

2012

IBM System z Technical University

Enabling the infrastructure for smarter computing

CICS TS : Introduction to Platforms as deployment targets

zAI09

Matthew Webster

CICS meets the cloud

matthew_webster@uk.ibm.com



CICS Cloud Enablement

Monday

0830 *General Session*

Tuesday

1030 CICS TS : Introduction to Applications as first class entities
1300 **CICS TS: Introduction to Platforms as deployment targets**

Wednesday

0900 CICS TS: Application Management Update
1030 CICS TS: Platform Management Update
1300 *CICS in the Cloud: Hands-On Lab*
1615 *CICS Tools Family Update*

Thursday

Pain Points

- *Deploying and un-deploying applications is a high skill complex job due to the number of separate artifacts*
- *Customers would like to see usage / charging, availability / SLA at the application level*
- *Elastic scale is a requirement, but it needs to be managed within the constraints of the customers resources and business environment*

Pain Points

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zAI11 CICS TS : Application Management Update

- *Elastic scale is a requirement, but it needs to be managed within the constraints of the customers resources and business environment*

zAI12 CICS TS : Platform Management Update

Once upon a time things were simple

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REGION

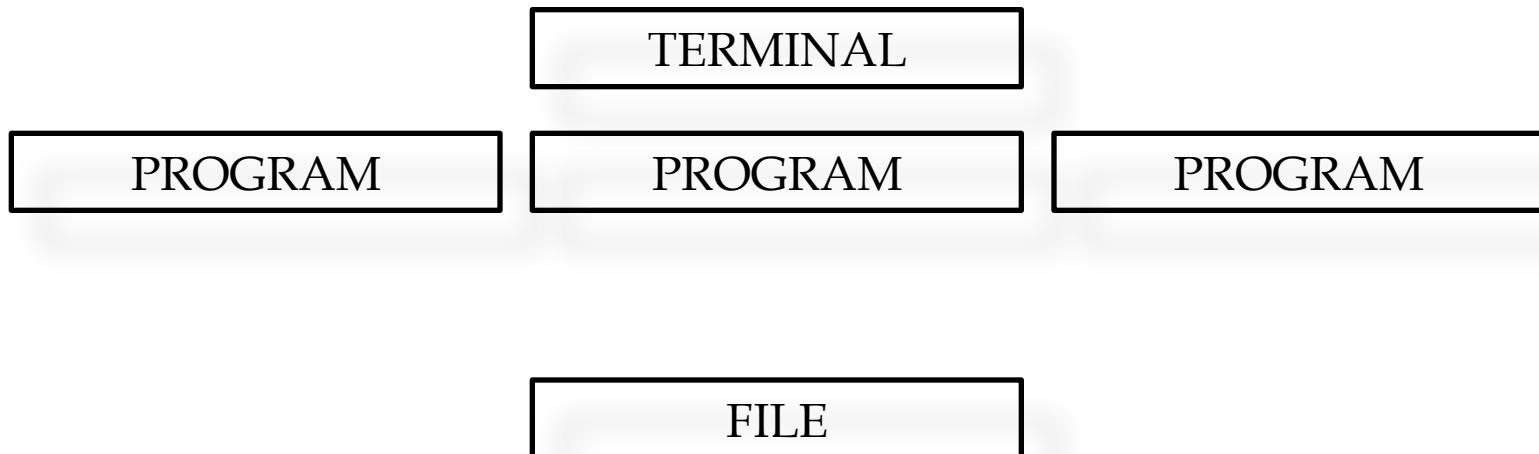
Then we had to scale

REGION

REGION

REGION

Then we needed high availability



Then we started getting really clever

QUEUE

TERMINAL

WEBSERVICE

PROGRAM

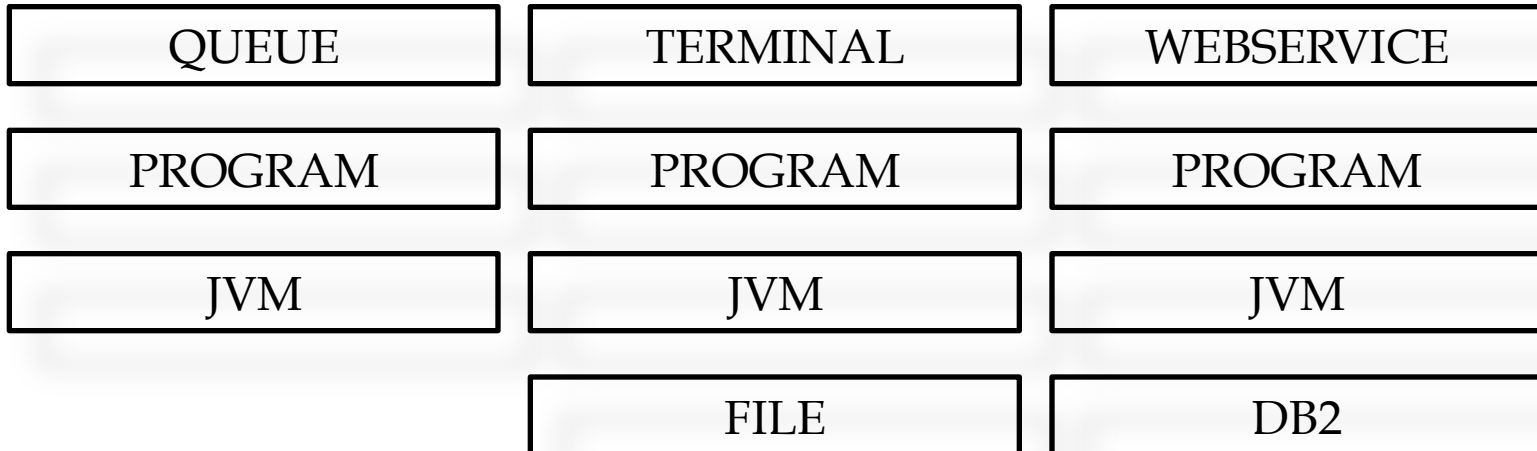
PROGRAM

PROGRAM

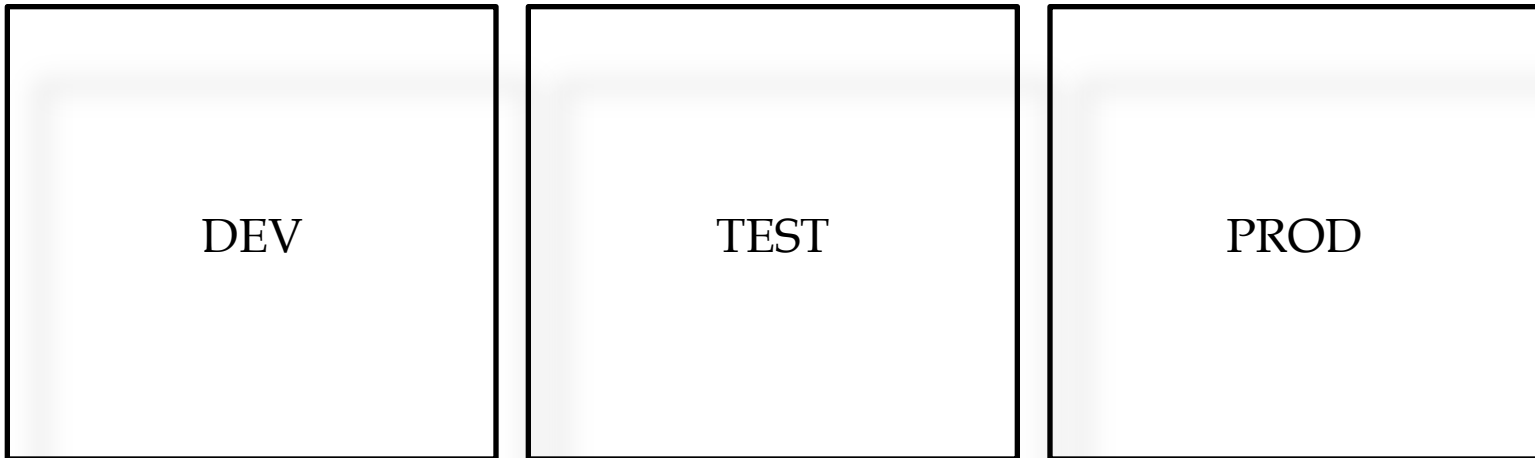
FILE

DB2

And then came Java



And what about those pesky* developers



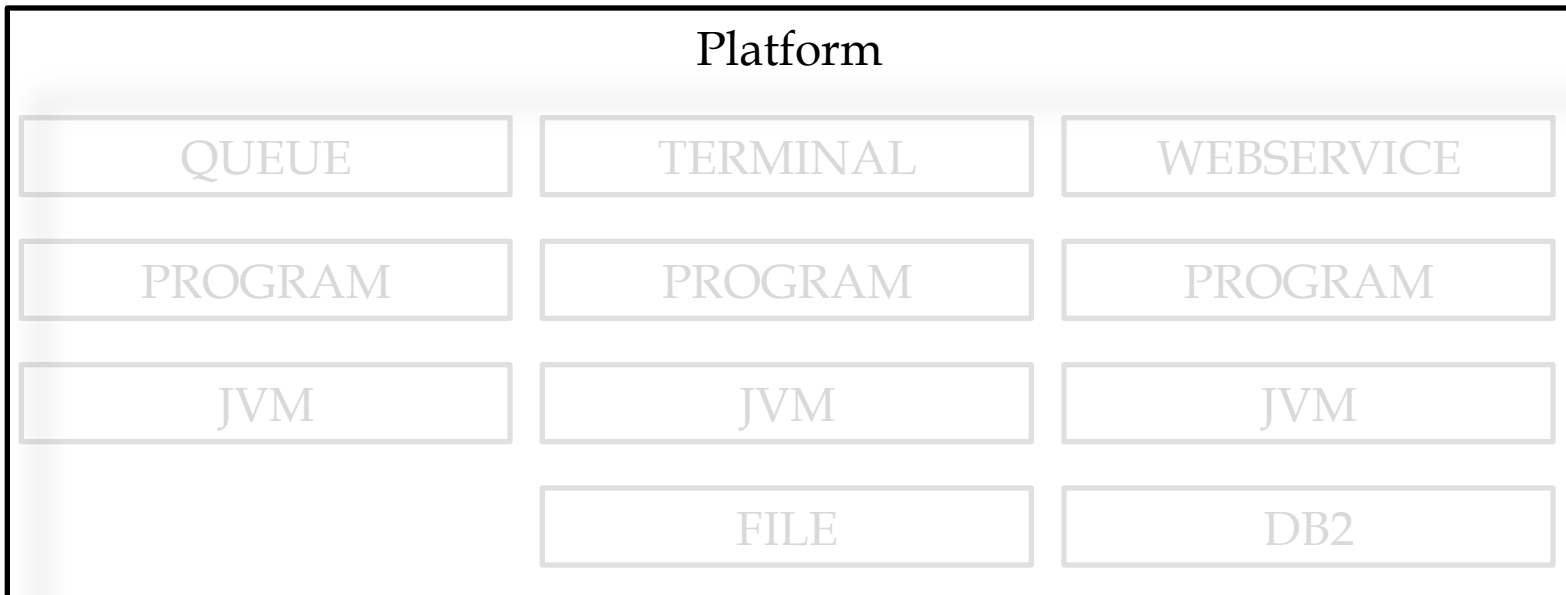
*Troublesome; annoying: *a pesky mosquito*

