CICS as a Platform Service Provider

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12422

http://www.linkedin.com/pub/matthew-webster/31/b09/b16
CICS as a Platform Service Provider

To facilitate the deployment of a new application level resource, CICS introduces the concept of a platform. Platforms are new CICS resources that deliver a simple layer of abstraction to decouple applications from the underlying region topology. In addition we introduce the concept of a Policy. Policies enable the behaviour of applications and platforms to be managed by determining whether tasks running as part of a platform, as an application, or as types of operation within an application, exceed certain predefined thresholds. When a threshold is breeched, CICS can issue a message, abend the task, or issue an event. Expanding on the concepts introduced in the earlier session (Reinventing the CICS application lifecycle) this session shows how the combination of application, platform, and policy deliver far greater service agility.
CICS Cloud Enablement

Monday
  1:30 PM  CICS TS V5.1 Technical Overview

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  4:30 PM  Modernizing CICS - Hands on Lab, Part 1 of 2
  6:00 PM  Modernizing CICS - Hands on Lab Part 2 of 2

Friday
Once upon a time things were simple
Once upon a time things were simple
Then we had to scale
Then we needed high availability
Then we started getting really clever
And then came Java
And what about those pesky* developers

*Troublesome; annoying: a pesky mosquito

http://www.thefreedictionary.com/pesky
We need things to be simple again
We need things to be simple again:
Platform
We need things to be simple again: Region Types
We need things to be simple again: Application
We need things to be simple again: Dependencies
We need things to be simple again:
Application Context
New First Class Concept Resources

Application
Platform
Policy
Platform

Set of one or more region types
A collection of zero or more CICS bundles
Life-cycle as a single entity
Hides complexity of and evolution of underlying topology
Provides services for Applications
Control Applications through Policy
Platform Package

Name
RetailBanking

zFS home
/var/cicsts/JTPLEX1/RetailBanking

Region types
ID
name

Resources & Dependencies
define: LIBRARY, TRANSACTION, ...
import: DB2CONNECTION, JVMSERVER, TCPIPSERVICE, ...

Policy
Platform Lifecycle

Create Platform bundle project
Platform Lifecycle

Create Platform bundle project
Package CICS bundle(s)
Platform Lifecycle

Create Platform bundle project
Package CICS bundle(s)
Export Platform to zFS
Platform Lifecycle

Create Platform bundle project
Package CICS bundle(s)
Export Platform to zFS

INSTALL Platform onto a CICSplex

Activate/Deactivate Platform
ENABLE/DISABLE Platform
DISCARD Platform
Platform Lifecycle

Create Platform bundle project
Package CICS bundle(s)
Export Platform to zFS

INSTALL Platform onto a CICSplex

Activate/Deactivate Platform
ENABLE/DISABLE Platform
DISCARD Platform

Platform status (ACTIVE | INACTIVE | ..., ENABLED | DISABLED | ...)
Platform vs. CICSpex

Simplified abstraction
Offline representation
Separation of DevOps* roles
Complete lifecycle
Controlled evolution
Security
Management, measurement and control

* “… communication, collaboration and integration between software developers and information technology(IT) professionals …”

DevOps Roles

• Application Developer
• System Programmer
• Application Deployer
DevOps Roles

• Application Developer
  • Resources
  • Dependencies
  • Entry points
  • Policy

• System Programmer
  • Topology
  • Services
  • Policy

• Application Deployer
  • Deployment
  • Resources
  • Policy
Demonstration
### “CICS Cloud” Perspective

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Definition Name</td>
<td>MAILAPPL</td>
</tr>
<tr>
<td>Application Directory</td>
<td>/u/jamese/platform/applications/ia.mail.appl_1.0.0/</td>
</tr>
<tr>
<td>Binding Directory</td>
<td></td>
</tr>
<tr>
<td>Changeagent</td>
<td>DREPAPI</td>
</tr>
<tr>
<td>Changeagrel</td>
<td>0680</td>
</tr>
<tr>
<td>Changetime</td>
<td>05-Sep-2012 10:50:09</td>
</tr>
<tr>
<td>Changeuserid</td>
<td>JAMESE</td>
</tr>
<tr>
<td>Createtime</td>
<td>05-Sep-2012 10:50:09</td>
</tr>
<tr>
<td>Description</td>
<td>Appl</td>
</tr>
<tr>
<td>Enable Status</td>
<td>ENABLED</td>
</tr>
<tr>
<td>Major Version</td>
<td>1</td>
</tr>
<tr>
<td>Micro Version</td>
<td>0</td>
</tr>
<tr>
<td>Minor Version</td>
<td>0</td>
</tr>
<tr>
<td>Name</td>
<td>ia.mail.appl</td>
</tr>
<tr>
<td>Platform Definition Name</td>
<td>IAPLAT</td>
</tr>
</tbody>
</table>
Create CICS Platform Project

New CICS Platform Bundle Project
Create a new CICS Platform Bundle project

Project name: webster.platform
Use default location
Location: /Users/matthew_webster/Workspaces/z tech 2012 (CICS)/webster.platform

Platform properties
Name: Webster
Description: Demo
Use the default location:
/platform/clients/CLIENT01/Workspaces/z tech 2012 (CICS)/webster
Specify a location:

CICS Platform Bundle Project
Specify the Region Types for this Platform Bundle.

