



CICS Transaction Server V3.2

Continuing to put the S in SOA

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SOA on your terms and our expertise – www.ibm.com/cics

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Agenda

- CICS Transaction Server V3
 - Strategy and themes

- CICS TS V3.2
 - Application Connectivity
 - Application Reuse
 - Service Management
 - Architectural Enhancements

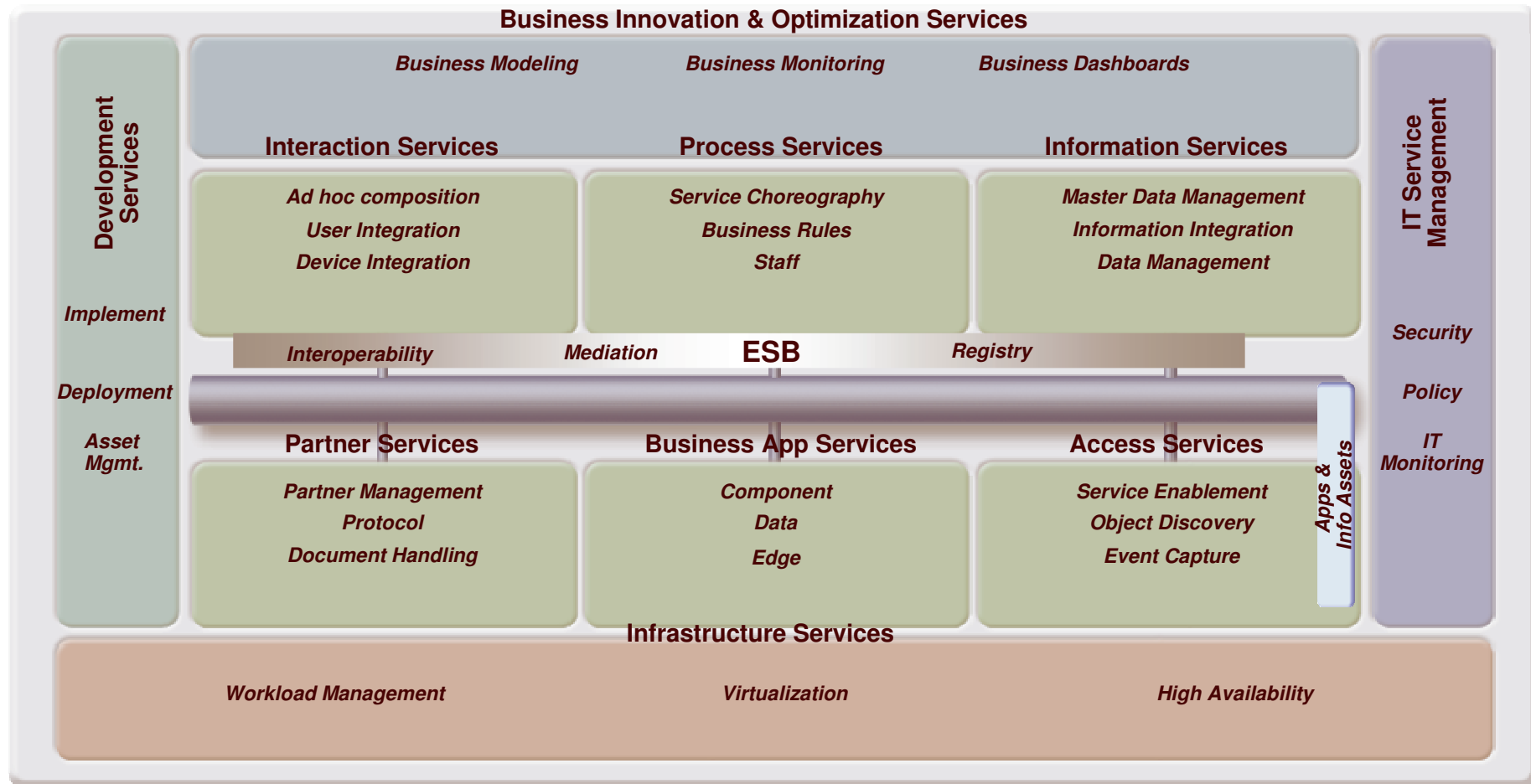
- Summary

IT Challenges

- IT Imperatives
 - Support growth
 - Improve flexibility and responsiveness
 - Keep costs in check
 - Do more with less

- Driving Need to Transform Existing Applications
 - Extend existing applications to new audiences and opportunities
 - Exploit existing resources and skills
 - Improve performance of existing workloads for faster response times and reduced costs
 - Improve system management to enable management of more with less
 - Simplify the development process to reduce application development costs and time to deployment

Service Oriented Architecture at the Core of A Flexible IT Environment *and the transformation of existing applications*



CICS Transaction Server V3 themes

Application Connectivity

Enables extending existing applications beyond their original designs to support integrated business processes via standard APIs and protocols

Application Reuse

Enables the creation of components from existing applications which are more flexible & configurable for use in new applications.

Service Management

Enables effective management of large runtime configurations via modern user interfaces, so that demanding service level and IT governance objectives can be met

Architectural Enhancements

Relieves constraints on processing, configuration or data capacities to allow for continued application and system growth

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CICS TS 3.2 Support of External Standards

- XML
 - Extensible Markup Language Version 1.0
 - XML Encryption Syntax and Processing
 - XML-Signature Syntax and Processing
 - XML-binary Optimized Packaging (XOP)

- Profiles
 - WS-I Simple SOAP Binding Profile Version 1.0
 - WS-I Basic Profile Version 1.1

CICS TS 3.2 Support of External Standards...

- SOAP
 - SOAP 1.1 and 1.2
 - SOAP 1.1 Binding for MTOM 1.0
 - SOAP Message Transmission Optimization Mechanism (MTOM)
 - Web Services Security: SOAP Message Security

- Web Services Atomic Transaction Version 1.0
- Web Services Coordination Version 1.0
- Web Services Trust

- Web Services Description Language Version 1.1
- Web Services Description Language Version 2.0
- WSDL 1.1 Binding Extension for SOAP 1.2

CICS Web Services Assistants

- New options
 - MAPPING-LEVEL={1.0, 1.1, 1.2, 2.0}
 - Level of mapping that the CWSA should use when generating the Web service binding file and Web service description or language structure
 - MINIMUM-RUNTIME-LEVEL={MINIMUM, 1.0, 1.1, 1.2, 2.0, CURRENT}
 - Minimum CICS runtime environment that the Web service binding file can be deployed into
 - CCSID
 - Specifies the CCSID to be used at runtime
 - TRANSACTION
 - In a service provider, specifies the name of an alias TRANID
 - USERID
 - In a service provider, specifies a user ID which can be used by any client

CICS Web Services Assistants...

