Enterprise Cloud: Accelerate Your Journey with CA AppLogic for System z

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## Agenda

- Why System z for the cloud?
  - What is motivating people to use System z for cloud?
  - How is Linux deployed on the mainframe today?
- Current deployment solutions
  - Why are today's solutions problematic?
- CA AppLogic for System z overview
  - What is it and how does it work?
  - How does it increase your productivity?
  - How can it decrease your costs and risks?
- Summary



## Why System z for

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Thoughts about the Cloud, Virtualization, Mainframes, Enterprise Software...and other stuff.

#### **DISTRIBUTED PERS**

- Want to keep/move cloud workloads in-ł
- Require high RASSS environment
  - Reliability, Accessibi Stability and Scalabi
- Looking to lower cos



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#### → Linux on System z–A Cost Saver?

One of the claims that we in the Linux on System z world make is that it can be more cost effective to run your systems on the mainframe than using a distributed x86-based architecture. I was trawling my research and decided to post some of the key data points and quotations that support this hypothesis. There's a huge amount of research behind this but if I were talking to a customer and wanted to hit the highlights this would be a good starting point:

- Over a three year period, total costs for hardware, software and support can be up to 80% less with similar dramatic savings on floor space and energy.
- Using a fully configured machine running Linux for System z, clients can create and maintain a Linux virtual server in the z114 for as little as \$500 per year.[1]
- Extra resources to manage an additional 10 <u>IFLs</u>? Probably none at all but add 100 x86 cores you'll need an additional two people.
- Clients can consolidate workloads from forty x-86 processors running Oracle software on to a z114 with just three processors running Linux.
  - · Run production, development and QA environment on single machine
  - Much better resource utilization (often 90%+) without degradation on service vs. x86 typically at 10-20% utilization levels
- Just take Oracle licensing costs as an example. A System z10 BC with <u>one IFL</u> compared to cluster of two x86 dual-processor Intel quad-core servers:
  - Saving 87.5% on licensing Oracle Database Enterprise Edition Full License
  - Saving 87.5% per annum on the cost of Oracle Database Enterprise Edition
- According to Gartner, one major Insurance Company
  - Saved ~80% of floor space and a similar percentage of electric power
  - Avoided investing additional \$10 million for backup
  - Reduced TCO by \$15 million in 3 years

[1] http://www-03.ibm.com/press/us/en/pressrelease/35013.wss

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## **Current Deployment Solutions**

Just provision Linux container



Add virtual infrastructure and/or middleware

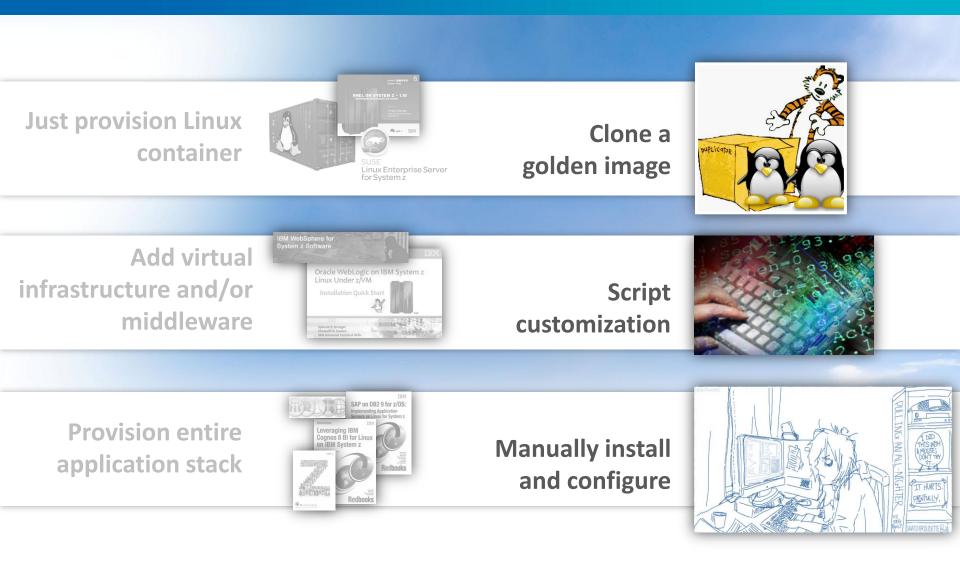


Provision entire application stack





## **Current Deployment Solutions**





## **Evaluating Deployment Options**

#### Provisioning just Linux or entire application? Consider...



- Speed to value
- Accuracy
- Auditing and reporting
- Resource allocation and constraints



#### Ongoing Management

- Manage to service level objectives
- Linux patching and upgrades
- Component patching and upgrades etc.
- Charge/show back



#### Controlled De-provisioning

- End of application lifecycle
- Varying capacity demands
- Efficient use of system resources



### Simplify Linux on System z and accelerate mainframe cloud

#### CA AppLogic<sup>®</sup> for System z

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## Quickly design, provision and manage cloud applications on System z

