

The future of SOA on z/OS built on a smarter foundation of CICS TS V4, WAS V7 and Rational Developer for System z

Steve Kinder, Ian Mitchell, Colette Manoni, Cindy Krauss

April 8th, 2009

Welcome...

- Your speakers today:
 - Steve Kinder SOA Foundation Architect
 - Ian Mitchell Product Architect for CICS Transaction Server
 - Colette Manoni Product Architect, WebSphere Application Server for z/OS
 - Cindy Krauss Product Architect, Rational Developer for System z
- What you will hear in this session:

Building on the lessons learned in **Future-Proof your Applications with SCA: Programming model optimized for SOA** we will show you how SCA can be applied to your business applications running on z/OS.

Using a simple application example we will show components wired across CICS and WebSphere Application Server (WAS) that will be used as an illustration of how CICS, Rational Developer for System z (RDz), and WebSphere Application Server for z/OS are delivering new capabilities in support of this important multi-lingual, multi-environment programming model.



Agenda

- Quick SCA in WAS recap
- Introduction to SCA support in CICS TS v4.1
- The Portfolio Scenario
- Defining and implementing SCA components using Rational Developer for System z
- Deploying and running SCA components in CICS TS
- Gaining value from SCA-based approach to architecture
- Summary and Questions

Agenda

Quick SCA in WAS recap

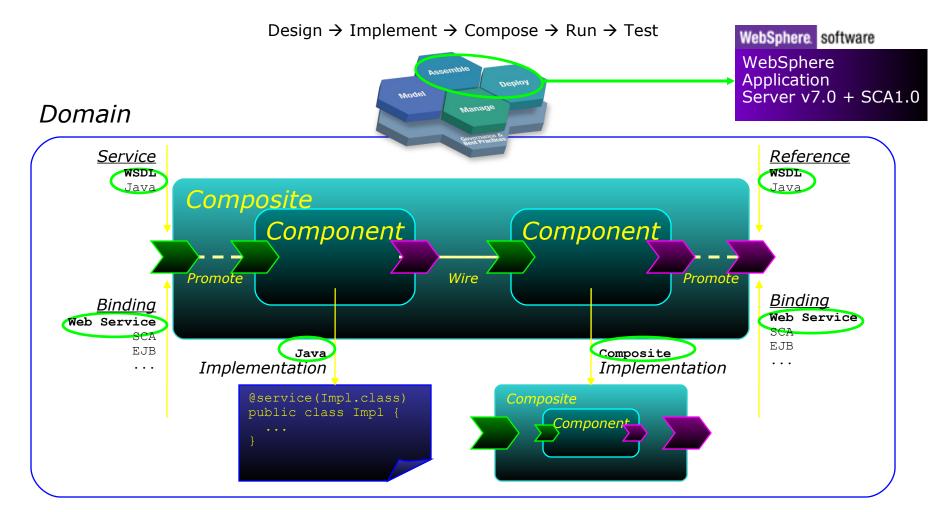
- Introduction to SCA support in CICS TS v4.1
- The Portfolio Scenario
- Defining and implementing SCA components using Rational Developer for System z
- Deploying and running SCA components in CICS TS
- Gaining value from SCA-based approach to architecture
- Summary and Questions

SCA: What it is

- Service Component Architecture.
- A concrete manifestation of an SOA way of thinking.
- Designed for building agile service oriented applications.
- A framework for implementing, assembling, composing and deploying services.
- Supports loose or tight coupling of coarse or fine grained services.
- Extends, exploits and complements existing technologies and standards.
- Language, Application Environment, Framework and Vendor neutral.
- Supports Java and Web Services, and more
- An extensible set of:
 - Protocol bindings (eg. SCA, WS, RMI, ...)
 - Implementation languages (eg. Composite, Java, ...)
 - Interface definitions (eg. WSDL, Java, ...)
 - Pluggable Data bindings (eg. PoJo, JAXB, ...)
 - Policies and Intents (eg. Integrity, Confidentiality).
- "Classic SCA" refers to Service Component Architecture as it is defined and built by IBM supported in a variety of WebSphere Family products starting with V6.
- "Open SCA" refers to Service Component Architecture as defined by the industry at both the OSOA collaboration



SCA Key Concepts



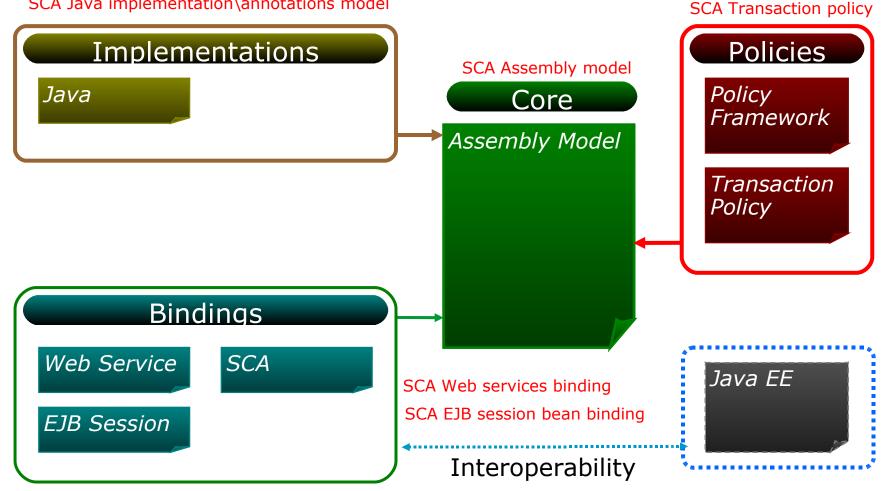
Reusability, Connectivity, Flexibility, Extensibility



SCA v1.0 Specifications – Flexible & Extensible

SCA Policy framework

SCA Java implementation\annotations model





Agenda

- Quick SCA in WAS recap
- Introduction to SCA support in CICS TS v4.1
- The Portfolio Scenario
- Defining and implementing SCA components using Rational Developer for System z
- Deploying and running SCA components in CICS TS
- Gaining value from SCA-based approach to architecture
- Summary and Questions



CICS Transaction Server v4.1 allows you to:

Compete for new opportunity by gaining insight into business processes and responding by modifying key business applications quickly and with confidence

– Business Flexibility and Innovation

Comply with corporate, industry and government policies to manage business risk of critical business applications

– Governance and compliance

Control costs by simplifying IT infrastructure and improving development and operations productivity through easier-to-use interfaces and functions