<http://http://www.thefreedictionary.com/pesky>

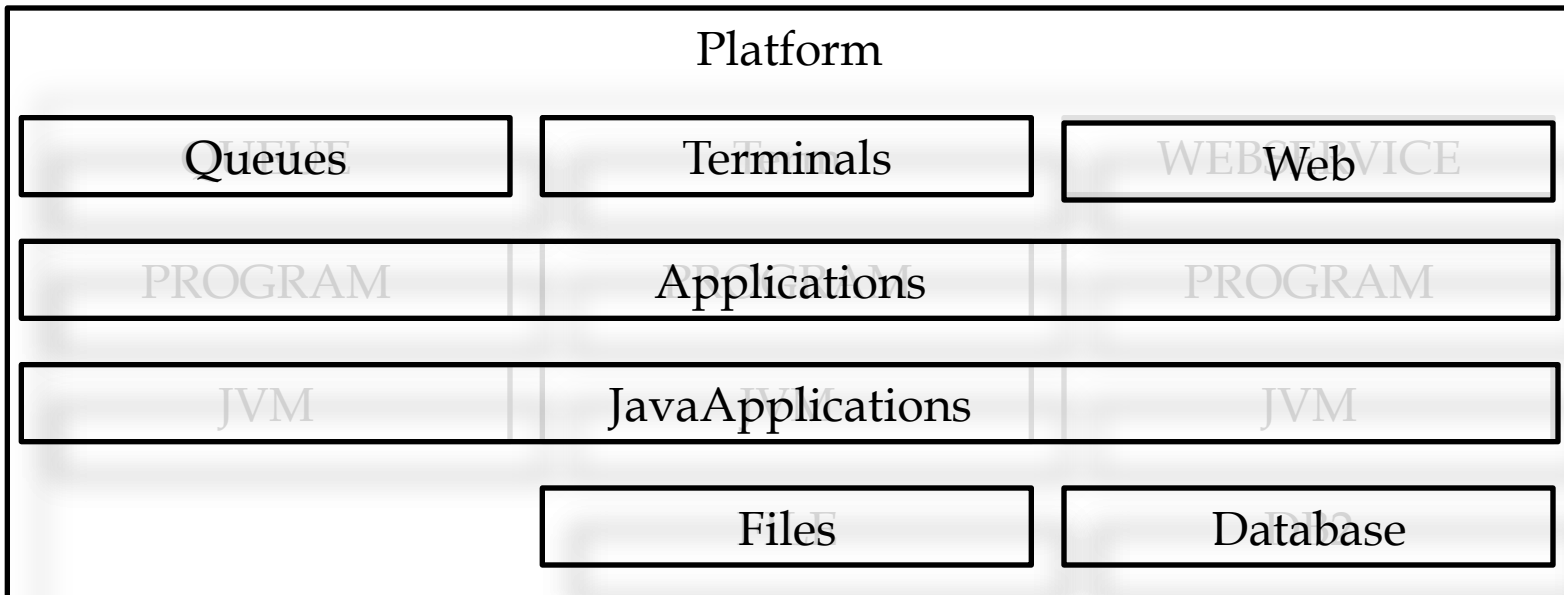
We need things to be simple again

REGION

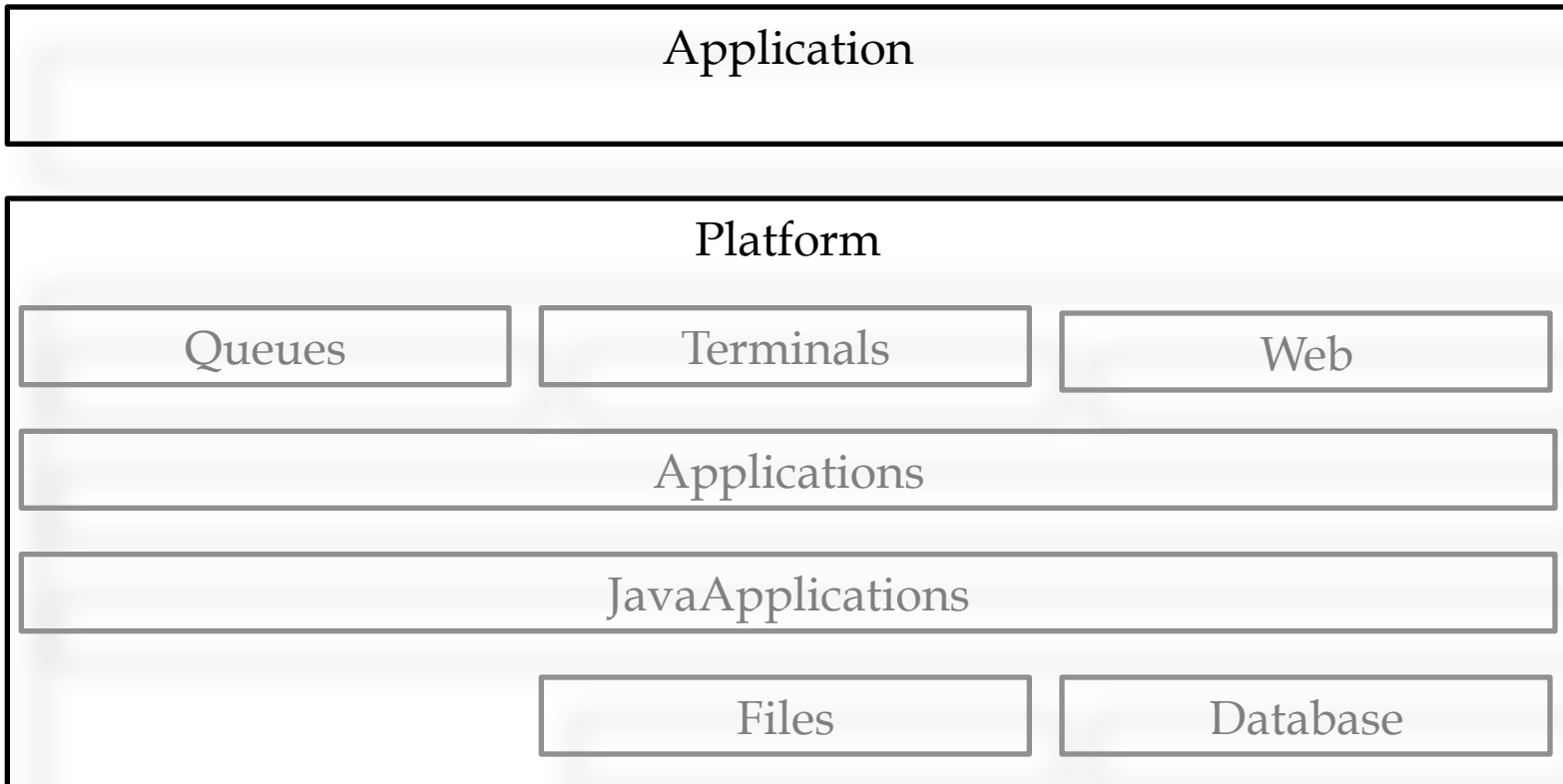
We need things to be simple again: Platform



