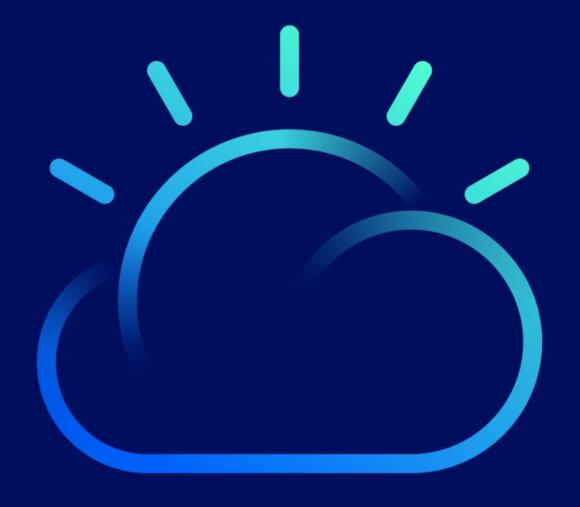


Supported Cloud Providers



CAM Connections

- Used to securely store credentials for each cloud provider
- Used by Terraform to connect to the cloud provider defined in the Template
- Connections are namespaced for security
- CAM connections can be created for each of the supported cloud providers
- 3rd Party providers may be used however connections to providers will have to be defined in the CAM template

Supported Connections

https://www.ibm.com/support/knowledgecenter/en/SS2L37_4.2.0.0/cam_managing_connections.html

- VMware vSphere
- Amazon EC2
- IBM Cloud
- IBM Cloud Kubernetes Service
- Huawei Cloud
- Microsoft Azure
- OpenStack
- VMware vRealize Automation

- Google Cloud
- Nutanix
- VMware NSX-T
- VMware NSXv
- IBM Workload Deployer
- IBM Cloud Orchestrator (ICO)
- IBM Cloud Private

Considerations

- Cloud connections are closely coupled with Terraform providers
- Terraform providers are not all created equally some are more mature than others
- Don't assume you can perform the same tasks on all cloud providers
- Network connectivity to cloud providers must be available

VMware vSphere

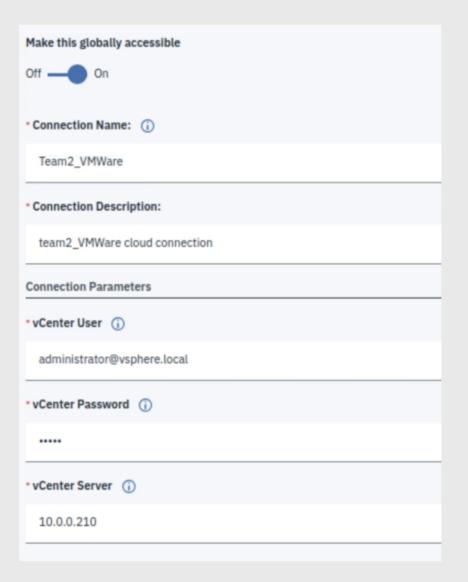
https://www.terraform.io/docs/providers/vsphere/index.htm

Supported Version

vCenter version 6.0 and above

VMware vSphere Provider

The VMware vSphere provider gives Terraform the ability to work with VMware vSphere Products, notably vCenter Server to access and manage a vSphere environment.



Amazon EC2

For Cloud Automation Manager to access your Amazon Web Services (AWS) account, an access key and the secret access key to your account are required.

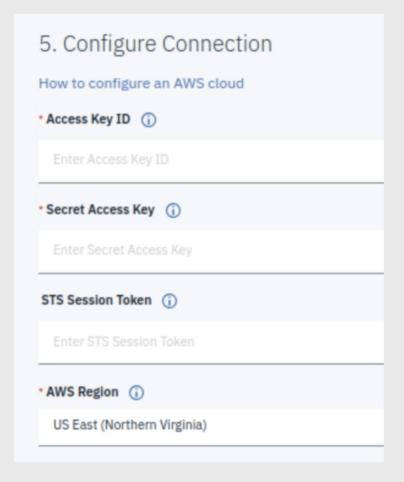
The access key and the secret access key are not your AWS username and password, but they are special tokens that allow Cloud Automation Manager to communicate with your AWS account via secure API calls.

How to setup access keys?

https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_access-keys.html - Using_CreateAccessKey

Terraform AWS Provider

https://www.terraform.io/docs/providers/aws/



```
provider "aws" {
  region = "${var.aws_region}"
  token = "${var.aws_token}"
  access_key = "${var.aws_access_key}"
  secret_key = "${var.aws_secret_key}"
}
```

IBM Cloud

IBM Cloud API Key

Used to provision IBM Cloud Resources

SoftLayer User Name & SoftLayer API Key

Used to provision SoftLayer IaaS resources
 Maintained by IBM not available from Terraform

Provider Reference

https://cloud.ibm.com/docs/terraform?topic=te rraform-provider-reference

5. Configure Connection

How to configure an IBM cloud

Provide the IBM Cloud API Key to provision and manage resources.

IBM Cloud API Key (i)

Enter IBM Cloud API Key

Provide the SoftLayer User Name and API Key to provision SoftLayer resources.

SoftLayer User Name (i)

Enter SoftLaver User Name

SoftLayer API Key (i)

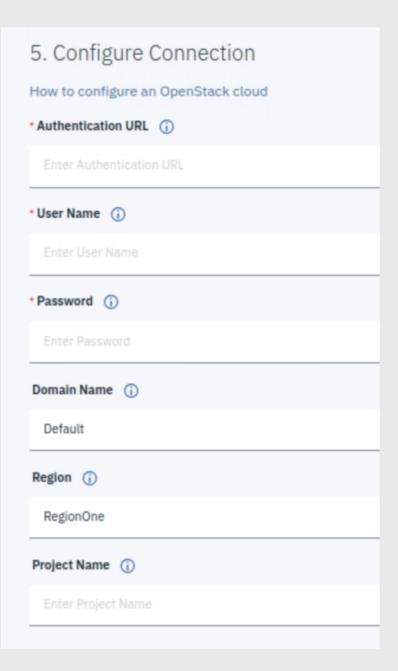
Enter SoftLayer API Key

OpenStack

https://www.terraform.io/docs/providers/openstack/

IBM Cloud Automation manager supports OpenStack cloud connection, PowerVC on Openstack connection, and z/VM Cloud Manager Appliance on OpenStack connection.

- OpenStack connection
- PowerVC cloud on OpenStack (PowerVC cloud V1.3.3)
- z/VM Cloud Manager Appliance on OpenStack (see documentation)



Custom Terraform Providers

https://www.ibm.com/support/knowledgecenter/en/SS2L37_4.2.0.0/cam_using_BYO_terraform.html



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