



zSystems in the Cloud: Surprise! You're a Service Provider

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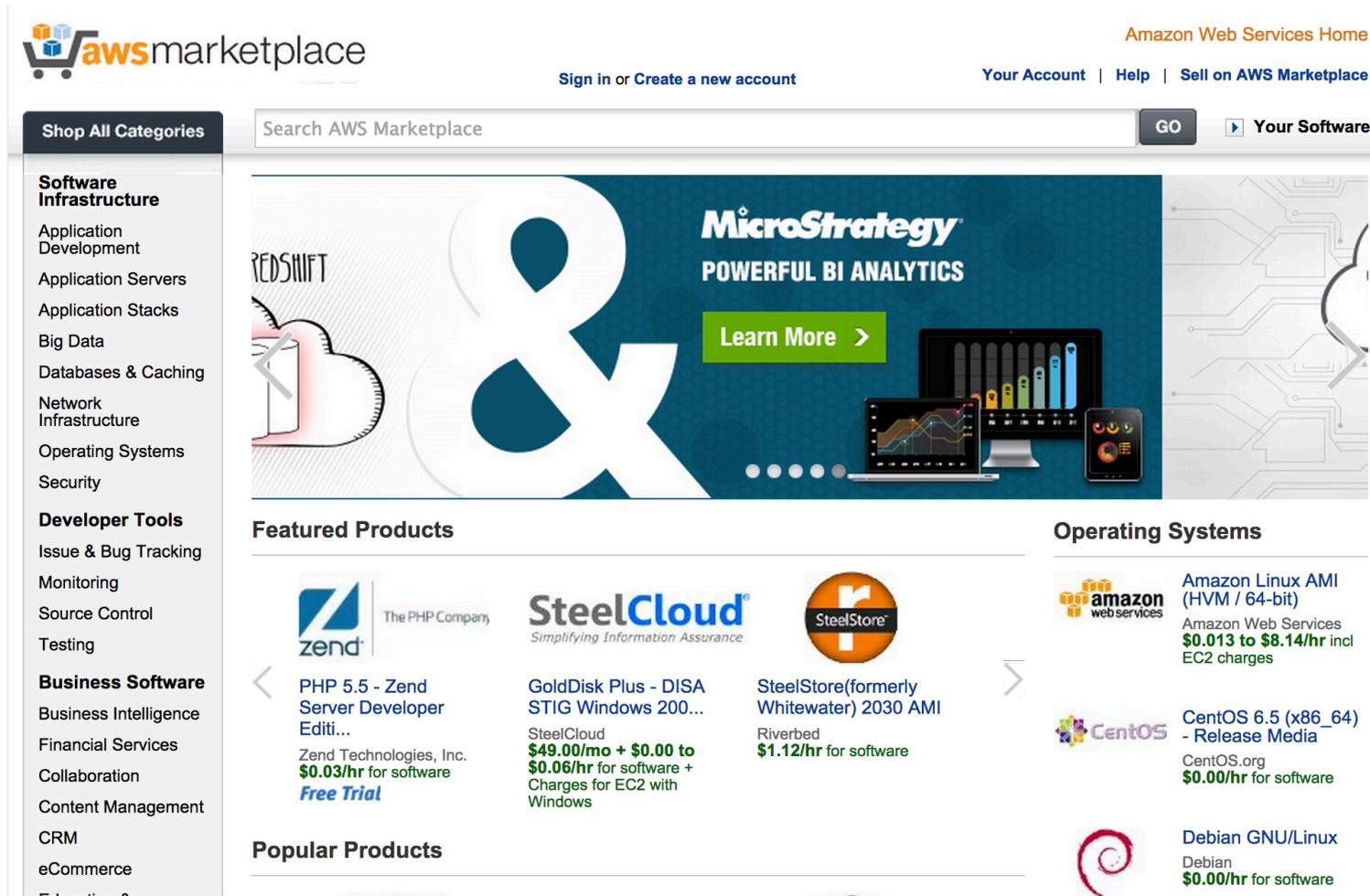
An API Economy of and Consumers



Segment	Company	Description	Client	Client Value
Payment Services		Seamless payment mode integrated into POS		Home Depot customers can pay with PayPal at the point of sale, reducing fraud incidents and cutting on larger credit card fees Rolled out to nearly 2000 stores in 2 weeks
Communication Services		All telco offerings, including line provisioning, phone calls, SMS are provided through APIs		Intuit very quickly built (PoC in a weekend to production in 1 month) a service based 2 nd factor authentication solution using the SMS messaging API from Twilio
Telco		API suite includes APIs for contacts, SMS, MMS, advertising & payment		AT&T subscribers will benefit from directly charging in-app purchases to phone bill
Finance		Drive promotion campaigns for brick & mortar store customers		Merchants provided insight into success of their campaigns. "Tweet to Transaction" model to increase revenue

