Centralized Node Attribute Database for High Performance Computing

Nisha Prabhakar
Meghan Utter
Computing/COMP-LC/HPC Cluster Engineer Academy

LLNL-PRES-812877

This work was performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under contract DE-AC52-07NA27344. Lawrence Livermore National Security, LLC

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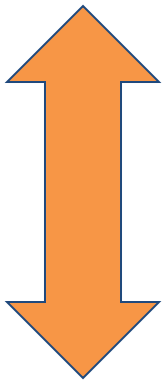
Motivation

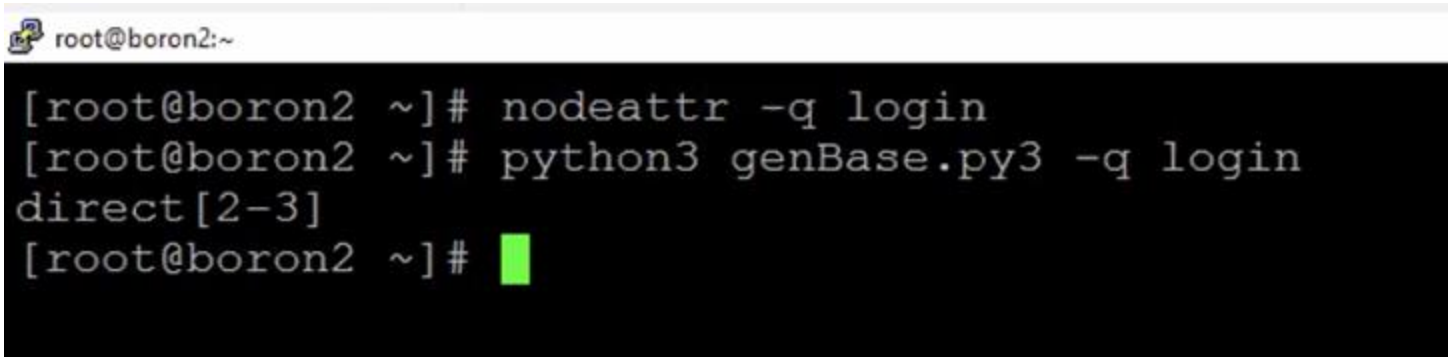
- The *genders* tool is an open source LLNL tool that stores information about node configurations
- There is no way to access this information without logging into a node
- -> we created a *centralized database* which stores all the genders of all the clusters

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



- 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