



Cloud Automation

In the Azure Cloud Using Terraform with DevOps

Hank Wojteczko - Cloud Practice Team Lead
Edwin Young - Cloud Engineer



David Kent Consulting

ORACLE and Banner IT Services



ORACLE and Banner Experts

Real-world Practitioners. Solutions You Trust. Always..



DK

David Kent Consulting

ORACLE and Banner IT Services

Azure services



Cost
Management...



Help + support



DevTest Labs



Virtual
machines



App Services



More services

Recent resources

Name	Type	Last Viewed
[?] TEST_rg	Resource group	4 minutes ago
[?] cohesionvault	Storage account	6 hours ago
[?] cohesion2020_rg	Resource group	6 hours ago
[?] ClasseDesignUSA	Subscription	6 hours ago
[?] ClasseDesignUSA_rg	Resource group	a week ago
[?] NetworkWatcherRG	Resource group	2 months ago
[?] cloud-shell-storage-eastus	Resource group	2 months ago
[?] CDUSA_Recovery_RG	Resource group	2 months ago
[?] automationrgdiag395	Storage account	9 months ago
[?] ClasseDesignUSA_nsg	Network security group	10 months ago

Navigate



Subscriptions



Resource groups



All resources



Dashboard



DK

David Kent Consulting

ORACLE and Banner IT Services

Microsoft Azure

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

hank.wojtecz
CLASSE

Home > New

DevOps Starter

devops

DevOps Starter

DevOps Managed Service

Award Winning DevOps Adoption and Support

Fyipe - DevOps and SRE Platform

Azure Managed Services

Create a resource

Home

Dashboard

All services

FAVORITES

All resources

Resource groups

App Services

SQL databases

Azure Cosmos DB

Virtual machines

Load balancers

Storage accounts

Virtual networks

Azure Active Directory

Monitor

Advisor

Security Center

Help + support

Cost Management + Billing

Blockchain

Compute

Containers

Databases

Developer Tools

DevOps

Identity

Integration

Internet of Things

IT & Management Tools

Media

Migration

Mixed Reality

Monitoring & Diagnostics

Web App

SQL Database

Function App

Azure Cosmos DB

Kubernetes Service

DevOps Starter

Storage account

Quickstarts + tutorials



DK

David Kent Consulting

ORACLE and Banner IT Services

Microsoft Azure

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

Home > New >

DevOps Starter

Microsoft

DevOps Starter Microsoft Save for later Create It

Overview Plans Usage Information + Support

Launch an app running in Azure in a few quick steps

DevOps Starter makes it easy to get started on Azure. It helps you launch an app on the Azure service of your choice in a few quick steps. DevOps Starter sets you up with everything you need for developing, deploying and monitoring your app.

Creating a project with DevOps Starter provisions Azure resources and comes with a Git code repository, Application Insights integration and a continuous delivery pipeline setup to deploy to Azure. The DevOps Starter dashboard lets you monitor code commits, builds, and deployments from a single view in the Azure portal.

Key benefits of DevOps Starter:

- Get up and running with a new app and a full DevOps pipeline in just a few minutes
- Support for a wide range of popular frameworks such as .NET, Java, PHP, Node.js, and Python
- Start fresh or bring your own application from GitHub
- Built-in Application Insights integration for instant analytics and actionable insights
- Cloud-powered CI/CD using Azure Pipelines and Azure Repos

DevOps Starter is powered by Azure Pipelines and gives you a head start in developing and deploying your applications. From the initial starting point a DevOps Starter provides, you can very easily:

- Customize your build and release pipeline – ex. add a test stage to your pipeline to validate before deploying to production
- Use pull requests to manage your codeflow & keep your quality high
- Test and build each commit before you merge your code to raise the quality bar
- Track your Project backlog and issues right along with your application by using Azure Boards



DK

David Kent Consulting

ORACLE and Banner IT Services

Microsoft Azure

Search resources, services, and docs (G+)

hank.wojtecz
CLASSE

Create a resource

Home >

Azure DevOps

We've made it easier to manage Azure DevOps billing and subscriptions. You can set up billing, change your subscription or pay for more users and resources within Azure DevOps. [Learn more](#)

