STORAGE DEVELOPER CONFERENCE
SDC 21
BY Developers FOR Developers
Virtual Conference
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A SNIA Event

Exploiting RDMA to Create a Geographically Dispersed Storage Network over the WAN

Get Real-Time Access to Remote Data

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Agenda

- The challenge that needs to be solved
- The solution
- A demonstration
- How it's accomplished
- What this enables

Data is Everywhere
….but is it where it's needed?

Unavoidably, we focus on MOVING, COPYING and REPLICATING data,

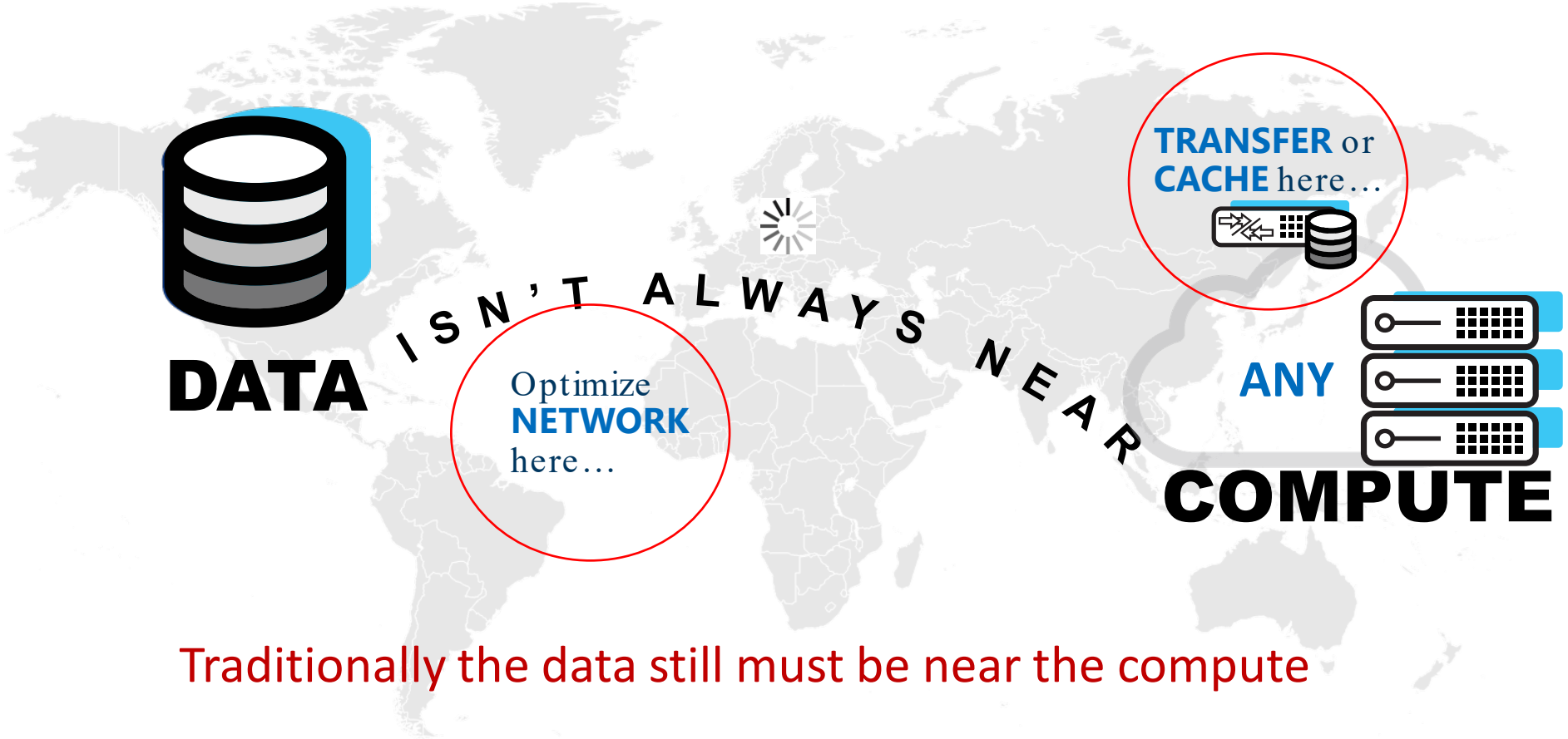
MULTIPLE TIMES!





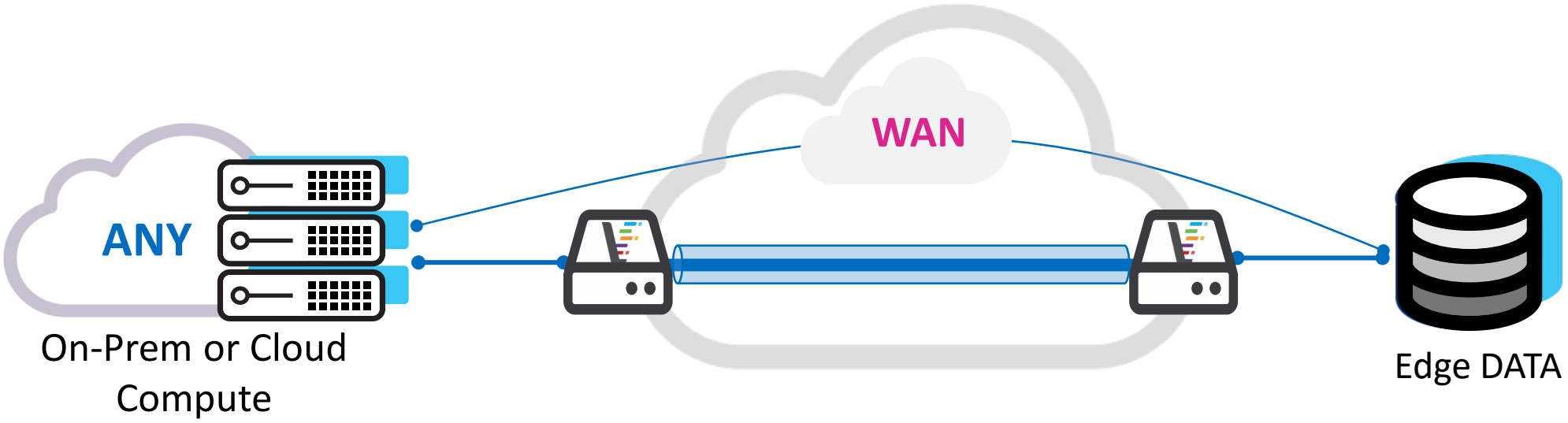
- How long does it take? $$$
- Is it stale?
- Is it safe (network/cloud?)
- Am I allowed to move it?

