



# UPI ARM Sprint Demo

DEMO 1

[gwest@redhat.com](mailto:gwest@redhat.com)

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# Overview

- Consists of:
  - Main arm template: azdeploy.json
  - sub templates:
    - master.json - for bootstrap and masters
    - node.json – for workers
  - Setup Script: setup\_azarm.sh
  - Deploy Script: deploy\_azarm.sh

# What it does:

- Deploys a UPI Azure OCP 4.x (4.1 at the moment)
  - 3 Masters
  - N Workers – parameter – 3 for test
  - Availability Group for Masters
  - Availability Group for Nodes
  - Public Load Balancer for API
  - Public Load Balancer for Apps
  - Internal Load Balancer for Internal API

# ARM Parameters

```
{
  "$schema" : "https://schema.management.azure.com/schemas/2015-01-01/deploymentParameters.json#",
  "contentVersion" : "1.0.0.0",
  "parameters" : {
    "image" : {
      "value" : "https://sagswx1.blob.core.windows.net/vhd/rhcos-410.8.20190504.0-azure.vhd"
    },
    "BootstrapIgnition" : {
      "value" : ""
    },
    "MasterIgnition" : {
      "value" : ""
    },
    "WorkerIgnition" : {
      "value" : ""
    },
    "WildcardZone" : {
      "value" : "wildcardzone"
    },
    "numberOfNodes" : {
      "value" : 3
    },
    "sshKeyData" : {
      "value" : ""
    }
  }
}
```

# Azuredeploy.json

▼ Content	Object	Object
\$schema	String	<a href="https://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#">https://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#</a>
contentVersion	String	1.0.0.0
▼ parameters	Object	Object
▶ image	Object	Object
▶ BootstrapIgnition	Object	Object
▶ MasterIgnition	Object	Object
▶ WorkerIgnition	Object	Object
▶ WildcardZone	Object	Object
▶ numberOfNodes	Object	Object
▶ sshKeyData	Object	Object
▶ masterVMSize	Object	Object
▶ nodeVMSize	Object	Object



# Variables

▼ variables	Object	Object
gituser	String	glennswest
branch	String	master
version	String	4.1
baseTemplateUri	String	[concat('https://raw.githubusercontent.com/', variables('gituser'), '/ocpupi4azure/', variables('branch'), 'baseTemplateUri.json')]
baseVMachineTemplateUriNode	String	[concat(variables('baseTemplateUri'), 'node.json')]
baseVMachineTemplateUriMaster	String	[concat(variables('baseTemplateUri'), 'master.json')]
location	String	[resourceGroup().location]
virtualNetworkName	String	openshiftVnet
addressPrefix	String	10.0.0.0/16
nodesubnetName	String	nodeSubnet
nodesubnetPrefix	String	10.0.1.0/24
mastersubnetName	String	masterSubnet
mastersubnetPrefix	String	10.0.0.0/24
nodeStorageName	String	[concat('sa', resourceGroup().name)]
vhdStorageType	String	Premium_LRS
vnetId	String	[resourceId('Microsoft.Network/virtualNetworks', variables('virtualNetworkName'))]
nodeSubnetRef	String	[concat(variables('vnetId'), '/subnets/', variables('nodesubnetName'))]
masterSubnetRef	String	[concat(variables('vnetId'), '/subnets/', variables('mastersubnetName'))]
▶ rhel	Object	Object
baseVMachineTemplateUriBastion	String	[concat(variables('baseTemplateUri'), 'bastion.json')]
▶ vmSizesMap	Object	Object
tenantId	String	[subscription().tenantId]
bastionVMSize	String	Standard_DS1_v2
masterLoadBalancerName	String	[concat('MasterLb', resourceGroup().name)]

# Resources

▼ resources	Array	↕	Array
▶ Item[0]	Object	↕	Object
▶ Item[1]	Object	↕	Object
▶ Item[2]	Object	↕	Object
▶ Item[3]	Object	↕	Object
▶ Item[4]	Object	↕	Object
▶ Item[5]	Object	↕	Object
▶ Item[6]	Object	↕	Object
▶ Item[7]	Object	↕	Object
▶ Item[8]	Object	↕	Object
▶ Item[9]	Object	↕	Object
▶ Item[10]	Object	↕	Object
▶ Item[11]	Object	↕	Object
▶ Item[12]	Object	↕	Object
▶ Item[13]	Object	↕	Object

