



Welsh Azure User Group

- Meet Up-

16th March 2022

Meet Your Speakers – March Event



Elkhan Yusubov

@ElYusubov

Setting up your Biceps for
success in Azure



Matthew Fortunka

@memleek

Building Apps with
Blazor and SignalR



Welsh Azure User Group



<https://cutt.ly/welshazure>



@welshazure

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<https://www.meetup.com/MSFT-Stack>

<https://theCloudMarathoner.com>   



Elkhan Yusubov

Speaker | Author | Cloud Architect
Founder at #cloudmarathoner



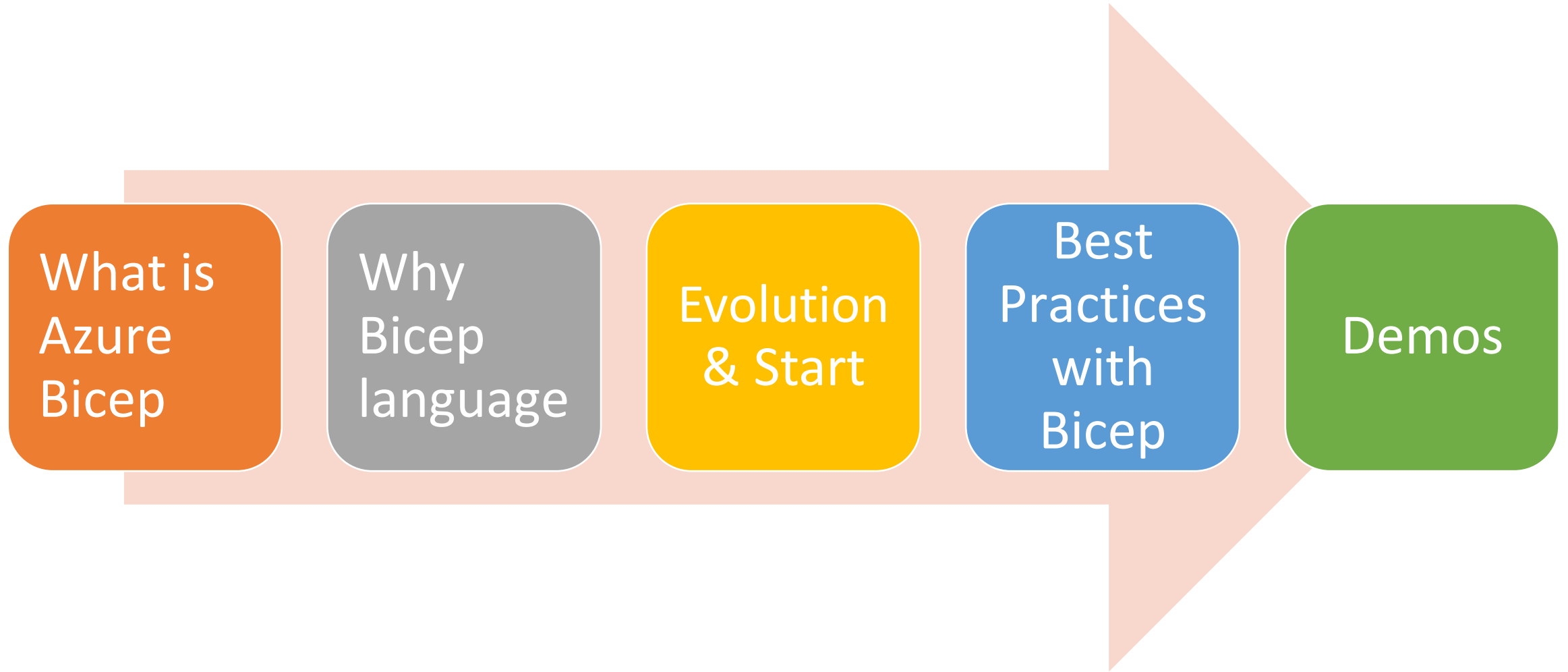
Elkhan is a Cloud Architect Manager, Microsoft Azure MVP and 15+ MCT with experience in cloud solutions, enterprise healthcare systems and healthcare data, and API standards (HL7 FHIR, EDI X12).

