Accelerate time to value for rapid growth and innovation

Mani Govindan,
Director, Cloud Solutions
CA Technologies
the “New Normal” and the big shift

IT must deliver new services that ACCELERATE INNOVATION

Mobility  Social  Big Data  SaaS  Client Experience

While TRANSFORMING delivery of mainstream IT

Rationalization  Agile Cloud Delivery  Standardized Infrastructure  Automation Reengineering  Bring Your Own Device

Shift from

Managing Technology To Delivering Innovation
the innovation mandate: everything as a service
cloud as key enabler to innovation and its benefits

ENTERPRISE
Agility + Cost Reduction

EMERGING MARKET
Speed + Simplicity

SERVICE PROVIDERS
Margin + Revenue

ON-PREMISE
SaaS

ACCELERATE

B E S I N E S S  
S E R V I C E  
I N N O V A T I O N

TRANSFORM
SECURE
the complexity of cloud service delivery
we believe...

Innovation is possible in a complex and constantly evolving hybrid world
roadmap to the cloud: plan, build and run cloud
plan cloud: create decision model for determining cloud services suitability

Create a decision model for determining which applications and services to move to the cloud.
how to model agile cloud services

1. Rationalize application portfolio by business value to select and validate services most suitable to cloud

2. Model capacity requirements allowing for elastic scaling and burst capacity without over provisioning

3. Develop and test application and cloud services behavior in simulated production environment
A large San Francisco-based health care services company, with business lines to automate processes from medical supplies packaging to claims management, and revenue cycle management to medical imaging.

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Solution</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavily reliant on VMware technology, but was at a pivotal point with its virtualization strategy and open to alternatives since VMware made decision to EOL VMware Lab Manager. Also, needed to replace with VMware vCloud Director or find an alternative solution.</td>
<td>Leveraging CA Technologies’ Cloud Capability Assessment and Strategy Service (CCAS Service) to build and execute a cloud strategy.</td>
<td>Conducted operational review of McKesson’s requirements, helping them to fully understand their business objectives and technology requirements to ensure that they made the most advantageous technology investments for years to come.</td>
</tr>
</tbody>
</table>
build cloud: accelerate AppDev and delivery production cycles

Virtualize business services across infrastructure, applications and services
What if you could….

APPLICATION DEPLOYMENT, MIGRATION

45+ DAYS | 45 MINUTES
abstract applications from infrastructure

“STITCH” together composite parts & pieces of physical or virtual infrastructure & necessary configs for each

Load Balancers, App Servers, Instrumentation, DB fabric, ESB, external systems, firewalls

Abstract app components from infrastructure

Encapsulate entire application environment (not just the code & the individual server its on)

Catalog of virtual appliances; easily drag and drop to create business services in minutes

Quickly scales migrate, or replicates the entire application and infrastructure
Design and assemble internal cloud services - CA Applogic
PGi is a leading provider of advanced meeting, conferencing and collaboration services. PGi operates in 24 countries and serves 90% of the Fortune 500.

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<td>Quickly secure scalable data center resources near the new markets it will serve</td>
<td>Using CA cloud solutions to virtualize the entire business service from infrastructure to app</td>
<td>Spin up 5 new virtual data centers for the cost of 1 physical data center</td>
</tr>
<tr>
<td>Would take 6 months to purchase new hardware and 4-6 weeks to deploy software</td>
<td>PGi can choose the provider with the right price points and coverage for each new market it enters</td>
<td>Time to deploy a new application down from 7 months to 2-5 days, start to finish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Delivering 5 nines with load balancing across DCs</td>
</tr>
</tbody>
</table>
run cloud: automate provisioning and delivery

run cloud

Automate provisioning and delivery across virtual, physical and hybrid cloud
**IaaS use case:**
orchestrating business processes and workflows