# Bootstrap VM











▼ Item[2]	Object	Object
name	String	bootstrap
type	String	Microsoft.Resources/deployments
apiVersion	String	2015-01-01
dependsOn	Array	Array
properties	Object	Object
mode	String	Incremental
templateLink	Object	Object
parameters	Object	Object
vmName	Object	Object
dnsName	Object	Object
sa	Object	Object
subnetRef	Object	Object
vmSize	Object	Object
ignition	Object	Object
baseTemplateUrl	Object	Object
imageReference	Object	Object
masterLoadBalancerName	Object	Object
availabilitySet	Object	Object
sshKeyData	Object	Object



# Master1

▼ Item[4]	Object	Object
name	String	master1
type	String	Microsoft.Resources/deployments
apiVersion	String	2015-01-01
▶ dependsOn	Array	Array
▼ properties	Object	Object
mode	String	Incremental
▶ templateLink	Object	Object
▼ parameters	Object	Object
▶ vmName	Object	Object
▶ dnsName	Object	Object
▶ sa	Object	Object
▶ subnetRef	Object	Object
▶ vmSize	Object	Object
▶ ignition	Object	Object
▶ baseTemplateUrl	Object	Object
▶ imageReference	Object	Object
▶ masterLoadBalancerName	Object	Object
▶ availabilitySet	Object	Object
▶ sshKeyData	Object	Object

# Workers

▼  Item[3]	Object	↕	Object
 name	String	↕	[concat('node', copyindex())]
 type	String	↕	Microsoft.Resources/deployments
 apiVersion	String	↕	2015-01-01
▶  copy	Object	↕	Object
▶  dependsOn	Array	↕	Array
▼  properties	Object	↕	Object
 mode	String	↕	Incremental
▶  templateLink	Object	↕	Object
▶  parameters	Object	↕	Object

# Steps By Step

- How to run:
  - Clone repo
  - setup\_azarm.sh
  - Setup your external dns
  - deploy\_azarm.sh

# Setup-azarm.sh

- What it does:
  - Run the installer for ignition files
  - Create resource group
  - Copy RHCOS image into resource group
  - Copy bootstrap ignition file into resource group (Too big for direct usage)
  - Build an indirect ignition file to point to bootstrap
  - Copy and encode ignitions into `runit.deploy.json`

```
[Glenns-MacBook-Pro-2:4.1 gwest$ ./setup_azarm.sh
INFO Consuming "Install Config" from target directory
Delete old resource group
Create new resource group
{
  "id": "/subscriptions/27523af7-7c6e-4e06-9d6e-070881f968e8/resourceGroups/gswx1",
  "location": "eastus",
  "managedBy": null,
  "name": "gswx1",
  "properties": {
    "provisioningState": "Succeeded"
  },
  "tags": null,
  "type": "Microsoft.Resources/resourceGroups"
}
Copy RHCOS to resource group
The default kind for created storage account will change to 'StorageV2' from 'Storage' in future
{
  "accessTier": null,
  "azureFilesIdentityBasedAuthentication": null,
  "creationTime": "2019-10-11T13:28:59.117484+00:00",
  "customDomain": null,
  "enableHttpsTrafficOnly": true,
  "encryption": {
    "keySource": "Microsoft.Storage",
    "keyVaultProperties": null,
    "services": {
      "blob": {
        "enabled": true,
        "lastEnabledTime": "2019-10-11T13:28:59.211236+00:00"
      },
      "file": {
        "enabled": true,
```

```
    "enabled": true,  
    "lastEnabledTime": "2019-10-11T13:28:59.211236+00:00"  
  },  
  "queue": null,  
  "table": null  
}  
,  
"failoverInProgress": null,  
"geoReplicationStats": null,  
"id": "/subscriptions/27523af7-7c6e-4e06-9d6e-070881f968e8/resourceGroups/gswx1/providers/Microsoft.Storage/storageAccounts/sagswx1",  
"identity": null,  
"isHnsEnabled": null,  
"kind": "Storage",  
"lastGeoFailoverTime": null,  
"location": "eastus",  
"name": "sagswx1",  
"networkRuleSet": {  
  "bypass": "AzureServices",  
  "defaultAction": "Allow",  
  "ipRules": [],  
  "virtualNetworkRules": []  
},  
"primaryEndpoints": {  
  "blob": "https://sagswx1.blob.core.windows.net/",  
  "dfs": null,  
  "file": "https://sagswx1.file.core.windows.net/",  
  "queue": "https://sagswx1.queue.core.windows.net/",  
  "table": "https://sagswx1.table.core.windows.net/",  
  "web": null  
},  
"primaryLocation": "eastus",  
"provisioningState": "Succeeded",  
"resourceGroup": "gswx1",
```



```
"secondaryEndpoints": null,
"secondaryLocation": null,
"sku": {
  "capabilities": null,
  "kind": null,
  "locations": null,
  "name": "Standard_LRS",
  "resourceType": null,
  "restrictions": null,
  "tier": "Standard"
},
"statusOfPrimary": "available",
"statusOfSecondary": null,
"tags": {},
"type": "Microsoft.Storage/storageAccounts"
}
{
  "created": true
}
{
  "completionTime": null,
  "id": "948dc086-b73c-4923-9334-354c9af2bf17",
  "progress": null,
  "source": null,
  "status": "pending",
  "statusDescription": null
}
Waiting on copy of vhd
unknown
Copy of vhd complete
Configure template with ignition files
{
  "created": true
```

```

{
  "etag": "\"0x8D74E4FC006FB75\"",
  "lastModified": "2019-10-11T13:34:32+00:00"
}
Url: https://sagswx1.blob.core.windows.net/files/bootstrap.ign
{
  "publicIp": {
    "ddosSettings": null,
    "dnsSettings": null,
    "etag": "W/\"bb653cb2-1465-4440-8fe3-7843e1432aff\"",
    "id": "/subscriptions/27523af7-7c6e-4e06-9d6e-070881f968e8/resourceGroups/gswx1/providers/Microsoft.Network/publicIPAddresses/gswx1",
    "idleTimeoutInMinutes": 4,
    "ipAddress": "52.168.85.165",
    "ipConfiguration": null,
    "ipTags": [],
    "location": "eastus",
    "name": "gswx1",
    "provisioningState": "Succeeded",
    "publicIpAddressVersion": "IPv4",
    "publicIpAllocationMethod": "Static",
    "publicIpPrefix": null,
    "resourceGroup": "gswx1",
    "resourceGuid": "7cf474ce-9033-4920-b3a4-269654c36eb0",
    "sku": {
      "name": "Basic",
      "tier": "Regional"
    },
    "tags": null,
    "type": "Microsoft.Network/publicIPAddresses",
    "zones": null
  }
}

