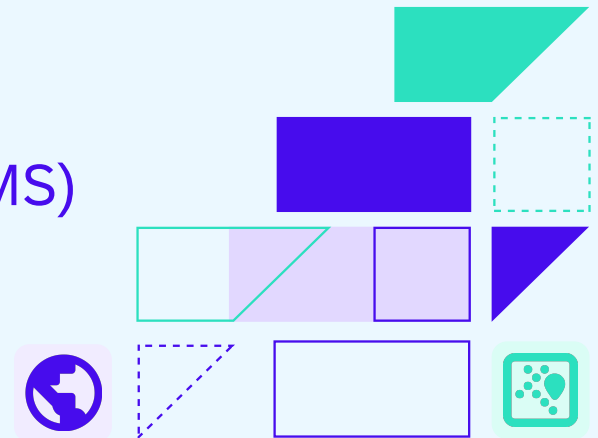


# SAP TechEd

## XP160 – Use Terraform for cross-cloud setup of SAP BTP and Microsoft Azure

Rui Nogueira, Christian Volk, Holger Bruchelt (MS), Martin Pankraz (MS)  
Nov 02, 2023



# Automating SAP Business Technology Platform

## Home-grown solutions at customers

- Often: Wiki/document describing necessary steps in the BTP cockpit
- Solution often based on BTP CLI
- Code maintained by customer dev team
- Potential hard-coded dependencies in setup

## btp-setup-automator

- Open-source project maintained by SAP community
- Setup via config file
- "Non-standard" solution

## SAP Automation Pilot

- Available as service in some regions of SAP BTP
- SAP proprietary solution

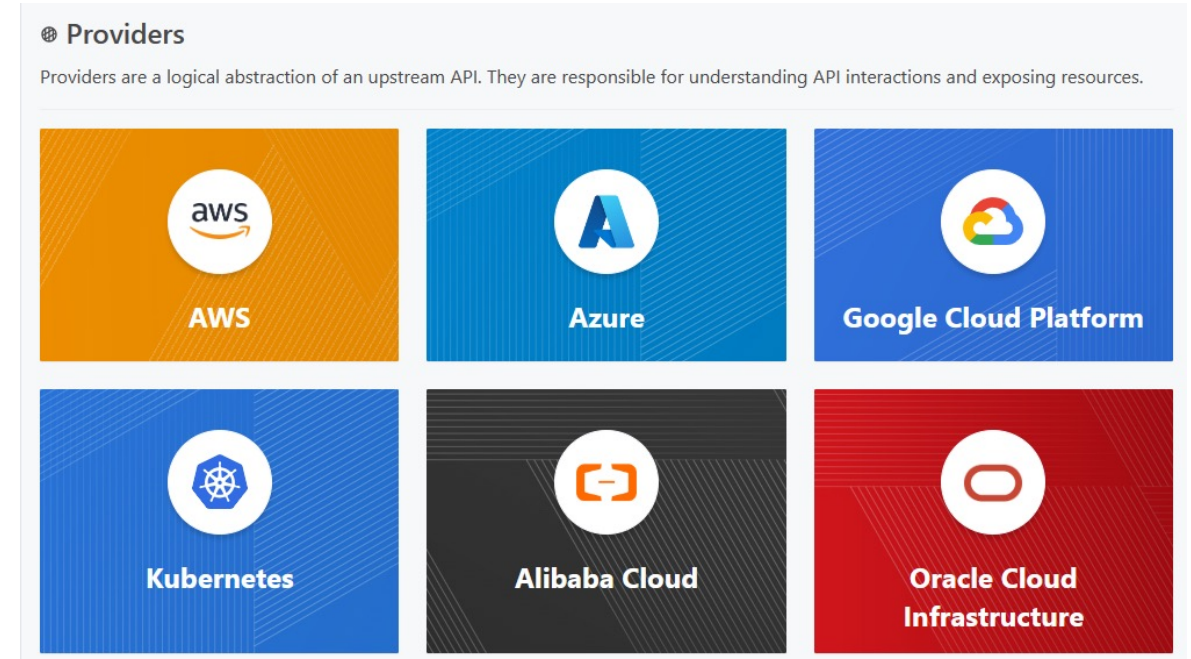
# Terraform

De-facto **industry standard** for infrastructure-as-code

All **major cloud providers** support Terraform

Currently **> 3000 Terraform providers** available

➤ Perfect fit for end-to-end BTP cross-cloud solution deployment



[Browse Providers | Terraform Registry](#)

# Terraform provider for SAP BTP

## Available in beta since June 26<sup>th</sup>, 2023

- <https://registry.terraform.io/providers/SAP/btp/latest/docs>
- Available for non-productive use ([blog post](#))
- Covers capabilities that were prioritized by customers during POC phase
- Target persona:
  - SAP customers/partner – SAP-internal teams can benefit
  - SAP BTP Operation teams at customers
  - Enable DevOps/Platform teams to deliver self-service setups for development projects