Why does this happen?



Traditionally the data still must be near the compute

There is Finally a Better Way

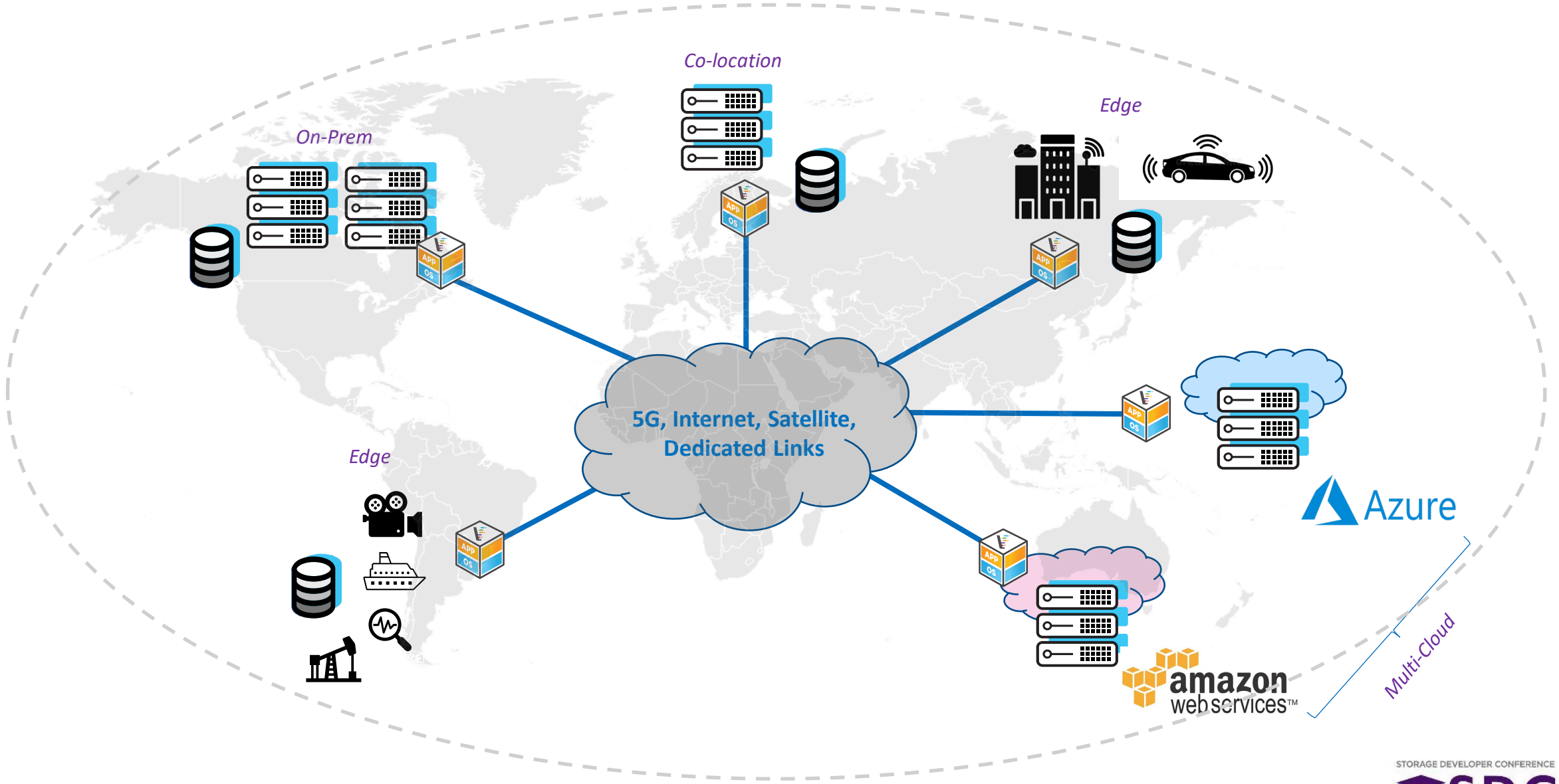


If you need to move/migrate/backup -> MOVE IT FASTER with LESS RISK THAN EVER BEFORE!