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**CA Process Automation**

<table>
<thead>
<tr>
<th>PROCESS ORCHESTRATION</th>
<th>REQUEST MANAGEMENT SYSTEM</th>
<th>PROVISIONING AND CONFIGURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receive request</td>
<td>ITIL Request</td>
<td>Provision infrastructure</td>
</tr>
<tr>
<td>Process request</td>
<td>Task 1 – Email approver</td>
<td>...or Virtual grid fabric</td>
</tr>
<tr>
<td></td>
<td>Task 2 – Receive approval</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Task 3 – Initiate provisioning</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Close request</td>
</tr>
</tbody>
</table>

**Michelle, Larry’s manager, receives an email request for approval**

Michelle approves via email

**Larry, a product developer, requests a computer system from self-service catalog**

Larry gets an email that system is available

**Larry gets an email that system is available**

**Michelle approves via email**

**Receive request**

**Process request**

**Provision server**

**Load software**

**Email user**

**Close request**

**Deploy software**
CA “XaaS” Cloud Management Framework
Open, Modular & Flexible

Self Service Portal
Catalog of Automated Services
- IaaS Server Automation
- AppLogic Cloud Grid
- Workload
- vCloud
- VCE IaaS
- VDI
- Amazon

Process Automation & Orchestration
- CA Server Automation
- CA AppLogic
- CA Workload Automation
- VMware vCloud Director
- VCE IaaS
- VDI
- Amazon EC2

Traditional Infrastructure

CA Workload Automation

Applogic Grid

CA Expo
### Challenge
- Pioneering a managed cloud service offering
- Needed automated solution across enterprise & external cloud
- Needed to show clear value of cloud for public sector, commercial, & enterprise organizations

### Solution
- CA as a front-end for automation, provisioning and integration:
  - CA Server Automation
  - Cisco UCS Manager
  - NetApp Provisioning Manager
  - VMware Solutions

### Benefits
- Save CAPEX /OPEX with external private clouds and integrated automation
- Fast time-to-value for new product revenue
- Gain flexibility and agility to move services to and from architectures
Case Study - CBN Indonesia

Presentation by: Mr. Tony Hariman, CTO
AppLogic Deployment Through CBN Cloud: A Customer’s Perspective

Presentation by: Mr. Tony Hariman, CTO CBN
Agenda

- About CBN
- Cloud Platform Selection Process
- CBN Cloud AppLogic Infrastructure
- Crash, Learning Curve
- Our Customer Problem / Solutions
- CBN Cloud Service Offerings / Roadmap
- Closing
CBN Brief Information

- Founded in 1995 PT Cyberindo Aditama (CBN) has grown into a full-fledged, trusted ISP with a broad range of offerings for individual Internet users and corporate businesses.

- Our large international bandwidth connects subscribers and customers through redundant routes to major Tier-1 Global Internet backbone providers.
Our Network

GLOBAL INTERNET

INTERNATIONAL UPSTREAM

CONTENT PROVIDERS

FULL END TO END SUBMARINE FIBER OPTIC

LOCAL INTERNET EXCHANGE

LOCAL PRIVATE PEERINGS

CBN NETWORK

NETWORK ACCESS PROVIDER @ SINGAPORE

IIX2 C2IX OPEN IXP

(ISP) (ISP) (ISP) (ISP) (ISP)

AND MANY MORE

Google

videjug

Yahoo!

EQUINIX

facebook

EA

Microsoft

MNet

YouTube

FOX

CDN

Limelight

Akamai

Apple

MTV
Data Center
“It’s easy to come up with new ideas; the hard part is letting go of what worked for you two years ago but will soon be out of date.”