He is an active MCT, a Microsoft Tech Community Contributor, Cloud Lunch and Learn Speaker and Co-Organizer, and Azure SME (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 Global Azure.

<https://theCloudMarathoner.com>   

What we will cover

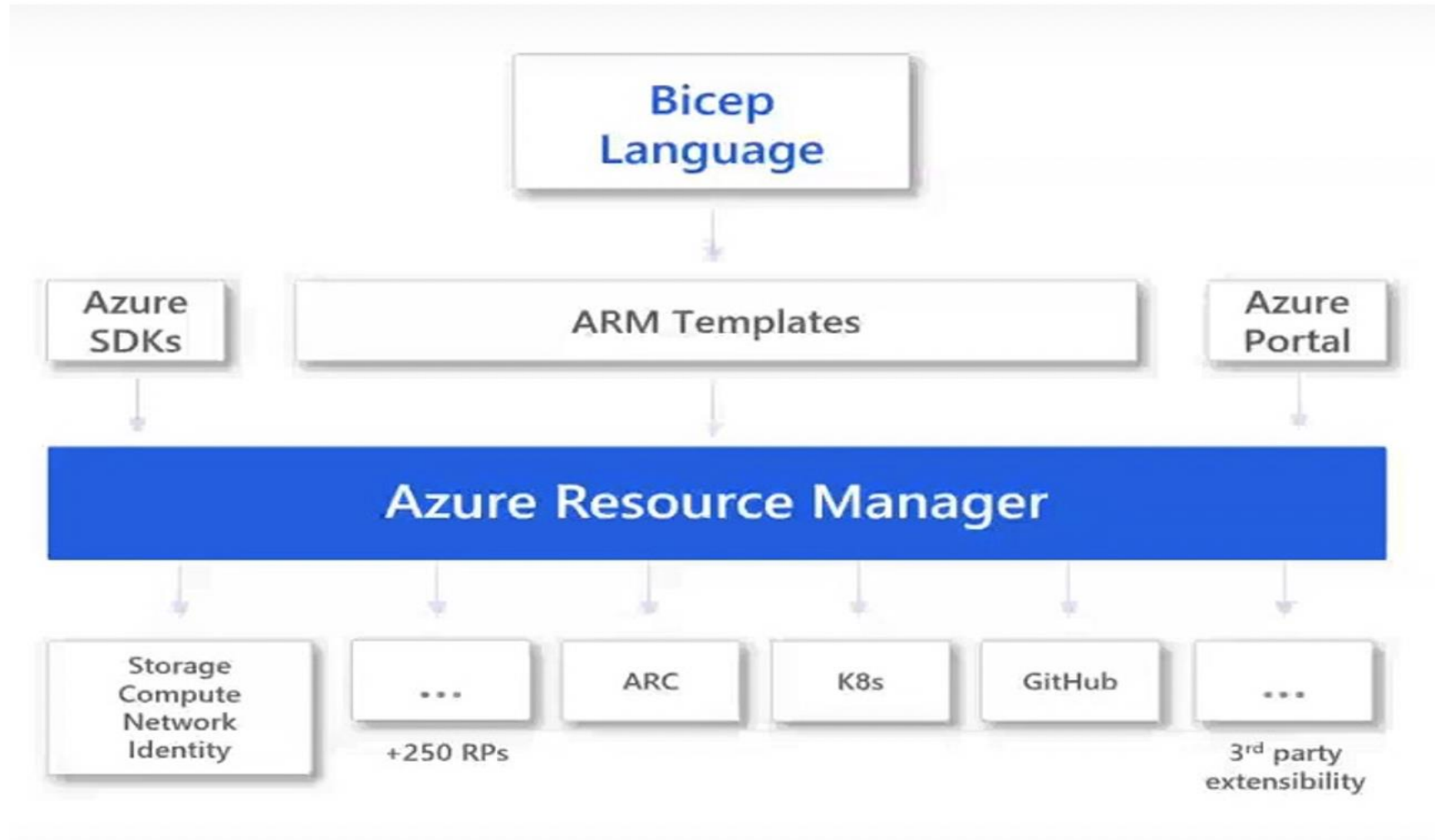


What is Azure Bicep?