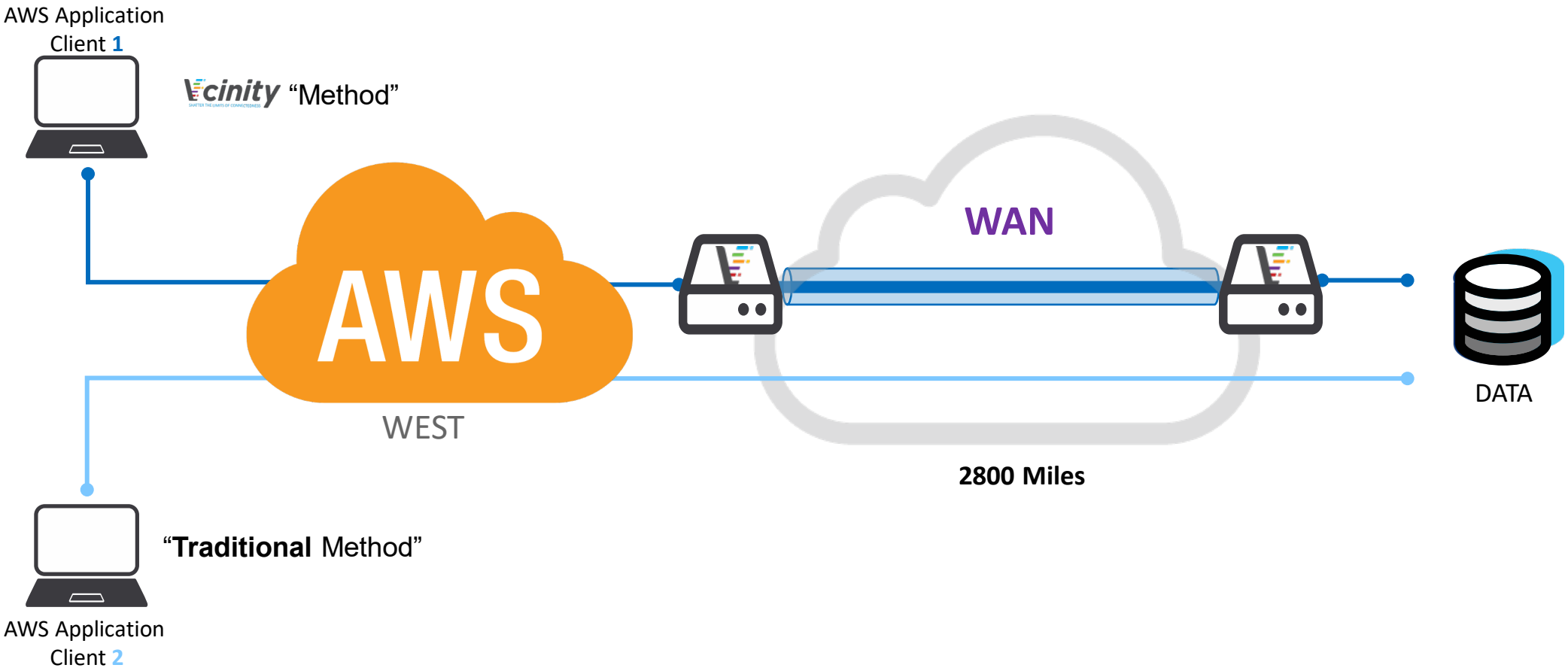
If want to use/execute on/reach it where it is -> LEAVE IT and ACCESS IT!

Make the WAN a Global LAN

Real-time Access Across a Distributed Elastic Enterprise



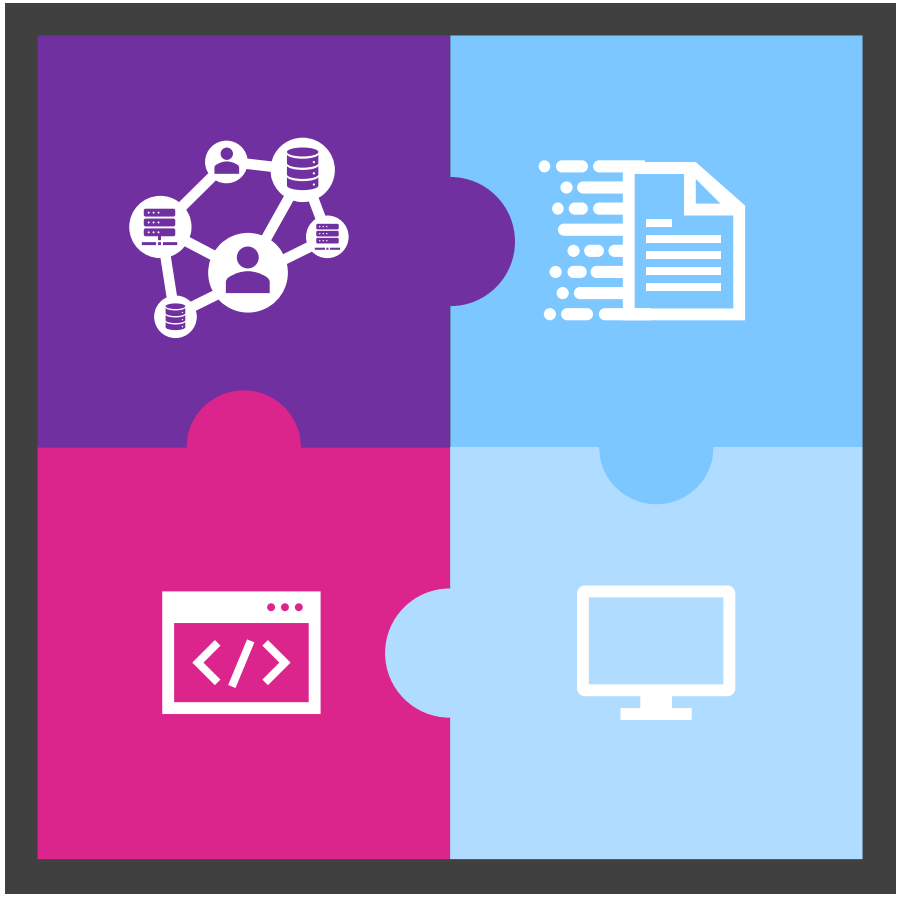
Demo



Minimizing the Effects of Latency

Advanced Fabric
based on memory-to-memory data access, buffer credits, packet loss recovery, and more

