What Matrix

Market analysis and platform comparison

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October 2018

EXCERPT

WHATMATRIX LANDSCAPE REPORT

SOFTWARE DEFINED STORAGE AND HYPERCONVERGED INFRASTRUCTURE 2018

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Key Trends

The overall observation of the last couple of years is that SDS/HCI platform functionality is getting both deeper and broader in scope. The ultimate aim is not only to rival the functionality provided by long establish traditional shared storage solutions, but to surpass them altogether. The years 2017 and 2018 are no exception. There were a lot of compelling new capabilities introduced for the very first time, as well as other capabilities being widely adopted by SDS/HCI vendors. At the same time, though, some capabilities are clearly (still) struggling to gain momentum, whereas some potential capabilities simply did not see the light of day.

Here is a list with trend highlights for 2017/2018:

MAKING A DEBUT

- Meshed architectures
- NVMe in hybrid and all-flash compositions
- Erasure Coding without compromise
- Native end-to-end encryption

FAST ADOPTION RATE

- Support for Hyper-V
- Support for containers and container orchestration platforms
- Native backup/restore features
- Native software-based encryption

STRUGGLING FORWARD

- Support for large-scale storage clusters
- Multi-cloud deployment model
- Storage QoS Guarantees
- Complete native predictive analytics with automated responses

MISSING IN ACTION

- Cloud-inspired purchase models (pay-per-use subscriptions)
- Adoption of an all-encompassing storage performance industry benchmark
- Profiling tools for deduplication benefits

Highlights

Key Takeaways

SDS/HCI has gained in maturity. Almost every platform in the comparison with an active development cycle has crossed the 70% score barrier. These platforms now have a baseline of native capabilities that are comparable to traditional enterprise storage platforms, and sometimes even go beyond. SDS/HCI customer base numbers are also still rising across the board and the 15,000 customer-mark for a single technology has already been breached.

SDS/HCI itself has become transformative. Already new architecture types have appeared that challenge the very definition of SDS/HCI. This can be considered a step forward as existing SDS/HCI architectures are exhibiting some foundational limitations and weak-spots that need to be addressed. It also forces vendors to rethink their implementation of the SDS/HCI concept and re-embrace the key principle of simplicity.

"Best" is in the eye of the beholder. It becomes increasingly important for end-user organizations to identify exactly what benefits they are looking for during early pre-procurement stages. Although many SDS/HCI solutions seem very similar at first glance, they often have their own particular set of pros and cons that can also differ depending on the unique situation and goals.

