



IBM Software Group

IBM CICS® Transaction Server for z/OS™ V3.1

Technical Overview

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Refer to IBM Software Announcement 204-285

ibm.com/cics



Agenda

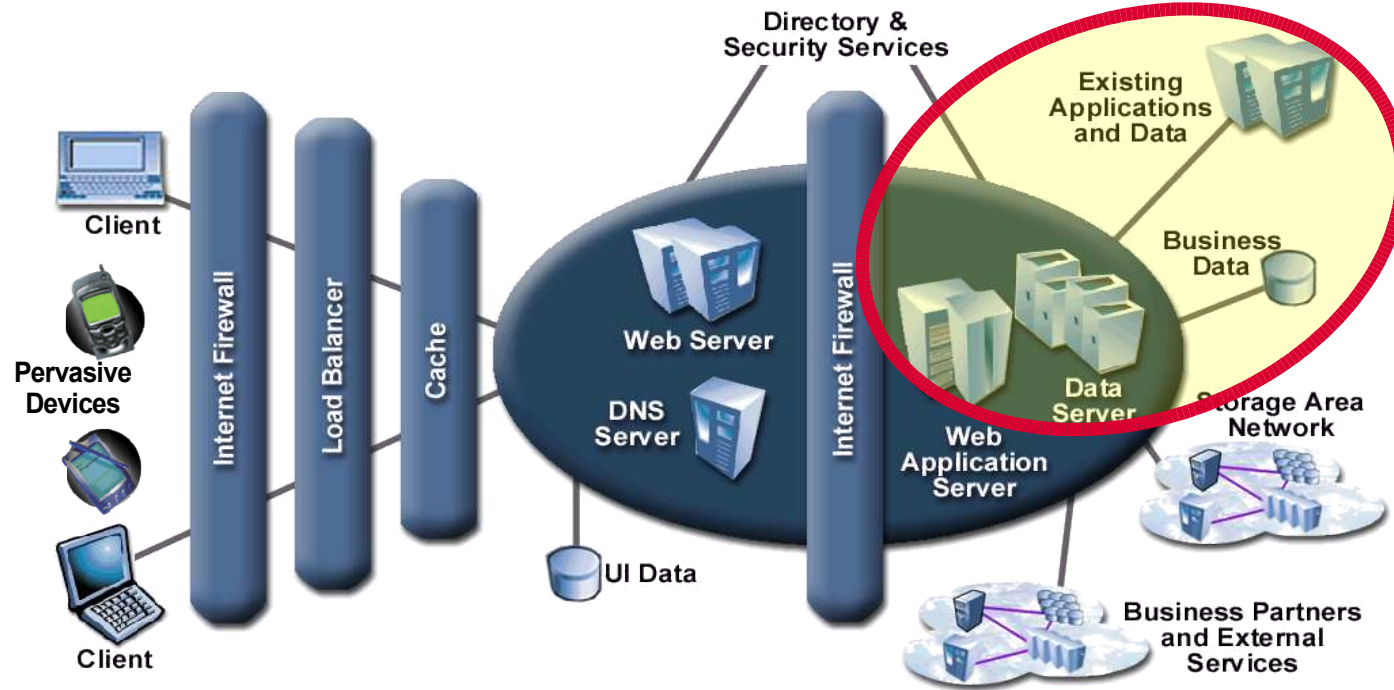
- **CICS Transaction Server V3**
 - Strategy and themes

- **CICS TS V3.1**
 - CICS Integration
 - Application Transformation
 - Enterprise Management
 - Packaging and migration considerations

- **Summary**

CICS today...