- DSL for deploying Azure resources
- Transparent abstraction over ARM and ARM templates
- Simple way to author Azure resources
- Transpiled to standard ARM Template JSON files

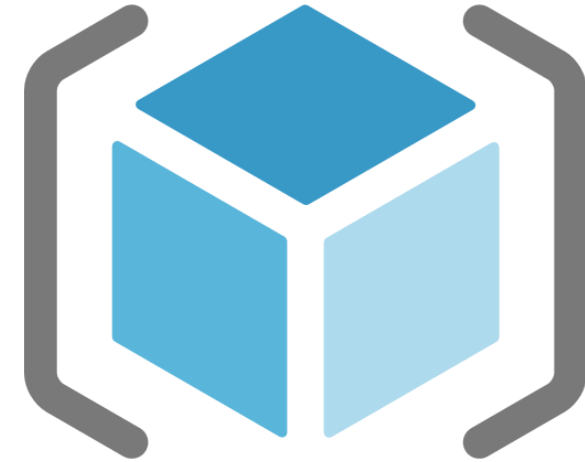


Relationship between Bicep and ARM templates



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

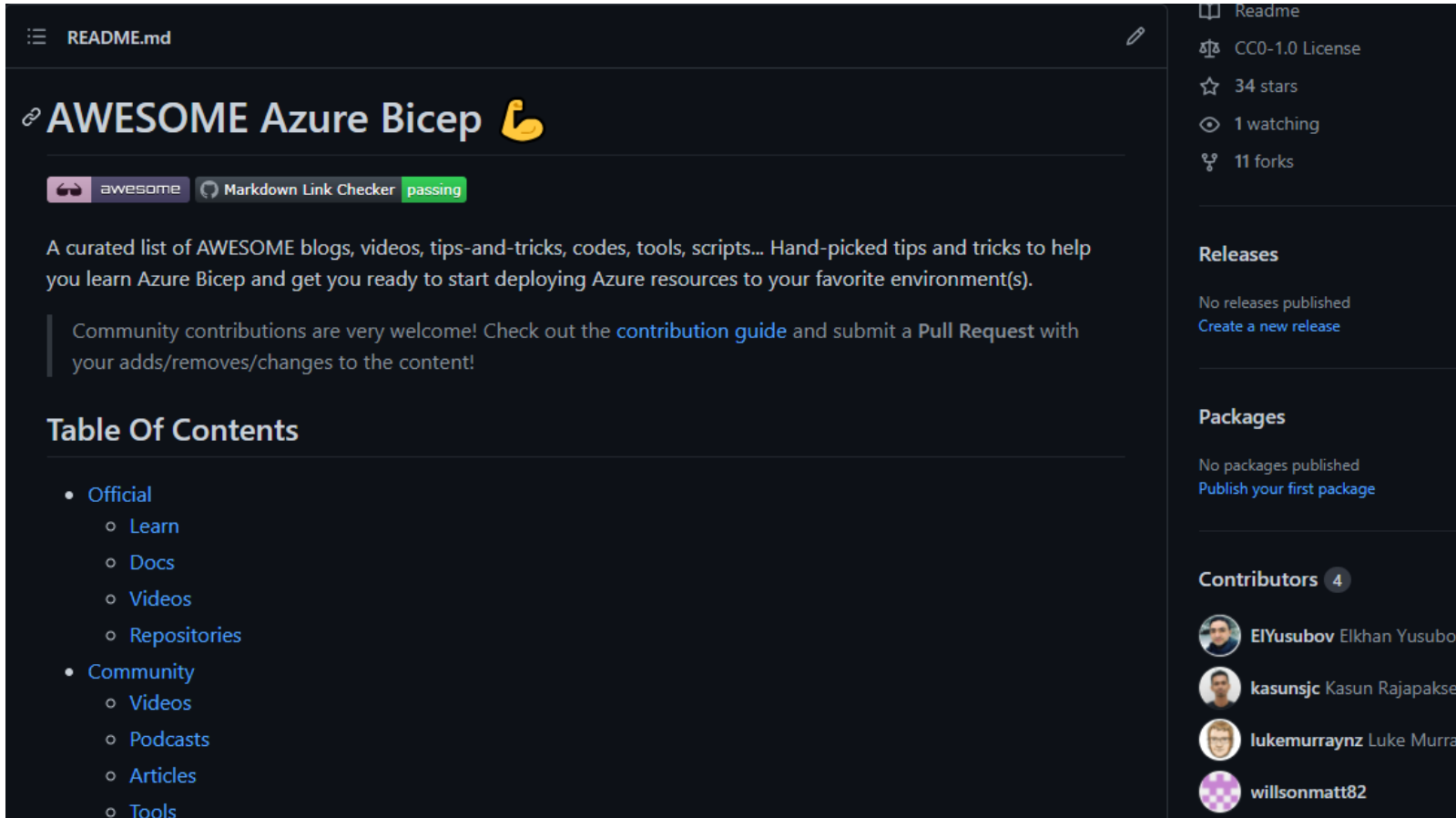


Azure Bicep evolution from 2020

- Started as alpha version in 2020
- Supported version: v0.3.1
- Latest version: v0.4.1318
- Expected version March: v0.5
- Stable version v1.0 this year 😊

```
PS C:\Work\Learn-Bicep> az bicep list-versions
[
  "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"
]
```

How to start with Azure Bicep?



The screenshot shows the README.md file for the 'AWESOME Azure Bicep' repository. The title is 'AWESOME Azure Bicep' with a flex emoji. Below the title, there are two badges: 'awesome' and 'Markdown Link Checker passing'. The text describes a curated list of blogs, videos, tips-and-tricks, codes, tools, and scripts to help learn Azure Bicep. It also mentions that community contributions are welcome and provides a link to the contribution guide. A 'Table Of Contents' is listed with categories: Official (Learn, Docs, Videos, Repositories) and Community (Videos, Podcasts, Articles, Tools). On the right side, there are statistics: 34 stars, 1 watching, and 11 forks. Below these are sections for Releases (No releases published), Packages (No packages published), and Contributors (4 contributors: ElYusubov, kasunsjc, lukemurraynz, willsonmatt82).

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!





Table Of Contents

- Official
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 - [Tools](#)

Releases
No releases published
[Create a new release](#)

Packages
No packages published
[Publish your first package](#)

Contributors 4

-  **ElYusubov** Elkhan Yusubov
-  **kasunsjc** Kasun Rajapakse
-  **lukemurraynz** Luke Murray
-  **willsonmatt82**

