Clarity 5.0 & Cloud Databases

Today's Agenda

- Introduction
- What is Cloud Computing
- Cloud Basics
- Deploy a "Vanilla" database machine
- Clone existing machines
- Test changes
- Protect Databases
- Q&A

About Matthew Zito

- Chief Scientist, GridApp Systems
- Formerly of EMC and Register.com
- Expert in using centralized management and automation to run large production applications

What is Cloud Computing

- Cloud Computing is a buzzword for a variety of externally hosted, on-demand resources
- Typically offers small unit pricing – per GB, per compute-hour, per-user
- Designed to enable small and large companies to flexibly allocate IT resources – “pay as you go”
- Spin-up quickly – spin-down quickly
- Key players – Amazon.com, Salesforce.com, Microsoft, and a number of others

Amazon EC2 & S3

- EC2
  - Elastic Compute Cloud
  - On-demand Linux, Windows, and Solaris x86 servers
  - Pay by the hour
  - Scale from 1 to hundreds of machines

- S3
  - Simple Storage Service
  - Infinitely sized storage platform
  - Users upload files and set permissions
  - Files are replicated to multiple facilities globally
  - Pay by the GB

EC2/Cloud Server Challenges

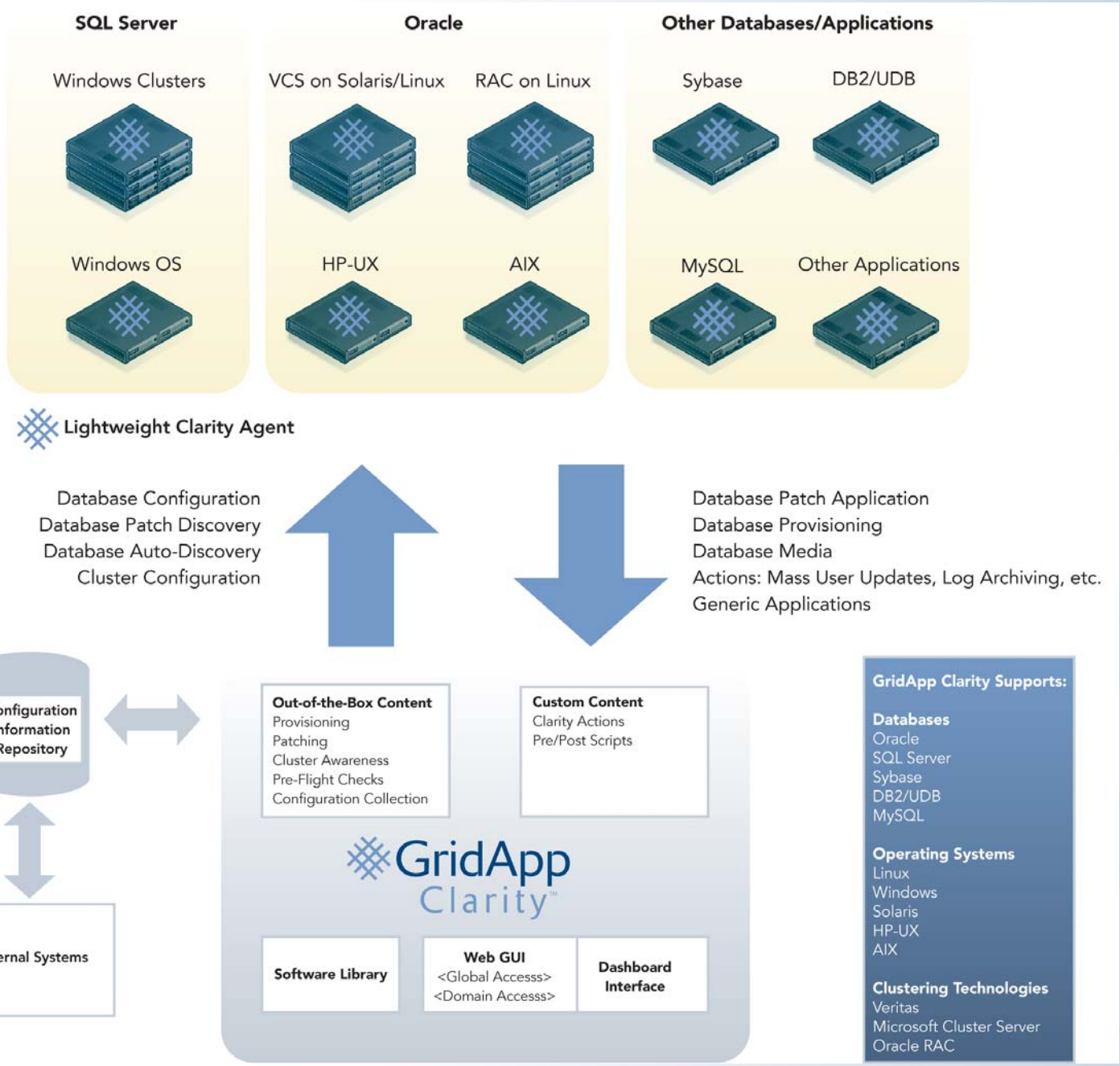
- Images can start out as vanilla servers
  - Require pre-requisites configured
  - Installation/upgrade/creation of database time-consuming
  - Mirroring internal configurations is difficult