-IT Simplification

CICS TS v4.1 will be available 2nd or early 3rd quarter 2009. Join the Open Beta – see http://www.ibm.com/software/htp/cics/tserver/v41/openbeta/



CICS TS v4.1: Competing with Flexibility and Innovation

- Application Components
 - Bundles
- Web 2.0 and RESTful features
 - Atom Feeds
- Web Services, SOAP and XML Enhancements
 - WS-Addressing
 - Improved XML data mapping
- Java 6
- Event Processing



CICS TS v4.1: Complying

- Event Processing
- Meta-data for Resource Definitions
- Identity Propagation
- Security Enhancements for DB2 applications
- WebSphere Service Registry and Repository support



CICS TS v4.1: Controlling Costs with Simplification

- CICS Explorer
- CICS Management Interface
- CSD Definition Repository API
- Discovery Library Adapter for CICS TS
- Dynamic Workload Management enhancements
- Extensions to CICS intercommunications over TCP/IP
- IPv6 support
- WebSphere MQ Group Attach



CICS TS v4.1 Component Architecture

- Provide capability to easily develop flexible and reusable CICS application components
 - Rapid assembly and deployment of new Services
 - Express existing applications as re-usable components
- Separation of bindings from application code allows flexible infrastructure changes
- Reduce skills and effort required to view and manage business applications

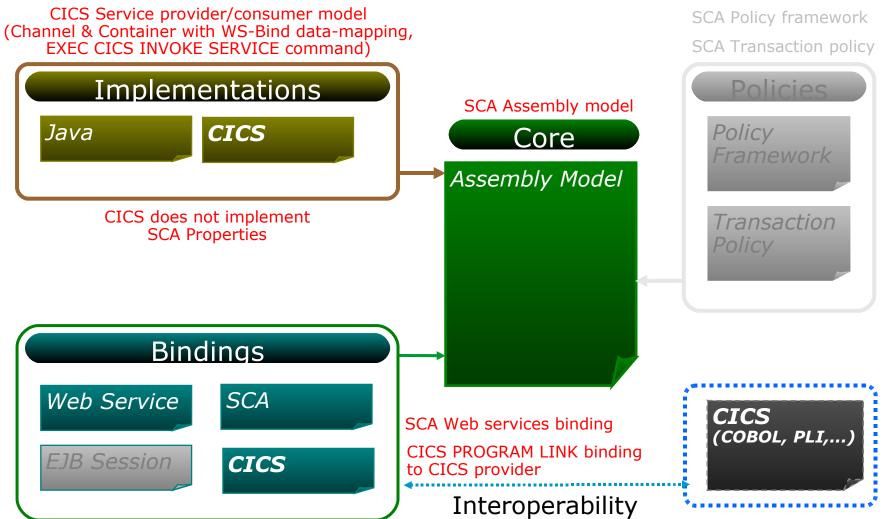


Component Architecture in CICS TS v4.1

- Ability to install and manage business applications as single CICS components
 - Abstract away from programs, transactions, resources
- Ability to describe CICS application as SCA components (using SCDL)
- Application bindings provided by CICS and configured using SCDL
 - Services and References
 - Invocation locally and via web services
 - EXEC CICS INVOKE SERVICE
- RDz providing CICS component tooling to enable component definition, assembly and deployment



SCA v1.0 Specifications – CICS TS v4.1 capabilities





Agenda

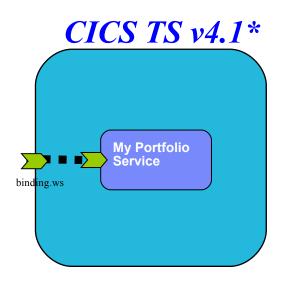
- Quick SCA in WAS recap
- Introduction to SCA support in CICS TS v4.1

The Portfolio Scenario

- Defining and implementing SCA components using Rational Developer for System z
- Deploying and running SCA components in CICS TS
- Gaining value from SCA-based approach to architecture
- Summary and Questions



Service Component Architecture - Scenario

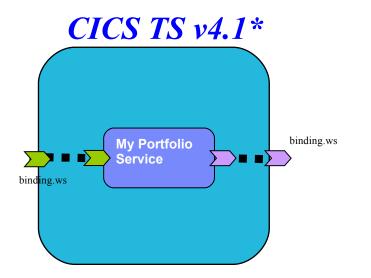


<component name = "MyPortfolioComponent">
 <implementation.CICS program="PORTFOLI"/>
 <service name="MyPortfolioService"
 <binding.ws ... >
 </service>

</component>

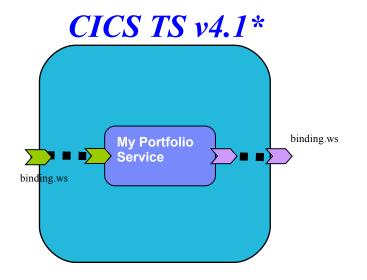


Service Component Architecture – Scenario



```
<component name = "MyPortfolioComponent">
    <implementation.CICS program="PORTFOLI"/>
    <service name="MyPortfolioService"
        <binding.ws ... >
        </service>
        <reference name="MyStockQuoteService">
            <binding.ws ... >
        </reference>
        </reference>
</component>
```

Service Component Architecture – Programming Model



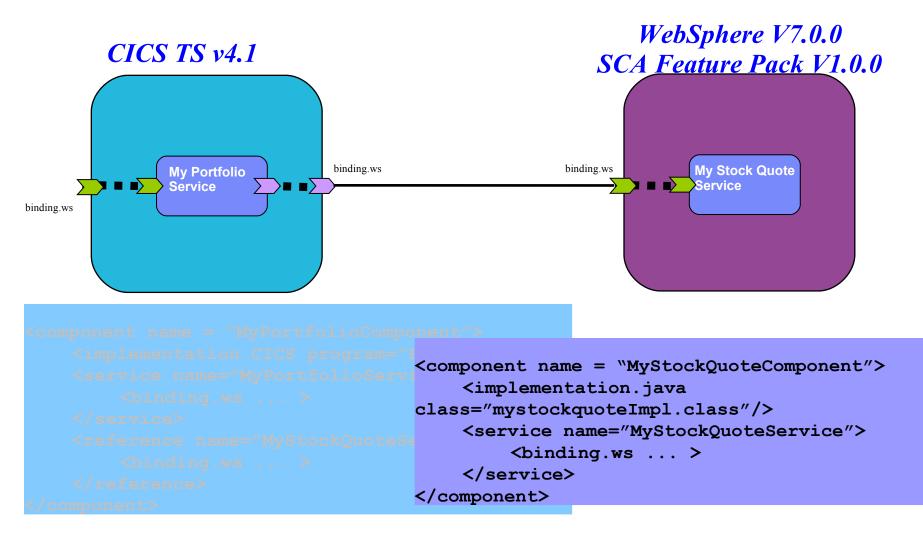
CICS COBOL Program

```
EXEC CICS PUT CONTAINER("SYMBOL")
CHANNEL("QUOTESERVICE")
FROM("IBM ")
```

