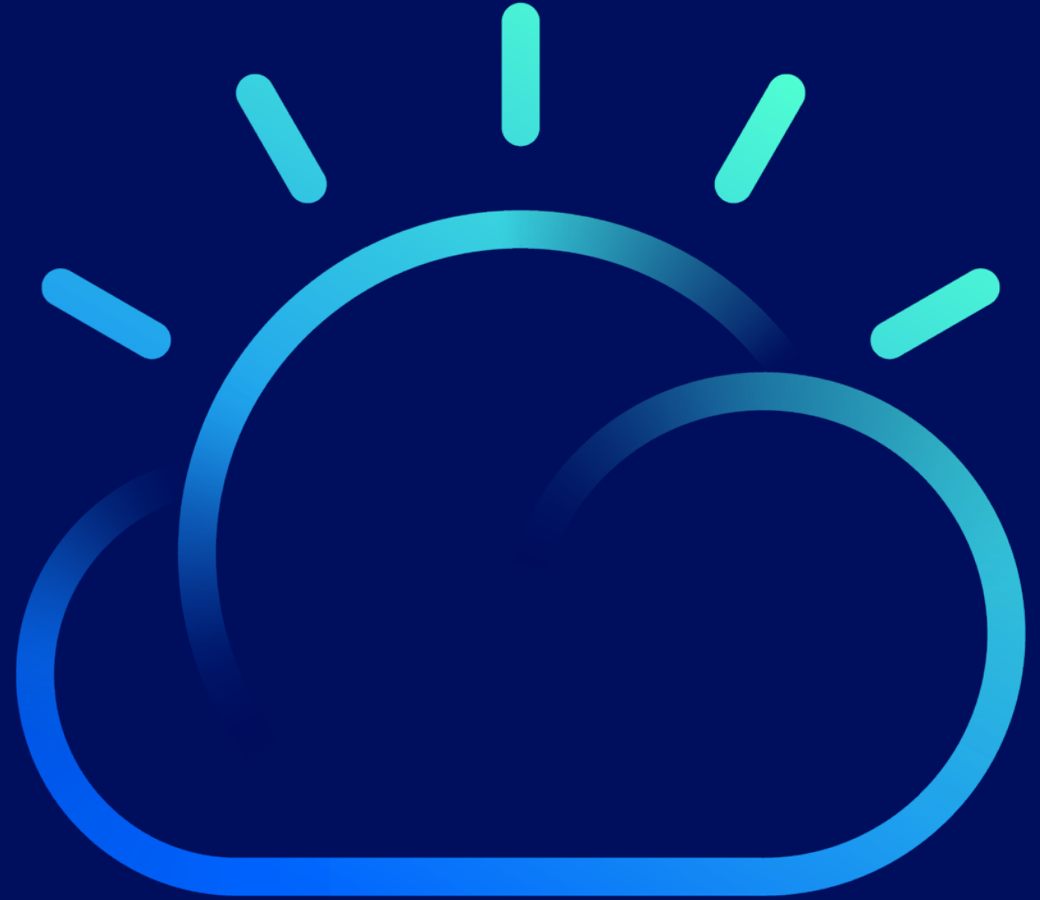


## CAM Template Format



# CAM Template files

Metadata for CAM

# CAM Configuration Files

## `camtemplate.json`

- Defines metadata for the entire template
- Name
- Description
- Title
- Displayname
- Etc

## `camvariables.json`

- Defines the template input variables are defined
- Name
- Label
- Description
- Type
- etc

# camtemplate.json - Example

← Template Library

## LAMP Deployment on a single virtual machine

Overview

Template Source

Parameters

This template deploys Oracle MySQL Database V5.7 and Apache HTTP Server V2.4 on a Linux virtual machine.

AUTHOR	IBM
TYPE	Terraform
CREATED	05/27/2019 12:26 PM
CLOUD	VMware vSphere
VERSION	2.1

Template Version:

2.1(default)

GIT URL :

[https://github.com/IBM-CAMHub-Open/template\\_lamp\\_stack\\_v1\\_standalone/tree/2.1/vmware/terraform](https://github.com/IBM-CAMHub-Open/template_lamp_stack_v1_standalone/tree/2.1/vmware/terraform)

To clone the template click the Git repository link, clone the repository and then create a template with the new repository information.

