



# UPI ARM Sprint Demo

DEMO 2

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# WIP

- ~~• Reconfigure internal load balancer to handle node boots - size 2~~
- Fix wildcard app load balancer - size 2
- ~~• Change scripts to parametrise resource group name - size 1~~
- ~~• Change to use 4.2 nightlies - size 2~~
- Add azure cloud provider - size 3 – In Progresss – Pending Blocker
- Dns local or automation - size 2
- ~~• Add bastion for debug - size 1 - Unneeded~~
- Work to support ci of azure arm upi - need help from someone who does ci
- Cleanup of scripts

# Internal Load Balancer – Created

Showing 12 resources created

<input type="checkbox"/> Name ↑↓	Type ↑↓	Location ↑↓
<input type="checkbox"/>  masteravailabilityset	Availability set	East US
<input type="checkbox"/>  nodeavailabilityset	Availability set	East US
<input type="checkbox"/>  bastion_OsDisk_1_69cf9d779672457b87c7cc003cd69a18	Disk	East US
<input type="checkbox"/>  MasterLbgswx1	Load balancer	East US
<input type="checkbox"/>  gswx1intlb	Load balancer	East US
<input type="checkbox"/>  wildcardzone1b	Load balancer	East US
<input type="checkbox"/>  bastion869	Network interface	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

# Internal Load Balancer - Working

The screenshot displays the Azure portal interface for an Internal Load Balancer. The left-hand navigation pane includes sections for Overview, Settings, and Support + troubleshooting. The main content area shows the configuration details for the load balancer 'gswx1intlb'.

**Navigation Pane:**

- Overview (selected)
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Settings
  - Frontend IP configuration
  - Backend pools
  - Health probes
  - Load balancing rules
  - Inbound NAT rules
  - Properties
  - Locks
  - Export template
- Support + troubleshooting
  - New support request

**Load Balancer Configuration:**




Property	Value
Resource group (change)	gswx1
Location	East US
Subscription (change)	BorisB-External-Partner
Subscription ID	27523af7-7c6e-4e06-9d6e-070881f968e8
SKU	Basic
Tags (change)	displayName : OpenShiftIntLB
Backend pool	masters (4 virtual machines)
Health probe	2 probes
Load balancing rule	2 rules
NAT rules	0 inbound
Private IP address	10.0.0.31

# Internal Load Balancer – Backend Pool

[Home](#) > [gswx1](#) > [gswx1intlb - Backend pools](#) > [masters](#)


## masters

gswx1intlb

 Save  Discard  Delete

**Backend pool name**

masters

**IP version** 





IPv4

**Associated to**

[masteravailabilityset \(availability set\)](#)

**Target network IP configurations**

Only VMs within the current availability set can be chosen. Once a VM is chosen, you can select a network IP configuration related to it.

Virtual machine: master3 Network IP configuration: master3nic/ipconfig1 (10.0.0.4)	
Virtual machine: master1 Network IP configuration: master1nic/ipconfig1 (10.0.0.5)	
Virtual machine: master2 Network IP configuration: master2nic/ipconfig1 (10.0.0.6)	
Virtual machine: bootstrap-0 Network IP configuration: bootstrap-0nic/ipconfig1 (10.0.0.7)	

+ Add a target network IP configuration

**Associated load balancing rules**

[lbrint](#)

[lb22623](#)



# Azure VHD

- Currently Azure (VHD) VM Images are just stored in a storage account
- Every time you run the ARM template due to this we must “copy” the image into the resource group used by the ARM template
- Note that a normal “RHEL” Image has a different mechanism, that effectively includes distribution of images to all av zones, and speeds up the vm spin up. (10-20 minutes of extra time for storage account)

Azure

VHD Image blob URL

<https://rhcos.blob.core.windows.net/imagebucket/rhcos-42.80.20191010.0.vhd>

# Card – Parametertised scripts

- Scripts have been changed to support giving the resource group on command line

```
./setup_azarm.sh gswx1  
read -p "Press [Enter] to start deploy"  
./deploy_azarm.sh      gswx1
```

# Card – Move to 4.2

- Changed Folder structure to be version independent
- Added nightly build “Internal” script to pull installer
- Changed rhcos version and storage account source
- Change scripts to reflect above

```
[Glenns-MacBook-Pro-2:ocpupi4azure gwest$ pwd
/Users/gwest/ocpupi4azure
[Glenns-MacBook-Pro-2:ocpupi4azure gwest$ ls
README.md      images          ssh_mac.md      wip
arm            ssh_linux.md   ssh_windows.md
```