EXEC CICS INVOKE SERVICE("MyStockQuoteService") CHANNEL("QUOTESERVICE")



Service Component Architecture – Scenario





Service Component Architecture – Programming Model WebSphere V7.0.0 **CICS TS v4.1*** SCA Feature Pack V1.0.0 binding.ws binding.ws **My Portfolio My Stock Quote** Service Service binding.ws WebSphere POJO

FROM ("IBM ")

@Remotable
public interface stockQuote{
 public String myStockQuoteService();}

EXEC CICS INVOKE SERVICE ("My CHANNEL ("QU

@Service(stockQuoteImpl.class)
public class stockQuoteImpl implements stockQuote



Agenda

- Quick SCA in WAS recap
- Introduction to SCA support in CICS TS v4.1
- The Portfolio Scenario
- Defining and implementing SCA components using Rational Developer for System z
- Deploying and running SCA components in CICS TS
- Gaining value from SCA-based approach to architecture
- Summary and Questions



	Tools IBM Rational Deve	loper for System z		×	
<u>F</u> ile <u>E</u> dit <u>N</u> avigate Se <u>a</u> rch	-				
			🗈 🗟 Enterprise	»	
🗔 EST Project 🛛 😵 🕏 Navi	igator 🖳 🗖 🚺 Welcome to z/OS Projects	s 🚺 Welcome to EST 🕱 🗧 🗖	Remote Sys 🛛 🦳 🕻		
	Enterprise Service 1				
	The Enterprise Service	Enterprise Service Tools	Image: Second secon	New SCA Project Wizard	
New Open Welcome Page Refresh	COBOL and PL/I base	d business programs and applications for Web service modeling and composition, and the vice interface components such as WSDL file,	My Data S My Data S CINDY.	reate a New SCA Project Enter generic information about the project	
	IMS Web 2.0 Project Batch, TSO, z/OS UNIX Project	s), and COBOL converters from COBOL data		Project name: MyPortFolioProject	
	Database Application Project SCA Project	Problems	₩	✓ Use <u>default</u> location	
E Outline 🛛	Host Connection			Location: C:\RDz CA beta workspaces\MyPortFolioProject	Browse
An outline is not available.	mf Flow	-		Choose file system; default	
	Operations File			Choose file system; default	
	Screen Operations File			Target Runtime	
	Message Definition			<none></none>	✓ Ne <u>w</u>
				Project Settings	
				Implementation Types for SCA Components	
				Composite	
L ≟ □*				♥ ① Java ♥ ② OICS	
				? < <u>Back</u> <u>Next</u> > <u>Finish</u>	Cancel



© Enterprise Service Tools -			1
<u>File E</u> dit <u>N</u> avigate Se <u>a</u> rch <u>P</u> roject <u>R</u> ur			
📫 • 🔛 🗁 🛛 I 💁 • 🛛 🥒 I	• 1 🖢 • 🖗		•
🔄 EST Project 🛛 😤 Navigator 🖓 🗖	🚺 Welcome t	o z/OS Projects 🚯 Welcome to EST 🕱 🛛 🗖 📕 Remote Sys 🕱 🦳 🗖	1
	Enterpris	e Service Tools (EST)	
MyPortFolioProject SCA Content Contributions	Welco	me to Enterprise Service Tools	
		🔍 Import	
	The Enter COBOL a services e	File system Import resources from the local file system.	
	These fea generatio bind file (From directory: C:\RDz\Cobol Source	Browse
E Outline 🛛 🗖 🗖 An outline is not available.	Properties Property	Cobol Source Cobol Source PORTFOLI.cbl queryAccount.cbl	
		Filter <u>Types</u> <u>Select All</u> <u>Deselect All</u>	
		Into folder: MyPortFolioProject	Browse
		Options Overwrite existing resources without warning Oreate complete folder structure Oreate selected folders only	
		⑦ < <u>Back</u> <u>Next</u> > <u>Finish</u>	Cancel



			l Developer for System z			×	
<u>F</u> ile <u>E</u> dit <u>N</u> avigate Se <u>a</u> rch							
		• <u> </u>			🖺 📑 Enterprise	0	New CICS Component Type Wizard 🛛 🔲 🔀
🗟 EST Project 🛛 😤 🕏 Na		Welcome to z/C	DS Projects 🚺 Welcome to EST 🛛		📕 Remote Sys 🛛 🦳	~	New Cit's Component Type wizard
	□ 🔄 🏹	Enterprise S	ervice Tools (EST)			La	nguage structures 🛛 🛁 🐟
	eres.	es for CICS Project) Enterprise Service	Tools		Т	he language structures have been imported. pecify request, response or both language structures.
⊪ 进 src ⊪ 🛋 JRE System Library	i IMS Web 2	Gateway Project .0 Project	New CICS Compon	ent Type Wiza	ard	ſ	🔲 Request Language Structure 🔲 Response Language Structure
	111/0	, z/OS UNIX Project pplication Project	New CICS Component Type				Select a language structure for the response message:
	SCA Project		Create a component type fron	n CICS program sourc	e code		H. MYVARIABLES
	SCA Compo						🚊 🗹 🔵 CustomerInfo
	SCA Contril	bution Component Type	<u>P</u> roject: M	lyPortFolioProject			····· ♥ ● userName ····· ♥ ● department
		Properties 🕅	Component type file name: P	ORTFOLI.componentT	уре		· · · · · · · · · · · · · · · · · · ·
		Property					🖂 🕑 😑 returnCode
E Outline ⊠ An outline is not available.			Component type service pro	perties			
			CICS program source file:	PORTFOLI.cbl			O DFHCOMMAREA (contains unsupported types)
			P <u>r</u> ogram name:	PORTFOLI			
			Conversion type:	Interpretive XML Conv	ersion 🔹		
: D *						C	Change COBOL Preferences
			?	ck <u>N</u> ext >	<u>F</u> inish		
						?	Cancel



