



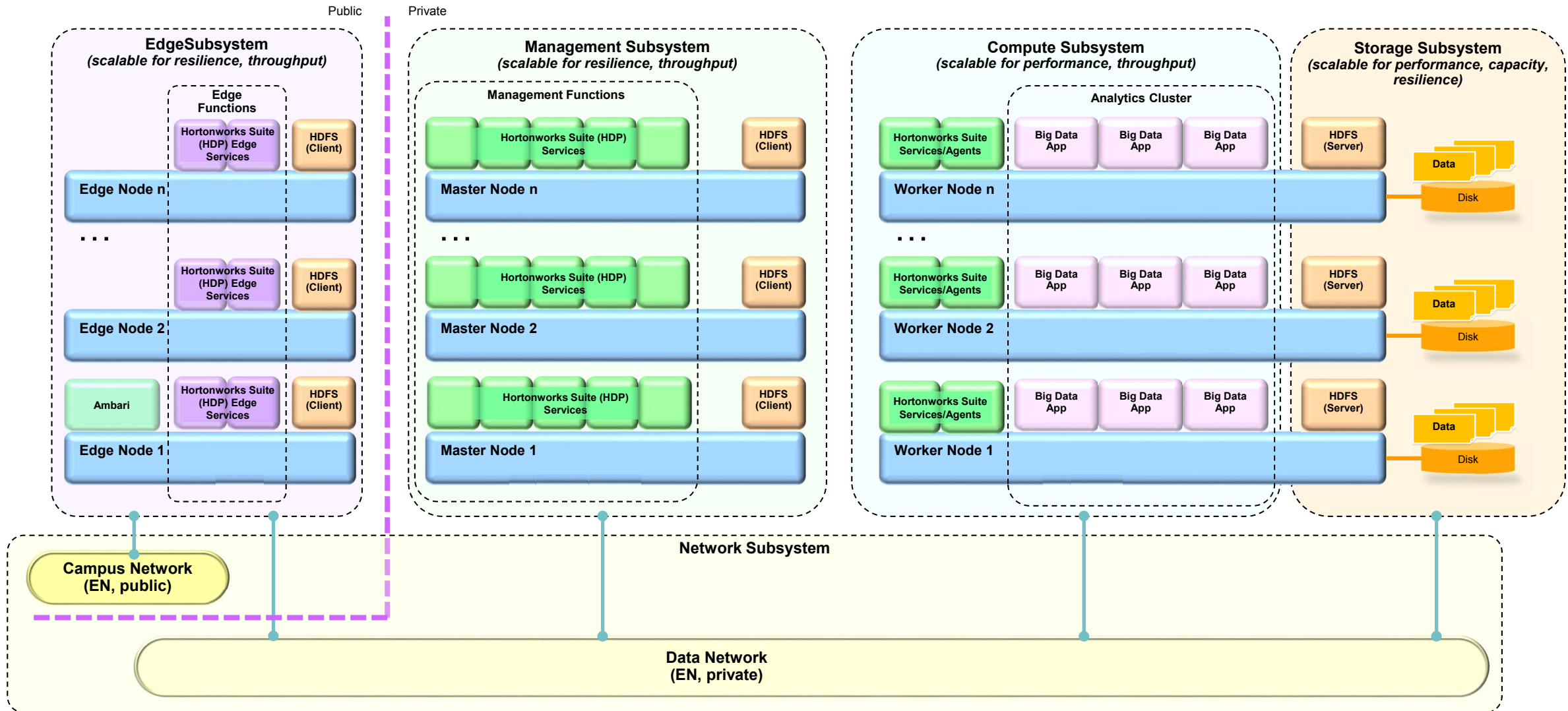
IBM Systems  
Power Development

# Hortonworks Data Platform on IBM Power (HDP on