

Liquid trae eficiencia a la UC3M

Eficiencia operativa

2X

Más
Tokens por Watio

Eficiencia de coste

50%

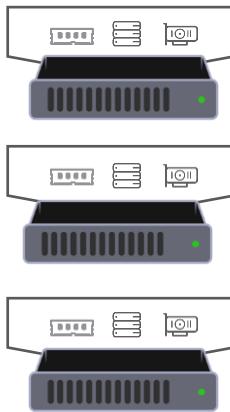
Más
Tokens por Euro

“Energía, no computación, será el embudo #1 para el progreso de la IA”

- Mark Zuckerberg, CEO, Meta

Qué es una infraestructura CDI

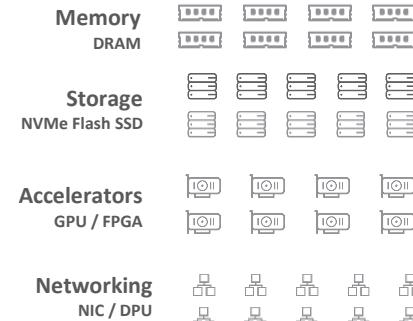
Conventional AI Servers



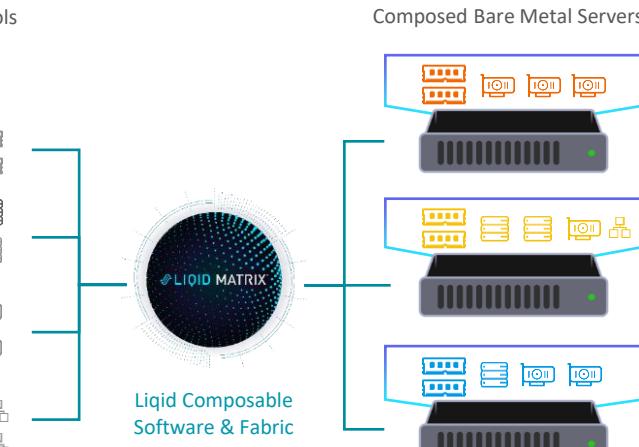
- ! Low Device Density
- ! High Power/TCO
- ! Limited Flexibility