			l Developer for System z			×		
<u>File E</u> dit <u>N</u> avigate Se <u>a</u> rch								
EST Project X Sa Na		• <u> </u> + + %			Enterprise	New CICS Co	omponent Type Wizard	
La EST Project 23 La. No					Remote Sys 🐹			
🖃 😂 MyPortFolioProject		Enterprise S	ervice Tools (EST)			DFHLS2WS: High Le	vel Language to WSDL Conversion	
SCA Content	💰 Service Flo	w Project) Enterprise Service	e Tools		Specify targets for V	VSBind and WSDL files	
Composites		es for CICS Project			🗉 🖆 New Connection			
PORTFOLI.cbl B	SOAP for C	ICS Project Gateway Project	New CICS Compo	onent Type Wiz	ard	Service Artifacts	5	
	i 🎆 IMS Web 2	.0 Project						
	111/2	, z/OS UNIX Project oplication Project	New CICS Component Typ	e				
	🙀 SCA Projec		Create a component type fr	om CICS program sourc	e code	File container:	/MyPortFolioProject	Browse
	as SCA Compo					WSDL file name:	PORTFOLI	.wsdl
	SCA Compo							
		Component Type	<u>P</u> roject:	MyPortFolioProject		WSBIND file name:	PORTFOLI	.wsbind
		Properties 🕅	Component type file name:	PORTFOLI.componentT	уре	Log file name:	PORTFOLI	.log
		Property						
An outline is not available.			Comment have a series			Overwrite files		
An outline is not available.			Component type service p	properties				
			CICS program <u>s</u> ource file:	PORTFOLI.cbl				
			Program name:	PORTFOLI				
			r <u>r</u> ogram name.					
			Conversion type:	Interpretive XML Conv	ersion 💉			
L								
E ∐*								
			(?)	ack <u>N</u> ext >	<u>F</u> inish			
						⑦ < <u>B</u> ack	<u>N</u> ext > <u>F</u> inish	Cancel



© Enterprise Service Tools -		eloper for System	Z		
<u>File Edit N</u> avigate Se <u>a</u> rch <u>P</u> roject <u>R</u> u					
	• 1 2 - 7 - % 4 •			🖹 🗟 Enterprise	
🗟 EST Project 🛛 😵 Navigator 🖓 🗖	Welcome to z/OS Proje	ects 🚺 Welcome to EST 💈	*	🗖 🗖 🦛 Remote Sys 🖾	
B B MyPortFolioProject B B SCA Conterp	Enterprise Service	O New Compone	ent Wizard		
Contribut New Service Composites PORTFOLI.cbl SOAP PORTFOLI.componentT Mar Mar Market		New SCA Component create a new SCA com			2 D
PORTFOLI.wsbind	eb 2.0 Project TSO, z/OS UNIX Project Ise Application Project	<u>P</u> roject:	MyPortFolioProject	*	
	oject	C <u>o</u> mposite:	MyPortFolio - http://temp	Select	Ne <u>w</u>
∑ SCA C		<u>C</u> omponent Name:	MyPortfolioComponent		
	CA Component Type				
	🔲 Properties 🛛 🧔 Ta	Interface Type:	WSDL	~	
E Outline 🕱 🗖 🗖	Property Value	🔾 Create a new servi	ice interface		
An outline is not available.		Reuse an existing s	service interface		
		Interface Name:	PORTFOLIPort - file://target.	files	Se <u>l</u> ect
		Implementation Type:	CICS	~	
		O Create a new imple	ementation		
		 Reuse an existing i 			
		, s	·		
i □ *		Implementation na	ame \MyPortFolioProject\PO	RTFOLI.componentType	Sele <u>c</u> t
		?	< <u>B</u> ack <u>N</u> ext >	<u>Finish</u>	Cancel



Ele Édit Diagram Mavigate Segrit Project Bun Window Help Inhoma Is Est Froject III A + A + J + IIIIIIIIIIIIIIIIIIIIIII	© Enterprise Service Tools - I	MyPortFolioPro	oject/My	PortFolio.com	posite_diagr	am - IBM Ratio	nal Deve 🔳 🗖 🔀
Tahoma Image: Source Sourc	<u>File Edit D</u> iagram <u>N</u> avigate Se <u>a</u> rch <u>P</u> r	oject <u>R</u> un <u>W</u> indow	<u>H</u> elp				
EST Project Example Number to z/OS Proj Welcome to EST MyPortFolio.composit Remote Sys Image: System composit Image: Strice Stri							🗈 🗟 Enterprise
Image:	Tahoma 💙 8 💙 🖪	BI A • 🗞 • .	$\not \bullet \rightarrow \bullet $	특 🗞 - 배 - 😫	•• 🖺 🗩 🖂	- 100%	Z/OS Projects
WhyPortFolioProject Image: Composites Image: Contributions Image: Contributions Image: Contributions Image: Contributions Image: Contributions Image: Contributions Image: Contributions Image: Contributions Image: Control Component Type Image: Contributions Image: Control Component Type Image: Control Component Image: Control Component Image: Control Component Image: Control Component Image: Control Component Image: Control Component Im	🗟 EST Project 🛛 😤 Navigator 🗖 🗖	Welcome to z/OS	Proj 🚺	Welcome to EST	A *MyPortFolio.c	composit 🛛 🗖 🗖	📕 Remote Sys 🕺 🦳 🗖
Image: Solution of the solution	□ 🔄 🏹				~	😳 Palette 🛛 🗅	~
Composites Composites MyPortFolio PORTFOLLio PORTFOLLios PORTFOLLios PORTFOLLissind PORTFOLLissind PORTFOLLissind Component MyPortfolioComponent Porperties 2 Tasks Problems Core Component MyPortfolioComponent Properties Problems Core Component MyPortfolioComponent Properties Problems Core MyPortfolioComponent Properties Problems Core MyPortfolioComponent Properties Problems Core MyPortfolioComponent Properties Problems Core MyPortfolioComponent Properties Problems Core MyPortfolioComponent Properties Problems Core MyPortfolioComponent Properties Problems Properties Problems Proble						▶ €	🕹 🏖 ⇔ ⇔ 🐼 🕞
• Composites • Ittl://temp • MyPortfolioComponentType • PORTFOLLoig • PORTFOLLusshind • PORTFOLLwskind • PORTFOLLwskind • PORTFOLLwskind • PORTFOLLwskind • PORTFOLLwskind • Portrolused • State = Sta						Component	
Image: http://temp Image: MyPortFolio Image:						Reference	
Image: MyPortFolio Image: MyPortFolicOmpone Image: MyPortFolicOmponentType Image: PortFolicWishind	- □ http://temp						
PORTFOLLog PORTFOLLog PORTFOLLog PORTFOLLwslid PORTFOLWslid PORTFOL			np			^o l₀ Wire/Promote	
PORTFOLLcomponentType PORTFOLLug PORTFOLLusdid PORTFOLLusdid PORTFOLLusdid PORTFOLLusdid Portfollusdid Portfollusdid Properties ☆ Tasks Problems Core Implementation Properties Autowire: false Intents: Policy sets: Add Remove Remove							
PORTFOLLwsbind Properties Autowire: Properties Autowire: false Intents: Policy sets: Add Remove							
PORTFOLLwsdi PORTFOLLwsdi Properties X Tasks Problems Component MyPortfolioComponent Implementation Properties Appearance Intents: Policy sets: Add Remove							
Image: Signature							⊞
Properties 2 Tasks Problems Component MyPortfolioComponent Tore Component Core Component Implementation Properties Autowire: false Intents: Policy sets: Add Remove Remove					~		~
Component MyPortfolioComponent Core Component MyPortfolioComponent Implementation Properties Appearance Intents: Policy sets: Add Remove Remove	🖥 🛋 JRE System Library [jdk]	<			>		<
Core Component Mare: MyPortfolioComponent Implementation Properties Appearance Intents: Policy sets: Add Remove		Properties 🛿	🖉 Tasks 🚦	Problems			~ - 8)
Core Component Implementation Properties Appearance Autowire: false Intents: Policy sets: Add Remove		Component	MyPortfo	olioComponent			
Properties Autowire: false Appearance Intents: Policy sets: Intents: Add Remove Remove	🗄 Outline 🛛 🗧 📑 👘 🖓 🗖	Core	Compone	nt			
Appearance Intents: Policy sets: Add Remove Remove		Implementation	Name:	MyPortfolioCompone	nt		
Appearance Intents: Policy sets: Add Remove Remove		Properties	Autowire:	false			~
Remove Remove		Appearance	Intents:		-	Policy sets:	
					Add		Add
					Remove		Remove
i D° · RTP ADM server					Itemove		Kemove
i D [¢]							
© [♦] RTP ADM server							
	: 0 *						RTP ADM server