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Redefining the business



The screenshot shows the AWS Marketplace homepage. At the top left is the 'aws marketplace' logo. To the right are links for 'Amazon Web Services Home', 'Sign in or Create a new account', 'Your Account', 'Help', and 'Sell on AWS Marketplace'. Below the navigation is a search bar with the text 'Search AWS Marketplace' and a 'GO' button. A 'Your Software' link is also present. On the left is a vertical navigation menu with categories: 'Shop All Categories', 'Software Infrastructure' (with sub-items like Application Development, Application Servers, Application Stacks, Big Data, Databases & Caching, Network Infrastructure, Operating Systems, Security), 'Developer Tools' (with sub-items like Issue & Bug Tracking, Monitoring, Source Control, Testing), and 'Business Software' (with sub-items like Business Intelligence, Financial Services, Collaboration, Content Management, CRM, eCommerce, Education & Research).

The main content area features a large banner for 'MicroStrategy POWERFUL BI ANALYTICS' with a 'Learn More >' button. Below the banner are three sections: 'Featured Products', 'Operating Systems', and 'Popular Products'. The 'Featured Products' section includes:

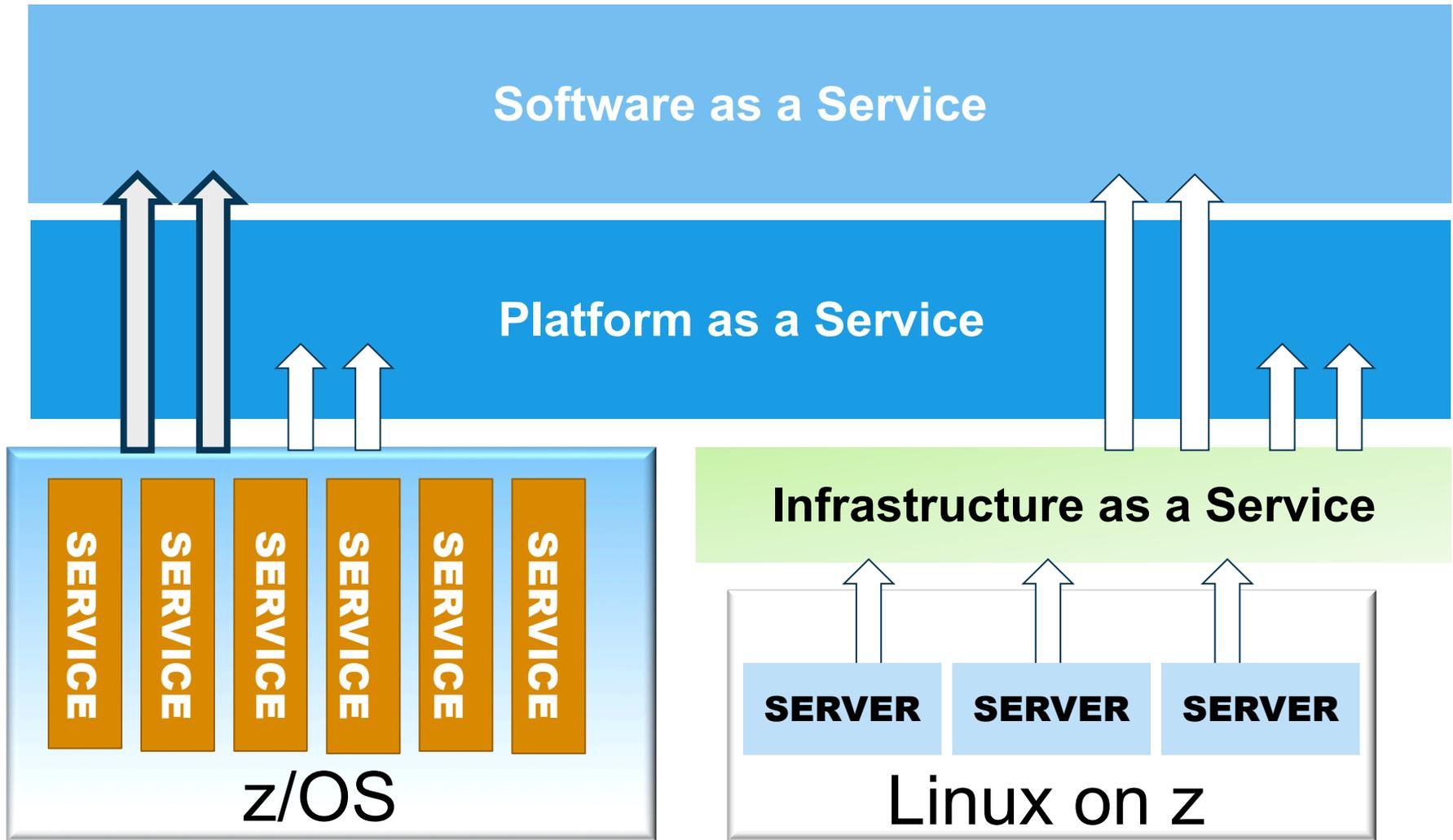
- Zend** (The PHP Company): PHP 5.5 - Zend Server Developer Edition... Zend Technologies, Inc. **\$0.03/hr** for software **Free Trial**
- SteelCloud** (Simplifying Information Assurance): GoldDisk Plus - DISA STIG Windows 200... SteelCloud **\$49.00/mo + \$0.00 to \$0.06/hr** for software + Charges for EC2 with Windows
- SteelStore** (formerly Whitewater): SteelStore (formerly Whitewater) 2030 AMI Riverbed **\$1.12/hr** for software