```

Glenns-MacBook-Pro-2:4.1 gwest\$ ./setup\_azarm.sh

# DNS Setup

```
; Warning - every name in this file is ABSOLUTE!
$ORIGIN .
gw.ncc9.com      3600    IN      SOA     ns1.ncc9.com hostmaster.gw.ncc9.com 1 10800 3600 604800 3600
gw.ncc9.com      3600    IN      NS      ns1.ncc9.com
_etcd-server-ssl._tcp.gw.ncc9.com 86400    IN      SRV      1 1 2380 bootstrap-0.gw.ncc9.com
_etcd-server-ssl._tcp.gw.ncc9.com 86400    IN      SRV      1 1 2380 control-plane-0.gw.ncc9.com
_etcd-server-ssl._tcp.gw.ncc9.com 86400    IN      SRV      1 1 2380 control-plane-1.gw.ncc9.com
_etcd-server-ssl._tcp.gw.ncc9.com 86400    IN      SRV      1 1 2380 control-plane-2.gw.ncc9.com
api.gw.ncc9.com  3600    IN      A        40.117.96.124
api-int.gw.ncc9.com 3600    IN      A        10.0.0.31
bootstrap-0.gw.ncc9.com 86400    IN      A        10.0.0.4
control-plane-0.gw.ncc9.com 86400    IN      A        10.0.0.6
control-plane-1.gw.ncc9.com 86400    IN      A        10.0.0.5
control-plane-2.gw.ncc9.com 86400    IN      A        10.0.0.7
etcd-0.gw.ncc9.com 3600    IN      A        10.0.0.6
etcd-1.gw.ncc9.com 3600    IN      A        10.0.0.5
etcd-2.gw.ncc9.com 3600    IN      A        10.0.0.7
ns1.gw.ncc9.com  3600    IN      A        147.75.111.55
~
```