- Prebuilt Images with Database
  - Saves time
  - Schema deployment takes time
  - Upgrade testing difficult to reproduce in local environments
  - Having lots of images can make mass changes difficult

Demo – Step 1

- Launch 3 new database machine images
- Show existing Amazon EC2 server
- Provision new Oracle database on EC2 server using GridApp Clarity

GridApp Clarity™ Architecture



GridApp SYSTEMS

GridApp Clarity Deployment & the Cloud

- Template-driven automation
  - Describing database configurations as models remove the need to maintain many different database images
  - Templates can be built as stringently or flexibly as required

- Inline Patching
  - As part of a database installation and creation, automatically apply required patches
  - Removes the risk that cloud databases are unsecured in a public environment
  - Guarantees consistency with on-premise environments

GridApp Clarity Automated Admin & the Cloud

- Database Upgrades and Patching
  - Test upgrades in sandbox environments
  - Validate process and procedure with duplicate data
  - No need to leverage on-premise hardware for testing
  - Easy deployment allows for repeated testing
  - Clarity faciliates predictability and process

- On-demand Development/Test Environments
  - Create temporary database infrastructure for testing
  - Rapidly spin-up multiple databases for testing changes or enable developer access
  - When completed, simply destroy environments

GridApp Clarity Data Protection & the Cloud

- Database Backups and Archiving
  - Stream RMAN backups to Amazon S3
  - Incrementally push archive logs to keep up to date
  - Protect your business against tape or site failure
  - Centralized RMAN backups can be used for creation of EC2 images
- Online Disaster Recovery
  - Run an EC2 server as an Oracle Data Guard standby
  - Clarity can automate the configuration of EC2 images and Data Guard relationship
  - Easily scale image to different size machines in a disaster scenario

Demo – Step 2

- Approve new EC2 images into Clarity
- Start cloned databases
- Test Minor Upgrade to 10.2.0.4
- Load schema into two instances
- Kick off RMAN backup to S3

Summary – GridApp Clarity & the Cloud

- Cloud Computing
  - A new, flexible, and cost-effective way of deploying on-demand IT resources
  - An additional layer of complexity around an already complex database environment
- GridApp Clarity
  - Out-of-the-box automation facilitates deployment on Cloud environments
  - Streamlines complexity, guarantees predictability, mitigates risk
  - Enables users to take charge of the cloud
  - Provide complete accountability and audit trail

Q&A – GridApp Clarity

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