MAKING CLOUD DEPLOYMENTS A REALITY WITH HYPERCONVERGED INFRASTRUCTURE
Overview

The promises of simplicity and cost savings have made Hyperconverged Infrastructure extremely attractive for IT, especially in branch-office deployments. At the same time, many organizations are also evaluating whether a Software-Defined Data Center (SDDC) architecture can help usher in a new cloud paradigm to help accelerate application service delivery and further reduce IT costs.

When evaluating cloud options today, few companies embrace a pure public cloud strategy; instead, most companies have strict requirements to keep particular data or applications in house for security, privacy and data sovereignty. For these organizations, deploying an on-premise private cloud (with hybrid cloud capabilities) may be the better option.

Until recently, the deployment of private clouds has required IT departments to bulk up on staff with specialized DevOps skillsets. Unfortunately, with shrinking IT budgets, this is not feasible for many companies. Given this dilemma, companies are looking for ways to leverage the benefits of hyperconverged architectures as a means to simplifying private cloud deployments.

SanDisk and Stratoscale have partnered to radically transform how clouds are built in today's existing data center. By re-defining how infrastructure is architected, deployed, managed and consumed, the two companies are helping customers overcome the complexities and costs typically associated with deploying clouds within the data center. The result is a viable solution for IT leaders looking to deploy hosted or on-premise private clouds with the simplicity, flexibility and cost benefits they are looking for.
The solution

Stratoscale has optimized its SDDC solution – Stratoscale Symphony – for cloud and virtualization environments running on SuperMicro servers with SanDisk SSD and Flash products. This joint solution allows customers to easily deploy their own cloud by virtualizing and pooling CPU, memory and storage resources. These resource pools can then be used to provision virtual machines along with the networks and storage necessary to make them run. A self-service portal and standard OpenStack APIs provide a centralized control point and a single pane of glass view of the entire infrastructure.

Customers can deploy the Stratoscale Symphony solution by building a cloud from the following three SuperMicro reference configurations:

1. Compute Configuration with SuperMicro SuperServer 6018R-TDW

   **CPU(S)**
   - Two (2) Intel® Xeon® E5-2690 v3 2.6GHz (12 cores)

   **MEMORY**
   - 256GB DDR4 SDRAM (32GB RDIMM, 2133MT/s, ECC)

   **STORAGE**
   - LSI SAS 2308 Adapter, 4 ports, 6GBps per port (JBOD configuration)
   - Three (3) 3TB 7.2K RPM SATA 6Gbps 3.5in Hot-plug HDDs
   - One (1) SanDisk Optimus2 Eco, 800GB SAS 6Gbps, MLC, 2.5in Hot-plug SSD

   **NETWORKING**
   - Dual-Port 10GbE SFP+ (Intel 82599ES-based Adapter)
   - On-board Intel i350 Dual Port Gigabit Ethernet

2. High Storage configuration with SuperMicro SuperServer 6028R-E1CR12L

   **CPU(S)**
   - Two (2) Intel® Xeon® E5-2690 v3 2.6GHz (12 cores)

   **MEMORY**
   - 256GB DDR4 SDRAM (32GB RDIMM, 2133MT/s, ECC)

   **STORAGE**
   - LSI SAS 2308 Adapter, 4 ports, 6GBps per port (JBOD configuration)
   - Nine (9) 6TB 7.2K RPM SATA 6Gbps 3.5in Hot-plug HDDs
   - Three (3) SanDisk Optimus2 Eco, 1.6GB SAS 6Gbps, MLC, 2.5in Hot-plug SSD

   **NETWORKING**
   - Dual-Port 10GbE SFP+ (Intel 82599ES-based Adapter)
   - On-board Intel i350 Dual Port Gigabit Ethernet
3. High density with SuperMicro SuperServer 6028TP-HCOR

Four hot-pluggable systems (nodes) in a 2U form factor

**CPU(S)**
- Two (2) Intel® Xeon® E5-2660 v3 2.6GHz (10 cores)

**MEMORY**
- 256GB DDR4 SDRAM (32GB RDIMM, 2133MT/s, ECC)

**STORAGE**
- On-board LSI SAS 3008, SAS3 (12Gbps) - JBOD configuration
- Two (2) 8TB 7.2K RPM SATA 6Gbps 3.5in Hot-plug HDD
- One (1) SanDisk Optimus2 Eco, 1.6TB SAS 6Gbps, MLC, 2.5in Hot-plug SSD

**NETWORKING**
- Dual-Port 10GbE SFP+ (Intel 82599ES-based Adapter)
- On-board Intel i350-AM2 Dual Port Gigabit Ethernet
SanDisk and Stratoscale have partnered to deliver a solution based on SanDisk’s Enterprise SSDs. SanDisk’s Enterprise SSDs deliver a combination of performance, reliability and value to meet the most I/O-intensive requirements in today’s clouds.

