# Bicep Training Module

The below training module aims to upskill and educate Arinco consultants who are not familiar or completely comfortable with using Bicep to deploy resources.

**Training course length:** Estimated time to complete the below is 3 days (without divein videos)

If the dive-in videos are watched assume 5 days to complete the below.

**Training mentor checkin:** The training mentor checkins take place at the end of the day and give the trainee an sounding board to ask technical questions. It also helps track progress against training milestones to ensure the trainee has enough time to complete training.

### Training resources:

Learn modules for Bicep - <https://learn.microsoft.com/en-us/azure/azure-resource-manager/bicep/learn-bicep>

### Training schedule and milestones

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| **Timeline** | **Time** | **Training module** | **Training activity** | **Done?** | **Comments/Feedback** |
| Day 1 - AM | ~60 mins |  | [Build your first Bicep template - Training | Microsoft Learn](https://learn.microsoft.com/en-us/training/modules/build-first-bicep-template/) | Done |  |
| Day 1 - AM | ~ 3.5 hours | [Fundamentals of Bicep - Training | Microsoft Learn](https://learn.microsoft.com/en-us/training/paths/fundamentals-bicep/) | 1. [Introduction to infrastructure as code using Bicep - Training | Microsoft Learn](https://learn.microsoft.com/en-us/training/modules/introduction-to-infrastructure-as-code-using-bicep/) | Done |  |
| 2. [Build your first Bicep template](https://learn.microsoft.com/en-us/training/modules/build-first-bicep-template/) | Done |  |
| 3. [Build reusable Bicep templates by using parameters](https://learn.microsoft.com/en-us/training/modules/build-reusable-bicep-templates-parameters/) | Done |  |
| 4. [Build flexible Bicep templates by using conditions and loops](https://learn.microsoft.com/en-us/training/modules/build-flexible-bicep-templates-conditions-loops/) | Done |  |
| 5. [Create composable Bicep files by using modules](https://learn.microsoft.com/en-us/training/modules/create-composable-bicep-files-using-modules/) | Done |  |
| Day 1 - PM | ~4 hrs | [Intermediate Bicep - Training | Microsoft Learn](https://learn.microsoft.com/en-us/training/paths/intermediate-bicep/) | 1. [Deploy child and extension resources by using Bicep](https://learn.microsoft.com/en-us/training/modules/child-extension-bicep-templates/) | Done |  |
| 2. [Manage changes to your Bicep code by using Git](https://learn.microsoft.com/en-us/training/modules/manage-changes-bicep-code-git/) | Done |  |
| 3. <https://learn.microsoft.com/en-us/training/modules/structure-bicep-code-collaboration/> | Done |  |
| 4. [Review Azure infrastructure changes by using Bicep and pull requests](https://learn.microsoft.com/en-us/training/modules/review-azure-infrastructure-changes-using-bicep-pull-requests/) | Done |  |
| 5. <https://learn.microsoft.com/en-us/training/modules/arm-template-whatif/> | Done |  |
| 6. <https://learn.microsoft.com/en-us/training/modules/migrate-azure-resources-bicep/> | Done | Convert JSON into Bicep and follow up procedure |
| Day 1 - PM | 15 mins | N/A | Catchup with your training mentor to discuss |  |  |
| Day 2 - AM | ~2.5 hrs | [Advanced Bicep - Training | Microsoft Learn](https://learn.microsoft.com/en-us/training/paths/advanced-bicep/) | 1. <https://learn.microsoft.com/en-us/training/modules/deploy-resources-scopes-bicep/> | Done | Apply resources into different scopes |
| 2. <https://learn.microsoft.com/en-us/training/modules/extend-resource-manager-template-deployment-scripts/> | Done | Customized Deployment script |
| 3. <https://learn.microsoft.com/en-us/training/modules/arm-template-specs/> | Done | Template Spec |
| 4. [Share Bicep modules by using private registries](https://learn.microsoft.com/en-us/training/modules/share-bicep-modules-using-private-registries/) | Done |  |
| Day 2 - AM/PM | ~4.5 hrs | [Deploy Azure resources by using Bicep and Azure Pipelines - Training | Microsoft Learn](https://learn.microsoft.com/en-us/training/paths/bicep-azure-pipelines/) | 1. <https://learn.microsoft.com/en-us/training/modules/build-first-bicep-deployment-pipeline-using-azure-pipelines/> | Done |  |
| 2. [Authenticate your Azure deployment pipeline by using service principals](https://learn.microsoft.com/en-us/training/modules/authenticate-azure-deployment-pipeline-service-principals/) | Done |  |
| 3. <https://learn.microsoft.com/en-us/training/modules/test-bicep-code-using-azure-pipelines/> | Done |  |
| 4. <https://learn.microsoft.com/en-us/training/modules/manage-multiple-environments-using-bicep-azure-pipelines/> |  |  |
| 5. <https://learn.microsoft.com/en-us/training/modules/manage-end-end-deployment-scenarios-using-bicep-azure-pipelines/> |  |  |
| 6. [Publish reusable Bicep code by using Azure Pipelines](https://learn.microsoft.com/en-us/training/modules/publish-reusable-bicep-code-using-azure-pipelines/) |  |  |
| 7. [Control and govern your Azure environment by deploying your infrastructure as code](https://learn.microsoft.com/en-us/training/modules/control-govern-azure-environment-deploying-infrastructure-code/) |  |  |
| Day 2 - PM | 15 mins | N/A | Catchup with your training mentor to discuss |  |  |
| Day 3 AM/PM | ~ 5 hrs | [Deploy Azure resources by using Bicep and GitHub Actions - Training | Microsoft Learn](https://learn.microsoft.com/en-us/training/paths/bicep-github-actions/) | 1. [Build your first Bicep deployment workflow by using GitHub Actions](https://learn.microsoft.com/en-us/training/modules/build-first-bicep-deployment-pipeline-using-github-actions/) |  |  |
| 2. <https://learn.microsoft.com/en-us/training/modules/authenticate-azure-deployment-workflow-workload-identities/> |  |  |
| 3. <https://learn.microsoft.com/en-us/training/modules/test-bicep-code-using-github-actions/> |  |  |
| 4. [Manage multiple environments by using Bicep and GitHub Actions](https://learn.microsoft.com/en-us/training/modules/manage-multiple-environments-using-bicep-github-actions/) |  |  |
| 5. <https://learn.microsoft.com/en-us/training/modules/manage-end-end-deployment-scenarios-using-bicep-github-actions/> |  |  |
| 6. <https://learn.microsoft.com/en-us/training/modules/automate-azure-infrastructure-change-reviews-using-bicep-github/> |  |  |
| 7. [Publish reusable Bicep code by using GitHub Actions](https://learn.microsoft.com/en-us/training/modules/publish-reusable-bicep-code-using-github-actions/) |  |  |
| 8. [Control and govern your Azure environment by deploying your infrastructure as code](https://learn.microsoft.com/en-us/training/modules/control-govern-azure-environment-deploying-infrastructure-code/) |  |  |
| Day 3 - PM | 15 mins | N/A | Catchup with your training mentor to discuss |  |  |

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