# Change version of OpenShift for ARM UPI

- Change the RHCOS Image name in azuredeploy.parameters.json

```
Glenns-MacBook-Pro-2:arm gwest$ cat azuredeploy.parameters.json
{
  "$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-42.80.20191010.0.vhd"
    },
    "rhcos_image" : {
      "value" : "rhcos-42.80.20191010.0.vhd"
    }
  }
}
```

- Change image variable in set\_azarm.sh

```
#export VHD_NAME=rhcos-410.8.20190504.0-azure.vhd
export VHD_URL=https://rhcos.blob.core.windows.net/imagebucket/
export VHD_NAME=rhcos-42.80.20191010.0.vhd
```

# First 4.2 Nightly Deployment Success

Filter by deployment name or resources in the deployment...			
<input type="checkbox"/> Deployment name	Status	Last modified	Duration
<input type="checkbox"/> <a href="#">master3</a>	✔ Succeeded	10/16/2019, 11:09:04 AM	1 minute 41 seconds
<input type="checkbox"/> <a href="#">bootstrap</a>	✔ Succeeded	10/16/2019, 11:08:53 AM	1 minute 29 seconds
<input type="checkbox"/> <a href="#">node2</a>	✔ Succeeded	10/16/2019, 11:08:48 AM	1 minute 24 seconds
<input type="checkbox"/> <a href="#">master1</a>	✔ Succeeded	10/16/2019, 11:08:46 AM	1 minute 23 seconds
<input type="checkbox"/> <a href="#">master2</a>	✔ Succeeded	10/16/2019, 11:08:47 AM	1 minute 23 seconds
<input type="checkbox"/> <a href="#">node1</a>	✔ Succeeded	10/16/2019, 11:08:40 AM	1 minute 16 seconds
<input type="checkbox"/> <a href="#">node0</a>	✔ Succeeded	10/16/2019, 11:08:45 AM	1 minute 21 seconds
<input type="checkbox"/> <a href="#">gswx1</a>	✔ Succeeded	10/16/2019, 11:09:13 AM	1 minute 54 seconds

# First 4.2 Bootstrap and Cluster at 99%

```
Glenns-MacBook-Pro-2:arm gwest$ openshift-install --dir=gw wait-for bootstrap-complete --log-level debug
DEBUG OpenShift Installer v4.1.18-201909201915-dirty
DEBUG Built from commit 33daf58e035dfd94f9ad23cf8d81e6665ff26c57
INFO Waiting up to 30m0s for the Kubernetes API at https://api.gw.ncc9.com:6443...
DEBUG Still waiting for the Kubernetes API: Get https://api.gw.ncc9.com:6443/version?timeout=32s: dial tcp 52.170.203.23:6443: i/o timeout
DEBUG Still waiting for the Kubernetes API: the server could not find the requested resource
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DEBUG Still waiting for the Kubernetes API: the server could not find the requested resource
DEBUG Still waiting for the Kubernetes API: Get https://api.gw.ncc9.com:6443/version?timeout=32s: dial tcp 52.170.203.23:6443: connect: connection refused
INFO API v1.14.6+1e5e0b1 up
INFO Waiting up to 30m0s for bootstrapping to complete...
DEBUG Bootstrap status: complete
INFO It is now safe to remove the bootstrap resources
Glenns-MacBook-Pro-2:arm gwest$
```

```
[Glenns-MacBook-Pro-2:arm gwest$ openshift-install --dir=gw wait-for install-complete --log-level debug
DEBUG OpenShift Installer v4.1.18-201909201915-dirty
DEBUG Built from commit 33daf58e035dfd94f9ad23cf8d81e6665ff26c57
INFO Waiting up to 30m0s for the cluster at https://api.gw.ncc9.com:6443 to initialize...
DEBUG Still waiting for the cluster to initialize: Some cluster operators are still updating: authentication, console, image-registry
DEBUG Still waiting for the cluster to initialize: Working towards 4.2.0-0.nightly-2019-10-11-230724: 99% complete
DEBUG Still waiting for the cluster to initialize: Some cluster operators are still updating: authentication, console, image-registry
█
```