Power) Deployment Guide

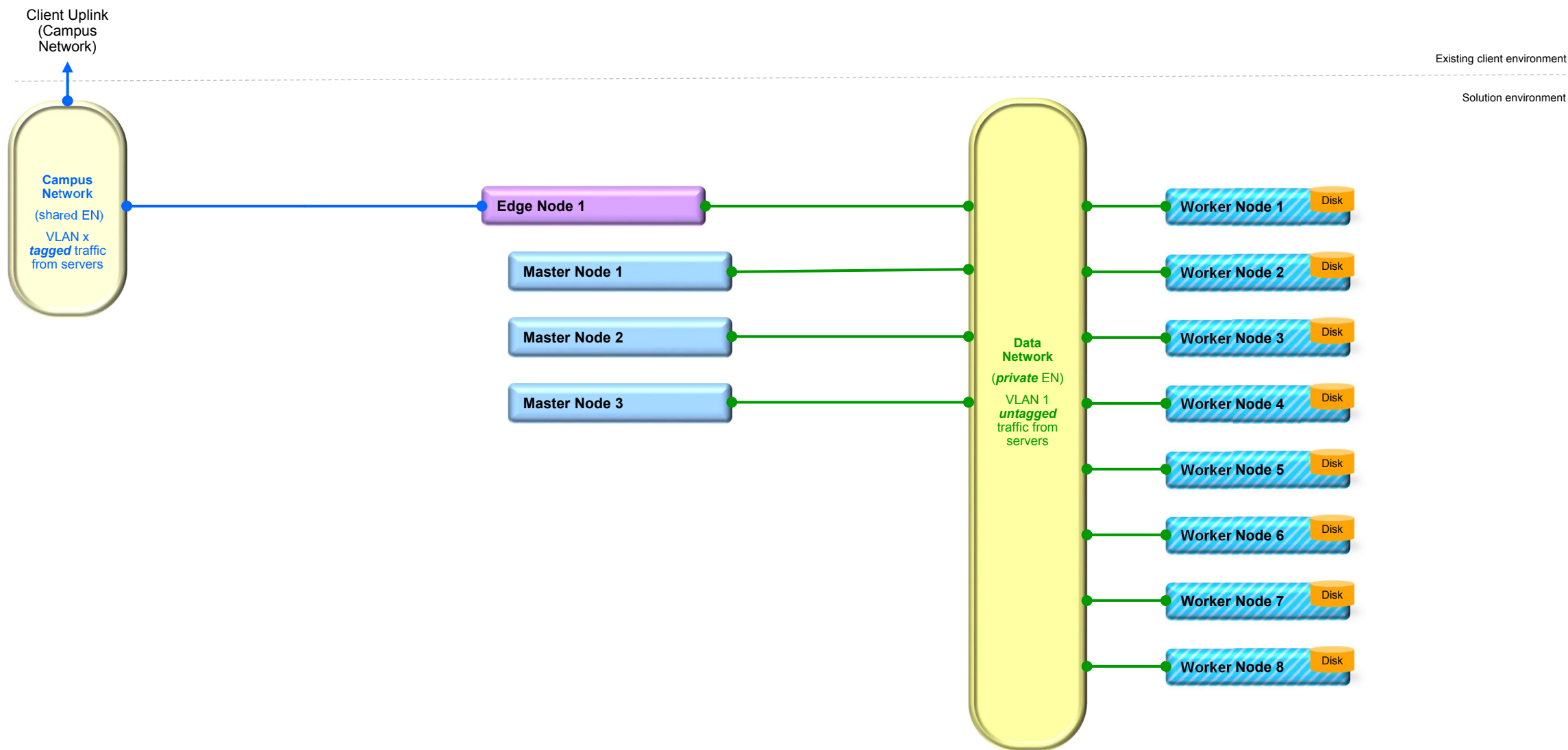
## Design Overview



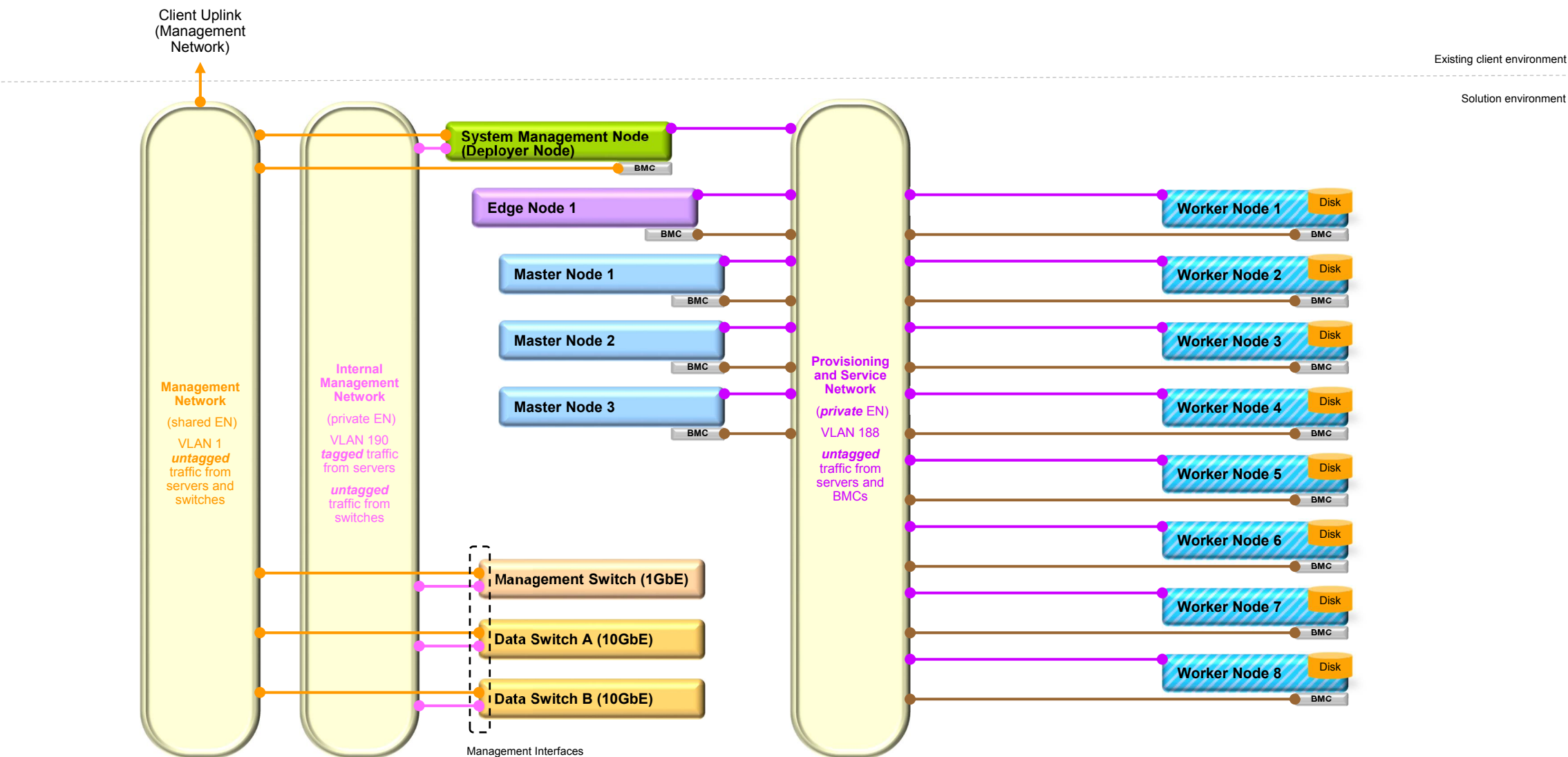
## Architecture – Infrastructure/Hosting Overview



Minimum Production Configuration – Logical Network Topology – Application Level View

