NGAS Deployment and Configuration Standards

Words and their Meanings

We will try to avoid using ambiguous terms like 'NGAS server' in favor of more specific terms:

- NGAS Service: an instance of the the NGAS software running on an NGAS node.
- Service Number: an enumeration of the NGAS services running on an NGAS node
- Port Number: the tcp/ip port an NGAS service listens to.
- NGAS Node: a computer running one or more NGAS services.
- NGAS Cluster: one or more NGAS nodes sharing a common cluster name and relational database.
- NGAS Root directory: the base directory a service executes from.
- NGAS Volume: a storage partition NGAS uses to store files
- NGAS Copy Node: an NGAS Node that is a duplicate of another NGAS node, using subscription or rsync

NGAS Node Host Names

Server host names follow this general format and should be under 128 characters long:

`$SITE-$CLUSTER-ngas-$PROFILE-$NUMBER`, e.g. `soc-ssa-ngas-prod-001`

What the Node Host Name Components Mean

$SITE	$CLUSTER	$PROFILE	$NUMBER
2 to 3 lowercase letters representing site location: • cv: Charlottesville, Virginia • soc: Socorro, New Mexico • gb: Green Bank, West Virginia • uva: University of Virginia • nmt: New Mexico Tech Non-NRAO Sites: • jao: Joint ALMA Observatory (Chile) • eso: European Southern Observatory (Germany) • naoj: National Astronomy Observatory (Japan)	• naasc • ssa • gbo	• prod: production • test: test • dev: development • copy: duplicate	001 onwards

Mapping Old Node Host Names to New Node Host Names

Old Name	New Name	Old Name	New Name
nmngas01	soc-ssa-ngas-prod-001	cvngas01	cv-ssa-ngas-prod-001
nmngas02	soc-ssa-ngas-prod-002	cvngasttest01	cv-ssa-ngas-test-001
nmngas03	soc-ssa-ngas-prod-003	cvngas01-mirror	uva-ssa-ngas-copy-001
nmngas04	soc-ssa-ngas-prod-004	vegas-arc-03	uva-ssa-ngas-prod-001
nmngas01mirror	nmt-ssa-ngas-copy-001	vegas-arc-04	uva-ssa-ngas-prod-002
nmngas02mirror	nmt-ssa-ngas-copy-002	ngas-01	cv-naasc-ngas-prod-001
nmngas03mirror	nmt-ssa-ngas-copy-003	ngas-02	cv-naasc-ngas-prod-002
nmngas04mirror	nmt-ssa-ngas-copy-004	ngas-03	cv-naasc-ngas-prod-003
nmngastest01	soc-ssa-ngas-test-001		
nmngastest02	soc-ssa-ngas-test-002		

Ports and Service Numbers

A given NGAS node can be configured to run more than one service, this can be described as a service number and a port number. The first service on a node will be service number 1, and it will bind to port 7777. Subsequent services increment both the service number and port number, so the second service on a node would be service number 2, port 7778, and so on.

Partition Names and Mount Points

- NGAS nodes will have one root directory per service:
  - The root directory will be /NGAS$Number, so, /NGAS1 for the first service, /NGAS3 for the third and so on.
  - Nodes that will only run one service can use /NGAS for the root directory, omitting the service number.
- Volumes will be named VolumeNN, where NN is a zero padded number starting at 1, so Volume01, Volume02 and so on.
- Volumes will be mounted at $ROOT_DIRECTORY/volumes/$VOLUME_NAME

    - e.g. /NGAS2/volumes/Volume03, /NGAS/volumes/Volume12

Alerts, Monitoring & Logging

- We will aggregate logs in the SSA metrics server.
- We will provide service interruption alerts via Slack
- We will track the load on the NGAS servers via the metrics server
- This will be set up and configured on each host via an Ansible playbook