Common API's



Parallel File System
for rapid access to data

Simple Integration
with existing compute and storage via NFS, SMB or S3

No Compression
No Deduplication

Minimizing the Effects of Latency

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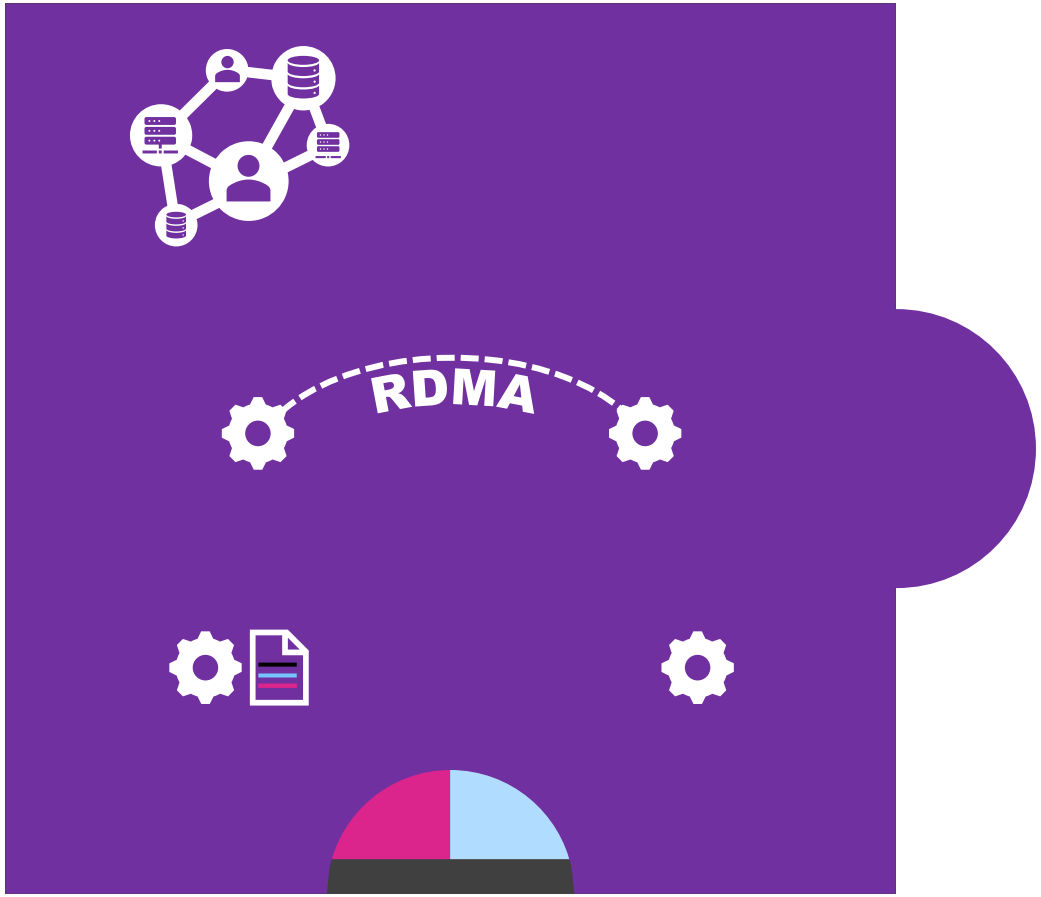
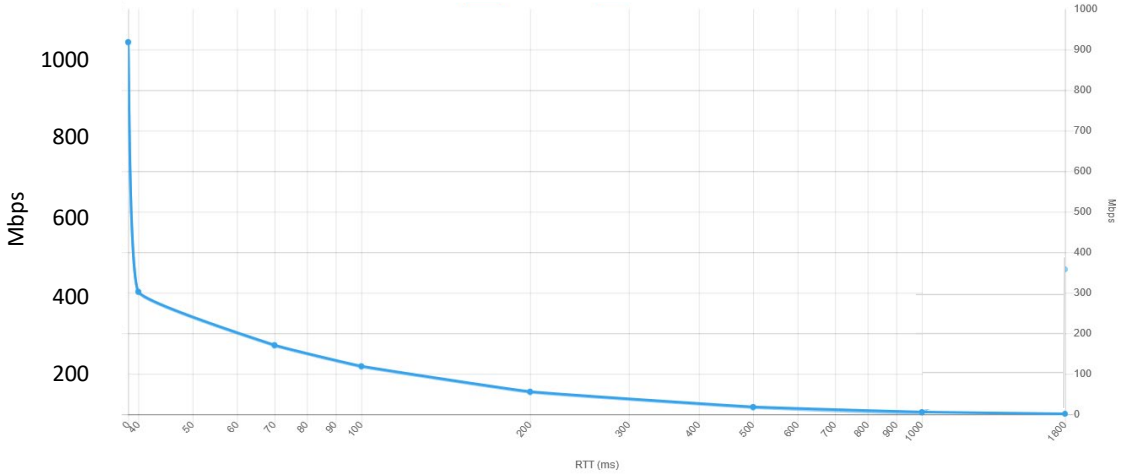
- **Remote Direct Memory Access across WAN bypasses common slow-downs vs TCP/UDP**