Contemprise Service Tools - Eile Edit Diagram Navigate Search Pr			Folio.compos	ite_diagr	am - IBM Ratio	nal Deve 🔳 🗖 🔀
💼 • 🔛 🗁 🗛 • 🥖 🔗 • •	2 - ₽ - ♥ ♦ • I I A - ♦		🔆 • 🖷 • 🔚 • ome to EST 🛛 🔒			Enterprise Z/OS Projects Remote Sys X □
MyPortFolioProject SCA Content SCA Composites MyPortFolio MyPortFolio MyPortFolio PORTFOLLcol PORTFOLLog PORTFOLLwsbind PORTFOLLwsbind PORTFOLLwsbind PORTFOLLwsbind	MyPortfolioCon				Palette	A New Connection Local Cosl Cos
a 🗁 Src a 🛋 JRE System Library [jdk]	<	*)=		>		× ×
	Properties Component	Tasks 🕄 Probl				
🗄 Outline 🛛 🐮 🔐 🗖 🗖	Core Implementation	Implementation Implementation ty				^
	Properties Appearance	Component type: Program: Call type:	PORTFOLI.compone PORTFOLI commarea	entType		Select
		Intents:		Po Add	licy sets:	Add
 ; □◆					1.0	③ ▼ RTP ADM server



Enterprise Service Tools - I	MyPortFolioPro	oject/MyPortFolio.compos	ite_diagram - IBM Ratio	onal Deve 🔳 🗖 🔀
<u>F</u> ile <u>E</u> dit <u>D</u> iagram <u>N</u> avigate Se <u>a</u> rch <u>P</u> r	roject <u>R</u> un <u>W</u> indow	Help		
i 😭 • 🔚 🖻 i 💁 • i 🥖 i 🔗 • i i Tahoma 🛛 🔹 8 ♥ I		今 - ∥ • → • 鴨 竅 • 喘 • 砦 •	門 戸 河 日・ 100%	Enterprise Enterprise
🗟 EST Project 🛛 😂 Navigator 🖓 🗖	Welcome to z/OS	Proj 🚺 Welcome to EST 🔂	*MyPortFolio.composit 🛛 🦳 🗖	Remote Sys 🛛 🦳 🗖
WyPortFolioProject MyPortFolioProject Solutions Composites Implication PORTFolio PORTFolicolio PORTFolicol PORTFolico PORTFOLIW P	MyPortfolioCom	p	Palette P	Image: Second
⊕ 进 src ⊕ 🛋 JRE System Library [jdk]	<		>	×
, 5.3		Tasks R Problems		
< >		MyStockQuoteComponent		
🗄 Outline 🛛 🗄 💣 🗖 🗖	Component			~
	Core	Implementation		
	Implementation Properties	Implementation type: Java		<u> </u>
Hostopaco	Appearance	Class: mystockquoteImpl.class		Browse
		Intents:	Policy sets: Add Remove	Add Remove
i ⊡ *			1	◎ ▼ RTP ADM server



© Enterprise Service Tools - I	MyPortFolioPro	oject/MyPortFolio.compo	osite_diagran	n - IBM Ration	nal Deve 🔳 🗖 💈
<u>F</u> ile <u>E</u> dit <u>D</u> iagram <u>N</u> avigate Se <u>a</u> rch <u>P</u> r	oject <u>R</u> un <u>W</u> indow	<u>H</u> elp			
i 📫 • 🔛 🕒 i 💁 • 🥖 i 🛷 • i	🖢 - 🖓 - 🍤 🔶 •	• 🔿 •			🖹 🗟 Enterprise
🕴 Tahoma 🛛 🗸 8 🖌 🛛	BI A • 🕭 • .	〃 · → · ⓑ छ · ఴ · ‰ ·	11 戸 区 日	• 100%	alle_ z/OS Projects
📑 EST Project 🛛 😤 Navigator 🗖 🗖	Welcome to z/OS	Proj 🚺 Welcome to EST 🚺	*MyPortFolio.com	nposit 🛛 🗖 🗖	📕 Remote Sys 🕱 🗧 🗖
			<u> </u>	Palette	~
🖃 😂 MyPortFolioProject				; ⊕, ⊝, 🖵 •	
🖃 🤔 SCA Content				2 Component	E
Contributions				Reference	E & New Connection
Http://temp		Add ComponentRefere	ence	Service	🗉 📑 Local
🖻 🔓 MyPortFolio	MyPortfolioCon	Ip MyStockQuoteCo		°l₀ Wire/Promote	RTP system
MyPortfolioCompone PORTFOLL.cbl	┃ └─────────				
PORTFOLL.componentType					H & MVS Files
PORTFOLI.log					📑 TSO Command:
PORTFOLI.wsbind					🗄 🐻 JES
PORTFOLI.wsdl					
	<		>		<
		🖉 Tasks 🚼 Problems			
< <u> </u>		MyStockQuoteComponent			
🗄 Outline 🖾 🛛 🗄 📑 🗖		Implementation			
	Core Implementation	Implementation type: Java			~
	Properties	Implementation type: Java			
	Appearance	Class: mystockquoteImpl.class			Browse
MyBerthiloGrap	hppedranee				
		Intentes	Delte	v coto	
		Intents:		y sets:	
			Add		Add
			Remove		Remove
: •					RTP ADM server