All services

FAVORITES

- All resources
- Resource groups
- App Services
- SQL databases
- Azure Cosmos DB
- Virtual machines
- Load balancers
- Storage accounts
- Virtual networks
- Azure Active Directory
- Monitor
- Advisor
- Security Center
- Help + support
- Cost Management + Billing

Azure DevOps

Plan smarter, collaborate better, and ship faster with a set of modern dev services

Click Here

My Azure DevOps Organizations

Get started using Azure DevOps

Billing management for Azure DevOps



DK

David Kent Consulting

ORACLE and Banner IT Services

**Henry Wojteczko**[Edit profile](#)hank.wojteczko@classedesignusa.comclassedesignusa.com

United States

hank.wojteczko@davidkentconsulting.com

Visual Studio Dev Essentials

Get everything you need to build and deploy your app on any platform.

[Use your benefits](#)

Azure DevOps Organizations

[Create new organization](#)[dev.azure.com/CohesionDevOpsWorkshop](#) (Owner)**Projects**[Cohesion2020](#)[New project](#)**Actions**[Open in Visual Studio](#)[dev.azure.com/davidkentcloudsolutions](#) (Owner)[dev.azure.com/hankwojteczko](#) (Owner)

Organizations Pending Deletion - [Expand](#)

Azure DevOps CohesionDevOpsWorkshop / Cohesion2020 / Overview / Summary Search Private Inv

Cohesion2020

About this project

Help others to get on board!

Describe your project and make it easier for other people to understand it.

+ Add Project Description

Project stats Last 7 days

Boards

4 Work items created 1 Work item completed

Pipelines

86% Builds succeeded 0% Deployments succeeded

Members 2

Project Settings

Project settings



The screenshot shows the Azure DevOps 'Overview' page for the 'Cohesion2020' project. The left sidebar includes links for Overview, Summary, Dashboards, Wiki, Boards, Repos, Pipelines, Test Plans, and Artifacts. A callout box highlights the 'Project Settings' link at the bottom of the sidebar. The main content area features a section titled 'About this project' with a placeholder for a project description. To the right, there's a 'Project stats' summary showing 4 work items created and 1 completed, along with pipeline success rates. The 'Members' section shows two users. The bottom left corner contains a logo for 'David Kent Consulting'.



DK

David Kent Consulting
ORACLE and Banner IT Services

CohesionDevOpsWorkshop / Cohesion2020 / Settings / GitHub connections

Search

Project Settings
Cohesion2020

- General
- Overview
- Teams
- Permissions
- Notifications
- Service hooks
- Dashboards

Boards

- Project configuration
- Team configuration
- GitHub connections**

Pipelines

- Agent pools
- Parallel jobs
- Settings
- Test management
- Release retention
- Service connections
- XAML build services

Repos

- Repositories

Artifacts

- Storage

GitHub connections

Connect GitHub with Azure Boards

Link commits and pull requests to work items, and see the status of your development from within Azure Boards.

Connect your GitHub account

Alternative connection options

- Personal Access Token
- GitHub Enterprise Server

Click here and go through the prompts



Go here after connecting to your GitHub Account



DK

David Kent Consulting

ORACLE and Banner IT Services

CohesionDevOpsWorkshop / Cohesion2020 / Settings / Service connections

Search

Project Settings
Cohesion2020

General

- Overview
- Teams
- Permissions
- Notifications
- Service hooks
- Dashboards

Boards

- Project configuration
- Team configuration
- GitHub connections

Pipelines

- Agent pools
- Parallel jobs
- Settings
- Test management
- Release retention
- Service connections
- XAML build services

Repos

- Repositories

Artifacts

- Storage

Service connections

Filter by keywords

Service Principal Connection to Subscription

ClasseDesignUSA (df48342b-01c5-49db-97ce-27576bdbb6e5)

David-Kent-Consulting — My organization GitHub Connection

hankwojteczkodki — My personal GitHub connection

New service connection

Created by

Click here to create your service connections

Service connections

Filter by keywords

Service Principal Connection to Subscription

ClasseDesignUSA (df48342b-01c5-49db-97ce-27576bdbb6e5)

