

Projeto Formação DevOps Fundamentals

1. Service Principal

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and the user profile 'Guilherme_Sousa12345... DIRETÓRIO PADRÃO'. The breadcrumb trail is 'Home > Diretório Padrão | App registrations > sp-azuredevops2'. The left sidebar contains navigation links: Overview, Quickstart, Integration assistant, Diagnose and solve problems, Manage (with sub-links for Branding & properties, Authentication, Certificates & secrets, Token configuration, API permissions, Expose an API, App roles, Owners, Roles and administrators, and Manifest), and Support + Troubleshooting (with a link for New support request). The main content area is titled 'sp-azuredevops2' and includes a 'Delete' button, 'Endpoints', and 'Preview features' links. A notification banner asks for feedback on the Microsoft identity platform. Below this, the 'Essentials' section displays key application details: Display name (sp-azuredevops2), Application (client) ID (0e933fff-1506-4263-942f-2c25f49db1a8), Object ID (59bc4ca4-321b-42da-9db6-928d39fc64ab), Directory (tenant) ID (548e2447-976e-4b09-befe-9660c9f29b64), Client credentials (0 certificate, 1 secret), Redirect URIs (Add a Redirect URI), Application ID URI (Add an Application ID URI), and Managed application in L... (sp-azuredevops2). A 'Supported account types' link points to 'My organization only'. A blue information banner states that starting June 30th, 2020, new features will not be added to ADAL and Graph, and applications will need to be upgraded to MSAL and Microsoft Graph. At the bottom, there are links for 'Get Started' and 'Documentation', followed by a large section titled 'Build your application with the Microsoft identity platform' with a brief description and a 'Learn more' link.

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

Guilherme_Sousa12345... DIRETÓRIO PADRÃO

Home > Diretório Padrão | App registrations > sp-azuredevops2

sp-azuredevops2

Search

Delete Endpoints Preview features

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Quickstart

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Owners

Roles and administrators

Manifest

Support + Troubleshooting

New support request

Got a second? We would love your feedback on Microsoft identity platform (previously Azure AD for developer). →

Essentials

Display name : sp-azuredevops2

Application (client) ID : 0e933fff-1506-4263-942f-2c25f49db1a8

Object ID : 59bc4ca4-321b-42da-9db6-928d39fc64ab

Directory (tenant) ID : 548e2447-976e-4b09-befe-9660c9f29b64

Client credentials : 0 certificate, 1 secret

Redirect URIs : Add a Redirect URI

Application ID URI : Add an Application ID URI

Managed application in L... : sp-azuredevops2

Supported account types : My organization only

Starting June 30th, 2020 we will no longer add any new features to Azure Active Directory Authentication Library (ADAL) and Azure Active Directory Graph. We will continue to provide technical support and security updates but we will no longer provide feature updates. Applications will need to be upgraded to Microsoft Authentication Library (MSAL) and Microsoft Graph. [Learn more](#)

Get Started Documentation

Build your application with the Microsoft identity platform

The Microsoft identity platform is an authentication service, open-source libraries, and application management tools. You can create modern, standards-based authentication solutions, access and protect APIs, and add sign-in for your users and customers. [Learn more](#)

2. Key da Service Principal

The screenshot shows the 'Certificates & secrets' page for the 'sp-azuredevops2' application. The breadcrumb trail is 'Home > Diretório Padrão | App registrations > sp-azuredevops2 | Certificates & secrets'. The left sidebar is identical to the previous screenshot. The main content area has a title 'sp-azuredevops2 | Certificates & secrets' and a 'Got feedback?' link. A notification banner states that application registration certificates, secrets, and federated credentials can be found in the tabs below. Below this, there are three tabs: 'Certificates (0)', 'Client secrets (1)', and 'Federated credentials (0)'. The 'Client secrets (1)' tab is selected. A description states: 'A secret string that the application uses to prove its identity when requesting a token. Also can be referred to as application password.' Below this, there is a '+ New client secret' button. A table lists the existing client secret:

Description	Expires	Value	Secret ID
key-azuredevops	4/14/2025	Nk4*****	3da84b63-87a6-4722-be63-b0263b1132...