- Mapping Level (retrofitted to CICS TS v3.1 via the service channel)
 - **1.0**
 - CICS TS 3.1 base level
 - **1.1**
 - Variable length binary data mapped to container
 - XML schema list and union types mapped to character arrays
 - Other character and binary data mappings to containers depending on data length
 - **1.2**
 - Character and binary data of more than 32,767 bytes mapped to a container
 - CHAR-VARYING
 - CHAR-VARYING-LIMIT
 - CHAR-MULTIPLIER
 - DEFAULT-CHAR-MAXLENGTH
 - Support for:
 - Multiple variable length mappings
 - COMP-1 (float)
 - COMP-2 (double)
 - LEVEL 88 toleration
 - Base64binary data mapped to a field in the language structure
 - Improved messages in the event of conversion errors
 - **2.0**
 - Currently the same as level 1.2

Improved Support for Binary Attachments

- In standard SOAP messages:
 - Binary objects are base64 encoded
 - Included in the message body
 - Significantly increases their size
 - Can impact transmission time
- MTOM/XOP provides a solution to this problem
 - The MTOM specification
 - Defines a method for optimizing SOAP messages
 - Separates out binary data
 - Sends it in separate binary attachments using a MIME Multipart/Related message
 - The XOP specification
 - Defines an implementation for optimizing XML messages
 - Uses binary attachments in a packaging format
 - > Includes but is not limited to MIME messages

Improved Support for Binary Attachments...

- CICS implements MTOM/XOP support
 - in both the requester and provider pipelines
 - New MTOM/XOP configuration definitions
- New modes of operation in the pipeline
 - **Direct mode**
 - Binary attachments associated with an MTOM message
 - Passed in containers through the pipeline and handled directly by the application handler
 - Inbound messages
 - > Application handler passes the binary attachments to the application program without needing to perform any data conversion
 - Outbound messages
 - > XOP enabled applications can pass binary attachments from the application program to the pipeline without any data conversion
 - **Compatibility mode**
 - XOP document contained in inbound MTOM messages
 - Converted into a SOAP message
 - Associated binary attachments are converted into base64binary data..
 - Outbound SOAP messages converted into MTOM message after all other processing taken place
 - Each binary object has to be converted from a base64 encoding in the pipeline
- WS-Security and WSDL Validation run with compatibility mode for MTOM/XOP

Support for WSDL 2.0

- WSDL 2.0 is a “Candidate Recommendation” with the W3C
- Mandatory requirements
 - Only the message exchange patterns in-only, in-out, robust in-only, and in-optional-out may be used in the WSDL
 - Only one Endpoint is allowed for each Service
 - There must be at least one Operation
 - Endpoints may only be specified with a URI
 - There must be a SOAP binding
 - The XML schema type must be used

Support for WSDL 2.0...

- CICS Web Service Assistants
 - DFHLS2WS new options
 - WSDL_1.1(<HFS filename location>)
 - WSDL_2.0(<HFS filename location>)
 - SOAPVER(1.1|1.2|ALL)
 - URI parameter may now specify an relative or absolute URI
 - DFHWS2LS new options
 - Automatically determines the WSDL version
 - OPERATION=value
 - Specifies the subset of valid operations that are required for a requestor
 - Used to limit the size of the WSBIND file
 - WSDL-SERVICE=value
 - Specifies the wsdl:Service element to be used when there is more than one Service element for a Binding element

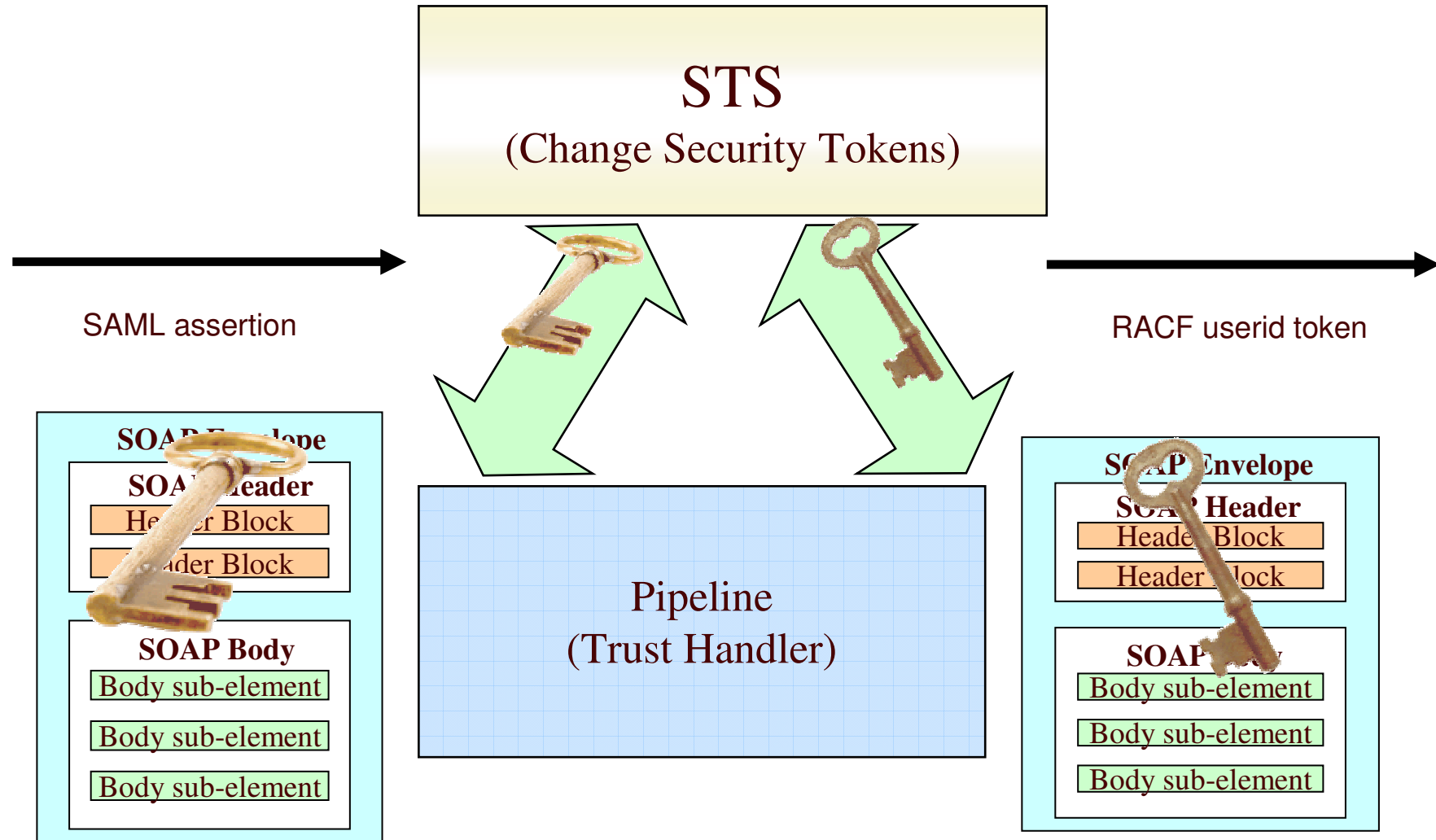
Support for WSDL 2.0...