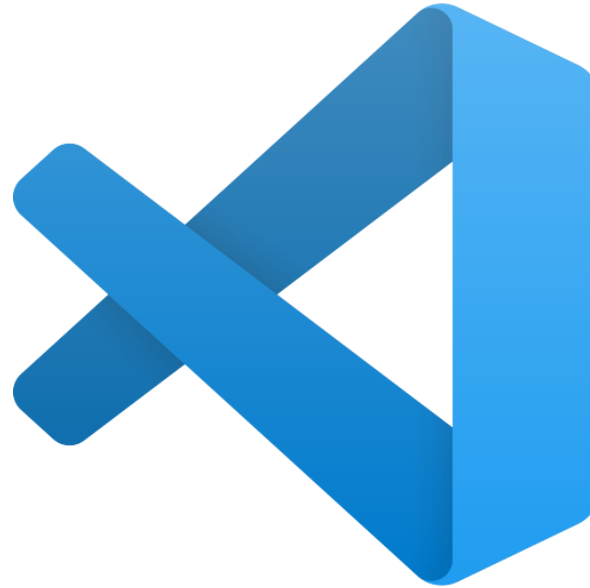


Azure Bicep First Look video course



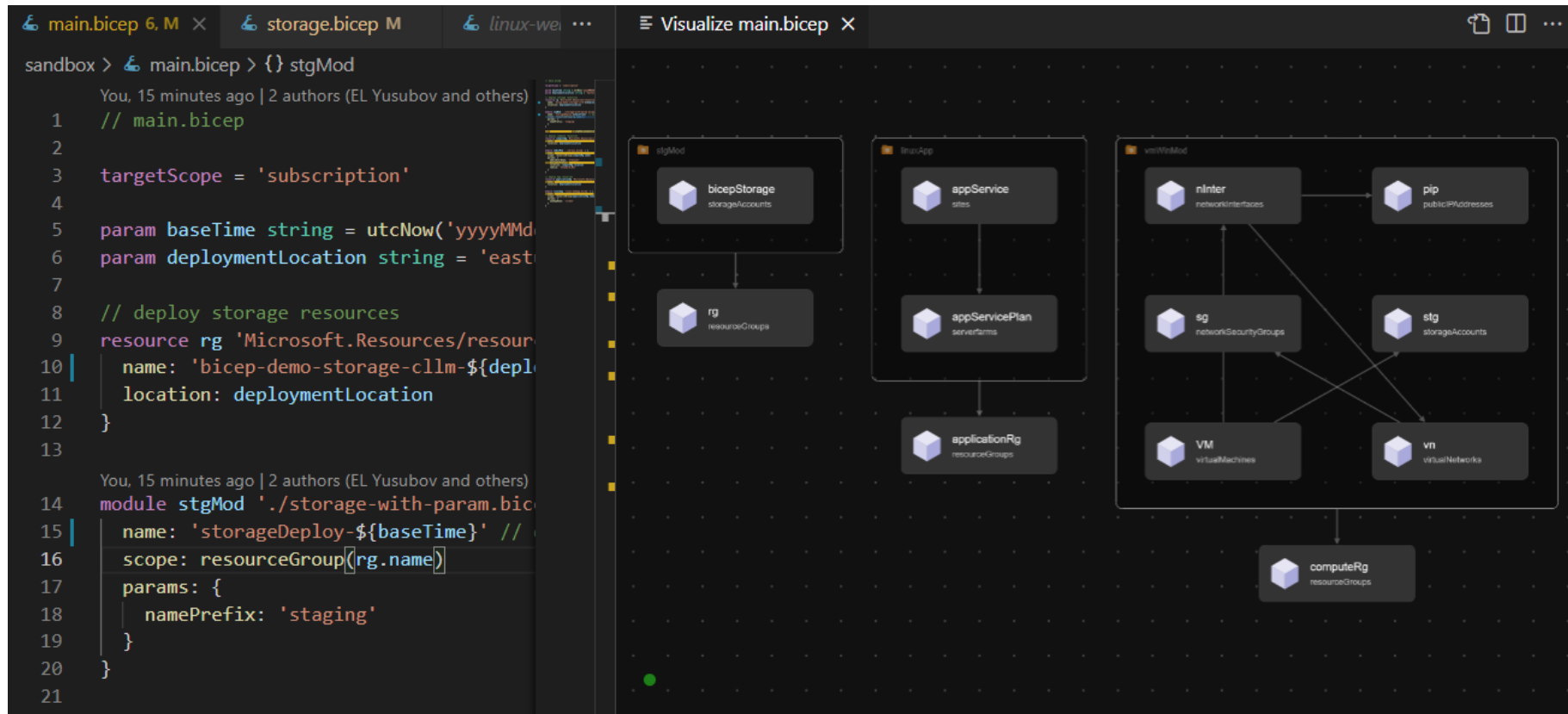
VS Code & Bicep configuration file

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



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   }
```

TERMINAL DEBUG CONSOLE PROBLEMS 3 OUTPUT

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

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

The screenshot shows the GitHub Actions interface for a repository named 'Learn-Bicep' by user 'Elyusubov'. The 'Actions' tab is selected, displaying a workflow run titled 'Merge pull request #77 from Elyusubov/development deploy-main-site #47'. The workflow run is successful, triggered by a push 12 hours ago, with a total duration of 1m 46s. The workflow is defined in 