

Planning an Enterprise OpenStack Deployment

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Agenda

- Introduction
- What initial considerations need to be made?
- What specific details need to be planned, and how do they impact the overall implementation?
- SUSE® OpenStack Cloud 5 on NetApp Clustered Data ONTAP

Why bother?



“What if we don’t change at all ...
and something magical just happens?”

Why bother?



Initial Considerations

Initial Considerations

What problem are you trying to solve by implementing a private Infrastructure-as-a-service (IaaS) cloud?

Initial Considerations

Who are the expected end-users of your cloud, and what do they want to get out of it?

Initial Considerations

How much of your current infrastructure and workflows do you want to keep?

Initial Considerations

What are the business and technical requirements for the project?

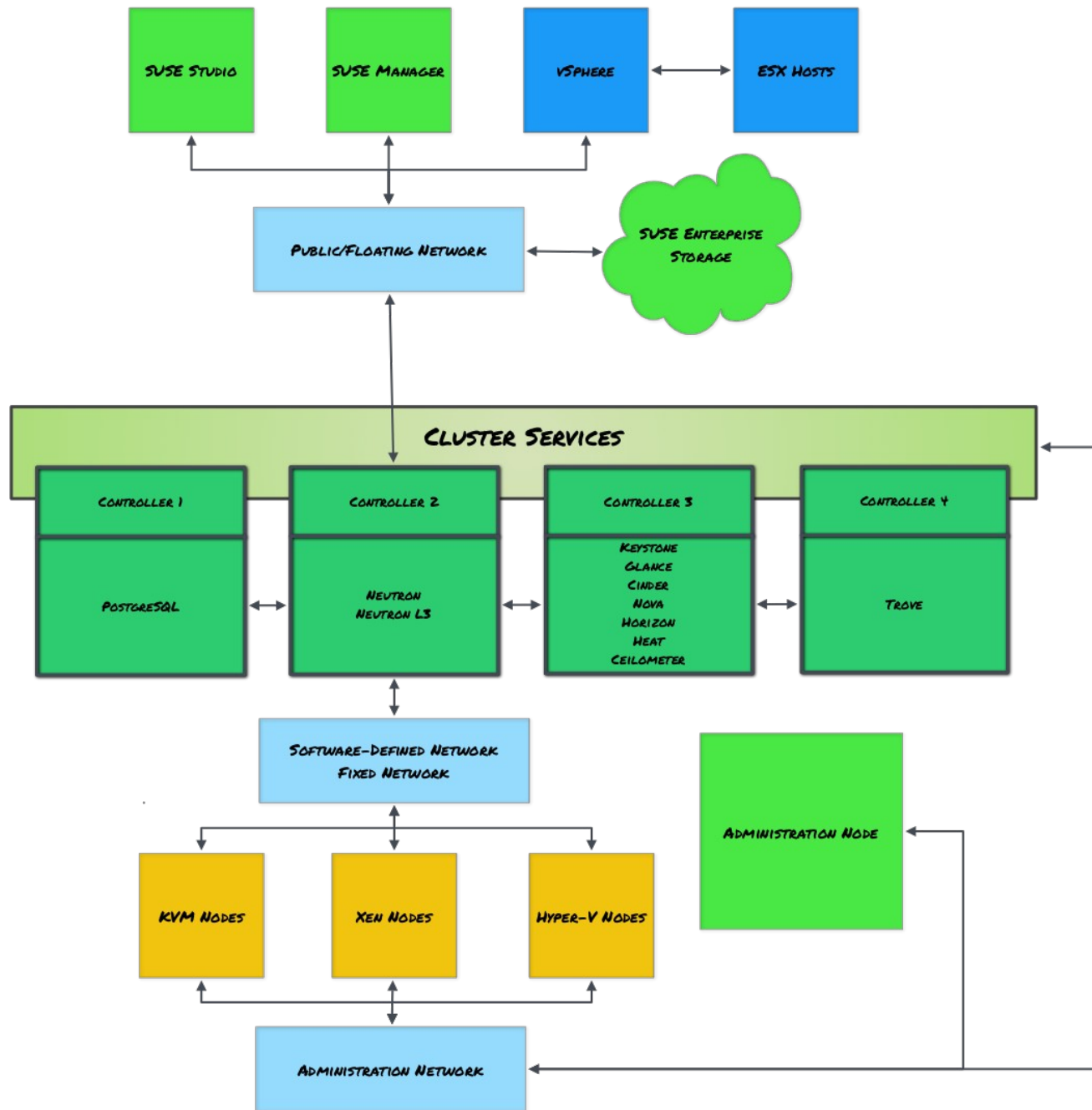
Initial Considerations

What are the constraints for this project?

Initial Considerations

What additional resources do you need to have a successful deployment?

Technical Details



Control Plane

- How do you want to group the control plane services
 - Typical separated services
 - Backend database
 - Neutron L3 agent
 - Trove
- Is a highly-available infrastructure important?
 - What do you want to use for shared storage for RabbitMQ and PostgreSQL?
 - What STONITH mechanism is appropriate?