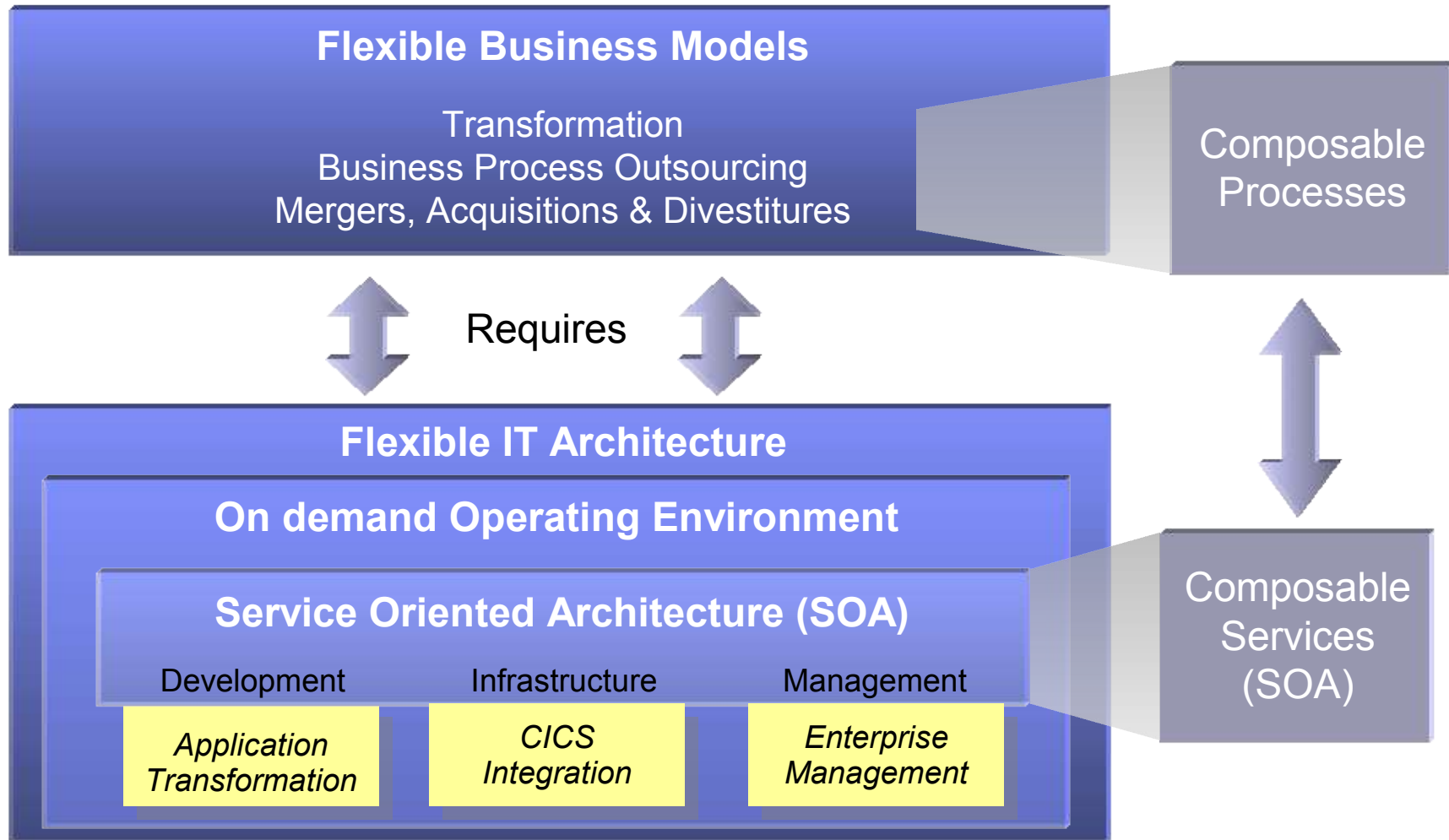
CICS Transaction Server



Over 35 years and \$1 Trillion invested in Applications ... IDC
 Over \$1 trillion processed/day
 Over 30 billion transactions/day
 Most people use CICS

Combining the reliability and security of CICS software with the flexibility of e-business technology

Service Oriented Architecture at the Core of A Flexible IT Environment Supporting Today's On Demand Businesses



CICS Transaction Server V3 themes

CICS Integration

Enable the reuse of CICS applications within a flexible On Demand operating environment via standard interfaces and communication protocols.

Application Transformation

Enable the enhancement of existing applications, and construction of new applications, using contemporary programming languages, constructs and tools

Enterprise Management

Enable the effective management of large runtime configurations via modern user interfaces

CICS TS V3.1

■ CICS Integration

- Web services and the CICS Web services assistant
- HTTP/1.1 including outbound API and URIMAPs
- Transport Layer Security, 256-bit encryption, and improved SSL V3

■ Application Transformation

- Containers and channels
- Language support enhancements
- Architectural patterns
- Information Center

■ Enterprise Management

- Open Transaction Environment for all thread safe applications
- XPLink for C & C++ programs
- Thread safe WEB commands
- CPSM Web User Interface including user favourites, group profiles, and 2 column views
- Batchrep callable via the Web User Interface

Web services capabilities extend CICS applications directly to a Service Oriented Architecture

- **A CICS application can now be a Web service provider and requester**
- **Rich set of Web services standards supported**
 1. SOAP 1.1 and 1.2 to send and receive Web services messages
 2. WS-I Basic Profile 1.0a for interoperability with between providers and requesters using SOAP 1.1
 3. WS-Coordination extensible coordination framework, and specific coordination of AtomicTransactions
 4. WS-AtomicTransaction for transaction coordination
 5. WS-Security for authentication and encryption of all or part of a message
 - SOAP Message Security
 - Username Token Profile 1.0
 - X.509 Certificate Token Profile
- **Both the HTTP/1.1 and WebSphereMQ network layers supported**
 - For flexible deployment options dependant on application and IT requirements
 - CICS applications acting as providers or requesters are agnostic to the transport mechanism used
- **Easy configuration and systems management for Web services**
 - New CICS resources and configuration files
 - URIMAP, PIPELINE, WEBSERVICE, WSBIND
 - Uses enhanced CICS services for traditional - monitoring, statistics and problem determination
- **Guidance provided to assist migration from the SOAP for CICS Feature to use these new capabilities**

Web services development capabilities

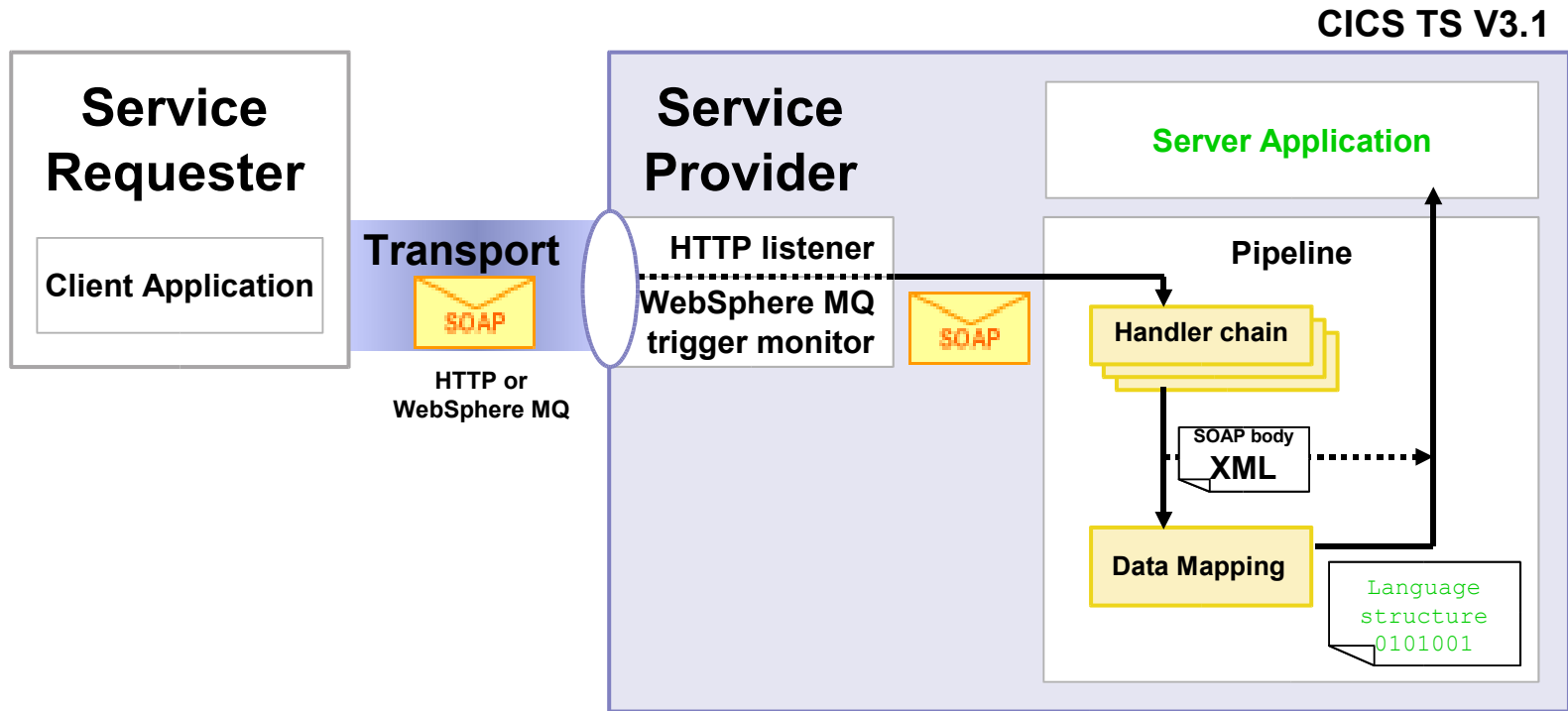
- **Mix rapid deployment and flexibility**
 - Underpinned by one or more pipelines and message handler programs