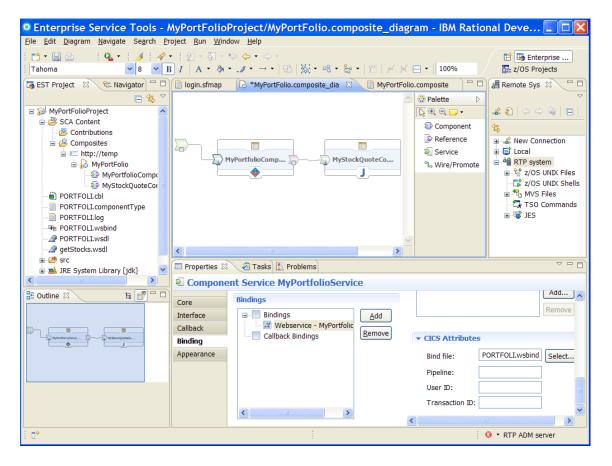


Enterprise Service Tools - I	AyPortFolioProject/MyPortFolio.composite_diagra	m - IBM Rational Deve 🔳 🗖 🔀
<u>File E</u> dit <u>D</u> iagram <u>N</u> avigate Se <u>a</u> rch <u>P</u> r		
i 😭 • 🔚 🖆 i 💁 • i 🥖 i 🔗 • i i i Tahoma 🛛 😵 8 💽 I	2 - 2 - ♥- ♥- ♥- 1 - 2 - ♥- Ø- Ø 唱 変・唱・器・ 三 ℋ ℋ ⊟	Image: The second s
🗟 EST Project 🛛 😵 Navigator 🖓 🗖	🚯 Welcome to z/OS Proj 🚯 Welcome to EST 🔂 *MyPortFolio.com	mposit 🛛 🕛 📕 Remote Sys 🕅 🗖
WyPortFolioProject SCA Content SCA Contributions Composites MyPortFolio WyPortFolio WyPortFolio PORTFOLLcbl PORTFOLLog PORTFOLLwsbind PORTFOLLwsbind PORTFOLLwsdi getStocks.wsdi Sc Sc		 Palette Palette Component Reference Service Wire/Promote Coal Coal Coal Cosl Cosl
	Properties Prosenties Problems	
	Interface Bindings Add Na Callback Callback Bindings Uri Performance	Name and Identity ame: MyStockQuoteBinding i: WSDL Element Use Generated WSDL Element Type: Element Name:
: 0*		WSDL Namespace:



Enterprise Service Tools -	MyPortFolio	Project/MyPo	rtFolio.compo	site_diagr	am - IBM Ratio	nal Deve 🔳 🗖 🔀
<u>F</u> ile <u>E</u> dit <u>D</u> iagram <u>N</u> avigate Se <u>a</u> rch <u>P</u> r	oject <u>R</u> un <u>W</u> ine	dow <u>H</u> elp				
📸 • 🔛 🗁 🗛 • 🥖 🛷 • -	h - 원 - 🌾 <	⊳ - ⇒ -				🖹 📑 Enterprise
i Tahoma 💙 8 💙 🛚	I I A ≤ Ø	• 🥒 • 🔶 • 🗍 🖫	🔊 • 애 • 🔓 •	T MX	- 100%	z/OS Projects
🔄 EST Project 🛛 😤 Navigator 🗖 🗖	Welcome to z	/OS Proje 🛛 🚺 W	elcome to EST	MyPortFolio.co	omposite 🛛 🗖 🗖	📕 Remote Sys 🙁 🔽 🗖
		I		~	😳 Palette 🛛 👂	~
🖃 😂 MyPortFolioProject 📃					▶ €. €. - -	
🖻 🚰 SCA Content					2 Component	
Contributions					Reference	Lev Connection
http://temp					Service	🗉 📑 Local
🖻 🌄 MyPortFolio	MyPortfolio	comp	MyStockQuoteCo		⁰L₀ Wire/Promote	E In the system Branch
	· · · · · · · · · · · · · · · · · · ·	·				z/OS UNIX Files
PORTFOLL.cbl						🗉 🔓 MVS Files
PORTFOLI.componentType						🗔 TSO Command:
PORTFOLI.log						🗈 🐻 JES
PORTFOLI.wsbind						
getStocks.wsdl	<			>		<
🗈 🗁 src	Properties X	🔪 🧟 Tasks) 💦 Pr	oblems			
			PortfolioService			
🗄 Outline 🖾 🛛 🛱 💣 🗖 🗖		Interface	or cronoo crimico			
	Core Interface	Interface type:	WSDL			
	Callback					
Negertalizaria	Binding	Interface:	file://target.files#ws	sdl.interface(PO	RTFOLIPort)	Browse
	Appearance	Callback Interface:				Browse
i □ *			i.		1	RTP ADM server







File Edit Navigate Search P							
The East Havigate Segren I	roject <u>R</u> un <u>W</u> indov	ow <u>H</u> elp					
i 📬 • 🔛 👜 i 💁 • i 🥖	🖉 • 🛛 😫 • 🤯	• 🍫 🔶 • 🔅	⇒ -		🗈 📑 Ent	erprise	i »
🕞 MyPortFolio.composite_di	iagram 📄 MyPor	rtFolio.composit	te 🕱				
<pre>8</pre>	" encoding="UTF http://www.osoa "MyPortfolioCom itation.gigg_cal" "MyPortfolioSer gdl_interface=" name="MyPortfol: we="MyStockQuoteCom n.java_class="m "MyStockQuoteSer gdl_interface=" name="MyStockQuoteSer	<pre>-8"?>org/xmlns/ wponent"> .lType="comm vice"> comm vice"> comm vice"> comm vice" file://targ loBinding"</pre>	<pre>'sca/1.0" xmlns:c marea" component: get.files#wsdl.in cics:bindfile="! arget="MyStockQuo eImpl.class"/> puri.org/GetStock '/></pre>	YpePath="PORTFOLI. Aterface (PORTFOLIPo PORTFOLI. <u>wsbind</u> "/> DteComponent/MyStoc	SkQuoteService"/> Face(NewWSDLFile)"/>		
							1



