

How to setup Fermicloud VMs with Static IPs

1. Go to miscomp.fnal.gov
2. Click on MISNET
On the form that shows up
3. Enter your employee id
4. Choose following -
Identifier type - Node/System/Nick Name
Identifier - FERMICLOUD-HA
5. Click 'Submit'

Scroll all the way down to the bottom of page

6. In 'Add New Network Interface' section
Choose:
Network Type - Add static interface (ip)
Subnet/Area - 131.225.154.0
Node name - THE NAME OF NODE (except the domain name)

If you have more nodes for which you want to request static ip, click 'Add another network interface' and repeat step 6 above

When all nodes are done,

7. Click 'Submit to Data Comm'

Fix any errors that show up (if they do)

8. If request was submitted successfully, you will receive an email
9. Takes at most a day for request to be processed

In meantime, go to
<https://fermi.service-now.com>

10. Click on 'Service Catalog' on left
11. Click on 'Accounts/Additional Kerberos Items'

12. On form that comes up, Check 'Host and FTP principals' and provide FQDN of the node name

13. Scroll all the way up and click 'Order'

Go one level back in your browser window and repeat steps 12, 13 for any additional nodes.

Wait till you get the host/ftp passwords for making keytab files

After you have received them

14. Login to fermigrid0 as root

15. `cd /usr/local/admin/bin`

16. Generate keytabs

`./makekeytab [hostname (without fnal.gov)] [password]`

Note: If you have a bunch of hosts you need to do this for, look in to `make_all_keytab` or you can just run `makekeytab` for each host

17. Upon successful generation of keytab files, you can find them in proper subdirectory at this location

`ls /usr/local/admin/keytab/`

The `makekeytab` script strips off any numbers in the hostname for the top-level directory it creates

for example - for nodes `dcache-pool1/dcache-pool2`, there will be top level directory called `dcache-pool`, which will then have subdirectories `dcache-pool1/dcache-pool2`

18. Copy over these keytabs to the cloud infrastructure

a. Either manually

`cd /usr/local/admin/keytab`

`scp dcache-admin/dcache-admin/krb5.keytab`

`root@fcl002k2:/var/www/html/dcache-admin`

b. Or use the script `/usr/local/admin/bin/copykeytab_cloud.sh`

Next step is to generate host/http certificates for these nodes
For this, follow the how-to document on generating host/http certs

By now, your request for static ips for these nodes should have been processed
by networking (Rick Theis)

Keep those handy and request new Mac addresses

19. Go to miscomp.fnal.gov

20. Enter your employee id

21. Choose following -
Identifier type - Node/System/Nick Name
Identifier - FERMICLOUD-HA

On top of page, you will see option of adding more mac addresses
Look for highest number that has been used

In a MAC address

First 3 octets are 52-54-00 - this is KVM standard

Next octet is 02 - this is fermicloud standard

Next octet represents the hostname of the node from whose pool you are
requesting mac addresses (background info: all fermicloud base nodes have a
pool of 16 mac addresses that can be used)- example 07 - for fcl007

After you have typed in all mac addresses, hit 'Submit to Data Comm'
This usually gets approved and you can go ahead without waiting for data comm
to get back to you

22.

Login as user 'oneadmin' to fcl301 and first see which MAC addresses have
already been used

onevnet show 3 (3 is the value of vnet)

So, at this point you know the MAC address and IP address. Then, run command

'onevnet addleases <vnet> <IPAddress> <MACAddress>.

Example command is

onevnet addleases 3 131.225.154.108 54:52:00:02:18:0b

Copy one of the existing templates, insert the new fixed ip number and
select the default SLF5 image

Use onetemplate create and onetemplate instantiate to launch the VM
Make the specific changes you need
Use "onevm saveas" to save the VM image
Use "onevm shutdown:" to shut down the VM
Modify the template file to use the saved image from the repository--be sure to mark it as "persistent"