



PRESENTS

NETWORLD INTEROP

an INTEROP event

King of SAN; Fibre Channel, IP Storage or InfiniBand

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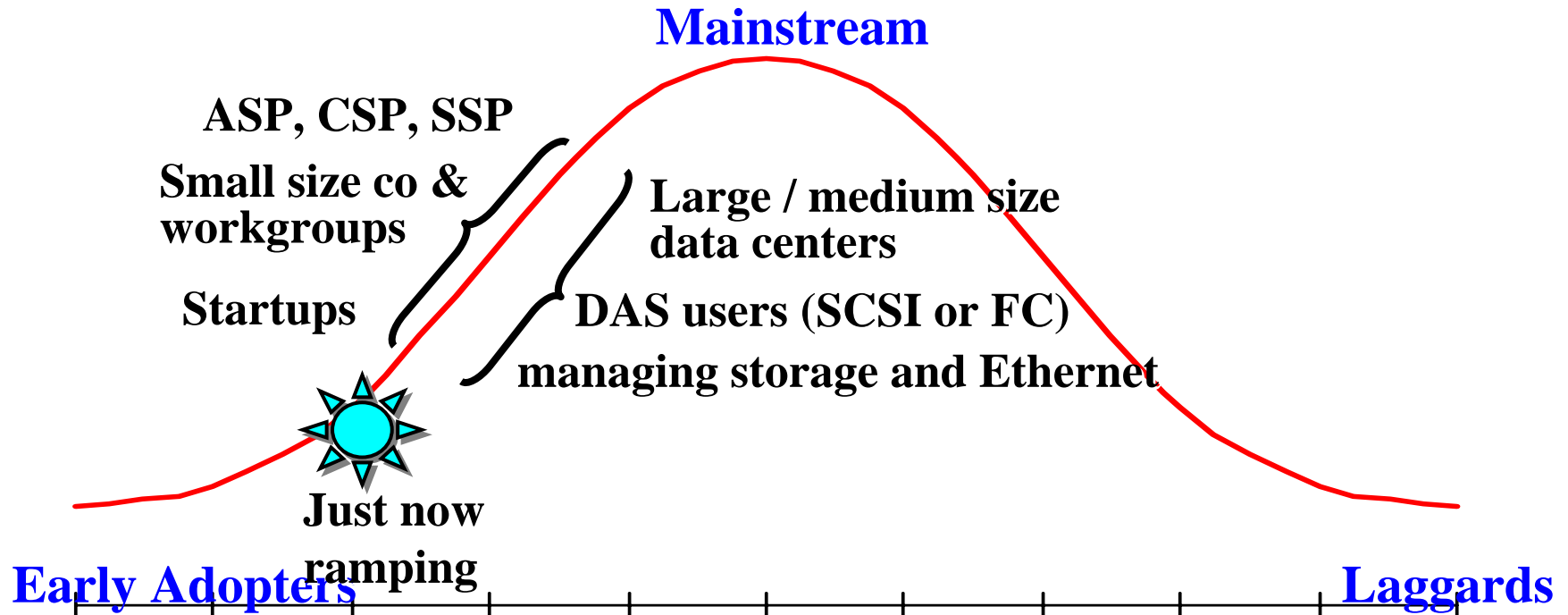
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Storage Networking Adoption Curve



Storage Networking Futures

New interconnect choices

- **Fibre Channel**

- Will dominate storage networking industry for several more years
- Will go to 10 Gigabit
- Will never go away

