

17181: Lunch and Learn: Decisions Rule CICS Applications

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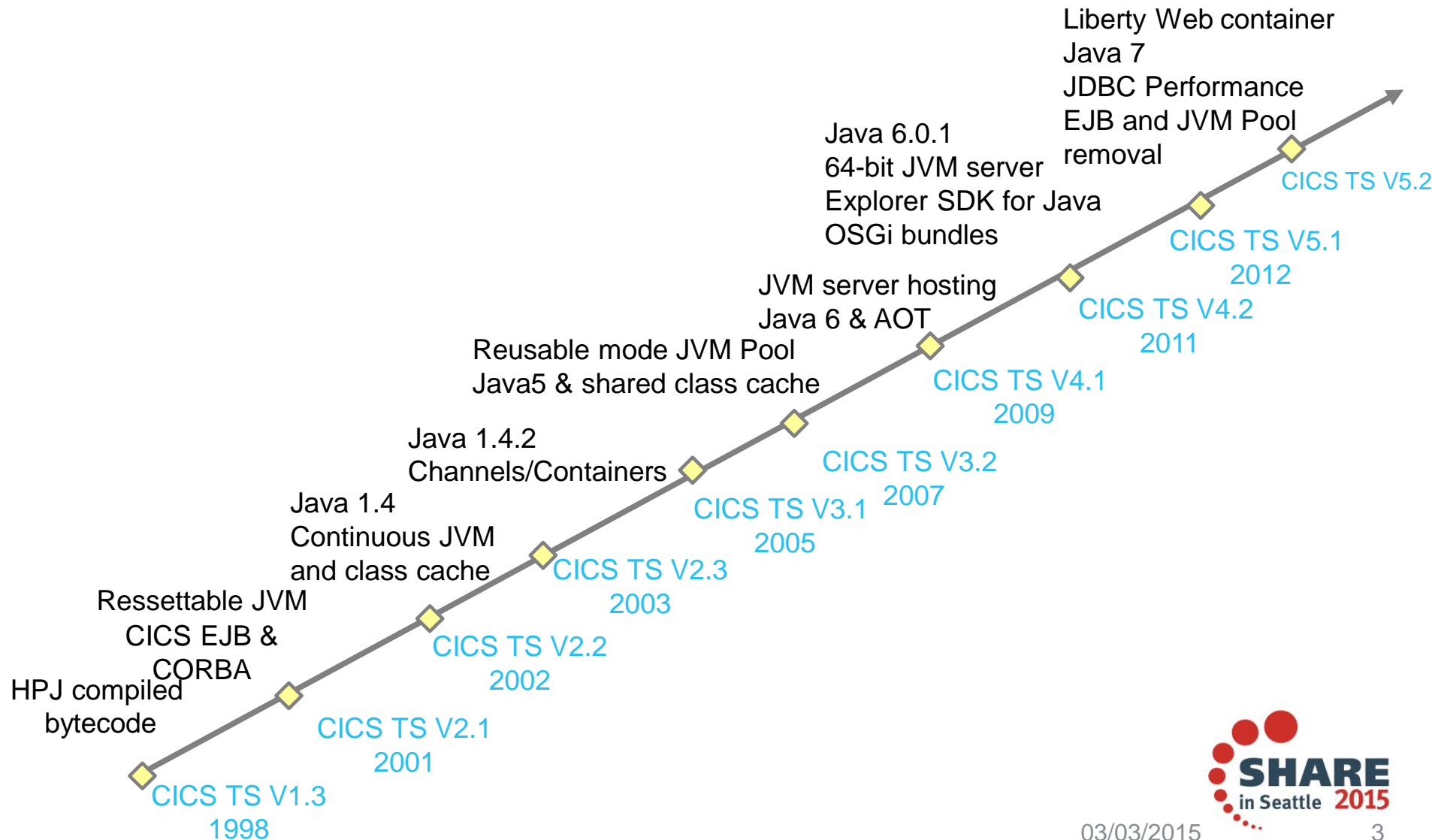


Abstract

In today's world of quicker, smarter, better, IT struggles to match the rate of change the business needs. Application change cycles must be shorter for the business to respond rapidly to marketplace changes and customer demands to ensure long-term success.

Join us to learn how partnering IBM Operational Decision Manager with CICS applications helps get the rules that drive business decisions to where they can be seen and changed by the people who understand them and the impact of the changes. Application modernization of CICS solutions with Decision Management enables a shared understanding between the business analysts who need changes and the IT teams responsible for delivering high-quality, seamless changes, and can significantly improve and optimize the IT change process.

CICS Java Support - Release history



IBM z13 Taking Java Performance to the Next Level



Continued aggressive investment in Java on Z

Significant set of new hardware features tailored and co-designed with Java

Simultaneous Multi-Threading (SMT)

- 2x hardware threads/core for improved throughput
- Available on zIIPs and IFLs

Single Instruction Multiple Data (SIMD)

- Vector processing unit
- Accelerates loops and string operations

Cryptographic Function (CPACF)

- Improved performance of crypto co-processors

New Instructions

- Packed Decimal ↔ Decimal Floating Point
- Load Immediate on Condition
- Load Logical and Zero Rightmost Byte

New 5.0 GHz 8-Core Processor Chip

480Mb L4 cache to optimize for data serving



Up to **50%** improvement
in throughput for generic
applications

Up to **2X** improvement in
throughput per core for security
enabled applications



IBM SDK for z/OS, Java Tech. Edition, Version 8 (IBM Java 8)