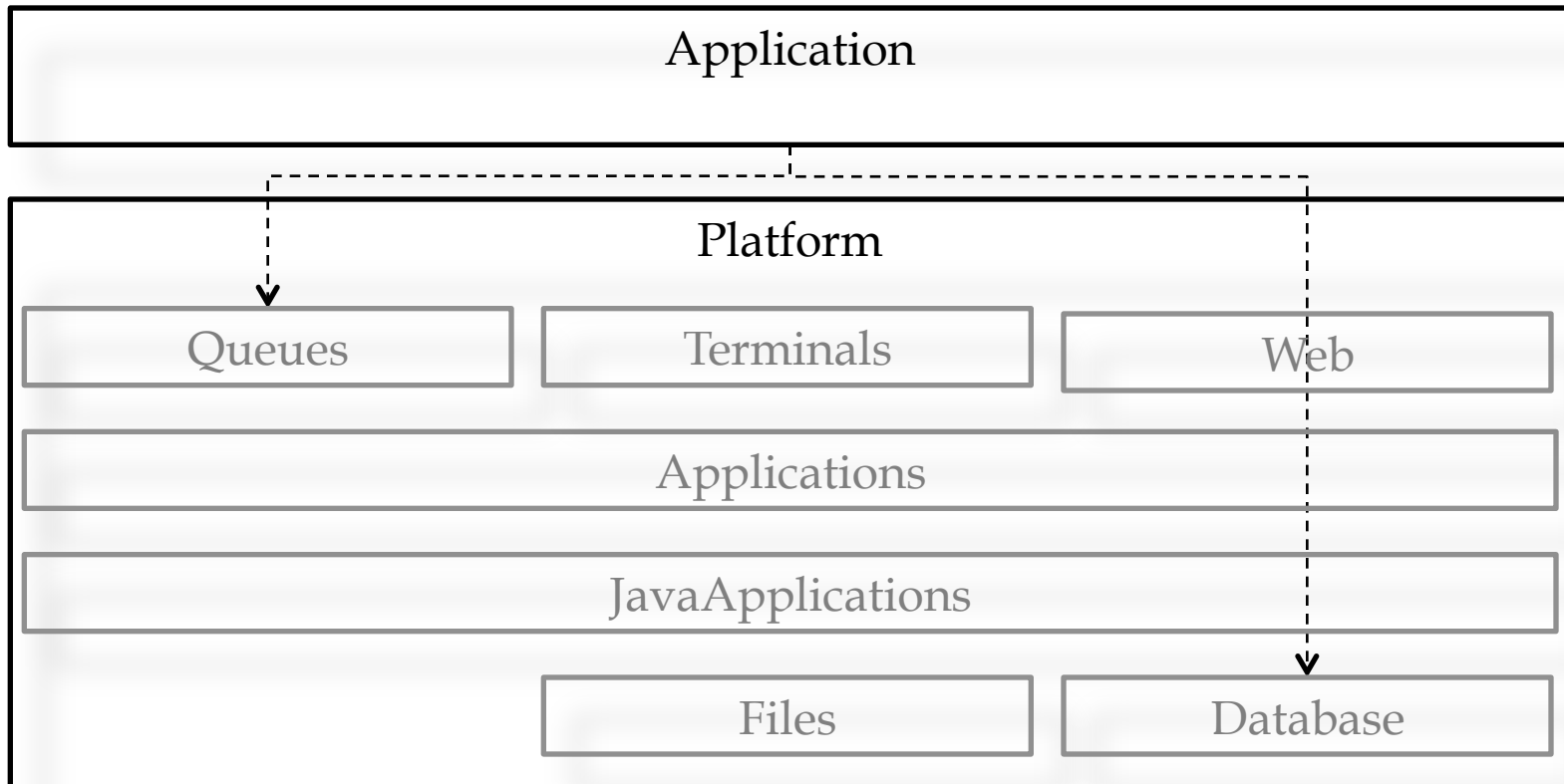
We need things to be simple again: Region Types