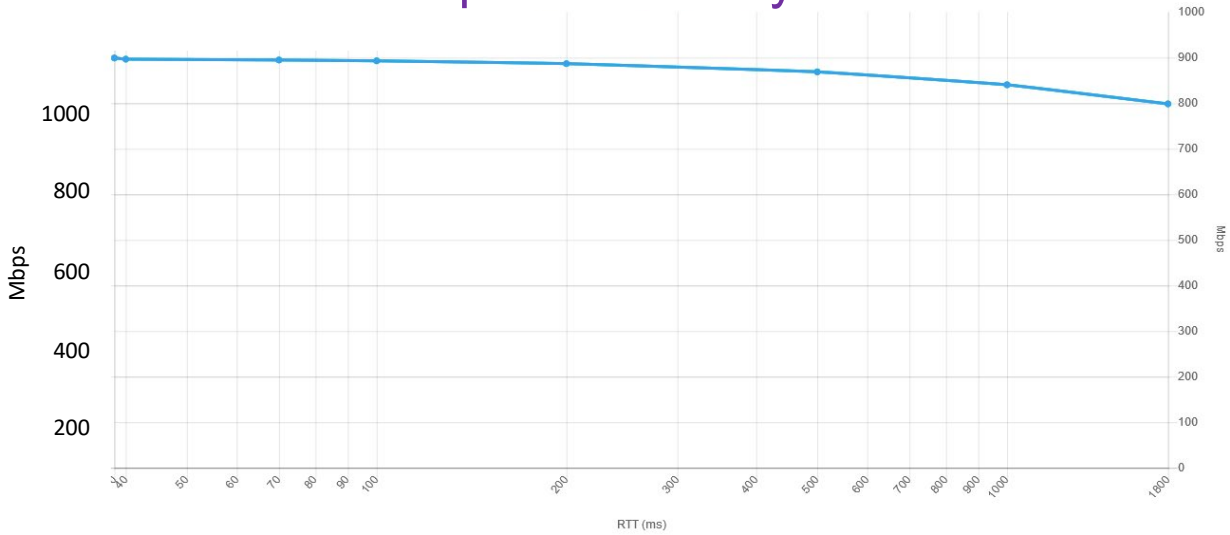


Comparison

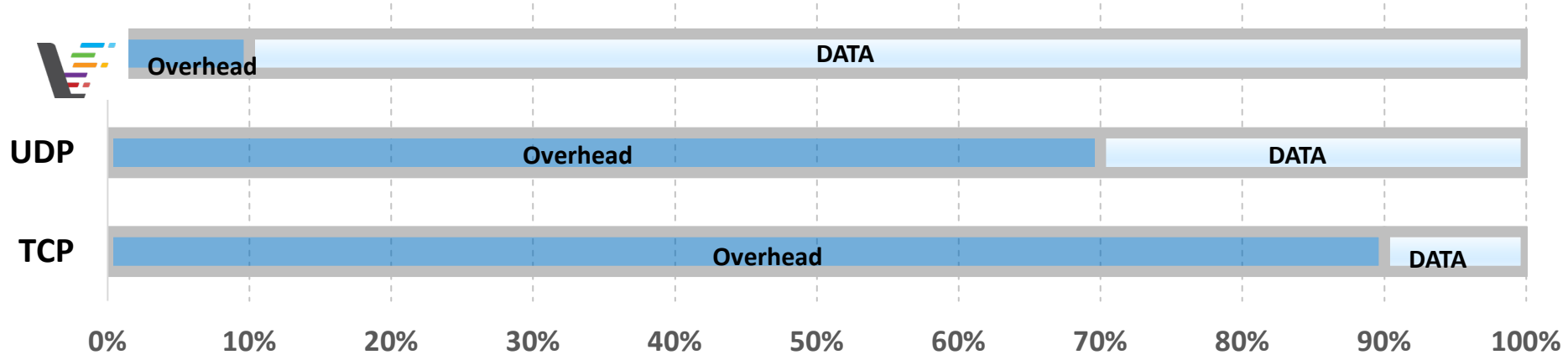
1Gbps without Vcinity



1Gbps with Vcinity



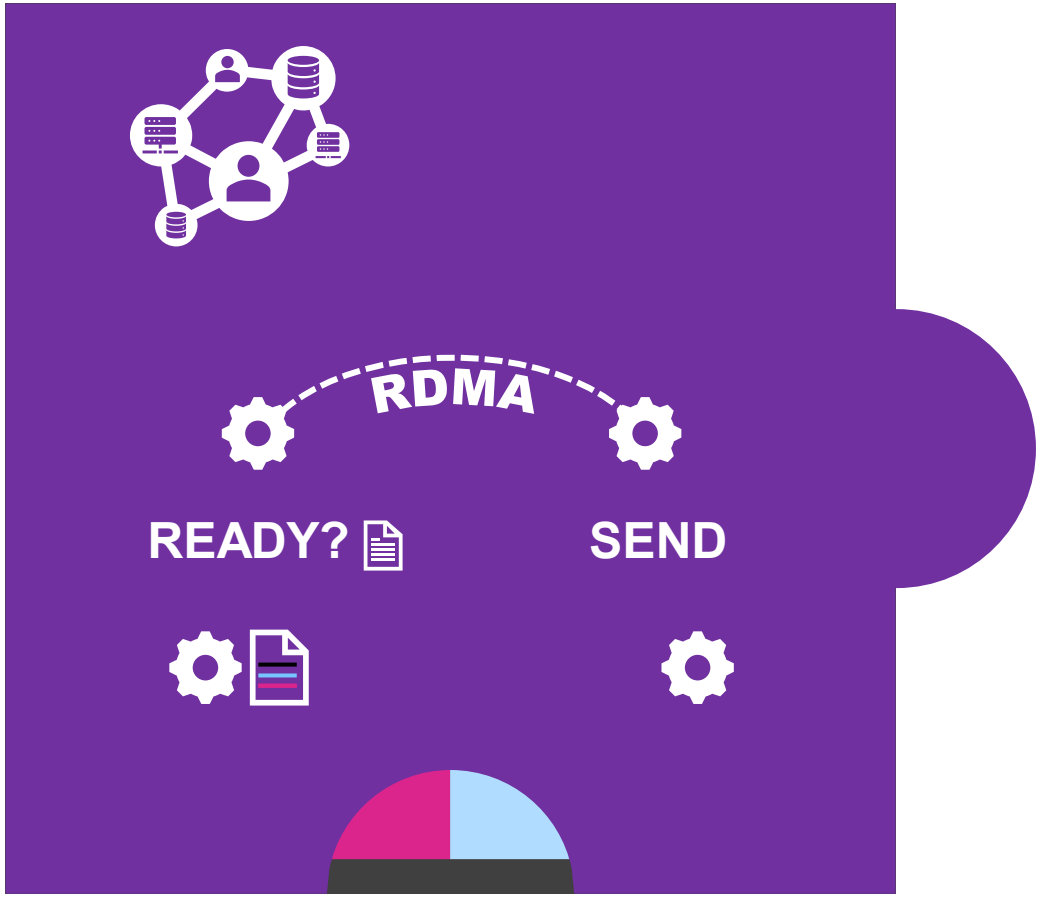
Comparing WAN Protocols



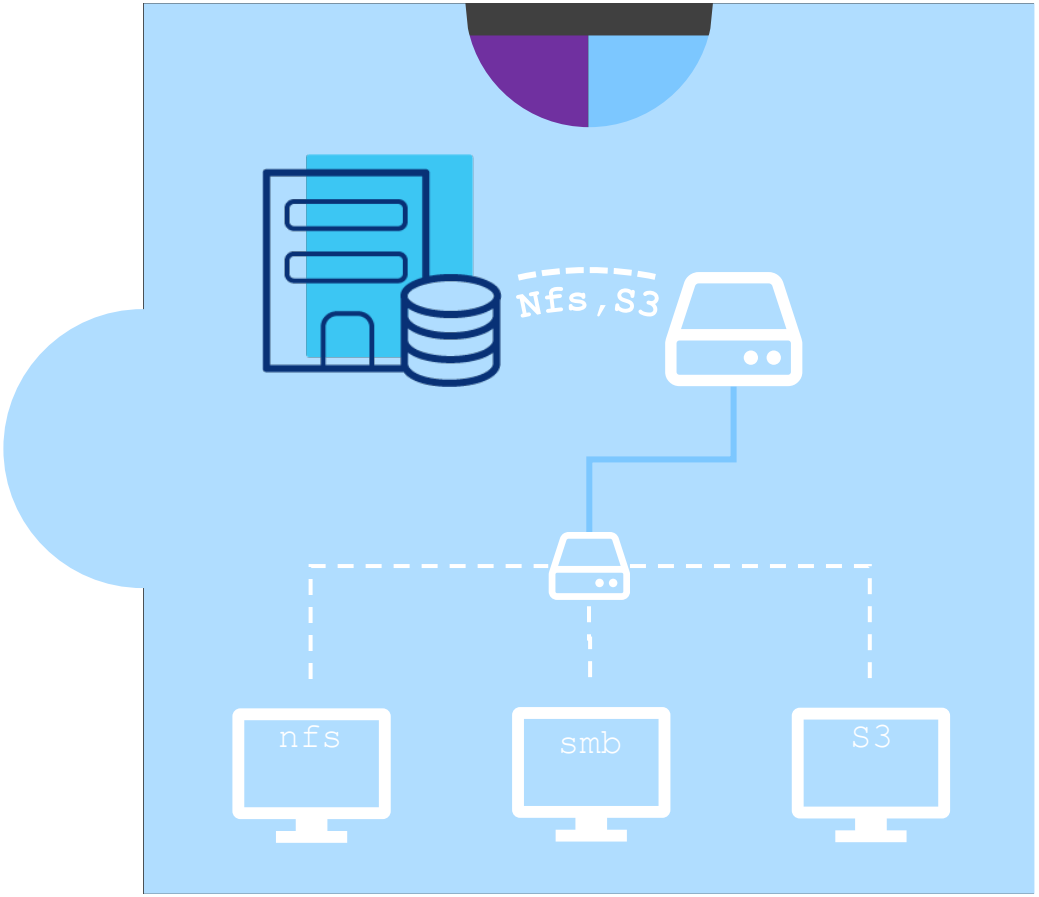
Minimizing the Effects of Latency

Advanced Fabric
based on memory-to-memory data access, buffer credits, packet loss recovery, and more

- **Remote Direct Memory Access across WAN bypasses common slow-downs vs TCP/UDP**
- **Buffer credits ensure lossless access to remote data**
- **Packet Loss Recovery minimizes impact of retransmissions**
- **Only move what the app needs**