The 'Operating Systems' section includes:

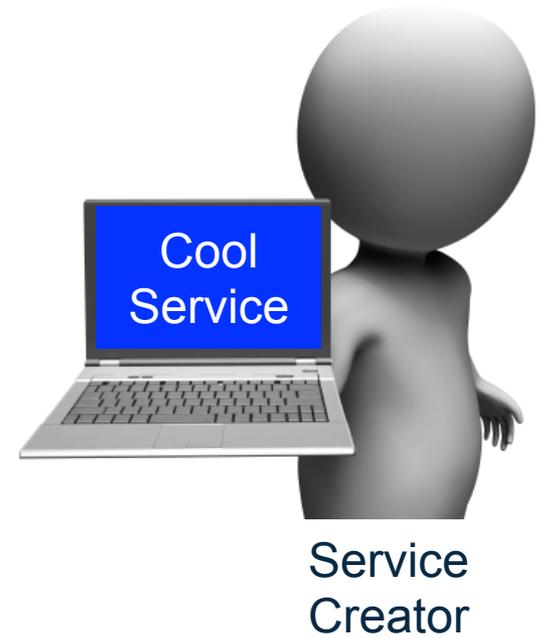
- amazon web services**: Amazon Linux AMI (HVM / 64-bit) Amazon Web Services **\$0.013 to \$8.14/hr** incl EC2 charges
- CentOS**: CentOS 6.5 (x86_64) - Release Media CentOS.org **\$0.00/hr** for software
- Debian GNU/Linux**: Debian **\$0.00/hr** for software

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z/OS Providing Higher Level Cloud Services



Hybrid Cloud Roles



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Service Consumer

Service Creator Role

Creates function

Break Down “monolithic applications”

Wants to leverage platform capability

Programs in a “Legacy Language”

- COBOL
- Assembler
- Java



Service Consumer Role



Finds Services

- Internally available
- Externally accessible

Relies on Containers

- Docker

Uses new languages

- JavaScript
- Ruby on Rails

Service Provider Roles

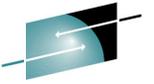


Worries about operational characteristics

- Availability
- Security
- Performance
- Disaster Recovery
- Offer & Dispose of the service

Worries about business issues:

- Service Levels
- Cost of implementation
- Value of the service
- Define the charge/show model



Dashboard ✖

← → ↻ 🏠 [Address Bar]

Apps IBM IBM zBLC Community IBM zPartnership z/OS Platform as a S... OpenShift zPAC Provisioning Log In - Walmart IS... zCloudEdge Submitting Batch JO... Dashboard Other bookmarks

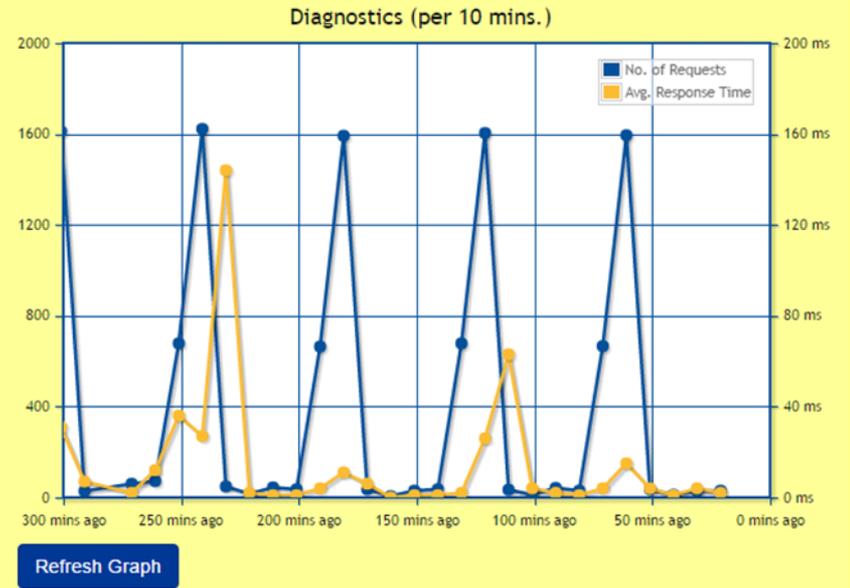
Dashboard
z/OS Cloud Service Monitoring Tool

