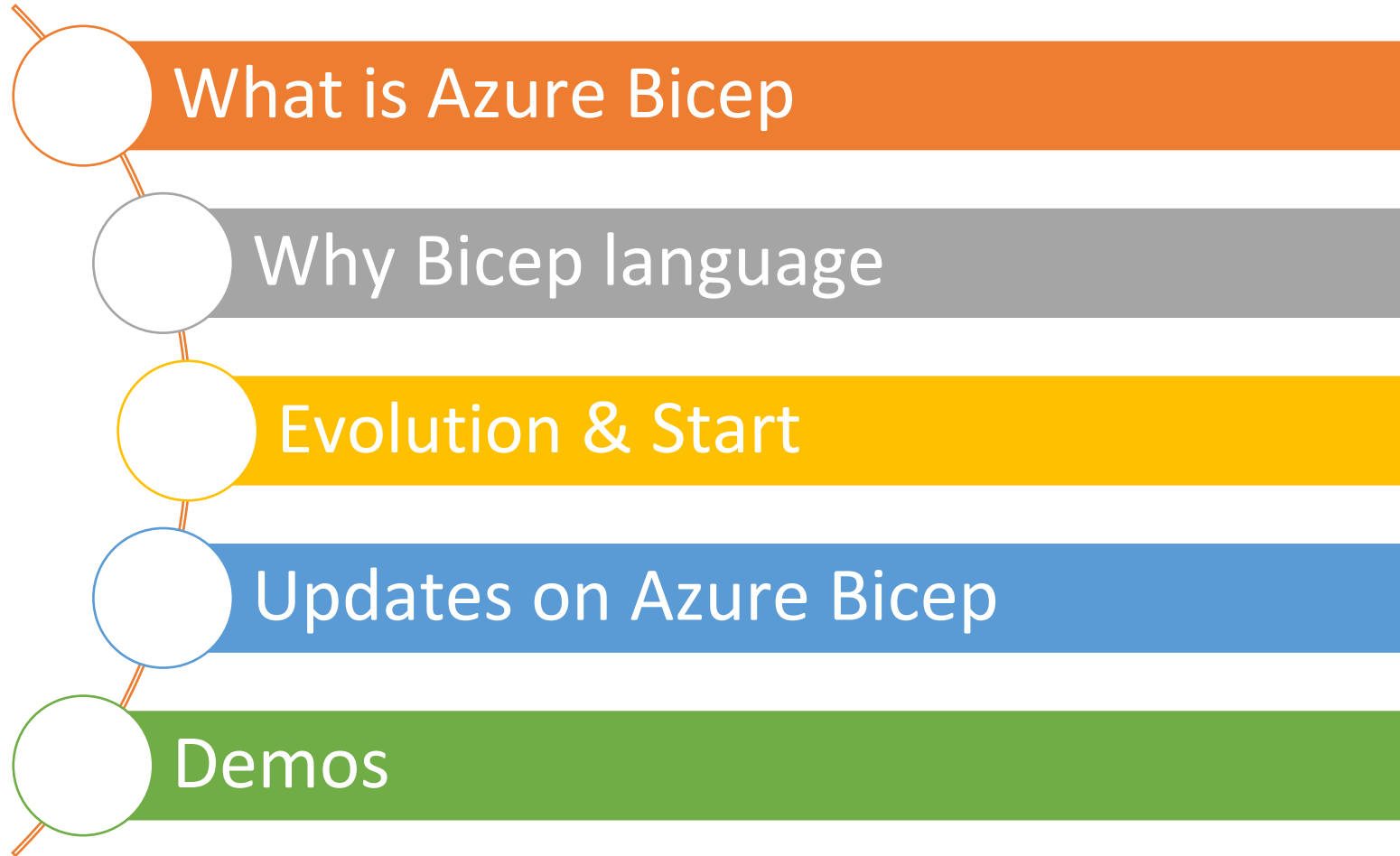
✓ validate 16s

→

✓ deploy 1m 6s



# What we have covered



# What is next?



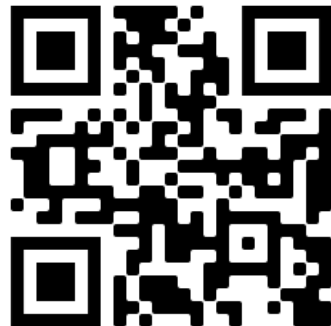
**Learn Bicep – GitHub**



**Azure Bicep – First Look course 🎥**



**Bicep Project - GitHub**



**AWESOME Azure Bicep 📖 - GitHub**



# Thank you !



<https://globalazure.net/>

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