A combination of research & data is delivered across fifteen channels aligned to the prevailing topics and technologies of digital infrastructure... from the datacenter core to the mobile edge.
451 Research coverage of OpenStack

Platform overview

Timely topics: Distro wars, Containers

Community growth

Market Sizing by business model

Enterprise insights

User deployment stories
AGENDA

Public & Private Cloud

- Trends
- Market size
AGENDA

OpenStack Detail

- Adoption
- Market size
- Pros/Cons
- Pricing
The Enterprise Journey to Cloud-ready Infrastructure

Q. In what phase are you in evolving your internal infrastructure (i.e., cloud-enabling) environment?

Source: Voice of the Enterprise, Cloud Computing
Cloud evolution roadblocks are typically not IT-based

Q: What roadblocks are inhibiting you from reaching the next phase of your cloud computing initiatives?
Source: Voice of the Enterprise, Cloud Computing
Cloud is NOT suitable for everything/everyone

Q. What are your two biggest IT related pain points that are currently impacting your ability to get to the next phase?

Source: Voice of the Enterprise, Cloud Computing

<table>
<thead>
<tr>
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Cloud is NOT suitable for everything/everyone

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Low Impact (0-4) | Moderate Impact (5-7) | Significant Impact (8-10) |
Overall IT Budget Allocation

- Cloud Services, 6.9%
- Security, 6.5%
- Software/Applications, 15%
- Networking, 9.3%
- Storage, 10.7%
- Servers, 12%
- 3rd Party Mgd/Prof Services, 6.8%
- Internal Staff/Labor Costs, 29%
- Other, 3.8%

Source: 451 Research, Voice of the Enterprise: Servers & Converged Infrastructure, Q4 2015
Budget allocation for hosting and cloud services

- Infrastructure Hosting: 30.6%
- Managed Services: 21.2%
- Application Hosting: 27.1%
- Security Services: 21.1%

Almost 70% of cloud spending is now beyond Infrastructure services.

Source: 451 Research Market Monitor, Cloud Computing
OpenStack is a toolkit

Image courtesy of the OpenStack Foundation
Enterprise adoption increases as platform matures

OpenStack Community Membership Growth

- 35,000
- 30,000
- 25,000
- 20,000
- 15,000
- 10,000
- 5,000
- 0

Source: OpenStack Foundation
OpenStack Foundation financial supporters now over 500
Implementation of OpenStack

Please indicate your organization’s implementation status for OpenStack.

In-Use (Not Including Pilots) 31.5%
In Pilot/Proof of Concept 12.4%
Planning: Next 6 Months 2.7%
Planning: Next 12 Months 6.1%
Planning: Next 24 Months 12.0%
Not In Plan 35.3%

n = 635

How would you describe your organization’s spending plans in 2016 compared to 2015 for OpenStack?


n = 462
From which of the following types of organizations are you purchasing OpenStack?

- Distribution: 37.5%
- Services provider: 25.0%
- DIY: 20.8%
- Other: 16.7%

Top OpenStack purchase decision criteria

✓ Price
✓ Long term support
✓ Existing relationship
✓ Reputation in community
✓ One stop shopping
OpenStack Market Size
OpenStack Market Size Scope

**In Scope revenue**
- Service providers utilizing an OpenStack platform as the core of the service provided.
- OpenStack consulting, development, management, training and other services.
- Products (services or hardware) that are specific to OpenStack.

**Out of Scope revenue**
- Server, storage or networking hardware that could be utilized in any architecture.
- Revenue generated by enterprises utilizing an OpenStack environment.
OpenStack Market Taxonomy

- OpenStack
  - Service Providers
  - Cloud Management
  - Products, Distribution and Management
    - Private Cloud
    - Public Cloud
    - Distro
    - IT Services
    - Training

OpenStack Research
OpenStack Ecosystem Segment Revenue

- 79% / 75% Of total revenue generated by OpenStack Service Providers in 2014 and 2019, respectively
- 56% / 44% Public cloud versus private cloud revenue breakdown for 2015

Source: 451 Research Market Monitor: OpenStack
Pricing
### Cloud Price Index Private Edition - Specification

<table>
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<th><strong>“Premium” Operating System</strong></th>
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<td>500 VMs with 2.5GHz Core, 4GB Memory, 200GB SAN Storage, 0.5Gbps Bandwidth, low contention</td>
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<th><strong>Orchestration:</strong> Allows Self-Service, Resource Reallocation, Resource Consumption Monitoring, 24 x 7 Support Contract</th>
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<th><strong>Hypervisor</strong></th>
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<td>25 server nodes, 100TB SAN, supporting network fabric</td>
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<th><strong>Firewall and load balancer</strong></th>
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| **Space, power, connectivity** |
When is an Openstack distribution cheaper than DIY?
Distributions have a lower TCO than DIY if an enterprise is able to save at least 45% of its manpower costs by using a distribution.
Private Cloud Index

Wrap Up
Enterprise reasons for selecting OpenStack

- Avoiding vendor lock-in
- Modularity with no central controller
- Open source
- Cost savings versus alternatives
- Major vendors backing the community
- Support for multiple hypervisors
- Momentum with NFV
Concerns with OpenStack platform

- Limited interest from SMB
- Light on reliability and resiliency in comparison to VMware for production workloads
- Still considered a toolkit rather than a product
- Concern with fragmentation
- Complex to deploy
- Limited supply of developers
Summary Thoughts

✓ Enterprise favors private cloud over public cloud
✓ Security is top concern regardless of choice
✓ OpenStack has enterprise mind share, but not wallet share
✓ The open source toolkit has promise, but a lot of work still ahead
✓ OpenStack distributions TCO savings over DIY only with manpower reduction
✓ Existing vendor relationships are often key selection criteria
Who will win the race?
Thank you!

@alsadowski