- **Rapid deployment using the CICS Web services assistant**
 - z/OS batch tool to produce WSDL, language structure copybooks, and WSBIND files
 - WSBIND used by CICS at runtime to convert between XML and language structures
 - Supports COBOL, PL/I, C and C++
 - Scenario 1 - generate a language structure and a WSBIND from a provided WSDL
 - A “top down” approach to implement an existing Web service or invoke a Web service
 - Scenario 2 - generate a WSDL and a WSBIND from a provided language structure
 - A “bottom-up” approach to expose an existing CICS application as a Web service
 - WSBIND used for data mapping support automatically by CICS at runtime
 - Converts between SOAP messages (typically XML document literal) and language structures

- **Flexibility using WSED**
 - Scenario 3 – visual mapping between a given WSDL and more complex language structures

- **New CICS commands to invoke a Web service and manage SOAP faults**

CICS as a Web service provider



1. Develop

- WSDL
- or
- Language structure
- Server Application

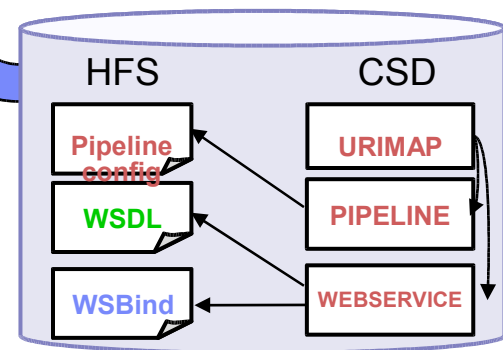
2. Generate

- Language structure
- or
- WSDL
- WSBIND

3. Configure

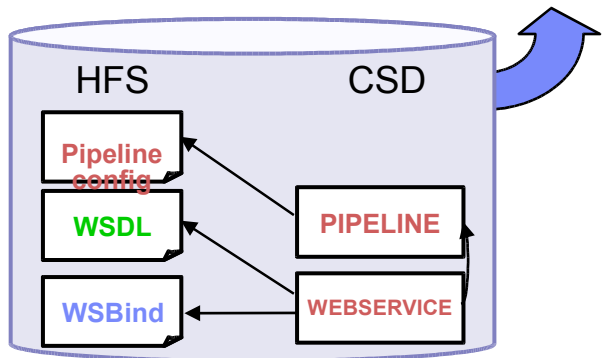
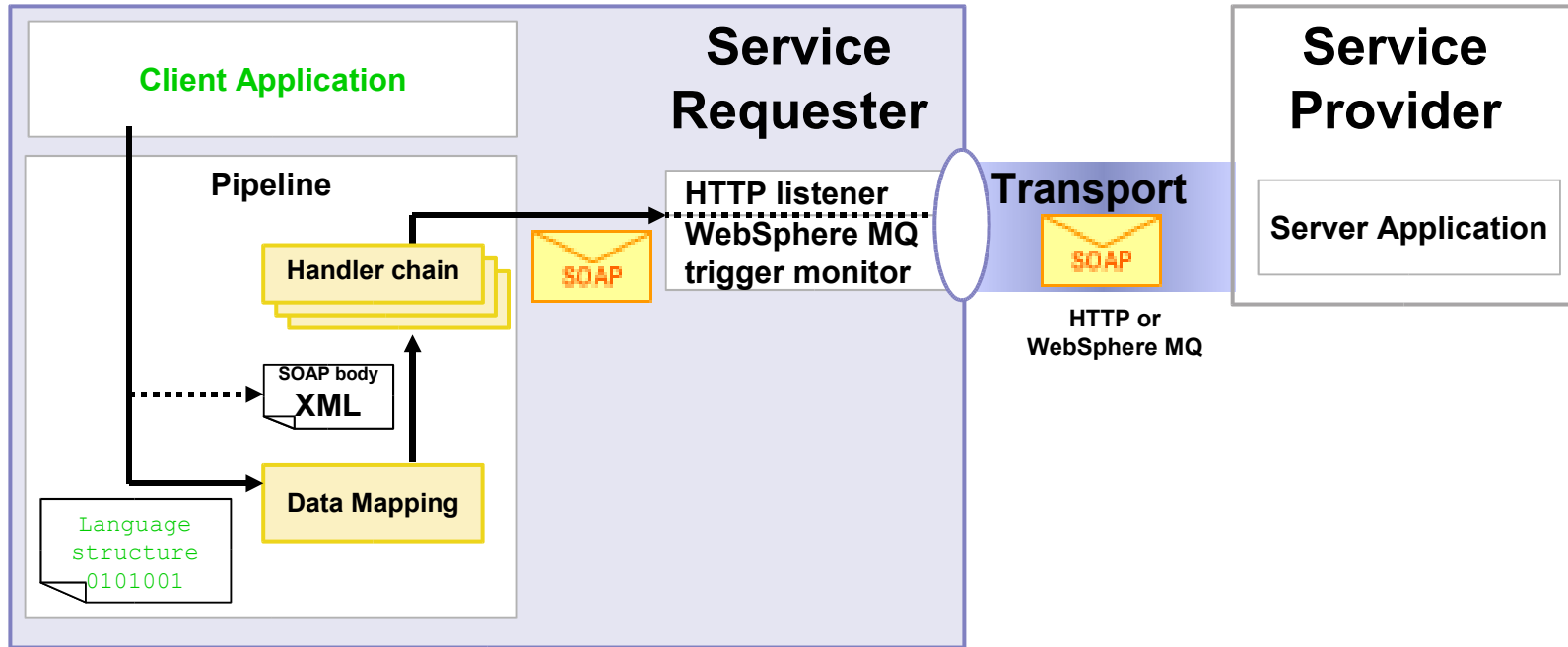
- TCP/IP SERVICE or WebSphereMQ
- URIMAP
- WEBSERVICE
- PIPELINE
- Pipeline configuration

