NVMe SSD Proliferation in OCP Servers

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SSD Market Survey

TOTAL SSD SHIPMENTS BY SEGMENT

Source: NAND Insights Q2 2016

ENTERPRISE SSD UNITS BY INTERFACE

PCIE SSD UNITS

Source: SSD forecast_Q116_Final.xlsx
Why NVMe?

Advantages of NVMe SSDs in Enterprise

- PERFORMANCE
- COST
- INNOVATIONS
Flexible NVMe Form Factors

Simplifying Deployments

2.5” U.2

M.2

Add-In Card
Flexible NVMe Form Factors

Simplifying Deployments

Storage Servers

Treys & JBOF

Carrier Cards
Higher Performance at Lower Cost

Data Flow bypassing target CPU

- Lower latency
- Better scalability
- Fewer requirements on CPU
- Lower power consumption

TARGET NODE 1

<table>
<thead>
<tr>
<th>NVMe Driver</th>
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<tr>
<td>ADMIN: CQ SQ</td>
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<td>IO: CQs SQs</td>
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Transport Abstraction

RDMA Transport

NVMe Fabric Target

NVMeoF w/RNIC

L2 Switch

40Gb RNIC

24x

Data Flow

Data Flow

Data Flow

Data Flow

Remote Namespace

Transport Abstraction

RDMA Transport

NVMe Fabric Initiator

NVMeoF w/RNIC

CLIENT NODE 1

CLIENT NODE 2

CLIENT NODE 3

CLIENT NODE 4

NVMe Driver

ADMIN: CQ SQ

IO: CQs SQs
Questions?

The architects of data storage are breaking new ground.

It starts at Booth B7.