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

Guilherme_Sousa12345... DIRETÓRIO PADRÃO

Home > Diretório Padrão | App registrations > sp-azuredevops2

sp-azuredevops2 | Certificates & secrets

Search

Got feedback?

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Support + Troubleshooting

New support request

Application registration certificates, secrets and federated credentials can be found in the tabs below.

Certificates (0) Client secrets (1) Federated credentials (0)

A secret string that the application uses to prove its identity when requesting a token. Also can be referred to as application password.

+ New client secret

Description	Expires	Value	Secret ID
key-azuredevops	4/14/2025	Nk4*****	3da84b63-87a6-4722-be63-b0263b1132...

3. Resource Group com as Tags

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Search resources, services, and docs (G+/I)

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DIRETÓRIO PADRÃO

Home > Resource groups > rg-infraestrutura-001

rg-infraestrutura-001 | Tags

Resource group

Search

Delete all

Feedback

Overview

Activity log

Access control (IAM)

Tags

Resource visualizer

Events

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Deployments

Security

Deployment stacks

Policies

Properties

Locks

Cost Management

Cost analysis

Cost alerts (preview)

Budgets

Advisor recommendations

Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. Tag names are case insensitive, but tag values are case sensitive.[Learn more about tags.](#)

Do not enter names or values that could make your resources less secure or that contain personal/sensitive information because tag data will be replicated globally.

Name	Value
Ambiente	Production
Área	Infraestrutura
Responsável	Guilherme

rg-infraestrutura-001 (Resource group)

Ambiente : Production

Área : Infraestrutura

Responsável : Guilherme

No changes

Apply

Discard changes

4. Dados da Storage Account

Microsoft Azure

Search resources, services, and docs (G+/I)

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DIRETÓRIO PADRÃO

Home > Resource groups > rg-infraestrutura-001 >

storageinfradevopsgui001

Storage account

Search

Upload

Open in Explorer

Delete

Move

Refresh

Open in mobile

CLI / PS

Feedback

Overview

Activity log

Tags

Diagnose and solve problems

Access Control (IAM)

Data migration

Events

Storage browser

Storage Mover

Partner solutions

Data storage

Containers

File shares

Queues

Tables

Security + networking

Networking

Front Door and CDN

Access keys

Essentials

JSON View

Resource group (move) : rg-infraestrutura-001

Location : brazilsouth

Subscription (move) : Production

Subscription ID : ecd70a7d-5041-41b7-87bf-9907e01f2e1c

Disk state : Available

Tags (edit) : Add tags

Performance : Standard

Replication : Locally-redundant storage (LRS)

Account kind : StorageV2 (general purpose v2)

Provisioning state : Succeeded

Created : 16/10/2024, 13:21:42

Properties

Monitoring

Capabilities (7)

Recommendations (0)

Tutorials

Tools + SDKs

Blob service

Hierarchical namespace : Disabled

Default access tier : Hot

Blob anonymous access : Enabled

Blob soft delete : Enabled (7 days)

Container soft delete : Enabled (7 days)

Versioning : Disabled

Change feed : Disabled

NFS v3 : Disabled

Allow cross-tenant replication : Disabled

Storage tasks assignments : None

Security

Require secure transfer for REST API operations : Enabled

Storage account key access : Enabled

Minimum TLS version : Version 1.2

Infrastructure encryption : Disabled

Networking

Allow access from : All networks

Private endpoint connections : 0

Network routing : Microsoft network routing

Access for trusted Microsoft services : Yes

5. Service Connection

The screenshot shows the 'Service connections - Azure' page in Azure DevOps. The left sidebar contains 'Project Settings' for 'AulaDevOps-001' with sections for General, Boards, and Pipelines. The main area shows the 'Service connection - Azure' configuration. An 'Edit service connection' modal is open on the right, titled 'Azure Resource Manager using service principal (manual)'. The modal fields are as follows:

- Environment:** Azure Cloud
- Server Url:** https://management.azure.com/
- Scope Level:** Subscription (selected), Management Group, Machine Learning Workspace
- Subscription Id:** ecd70a7d-5041-41b7-87bf-9907e01f2e1c
- Subscription Name:** Production
- Authentication:** Service principal key (selected), Certificate
- Service Principal Id:** b1f17b79-a036-4a9e-a204-bab86062b007