- Message exchange patterns supported
 - In-Only
 - CICS as the provider
 - CICS will receive a message and send no response
 - CICS as the requester
 - CICS application will send a message and expect no response
 - In-out
 - CICS as the provider
 - CICS will receive a message and respond with a normal response or fault
 - CICS as the requester
 - CICS application will send a message and expect a normal response or fault

Support for WSDL 2.0...

- Message exchange patterns supported...
 - Robust in-only
 - CICS as the provider
 - CICS will receive a message and respond only if an error occurs
 - CICS as the requester
 - CICS application will send a message and expect a response only if an error occurs
 - > New timeout specification on the PIPELINE definition
 - In-optional-out
 - CICS as the provider
 - CICS will receive a message and may respond with
 - > A normal response
 - > An error response
 - > Nothing (no response)
 - CICS as the requester
 - CICS application will send a message and expect:
 - > A normal response
 - > An error response
 - > Nothing (no response)

CICS support of WS-Trust



TCP/IP in CICS - Background

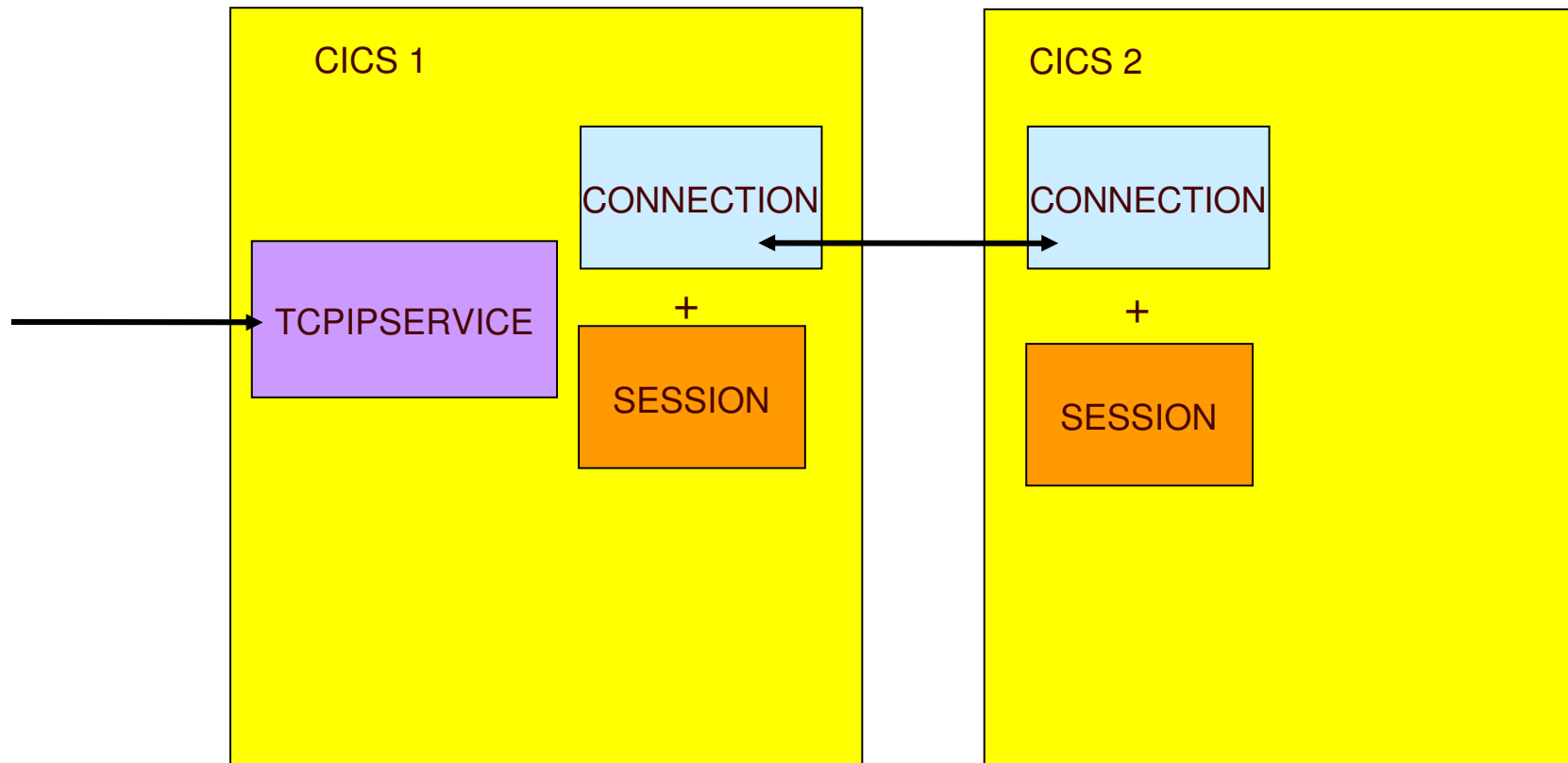
- SNA networking and VTAM have been at the heart of CICS for 30 years
 - No plan to remove existing SNA support
 - No requirement to change the CICS applications to exploit IP

- Customers are asking for TCP/IP alternatives for CICS to CICS connectivity
 - Network convergence
 - SNA skills shortage