- **InfiniBand**

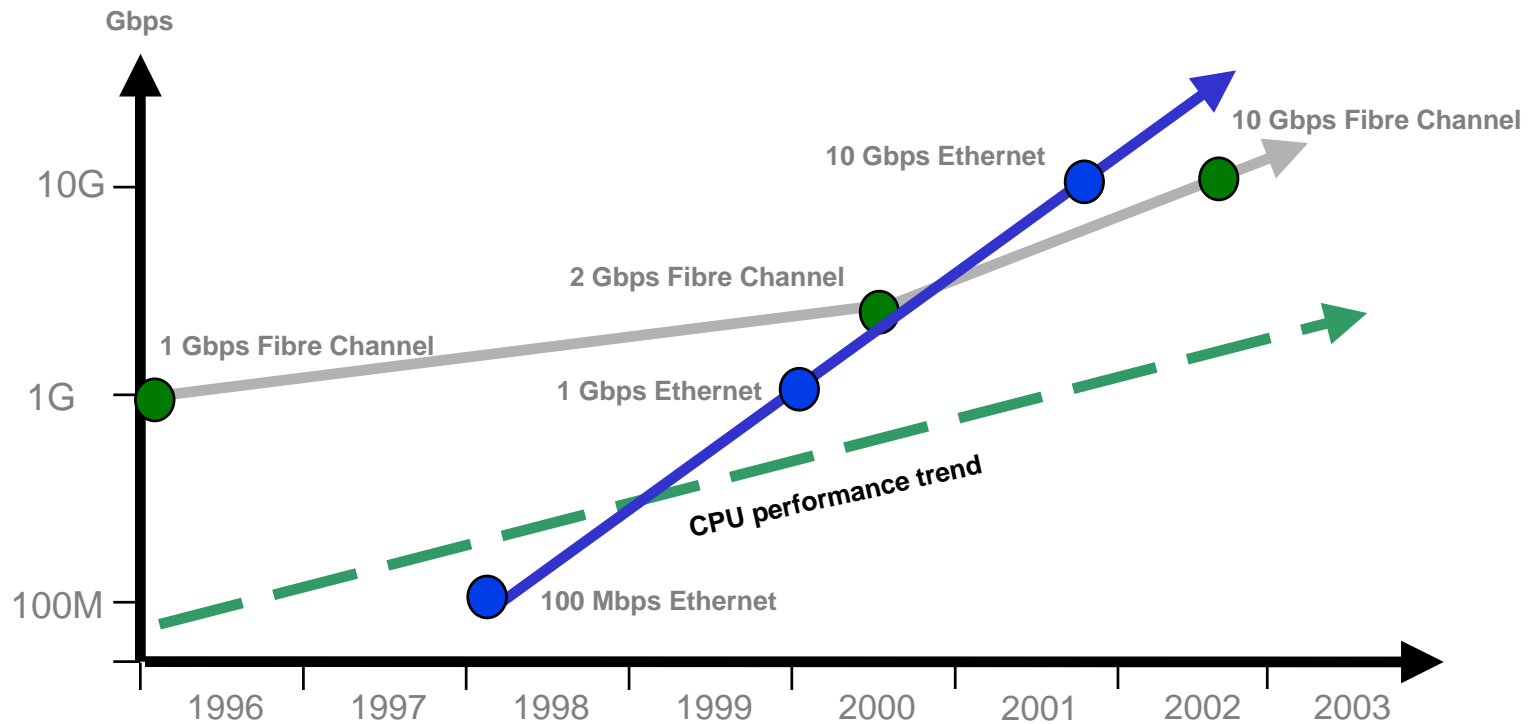
- Targeted at inter-processor communications (IPC) and PCI replacement at introduction
- Will enter the storage networking market late
- Very promising, but all new