# Resource Group – At This Point

The screenshot shows the Microsoft Azure portal interface for a resource group named 'gswx1'. The top navigation bar includes the Microsoft Azure (Preview) logo, a search bar, and user information for 'gwest@redhat.com'. The left sidebar contains navigation links for Overview, Activity log, Access control (IAM), Tags, Events, Settings, Quickstart, Deployments, Policies, Properties, Locks, and Export template. The main content area displays the 'gswx1' resource group details, including the subscription 'BorisB-External-Partner' and the subscription ID '27523af7-7c6e-4e06-9d6e-070881f968e8'. Below this, there are filters for 'Filter by name...', 'All types', 'All locations', and 'No grouping'. A table lists 2 items:

Name	Type	Location
gswx1	Public IP address	East US
sagswx1	Storage account	East US

# Storage Account

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure (Preview) logo, a search bar, and user information (gwest@redhat.com). The breadcrumb trail indicates the current location: Home > gswx1 > sagswx1 - Containers.

The main content area is titled 'sagswx1 - Containers' and shows a storage account. Below the title, there is a search bar and a list of containers. The containers are listed in a table with columns: Name, Last modified, Public access, and Lease state.

Name	Last modified	Public access ...	Lease state
<input type="checkbox"/> files	10/11/2019, 8:34:28 AM	Blob	Available ...
<input type="checkbox"/> vhd	10/11/2019, 8:29:52 AM	Private	Available ...

The left sidebar contains a navigation menu with the following items:

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Data transfer
- Storage Explorer (preview)

# Bootstrap Ignition

The screenshot shows the Microsoft Azure portal interface. The browser address bar displays the URL: `ms.portal.azure.com/?microsoft_azure_marketplace_itemhidekey=bastionhostv2&microsoft_azure_compute_azbastion=tr...`. The portal header includes the 'Microsoft Azure (Preview)' logo, a search bar, and the user profile 'gwest@redhat.com'. The breadcrumb navigation shows the path: Home > gswx1 > sagswx1 - Containers > files.

The main content area is titled 'files' and is identified as a 'Container'. It features a search bar and a toolbar with actions: Upload, Change access level, Refresh, Delete, Change tier, Acquire lease, and a 'More' menu. The 'Authentication method' is 'Access key' with a link to 'Switch to Azure AD User Account'. The 'Location' is 'files'.

A search bar for blobs is present, with a checkbox for 'Show deleted blobs'. Below this is a table listing the files in the container:

Name	Modified	Access tier	Blob type	Size	Lease sta...
<input type="checkbox"/> bootstrap.ign	10/11/2019, 8:34:32 AM		Block blob	269.97 KiB	Available ...



# Start Deploy

```
[Glenns-MacBook-Pro-2:4.1 gwest$ ./deploy_azarm.sh  
Start Deployment  
█- Running ..
```

Essentials

Filter by name... All types All locations

1 of 27 items selected Show hidden types

<input type="checkbox"/>	Name	Type	Location
<input type="checkbox"/>	masteravailabilityset	Availability set	East US
<input type="checkbox"/>	nodeavailabilityset	Availability set	East US
<input checked="" type="checkbox"/>	gswx1intlb	Load balancer	East US
<input type="checkbox"/>	MasterLbgswx1	Load balancer	East US
<input type="checkbox"/>	wildcardzonelb	Load balancer	East US
<input type="checkbox"/>	bootstrap-0nic	Network interface	East US
<input type="checkbox"/>	master1nic	Network interface	East US
<input type="checkbox"/>	master2nic	Network interface	East US
<input type="checkbox"/>	master3nic	Network interface	East US
<input type="checkbox"/>	node01nic	Network interface	East US
<input type="checkbox"/>	node02nic	Network interface	East US
<input type="checkbox"/>	node03nic	Network interface	East US
<input type="checkbox"/>	bootstrap-0nsg	Network security group	East US
<input type="checkbox"/>	master1nsg	Network security group	East US
<input type="checkbox"/>	master2nsg	Network security group	East US
<input type="checkbox"/>	master3nsg	Network security group	East US
<input type="checkbox"/>	gswx1	Public IP address	East US
<input type="checkbox"/>	wildcardzone	Public IP address	East US
<input type="checkbox"/>	sagswx1	Storage account	East US