Dynamic install



CICS as a Web service requester

CICS TS V3.1



Dynamic install

1. Develop

- WSDL
- or
- Language structure
- Client Application

2. Generate

- Language structure or WSDL
- WSBIND

3. Configure

- TCPIP SERVICE or WebSphereMQ
- URIMAP
- WEBSERVICE
- PIPELINE
- Pipeline configuration

HTTP listener enhancements

- **Now conditionally compliant with the HTTP/1.1 specification**

- Conditional because is not designed to act as; a proxy, gateway, tunnel, caching server, or browser.
- Persistent connections
- Pipelining
- Chunked transfer-coding
- Automatically creates virtual hosts using URIMAP resource definitions
- Date and time formats

- **Support for HTTP client requests from CICS applications**

- Send an HTTP request EXEC CICS WEB CONVERSE
- Open a session to a remote server EXEC CICS WEB OPEN
- Break down a URL string into component parts including scheme, host, port, path, and query string EXEC CICS WEB PARSE URL
- Close an HTTP session with a remote server EXEC CICS WEB CLOSE
- Convert HTTP RFC time formats to ABSTIME EXEC CICS CONVERTTIME
- Convert ABSTIME to HTTP RFC formats EXEC CICS FORMATTIME
- Obtain information about an HTTP connection EXEC CICS WEB EXTRACT

HTTP listener enhancements

- **New URIMAP resource definition**
 - Specify the URI pattern to enable CICS to match requests to appropriate processing
 - For CICS as a Web service provider
 - Associate a URI for an Web service with a PIPELINE or WEBSERVICE resource
 - For CICS as an HTTP server
 - Replaces and simplifies the function previous provided by the CICS Web support analyzer exit
 - Static response, such as a DOCTEMPLATE or HFS file
 - Dynamic response using an application program using EXEC CICS Web APIs
 - Redirection to another server
 - For a CICS application as an HTTP client
 - Applications should use a URIMAP resource name to avoid hard coding URLs of HTTP server applications
- **Enhanced DOCTEMPLATE resource can now be retrieved from HFS**
- **Improved support for code page conversions**
 - CICS uses the z/OS Support for Unicode™ conversion services
 - Converts character data between UTF-8, UTF-16, ASCII page pages, and EBCDIC codepages
 - Requires a conversion environment to be setup – see the z/OS manual SA22-7649-02
 - Codepage conversions can be specified using:
 - EXEC CICS WEB commands
 - An analyzer program
 - A URIMAP definition

New security capabilities for TCP/IP

- **New support for Transport Layer Security (TLS 1.0)**
- **New cipher suite selection**
 - Support for AES cipher suites (128-bit and 256-bit)
 - Can now specify minimum and maximum encryption levels
- **Performance enhancements**
 - SSL caching support across the Parallel Sysplex
 - Scalability improvements by increasing the number of simultaneous SSL sessions supported
- **Revocation list processing**
 - Certificate Revocation Lists (CRLs) are checked when negotiating with clients
 - New supplied transaction, CCRL, is provided for updating the CRL in an LDAP server
 - EXEC CICS START USERID() now returns USERIDERR for a revoked user or group connection
- **Support for mixed case passwords**

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- Language support enhancements
- Architectural patterns
- Information Center

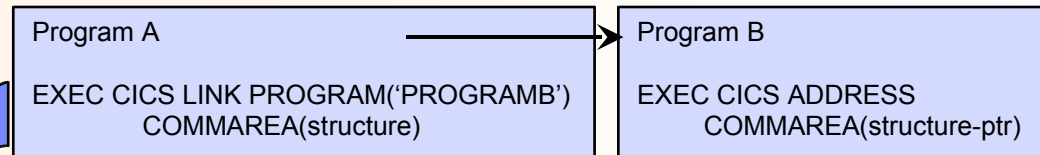
■ Enterprise Management

- Open Transaction Environment for all thread safe applications
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- CPSM Web User Interface including user favourites, group profiles, and 2 column views
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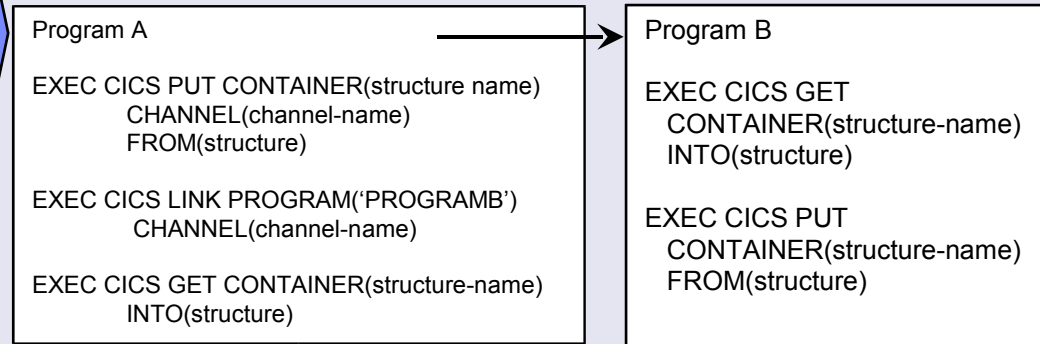
Optimized data exchange between CICS programs with Containers and Channels