### Features

- **Clouds**

VMware

- **Topology**

1 virtual machine:  
MySQL DB  
odb instance 1, 1 database  
Apache HTTP Server

- **Default Virtual Machine Settings**

vCPU 2, Memory (GB) 4, Disk (GB) 100

- **Operating Systems Supported**

Red Hat Enterprise Linux 7  
Ubuntu 16.04

- **Software Deployed**

Apache HTTP Server Version V2.4, with PHP Module  
Oracle MySQL V5.7

- **Usage and Special Notes**

1. The user is responsible for obtaining appropriate software licenses and downloads prior to template deployment.
2. Detailed system requirements for Oracle Database V5.7 - <https://dev.mysql.com/doc/refman/5.7/en/>
3. Detailed system requirements for Apache HTTP Server - [https://projects.apache.org/project.html?httpd-http\\_server](https://projects.apache.org/project.html?httpd-http_server)

# camtemplate.json - Continued

← Template Library

## LAMP Deployment on a single virtual machine

Save

Template Metadata

Manage Template

### Description



Change Icon

#### GIT URL

[https://github.com/IBM-CAMHub-Open/template\\_lamp\\_stack\\_v1\\_standalone/tree/2.1/vmware/terraform](https://github.com/IBM-CAMHub-Open/template_lamp_stack_v1_standalone/tree/2.1/vmware/terraform)

#### Display name ⓘ

LAMP Deployment on a single virtual machine

#### Short Description

This template deploys Oracle MySQL Database V5.7 and Apache HTTP Server V2.4 on a Linux virtual machine.

104/150

#### Cloud Provider

VMware vSphere

### Details

#### Long Description

This template deploys Oracle MySQL Database V5.7 and Apache HTTP Server V2.4 on a Linux virtual machine.

#### Features

- Clouds
- Operating Systems Supported
- Topology

# Cloud Connection

```
"manifest": {  
  "template_type": "Terraform",  
  "template_format": "HCL",  
  "template_provider": "IBM",  
  "template": {  
    "templateData": "",  
    "templateVariables": "",  
    "templateOutput": ""  
  },  
}
```



## 3. Select a Cloud Connection

\* Cloud Connection:

**You need a Cloud Connection:**



There isn't a IBM cloud connection to deploy this template with, create connection first.

# camtemplate.json

- The camtemplate.json file contains template metadata. It defines the function and features of the template.
- In the Cloud Automation Manager user interface, the template **Overview** page includes the details defined in this JSON file.
- Can be modified manually in a text editor, using the CAM UI or in the Template Designer

[https://github.ibm.com/OpenContent/template\\_integration\\_i/cam/blob/development/other/terraform/camtemplate.json](https://github.ibm.com/OpenContent/template_integration_i/cam/blob/development/other/terraform/camtemplate.json)



# camvariables.json - Example

Defines metadata for the  
terraform input variables

### 5. Cloud Input Variables

vSphere Cluster - LAMPNode01: ⓘ

vSphere Datacenter - LAMPNode01: ⓘ

vSphere Folder Name - LAMPNode01: ⓘ

### 6. SSH Keys

\* User Public SSH Key - ssh\_keys: ⓘ

### 7. LAMPNode01

\* Enable PHP Module - LAMPNode01: ⓘ

\* Enable Virtual Host Configuration - LAMPNode01: ⓘ



精な「社明」を「美と」と「字印」を「技」と「出」の  
PAPER・COM

When you deploy the template in the Cloud Automation Manager user interface, all these defined variables are displayed. After you enter the values in the user interface, they are passed on to a JSON file which is in turn sent for execution to terraform. Terraform matches these parameters with the variables in the .tf file.

# Input Groups

```
"input_groups": [  
  {  
    "name": "cloud",  
    "label": "Cloud Input Variables"  
  },  
  {  
    "name": "ssh_keys",  
    "label": "SSH Keys"  
  },  
  {  
    "name": "virtualmachine",  
    "label": "Virtual Machine Input Variables"  
  },  
  {  
    "name": "image_parameters",  
    "label": "Image Parameters"  
  }  
],
```

\* indicates a required field

## 1. Enter a unique Instance Name

\* Instance Name: ⓘ

jw-test2

## 2. Select a Namespace

\* Namespace:

default

## 3. Select a Cloud Connection

\* Cloud Connection:

Team2\_VMWare

## 4. Cloud Input Variables

## 5. Virtual Machine Input Variables

# Input Parameters

## CAM Variables

```
{  
  "name": "vm_1_datacenter",  
  "type": "string",  
  "description": "Target vSphere datacenter for virtual machine creation",  
  "hidden": false,  
  "label": "vSphere Datacenter - vm_1",  
  "secured": false,  
  "required": false,  
  "immutable": false,  
  "group_name": "cloud"  
},
```

## Terraform Variable

```
variable "vm_1_datacenter" {  
  description = "Target vSphere datacenter for virtual machine creation"  
}
```