Essentials

Filter by name... All types All locations No grouping

1 of 27 items selected Show hidden types

<input type="checkbox"/> Name	Type	Location	
<input type="checkbox"/> master3nic	Network interface	East US	...
<input type="checkbox"/> node01nic	Network interface	East US	...
<input type="checkbox"/> node02nic	Network interface	East US	...
<input type="checkbox"/> node03nic	Network interface	East US	...
<input type="checkbox"/> bootstrap-0nsg	Network security group	East US	...
<input type="checkbox"/> master1nsg	Network security group	East US	...
<input type="checkbox"/> master2nsg	Network security group	East US	...
<input type="checkbox"/> master3nsg	Network security group	East US	...
<input type="checkbox"/> gswx1	Public IP address	East US	...
<input type="checkbox"/> wildcardzone	Public IP address	East US	...
<input type="checkbox"/> sagswx1	Storage account	East US	...
<input type="checkbox"/> bootstrap-0	Virtual machine	East US	...
<input type="checkbox"/> master1	Virtual machine	East US	...
<input type="checkbox"/> master2	Virtual machine	East US	...
<input type="checkbox"/> master3	Virtual machine	East US	...
<input type="checkbox"/> node01	Virtual machine	East US	...
<input type="checkbox"/> node02	Virtual machine	East US	...
<input type="checkbox"/> node03	Virtual machine	East US	...
<input type="checkbox"/> openshiftVnet	Virtual network	East US	...

```
-- Logs begin at Fri 2019-10-11 14:26:01 UTC, end at Fri 2019-10-11 14:55:28 UTC. --
Oct 11 14:27:17 bootstrap-0 systemd[1]: Started Bootstrap a Kubernetes cluster.
Oct 11 14:27:20 bootstrap-0 bootkube.sh[1573]: Pulling release image...
Oct 11 14:27:30 bootstrap-0 bootkube.sh[1573]: 9e928444323ac8efafc26ecc9b42be1afcf46706ee351826098db7f33b6e7b4
Oct 11 14:28:08 bootstrap-0 bootkube.sh[1573]: Rendering Cluster Version Operator Manifests...
Oct 11 14:28:10 bootstrap-0 bootkube.sh[1573]: Rendering cluster config manifests...
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_project.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_03_quota-openshift_01_clusterresourcequota.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_apiserver.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_build.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_dns.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_ingress.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_network.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_03_authorization-openshift_01_rolebindingrestriction.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_authentication.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_console.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_02_config.clusterrole.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_featuregate.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_image.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_openshift-config-managed-ns.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_03_security-openshift_01_scc.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_infrastructure.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_oauth.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_openshift-config-ns.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_config-operator_01_scheduler.crd.yaml
Oct 11 14:28:13 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/config-bootstrap/manifests/0000_10_quota-openshift_01_clusterresourcequota.crd.yaml
Oct 11 14:28:14 bootstrap-0 bootkube.sh[1573]: Rendering Kubernetes API server core manifests...
```

```
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/bootstrap-manifests/kube-apiserver-pod.yaml
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/manifests/secret-kube-apiserver-to-kubelet-signer.yaml
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/manifests/secret-loadbalancer-serving-signer.yaml
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/manifests/00_openshift-kube-apiserver-ns.yaml
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/manifests/cluster-role-kube-apiserver.yaml
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/manifests/configmap-admin-kubeconfig-client-ca.yaml
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/manifests/configmap-csr-controller-ca.yaml
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/manifests/configmap-sa-token-signing-certs.yaml
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/manifests/secret-control-plane-client-signer.yaml
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/manifests/secret-service-network-serving-signer.yaml
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/manifests/00_openshift-kube-apiserver-operator-ns.yaml
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/manifests/cluster-role-binding-kube-apiserver.yaml
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/manifests/secret-aggregator-client-signer.yaml
Oct 11 14:28:17 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-apiserver-bootstrap/manifests/secret-localhost-serving-signer.yaml
Oct 11 14:28:21 bootstrap-0 bootkube.sh[1573]: Rendering Kubernetes Controller Manager core manifests...
Oct 11 14:28:24 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-controller-manager-bootstrap/bootstrap-manifests/kube-controller-manager-pod.yaml
Oct 11 14:28:24 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-controller-manager-bootstrap/manifests/secret-initial-kube-controller-manager-service-account-p
Oct 11 14:28:24 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-controller-manager-bootstrap/manifests/00_openshift-kube-controller-manager-ns.yaml
Oct 11 14:28:24 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-controller-manager-bootstrap/manifests/00_openshift-kube-controller-manager-operator-ns.yaml
Oct 11 14:28:24 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-controller-manager-bootstrap/manifests/secret-csr-signer-signer.yaml
Oct 11 14:28:27 bootstrap-0 bootkube.sh[1573]: Rendering Kubernetes Scheduler core manifests...
Oct 11 14:28:30 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-scheduler-bootstrap/bootstrap-manifests/kube-scheduler-pod.yaml
Oct 11 14:28:30 bootstrap-0 bootkube.sh[1573]: Writing asset: /assets/kube-scheduler-bootstrap/manifests/00_openshift-kube-scheduler-ns.yaml
Oct 11 14:28:34 bootstrap-0 bootkube.sh[1573]: Rendering MCO manifests...
Oct 11 14:28:37 bootstrap-0 bootkube.sh[1573]: I1011 14:28:36.979114      1 bootstrap.go:86] Version: 4.1.18-201909201915-dirty (a2175e587b007272f26305fe7d8b603c49e8f1fc)
Oct 11 14:28:37 bootstrap-0 bootkube.sh[1573]: I1011 14:28:36.982488      1 bootstrap.go:142] manifests/machineconfigcontroller/controllerconfig.yaml
Oct 11 14:28:37 bootstrap-0 bootkube.sh[1573]: I1011 14:28:36.985314      1 bootstrap.go:142] manifests/master.machineconfigpool.yaml
Oct 11 14:28:37 bootstrap-0 bootkube.sh[1573]: I1011 14:28:36.985578      1 bootstrap.go:142] manifests/worker.machineconfigpool.yaml
Oct 11 14:28:37 bootstrap-0 bootkube.sh[1573]: I1011 14:28:36.985814      1 bootstrap.go:142] manifests/bootstrap-pod-v2.yaml
Oct 11 14:28:37 bootstrap-0 bootkube.sh[1573]: I1011 14:28:36.986119      1 bootstrap.go:142] manifests/machineconfigserver/csr-bootstrap-role-binding.yaml
Oct 11 14:28:37 bootstrap-0 bootkube.sh[1573]: I1011 14:28:36.986404      1 bootstrap.go:142] manifests/machineconfigserver/kube-apiserver-serving-ca-configmap.yaml
Oct 11 14:28:38 bootstrap-0 bootkube.sh[1573]: Starting etcd certificate signer...
Oct 11 14:28:41 bootstrap-0 bootkube.sh[1573]: d853c62d2f625dce282c0897a04841819b38a765ee230ab3b82478df87746fd7
```