- **IP Storage**

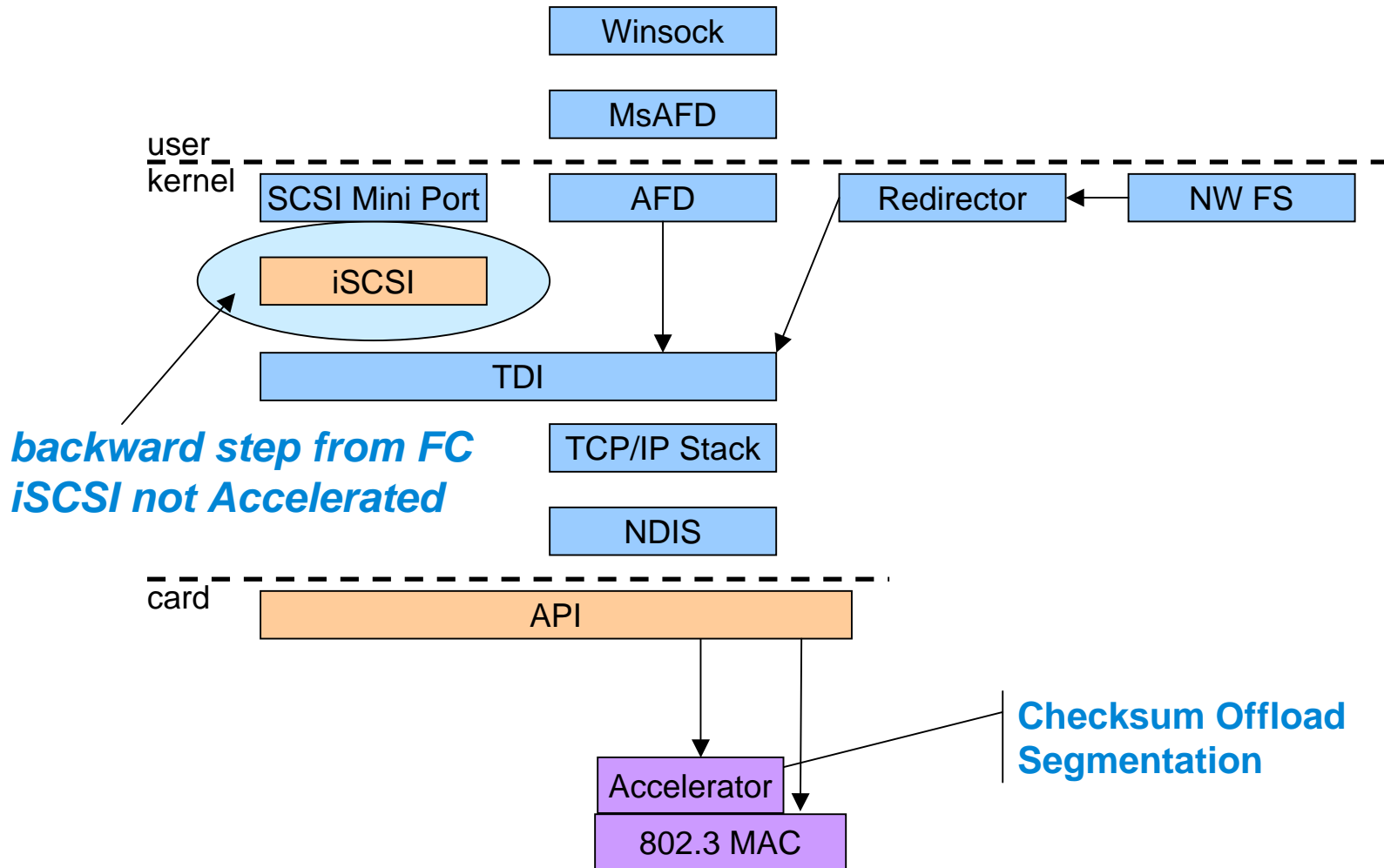
- iSCSI enables block storage, VI enables IPC
- Must be offloaded & accelerated to compete with Fibre Channel and InfiniBand