© Enterprise Service Tools - MyPo	ortFolioProject/MyPortFolio.composite_diagram - IBM Rational Deve 🔲 🗖 🔀
File Edit Diagram Navigate Search Project	SCA for CICS - Deploy Bundle
i 📫 • 🔛 🗁 i 💁 • 1 🏄 i 🖋 • 1 🖢 • i Tahoma 🛛 ♀ ♀ 😵 B I	
SEST Project 🛛 😤 Navigator 🗖 🕼 V	SCA Deployment Options
	Select your deployment options
⊨	
Import 🛛 🕨	Bundle name: MyPortFolioProject
🖹 😫 🚺 Deploy SCA Bundle	Remote Deployment
💱 Open Welcome Page	z/OS Unix connection RTP system
PC Team	Bundle location /u/cindy/bundles Browse
PC Comp <u>a</u> re With ▶	Delete contents of remote folder prior to deployment
PO Properties	Unpack contents of bundle archive
getStocks.wsdl	CICS Resource Definitions
🗴 🥮 src 🗄 🛋 JRE System Library [jdk] 💽 🔽	Save resource definition to manifest file
	CICS System/Region: NQA17C05
E Outline 🛛 🖼 📑 🗖 🗖	Bundle location /u/cindy/bundles
	✓ Install bundle resource at the end of deployment O Deployment of the bundle has completed □ □ ×
	Deployment of the bundle has completed
	Reason:
	See Details for more information
··· •	OK << <u>Details</u>
	Successfully created bundle archive: MyPortFolioProject.jar

🜼 CICS SM - MyPortFolioProject/MyPortFolio.composite_diagram - IBM Rational Developer for System z 🔲 🗖 🔀					
Eile Edit <u>D</u> iagram <u>N</u> avigate Se <u>a</u> rch <u>P</u> roject Operations <u>R</u> un <u>W</u> indow <u>H</u> elp					
『 ・ 風 ☆ ! ▲ · ! ▲ ! ▲ · ② · ③ · ⑤ · ⑤ · ○ · ○ · □ Tahoma					
🚸 CICSplex Explorer 🛛 🤣 🖱 🗖	🗐 Regions 🕒 Files 🛸 Transa	actions 🎎 Bundles 🛛 🗖 🗖	MyPortFolio.composit 🛛 🔭 🗖		
Server: NQA17C05	CNX0211I Scope: NQA17C05. Re	esource: 🚕 🛛 🗶 🏹	A Stalette		
🖃 💠 NQA17C05 (1/1)	Name	Bundledir			
📾 NQA17C05 (NQA17C05)	MYPORTFO	/u/cindy/bundles/	1.0		
			2 Component		
			Reference		
			- Service		
			MyPortfolioComp 2 % Wire/Promote		
	Properties 🛛	🗉 🎝 💀 🗸 🗖 🗋			
	Property	Value	📕 Remote Systems 🕱 📃 🗖		
	🖃 Basic				
	Basdefinever	N/A	RTP system		
	Basescope	N/A	z/OS UNIX Files		
	Bundledir	/u/cindy/bundles/	■ → My Home		
	Changeagent	N/A	in → bf		
	Changeagrel	N/A	e 🔁 bundles		
	Changetime	N/A	B-B META-INF		
	Changeusrid Definesource	N/A			
	Definesource	N/A N/A	getStocks.wsdl		
	Installagent	N/A N/A	MyPortFolio.composite		
	Installtime	N/A N/A			
	Installusrid	N/A	😨 📓 MyPortFolioProject.jar		
	Name	MYPORTFO	PORTFOLI.cbl		
	Region	NQA17C05	PORTFOLL componentType		
	Status	X DISABLED	PORTFOLI.log		
			PORTFOLI.wsbind		
	<		PORTFOLLwsdl		
i ∎° · NQA17C05					

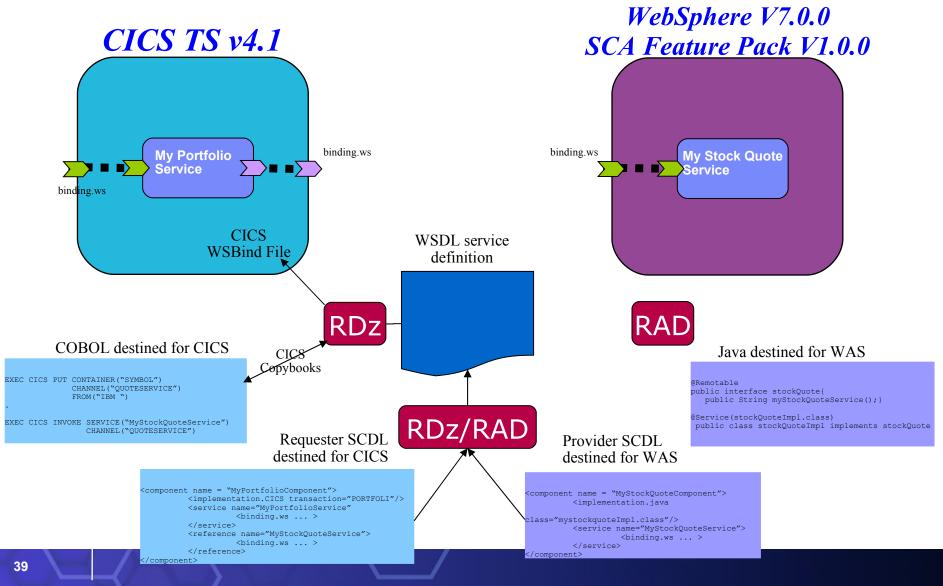


Agenda

- Quick SCA in WAS recap
- Introduction to SCA support in CICS TS v4.1
- The Portfolio Scenario
- Defining and implementing SCA components using Rational Developer for System z
- Deploying and running SCA components in CICS TS
- Gaining value from SCA-based approach to architecture
- Summary and Questions