David-Kent-Consulting — My organization GitHub Connection

hankwojteczkodki — My personal GitHub connection

New service connection

Created by

Click here to create your service connections



DK

David Kent Consulting

ORACLE and Banner IT Services

The screenshot shows the Azure DevOps Pipelines interface for the project 'Cohesion2020'. The left sidebar lists various project management features: Overview, Boards, Repos, Pipelines (which is selected and highlighted in grey), Environments, Releases, Library, Task groups, Deployment groups, Test Plans, and Artifacts. The main area is titled 'Pipelines' and displays a list of 'Recently run pipelines'. The table has columns for Pipeline, Last run, and duration. The pipelines listed are:

Pipeline	Last run	
TEST_rg Plan (Destroy)	#136 • 02-oct-2020 Manually triggered for master	12m ago 45s
TEST_rg Deploy	#135 • 02-oct-2020 Manually triggered for master	19m ago 3m 59s
TEST_rg plan	#134 • 02-oct-2020 Manually triggered for master	21m ago 32s
TEST_rg Destroy	#133 • 02-oct-2020 Manually triggered for master	5h ago 9m 54s

At the top right, there is a search bar, a 'Start a new Pipeline' button, and a 'New pipeline' button. Below the search bar is a 'Filter pipelines' dropdown. The top navigation bar shows the project name 'CohesionDevOpsWorkshop / Cohesion2020 / Pipelines'.



DK

David Kent Consulting

ORACLE and Banner IT Services

Azure DevOps CohesionDevOpsWorkshop / Cohesion2020 / Pipelines Search

Cohesion2020 +

Connect Select Configure Review

New pipeline

Where is your code?

Very few organizations use this

Azure Repos Git YAML
Free private Git repositories, pull requests, and code search

Bitbucket Cloud YAML
Hosted by Atlassian

GitHub YAML
Home to the world's largest community of developers

GitHub Enterprise Server YAML
The self-hosted version of GitHub Enterprise

Other Git
Any generic Git repository

Subversion
Centralized version control by Apache

Newer YAML Pipeline...

Use the classic editor to create a pipeline without YAML.

Less Headaches Option



DK

David Kent Consulting

ORACLE and Banner IT Services

Azure DevOps

CohesionDevOpsWorkshop / Cohesion2020 / Pipelines

Search

For GitHub Orgs, u...

Select a source

Azure Repos Git GitHub GitHub Enterprise Server Subversion Bitbucket Cloud Other Git

Team project: Cohesion2020

Repository: Cohesion2020

Default branch for manual and scheduled builds: master

Continue

Overview Boards Repos Pipelines Pipelines Environments Releases Library Task groups Deployment groups Test Plans Artifacts

→

Select your repository

Tell us where your sources are.
You can customize how to get these sources from the repository later.

Tool remembers last used repo

The screenshot shows the 'Select a source' step in the Azure DevOps Pipelines setup. The 'Azure Repos Git' option is selected. A callout bubble above it says 'For GitHub Orgs, u...'. To the right, there's a cloud icon with the text 'Tool remembers last used repo'. The left sidebar lists various Azure DevOps services like Overview, Boards, Repos, Pipelines, etc.

Azure DevOps

CohesionDevOpsWorkshop / Cohesion2020 / Pipelines

Search

Cohesion2020

Overview

Boards

Repos

Pipelines

Pipelines

Environments

Releases

Library

Task groups

Deployment groups

Test Plans

Artifacts

Select a source

Azure Repos Git GitHub GitHub Enterprise Server Subversion Bitbucket Cloud Other Git

Authorized using connection: David-Kent-Consulting Change

Select your repository

Tell us where your sources are. You can customize how to get these sources from the repository later.

Repository *

Enter 'organization/repository' or click '...' to browse

Default branch for manual and scheduled builds *

This setting is required.

Pick your repo

Master will be the default branch, you can change this to another branch

Continue

The screenshot shows the 'Select your repository' step in the Azure DevOps Pipelines setup. The GitHub source option is selected. A tooltip for the GitHub repository field says 'Pick your repo'. A tooltip for the default branch field says 'Master will be the default branch, you can change this to another branch'.