I/O Offloading - not just an option

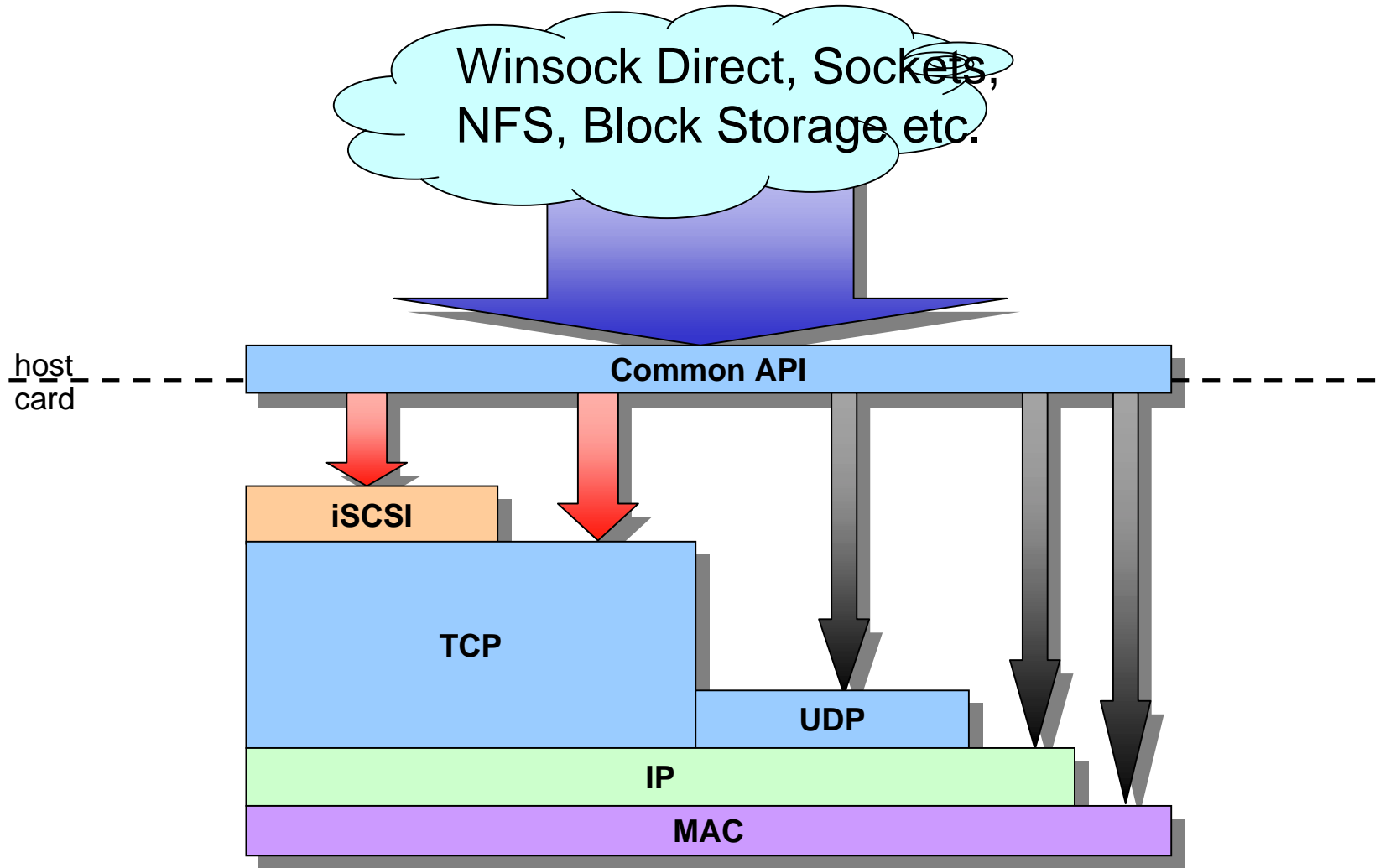
- CPU performance CAN NOT keep up with the demand for faster networking
result - iSCSI requires OS offload and hardware acceleration (just like Fibre Channel)



