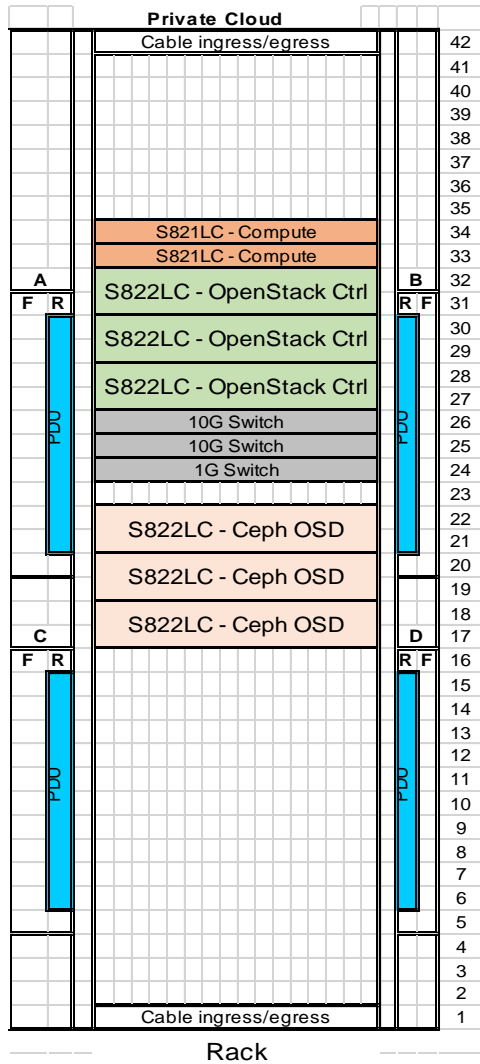


- High Level Component Architecture Diagram – Private Cloud



OpenStack Software Stack:

Ubuntu 16.04 (all nodes)
OpenStack Newton
Ceph Jewel
Operational Management
- Nagios Core
- ELK Stack (Elasticsearch, Logstash, Kibana)

Network : (HA) – Bonding

2 x Mellanox SX1410 (8831-S48)
1 x Lenovo G8052 (7120-48E)

Rack:

QTY: 1

SlimRack 7965-94Y (Standard 19" rack)
PDUs x 4: Each node should have 2 power cords
cabled to two different PDUs

OpenStack Controller:

QTY: 3

Server Config: (Briggs 8001-22C) (2U)
20 Cores (2.92 Ghz), 128 GB,
1 x 1.9 TB SATA SDD
2 x 2-Port 10G NIC (Intel 10G / Mellanox)

OpenStack Compute:

QTY: 2

Server Config: (Stratton 8001-12C) (1U)
16 Cores (2.3Ghz), 128GB ,
1 x 4TB SATA HDD
2 x 2-Port 10G NIC (Intel 10G / Mellanox)

CEPH Config :

QTY: 3

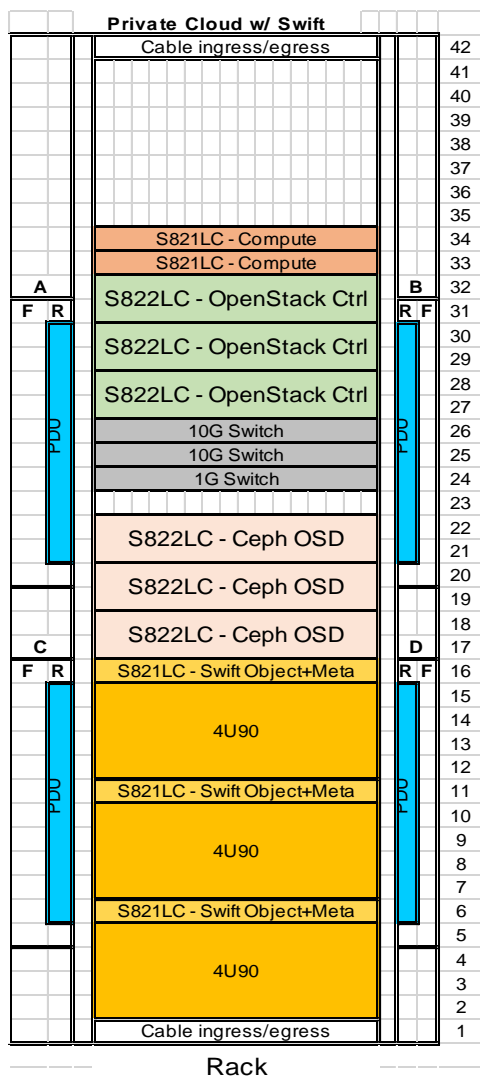
Per Server Config: (Briggs 8001-22C) (2U)

- 16 Cores (3.32Ghz), 128GB
- (OS) 1x SSD 240GB + (Journal) 2x SSD 240GB (1.2 DWPD) + (Storage) 9x 8TB SAS HDDs (~72TB)
- 1 x LSI 3008 External SAS (8 port SAS3)
- 2 x 2-Port 10G NIC (Intel / Mellanox)

**Notes:

- a) Compute + Memory may need to be altered based on actual performance requirement

High Level Component Architecture Diagram – Private Cloud with Swift



OpenStack Software Stack:

Ubuntu 16.04 (all nodes)
OpenStack Newton
Ceph Jewel
Operational Management
- Nagios Core
- ELK Stack (Elasticsearch, Logstash, Kibana)

Network : (HA) – Bonding

2 x Mellanox SX1410 (8831-S48)
1 x Lenovo G8052 (7120-48E)

Rack:

QTY: 1

SlimRack 7965-94Y (Standard 19" rack)
PDUs x 4: Each node should have 2 power cords
cabled to two different PDUs

OpenStack Controller and Proxy:

QTY: 3

Server Config: (Briggs 8001-22C) (2U)
20 Cores (2.92 Ghz), 128 GB,
1 x 1.9 TB SATA SDD
2 x 2-Port 10G NIC (Intel 10G / Mellanox)

OpenStack Compute:

QTY: 2

Server Config: (Stratton 8001-12C) (1U)
16 Cores (2.3Ghz), 128GB ,
1 x 4TB SATA HDD
2 x 2-Port 10G NIC (Intel 10G / Mellanox)

CEPH Config :

QTY: 3

Per Server Config: (Briggs 8001-22C) (2U)
16 Cores (3.32Ghz), 128GB
• (OS) 1x SSD 240GB + (Journal) 2x SSD 240GB
(1.2 DWPD) + (Storage) 9x 8TB SAS HDDs
(~72TB)
• 1 x LSI 3008 External SAS (8 port SAS3)
• 2 x 2-Port 10G NIC (Intel / Mellanox)

Swift Object / Metadata

QTY: 3

Per Server Config: (Stratton 8001-12C) (1U)

16 Cores (2.3Ghz), 128GB
• (OS) 1 x 4TB SATA HDD + 4 x SSDs 240GB
• 2 x 2-Port 10G NIC (Intel / Mellanox)
• 1 x LSI 3008 External SAS (8 port SAS3)

Expansion Drawer (4U) :

90 LFF JBOD Storage SMC PN SE-946ED-R2KJBOD
90 LFF – 2 TB SAS HDDs

**Notes:

- Openstack & Proxy Node can be combined for fewer than 24 SWIFT Objects
- Compute + Memory may need to be altered based on actual performance requirement
- Dedicated Swift Proxy Server may be required

High Level Network Architecture Diagram