DK

David Kent Consulting

ORACLE and Banner IT Services

The screenshot shows the Azure DevOps Pipelines interface. On the left, the sidebar includes options like Overview, Boards, Repos, Pipelines (selected), Environments, Releases, Library, Task groups, Deployment groups, Test Plans, and Artifacts. The main area displays a pipeline configuration with a large circular arrow icon. A modal window titled "Select a repository" is open, showing a list of repositories under "Showing your repositories". The list includes "David-Kent-Consulting/Cohesion2020DevOpsWorkshop", "David-Kent-Consulting/NWMSU", and "David-Kent-Consulting/OCI_R1_0_07_apr_2020". Below the list are two options: "Load all repositories" (radio button) and "Visit github.com" (link). At the bottom of the modal are "Select" and "Cancel" buttons. A callout box points to the repository list with the text: "Within your org, all repos appear in drop down list". The top navigation bar shows the project path: CohesionDevOpsWorkshop / Cohesion2020 / Pipelines. The top right corner has a search bar and various navigation icons.



DK

David Kent Consulting

ORACLE and Banner IT Services

Azure DevOps

CohesionDevOpsWorkshop / Cohesion2020 / Pipelines

Search

Cohesion2020

Overview

Boards

Repos

Pipelines

Pipelines

Environments

Releases

Library

Task groups

Deployment groups

Test Plans

Artifacts

+

Select a source

Azure Repos Git GitHub GitHub Enterprise Server Subversion Bitbucket Cloud Other Git

Authorized using connection: David-Kent-Consulting Change

Repository * | Manage on GitHub

David-Kent-Consulting/Cohesion2020DevOpsWorkshop

Default branch for manual and scheduled builds *

master

Continue

Pick continue

Select your repository

Tell us where your sources are.
You can customize how to get these sources from the repository later.

Repository * | Manage on GitHub

Default branch for manual and scheduled builds *

master

Continue

Pick continue



DK

David Kent Consulting

ORACLE and Banner IT Services

Azure DevOps CohesionDevOpsWorkshop / Cohesion2020 / Pipelines

Search

Cohesion2020

Overview Boards Repos Pipelines Pipelines Environments Releases Library Task groups Deployment groups Test Plans Artifacts

Project settings

Choose a template

Choose a template that builds your kind of app.
Don't worry if it's not an exact match;
you can add and customize the tasks later.

Select a template
Or start with an **Empty job**

Search

- build a Java WAR file and deploy it to an Azure Web App.
- Go (preview)**
Build a Go application.
- Gradle**
Build and test a Java project with Gradle.
- Jenkins**
Queue a Jenkins job and download its artifacts.
- Load test using Azure IaaS virtual machines**
Create a rig on Azure IaaS virtual machines to run load tests using VSTS cloud-based load testing service.
- Machine Learning Model**
Build and deploy a ML model using Azure Machine Learning.
- Node.js With Grunt**
Build a Node.js application using the Grunt task runner.
- Node.js With gulp**
Build a Node.js application using the gulp task runner.
- Universal Windows Platform**
Build and test a Universal Windows Platform application using Visual Studio.
- Xamarin.Android**
Build an Android app and Xamarin.UITest assembly. Test on real devices with App Center.
- Xamarin.iOS**
Build a Xamarin.iOS app and Xamarin.UITest assembly. Test on real devices with App Center.
- Empty pipeline**
Start with an empty pipeline and add your own steps.

You can select a pre-defined pipeline, like Jenkins, or build it yourself with an "Empty Pipeline". For Terraform, and until you know the tool, we suggest you always choose an empty pipeline.



DK

David Kent Consulting

ORACLE and Banner IT Services

Azure DevOps

CohesionDevOpsWorkshop / Cohesion2020 / Pipelines

Search

Cohesion2020 +

Overview Boards Repos Pipelines Pipelines Environments Releases Library Task groups Deployment groups Test Plans Artifacts

Pipelines

Cohesion2020-CI

Tasks Variables Triggers Options Retention History Save & queue Discard Summary Queue ...