Dynamically Configured AI Servers

Disaggregated Resource Pools



Liquid Composable Software & Fabric



- ✓ Highest AI Performance
- ✓ Optimized Efficiency
- ✓ Maximum Flexibility

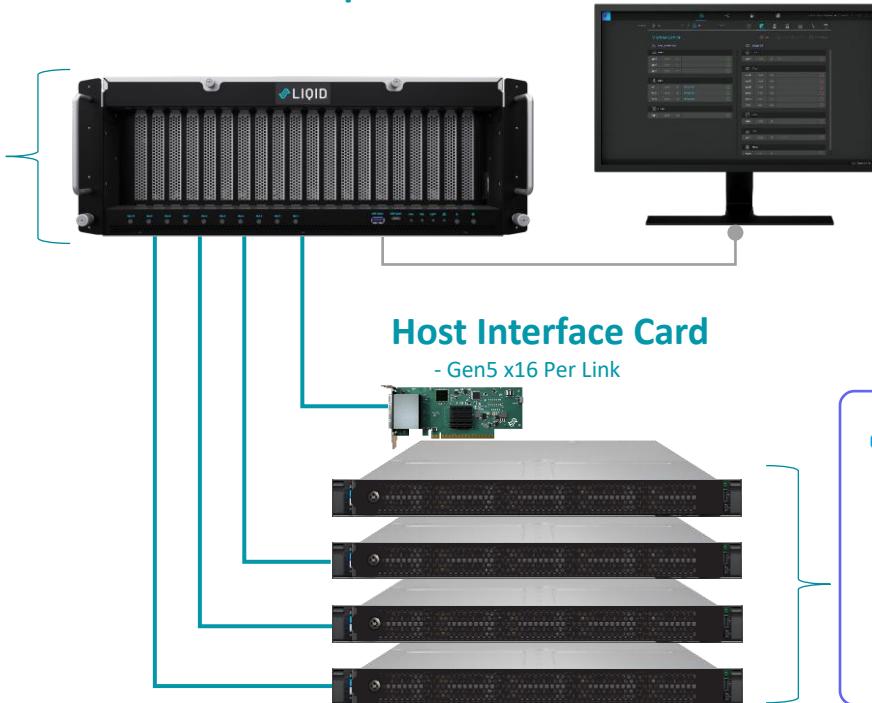
Los componentes de Liquid

Devices

PCIe: GPU, DRAM, FPGA, DPU, etc.
CXL: DRAM



Chasis de expansión



Liquid Composable

- Expansion Chassis
- Host Interface Card
- Optical Cables
- Liquid Matrix Software

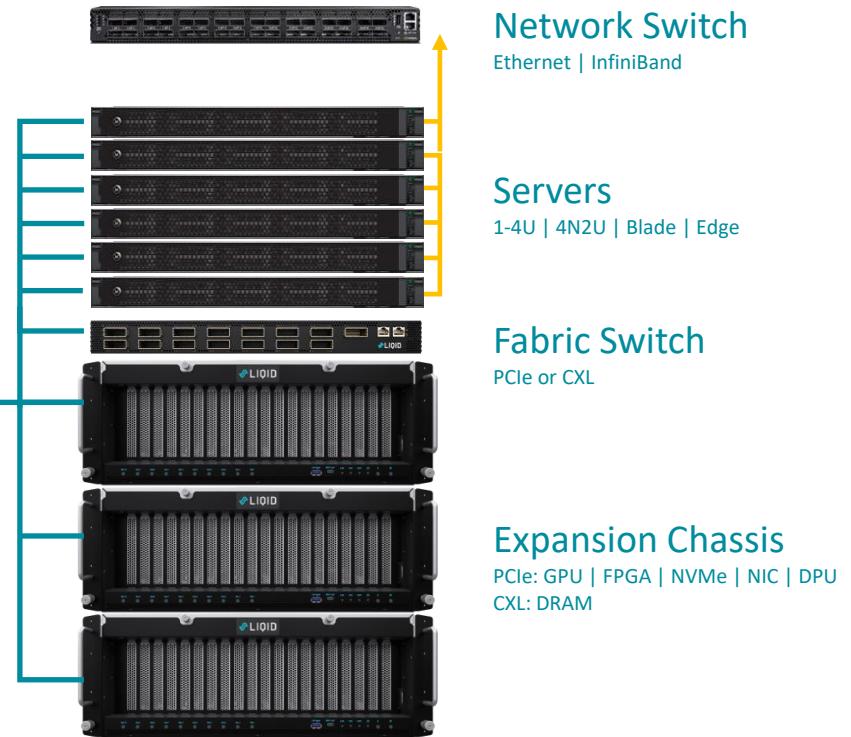
Servidores

1U, 2U, 2U4N, Blade, etc.



Infraestructura, cómo se integra.

Composable Software

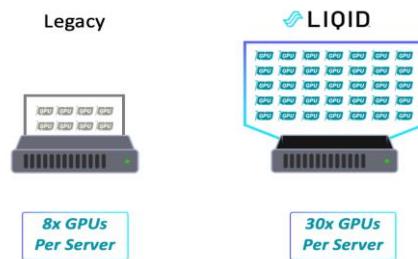


Qué beneficios da Liqid a UC3M

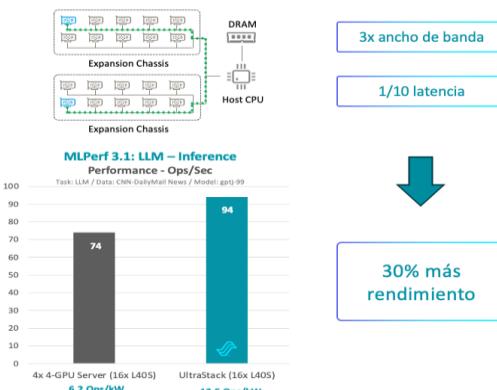
Maximiza Rendimiento



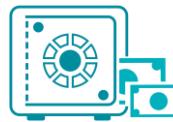
Conecta hasta 30 GPUs/servidor.
Incrementa 30% el rendimiento.