- **New Java8 Language Features**
 - Lambdas, virtual extension methods
- **IBM z13 exploitation**
 - Vector exploitation and other new instructions
 - Instruction scheduling
- **General throughput improvements**
 - Up-to 17% better application throughput
 - Significant improvements to ORB
- **Improved crypto performance for IBMJCE**
 - Block ciphering, secure hashing and public key
 - Up-to 4x improvement to Public Key using ECC
 - CPACF instructions: AES, 3DES, SHA1, SHA2, etc
- **Significantly improved application ramp-up**
 - Up-to 50% less CPU to ramp-up to steady-state
 - Improved perf of ahead-of-time compiled code
- **Improved Monitoring**
 - JMX beans for precise CPU-time monitoring
- **Enhancements to JZOS Toolkit for Java batch**



CICS JVM Server - Aims

1. Provide **new APIs** for Java applications deployed into CICS
 - Enable porting of JEE applications to CICS from other application servers
2. Update CICS to provide **same features and functions as WebSphere Liberty Profile**
 - Priority to API based functions
 - Support QoS features and integrate with CICS as required
 - Keep up to date with Liberty service stream
3. Continue to provide a **robust JVM hosting environment** for other components and services
 - ODM, SAML
 - PHP, Modern Batch, Mobile ...

CICS JVM Server - runtimes

1. OSGi JVM Server

- LINK and 3270 (Initial program)

2. Liberty JVM Server

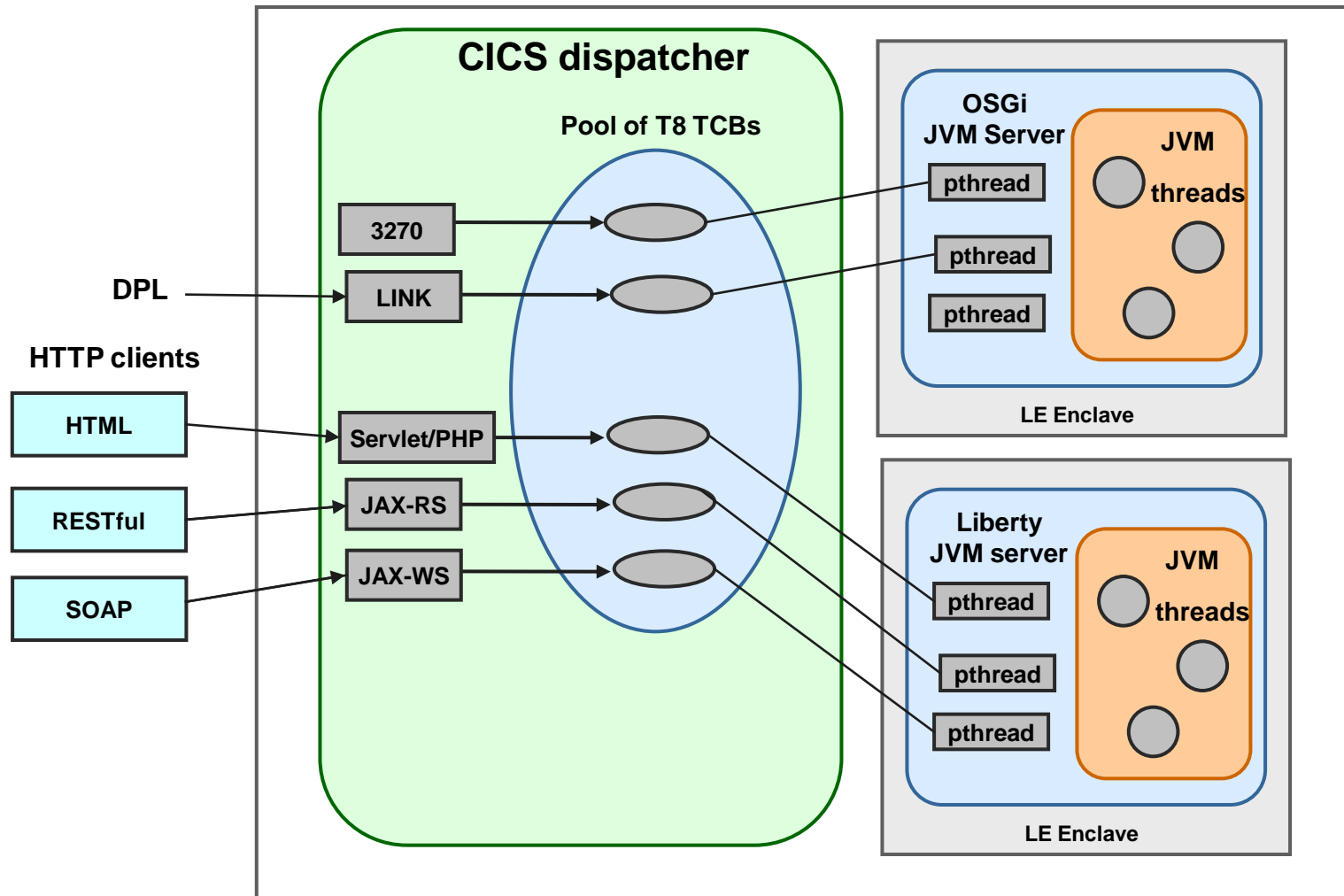
- Servlet, PHP, RESTful and Web services

3. CLASSPATH JVM Server

- SAML JVM server
- Mobile JVM server
- Axis2 JVM server (Java Web services, via CICS pipeline)
- ODM
- Modern Batch JVM server