#### Reduce costs and increase efficiency

- Host thousands of Linux on System z applications on a single zEnterprise server
- Replaces need for hundreds of distributed servers and their required network fabric

## Easily connect to z/OS transactions and databases

Self-service provisioning on System z combines cost reduction and agility with massive scalability and reliability



#### Introducing CA AppLogic<sup>®</sup> for System z a turnkey application platform



Virtualize Linux on System z application and its ENTIRE infrastructure

> Firewalls Load balancers Web servers App servers Storage



# **CA AppLogic for System z** simplify deployment

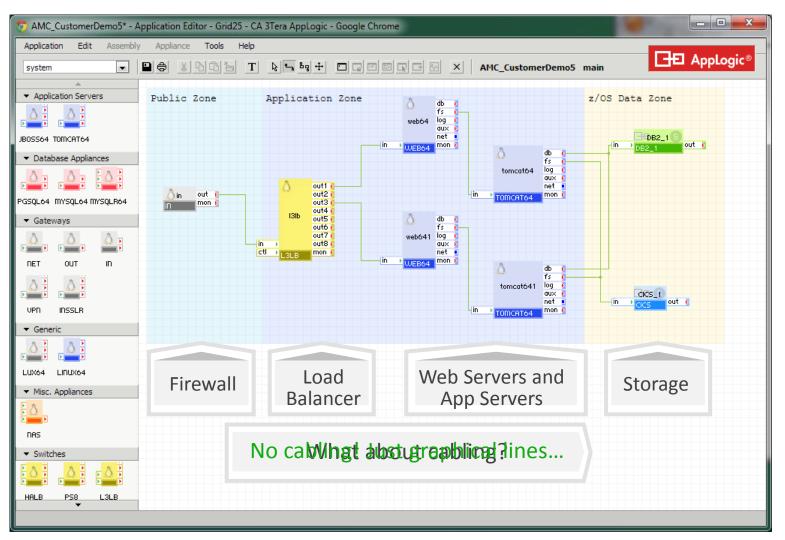


Automatically scale, easily migrate and instantly replicate entire Virtualized Business Service

#### **Quickly and Easily Scale**



## Using CA AppLogic for System z





# **CA AppLogic for System z** taking a closer look

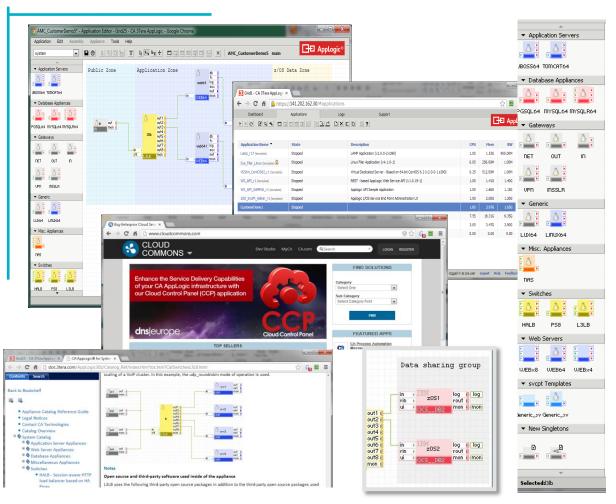
System Dashboard -Applications Tab

Infrastructure Editor – Catalog

Infrastructure Editor – Appliances Instances

z/OS Service End Point

Virtual network connections



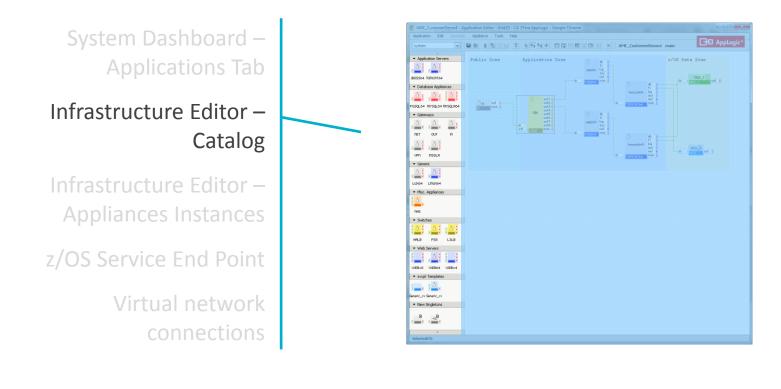


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## **CA AppLogic for System z** Infrastructure Editor – Catalog





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System Dashboard – Applications Tab