Future Outlook

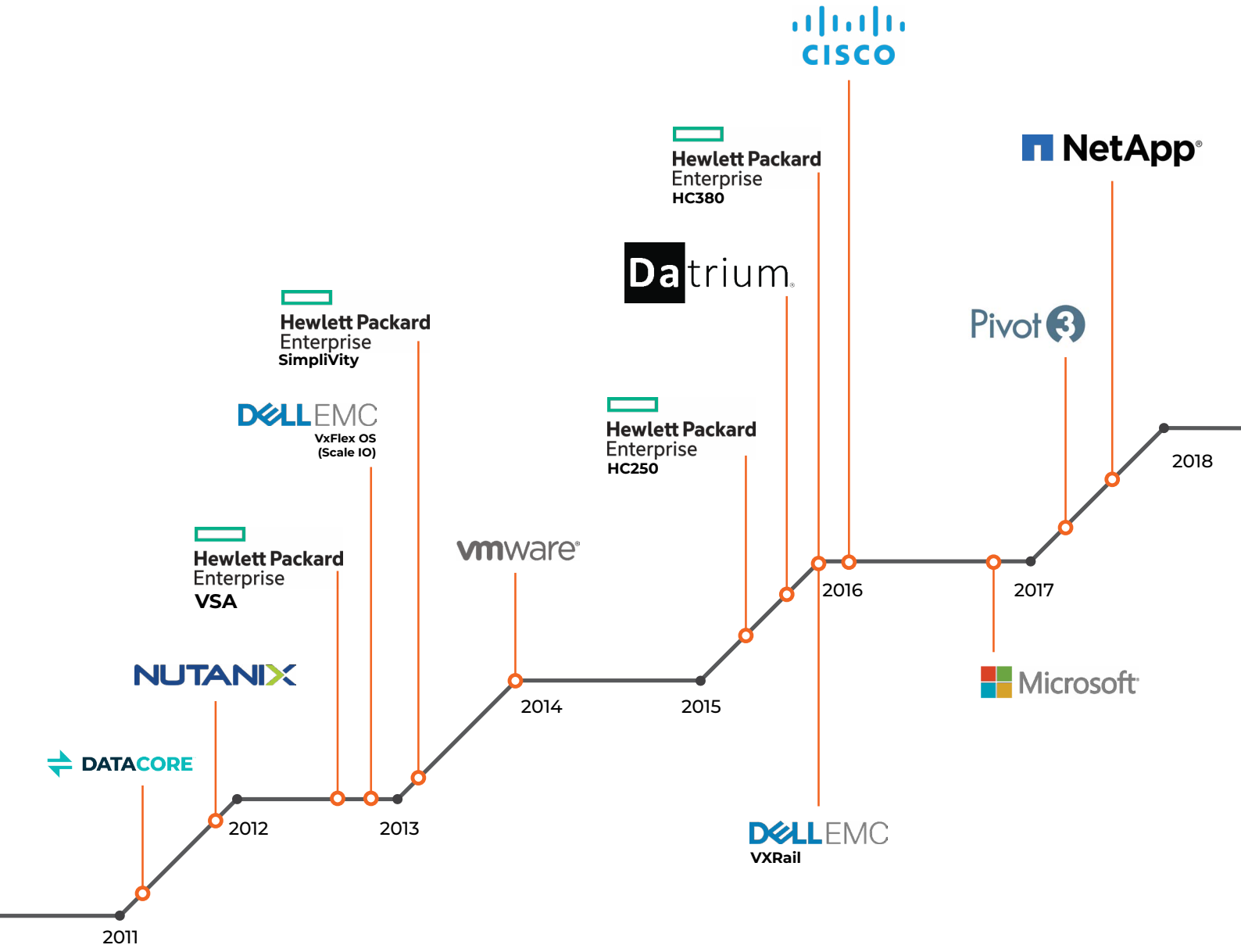
Hybrid cloud is the next step. Most SDS/HCI platforms have evolved to a stage where they qualify for adoption in a private cloud ecosystem. Many vendors have now targeted full-featured hybrid-cloud scenarios as the logical next step. In order to bridge the gap between private and public clouds and to provide a seamless experience at the same time, SDS/HCI solutions need to be able to be fully deployed on top of native public cloud infrastructures.

Focus on demanding enterprise application workloads. With a proven install base for workloads that have low and medium requirements, SDS/HCI vendors will start to expand their horizon by supporting modern high-demanding enterprise workloads. In order to prove that they can meet even the most rigorous requirements, they will formally validate their solution whenever possible.

Increased competition will cause more casualties. Now that all of the established enterprise vendors have adopted their 'weapon of choice' either by acquisition or internal development, the SDS/HCI war is likely to heat up. Existing SDS/HCI platforms have to battle on multiple fronts: against their brethren, against modernized traditional enterprise storage offerings (don't discard these just yet!), and against new start-ups that have the opportunity to re-image the SDS/HCI concept from the ground up. In this overcrowded arena casualties seem to be unavoidable.

Industry Timeline

The following is a timeline indicating when each commercial SDS & HCI product was introduced to the market. In some cases, this does not correspond to when the company was founded or incorporated.