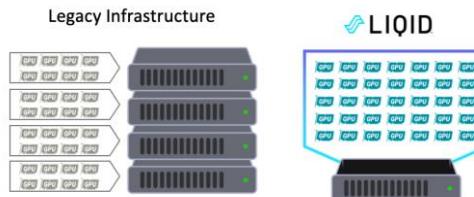
Liquid P2P. Comunicaciones sin pasar por la CPU



Reduce Costes



Aumenta la eficiencia energética.
Reduce el número de servidores.
Alarga la vida de la infraestructura.



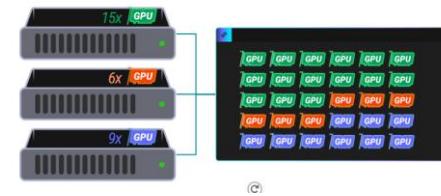
Da capacidad de GPUs a servidores existentes
Actualiza solamente lo que necesita ser actualizado

Aumenta la agilidad

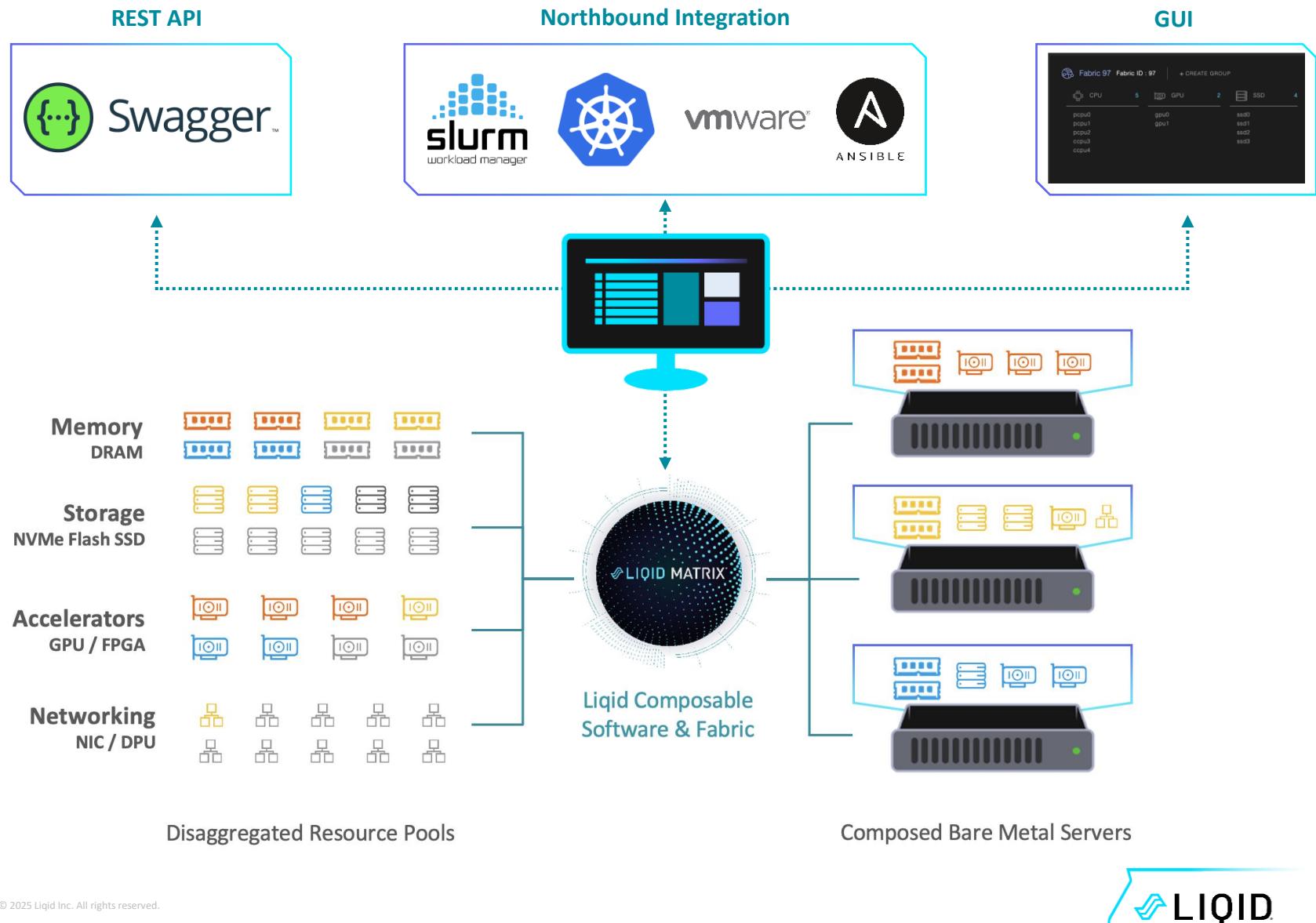


Utiliza cualquier tipo de GPU.
Crecer con las necesidades de UC3M.