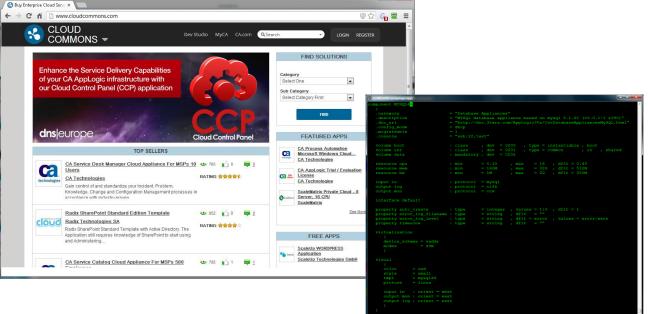
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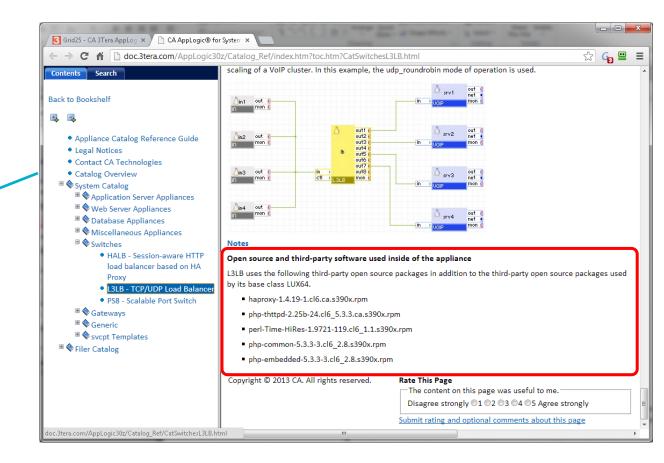
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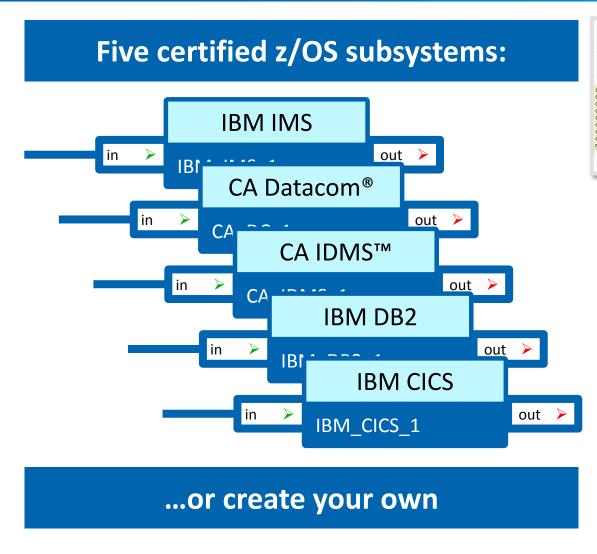
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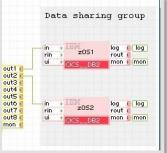
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### **CA AppLogic for System z** z/OS Service End Point

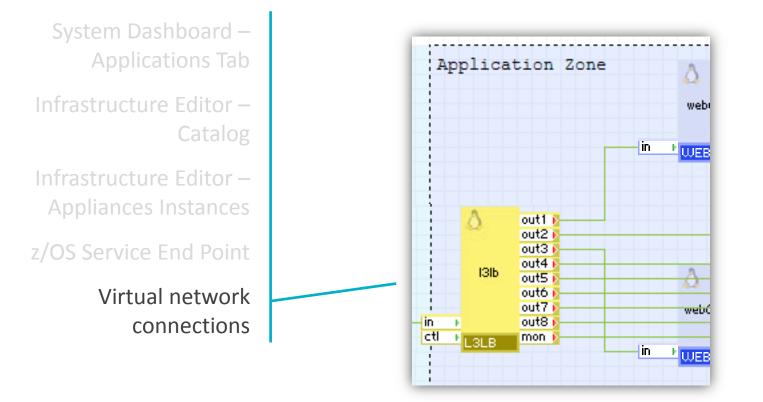




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### **CA AppLogic for System z** virtual network connections





## Advantages of the CA AppLogic<sup>®</sup> methodology

**Self-validating deployments.** AppLogic for System z checks system settings and pipework before launching applications

**Easy access.** Provide as much or as little access to resources on grid as necessary



**Easy to construct**. "Next" instances of appliances can be easily created from current versions

**Easy to move.** Appliances can be quickly moved from one grid to another for production, application migration or DR processing

**Simplified recovery.** Recovery techniques can be designed into appliance implementation as a policy

**Quickly scale.** Quickly provide "raw" capacity to App Dev or QA without having to interact to provision, implement virtual machines



## **Benefits of a virtual business service** ability to deploy applications & services in minutes

#### **More Agility for Enterprises**

- Build and deploy apps in minutes!
- On-demand elasticity and flexibility
- Replicate and scale apps instantly
- Work through an intuitive GUI, not by pulling cables and copying gold images

#### Leverage Power of Linux on System z

- Increase RASSS
- Reduce datacenter costs
- Reduce management costs
- Easier interoperability with z/OS
- The ultimate cloud platform





## Summary

Linux on System z is the optimal platform for many scenarios Today's methods are expensive, slow and high risk





#### CA AppLogic for System z:

- Simplifies deployment and management of Linux on the mainframe
- Provides a cost-effective, robust cloud platform
- Increases your productivity while reducing risk





## Ca World '13



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