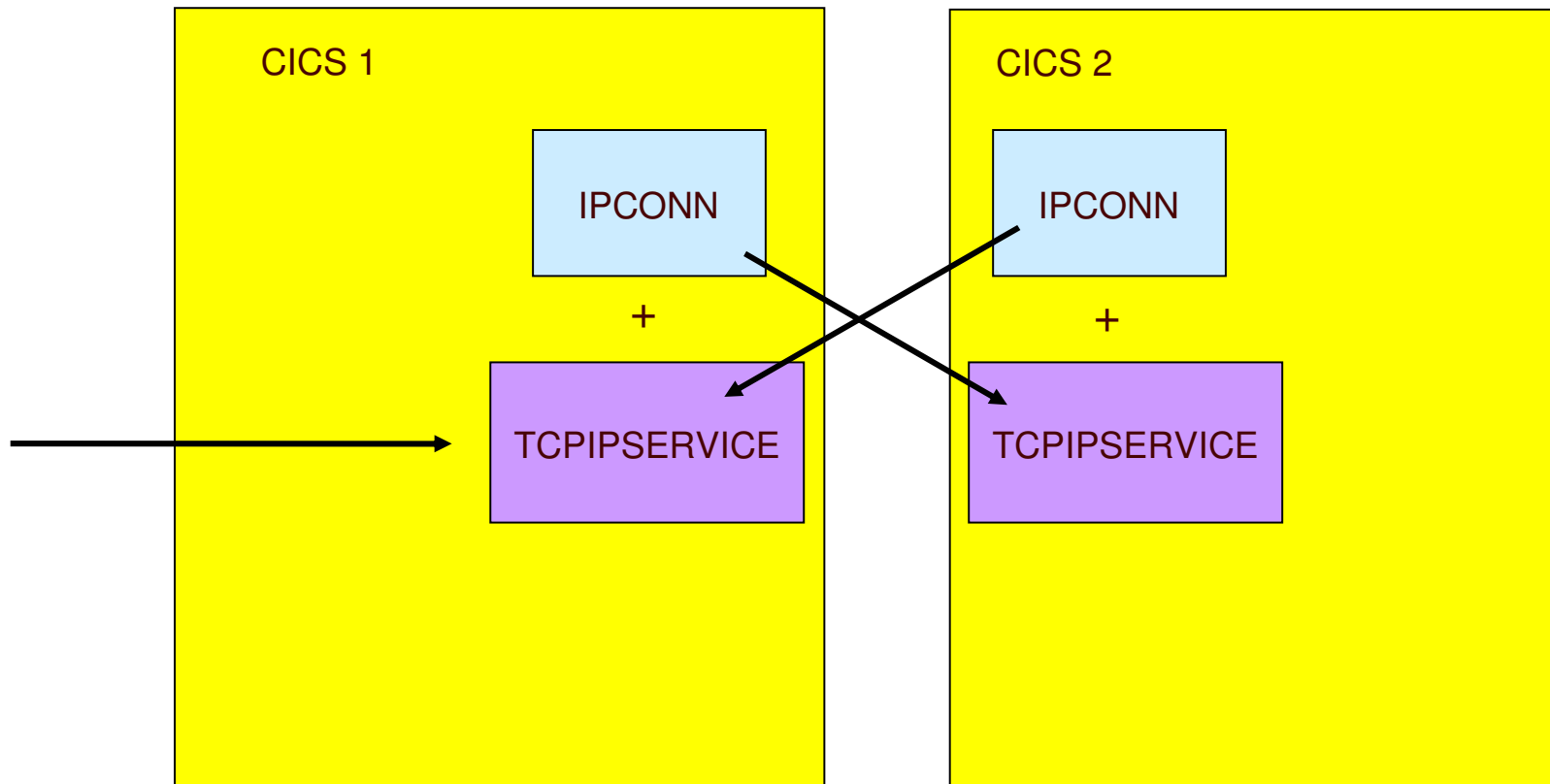
- CICS Transaction Server IP Standardization
 - Provide a new transaction IP communications protocol for connectivity between and into CICS
 - Long term plan to provide CICS with IP choice for most of the CICS programming model
 - CICS TS 3.2
 - Distributed Program Links (DPL)
 - JCA

- CICS TCP/IP network management will be provided
 - Systems and User correlation data tracking with CICSplex Systems Manager

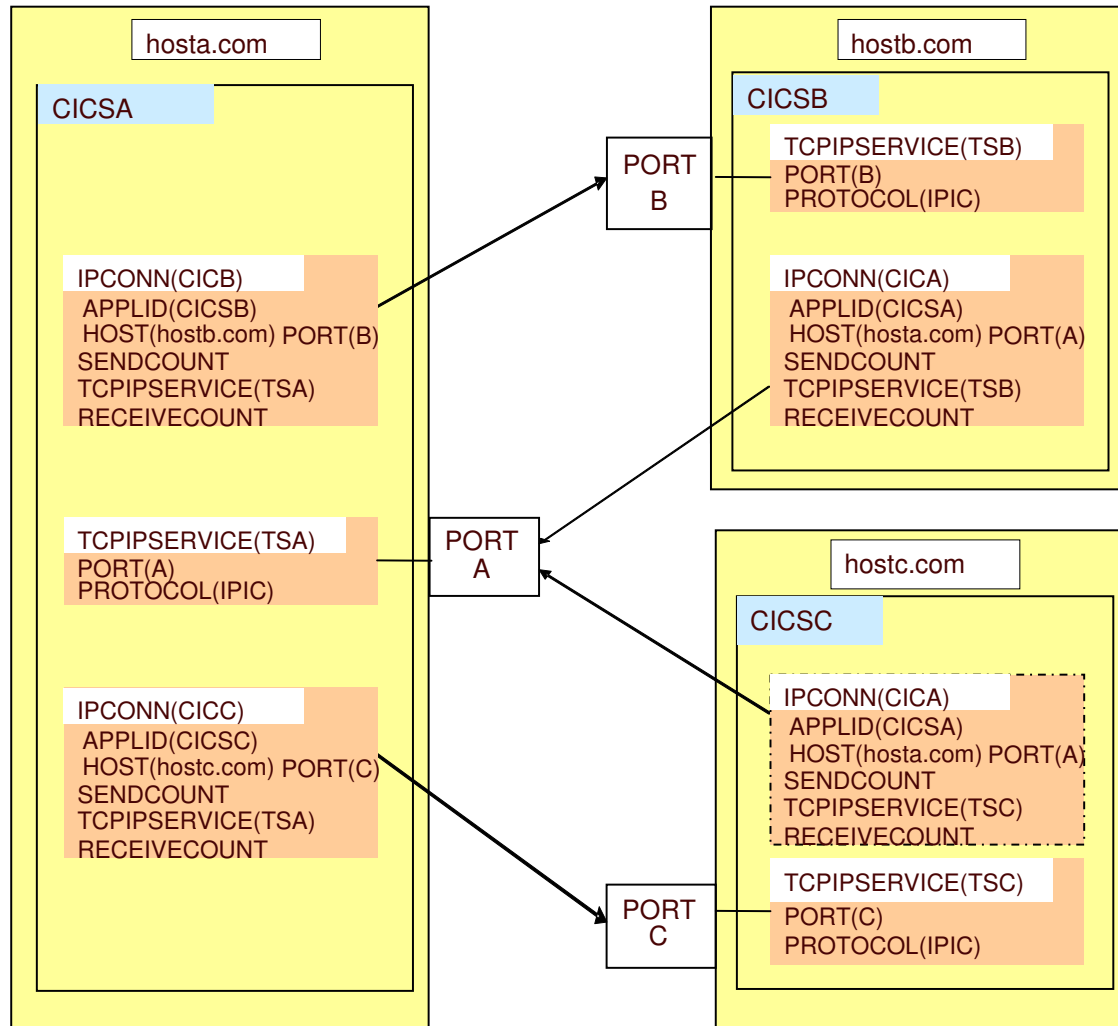
Current CICS Resource Definitions



CICS 3.2 Resource Definitions



CICS 3.2 Resource Definitions...