- **Offers a more flexible and intuitive alternative to the COMMAREA**
 - By using separate containers for logically different data it will simplify language structures and minimize the impact of changes to the interface
 - For example; customer,account,orders
 - Avoids “overloading”
 - Dynamic creation and discovery by applications
- **Enables large amounts of data to be passed between CICS applications**
 - Not subject to 32KB restriction
- **Optimized and managed by CICS**
- **Requires minimal application changes required to use**

Existing application using a COMMAREA



Application using a container and channel



Optimized data exchange between CICS programs with Containers and Channels

- **A container is a named holder of information**
 - No CICS enforced size limitation - subject to “above the line” storage in the 2GB address space
 - Storage and lifetime managed by CICS
 - Non-persistent by default
 - Can be persistent if used within a controlling BTS process

- **A Channel is a named group of containers**
 - Containers are added to a channel
 - No limit on the number of containers in a channel
 - Channels are passed between CICS applications
 - Program to program using LINK and XCTL commands
 - Transaction to transaction using START and RETURN commands
 - Only one channel can be passed at a time
 - A channel is mutually exclusive with a COMMAREA

- **Supported between CICS regions and within the Web services support**
 - Only modified data is transferred between regions

- **Dynamic data conversion via GET and PUT APIs and transport resource definitions**
 - Uses CICS or z/OS Support for Unicode

Container and channel commands

- **Container commands**
 - PUT CONTAINER
 - GET CONTAINER
 - MOVE CONTAINER
 - DELETE CONTAINER
- **Program transfer commands**
 - LINK PROGRAM
[CHANNEL|COMMAREA]
 - XCTL PROGRAM
[CHANNEL|COMMAREA]
- **Inquiry commands**
 - ASSIGN CHANNEL(data-area)
 - STARTBROWSE CONTAINER
[CHANNEL(data-area)]
 - GETNEXT CONTAINER (data-area)
 - ENDBROWSE CONTAINER
- **Transaction transfer**
 - RETURN TRANSID [CHANNEL|
COMMAREA]
 - START TRANSID [CHANNEL|FROM]
- **New JCICS classes Channel, Container, ContainerIterator provide access to containers and channels for Java programs**

Language support enhancements

- **Support for IBM Software Developer Kit for z/OS, Java 2 Technology Edition, Version 1.4.2**
 - Native Java improvements include:
 - Enhancements to security, XML, networking, and debugging support
 - Numerous fixes and minor improvements

- **Support for LE Assembler programs**
 - Application programs with LE MAIN
 - Not for Global or Task Related User Exits
 - New translator option LEASM
 - DFHEIENT and DFHEIRET will generate appropriate LE calls
 - CEEENTY and CEETERM
 - High Level Assembler for MVS & VM & VSE Release 4+
 - Allows for use of LE debugger

Architectural patterns

- **New CICS example application**
 - Encompass “Best Practices”
 - Separation of presentation, business and data access logic
 - Use of Channels and COMMAREAs
 - Catalog and purchase order application
 - Supplied compiled and ready to be installed
 - Written in COBOL and using VSAM data files
 - Used to illustrate end-to-end scenarios
 - Demonstrate CICS Web services using SOAP over HTTP

CICS Information Center

Move to the Eclipse framework reflects strategic direction for delivering IBM documentation

- **New search engine**
- **Consistent look and feel**
- **Integration with other product information**
- **Customizable – add your own information**
- **Navigation improvements**
- **Available on the IBM Web site, installable on your workstation, or servers;**
 - Windows 2000 Server, Advanced Server, Professional (32-bit)
 - Windows XP Professional (32-bit)
 - Linux RedHat Enterprise 3.0 (AS), 32-bit
 - Linux SuSE Enterprise 8 and 9, 32-bit
 - AIX V5.2 and V5.3, 32-bit

CICS Information Center navigation improvements

■ What's New

- Organised by major functional area
- Available from the navigation and welcome page
- Integrated linking – no longer standalone

“contains everything you need to know about new functions”

■ Learning paths

- Available from the navigation
- Covers new functions
- CPSM WUI & Channels

“a sequence of topics that help a user learn about a new area of the product”

■ Information roadmaps

- Function based - CPSM, Java and Web services
- Available from the navigation and welcome page
- Overview section with links to information center topics and web resources

“a topic that provides a set of comprehensive links to information from a variety of sources”

■ Troubleshooting and support

- Web search to find online support information
- Getting fixes and contacting IBM support
- Technotes

“a section that includes search page for querying online support documents and selection of technotes”

CICS TS V3.1

- **CICS Integration**

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- **Application Transformation**

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- **Enterprise Management**

- Open Transaction Environment for all thread safe applications
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Open Transaction Environment (OTE) delivering improved performance for core business logic applications

- **OPENAPI program support**
 - For COBOL, PL/I, Assembler, C, and C++ programs not compiled with XPLink
 - Programs must be reentrant and thread safe
 - Programs will run on new L8 and L9 TCBs

- **C and C++ programs can be compiled with XPLINK option**
 - Higher performance subroutine linkage and guard pages for stack extension
 - Programs must be reentrant and thread safe
 - XPLink programs will start and run on new X8 and X9 TCBs

- **OTE exploitation by CICS SSL connection management**
 - New SP mode TCB
 - Reduces system storage requirements
 - Existing S8 TCBs
 - Now only allocated for the duration of the SSL requests
 - Provides for increased number of simultaneous SSL sessions

- **EXEC CICS WEB commands are now thread safe**

CPSM Web User Interface is easier to use and feature rich

- **Improved screens**
 - Less white space
 - Multi-column details
 - Collapsible filters
- **User favourites + Group profiles**
- **Result set warning count**
- **Filter confirmation**
- **Dynamic selection lists**
- **Improved BAS admin views**
- **Full support for new CICS resource types**
- **Batchrep access enhancements**