# Current Status

- Working:
  - Scripts do proper preparation
    - Ignition Files are getting passed and used
  - ARM Template deploys the intended resources
  - Bootstrap node is booting, and running bootstrap
- Not Done/Not Working:
  - Need to add a bastion(rhel) for ease of debug
  - Internal LB Not routing/not found by masters
  - Masters not booting due to above
  - Need to fix up the apps loadbalancer/ip



# Where's it at:

The screenshot shows the GitHub interface for the repository `glennswest / ocpupi4azure`. The browser address bar displays `github.com/glennswest/ocpupi4azure/tree/master/4.1`. The repository page includes a search bar, navigation links for Pull requests, Issues, Marketplace, and Explore, and a header with repository statistics: 1 Unwatch, 0 Stars, and 0 Forks. Below the header, a tabbed interface shows the 'Code' tab selected. The main content area displays the file tree for the `4.1` branch, listing files such as `azuredeploy.json`, `azuredeploy.parameters.json`, `deploy_azarm.sh`, `master.json`, `node.json`, `setup-variables.py`, and `setup_azarm.sh`, each with a brief description and a commit timestamp.

Branch: master `ocpupi4azure / 4.1 /` Create new file Upload files Find file History

glennswest Cleanup extra files Latest commit d4ae4e8 15 seconds ago

..		
<code>azuredeploy.json</code>	Add a dependency for internallb and change ip address	2 hours ago
<code>azuredeploy.parameters.json</code>	Add sshkeydata for nodes	2 days ago
<code>deploy_azarm.sh</code>	Split into two - one for setup one for deploy	2 hours ago
<code>master.json</code>	Change the way keydata is passed and remove tags from master	2 days ago
<code>node.json</code>	Fix missing parameters	yesterday
<code>setup-variables.py</code>	Make sure parameters have correct format for bootstrap ignition	2 days ago
<code>setup_azarm.sh</code>	Split into two - one for setup one for deploy	2 hours ago

<https://github.com/glennswest/ocpupi4azure/tree/master/4.1>