JVM Server - Runtime

CICS Region

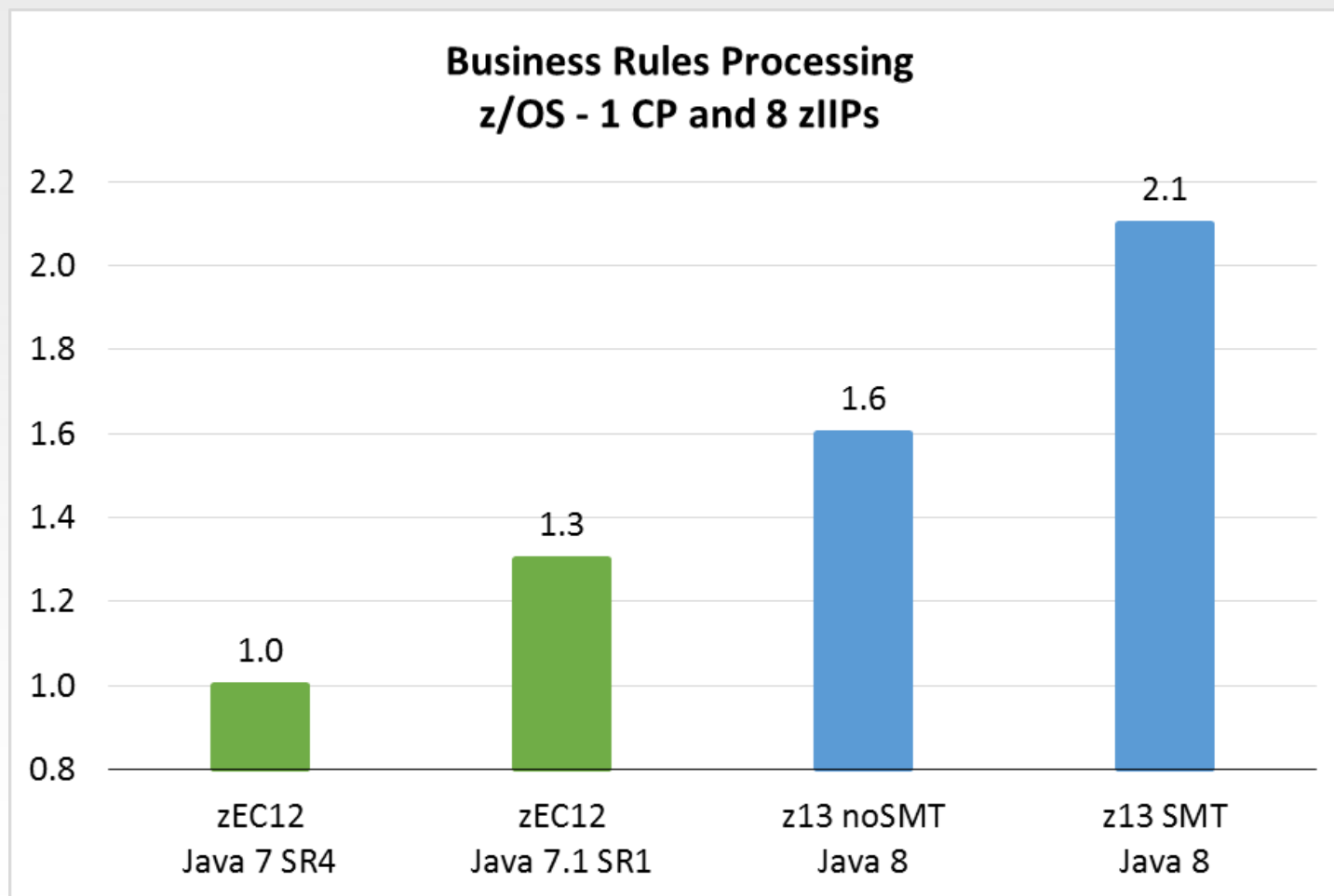


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16721: Decision Management: Making the Right Change, at the Right Time

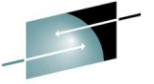
03/03/2015

z/OS - IBM Business Rules Processing with IBM Java 8 and z13



z/OS - aggregate 2x improvement from IBM Java 8 and IBM z13

Operational Decision Manager for z/OS



Providing an easily manageable, single source of truth for
operational business decisions

Codifies business policies, practices and regulations



Enables changes to be easily made by business people



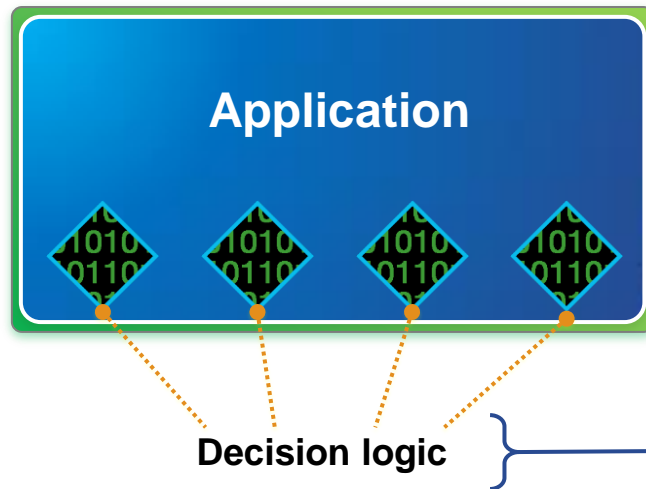
Automates decision making with the fidelity of an expert



Codify business policies, practices, & regulations

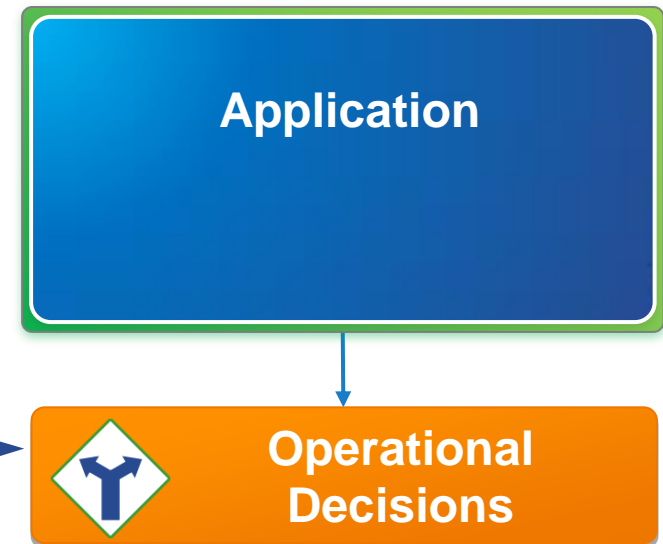
Manage decision logic independently from applications