Tecnología puntera.

GPUS dinámicas

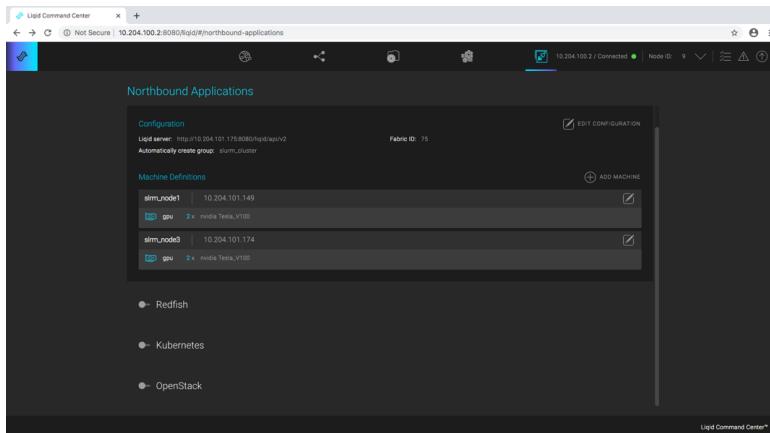


Un software que se integra con lo existente.



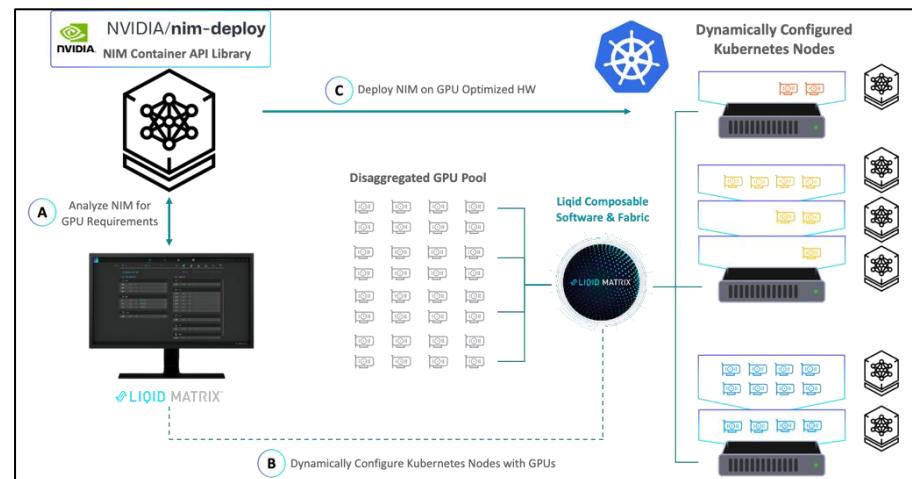
Integración con SLURM y Kubernetes

SLURM Plug-In



- Enable dynamic HW configuration directly from SLURM
- Match HW configuration to workload requirements

Kubernetes Plug-In



Inferencia automática con Kubernetes



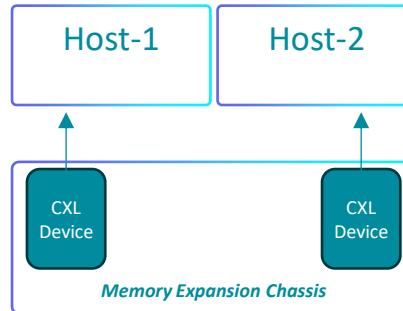
kubernetes

openstack.