IP Interconnectivity Security

- TCPIP SERVICE and IPCONN settings
 - Bind time security
 - SSL client certificates on the TCPIP SERVICE definition
 - Link security
 - SECURITYNAME parameter on the IPCONN definition
 - User security
 - USERAUTH parameter on the IPCONN definition

SYSID Processing: IPCONN v CONNECTION

- CICS TS 3.2 supports IP Interconnectivity for DPL
- If a single region supports both DPL and other forms of function shipping then:
 - Both an IPCONN and a CONNECTION, with the same name, will have to be installed
 - DPL will search for IPCONN match before looking for CONNECTION
 - IPCONN and CONNECTION with same name must have same APPLID, and vice versa

IPCONN AUTOINSTALL

- Enabling AUTOINSTALL for IPCONN
 - TCPIPSERVICE must be defined with PROTOCOL (IPIC) and URM (DFHISAIP | program_name)
 - An IPCONN definition to be used as a template must be installed

- URM (DFHISAIP | program_name)
 - Invoked at INSTALL
 - Specifies name of installed IPCONN to be used as a template
 - May override APPLID, HOST and PORT
 - Invoked at DELETE
 - No action necessary
 - Values returned by the user program in its communications area

WEB Performance improvements

- CICS TS 3.1 processing
 - An OPTIONS request is made when a WEB OPEN command is issued
 - Determine the HTTP version of the partner

- CICS TS 3.2 processing
 - Server version can be determined when the first response is received from the server
 - An OPTIONS request is made when WEB OPEN command is issued, if HTTPVNUM and HTTPRNUM are specified

- Optimized support for codepage conversion
 - Performance enhancements to data conversion services in CICS
 - Used by CICS Web Support and Web services

Containers for the HTTP Header Repository

- HTTP headers now use Containers instead of Temporary Storage
 - Both Client and Server sides will use Containers
 - Removal of Temporary Storage removes 32k outbound session limit
 - TSQPREFIX now redundant on TCPIPSERVICE definition

Channel and container support for Web commands

- New WEB SEND command options
 - CHANNEL
 - Specifies the name of the channel that the container belongs to
 - CONTAINER
 - Is the container from which the HTTP request body will be sent
 - Chunked requests
 - May not use the channel and container option
 - Must send all chunks in the same codepage

Channel and container support for Web commands...

- New **WEB RECEIVE** command options
 - BODYCHARSET
 - the character set of the HTTP request body
 - MEDIATYPE
 - the data content of any message body provided
 - TOCHANNEL
 - the name of the channel that owns the TOCONTAINER
 - TOCONTAINER
 - the container into which the HTTP response body will be received

- New **WEB CONVERSE** command options
 - BODYCHARSET
 - Returns the character set of the HTTP response body
 - CHANNEL
 - the name of the channel that the container belongs to
 - CONTAINER
 - the container from which the HTTP request body will be sent
 - TOCHANNEL
 - the name of the channel that owns the TOCONTAINER
 - TOCONTAINER
 - the container into which the HTTP response body will be received

Document Template Processing Changes

- Document templates now cached
 - Document domain always caches templates from:
 - A PDS, a CICS file, the USS File System, a TS queue, a TD queue
 - Document domain may cache templates from:
 - A CICS user exit
 - The exit may override by setting `dhtx_cache_response` to '1'
 - Loader domain caches templates from:
 - A CICS application program
- Refresh Document template
 - CEMT or EXEC CICS SET DOCTEMPLATE NEWCOPY
 - Deletes cached copy and replaces it with the new copy

Deleting a Document

- Currently a document exists until the end of the transaction
 - Can cause storage leaks for long running transactions
- New commands and options to allow deletion of a document during a transaction
 - EXEC CICS DOCUMENT DELETE command
 - DOCSTATUS(DOCDELETE) option
 - EXEC CICS WEB SEND and WEB CONVERSE commands

Changes to the Sample Programs

- Samples have been changed to use CICS WEB commands
 - DFH\$WB1A
 - DFH\$WB1C
- New samples have been added to use pipelining
 - DFH\$WBPA
 - DFH\$WBPC
 - DFH0WBPO
- New samples have been added to use chunking
 - Client chunking samples
 - DFH\$WBCA - Assembler Client Side Chunking
 - DFH\$WBCC - C Client Side Chunking
 - DFH0WBCO - COBOL Client Side Chunking
 - Server chunking samples
 - DFH\$WBHA - Assembler Server Side Chunking
 - DFH\$WBHC - C Server Side Chunking
 - DFH0WBHO - COBOL Server Side Chunking
- Sample URIMAP definitions provided

WEB API available in Converter and Web Error Program

- Web Commands now available for converter programs and Web Error Program
 - Can replace the manual method of constructing responses
 - Allows your programs to take advantage of:
 - CICS assistance in constructing structured responses
 - HTTP protocol compliance
 - CICS provided code page conversions
 - Parameter lists remain unchanged
 - Cautions
 - Must specify ACTION(IMMEDIATE) on the commands
 - EXEC CICS WEB SEND command will ignore and discard storage pointed to by ENCODE_DATA_PTR in the encode routine
 - Analyzer code page conversion does not apply to WEB Commands
- DFHWBEP is called for errors during the delivery of static responses

Security for documents

- Resource level security added for DOCTEMPLATES
 - Documents delivered as a static response to a Web request
 - TEMPLATE name specified on the URIMAP definition
 - Document templates used by an application program
 - CREATE, INQUIRE and DISCARD DOCTEMPLATE commands
 - EXEC CICS DOCUMENT CREATE and INSERT commands

Security for HFS files

- Access to HFS files can be controlled based on USERID
 - Only for CICS Web clients
 - Only for pages delivered as static content
 - Specified in a URIMAP definition
- HFS resource security is activated by:
 - XHFS parameter in the systems initialization table
 - Security check will be made on the Web client USERID
 - USERID from basic authentication or a client certificate