Service Component Architecture – Development Artifacts



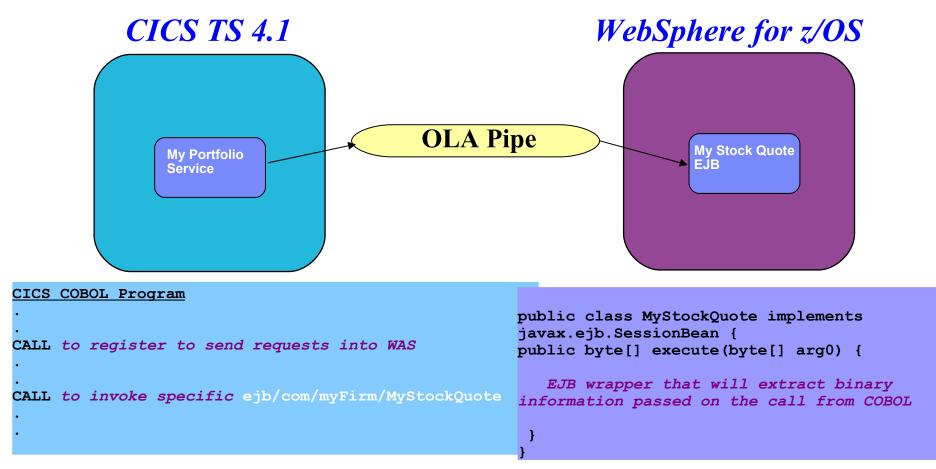


Agenda

- Quick SCA in WAS recap
- Introduction to SCA support in CICS TS v4.1
- The Portfolio Scenario
- Defining and implementing SCA components using Rational Developer for System z
- Deploying and running SCA components in CICS TS
- Gaining value from SCA-based approach to architecture
- Summary and Questions



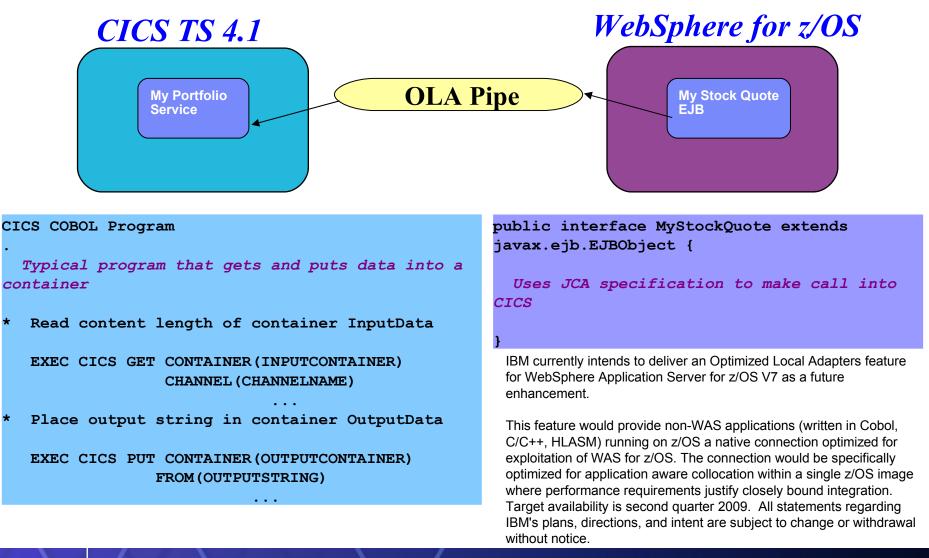
Optimized Local Adapter – Low Level APIs



IBM currently intends to deliver an Optimized Local Adapters feature for WebSphere Application Server for z/OS V7 as a future enhancement. This feature would provide non-WAS applications (written in Cobol, C/C++, HLASM) running on z/OS a native connection optimized for exploitation of WAS for z/OS. The connection would be specifically optimized for application aware collocation within a single z/OS image where performance requirements justify closely bound integration. Target availability is second quarter 2009. All statements regarding IBM's plans, directions, and intent are subject to change or withdrawal without notice.

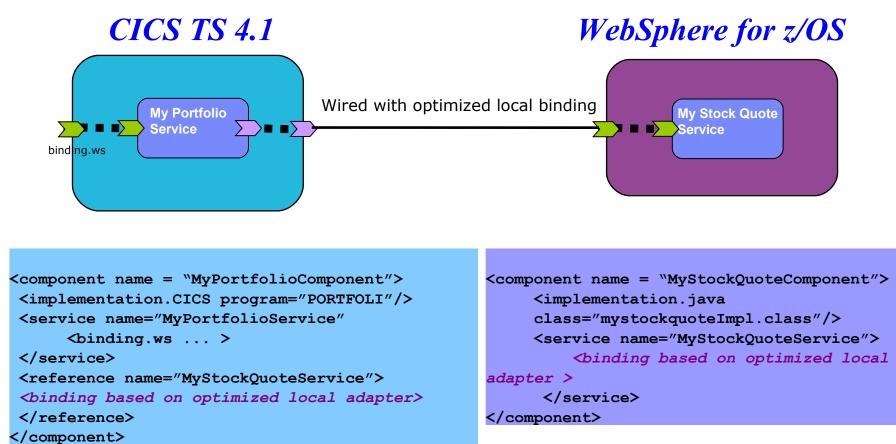


Optimized Local Adapter – Low Level APIs





Service Component Architecture



IBM currently has no plans to deliver an SCA binding based on the optimized local adapter. This page is a depiction of how the technology it does plan to deliver could be combined and/or used within the Service Component Architecture as currently defined. All statements regarding IBM's plans, directions, and intent are subject to change or withdrawal without notice.



Agenda

- Quick SCA in WAS recap
- Introduction to SCA support in CICS TS v4.1
- Defining and implementing SCA components using Rational Developer for System z
- Deploying and running SCA components in CICS TS
- Gaining value from SCA-based approach to architecture
- Summary and Questions

References

- CICS Transaction Server v4.1
 - Open Beta: http://www.ibm.com/software/htp/cics/tserver/v41/openbeta/
- Rational Developer for System z
 - http://www.ibm.com/software/awdtools/rdz/
- Open Service Oriented Architecture Web site for SCA v1.0 Specifications
 - http://www.osoa.org/
- OASIS Open CSA Web site for SCA v1.x
 - http://www.oasis-opencsa.org/sca
- Apache Tuscany Web site
 - http://incubator.apache.org/tuscany/
- SCA feature pack support website
 - http://www.ibm.com/support/docview.wss?
 rs=180&context=SSEQTP&dc=DB600&uid=swg21329175
- DeveloperWorks
 - http://www.ibm.com/developerworks/websphere





WebSphere



software