Pipeline Build pipeline

Get sources David-Kent-Consulting/Cohesion2020DevOpsWorkshop master

Agent job 1 Run on agent +

Click on the plus

Cohesion2020-CI

Agent pool * Azure Pipelines | Pool information | Manage

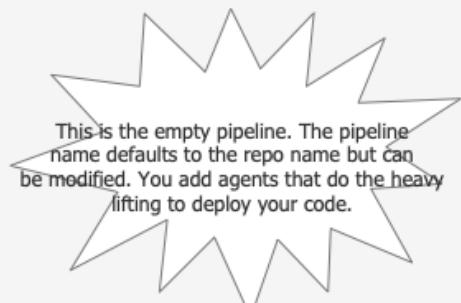
Agent Specification * vs2017-win2016

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

This is the empty pipeline. The pipeline name defaults to the repo name but can be modified. You add agents that do the heavy lifting to deploy your code.



Azure DevOps

CohesionDevOpsWorkshop / Cohesion2020 / Pipelines

Search

Cohesion2020 +

Overview

Boards

Repos

Pipelines

Pipelines

Environments

Releases

Library

Task groups

... > Cohesion2020-CI

Tasks Variables Triggers Options Retention History Save & queue Discard Summary Queue

Pipeline Build pipeline ...

Get sources David-Kent-Consulting/Cohesion2020DevOpsWorkshop master

Agent job 1 Run on agent +

Add tasks Refresh

All Build Utility Test Package Deploy Tool Marketplace

Type in "Terraform"

.NET Core dotnet Build, test, package, or publish a dotnet application, or run a custom dotnet command

Android signing Android Sign and align Android APK files

Ant Ant



DK

David Kent Consulting

ORACLE and Banner IT Services

Search

Save & queue ▾ Discard Summary Queue ...

Add tasks | Refresh

terraform

Terraform
Execute terraform commands to manage resources on AzureRM, Amazon Web Services(AWS) and Google Cloud Platform(GCP)

Terraform tool installer

Find in cache or download a specific version of Terraform and prepend it to the PATH

Terraform Installer
Installs a specific version of terraform

Terraform CLI
Execute terraform cli commands



DK

David Kent Consulting
ORACLE and Banner IT Services

Search

Save & queue Discard Summary Queue ...

Terraform tool installer

Task version 0.*

Display name * Install Terraform 0.12.3

Version * 0.12.3

Control Options

Output Variables

Change to match version in main .tf module

```
11 //set this up using PowerShell AZ as follows.
12 # New-AzResourceGroup cohesion2020_rg -locat
13 # New-AzStorageAccount -ResourceGroupName coh
14 # Set-AzCurrentStorageAccount -ResourceGroupn
15 # New-AzStorageContainer -Name "tformstate" -
16 # Copy Key1's value to access_key below
17 # enter the storage account name and the cont
18 # Then, copy the "terraform.state" file to TE
19 # working directory, then to the container.
20 # Be certain to delete your local copy once y
21 # then test with "terraform init", followed b
22 # If you have done this correctly, then you w
23 # "Acquiring state lock. This may take a few
24 # Of course, this carries some risk, so do be
25 # situation.

26
27 # These action must be completed prior to imp
28
29 terraform {
30   required_version = ">= 0.13.4"
31
32   backend "azurerm" {
33     storage_account_name = "cohesionkvault"
34     container_name       = "tformstate"
35     access_key           = "shJ1ZWdCZdB1W+g+G
36
37   // entry below should either be dev.terra
38   // for individual tstate, it should be Az
39   // example key                   = "pro
40   // key = "TEST_rg.terraform.tstate"
41 }
42
43 provider "azurerm" {
44   version = "= 2.29"
45   features {}
46 }
47
```



DK

David Kent Consulting

ORACLE and Banner IT Services

CohesionDevOpsWorkshop / Cohesion2020 / Pipelines

Search

... > Cohesion2020-CI

Tasks Variables Triggers Options Retention History | Save & queue Discard Summary Queue ...