iSCSI in Software



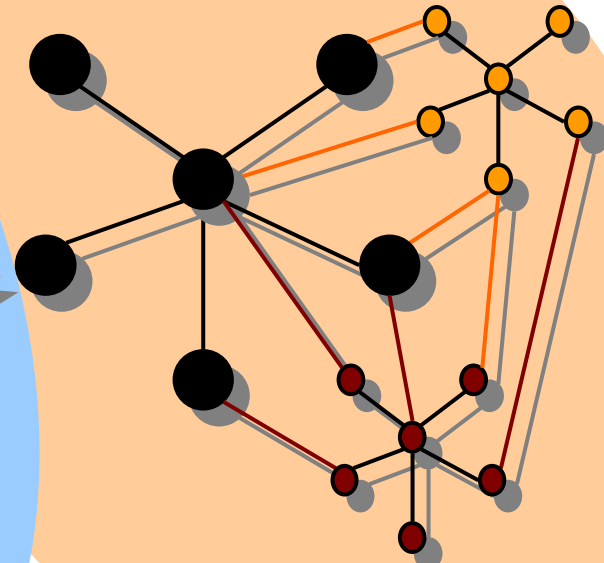
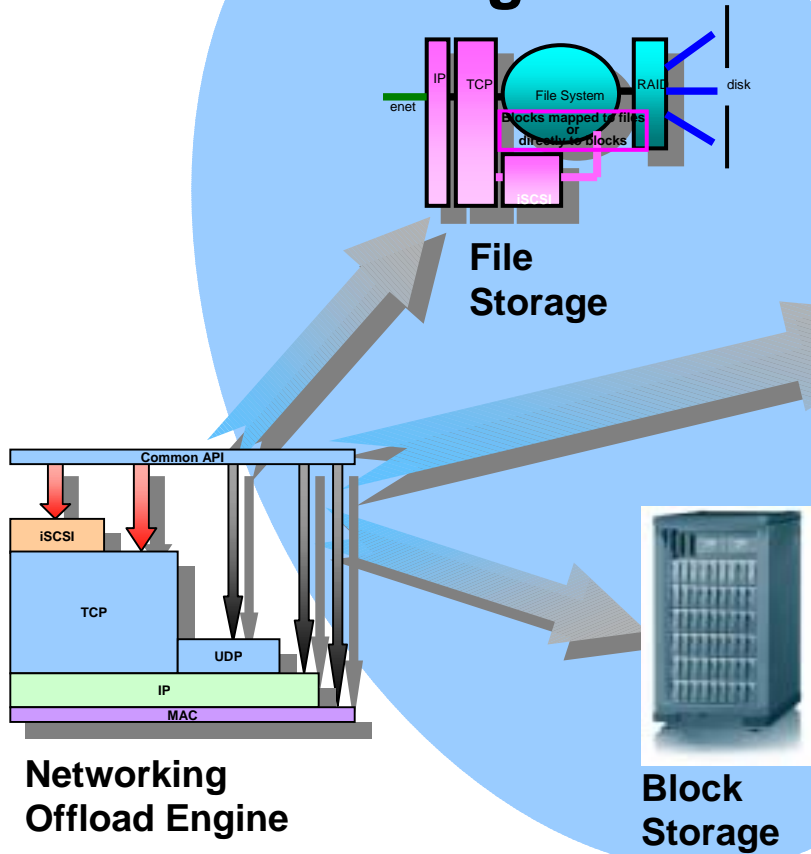
Networking Offload Engine (iNOE)