## 4. Cloud Input Variables

**vSphere** Target vSphere datacenter for virtual machine creation

vSphere Datacenter - vm\_1 value must not contain |,<,> and " characters.

vSphere Datacenter - vm\_1: 

# Input Parameters

## CAM Variables

```
{
  "name": "vm_1_dns_servers",
  "type": "list",
  "description": "DNS servers for the virtual network adapter",
  "hidden": false,
  "label": "DNS Servers - vm_1",
  "secured": false,
  "required": true,
  "immutable": false,
  "group_name": "virtualmachine"
},
```

## Terraform Variable

```
variable "vm_1_dns_servers" {
  type          = "list"
  description = "DNS servers for the virtual network adapter"
}
```

## 5. Virtual Machine Input Variables

\* DNS servers for the virtual network adapter

DNS Servers - vm\_1 value must not contain |,<,> and " characters.

\* DNS Servers - vm\_1:

8.8.8.8

Add New +

# Input Parameters

## CAM Variables

```
{
  "name": "vm_1_root_disk_type",
  "type": "string",
  "description": "Type of template disk volume",
  "default": "eager_zeroed",
  "hidden": false,
  "label": "Template Disk Type - vm_1",
  "secured": false,
  "options": [
    {
      "value": "eager_zeroed",
      "label": "Thick Provision Eager Zeroed",
      "default": "true"
    },
    {
      "value": "lazy",
      "label": "Thick Provision Lazy Zeroed"
    },
    {
      "value": "thin",
      "label": "Thin Provision",
      "group_name": "virtualmachine"
    }
  ],
  "required": true,
  "immutable": false,
  "group_name": "virtualmachine"
},
```

## Terraform Variable

```
variable "vm_1_root_disk_type" {
  type          = "string"
  description    = "Type of template disk volume"
  default        = "eager_zeroed"
}
```

### \* Template Disk Type - vm\_1: ⓘ

Thick Provision Eager Zeroed ▼

Thick Provision Eager Zeroed

Thick Provision Lazy Zeroed

Thin Provision

# Input Parameters

Terraform Variable

```
variable "mariadb_ssh_user_password" {  
  description = "The user password for ssh connection to mariadb server, which is default in template"  
}
```

## CAM Variables

```
{  
  "name": "mariadb_ssh_user_password",  
  "label": "mariadb Server SSH User Password",  
  "description": "The user password for ssh connection to mariadb server, which is default in template",  
  "hidden": false,  
  "immutable": false,  
  "required": true,  
  "secured": true,  
  "type": "password",  
  "group_name": "virtualmachine"  
},
```

\* mariadb Server SSH User Password: ⓘ

Enter password:

Confirm password:

Passwords did not match. Try again.

# Input Parameters

## Terraform Variable

```
variable "mariadb_user" {  
  description = "User to be added into db and sshed into servers"  
  default     = "camuser"  
}
```

## CAM Variables

```
{  
  "name": "mariadb_user",  
  "label": "mariadb User",  
  "description": "User to be added into db and sshed into servers; Allow 1 to 16 alphanumeric characters with beginning at",  
  "default": "camuser",  
  "hidden": false,  
  "immutable": false,  
  "required": true,  
  "secured": false,  
  "type": "string",  
  "regex": "^[A-Za-z][A-Za-z0-9]{0,15}$",  
  "group_name": "virtualmachine"  
},
```

## 6. Virtual Machine Input Variables

\* mariadb User: ⓘ

camuser?

Invalid parameter value, must contain `^[A-Za-z][A-Za-z0-9]{0,15}$` characters.

# Input Parameters

## Terraform Variable


```
variable "public_ssh_key" {  
  description = "Public SSH key used to connect to the virtual guest"  
}
```


## CAM Variables

```
{  
  "description": "Public SSH key used to connect to the virtual guest",  
  "hidden": false,  
  "immutable": false,  
  "label": "Public SSH Key",  
  "name": "public_ssh_key",  
  "required": true,  
  "secured": false,  
  "type": "string",  
  "regex": "ssh-rsa AAAA[0-9A-Za-z+/]+[=]{0,3} ([^@]+@[^@]+)"  
},
```

Public SSH key used to connect to the virtual guest

Public SSH Key value must contain ssh-rsa AAAA[0-9A-Za-z+/]+[=]{0,3} ([^@]+@[^@]+) characters.

\* Public SSH Key: 

\* Public SSH Key: 

asdasd|

Invalid parameter value, must contain ssh-rsa AAAA[0-9A-Za-z+/]+[=]{0,3} ([^@]+@[^@]+) characters.