By Roger Von Oech
BFC Server

Grid 1

Grid 2 (optional)

192.168.0.1

192.168.0.2 192.168.0.3 192.168.0.9

192.168.0.20 192.168.0.21 192.168.0.27

46.64.64.11

46.64.64.12 46.64.64.13 46.64.64.19

46.64.64.20 46.64.64.21 46.64.64.27

controller IP 46.64.64.101

controller IP 46.64.64.102

Public network/WAN:
No limitations on how connected

Internet
### Servers Overview

#### Server Utilization

![Server Utilization Chart](image)

(2012-08-11 22:36:04 - 2012-08-13 21:36:05)

#### Server States

- Offline: 1
- Online: 2
- Regulating: 0
- Quarantined: 0
- Failed: 0

#### Configuration Checklist

- System Backbone Identity
- Internal IP Base
- Available Grid IDs
- Version Download Config
- AppLogic Versions
- Backbone Network
- External Network
- Application IPs

Optional configuration steps:

- Power Network
- BFC Replica DB

### Server Details

<table>
<thead>
<tr>
<th>SERVER</th>
<th>APLOGIC SERVER NAME</th>
<th>BACKBONE IP</th>
<th>GRID</th>
<th>VMWARE</th>
<th>POWER STATUS</th>
<th>POWER IP</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:25:90:4D:9D:5F</td>
<td></td>
<td>10.64.200.169</td>
<td></td>
<td></td>
<td>IPMI</td>
<td>202.158</td>
</tr>
<tr>
<td>00:25:90:4D:97:B3</td>
<td>srv1 (Controller)</td>
<td>10.64.200.170</td>
<td>Grid1NFS</td>
<td></td>
<td>IPMI, On</td>
<td>202.158</td>
</tr>
<tr>
<td>00:25:90:4E:0C:DF</td>
<td>srv2</td>
<td>10.64.200.168</td>
<td>Grid1NFS</td>
<td></td>
<td>IPMI, On</td>
<td>202.158</td>
</tr>
</tbody>
</table>

Updated: 2012-08-13 21:38:56
<table>
<thead>
<tr>
<th>Application Name</th>
<th>State</th>
<th>Description</th>
<th>CPU</th>
<th>Mem</th>
<th>BW</th>
</tr>
</thead>
<tbody>
<tr>
<td>BackupHelper_r2 (template)</td>
<td>Stopped</td>
<td>Helper Application for the BCK appliance (v1.2.13-1)</td>
<td>0.30</td>
<td>448.00M</td>
<td>50.00M</td>
</tr>
<tr>
<td>Lamp_r16 (template)</td>
<td>Stopped</td>
<td>LAMP Application (v1.2.12-1)</td>
<td>1.15</td>
<td>1.78G</td>
<td>950.00M</td>
</tr>
<tr>
<td>LampCluster_r26 (template)</td>
<td>Stopped</td>
<td>Scalable LAMP Cluster Application (v2.0.8-1)</td>
<td>2.45</td>
<td>3.88G</td>
<td>1.45G</td>
</tr>
<tr>
<td>LampX4_r16 (template)</td>
<td>Stopped</td>
<td>Scalable LAMP Application (v1.2.12-1)</td>
<td>2.85</td>
<td>3.28G</td>
<td>1.40G</td>
</tr>
<tr>
<td>MigHelper (template)</td>
<td>Stopped</td>
<td>Helper Application for the MIG appliance (v1.3.10-1)</td>
<td>0.30</td>
<td>448.00M</td>
<td>4.00M</td>
</tr>
<tr>
<td>SugarCRM_r18 (template)</td>
<td>Stopped</td>
<td>Fully featured, scalable CRM Application, based on SugarCRM's Sugar Open Source 5.2.0 (v5.2.0-13)</td>
<td>2.15</td>
<td>2.94G</td>
<td>1.55G</td>
</tr>
<tr>
<td>Sys_Filer_Linux (template)</td>
<td>Stopped</td>
<td>Linux Filer Application (v4.1.1-1)</td>
<td>0.05</td>
<td>512.00M</td>
<td>1.00M</td>
</tr>
<tr>
<td>Sys_Filer_Solaris (template)</td>
<td>Stopped</td>
<td>Solaris Filer Application (v4.0.2-1)</td>
<td>0.05</td>
<td>512.00M</td>
<td>1.00M</td>
</tr>
<tr>
<td>TWiki_r16 (template)</td>
<td>Stopped</td>
<td>TWiki 4.3.2 collaboration platform (v4.3.2-3)</td>
<td>1.25</td>
<td>1.25G</td>
<td>900.00M</td>
</tr>
<tr>
<td>VDS_CentOS55_r7 (template)</td>
<td>Stopped</td>
<td>Virtual Dedicated Server - Based on CentOS 5.5 (v1.0.6-1)</td>
<td>0.25</td>
<td>256.00M</td>
<td>1.00M</td>
</tr>
<tr>
<td>VDS64_CentOS55_r7 (template)</td>
<td>Stopped</td>
<td>Virtual Dedicated Server - Based on 64-bit CentOS 5.5 (v1.0.6-1)</td>
<td>0.25</td>
<td>512.00M</td>
<td>1.00M</td>
</tr>
<tr>
<td>WS_API_r17 (template)</td>
<td>Stopped</td>
<td>REST - based AppLogic Web Service API (v1.10.17-1)</td>
<td>1.10</td>
<td>1.66G</td>
<td>730.00M</td>
</tr>
<tr>
<td>WS_API_SAMPLE_r4 (template)</td>
<td>Stopped</td>
<td>AppLogic API Sample Application (v1.0.3-1)</td>
<td>1.05</td>
<td>1.34G</td>
<td>1.15G</td>
</tr>
</tbody>
</table>
This application is not ready to start. 8 mandatory properties are not configured.
“Every act of creation is first of all an act of destruction.”