Service: [Redacted]

Status: Up

Response Time: 96ms

Refresh Show Debug



Dashboard is brought to you by the z/OS Cloud Development Team

Windows taskbar with icons for Start, Internet Explorer, File Explorer, VLC, Skype, Excel, Outlook, Word, PowerPoint, OneDrive, and Chrome. System tray shows 8:11 PM, 8/4/2015, and network/volume icons.

Why Do I Want the API Manager?



Handle the business of a Request

Keeps track of the number of users

Provides high level security

Aggregates Multiple services

Surprise! : You will probably have more than 1!

There Are Brokers and There are Services

Broker



Provide a dedicated instance of a service

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Service



Perform a function

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The Real Work Starts After the Service is Created



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What Do I charge? What do I Provide?

Freemium?

What Value to add?



How to charge?

What do I deploy for a tier?

Managing Security

Isolation

Performance



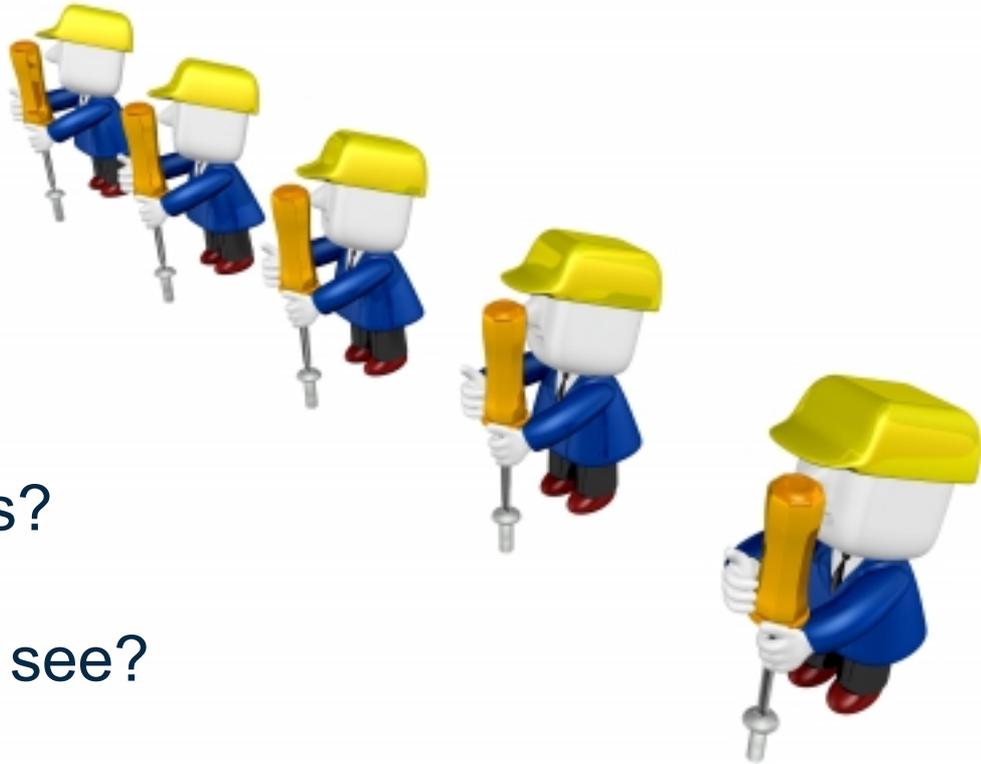
What level of orchestration is appropriate for the system?

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How much control do I give tenants?



Do they manage users?

What Info should they see?

Capacity Planning



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When it's over!



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Summary

- Much of the job remains the same
 - Performance/availability
 - Security
 - DR
- The way the environment will be accessed is changing
 - New workload requirements
 - Focus is on a services model rather than an application model
 - More unpredictable model will ensue
- The new model will require new approach to providing service
 - New tools will provide new insights
 - Operations will have an additional business focus
 - Service Lifecycle will be fundamentally different