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Platform Comparison

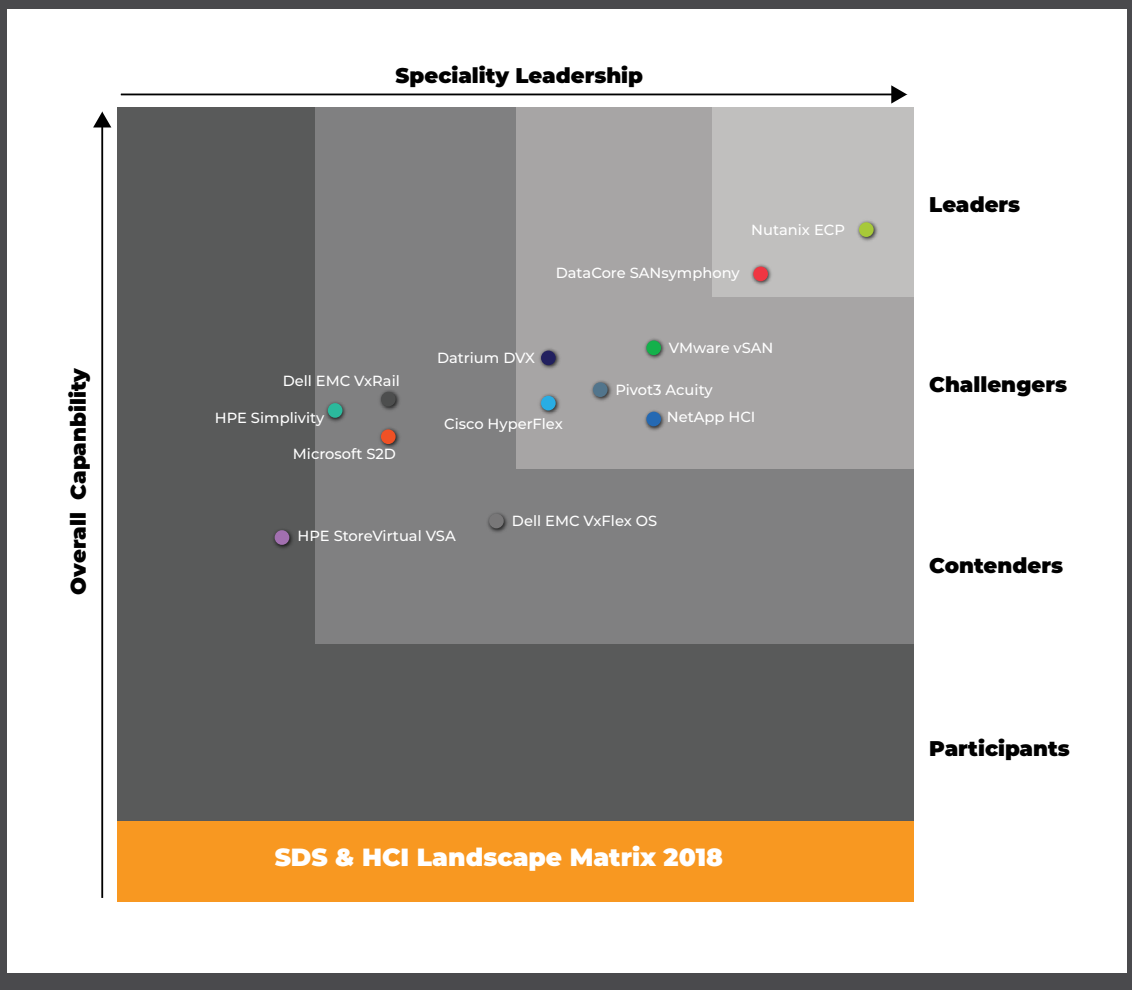
As of October 2018, the SDS & HCI category comparison evaluates vendor products across a total of 115 features spanning the seven focus areas described in the Scope of Report section above.

Landscape Matrix

The Landscape Matrix visualizes the technical ranking of all evaluated platforms in the technology landscape.

The y-axis represents the overall technical capability determined by the "total score" generated by all technical evaluation features in the comparison matrix. (Higher=Better)

The x-axis visualizes leadership in listed focus areas i.e. in subset(s) of evaluation features that focus on a certain use case (specialty).



Evaluation Data

This table summarizes the scores generated by the evaluation, including score by focus area and total score.

Vendor Platform	Design & Deploy	Workload Support	Server Support	Storage Support	Data Availability	Data Services	Manage-ment	Overall
Cisco HyperFlex v3.5	83.3%	73.1%	76.9%	92.3%	65.5%	58.7%	75.0%	**71.6%**
DataCore SANsymphony v10.0 P7U2	66.7%	80.8%	100.0%	96.2%	86.2%	71.7%	78.6%	**83.3%**
Datrium DVX v4.0.3.0	83.3%	65.4%	88.5%	92.3%	74.1%	63.0%	78.6%	**75.7%**
Dell EMC VxFlex OS Enterprise v2.6	58.3%	80.8%	96.2%	92.3%	50.0%	28.3%	57.1%	**60.8%**
Dell EMC VxRail v4.5.225	66.7%	73.1%	76.9%	84.6%	75.9%	47.8%	85.7%	**71.6%**
HPE SimpliVity 380 v3.7.5	75.0%	69.2%	65.4%	53.8%	84.5%	60.9%	82.1%	**71.2%**
HPE StoreVirtual VSA v12.7	58.3%	42.3%	92.3%	76.9%	70.7%	23.9%	64.3%	**59.5%**
Microsoft S2D Datacenter v2.0	66.7%	73.1%	96.2%	88.5%	51.7%	63.0%	64.3%	**68.5%**
NetApp HCI v1.3	66.7%	88.5%	50.0%	53.8%	56.9%	89.1%	85.7%	**70.3%**
Nutanix ECP Ultimate v5.9	66.7%	96.2%	88.5%	88.5%	93.1%	76.1%	92.9%	**87.4%**
Pivot3 Acuity Datacenter v10.4	83.3%	80.8%	65.4%	80.8%	72.4%	58.7%	85.7%	**73.0%**
VMware vSAN Enterprise v6.7	83.3%	88.5%	96.2%	88.5%	77.6%	47.8%	78.6%	**76.6%**

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Vendor Example
DataCore

Founded in 1998, DataCore is headquartered in Fort Lauderdale, Florida, United States. Their current SDS offering is SANsymphony v10.0 PSP7 U2, which is the company's only product next to Hyperconverged Virtual SAN, which also fits the SDS classification and is built on the SANsymphony foundation.