Without ODM



- Hard coded decisions are difficult to change
- Rules intertwined within applications cannot be reused by other systems

With ODM

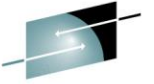


- Externalized decisions are easy to change
- Centralized decisions enable reuse and consistency

Modernization with Decision Management

- Definition:
 - Applying technology and process to gain increased “decision making” agility for business applications
- Business need:
 - Business application “decision making” needs to adapt to changes in the marketplace, in time to make a difference
- Application Development cost & skills:
 - More effective application development & maintenance
 - Consolidation/Restructure of existing applications
 - Broaden the team making and maintaining the changes
 - Adapt to more agile lifecycle processes, without increasing business risk
- Goal:
 - Be able to make the changes needed by the Business
 - in hours or days, not months

Why Modernize with ODM on z/OS



Consolidation, Isolation, Extension or Extinction of the COBOL & PL/I application portfolio

Cost savings

- *Shorter change cycle*
- *Rule engine processing offload eligible*

Be able to react to increasing variety and volume of change requests

Improved Time to Market

- *Business decisions in natural language*
- *Decouple development and business decision change lifecycles*

Sharing business rules across platforms & channels

Single version of the Truth

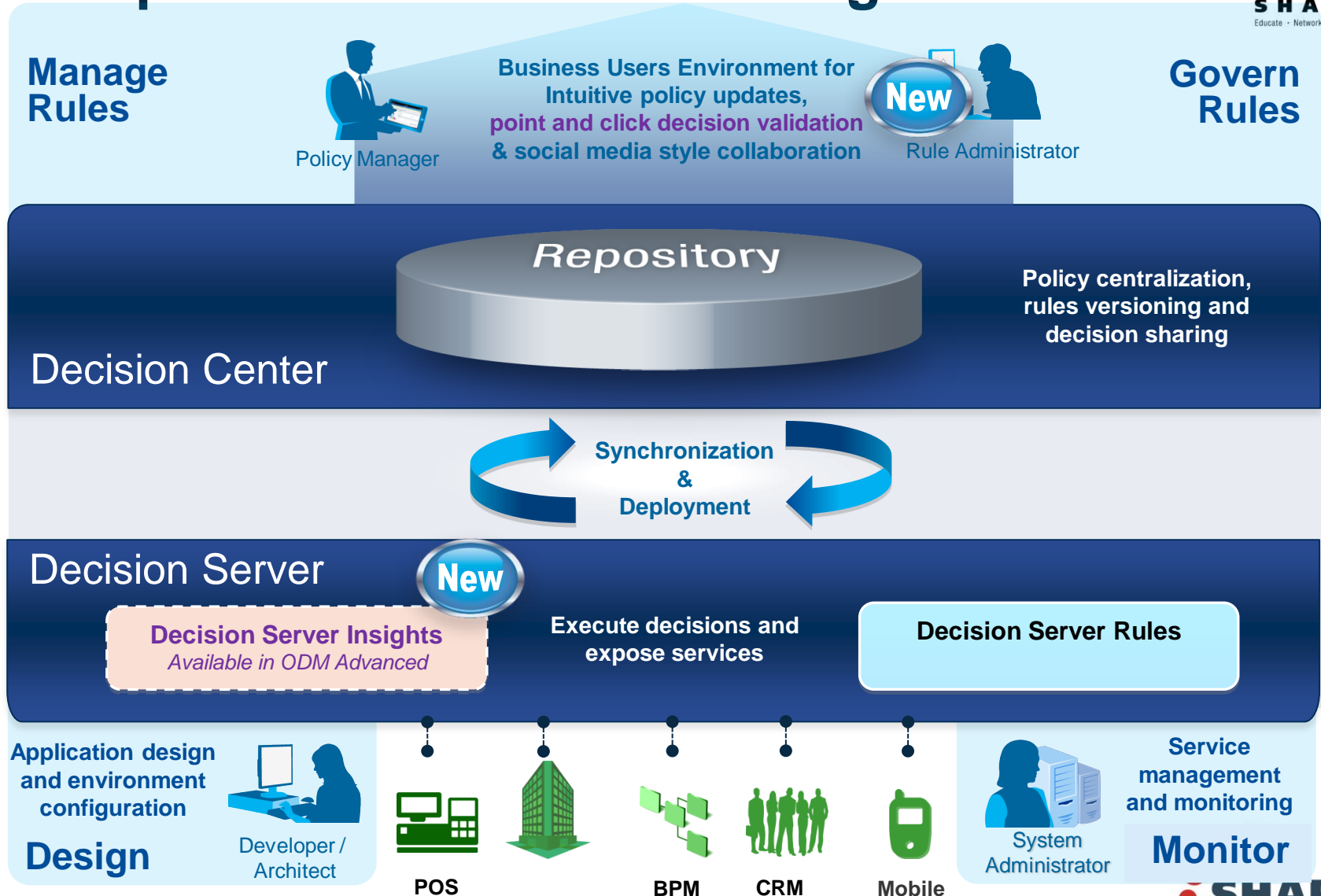
- *Shared expression of business policy*
- *Maintain with Center of Competency*

