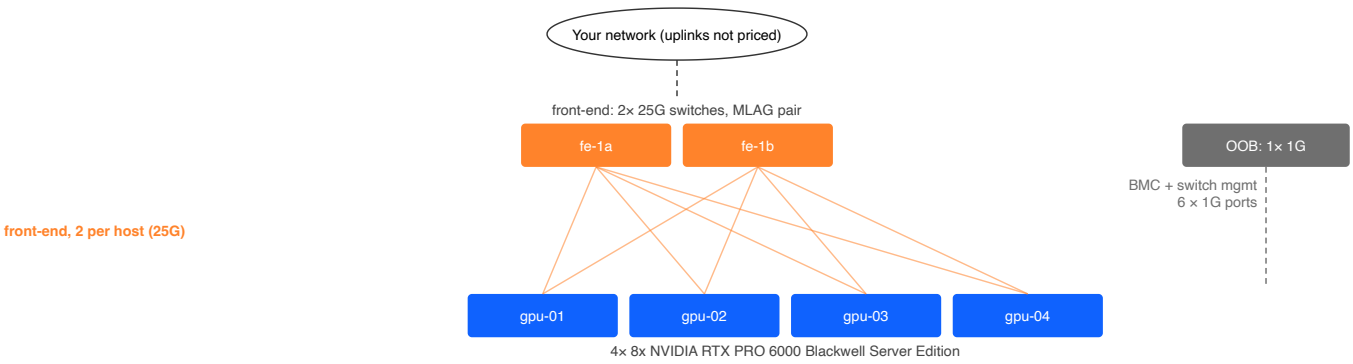
UpStation

Design **UPS-DSN-20261103-BKCU**
Prepared 2026-11-03 · prices as of 2026-11-03
Prepared for **Example SaaS Co** · —

Network topology — budgetary design, not a quote

4× 8-GPU RTX PRO 6000 inference farm (32 GPUs), Texas colo

Topology



Fabrics

Fabric	Speed	Switches	Ports used / total	Oversubscription
front end	25G	2× 48× 25G + 8× 100G	12 / 96	3:1 or better
oob	1G	1× 48× 1G RJ45 + 4× 10G	6 / 48	n/a

How it was designed

1. Front-end: 2 ports per host, one to each switch of an MLAG pair of 48× 25G + 8× 100G switches; 4 ports per switch of 48 usable → 1 pair(s).
2. OOB: 4 hosts + 2 switches = 6 × 1G ports → 1 × 48× 1G RJ45 + 4× 10G.

Network bill of materials

Item	Qty	Unit (USD)	Extended
48× 25G + 8× 100G switch (front-end pair, MLAG)	2	$6,049.00	$12,098.00
+1x 25G 2x SFP28 CX6 NIC (AOC-631102AN-ADAT) (listed option, one per GPU node)	4	$344.08	$1,376.32
25G 2 m passive DAC — GPU nodes to the pair, 2 per node	8	$39.00	$312.00
100G 2 m passive DAC — peer link	2	$54.00	$108.00
48× 1G RJ45 + 4× 10G switch (OOB)	1	$989.00	$989.00
Cat6 patch — 1G BMC/management (not priced)	6	$0.00	$0.00
Network total			**$14,883.32**

Port map and cable schedule (16 cables, 16 connections)

Rows that share a cable ID are lanes of one breakout cable. Device names match the rack elevation.

Cable	Fabric	From	To	Cable type
C0001	front end	gpu-01:FE 1	fe-1a:1	25G 2 m passive DAC
C0002	front end	gpu-01:FE 2	fe-1b:1	25G 2 m passive DAC
C0003	front end	gpu-02:FE 1	fe-1a:2	25G 2 m passive DAC

C0004	front end	gpu-02:FE 2	fe-1b:2	25G 2 m passive DAC
C0005	front end	gpu-03:FE 1	fe-1a:3	25G 2 m passive DAC
C0006	front end	gpu-03:FE 2	fe-1b:3	25G 2 m passive DAC
C0007	front end	gpu-04:FE 1	fe-1a:4	25G 2 m passive DAC
C0008	front end	gpu-04:FE 2	fe-1b:4	25G 2 m passive DAC
C0009	front end	fe-1a:uplink 1	fe-1b:uplink 1	100G 2 m passive DAC
C0010	front end	fe-1a:uplink 2	fe-1b:uplink 2	100G 2 m passive DAC
C0011	oob	gpu-01:BMC	oob-1:1	Cat6 patch
C0012	oob	gpu-02:BMC	oob-1:2	Cat6 patch
C0013	oob	gpu-03:BMC	oob-1:3	Cat6 patch
C0014	oob	gpu-04:BMC	oob-1:4	Cat6 patch
C0015	oob	fe-1a:mgmt	oob-1:5	Cat6 patch
C0016	oob	fe-1b:mgmt	oob-1:6	Cat6 patch

Topology (Mermaid source)

```
flowchart TB
  FE["Front-end MLAG pair: 2× 48× 25G + 8× 100G<br/>25G, storage converged"]
  GN -- "2× 25G per node" --> FE
  FE -. "uplinks to your core (not priced)" .-> CORE(("Your network"))
  OOB["OOB: 1× 1G switch"] -. "BMC, 6 ports" .- GN
```

Assumptions

- None beyond the catalog conventions.

Next step. Book the intro (https://calendly.com/alecglover/intro-call) or email alec@upstation.io with the design ID; UpStation validates the design and introduces the supplier that fits.

Prepared by UpStation from public supplier prices published at ai.upstation.io (prices as of 2026-11-03). Budgetary only: the supplier confirms price, availability and lead time on order. UpStation does not resell; buyers transact directly with the supplier. alec@upstation.io