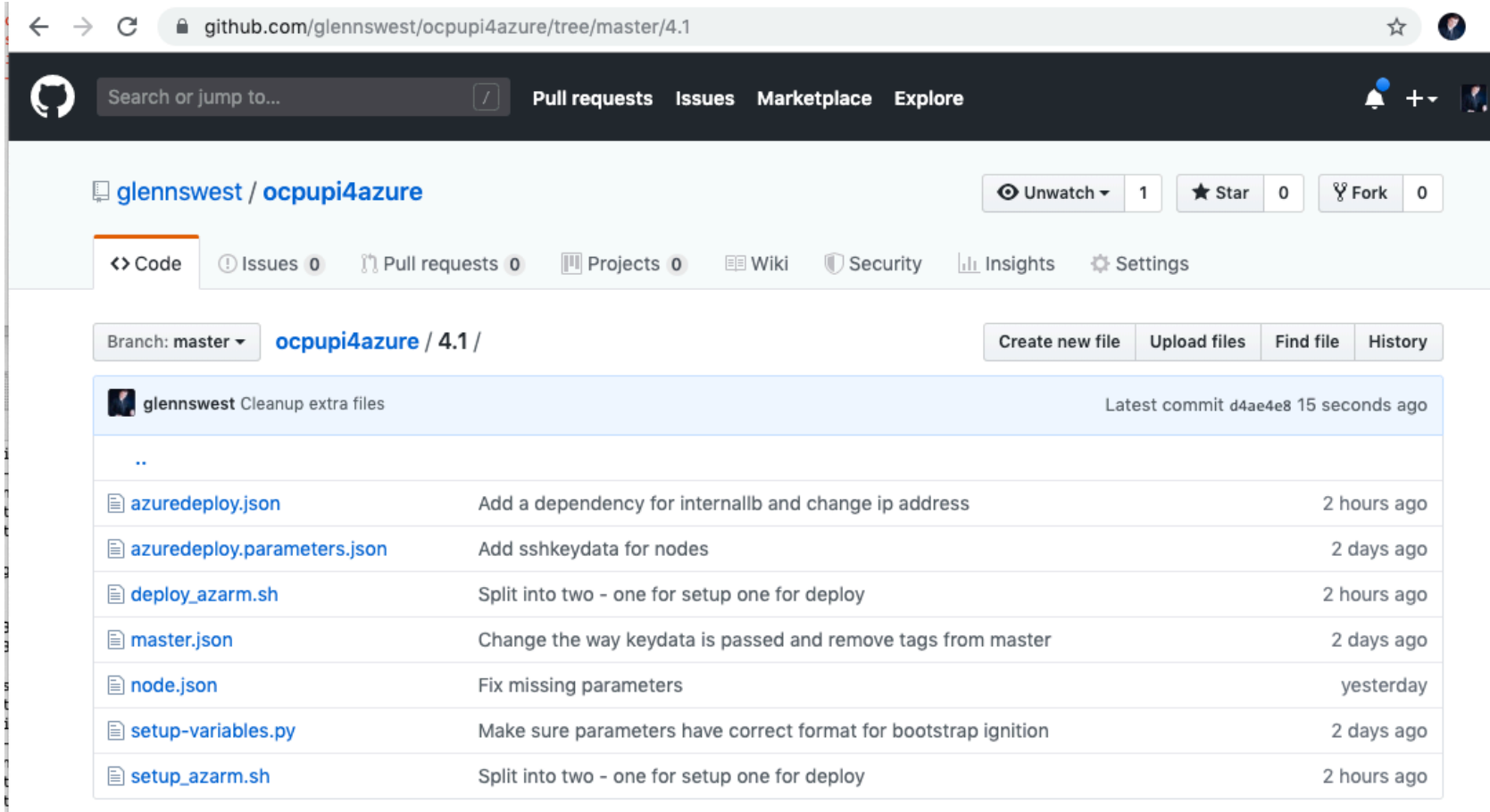
# Current Status

- Working:
  - Internal Load Balancer is Fixed and Working
- Testings Pending
  - Azure Cloud Provider
  - App Load Balancer/Portal
- New Cards
  - 4.3 – Test Bare Metal – In progress
  - Introduction/Overview Presentation
    - Include How To various subjects
      - Changing Internal IP's
      - Changing Versions
      - Adding More Workers

# Resolved Issues

- Resolved Issues
  - SSH Not Working to masters – ssh key had extraneous character
  - Masters Not Booting – DNS Address Issue Fixed
- Blockers
  - Azure Quota – Requested yesterday – Still not resolved

# Where's it at:



The screenshot shows the GitHub interface for the repository `glennswest / ocpupi4azure`. The URL in the browser is `github.com/glennswest/ocpupi4azure/tree/master/4.1`. The repository has 1 star and 0 forks. The `Code` tab is selected, showing the file list for the `master` branch at commit `4.1`. The latest commit by `glennswest` is titled "Cleanup extra files" and was made 15 seconds ago. The file list includes:

File	Description	Time
..		
<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>