By Picasso
Good combination of:
- CPU
- Memory
- disk controller
- disk brand
- Network card
- Network switches
Drop-down dialog displays progress on starting and stopping of components.

Component icons contain controls to start/stop.

Component icons indicate status (grayed out = stopped).
CBN Cloud Offering and Roadmap

**Infrastructure-as-a-Service (IaaS)**
- Virtual Dedicated Server (VDS)
- Cluster Servers
- Virtual Private Data Center (VPDC)
- Disaster Recovery Services (DRS)
- Storage Services

**Software-as-a-Service (SaaS)**
- Productivity Applications
- Collaboration Applications
- HR Applications
- Education Applications
- CRM Applications
- Finance and Accounting Applications

**Platform-as-a-Service (PaaS)**
- Java Runtime Services
- Collaboration Applications
- HR Applications
- Education Applications
- CRM Applications
- Finance and Accounting Applications

CBN Cloud Offering and Roadmap
CBN Cloud Offering and Roadmap

Productivity Applications
Collaboration Applications
HR Applications
CRM Applications
Education Applications
Finance and Accounting Applications

Software-as-a-Service (SaaS)

Java Runtime Services

Platform-as-a-Service (PaaS)

Virtual Dedicated Server (VDS)
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Storage Services

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CBN Cloud Offering and Roadmap

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**Platform-as-a-Service (PaaS)**
- Java Runtime Services

**CBN Cloud Offering and Roadmap**

internet@your.fingertips
“There’s a way to do it better – find it.”

By Thomas Edison
More Information

- tony.hariman@cbn.co.id
- http://cloud.cbn.net.id
- http://doc.3tera.com
- http://forum.3tera.com
- Linkedin AppLogic Users Group
- https://communities.ca.com CA AppLogic group
Why CA Technologies for Cloud Solutions?

- Unified cloud service delivery providing choice across:
  - heterogeneous environments, and
  - IAAS, Applications/SAAS and Services

- Fast time to value
- Highly open, extensible and flexible
- Full Cloud Service Lifecycle Management

CA Technologies was named one of the top two market share leaders in the worldwide cloud systems management software market by IDC, a leading provider of global IT research and advice.

Thank you