6. Pipeline Criada (AulaDevOps-001-CI (1))

The screenshot shows the 'Pipelines' page in Azure DevOps. The left sidebar shows the 'Pipelines' section selected. The main area displays 'Recently run pipelines' with the following data:

Pipeline	Last run
AulaDevOps-001-CI (1)	#24 • Alteracoes de Tag Batched CI for main 19m ago 50s
AulaDevOps-001-CI	#12 • Set up CI with Azure Pipelines Manually triggered for master 11h ago 24s

7. Pipeline Editada

Azure DevOps

GuilhermeSousa123456789 / AulaDevOps-001 / Pipelines

Search

...

...

...

GS

AulaDevOps-001

Overview

Boards

Repos

Pipelines

Pipelines

Environments

Releases

Library

Task groups

Deployment groups

Test Plans

Artifacts

AulaDevOps-001-CI (1)

TasksVariablesTriggersOptionsHistory

Save & queueDiscardSummaryQueue

PipelineBuild pipeline

Get sources

Agent job 1

Install Terraform v1.9.2

Terraform : Inicializar

Terraform : Validate

Publish Pipeline Artifact

Name *

AulaDevOps-001-CI (1)

Agent pool

Azure Pipelines

Agent Specification *

windows-2019

Parameters

This pipeline doesn't have any pipeline parameters. Create them to share the most important settings between tasks and change them in one place.

Learn more

8. Release Criada e Executada

Azure DevOps

GuilhermeSousa123456789 / AulaDevOps-001 / Pipelines / Releases / Release Pipeline - CD / Release-12

Search

...

...

...

GS

AulaDevOps-001

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Release Pipeline - CD > Release-12

PipelineVariablesHistory

DeployCancelRefreshEdit

Release

Continuous deployment

Planejar Infraestruturaz

Aplicar Infraestruturaz

Help

9. Resource Group criado após execução da Pipeline e do Release

The screenshot shows the Microsoft Azure portal interface. The main view is the 'Tags' tab for the resource group 'rg-auladevops-001'. The left sidebar shows the 'Resource groups' list with 'rg-auladevops-001' selected. The 'Tags' tab displays a table of tags:

Name	Value
ambiente	desenvolvimento
Area	Marketing
Compania	Aula DevOps
Integracao	Processo DevOps
workspace	default

Below the table, there is a section for 'rg-auladevops-001 (Resource group)' showing the tags: 'Area : Marketing', 'Compania : Aula DevOps', and 'Integracao : Processo DevOps'. The 'More (2)' link indicates that there are two more tags.

Código Terraform Usado

```
variables.tf > variable "location"
1  variable "location" {
2      type = string
3      default = "brazilsouth"
4  }
5
6  variable "tags" {
7      type = map
8      default = {
9          "ambiente" = "desenvolvimento"
10         "Integracao" = "Processo DevOps"
11         "Compania" = "Aula DevOps"
12         "Area" = "Marketing"
13     }
14 }
```

variables.tf

```

site.tf > resource "azurerm_storage_account" "site" > static_website
1 terraform {
2     backend "azurerm" {
3
4     }
5 }
6
7 provider "azurerm" {
8     features{}
9 }
10
11 resource "azurerm_resource_group" "rg" {
12     name = "rg-auladevops-001"
13     location = "brazilsouth"
14     tags = merge(var.tags, {
15         "workspace" = "${terraform.workspace}"
16     })
17 }
18
19
20 resource "azurerm_storage_account" "site" {
21     name = "stauladevopsguil001"
22     resource_group_name = azurerm_resource_group.rg.name
23     location = azurerm_resource_group.rg.location
24     account_kind = "StorageV2"
25     account_tier = "Standard"
26     account_replication_type = "LRS"
27
28     static_website {
29         index_document = "index.html"
30     }
31
32     tags = merge(var.tags, {
33         "workspace" = "${terraform.workspace}"
34     })
35 }
36

```

site.tf