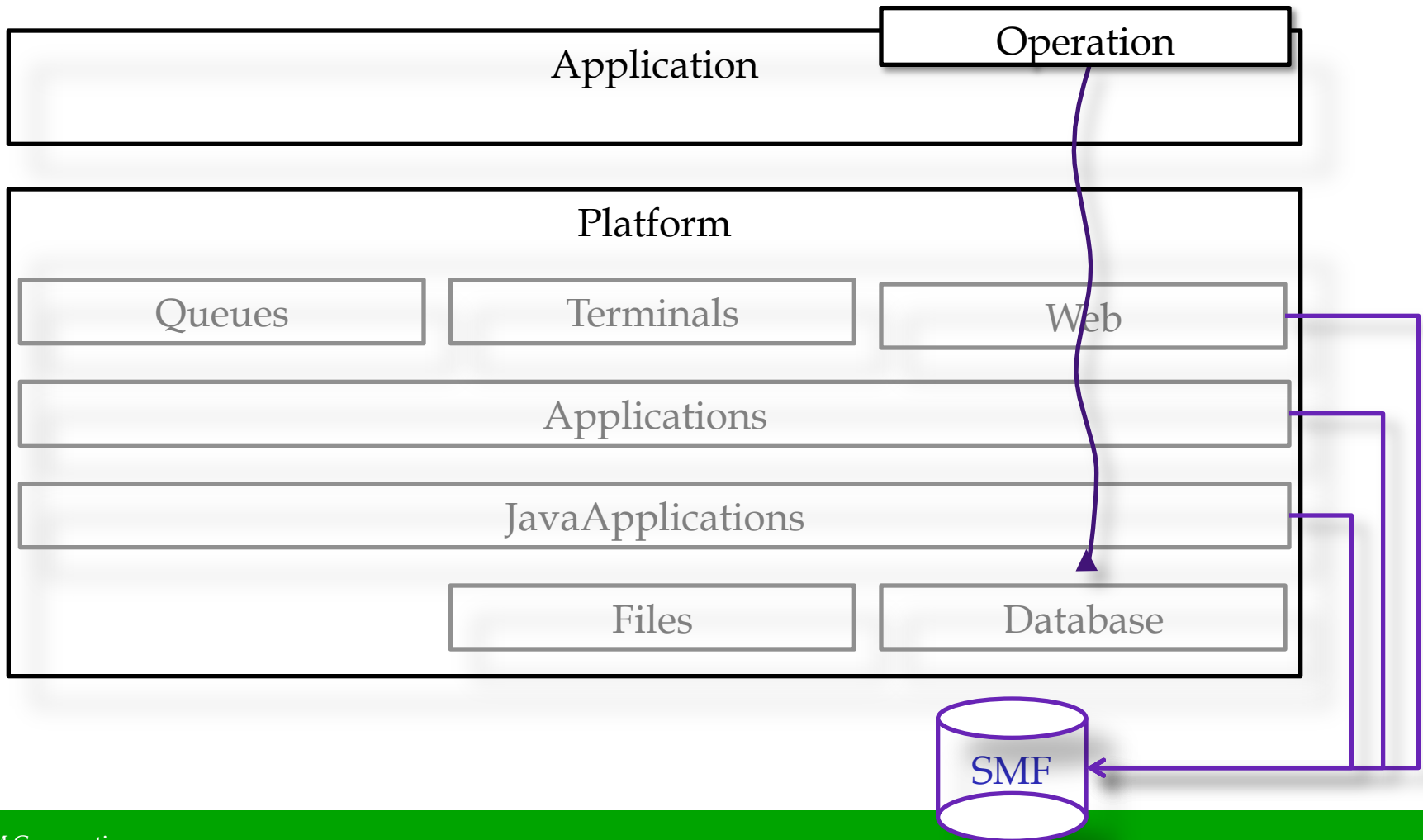
We need things to be simple again: Application



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

org.maw.production.Banking

zFS home

/var/cicsts/PRODPLEX

Region types

ID

name

Resources & Dependencies

define: LIBRARY, TRANSACTION, ...

import: DB2CONNECTION, JVMSERVER, TCPIPSERVICE, ...