Basic authentication assistance for HTTP client applications

- Parameters added to Client EXEC CICS WEB SEND and CONVERSE commands to allow application to :
 - Specify credentials (username and password)
- AUTHENTICATE (NONE|BASICAUTH) option
 - If BASICAUTH is specified credentials may be specified
 - USERNAME, USERNAMELEN, PASSWORD, PASSWORDLEN
 - If BASICAUTH is specified and credentials are not supplied
 - User exit XWBAUTH will be invoked to do the credentials lookup
- XWBAUTH user exit
 - Inputs are the host and path components from the target URL
 - REALM name if returned on the 401 challenge
 - Output from the exit is a username and password
 - Sample exits provided

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64-bit storage for CONTAINER data

- 64-bit storage
 - Ability to use storage above the 2 GB boundary
 - Exploit z/OS 64-bit capabilities
 - Channels and container storage only
 - No external changes

CICS Java Enhancements

- **Resettable JVM removed**
 - Many removed, renamed and replaced options
 - Migration toward “Standard” JVMs
 - > Most old options are ignored or tolerated
 - Improved error messages
- **JVM Profile and Properties changes**
 - Any JVM option or system property may now be specified
 - “X” options now use standard Java format
 - System Properties may be specified in JVM properties or profile
- **JVM Application Isolation Utility**
 - Standalone Utility
 - Code Analyzer tool
 - > Support Pac CH1B available now
 - Useful for migrating to Continuous Mode JVMs
 - Reports Modifications to static Objects
- **Improved Trace – CICS formats JVM trace output**

CICS Java Enhancements – Startup & Shutdown

- New JVM Profile option `IDLE_TIMEOUT={30 | number}`
 - Specifies timeout threshold for JVMs

- **PERFORM JVMPOOL START**
 - `JVMCOUNT` – number of JVMs to start
 - `JVMPROFILE` – JVM profile name as it is stored in HFS
 - `EXECKEY` – Execution Key in which JVM is to run

- **PERFORM JVMPOOL TERMINATE**
 - `PHASEOUT` – running programs allowed to complete
 - `PURGE` – running programs terminated via the CICS PURGE facility
 - `FORCEPURGE` – running programs terminated via the CICS FORECEPURGE facility
 - `JVMPROFILE(data-area)` – optional. Only JVMs started with that profile are terminated

- **SET JVMPOOL TERMINATE**
 - **Deprecated: use PERFORM JVMPOOL**

JVM Garbage Collection

- CICS TS 3.1 Garbage collection
 - GC ran after nn Java programs executed in JVM
 - GC statistics counted against last user program in JVM
- CICS TS 3.2 Garbage Collections
 - Separate Transaction (CJGC)
 - Triggered by storage utilization in non-system heap
 - User-defined threshold storage utilization threshold
 - Runs in JVM immediately after user program terminates
 - Statistics not attributed to user programs
 - JVM not available for work until GC complete
 - Allocation Failures
 - GC runs as part of user task.
 - Statistics attributed to user task
 - User processing is suspended until GC is complete

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On-line management of program libraries

- Dynamic Program Library Management
 - Specify the data sets and order that CICS will search for programs and program artifacts
 - Without restarting CICS
 - In addition to the existing static DFHRPL
 - Organise such data sets in dynamically definable LIBRARY resources
 - More flexible way of representing your applications

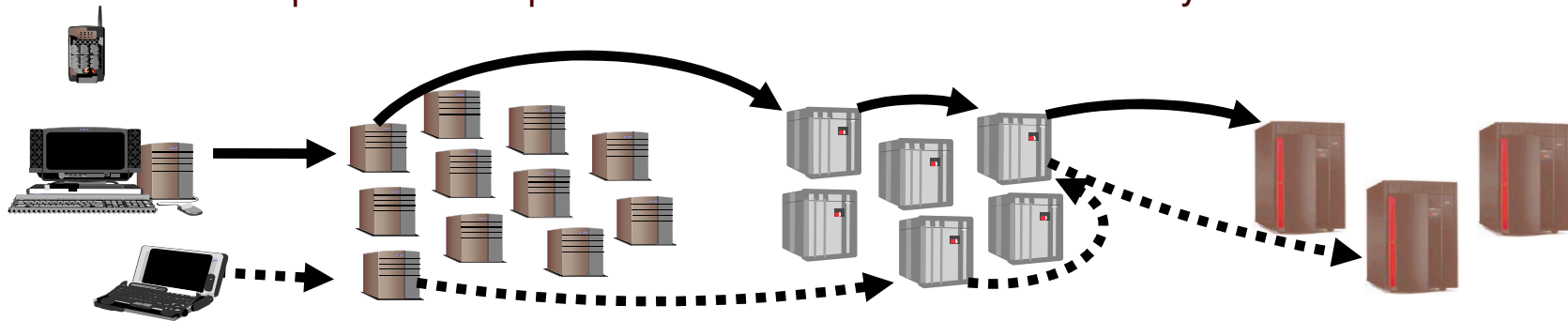
A high level overview of EWLM

Improves
utilization of IT
resources

Manages
business process
service levels

... e-business environment issues ...

- Are my business performance objectives being met?
- What components of the environment are contributing to the problem?
- What resources are being used by an application or business process?
- What workloads are impacted by the problem?
- How these performance problems can be resolved without any human intervention?



A high level overview of EWLM...

- Ability to monitor *all* or *specific* transactions that an application processes.
- Ability to monitor *all* or *specific* operating system processes.
- Monitor application transactions *separate* from operating system processes.
- Obtain end-to-end transaction data
 - Example transaction flow:
 - Hop 0 – WebSphere Application Server
 - Hop 1 – CICS TS 3.2
 - Hop 2 – DB2 Universal Database
- Autonomic resource management based on business goals and importance specified in the customer supplied policy.

CICS Exploitation of EWLM

- No application changes required
- Correlators accepted and passed
 - CICS ↔ CICS
 - Flowing into CICS
 - Flowing out from CICS
- Transports
 - SOAP, HTTP, IP Interconnectivity for DPL, IIOP, MRO
- EWLM Control Center used to set up policies, show CICS workloads, etc.

EWLM Control Center

Hop details - Transaction class 'CICS Transactions starting with E'

View the data for the hops that are processing work in the class.