Ensuring seamless business experience in migration / application evolution

Incremental Adoption

- *Deploy one decision at a time*
- *Focus on decisions that are complex or need to change often & quickly*

IBM Operational Decision Manager V8.7



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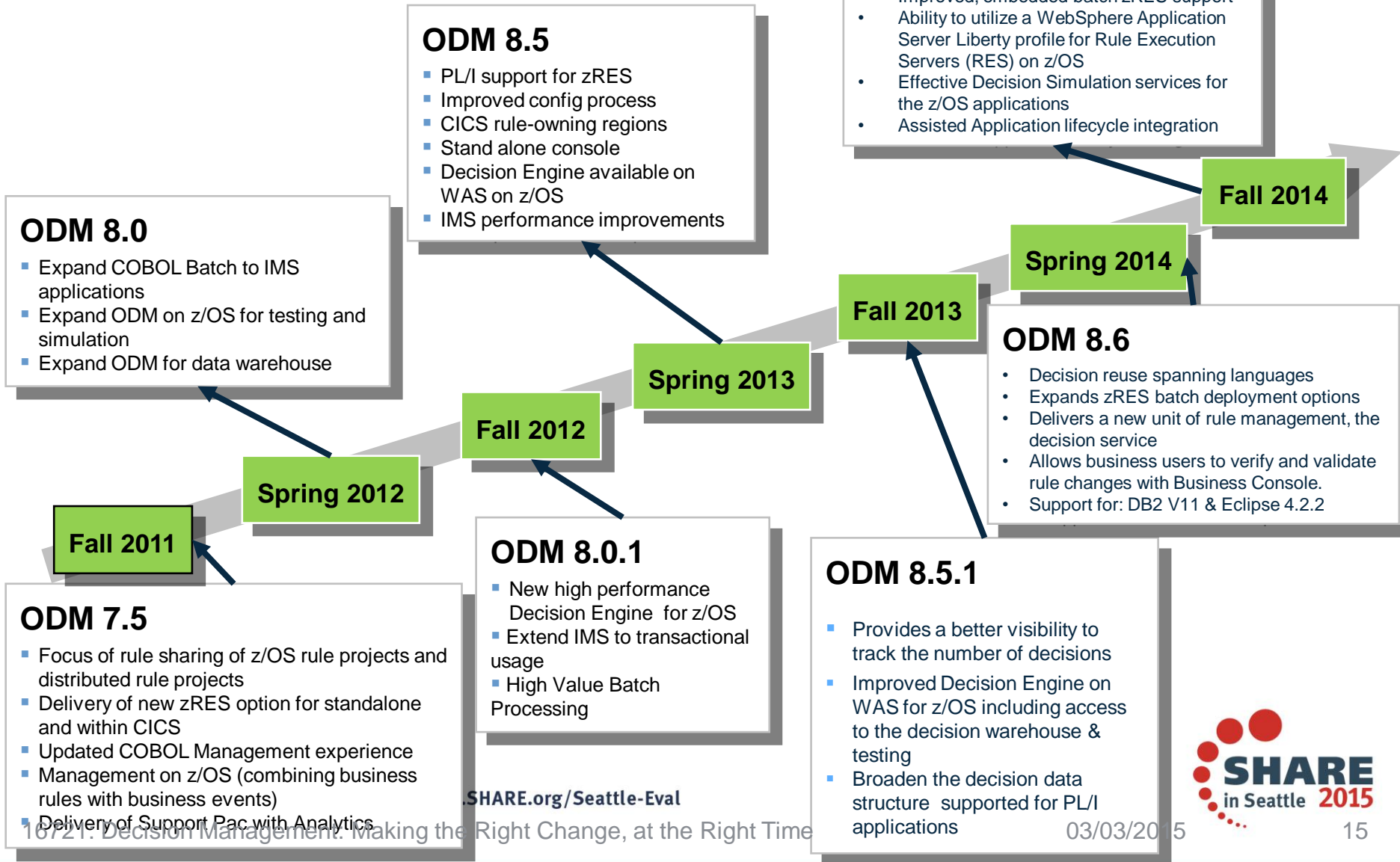
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Enterprise Application