Policy

Platform Lifecycle

- Create Platform bundle project

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- Package CICS bundle(s)

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- INSTALL Platform onto a CICSplex
- *Activate/Deactivate Platform*
- ENABLE/DISABLE Platform
- DISCARD Platform

Platform Lifecycle

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- Platform status (ACTIVE | INACTIVE | ..., ENABLED | DISABLED | ...)

Platform vs. CICSplex

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 ...”

<http://en.wikipedia.org/wiki/DevOps>

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

The screenshot displays the Eclipse IDE interface for the CICS Cloud Platform Definition 'RETAIL' in 'CICSEXP3'. The main window shows the 'Attributes' tab for the 'RETAIL' platform definition. The 'Basic' section includes the following properties:

Property	Value
▼ Basic	
Description	
Name	RETAIL
Platform Directory	/u/webster/CICSEXP3/retail.production/platform/retail.production.platform/
▼ Definition Signature	
Change Agent	DREPAPI
Change Release	0680
Change Time	21-Sep-2012 16:06:41
Change User ID	CICSUSER
Create Time	21-Sep-2012 16:06:41

The 'Project Explorer' on the left shows the project structure with 'retail.production.platform' selected. The 'Problems' and 'Properties' tabs are also visible at the bottom of the main window.

Information Center

Software information center

Search: Scope: All topics

Contents

- + Information Center home
- + CICS Transaction Server for z/OS, Version 5.1
 - + Product overview
 - + What's new
 - + Platform as a Service (PaaS) capabilities
 - + Applications
 - + Platforms
 - + Policies
 - + Capability and scalability advancements
 - + Discontinued functions
 - + Changes to the CICS Explorer and CICS Ex
 - + General information
 - + Scenarios
 - + Getting started
 - + Getting started with CICSplex SM
 - + **Getting started with cloud-style deployment**
 - + Getting started with events
 - + Getting started with Java
 - + Getting started with intercommunication
 - + Getting started with web services
 - + Installing

IBM Confidential

[CICS Transaction Server for z/OS, Version 5.1 open beta](#) > [Getting started](#)

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.

Getting started with cloud-style deployment

- **Stage 1: Create a platform**
- **Stage 2: Create an application**
- **Stage 3: Add application entry points**
- **Stage 4: Add resources for the application**
- **Stage 5: Add a policy**

Stage 1: Create a platform

Single description of a Platform: capabilities, composition and dependencies

Hide complexity and evolution of underlying topology from Applications

More easily maintain consistency through development lifecycle

Simplify management of resource and service status

Prevent disruptive change that might otherwise break Applications

Summary

New Platform resource

Simplifies Application deployment and Platform management

Helps maintain consistency between DEV, TEST and PROD

Questions?

More Information

- “CICS TS”
 - <http://www.ibm.com/cics/>
- developerWorks Community
 - <https://www.ibm.com/developerworks/mydeveloperworks/blogs/cicsdev/>
- “Did you say mainframe?! ” Podcasts
 - <http://itunes.apple.com/us/podcast/did-you-say-mainframe-!/id275831334>

CICS TS Highlights

Monday

- 1030 CICS Portfolio update
- 1300 CICS TS: A Technical Overview

Tuesday

- 0900 CICS TS: Touching the Cloud - Introducing Enterprise Services
- 1030 CICS TS: Introduction to Applications as first class entities
- 1030 *CICS Portfolio update*
- 1300 CICS TS: Introduction to Platforms as deployment targets
- 1430 *CICS TS: A Technical Overview*

Wednesday

- 0900 **CICS TS: Application Management Update**
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- 1030 CICS TS: Support for WebSphere Application Server Liberty profile
- 1300 CICS TS: Java and the JVM Server
- 1430 CICS TS: Scalability Enhancements