Interval: 3/20/07 7:47:30 AM to 3/20/07 7:52:30 AM

Selected node ▾

- CICS Transactions starting with E
 - Hop 0
 - CICS
 - winmvs27.hursley.ibm.com
 - winmvs2c.hursley.ibm.com
 - SPUD20
 - IYK3ZC35
 - IYK3ZSC1
 - IYCWSTS1
 - IYK3ZC32
 - IYK3ZC21
 - IYCWCTGO
 - winmvs28.hursley.ibm.com
 - winmvs26.hursley.ibm.com
 - Hop 1
 - CICS
 - winmvs2c.hursley.ibm.com
 - IYK3ZC35

Show response time data
 Show transaction counts
 Show resource data
 Show in progress data

Hop number	Name	Type	Platform	Average response time	Standard deviation	Average active time	Average queue time	Successful transactions	Failed transactions
	CICS Transactions starting with E	Class		03.561359	00.000000	03.561838	00.002023	1	0
0	IYK3ZC32	Instance	z/OS	03.561359	00.000000	03.539838	00.000023	1	0
1	IYK3ZC35	Instance	z/OS	03.399788	00.000000	00.013679	00.001750	1	0
Total: 3									

Hide Tree

Close

Base CICS and CICSplex SM Installation Merge

- CICSplex SM TSO EUI removed
 - WUI is the interface into CICSplex SM
- FMIDs
 - CICSplex SM becomes a dependent FMID
- Ease of Installation and Configuration
 - Single set of Jobs
 - EYUISTAR merged into DFHISTAR
 - New JCL samples for CMAS, WUI Server and MAS
 - EYUINST merged into DFHINST
 - EYU9XDUT enhancements to create definitions for the WUI server & CMAS
- EYUCMSDS & EYU9XDUT
 - Enhanced CICSplex SM Data repository setup
- New Installation Verification Programs

CICSplex SM Resource Definitions

- Default resource definitions created at startup for
 - CMAS
 - WUI
 - MAS
- Removed requirement to customize DFHCNV
- Enhanced EYUSAMP set
 - EYU\$CDEF (CMAS)
 - EYU\$WDEF (WUI)
 - EYU\$MDEF (MAS)

CICS-MQ adapter installation

- Components transferred from the WebSphere MQ product into CICS TS 3.2:
 - CICS-MQ Adapter
 - MQ trigger monitor for CICS
 - MQ bridge (includes the DPL bridge and link 3270 bridge)
 - Does not include the 3270 start bridge which is obsolete
- CICS shipped components
 - CICS-MQ Adapter and MQ trigger monitor for CICS - will work with all supported releases of Websphere MQ
 - MQ bridge - will work with MQ V6 and above, for MQ V5.3.1 control will be transferred to MQ shipped bridge
 - CICS Level 2 and Level 3 will service CICS shipped components
- Websphere MQ will continue to ship components for use with CICS TS 3.1 & below
 - Until such time that all releases of CICS TS prior to CICS TS 3.2 are out of service
 - Limited enhancements over time, will functionally stabilize
 - MQ Level 2 and Level3 will continue to service MQ shipped components

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EXEC CICS Thread Safe Commands

- File Control
 - API Commands will be Threadsafe (local VSAM and RLS only)
 - DELETE RESETBR
 - ENDBR REWRITE
 - READ STARTBR
 - READNEXT UNLOCK
 - READPREV WRITE
 - INQUIRE FILE will be Threadsafe
 - SPI Commands **not** Threadsafe
 - SET FILE
 - INQUIRE/SET DSNAME
 - CREATE/DISCARD FILE
- Exits must be made Threadsafe

EXEC CICS Thread Safe Commands...

- CICS-MQ Adapter will be enhanced to use OTE
 - The CICS-MQ TRUE will be enabled as OPENAPI
 - The CICS-MQ TRUE will use L8 TCBs not private TCBs
 - MQ API commands from CICS applications will be threadsafe

- The WebShere MQ shipped Adapter will **not** support OTE

EXEC CICS Thread Safe Commands...

- EXEC CICS JOURNAL
 - Is now threadsafe
 - WRITE JOURNALNAME (and WRITE JOURNALNUM)
 - WAIT JOURNALNAME (and WAIT JOURNALNUM)
 - XPI WRITE_JOURNAL_DATA

- System “autoinstalled” global user exits
 - Can be defined as threadsafe

Shared Data Tables greater than 2GB

- New Data Space allocations
 - Multiple data spaces are now available

- Data Spaces:
 - **DFHDT001**
 - Table Entry Descriptors
 - Previously stored in CICS Address Space
 - **DFHDT002**
 - Index Nodes
 - Previously stored in CICS Address Space
 - **DFHDT003 – DFHDTnnn**
 - Up to 2 GB of Record Data each
 - Up to 100 Dataspaces per CICS region
 - Previously only one Dataspace for Record Data