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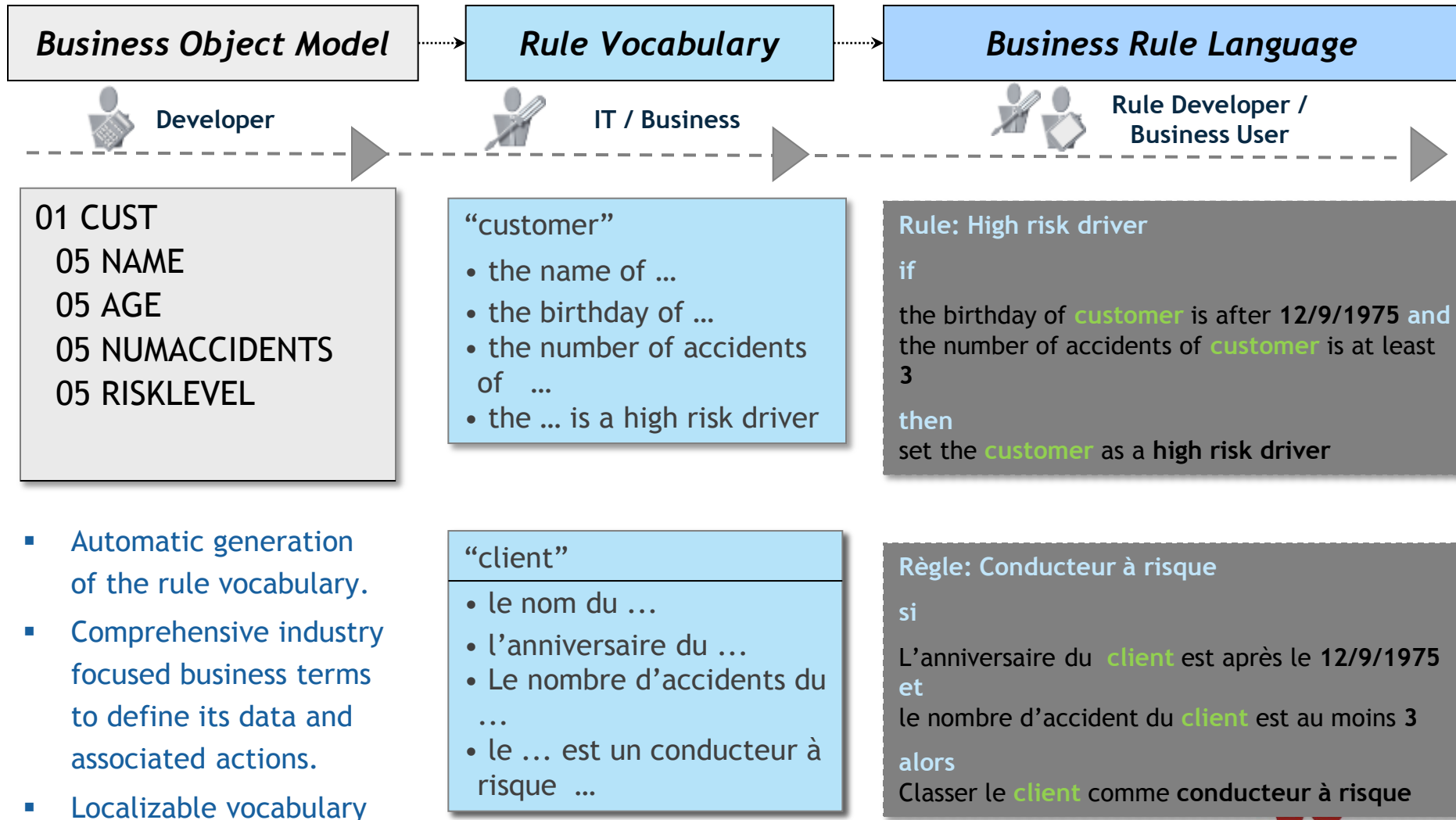
IBM ODM for z/OS Roadmap



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ODM Brings the IT and Business World together



Decision Tables

	Grade	Amount of loan		Insurance required	Insurance rate
		Min	Max		
0	A	< 100,000		false	0.001
1		100,000	300,000	true	0.003
2		300,000	600,000	true	0.005
3		≥ 600,000		true	0.0075
4	B	< 100,000		false	0.0025
5		100,000	300,001	true	0.005
6		300,000	600,000	true	0.0075
7		≥ 600,000		true	0.0145
8	C	< 100,000		true	0.0035
9		100,000	300,000	true	0.006
10		300,000	600,000	true	0.0085
11		≥ 600,000		true	0.0145
12	Otherwise			true	0.022