SanDisk offers the industry’s broadest portfolio of PCIe, SAS and SATA flash drives offering market leading performance, price/performance and capacities for software defined data center and clouds as follows:

<table>
<thead>
<tr>
<th>Flash Series</th>
<th>Uses Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Optimus Series:</strong></td>
<td></td>
</tr>
<tr>
<td>Eco (400GB, 800GB, 1.6GB, 2TB),</td>
<td>Unprecedented density and incredible capacities by up to 4TB for data center SSDs</td>
</tr>
<tr>
<td>Ascend (200GB, 400GB, 800GB, 1.6TB),</td>
<td></td>
</tr>
<tr>
<td>Ultra (150GB, 300GB, 600GB, 1.2TB),</td>
<td></td>
</tr>
<tr>
<td>Extreme (100GB, 200GB, 400GB, 800GB)</td>
<td></td>
</tr>
<tr>
<td>and MAX (4TB)</td>
<td></td>
</tr>
<tr>
<td><strong>LIGHTNING GEN. II SERIES:</strong></td>
<td></td>
</tr>
<tr>
<td>Eco (800GB, 1.6GB), Ascend (200GB,</td>
<td>A custom controller makes Lightning a competitive solution for demanding environments</td>
</tr>
<tr>
<td>400GB, 800GB, 1.6TB) and Ultra (200GB,</td>
<td></td>
</tr>
<tr>
<td>400GB, 800GB)</td>
<td></td>
</tr>
<tr>
<td><strong>CLOUDSPEED GEN. II SERIES:</strong></td>
<td></td>
</tr>
<tr>
<td>Eco (240GB, 480GB, 960GB), Ascend (120GB,</td>
<td>For the demanding requirements of hyperscale data centers</td>
</tr>
<tr>
<td>240GB, 480GB, 960GB) and Ultra (100GB, 200GB,</td>
<td></td>
</tr>
<tr>
<td>400GB, 800GB)</td>
<td></td>
</tr>
<tr>
<td><strong>CLOUDSPEED GEN. II SERIES:</strong></td>
<td></td>
</tr>
<tr>
<td>Eco (480GB, 960GB, 1.92TB) and Ultra (400GB,</td>
<td>Purpose-built for the cloud for superior performance and economics</td>
</tr>
<tr>
<td>800GB)</td>
<td></td>
</tr>
<tr>
<td><strong>FUSION IOMEMORY:</strong></td>
<td></td>
</tr>
<tr>
<td>SX350-1300 (1.25TB), SX350-1600 (1.6TB),</td>
<td>Up to 6.4TB for read-intensive workloads like web hosting, databases, virtualization, data mining, 3D Animation or CAD/CAM</td>
</tr>
<tr>
<td>SX350-3200 (3.2TB) and SX350-6400 (6.4TB)</td>
<td></td>
</tr>
</tbody>
</table>
Benefits

With SanDisk’s portfolio of enterprise products and Stratoscale Symphony, you can easily deploy a cloud running on SuperMicro servers in minutes. With just three servers required to get started, grow your cloud as capacity needs change, whether that is one server or one rack at a time. The simplicity and flexibility of this solution helps IT organizations re-focus on what is most important: providing increased agility and responsiveness to ever-changing business requirements.

The joint solution allows you to deploy a cloud, based on Software-Defined-Architecture to gain the following benefits:

1. **Ease of Use**
   Works out-of-the-box with easy setup and installation

2. **Incremental and Scale Out Deployment**
   Scale only the resources you need, the infrastructure expands automatically

3. **Open Architecture**
   Utilizes an intuitive and standard set of RESTful API’s and self-service tools, based on OpenStack API’s

4. **Lower TCO**
   Works with any x86 server without additional software or third party licensing, delivered as a subscription

---

**About Stratoscale**

Stratoscale is redefining the data center, developing a hardware-agnostic, software platform converging compute, storage and networking across the rack or data center. The self-optimizing platform automatically distributes all physical and virtual assets and workloads in real time, delivering “rack-scale economics” to data centers of all sizes with unparalleled efficiency and operational simplicity. Stratoscale is backed by leading investors including: Battery Ventures, Bessemer Venture Partners, Cisco, Intel and SanDisk.

For more information visit:
http://www.stratoscale.com
US Phone: +1 877 420-3244
Email: sales@stratoscale.com