

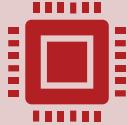


# Unlock the full potential of Azure with Bicep!

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**Roberto Hernández**

# Introduction to Infrastructure as Code



**Why IaC?** Infrastructure as Code and its benefits.



**Traditional ARM Templates:** What are the advantages of moving to Bicep.



**Introduction to Azure Bicep**

# What is Azure Bicep?

Bicep is a transparent abstraction over ARM templates.

Key features and benefits (easier syntax, modularity, integration with ARM).

High-level comparison of Bicep vs. ARM templates vs. Terraform.

```
app > main.bicep
1
2
3
4
5
```

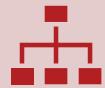


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## Setting Up Your Environment for Bicep

# Core Bicep Syntax and Features



**Basic Structure:** Declare and initialize resources with Bicep.



**Variables and Parameters:** Using variables and parameters for dynamic values.



**Outputs:** Defining and using outputs.



**Expressions and Loops:** Advanced syntax for handling complex requirements.





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## Core Bicep Syntax and Features

# Bicep Modules and Reusability

Organize code and make it reusable.

Use and share modules across different projects within your organization.

Use modules from the Azure Verified Modules (AVM) repository.

```
module stgModule '..//storageAccount.json' = {
    name: 'storageDeploy'
    params: {
        storagePrefix: 'examplestg1'
    }
}
```

# Azure Verified Modules

Initiative to consolidate and set the standards for what a good Infrastructure-as-Code module looks like. Modules will then align to these standards, across languages (Bicep, Terraform etc.) and will then be classified as AVMs and available from their respective language specific registries.

```
@description('Storage accounts using an AVM.')
module storage 'br/public:avm/res/storage/storage-
account:0.9.0' = {
    name: 'myStorage'
    params: {
        name: 'store${resourceGroup().name}'
    }
}
```

<https://azure.github.io/Azure-Verified-Modules/>



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## Bicep Modules and Reusability



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# Looping and Conditionals Bicep Syntax and Features

# Best Practices (Parameters)

## Naming

Name should be readable.

## Document

Use the description attributes to expand as appropriate.

## @allowed

Use the allowed attribute sparingly as the constraints may become obsolete quickly.

# Best Practices (Names)

## Naming

Use camel case for variables and resources. For resources specifically follow the Azure Naming guidelines.

## Unique

Use the built-in uniqueString function to prevent name clashes across your environments.

Use the allowed attribute sparingly as the constraints may become obsolete quickly.

# Best Practices (Output Parameters)

## Sensitive Data

Make sure you don't create outputs for sensitive data. Output values can be accessed by anyone who has access to the deployment history. They're not appropriate for handling secrets.

Instead of passing property values around through outputs, use the [existing keyword](#) to look up properties of resources that already exist. It's a best practice to look up keys from other resources in this way instead of passing them around through outputs. You'll always get the most up-to-date data.



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Walkthrough some of the Best  
Practices in the Demo Code



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Roberto Hernandez  
[roberto.hernandez@infernored.com](mailto:roberto.hernandez@infernored.com)

<https://github.com/overridethis/bicep-walkthrough>