Infrastructure

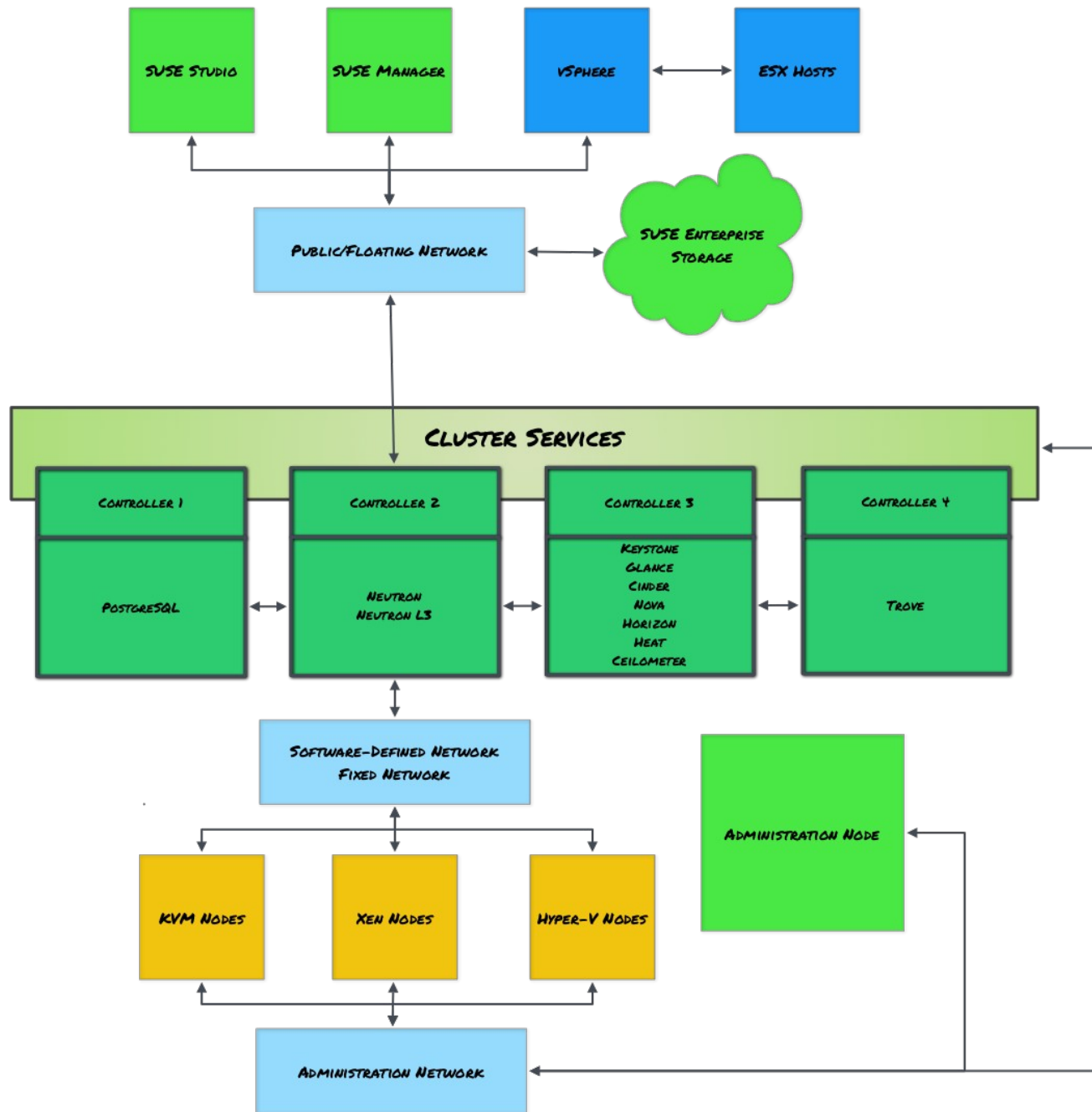
- Which hypervisor(s) do you want to support?
 - KVM, Xen, VMware, Hyper-V
- How do you want to handle storage?
 - What storage backends are available?
 - SAN, local disk, Ceph, NAS, etc.
 - Which services?
 - Storing virtual machines
 - Image repository
 - Volume storage
 - Object storage

Network

- Which Neutron plugin do you want to use?
 - Linuxbridge
 - VLAN
 - Open vSwitch
 - VMware
 - Cisco
- What encapsulation protocol do you want to use?
 - VLAN
 - GRE

Network

- Admin 192.168.124.0/24
- Fixed 192.168.123.0/24
- SDN 192.168.130.0/24
- Public 192.168.126.0/24
- Floating 192.168.126.0/24
- Storage 192.168.125.0/24 (Swift)



Additional Considerations

Additional Considerations

- Identify a patching strategy
 - Updater barclamp
 - SUSE Manager
 - Manual
 - “Cross your fingers and hope I can get away without it”

Additional Considerations

When going from POC to production, which parts of your infrastructure will need to be modified?

- Networking
- Physical infrastructure
- Single-cluster control plane → Multi-cluster control plane
- Integration with Active Directory (or other LDAP store)
- SUSE Studio integration

Additional Additional Consideration



SUSE OpenStack Cloud Deployment Guide

www.suse.com/documentation/suse-cloud-5

Thank you.





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