

IMS Connect Much More Than a TCP/IP Gateway

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IMS Connect

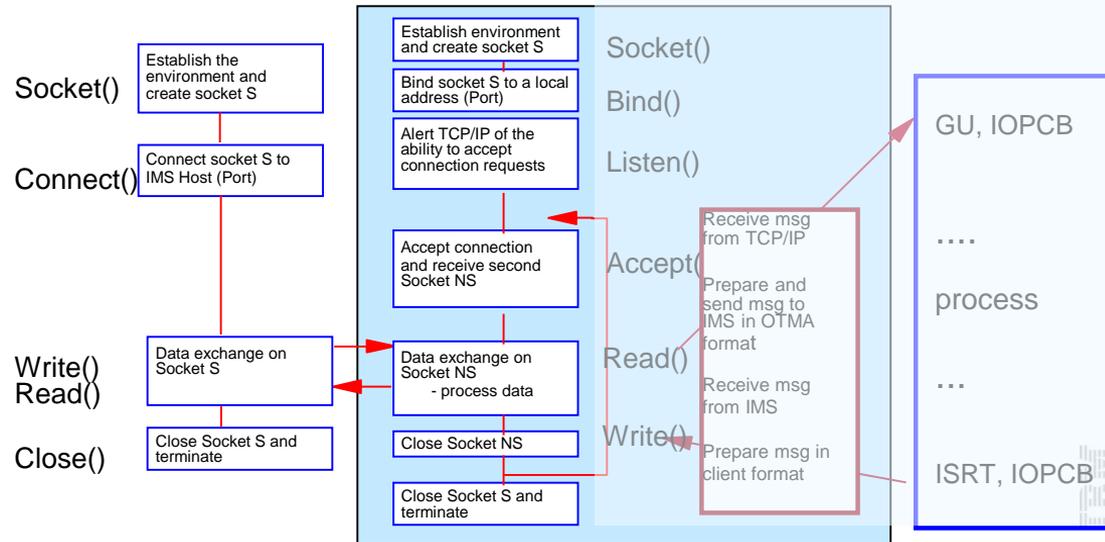
- IMS Connect is an integrated TCP/IP gateway for IMS
- With IMS Connect, you can create user-written applications to access IMS data and transaction services from any TCP/IP client. IMS Connect also supports callout from IMS applications to outside services.
- IMS Connect provides industry-proven performance throughput, scalability and availability

- Many IMS customers use IMS Connect today



Simple, Robust, Secure and Fast

- Simple and Flexible Application Programming model
 - Basic socket programming with Connect, Send, Recv, Close
 - Program flows with IMS application (Synchronous and Asynchronous)
 - Send Only, Send Recv, Resume Tpipe, Callout
 - Commit Mode 0 (Commit-the-Send) and 1 (Send-then-Commit)
 - Different socket connection types – Persistent, Transaction
 - User exits for customization



Simple, Robust, Secure and Fast...

- Multiple level of Security
 - Transaction and Command security authorization with OTMA
 - Authentication of userids, groups, passwords and passes the utoken to IMS with the message. Extended security authentication – PassTicket, Trusted User
 - Network – connection security and encryption with AT-TLS
- Different options of Availability and Scalability
 - Multiple IMS Connects on multiple LPARS can connect to IMSes on multiple LPARS
 - VIPA and Dynamic VIPA, SYSPLEX Distributor
- Superior performance throughout