What the Vendor Says

DataCore SANsymphony is an enterprise-class platform that provides a high-performance, highly available, and agile storage infrastructure with the lowest Total Cost of Ownership (TCO).

SANsymphony infrastructure software takes isolated storage devices, sometimes spread between different locations, and places them under one common set of enterprise-wide services. It pools their collective resources, managing them centrally and uniformly despite the differences and incompatibilities among manufacturers, models and generations of equipment in use.

Observations

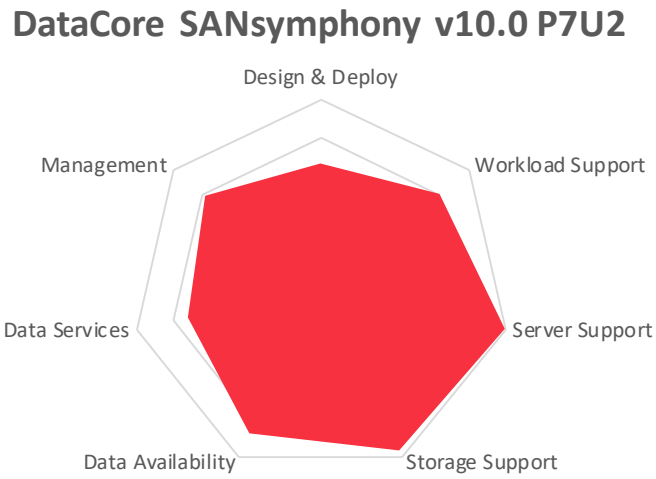
Despite having a lot going for it as well as having an extensive track record and broad customer base, DataCore is still a relatively small company that appears to suffer from a lack of brand awareness. SANsymphony's strong suit is undoubtedly the extended flexibility and with it the numerous use-cases that the platform can serve. However, these strong points could also prove to be its Achilles' heel if customers instead are looking for best-of-breed platforms to suit just one or two particular use-cases.

WhatMatrix Assessment

SANsymphony has long held a top spot in our SDS/HCI leaderboard. SANsymphony can be regarded as pure SDS, providing extreme flexibility when it comes to server- and storage hardware choice.

The product supports all major hypervisors as well as a wide range of bare metal platforms. Furthermore, the product can be deployed in a single layer or a dual layer fashion. In the latter case SANsymphony exclusively serves storage to external compute hosts.

With the obvious exception of Microsoft Storage Spaces Direct, SANsymphony is about the only SDS platform that has been built on top of the Windows Server OS. This explains the tight integration and why it is able to leverage native Windows functionality such as its File Services and Data Efficiency features. Although there aren't really many big caveats, the lack of true native capabilities means that some of the features can only be considered mediocre when stacked up against the competition.



About WhatMatrix

WhatMatrix: better technology decisions for your business

The community is changing the consultancy landscape with a new (crowdsourced-powered) trust model, delivering accountable analysis through respected industry experts, combining it with an open community curation (OCC) model that ensures impartiality.

WhatMatrix is challenging traditional comparison sites and classic IT analysts, by providing in-depth, community-validated and "always online" technology comparisons & landscape reports to its users – free of charge.

WhatMatrix provides unbiased analysis in an industry segment that is dominated by comparison sites collecting user-reviews, an increasingly unreliable approach that omits any technical analysis.

The Old

wait for annual reports
"oblique" evaluation criteria
"pay-to-play" vendors, entry criteria
evaluations "behind closed doors"
rankings based on user-reviews only
(most product review sites)

VS

WhatMatrix

"always-online" comparisons + reports
fully disclosed taxonomy and weights
free listings (inclusive of relevant newcomers)
Named owners + Open Community Curation
all comparisons based on technical analysis
(100+ evaluation points)

WhatMatrix Platform & Community

WhatMatrix Landscape Reports provide a comprehensive point-in-time snapshot analysis of a technology area and its leading solutions, complementing the depth of always-online comparisons. These reports include key industry trends, top-level assessments of vendor capabilities, and supporting information that enable the reader to make well-informed product evaluations and purchase decisions.

WhatMatrix significantly reduces the time and cost spent on researching suitable technologies to solve today's business challenges. Visitors and comparisons have grown exponentially since launch, indicating that IT professionals are looking for unbiased, current and free information.

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