Minimizing the Effects of Latency

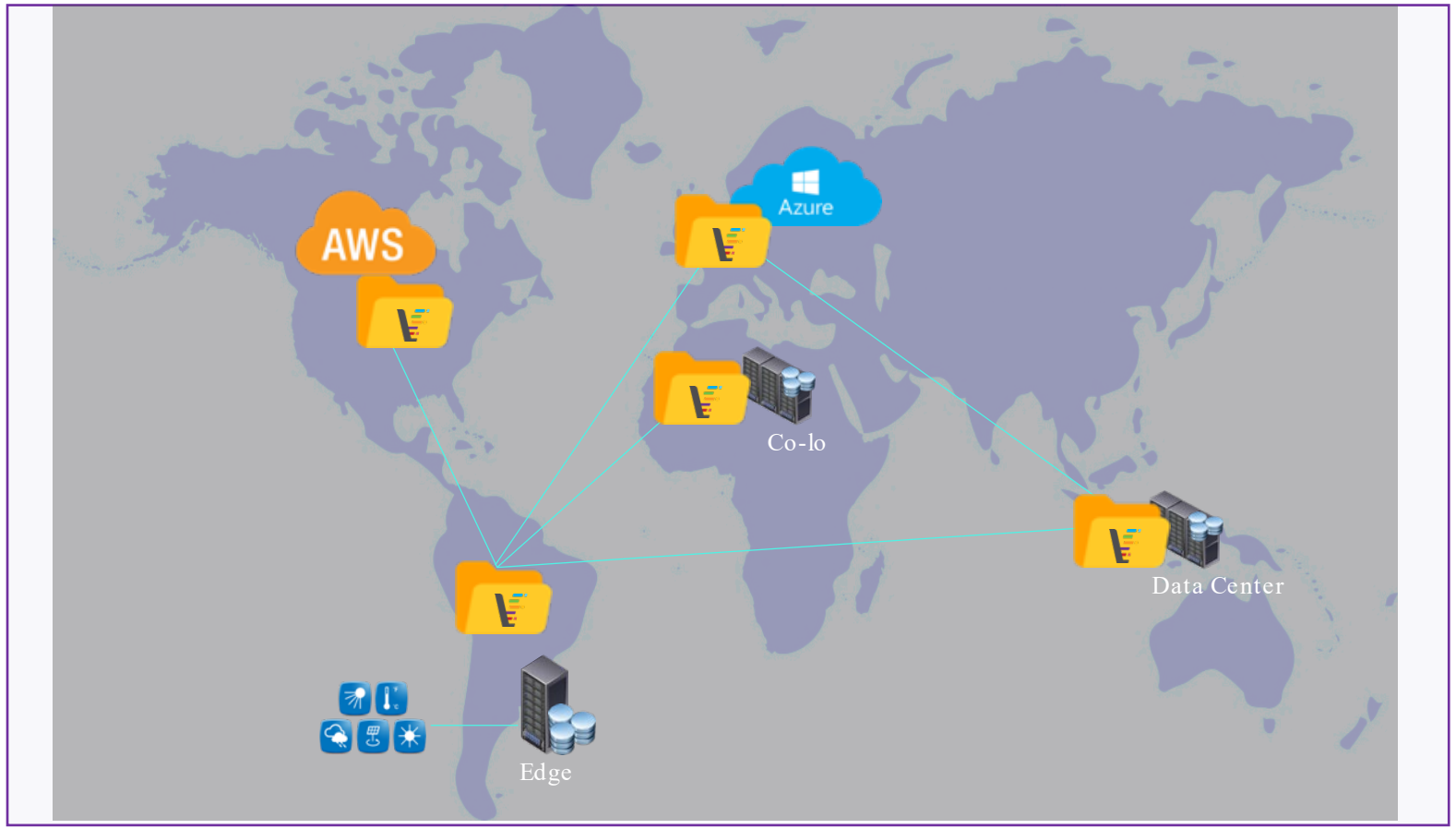


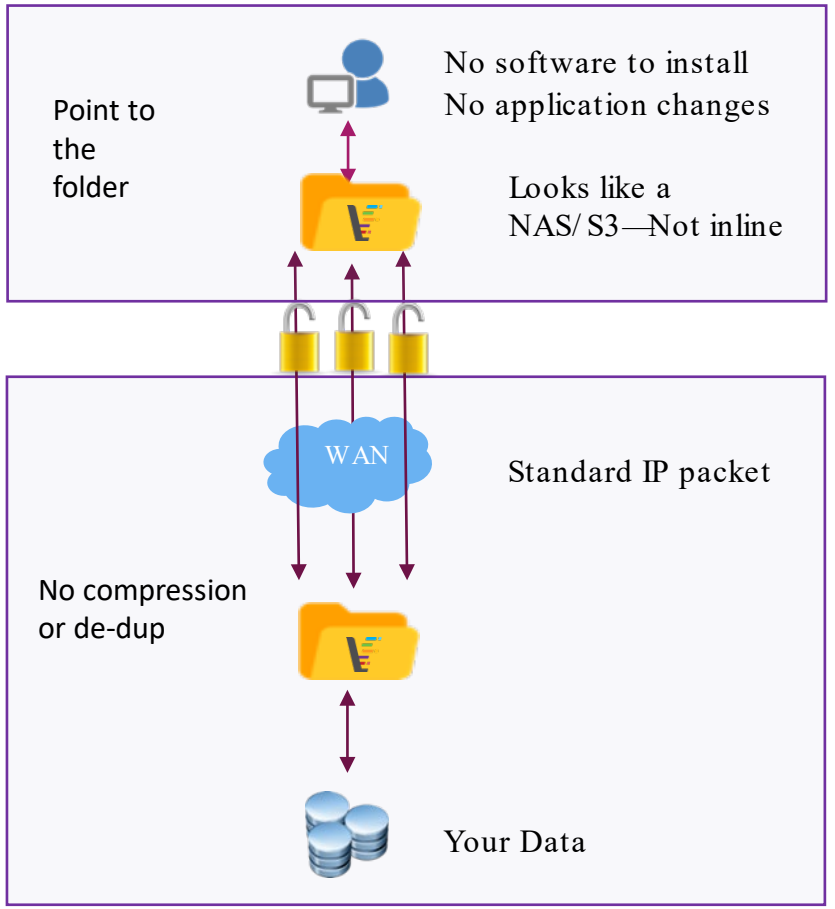
Simple Integration

with existing storage and compute via NFS, S3 or SMB

- **Storage site(s) present data to Vcinity**
- **User connects to their local Vcinity node via NFS, S3 or SMB, remote storage is presented locally**

How it works… easy to use

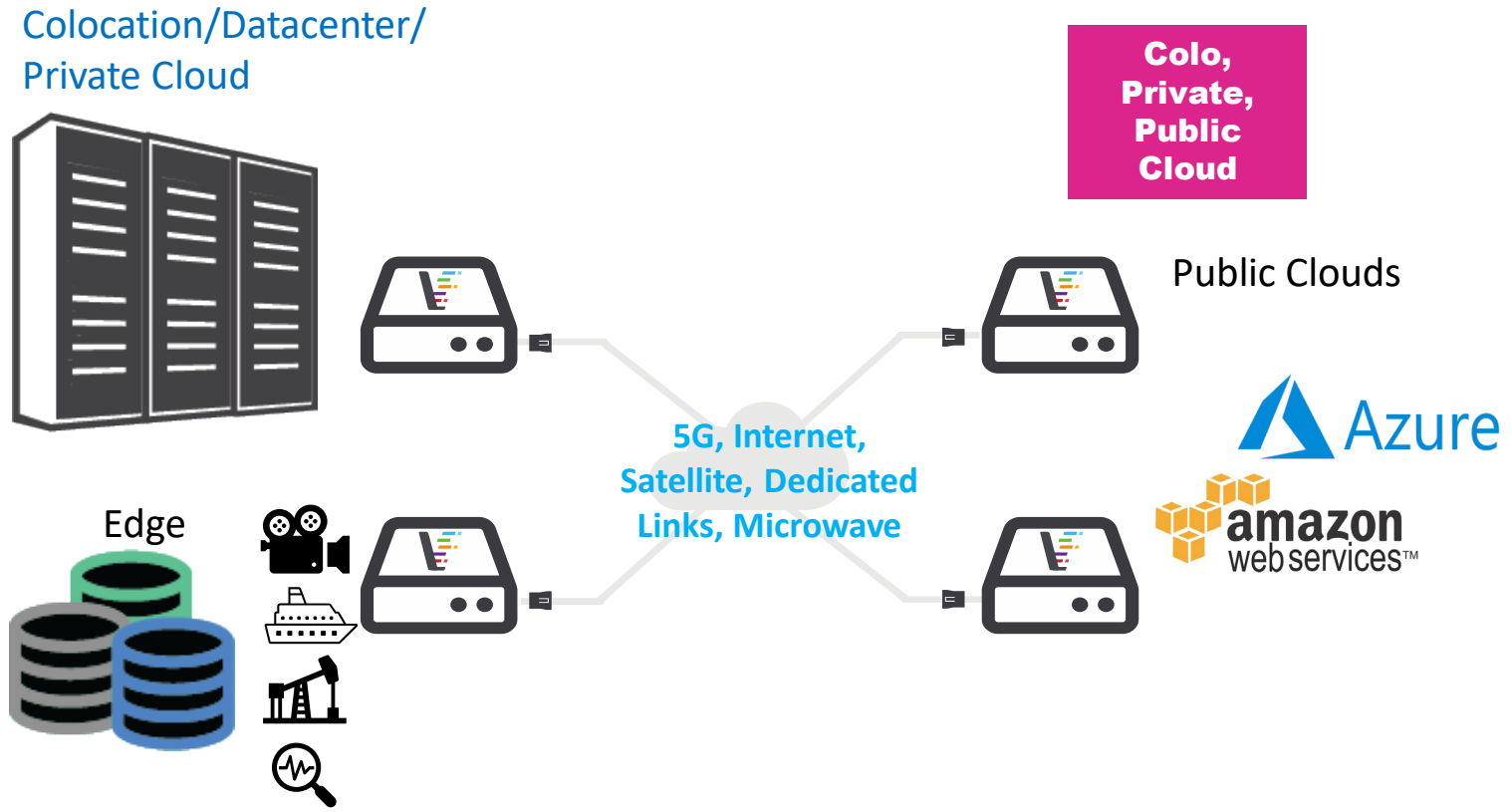




Use the Cloud as Never Before

Accelerate Cloud Adoption

Imagine having the flexibility of Public Cloud Compute providing scalability and cloud economics BUT having the control, security, and visibility of your Data by keeping it on Premises!



- Cloud Compute->Data on Prem
- Compliance / Regulations
- Risk free App Migrations
- Data Migrations

Empowered Edge

Remove stranded or stale edge's

- No Isolated edge
- Ge-Distributed AI
- Real Time Data Fusion

For more information visit us @vcinity.io

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