

National Aeronautics and
Space Administration



Designing Ansible for Large Scale Environments

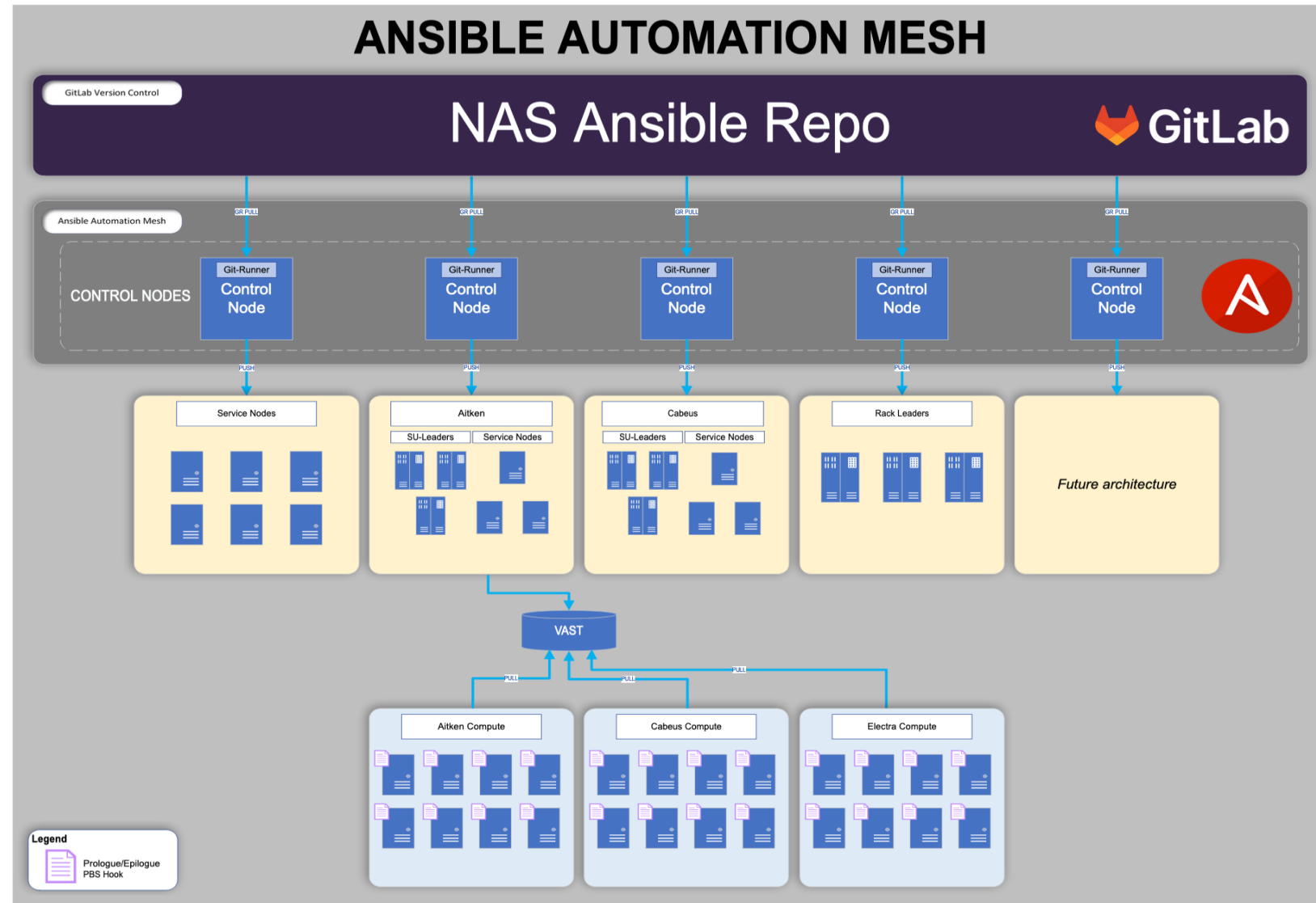
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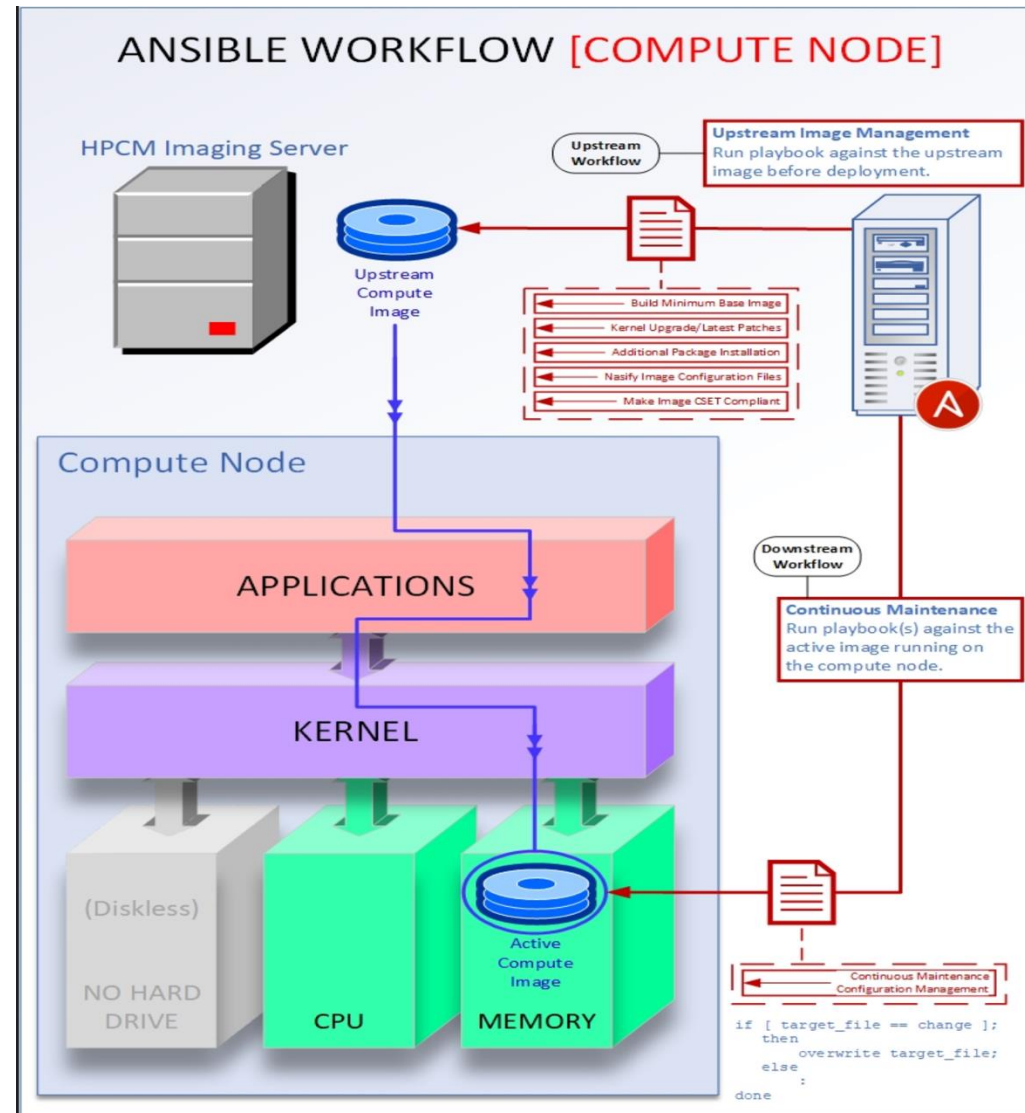
Scaling Ansible for a Large Environment

- The NASA Advanced Super Computing (NAS) division has taken a few different approaches in regard to running Ansible at scale.
- After trial and error, the division has landed on scaling the Ansible control nodes horizontally across each cluster.
- This design employs a centralized Gitlab instance, git-runners allocated for each control node, and an inventory of hosts for the corresponding cluster.



Using Ansible to Automate Building Compute Images

- Ansible is leveraged to automate and assist HPCM with building compute images.
 - Ansible automates repetitive HPCM commands used to build images or update kernels.
 - Ansible community modules (such as `ansible.posix.synchronize`) are used in conjunction with HPCM to build the image.
- This workflow is broken up into two terms – upstream and downstream.
 - Upstream refers to building the compute image
 - Downstream refers to Ansible plays being run on the node.





Questions?

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