Support for ESDS greater than 4GB

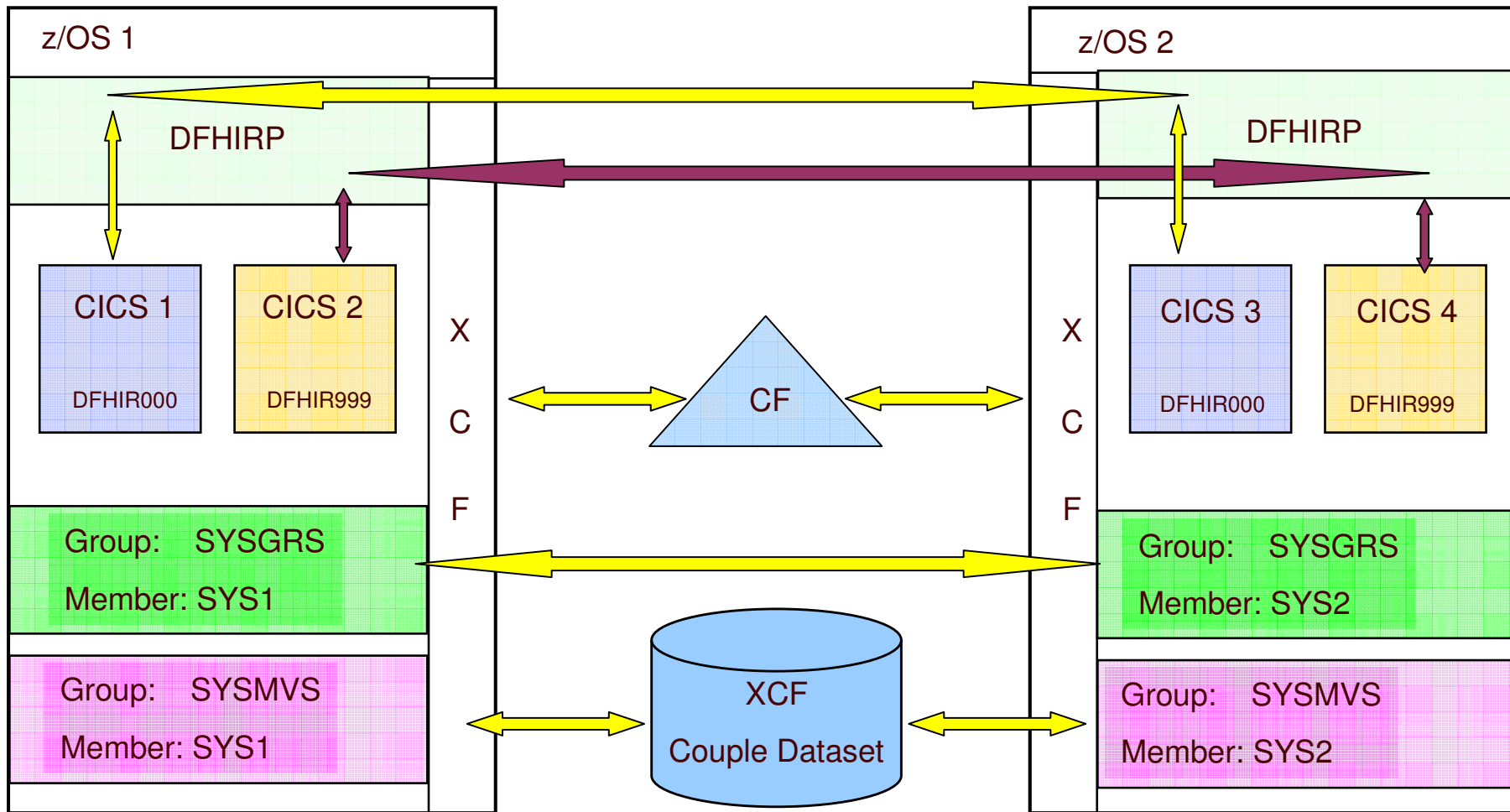
- New XRBA keyword on File Control Commands
 - May be specified anywhere RBA is used
 - XRBA mutually exclusive with RBA
 - Requires 8-byte RBA field
 - XRBA API may be used on non-Extended ESDS
 - Remote files are supported
 - No Alternate Indexes over Extended ESDS - VSAM does not support this
- Impact on Applications
 - RBA Sensitive
 - Program specifies RBA to Read/Update records
 - Must use XRBA to access Extended ESDS
 - RBA-Insensitive
 - Program does not use RBA to access records
 - May use RBA to access Extended ESDS with STARTBR, READNEXT, READPREV when using 'special' RBA to indicate start or end of data set

XCF Group Limit Changes

- Allow specification of which XCF group to join
 - New systems initialization parameter for CICS
 - XCFGROUP= name | DFHIR000
 - New EXCI options table parameter batch programs
 - XCFGROUP= name | DFHIR000

- Display which XCF group a region has joined
 - EXEC CICS INQUIRE IRC
 - CEMT INQUIRE IRC
 - CICSplex SM panel changes

XCF Group Limit Changes...



Monitoring Clock Precision

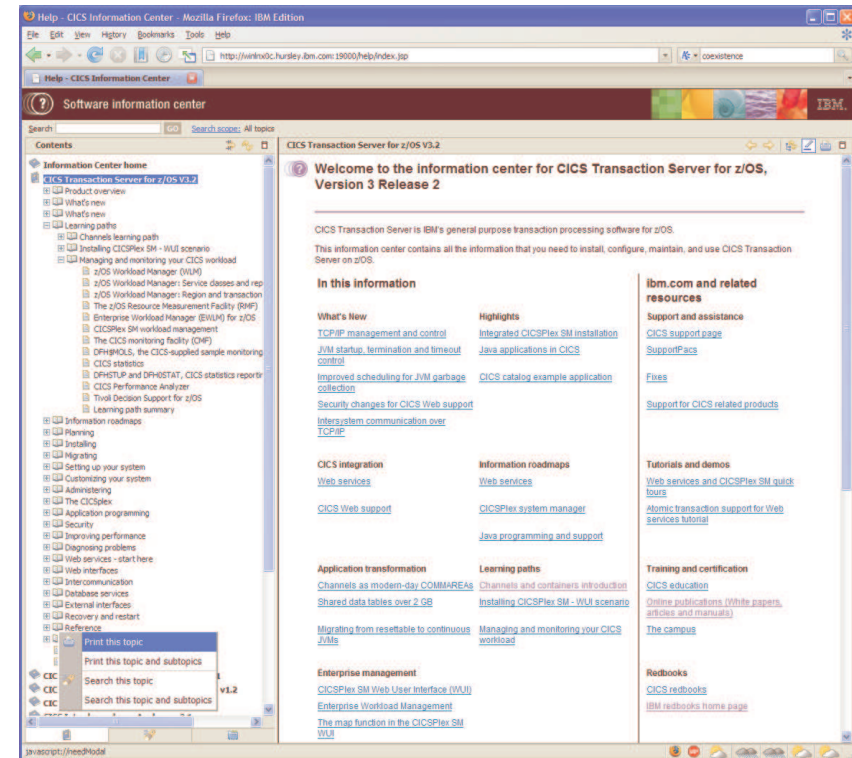
- Old Clock Format
 - 8 byte area
 - 32 bits for Timer component
 - 16 microsecond units
 - About 19 hour capacity
- New Clock Format
 - 12 byte area
 - 64 bits for Timer Component
 - 1 microsecond units
 - Several years capacity
- Reserved 8 bits and Period Count (24 bits) are unchanged
- Performance Class Clocks Only

Monitoring Record Data Compression

- Monitoring Domain now issues CSRCESTRV SERVICE=QUERY at Domain Initialization
 - COMPRESS=YES|NO in DFHMCT TYPE=INITIAL macro
 - Default is COMPRESS=NO
 - Compression Length Field added to SMF 110 records
 - SMFMNCRL
 - Non-zero value indicates record is compressed
- Monitoring Domain Subroutine now issues CSRCESTRV FUNCTION=COMPRESS
 - Algorithm chosen exploits occurrence of repeated characters in a data stream
- Monitor Domain Dump Formatter now formats compression management information
- DFH\$MOLS contains logic and calls to decompress monitoring records

CICS Information Center

- Content
 - Builds upon navigational improvements introduced in V3.1
 - New and updated learning paths and product overview Incl. Managing, measuring, and analyzing your CICS workload
 - New headers and footers on every page
 - feedback link
 - timestamp of last update
 - a link to the PDF
 - URL for the displayed topic
 - Anchors enable the Info Center to be extended with your own documentation
- Upgraded to IBM Eclipse Help System V3.1
 - Update Manager – install or update documentation from an IBM server via FTP or HTTP
 - An enhanced search and results
 - "Quick menu" to search or print a topic or section of the navigation
 - Icon to turn search highlighting on and off
- Use via IBM Web site, workstation, or server



Summary

- 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 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