Pipeline Build pipeline

Get sources David-Kent-Consulting/Cohesion2020DevOpsWorkshop master

Agent job 1 Run on agent

Install Terraform 0.13.4 Terraform tool installer

Enter Terraform

Click on plus again

terraform

Refresh

Terraform Execute terraform commands to manage resources on AzureRM, Amazon Web Services(AWS) and Google Cloud Platform(GCP)

Use for cloud service provider plugin modules

Terraform tool installer Find in cache or download a specific version of Terraform and prepend it to the PATH

Terraform Installer Installs a specific version of terraform

Terraform CLI Execute terraform cli commands

A screenshot of the Azure DevOps Pipeline editor. On the left, there's a list of pipeline steps: 'Get sources' (repository), 'Agent job 1' (Run on agent), and 'Install Terraform 0.13.4' (Terraform tool installer). To the right, a search bar shows 'terraform'. Below the search bar, a tooltip says 'Click on plus again' pointing to a '+' button. A larger tooltip 'Enter Terraform' is over the search bar. On the far right, a list of Terraform tasks is shown: 'Terraform' (Execute terraform commands to manage resources on AzureRM, Amazon Web Services(AWS) and Google Cloud Platform(GCP)), 'Terraform tool installer' (Find in cache or download a specific version of Terraform and prepend it to the PATH), 'Terraform Installer' (Installs a specific version of terraform), and 'Terraform CLI' (Execute terraform cli commands). A tooltip 'Use for cloud service provider plugin modules' points to the Terraform task description.

Azure DevOps

CohesionDevOpsWorkshop / Cohesion2020 / Pipelines

Search

C cohesion2020 +

Overview Boards Repos Pipelines Pipelines Environments Releases Library Task groups Deployment groups Test Plans Artifacts

... > Cohesion2020-CI

Tasks Variables Triggers Options Retention History Save & queue Discard Summary Queue ...

Pipeline Build pipeline ...

Get sources David-Kent-Consulting/Cohesion2020DevOpsWorkshop master

Agent job 1 Run on agent +

Install Terraform 0.13.4 Terraform tool installer

Terraform : azurerm Some settings need attention

Terraform ① Link settings View YAML Remove

Task version 0.*

Display name * Terraform : azurerm

Provider * ① azurerm

Command * ① init

Configuration directory ① \$(System.DefaultWorkingDirectory)

Additional command arguments ①

Change to directory where the terraform code is

AzureRM backend configuration ^

Azure subscription * ① Manage

This setting is required.

Resource group * ①

This setting is required.

The screenshot shows the Azure DevOps Pipeline editor for a pipeline named 'Cohesion2020-CI'. On the left, there's a sidebar with various DevOps tools like Overview, Boards, Repos, and Pipelines. The main area shows a pipeline with a 'Terraform' task. The 'Configuration directory' field is set to '\$(System.DefaultWorkingDirectory)'. A tooltip 'Change to directory where the terraform code is' is overlaid on this field, pointing to it with an arrow. Other fields visible include 'Display name' (Terraform : azurerm), 'Provider' (azurerm), 'Command' (init), and 'Azure subscription' (Manage). There are also sections for 'AzureRM backend configuration' and 'Resource group'.



DK

David Kent Consulting

ORACLE and Banner IT Services

Azure DevOps

CohesionDevOpsWorkshop / Cohesion2020 / Pipelines

Search

Cohesion2020 +

Overview Boards Repos Pipelines Environments Releases Library Task groups Deployment groups Test Plans Artifacts

Cohesion2020-CI

Tasks Variables Triggers Options Retention History Save & queue Discard Summary Queue ...

Pipeline Build pipeline

Get sources David-Kent-Consulting/Cohesion2020DevOpsWorkshop master

Agent job 1 Run on agent

Install Terraform 0.13.4 Terraform tool installer

Terraform : azurerm Terraform

Command * init

Configuration directory workshop_codebase/v2.29

Additional command arguments

AzureRM backend configuration ^

Azure subscription * ClasseDesignUSA (df48342) [Selected]

Resource group * cohesion2020_rg

Storage account * cohesionkvault

Container * devops46753

Key * Blanked out for security reasons

Select the subscription (may have to authorize), the resource group, storage account, and container where DevOps is to copy the microservice container to. Do not pick the container with the terraform state. Enter the storage account key 1 ...