Add a Region Type
Create a region type for the Platform.

Name: Web
CICS system group to use as the Region Type ID:
CICS SM connection: CICSEXMP3 (CICSpex)
CICSpex: CICSEXMP3
CICS system group: MAWAWEB
Export Platform Bundle
Create Platform Definition

Platform Definition Properties:
- **Name**: WEBSTER
- **Description**: Application, part of Belvedere
- **Platform Directory**: /var/cicsts/CICSEX3/Webster/platform/webster.platform/

Attributes:
- **Change Agent**: DREPAPI
- **Change Release**: 0680
- **Change Time**: 28-Sep-2012 14:34:16
- **Change User ID**: CICSEX3
- **Create Time**: 28-Sep-2012 14:34:16
Install Platform Definition

Perform INSTALL Operation
INSTALL operation will be performed on 1 items in the execution queue

Cloud Explorer
Server: EHCM
CICSplex: CICSEXPD3

- Belvedere ACTIVE,EMPTY
- Decking ACTIVE,EMPTY
- Webster ACTIVE,EMPTY

Applications
Region Types
- Java (1)
- Web (2)

CKJ1
PIPERA
RETAIL
Policy

http://www.ibm.com/software/cics/openbeta/

Complete your sessions evaluation online at SHARE.org/SanFranciscoEval
Real World Example: Phone Contract

200 free minutes
Unlimited text messages
500MB of data

“You have now used 80% of your data allowance”
Policy

Controls resource consumption

Consists of one or more rules in an XML document
  Threshold: CPU, storage, database access, ...
  Action: message, event, abend

Scoped
  Single Application operation
  Single Application
  All Applications on a Platform
Policy Scoping
Policy Scoping: Platform
Policy Scoping: Application
Policy Scoping: Operation
Policy Scoping: Application Binding
Policy Examples

“Abend any application running on the Retail Banking Platform that tries to request any 24-bit storage”

“I want to see a message if Version 1.1 of the Order Update Application allocates more than 1MB of storage”

“The Cart browse operation shouldn’t use more than 1 millisecond of CPU”
IBM Confidential

Getting started with cloud-style deployment

If you want to try out a cloud-style deployment for one of your existing CICS® applications, you can use this phased approach.

To try out the complete process first, using one of the sample applications supplied with CICS, you can follow through the scenario Scenario: Deploying an application in a PaaS.

Stage 1: Create a platform

In CICS, you can use a Platform as a Service (PaaS) to deploy and manage Software as a Service (SaaS)-based CICS applications over multiple CICS regions. The platform provides services to the applications. In this stage of your cloud-style deployment, you can set up a platform including CICS regions where your existing CICS application is installed. To create a platform, you must be using CICSplex® SM to manage your CICS regions.

Use the CICS Explorer® or the CICS Explorer SDK to create a CICS Platform Bundle project and export it to zFS. The platform bundle is a type of management bundle that describes the platform.
Determine Policy using CICS Performance Analyzer

CICS Monitoring Data now contains Application context:
   Platform, Application, Version, Operation

New Application-centric table in PA perspective

Integration with Cloud perspective

Detail/performance breakdown

New policy-centric reports
New Application-centric table in PA perspective

<table>
<thead>
<tr>
<th>Start Date</th>
<th>Start Time</th>
<th>Application Platform</th>
<th>Application Name</th>
<th>Version</th>
<th>Operation Name</th>
<th>Response Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-07-30</td>
<td>14.35.00</td>
<td>CToolPlatform</td>
<td>DSWApplication</td>
<td>1.0.0</td>
<td>CustomerDetailsInquiry</td>
<td>0.029954</td>
</tr>
<tr>
<td>2012-07-30</td>
<td>14.40.00</td>
<td>CToolPlatform</td>
<td>DSWApplication</td>
<td>1.0.0</td>
<td>CustomerDetailsInquiry</td>
<td>0.030990</td>
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<td>2012-07-30</td>
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Summary

New Platform resource simplifies Application deployment and management

Helps maintain consistency between DEV, TEST and PROD

New Policy resource simplifies control of resource consumption
Questions?

As a reminder, please fill out a session evaluation

Complete your sessions evaluation online at SHARE.org/SanFranciscoEval
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