## GitHub repository available with samples and best practices

- <https://github.com/SAP-samples/btp-terraform-samples>
- Covering commonly used patterns from SAP customers
- Open to contributions

# Terraform - Best Practices for Code Structure

## main.tf

- call modules, locals, and data sources to create all resources

```
# Set entitlement for SAP Private Link
resource "btp_subaccount_entitlement" "privatelink" {
  subaccount_id = btp_subaccount.this.id
  service_name  = "privatelink"
  plan_name     = "standard"
  amount        = 1
}
```

## variables.tf

- contains declarations of variables used in main.tf

```
variable "globalaccount" {
  type        = string
  description = "The globalaccount subdomain where the sub account shall be cre"
}
```

## outputs.tf

- contains outputs from the resources created in main.tf

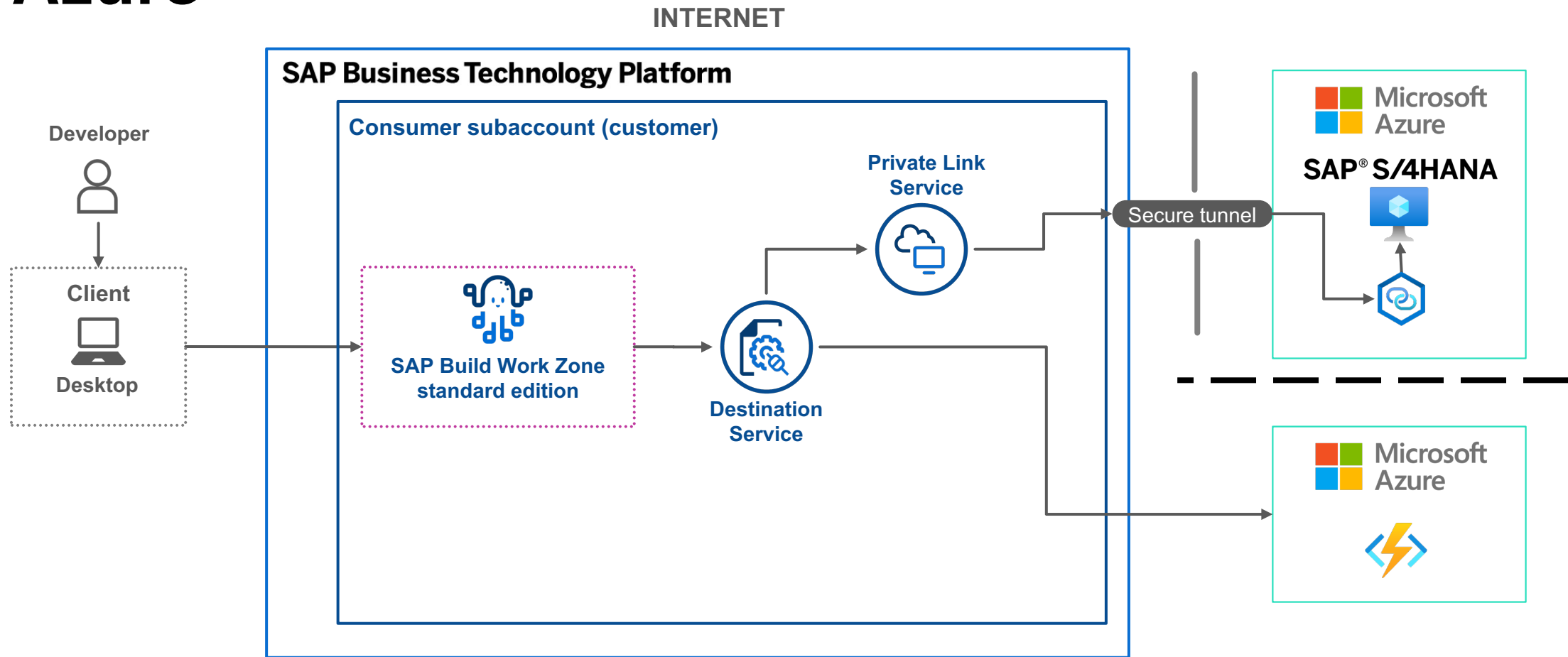
```
output "subaccount_id" {
  value       = btp_subaccount.this.id
  description = "The ID of the subaccount."
}
```

## providers.tf

- contains version requirements for Terraform and providers

```
terraform {
  required_providers {
    btp = {
      source = "sap/btp"
      version = "0.4.0-beta1"
    }
  }
}
```

# Use case: Combining SAP BTP and Microsoft Azure



# Exercises TechEd 2023 – XP160

Let's start the exercises of this hands-on session

<https://github.com/SAP-samples/teched2023-XP160>

# Related Sessions

XP940 - Security for SAP S/4HANA and Hyperscaler Native Services with SAP BTP (Private Link for Azure)

IN1044 - Event-Driven Architecture on SAP BTP Integrating Hyperscaler Services

DT961- Enable Collaborative, Intelligent ERP with SAP S/4HANA Cloud



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