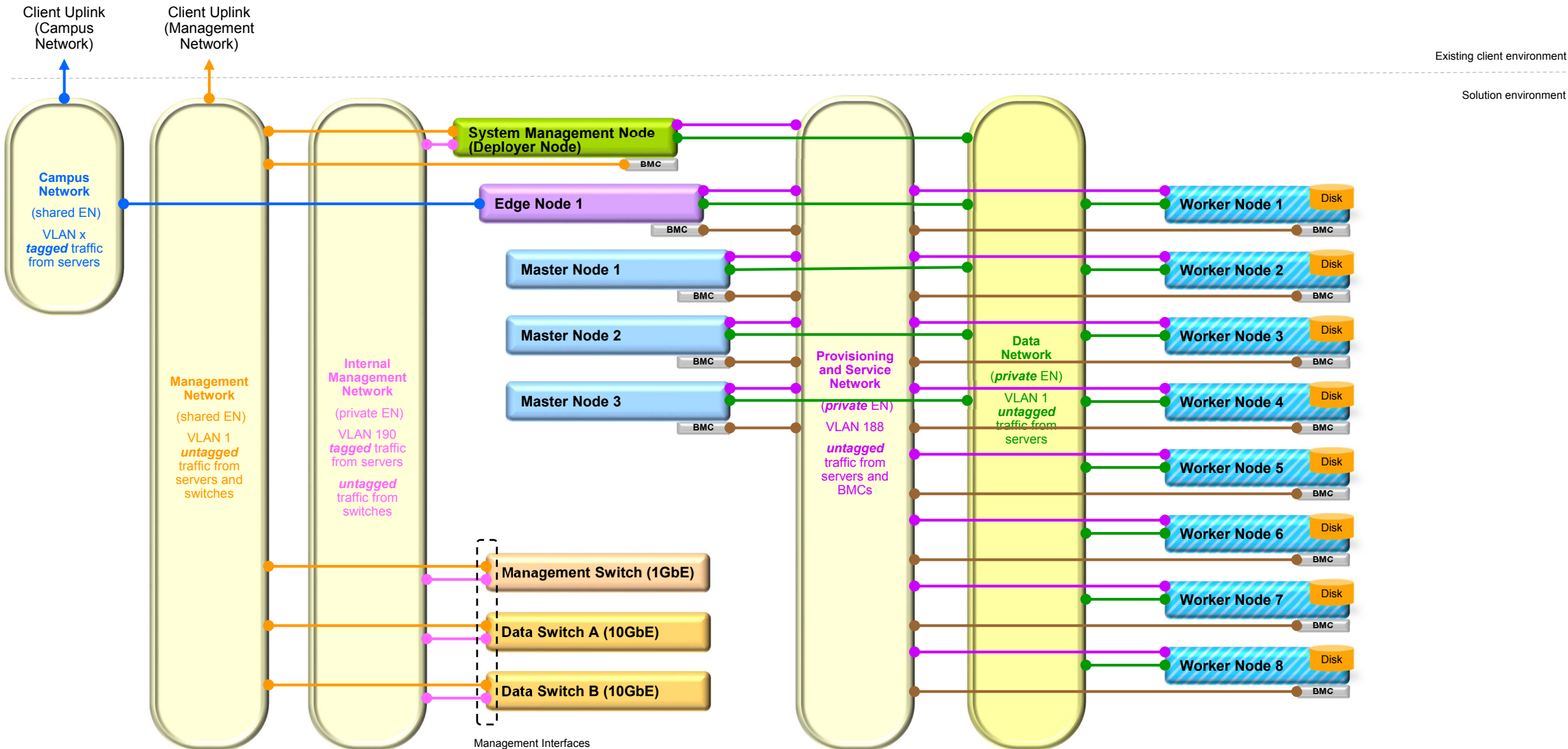


Minimum Production Configuration – Logical Network Topology – Infrastructure Level View