'main.deployment.yaml' and runs on 'push' events. The workflow consists of three jobs: 'lint', 'validate', and 'deploy'. The 'lint' and 'validate' jobs are grouped together and run in parallel, with 'lint' taking 17s and 'validate' taking 16s. The 'deploy' job runs sequentially after the first group, taking 1m 6s.

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: Success

Total duration: 1m 46s

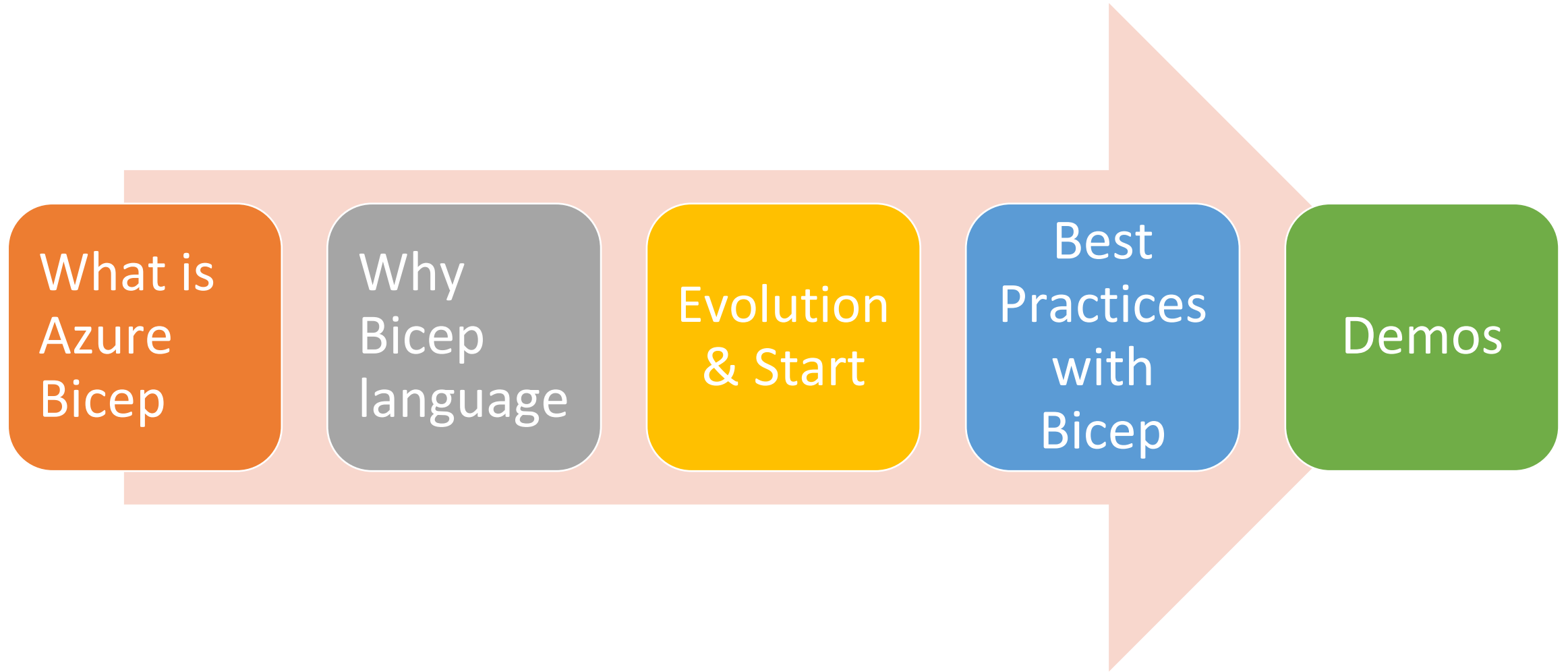
Artifacts: —

main.deployment.yaml
on: push

```
graph LR; lint[lint 17s] --> deploy[deploy 1m 6s]; validate[validate 16s] --> deploy;
```



What we covered



What is next?

Learn Bicep – GitHub



Azure Bicep – First Look course 🎧



Bicep Project - GitHub



AWESOME Azure Bicep 📖 - GitHub



Thank you !



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