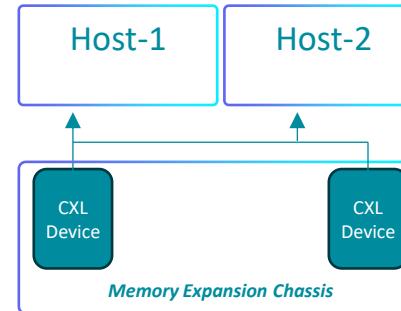
OMNIA NUTANIX

Liquid también permite expansión de RAM con CxL

Pooling de Memoria

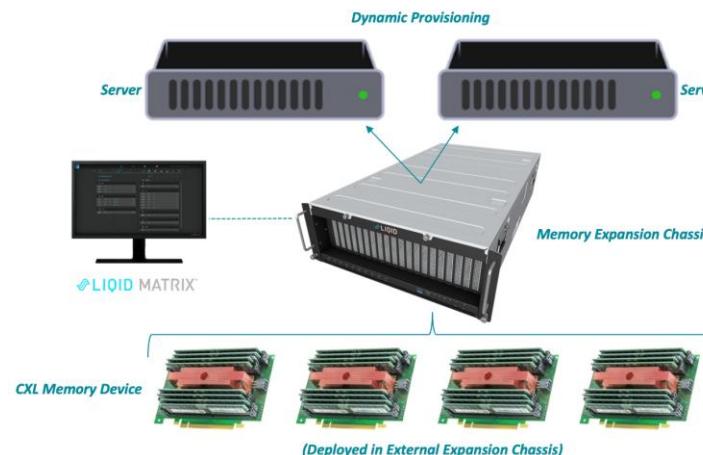


Compartir Memoria



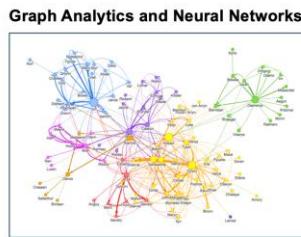
- ✓ Multi-Host Memory Pooling
- ✓ External Expansion Chassis
- ✓ Dynamic Provisioning Per Host

- ✓ Simultaneous Memory Sharing
- ✓ Enable Application Interleaving
- ✓ Performance, Features, TCO

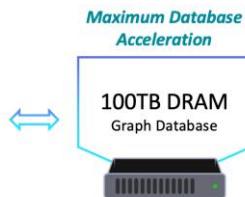


Beneficios de componer RAM dinámicamente

Hasta 100TB RAM/servidor



Larger memory keeps more data in-memory, reducing disk access and accelerating queries



- Up to 100x Faster Queries
- No Sharding up to >100TB
- Zero Network Latency

Reduce la cantidad de RAM comprada

Legacy Infrastructure



Low Utilization
Static Configuration



High Utilization
Dynamically Configurable



Usa DIMMs más baratas

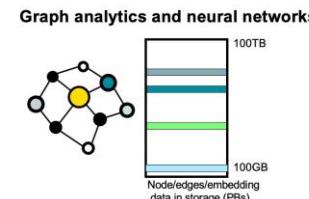


4TB Server – 256GB DIMM
256GB DIMM = \$3,850
16x \$3,850 = \$61,600 / TB
(Expensive Memory DIMM)



4TB Server – 64GB DIMM
64GB DIMM = \$350
64x \$350 = \$22,400 / TB
(Lower Cost Memory DIMM)

Reduce hasta 25x el tiempo por workload



~8 Hours NVMe → ~20 min CXL