Collapsible Filters

Ability to add a view to favourites

Reduction in white space

Improved visual presentation

Favourite views

User Profiles

Selection lists

Record	CICS system name	Task ID	Transaction ID	Dispatch status	User ID	Principal facility	VTAM LU name	Task priority	Transaction class	Time task has been suspended
1	IYCQSQ22	0000024	CONL	RUNNING	CTSQ01R			255	DFHTCL00	0:00:00
2	IYCQSQ22	0000026	COIO	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
3	IYCQSQ22	0000027	COIE	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:13
4	IYCQSQ22	0000032	CKAM	SUSPENDED	CTSQ01R			255	DFHTCL00	4:08:02
5	IYCQSQ22	0000033	CKTI	SUSPENDED	CTSQ01R			1	DFHTCL00	4:08:02
6	IYCQSQ22	0000025	CONL	RUNNING	CTSQ01R			255	DFHTCL00	0:00:00
7	IYCQSQ22	0000026	COIO	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
8	IYCQSQ22	0000027	COIE	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
9	IYCQSQ23	0000032	CKAM	SUSPENDED	CTSQ01R			255	DFHTCL00	4:08:02
10	IYCQSQ23	0000033	CKTI	SUSPENDED	CTSQ01R			1	DFHTCL00	4:08:02
11	IYCQSQ25	0000022	CONL	RUNNING	CTSQ01R			255	DFHTCL00	0:00:00
12	IYCQSQ25	0000026	COIO	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
13	IYCQSQ25	0000027	COIE	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
14	IYCQSQ25	0000289	CEDA	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
15	IYCQSQ25	0000022	CONL	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
16	IYCQST07	0000025	COIE	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
17	IYCQST07	0032860	COIO	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
18	IYCQST17	0000025	CONL	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
19	IYCQST17	0000028	COIE	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
20	IYCQST17	0000096	COIO	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
21	IYCQSWW1	0000022	CONL	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
22	IYCQSWW1	0000030	COVG	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
23	IYCQSWW1	0000030	COVG	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
24	IYCQSWW1	0000030	COVG	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00
25	IYCQSWW1	0000030	COVG	SUSPENDED	CTSQ01R			255	DFHTCL00	0:00:00

Resource selection

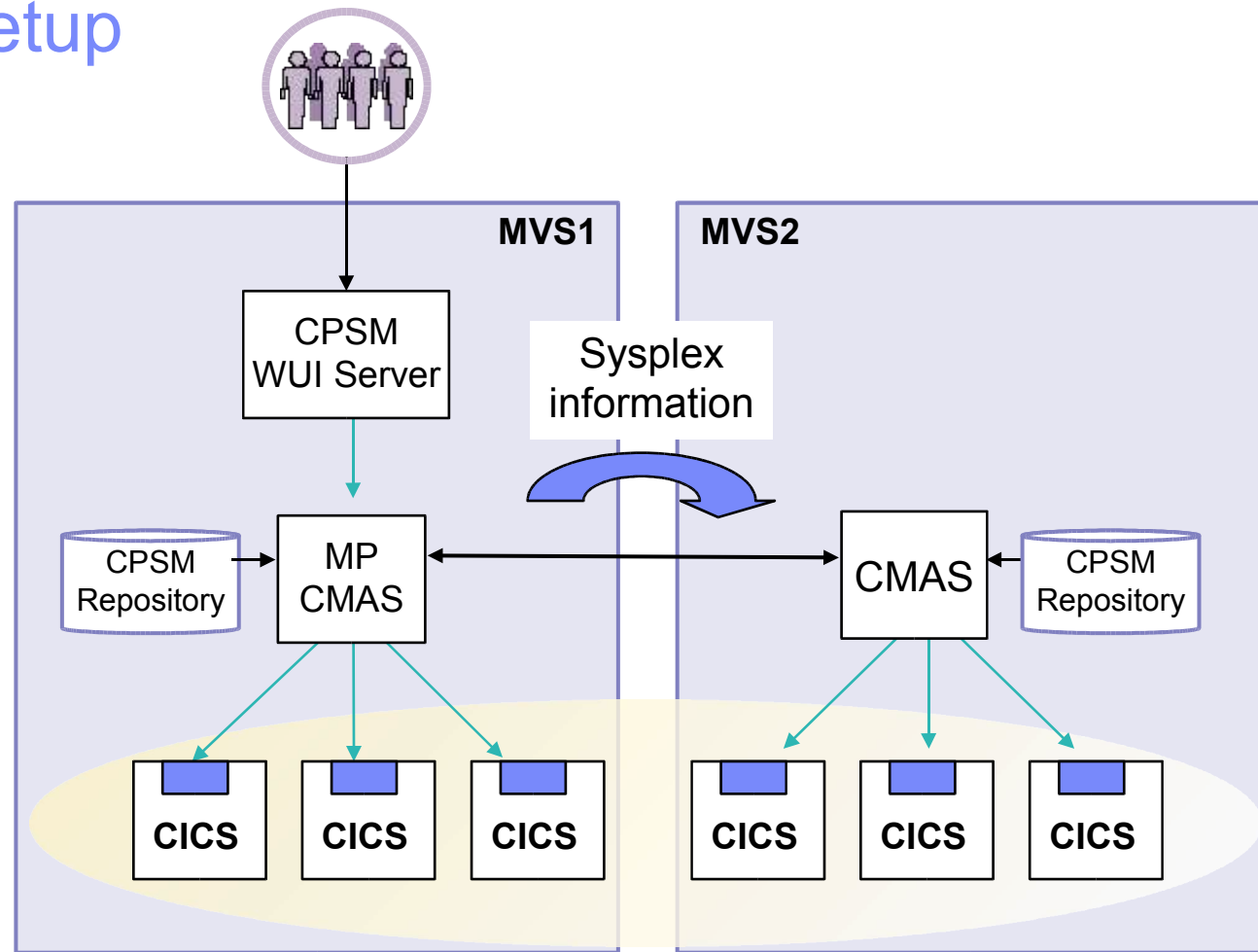
Select a value from the list below and click 'OK'.

