OpenEdge

Open Composable Disaggregated Infrastructure Featuring OpenFlex™
Open Composability

Provides the advantages of Hardware Composed Infrastructure with no vendor lock-in

Hardware Disaggregation

Disaggregate hardware components from the server so they can be efficiently pooled

Composability

Orchestrate virtual systems that can be optimally sized to the task
Open Composability
Fabric Attached Devices

- No physical systems – Only virtual systems
- Each device provides a resource that is offered over the fabric
- No established hierarchy – CPU doesn’t ‘own’ the GPU or the Memory
- All devices are peers on the network & they communicate with each other
NVMe-oF™ Fabric Devices

OpenFlex™ F3100 Fabric Device and E3000 Enclosure

- Dual-port, high-performance, low-latency fabric-attached SSD
- Self-virtualized device with up to 256 namespaces for dynamic provisioning
- 3U enclosure with 10 dual-port slots offering up to 614 TB
- Multiple storage tiers over the same wire – Flash and Disk accessed via NVMe-oF

OpenFlex™ | NVMe-over-Fabric | Infrastructure Disaggregation | Software Composable
OpenFlex™ Best in Class Performance Density

For Composable Disaggregated storage using NVMe over Fabrics

7.3M IOPS per RU
4KiB random read, QD=1

8.1M IOPS per RU @ 35 μsec
4KiB random write, QD=1

39 GB/s per RU
128KiB sequential read, QD=320

33 GB/s per RU
32KiB sequential write, QD=320

OpenFlex™ F3100

OpenFlex™ NVMe-over-Fabric | Infrastructure Disaggregation | Software Composable

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OpenFlex™ Composable Technology

High-Capacity & High-Performance Compute Fabric Device Concepts

OpenFlex™ D4000
4U half width

OpenFlex™ C1000
1U half width

OpenFlex™ C2000
2U half width

Replace C1000 with OpenEdge compute

High performance compute

OpenFlex™
NVMe-over-Fabric | Infrastructure Disaggregation | Software Composable
Open Composable API

Device Discovery
GET /Query

System Discovery
GET /System/Query

Compose Systems
POST /System/Composites

Create Storage Volumes
POST /Storage/Devices/{id}/Volumes/

Compose your virtual systems with one API

Email inquiries to OpenComposableAPI@wdc.com
Open Composable Compliance Lab

Objectives

• Create interoperability across the eco-system
• Enable customers to confidently purchase Fabric Attached Devices
• Enable composition / orchestration providers to focus on their value add
• Provide an open environment for multiple companies to debug interoperability issues
• Enable eco-system partners to verify compliance to OC API

Principals

• All Fabric Attached Devices are peers
• Vendors all benefit when customers can confidently purchase
• Provide an open environment to debug
• Leverage UNH-IOL
• OCCL is a center of excellence for NVMe-oF™