Control Options ^



DK

David Kent Consulting

ORACLE and Banner IT Services

C Cohesion2020 +

... > Cohesion2020-CI

Overview

Boards

Repos

Pipelines

Pipelines

Environments

Releases

Library

Task groups

Deployment groups

Test Plans

Artifacts

[Tasks](#) [Variables](#) [Triggers](#) [Options](#) [Retention](#) [History](#)[Save & queue](#) ▾**Pipeline**

Build pipeline

...

Get sources

David-Kent-Consulting/Cohesion2020DevOpsWorkshop ➔ master

Agent job 1

Run on agent

+

Install Terraform 0.13.4

Terraform tool installer

Terraform : azurerm

Terraform

Right click and clone the task

✓

⋮

 Enable selected task(s) Disable selected task(s) Remove selected task(s) Clone task(s) + Create task group ⚙ Manage task group

Search ≡ ? ...

Discard Summary Queue ...

Terraform ⓘ Link settings View YAML Remove

Task version 0.*

Display name *
Terraform : azurerm

Provider * ⓘ
azurerm

Command * ⓘ
init
init
validate
plan
validate and apply
destroy

Add other Terraform options here, such as plan, validate & apply, or destroy



DK

David Kent Consulting

ORACLE and Banner IT Services

Tasks Variables Triggers Options Retention History

Save & queue

Discard

Summary

Queue

...



Pipeline

Build pipeline



Get sources

David-Kent-Consulting/Cohesion2020DevOpsWorkshop

master

Agent job 1

Run on agent



Install Terraform 0.13.4

Terraform tool installer

Terraform : azurerm

Terraform

Terraform : azurerm plan

Terraform



Terraform : azurerm apply

Terraform

Terraform



Link settings

View YAML

Remove

Task version

0.*

Display name *

Terraform : azurerm plan

Provider *



azurerm

Command *



plan

Configuration directory

workshop_codebase/v2.29



Additional command arguments



Azure subscription *



Manage

ClasseDesignUSA (df48)



Scoped to subscription 'ClasseDesignUSA'

Control Options



Output Variables



DK

David Kent Consulting

ORACLE and Banner IT Services

TEST_rg Deploy

Tasks Variables Triggers Options Retention History | Save & queue Discard Summary Queue ...

Pipeline Build pipeline

Get sources David-Kent-Consulting/Cohesion2020DevOpsWorkshop master

Agent job 1 Run on agent

+
Install Terraform 0.13.4 Terraform tool installer
Terraform : azurerm Terraform
Terraform : azurerm plan Terraform
Terraform : azurerm apply Terraform

Terraform Task version 0.*

Display name * Terraform : azurerm apply

Provider * azurerm

Command * validate and apply

Configuration directory workshop_codebase/v2.29

Additional command arguments -auto-approve -parallelism=10

Azure subscription * ClasseDesignUSA (df) | Manage

Control Options Output Variables

Link settings View YAML Remove

This screenshot shows the Azure DevOps Pipeline Editor for a pipeline named 'TEST_rg Deploy'. The left sidebar lists pipeline tasks: 'Get sources' (using David-Kent-Consulting/Cohesion2020DevOpsWorkshop repository), 'Agent job 1' (run on agent), and four Terraform tasks: 'Install Terraform 0.13.4', 'Terraform : azurerm', 'Terraform : azurerm plan', and 'Terraform : azurerm apply'. The 'Terraform : azurerm apply' task is currently selected and expanded. The configuration for this task includes:

- Task version:** 0.*
- Display name:** Terraform : azurerm apply
- Provider:** azurerm
- Command:** validate and apply
- Configuration directory:** workshop_codebase/v2.29
- Additional command arguments:** -auto-approve -parallelism=10
- Azure subscription:** ClasseDesignUSA (df) (selected)



DK

David Kent Consulting
ORACLE and Banner IT Services

Thank You!

Hank Wojteczko - Cloud Practice Team Lead

David Kent Consulting, Inc

hankwojteczko@davidkentconsulting.com

832.226.4432(m)

Edwin Young - Cloud Engineer

David Kent Consulting, Inc

hankwojteczko@davidkentconsulting.com

832.823.3724(m)



DK

David Kent Consulting

ORACLE and Banner IT Services