



Centralized Node Attribute Database for High Performance Computing

Nisha Prabhakar

Meghan Utter

Computing/COMP-LC/HPC Cluster Engineer Academy



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Motivation

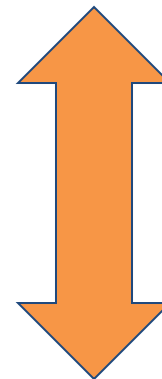
- The *genders* tool is an open source LLNL tool that stores information about node configurations
- There is no way to access this information without logging into a node
- -> we created a *centralized database* which stores all the genders of all the clusters





Approach

1. Installed the genders library for python in python3
2. created the structure of the database
3. used python3 to populate the database
 - a. adapted the script to comb through multiple directories
4. created python methods for users to query from the database





Results and Conclusions

root@boron2:~

```
[root@boron2 ~]# nodeattr -q login
[root@boron2 ~]# python3 genBase.py3 -q login
direct[2-3]
[root@boron2 ~]#
```

- nodeattr -q queries the local file, while our script queries the database in a similar manner
- *who does this benefit:* system engineers
- *what's next*
 - use gitlab to automate updates to the database
 - implement the database in larger clusters (integrate with cfengine structure)
 - ideally, any cluster would be able to use our query script to query the central node



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