iNOE Applications

Storage Networking

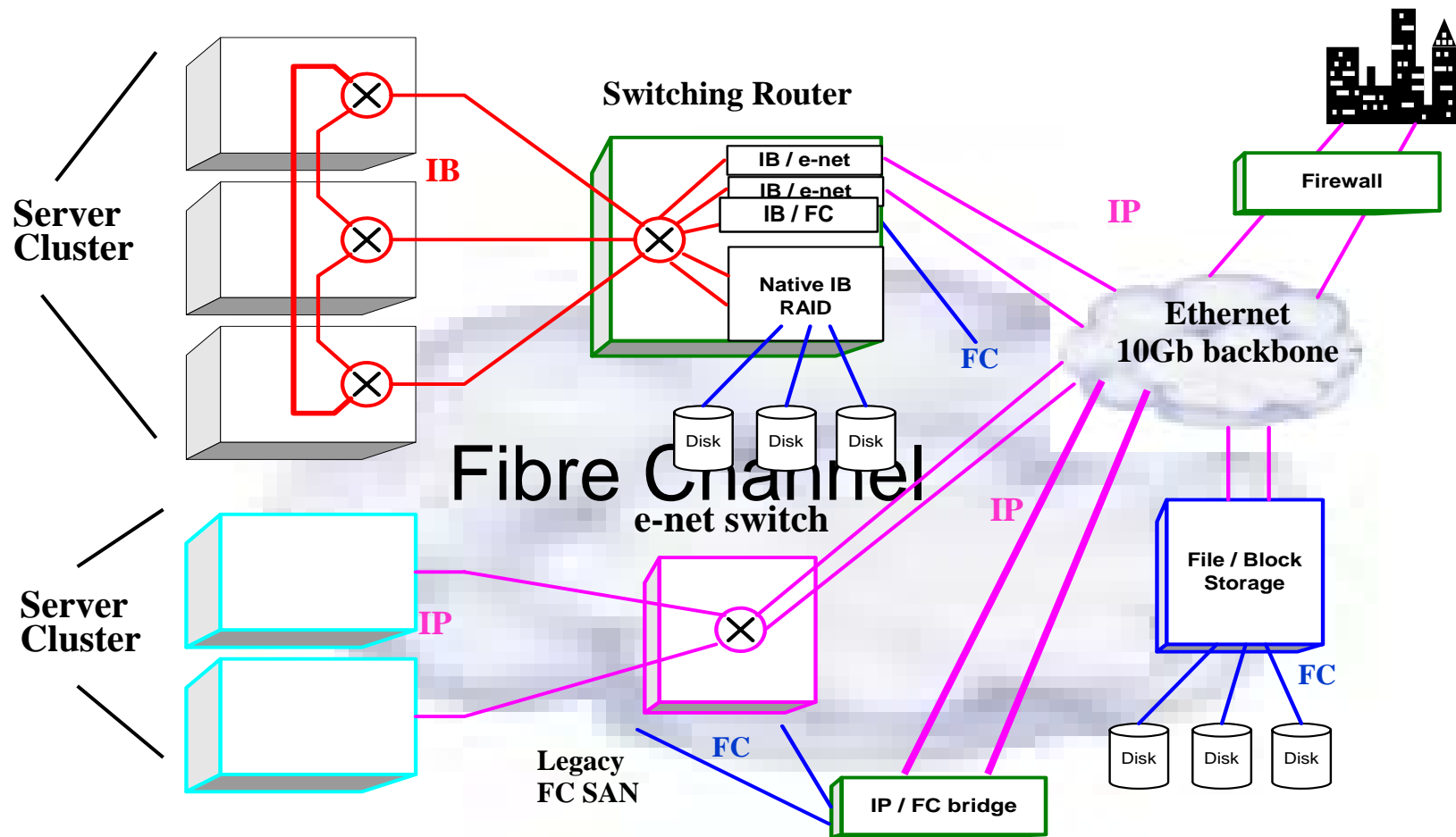
General Networking and IPC (inter-processor comm.)



HTTP, VI, FTP, Telnet, . . .

Data Center Design of the Future

Too many options!



Conclusions

- In the short term, Fibre Channel is the only choice for high performance storage networking.
- InfiniBand may be the best technology choice but will enter the storage networking market late.
- At 10Gb, iSCSI will threaten dominance of Fibre Channel in the storage networking market.

The biggest challenge -

TOO MANY CHOICES!