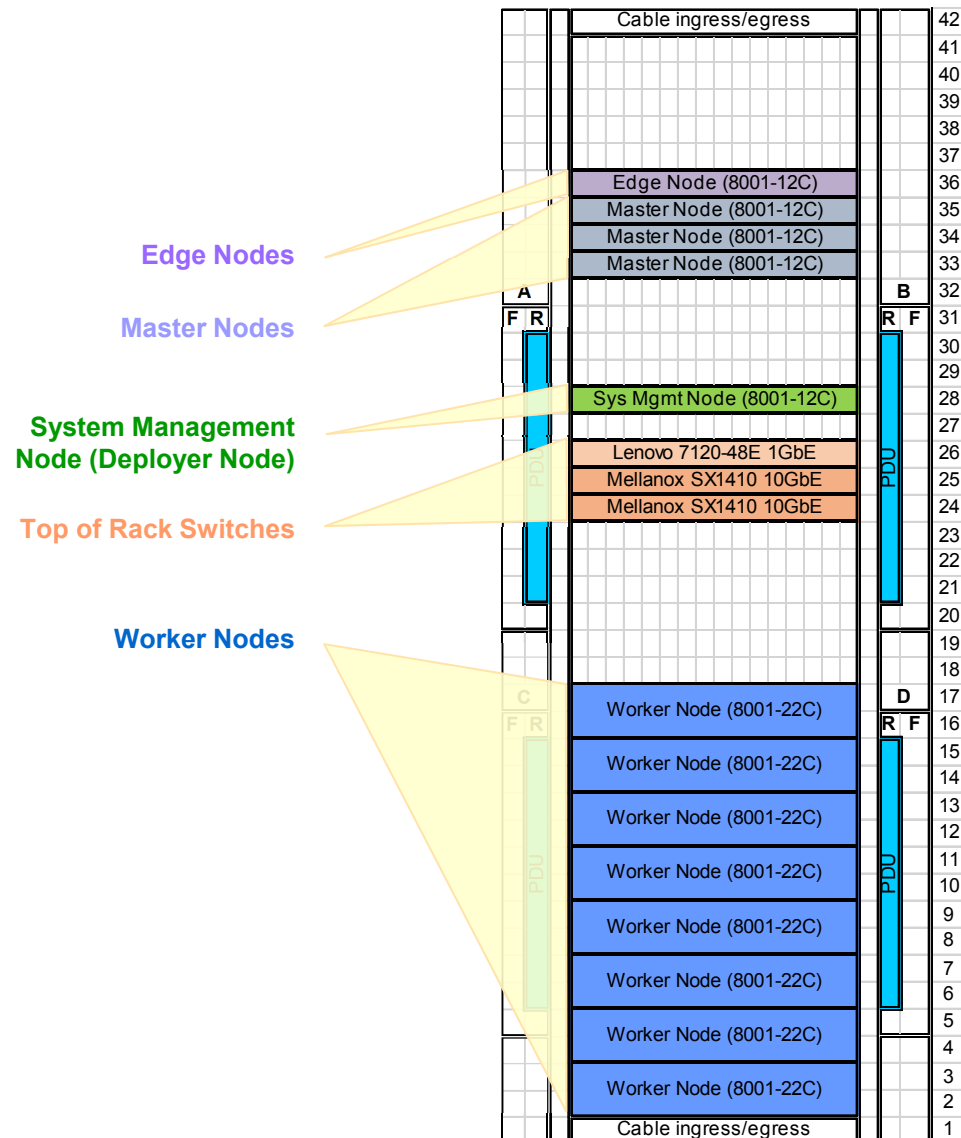




Minimum Production Configuration – Logical Network Topology – All Networks



## Minimum Production Configuration – Physical View – Rack Layout

**System Management Node**

Quantity: **1**  
 Power 821LC (Stratton) 8001-12C  
 1x POWER8 CPUs, 8 Cores  
 32GB Memory  
 2x 4TB HDDs  
 1x 2-port SPF+ Ethernet Adapter

**Management Switch**

Quantity: **1**  
 Lenovo G8052 7120-48E, 1GbE

**Data Switch**

Quantity: **2**  
 Mellanox SX1410, 10GbE

**Master Node**

Quantity: **3**  
 Power 821LC (Stratton) 8001-12C  
 2x POWER8 CPUs, 20 Cores  
 256GB Memory  
 4x 4TB HDDs  
 1x 2-port SPF+ Ethernet Adapter

**Rack**

Quantity: **1**  
 42U 7965-94Y + PDUs

**Edge Node**

Quantity: **1**  
 Power 821LC (Stratton) 8001-12C  
 2x POWER8 CPUs, 20 Cores  
 256GB Memory  
 4x 4TB HDDs  
 2x 2-port SPF+ Ethernet Adapter

**Worker Node**

Quantity: **8**  
 Power 822LC (Briggs) 8001-22C  
 2x POWER8 CPUs, 22 Cores  
 256GB Memory  
 12x 4TB HDDs  
 1x 2-port SPF+ Ethernet Adapter

## Minimum Production Configuration – Component Specifications

	System Mgmt Node	Master Node	Edge Node	Worker Node
<b>Server Type</b>	1U S821LC (Stratton) 8001-12C	1U S821LC (Stratton) 8001-12C	1U S821LC (Stratton) 8001-12C	2U S822LC (Briggs) 8001-22C
<b>Quantity</b>	1	3	1	8
<b>Cores</b>	8	20	20	22
<b>Memory</b>	32GB	256GB	256GB	256GB
<b>Storage - HDD</b>	2x 4TB HDD	4x 4TB HDD	4x 4TB HDD	12x 4TB HDD
<b>Storage Controller</b>	Marvell (internal)	LSI MegaRAID 9361-8i (2GB cache)	LSI MegaRAID 9361-8i (2GB cache)	LSI MegaRAID 9361-8i (2GB cache)
<b>Network - 1GbE</b>	4 ports (internal)	4 ports (internal)	4 ports (internal)	4 ports (internal)
<b>Network - 10GbE</b>	1x 2-port SPF+ adapter	1x 2-port SPF+ adapter	2x 2-port SPF+ adapter	1x 2-port SPF+ adapter

	Management Switch	Data Switch	Rack
<b>Type</b>	Lenovo G8052 7120-48E	Mellanox SX1410 8831-S48	42U Rack 7965-94Y
<b>Quantity</b>	1	2	1