Resources matching key: _____

Select	Resource name	Resource description
<input type="radio"/>	ADCALL	'All Andy Clifton's CICSes'
<input type="radio"/>	ADCAOR	'Andy Clifton's AORs'
<input type="radio"/>	ADCTOR	'Andy Clifton's TORs'
<input type="radio"/>	BATCHBAK	Back level Batchrep tests IPN

CICSplex SM Setup

- ▶ Install and activate CMAS
- ▶ Configure MP CMAS
 - ▶ Define CICSplex
 - ▶ Regions in CICSplex
 - ▶ WUI Server region
 - ▶ Link to other CMAS
 - ▶ Other CMAS involved
- ▶ Configure other CMAS
 - ▶ Link to other CMAS
- ▶ Install agent code
- ▶ Install and activate WUI Server
 - ▶ Auto-mport of WUI views



Packaging and migration considerations

Discontinued functions removed from CICS TS V3.1

- **OS/VS COBOL**
 - Programs using this level of COBOL will abend APCE
- **1 byte console ids**
- **High Performance Java (HPJ)**
- **ECI base classes (ECIREQUEST)**
 - Recommended replacement is the CCI Connector for CICS TS
- **Common Connector Framework (CCF)**
 - Recommended replacement is the CCI Connector for CICS TS
- **TCAM TOR**
 - Network support
- **CPSM remote MAS agent for Windows**
- **The detector and reporter components of the CICS Transaction Affinities utility have been removed from CICS TS and added to IBM CICS Interdependency Analyzer for z/OS V1.3**

CICS TS V3.1 packaging



■ CICS TS V3.1 product elements

- CICS Transaction Server
- CICSplex System Manager
- Information Center
- REXX Development and runtime for CICS
- CICS Application Migration Aid

■ WebSphere Studio Enterprise Developer V5.1 (WSED) promotion

- Integrated development environment for CICS and WebSphere
 - COBOL, PL/I, Java and J2EE development
 - z/OS file system integration
- One unrestricted license. No service entitlement

Planning and migration

- **Operating System required**
 - z/OS Version 1 Release 4 (5694-A01), or later

- **Latest Java environment supported**
 - IBM SDK for z/OS Java 2 Technology Edition, V1.4.2
 - Required for the CICS Web services assistant
 - Can be used for CICS programs written in Java, and Enterprise JavaBeans in CICS

- **Latest language compilers supported**
 - IBM Enterprise COBOL for z/OS and OS/390 V3 (5655-G53)
 - IBM Enterprise PL/I for z/OS and OS/390 V3 (5655-H31)
 - z/OS C/C++ (component of 5694-A01)

- **See the Announcement Letter for the full list of older compilers supported and other software and hardware pre-requisites**

Planning and migration

- **CICS TS V3.1 is applicable to all CICS customers**
 - CICS TS V1.3 service will be discontinued in April 2006

- **SOAP for CICS Feature coexistence supported for migration to base CICS TS V3.1 function**
 - Modify your message adapters to use the new interfaces.
 - Review your use of containers. The SOAP for CICS feature uses BTS containers; the Web services support in CICS TS V3.1 does not use BTS. In addition, the containers used in the new Web services support, and those used in the feature have different names.
 - Replace function in user-written handlers with function provided in this release:

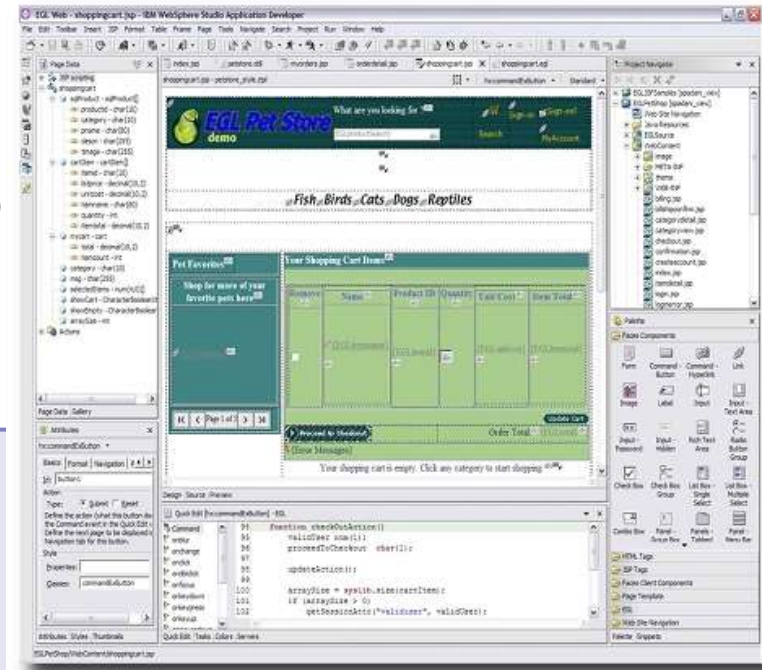
- **Statement of direction to remove the following**
 - CICSplex SM TSO End User Interface in the next release
 - In a future release
 - ONC RPC feature
 - CICS Web Interface COMMAREA interfaces
 - CICS Web Server plug-in

WebSphere Studio Enterprise Developer (WSED)

What is WSED?