Built-in Gap/Overlap checking

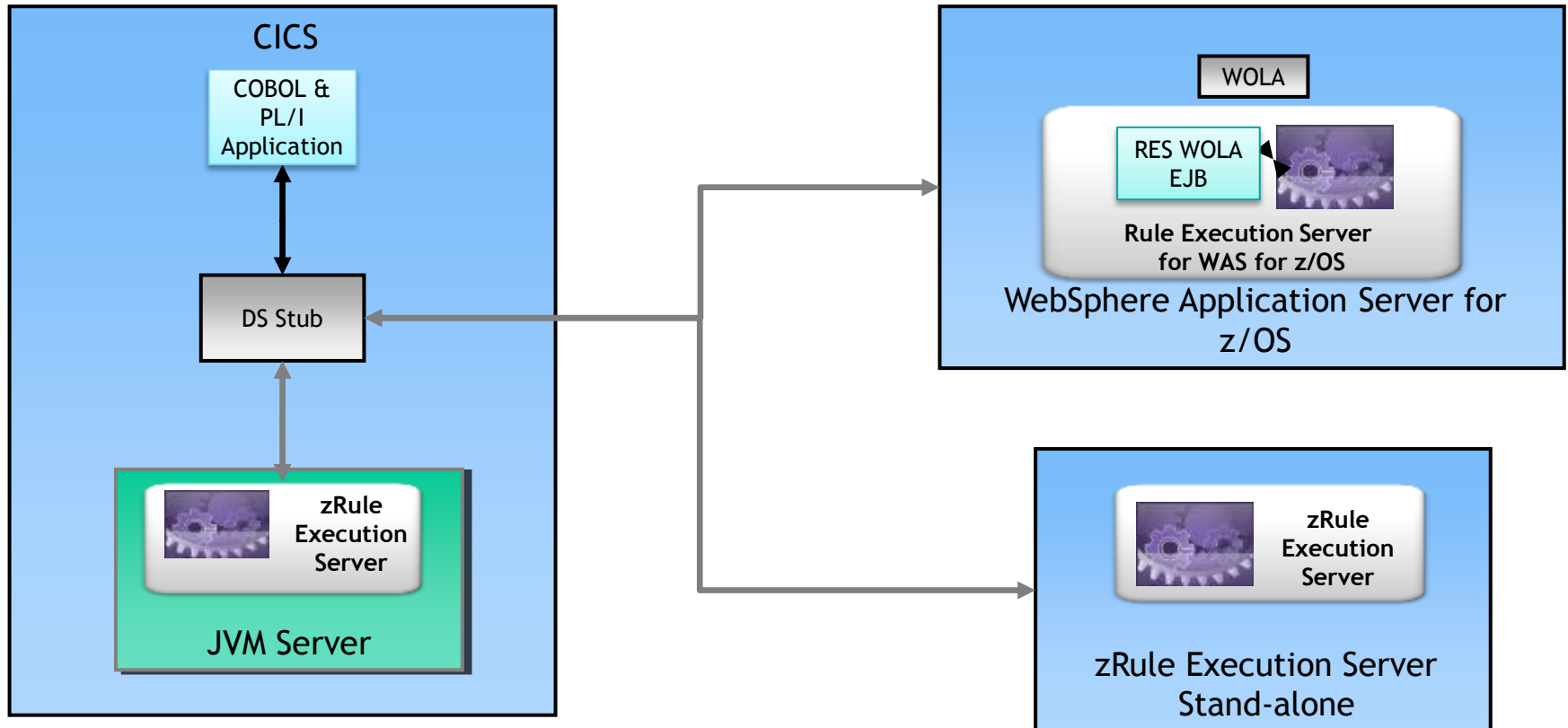
Automatic Rule generation

if
all of the following conditions are true :

- the loan grade in 'the loan report' is "C"
- the amount of 'the loan' is at least 600000 ,

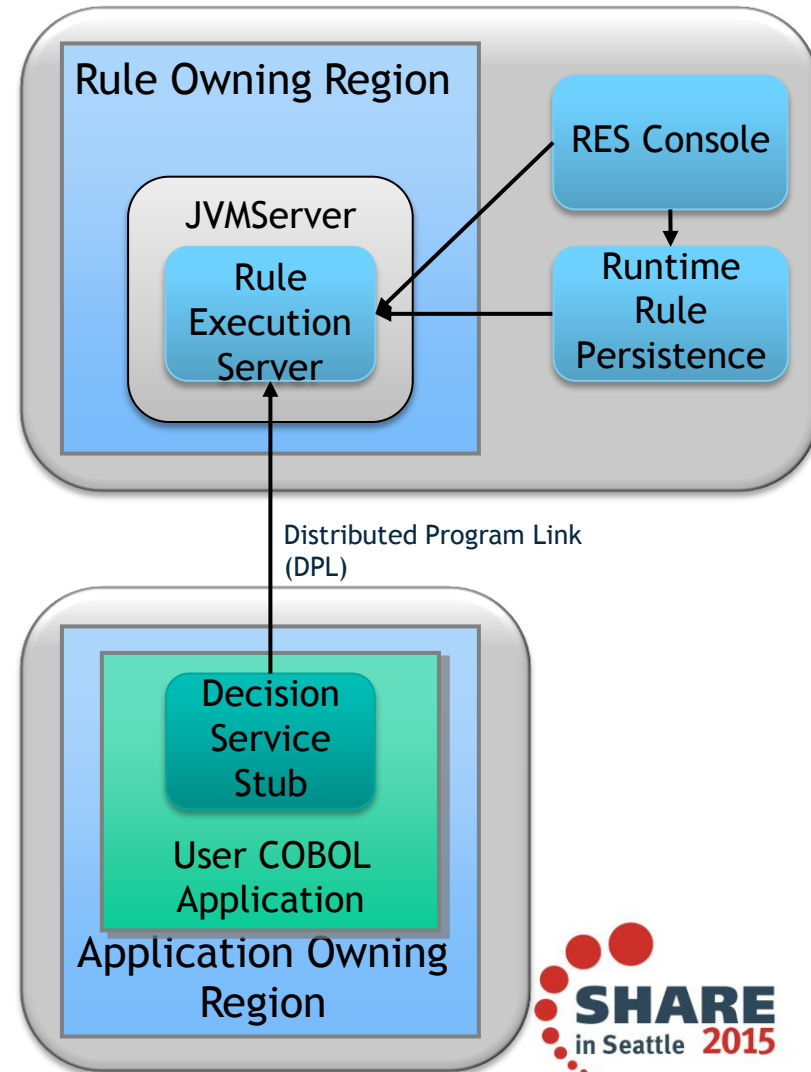
then
set insurance required in 'the loan report' to true ;
set the insurance rate in 'the loan report' to 0.0145 ;

