



# Next Generation Application Development



# What's Changed?

Mobile Apps

Languages

Data

REST

HTML5

Data Stores

Parallel Compute

Distribution

Deployment

Provisioning

Services

Scale-Out

Data Growth

Elastic Compute



**Cloud = Everything?**

# **Our Perspective**

Cloud Computing Can Address New  
Application Challenges While  
Solving Age Old Problems.

**But it Requires New Thinking.**



## Characteristics of a Next-Gen Application:

How can I make sure we're building new applications the right way, and how can I spot the signs that things aren't right?

# Next Generation Applications

- Commoditization is creeping up the stack; app servers, app dependencies are increasingly lightweight and available on demand ubiquitously
- Commodity leads to “scale-out”; applications need to:
  - Be lightweight
  - Decouple events from the computation that satisfies the events
  - Eliminate shared state that is stored locally
  - Depend on shared state that is itself available on a linearly and horizontally scalable platform
  - Available for provisioning on-demand

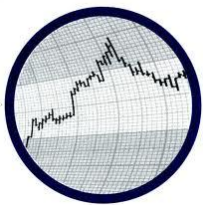
# Brokerage Firm Develops Real-time, High Volume, Adaptive Platform Using Cloud Technologies

## The Company

Is a leading derivatives clearing and execution firm with operations worldwide.

## How can we establish a real-time message fabric that facilitates visibility and workflow orchestration across 5.9 million lots per day?

The company needed a next generation platform to reduce dependency on IT staff to process trade messages and to handle 'elastic' volume spikes. They wanted a productive user experience to diagnose and fix trade issues and a rules engine to streamline process.



## Solution

- Rapid design and agile development for iterative development and testing
- VMWare vFabric and partner technology for the software layer to be configured on appliances to isolate message processing from applications
- Program planning, project tasks, testing strategy and plans for the iterative implementation of the trade event-driven architecture

## Results

- Adaptive infrastructure and key architecture elements for appliances
- Increased user efficiency through role-based dashboards for processing and management
- Management, development and implementation testing for clearing operations



Legacy applications in the new world:

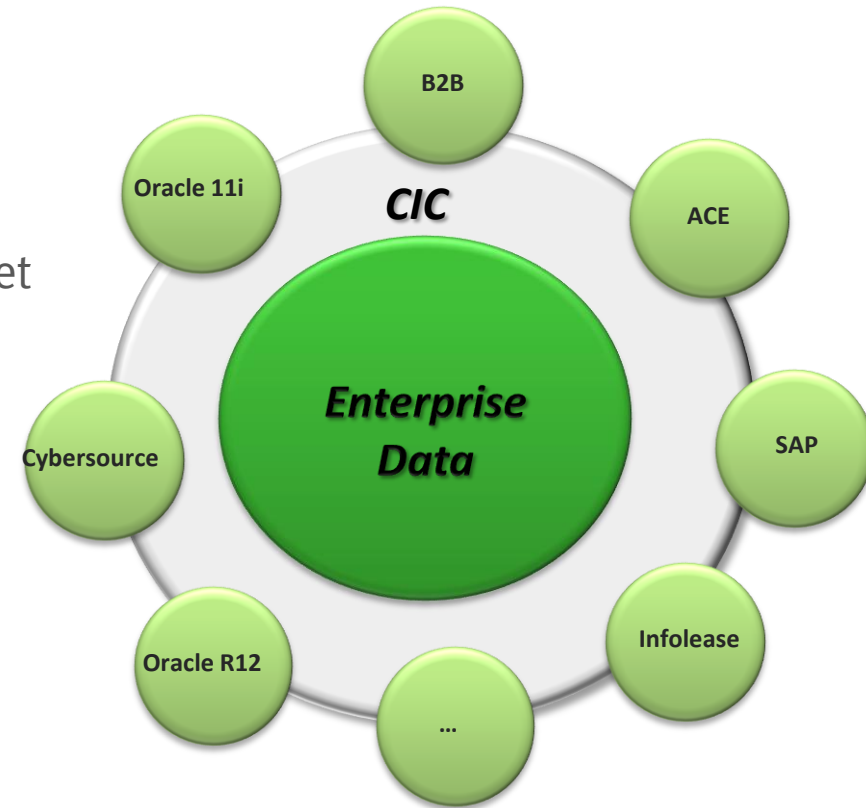
Can I bring my legacy applications along for the ride, and what does the journey look like?

# Modernizing Integration Architecture

- Common Integration Cloud
  - Provides a development and deployment framework for creating next generation integration projects by leveraging current and emerging cloud development standards
- Principles
  - Drive towards “one skill set, any cloud” integration solution
  - Minimize data movement
  - Simplify inter-process communication
  - Minimize data marshalling/unmarshalling
  - Cloud to cloud messaging

# Common Integration Cloud – Overview

- Common Integration Cloud (CIC)
  - Legacy applications interact with CIC to get data in and out
  - *Multi* data center deployment
  - 100% virtualized
  - One skill set any cloud
    - Supports private, public and hybrid cloud deployments





Consumption:

Applications on-demand and on-the-go

# It's a "New" World

A man in a dark suit and light-colored shirt is looking at a tablet computer. The tablet displays a financial dashboard with a line graph and various data points. In the background, another man in a light blue shirt is working on a laptop. The scene is set in an office or meeting room.

An ever expanding universe of devices, form factors and operating systems

App stores and SaaS with challenging security, governance and integration models

Massive amounts of structured/unstructured data in real-time across wireless links

Applications that embed Social features – tied into public or enterprise providers

# New Application Challenges

The business can use and purchase SaaS and go around IT. Mobility is exploding.



## SaaS

Lack of IT governance around SaaS, challenging security and integration scenarios



## Big Data

New types and sheer size of structured and unstructured data leaves aggregation and real-time availability challenges



## New Devices

Ever expanding universe of devices, form factors and operating environments



## Social

Increasing relevance of Social technologies (deployed Publically and Privately) on the enterprise



How do you structure the modern application development team?

# The Modern Team

The modern app dev team prioritizes business requirements and use outcomes-based approaches to bring output closer to business expectations. This, in the face of:

- Geographical distribution: on-shore + near-shore + off-shore = communication difficulties
- Methodology haze: Everyone's trying to be 'agile', but does doing it by the book equal success?
- Platform proliferation: Public cloud, private cloud, languages, app dev frameworks, middleware, mobility

THANK YOU