Brings the power of modern application architectures and rapid application development and robust team support, to diverse enterprise IT organizations

- Intuitive, visual construction based on open standards (JSF and Struts)
- Broad SOA support through Web services and JCA linking visual environments and user sessions to CICS QOS
- Easy to learn, COBOL like language for rapid UI and Business dev.
- Facilities to develop, debug and deploy Java, COBOL, & PL/I applications and services



Statement of Direction - What's Coming

CICS V3 exploitation - Subsystem support latest – CICS, WAS, DB2

- Connectivity enhancements**
 - WSDL automation from existing processing
 - Support for new CICS WS run timemarshallers
 - XML based COBOL adapter enhancements
 - JCA connectors supporting latest CTG
- Modern Architectural enhancements**
 - Service Flow Modeler support (Preview)
 - Leverages support for channels
- Traditional support for:**
 - EGL support for VG based Web Transactions
 - BMS Editor
- Integration with other IBM application lifecycle products**
- Eclipse V3 exploitation**

WSED Benefits

Single tool for all application transformation

- Increase developer productivity
- Leverage existing processing by enabling legacy assets to be used in SOA's
- Integrate with lifecycle
- Extend skill sets across the organization
 - Enterprise Generation Language limits need for Java or traditional expertise

Comprehensive set of CICS focused tools and connectors

■ Application Transformation

- CICS VSAM Transparency for z/OS V1.1
- CICS Business Event Publisher for MQSeries V1.2
- CICS Interdependency Analyzer for z/OS V1.3

■ Subsystem Management

- CICS Batch Application Control for z/OS V1.1
- CICS Performance Analyzer for z/OS V1.3
- Tivoli OMEGAMON XE for CICS V1.0 (3Q'2005)
- CICS Performance Monitor for z/OS V1.2
- CICS VSAM Recovery for z/OS V3.3
- CICS VSAM Copy for z/OS V1.1
- IBM Session Manager for z/OS V1.2
- CICS Online Transmission Time Optimizer for z/OS V1.1

■ CICS Connectors

- CICS Transaction Gateway V6.0
- CICS Universal Client V6.0
- MQSeries Integrator Agent for CICS V1.1

■ Application Development tools

- IBM Application Monitor for z/OS V2
- IBM Fault Analyzer for z/OS V5.1
- IBM Debug Tool for z/OS V5.1
- IBM WebSphere Studio Enterprise Developer V5.1.2

■ Statement of direction to release a CICS resource definition management product in 1H05

Summary - CICS Transaction Server V3.1

- **CICS TS and WebSphere Application Server are IBM's strategic middleware products that together support practically any mission critical solution**
 - Interoperate well using Web services and connectors to support end-to-end on demand systems
 - Complement z/OS qualities of service such as high availability, scalability, low cost per transaction, and excellent security
- **CICS TS provides the base for the majority of mainframe applications today**
 - An efficient and optimized runtime for the reuse and transformation of existing CICS applications
 - Provides easy to use services that exploit new technologies by building on CICS skills
 - First class support and management of mixed application types and workloads
- **CICS TS V3.1 will be generally available 25 March 2005**

Increased ease of CICS Integration

- **Web services capabilities to extend CICS applications to a Services Oriented Architecture**
- **Support for industry-leading SSL and TLS protocols**

Enhanced Application Transformation

- **Ability to leverage single development tool for application transformation and integration**
- **Optimized CICS data exchange capabilities**

Improved performance & Enterprise Management

- **Improved workload throughput**
- **Enhanced C and C++ programs performance**
- **Extension of the CICSplex SM Web User Interface**

For more information

- **IBM CICS Transaction Server for z/OS V3.1**
 - IBM Software Announcement 204-285, Transaction Servers & Tools e-newsletter, education, and services
ibm.com/cics
 - Release Guide, Migration Guide, Books and Manuals, Brochures, Demos, and Technical documents
ibm.com/cics/library/

- **IBM CICS Tools**
ibm.com/cics/tools

- **IBM Websphere Studio Enterprise Developer**
ibm.com/software/awdtools/studioenterprisedev/

- **IBM SDK for z/OS, Java 2 Technology Edition V1.4**
ibm.com/servers/eserver/zseries/software/java

- **IBM z/OS**
ibm.com/servers/eserver/zseries/zos

Web services terminology

- **Extensible Markup Language (XML)**
 - A standard for document markup, which uses a generic syntax to mark up data with simple, human-readable tags. The standard is endorsed by the World Wide Web Consortium (W3C).
- **Service provider**
 - The collection of software that provides a Web service.
- **Service provider application**
 - An application that is used in a service provider. Typically, a service provider application provides the business logic component of a service provider.
- **Service requester**
 - The collection of software that is responsible for requesting a Web service from a service provider.
- **Service requester application**
 - An application that is used in a service requester. Typically, a service provider application provides the business logic component of a service requester.
- **SOAP**
 - Formerly an acronym for Simple Object Access Protocol. A lightweight protocol for exchange of information in a decentralized, distributed environment. It is an XML based protocol that consists of three parts:
 - An envelope that defines a framework for describing what is in a message and how to process it.
 - A set of encoding rules for expressing instances of application-defined data types.
 - A convention for representing remote procedure calls and responses.
 - SOAP can be used with other protocols, such as HTTP.
- **SOAP intermediary**
 - A SOAP node that is both a SOAP receiver and a SOAP sender and is targetable from within a SOAP message. It processes the SOAP header blocks targeted at it and acts to forward a SOAP message towards an ultimate SOAP receiver.
- **SOAP node**
 - Processing logic which operates on a SOAP message.
- **UDDI - Universal Description, Discovery and Integration**
 - Universal Description, Discovery and Integration (UDDI) is a specification for distributed Web-based information registries of Web services. UDDI is also a publicly accessible set of implementations of the specification that allow businesses to register information about the Web services they offer so that other businesses can find them.
- **Web service**
 - A software system designed to support interoperable machine-to-machine interaction over a network. It has an interface described in a machine-processable format (specifically, Web Service Description Language, or WSDL).
- **Web service binding file**
 - A file, associated with a WEBSERVICE resource, which contains information that CICS uses to map data between input and output messages, and application data structures.
- **Web service description**
 - An XML document by which a service provider communicates the specifications for invoking a Web service to a service requester. Web service descriptions are written in Web Service Description Language (WSDL).
- **WSDL - Web Service Description Language**
 - An XML application for describing Web services. It is designed to separate the descriptions of the abstract functions offered by a service, and the concrete details of a service, such as how and where that functionality is offered.
- **XML**
 - Extensible Markup Language.
- **XML namespace**
 - A collection of names, identified by a URI reference, which are used in XML documents as element types and attribute names.
- **XML schema**
 - An XML document that describes the structure, and constrains the contents of other XML documents.
- **XML schema definition language**
 - An XML syntax for writing XML schemas, recommended by the World Wide Web Consortium (W3C).

Acknowledgements

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