Decision Invocation Options for CICS

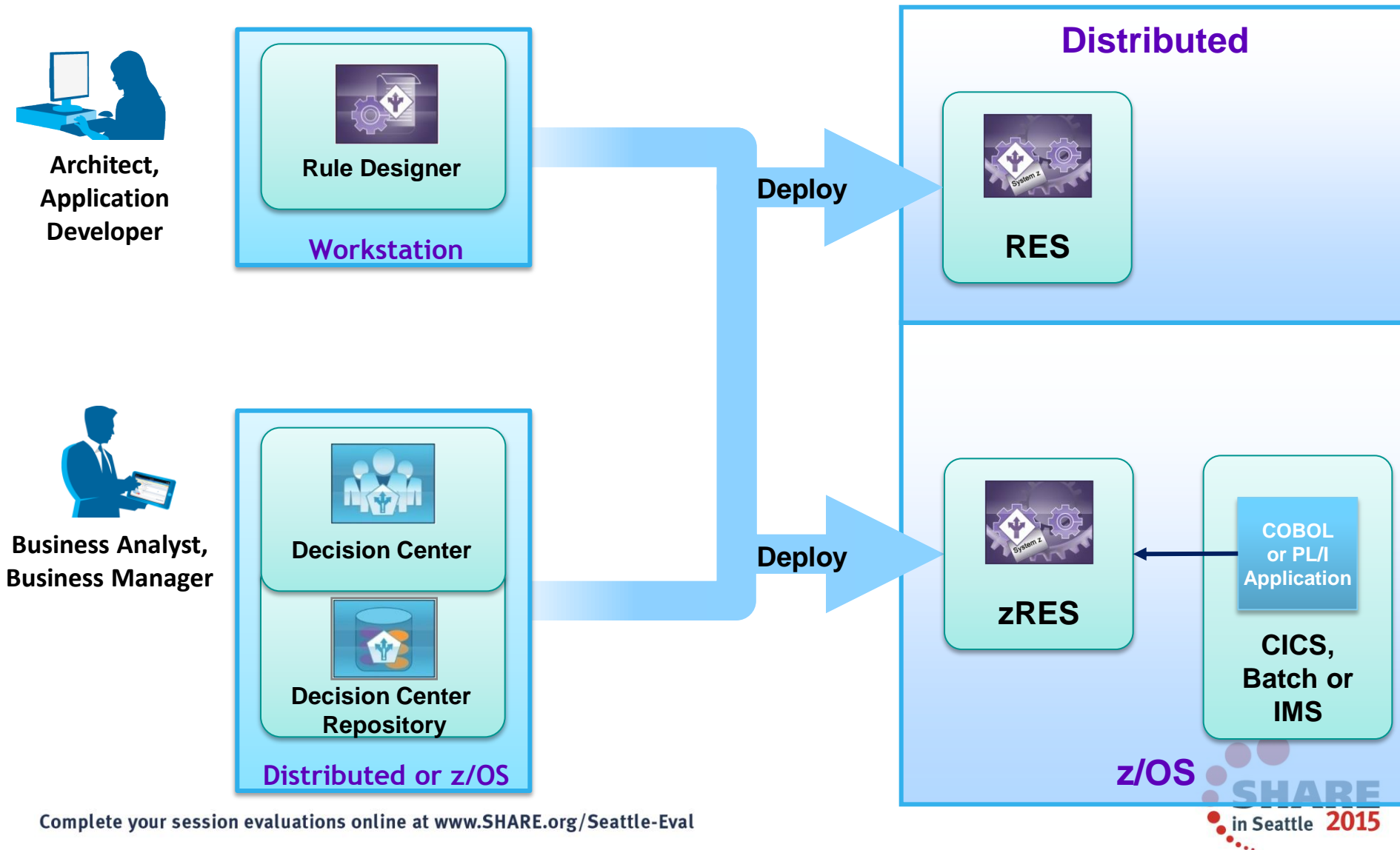


CICS Rule-Owning Regions (ROR)

- A CICS rule-owning region allows centrally hosted rules to be called by multiple CICS regions
- The rule-owning region hosts a zRule Execution Server for z/OS instance that runs locally in the CICS JVM server.
- The application-owning region uses a CICS Distributed Program Link (DPL) to run rules in a rule-owning region
- CICS DPL supports the ability for CICS to work load balance by having multiple rule-owning regions
- This is the only 'out of the box' configuration that supports cross LPAR communications



Managing and Deploying Decisions



ODM for z/OS enables smart organizations to capitalize on modernization and innovation

- **Faster Time to Market:**
 - Ability to react to changes in a fast pace competitive marketplace though Business events and rules
- **Lower cost of maintenance**
 - Leading to improvement operational efficiency and total cost of ownership
- **Better visibility and control**
 - Leading to improvement to better corporate governance
- **Ability to implement the best rules for the best outcome**
 - Business users can see, understand and have the appropriate tools to support the needs of the organization by maximizing their IT investment
- **Ability to manage and document business decisions executed in System z applications**
 - Authoring rules for COBOL & PL/I applications in business terminology
 - Ability to share business rules with Java and other COBOL & PL/I applications
 - Integrate seamlessly with existing COBOL & PL/I applications



Other sessions this week on ODM

- ✓ Tues at 10:00 AM:
 - 17147: Operational Decision Manager User Experience by Brian Peterson, Optum Technology, UnitedHealth Group
- Tues at 12:30 Metropolitan A:
 - 17181: Lunch and Learn: Decisions Rule CICS Applications by Ian Mitchell, Chris Backhouse and Richard Szulewski, IBM
- Wed at 10:00 in Virginia:
 - 16721: Decision Management: Making the Right Change, at the Right Time by Richard Szulewski, IBM
- Thurs. at 1:45 in Willow A:
 - 16569: Dynamic Business Rules and Other Things You Didn't Think CICS could do by Chris Backhouse, IBM

Where can I find out more?

- <http://www.ibm.com/operational-decision-management>
 - Shortcut: <http://ibm.com/ibmodm>
 - [IBM Operational Decision Manager for z/OS](#)
- White papers & tech docs
 - [WebSphere z/OS – The Value of Co-Location](#)
 - [Brief introduction to WebSphere Optimized Local Adapters](#)
 - [WebSphere for System z Prescriptive Use Cases \(Oct. 28, 2011 Addendum\)](#)
- Redbooks
 - [Flexible Decision Automation for Your zEnterprise with Business Rules and Events](#)
 - [Batch Modernization on z/OS](#)
 - [Patterns: Integrating WebSphere ILOG JRules with IBM Software](#)
- [Operational Decision Management eBook: Enabling Faster, More Consistent Business Decisions in Enterprise Applications \(April 2014\)](#)
- [Optimizing Decision Management with IBM WebSphere and System z \(YouTube\)](#)
- [IBM Operational Decision Management YouTube demo](#)
- [Top 10 Business Use Cases for Operational Decision Management](#)
- [Good Decision! Decision Management blog](#)

धन्यवाद
Hindi

多謝
Traditional Chinese

Grazie
Italian

ขอบพระคุณ
Thai

Gracias
Spanish

Спасибо
Russian

Obrigado
Brazilian Portuguese

多谢
Simplified Chinese



Merci
French

شكراً
Arabic

Danke
German

நன்றி
Tamil

ありがとうございました
Japanese

감사합니다
Korean

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