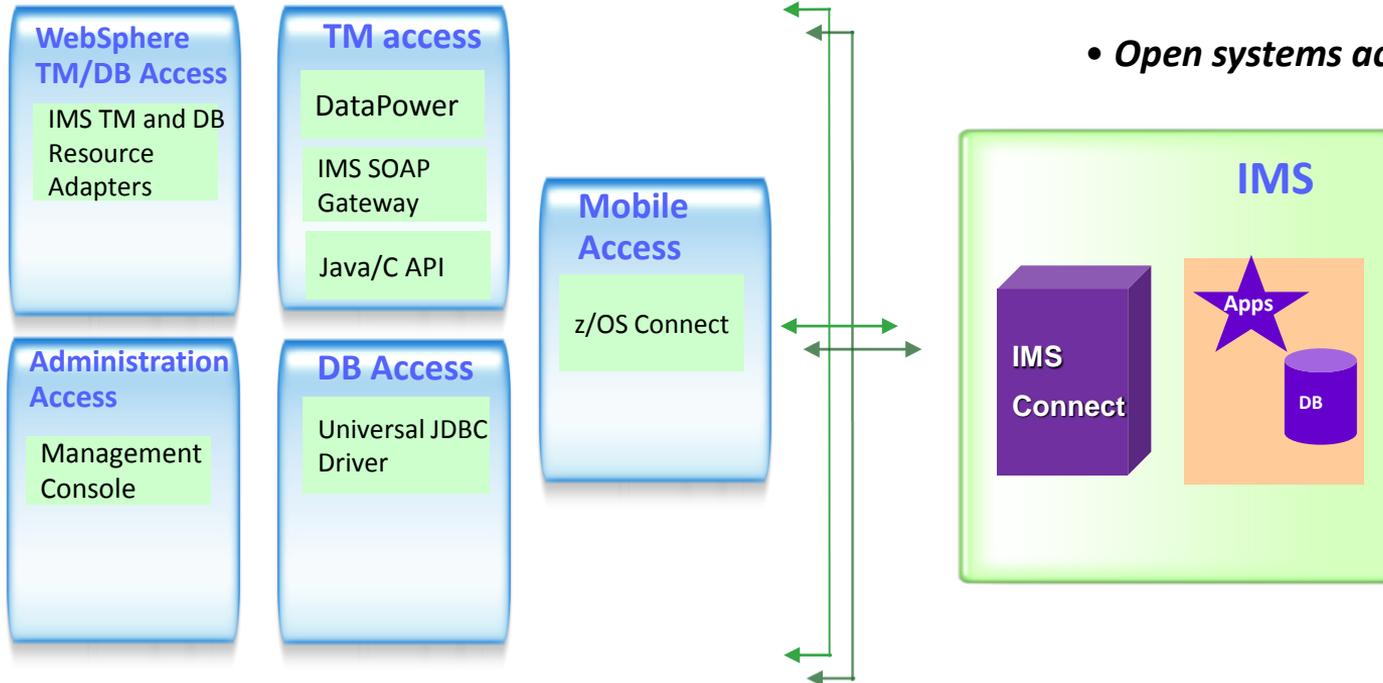


More than Just a TCP/IP Gateway

- But.... IMS Connect is much more than Just a TCP/IP Gateway
- And... It is not just used for IMS transaction access
- It is the **Essential** and **integral** component for many integration and modernization solutions
 - TM Access
 - DB Access / Analytics
 - Administration Access
 - Mobile Access



IMS access anywhere with IMS Connect

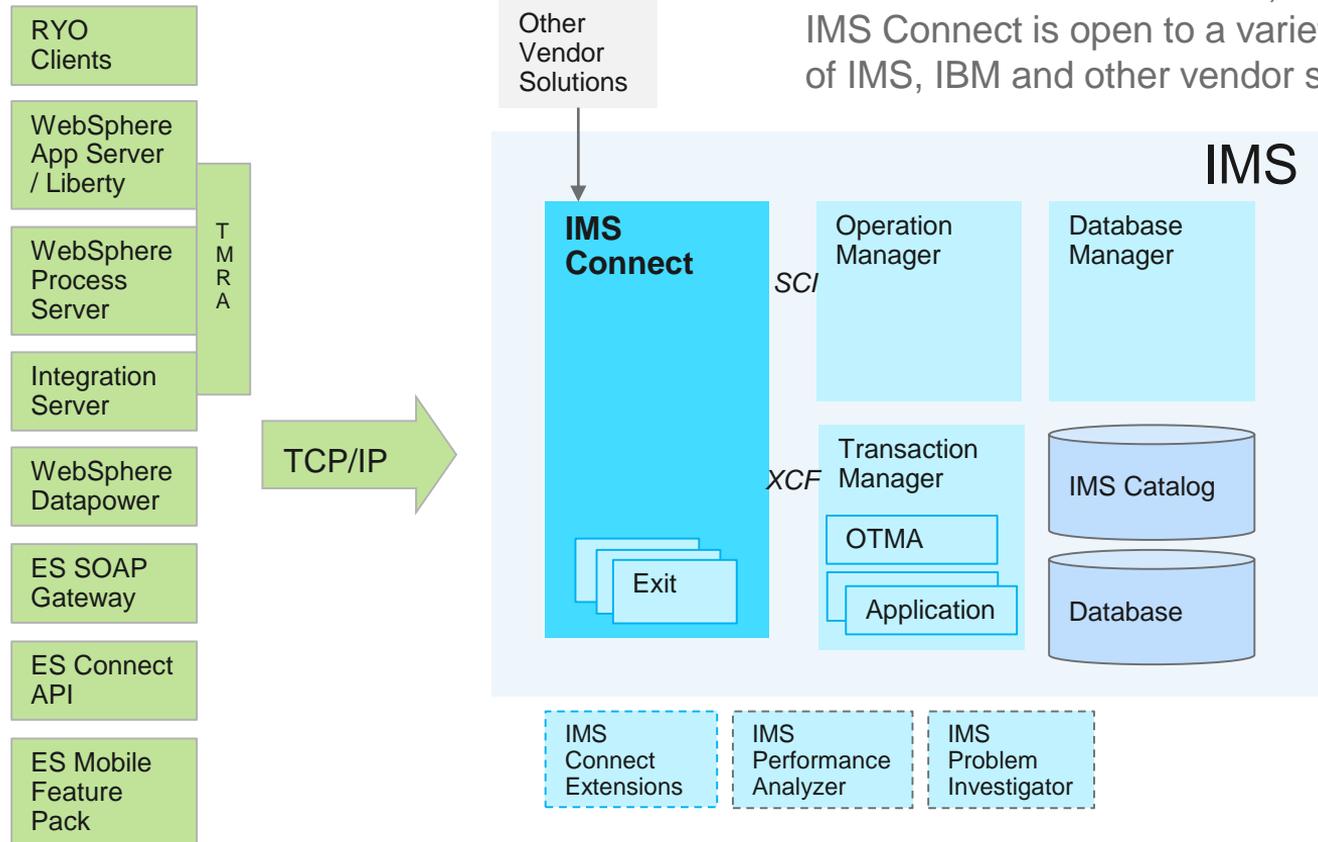


- *IMS access anywhere*
- *Standards-based data server and TM*
- *Open systems access*



IMS Connect Capabilities

TM Access

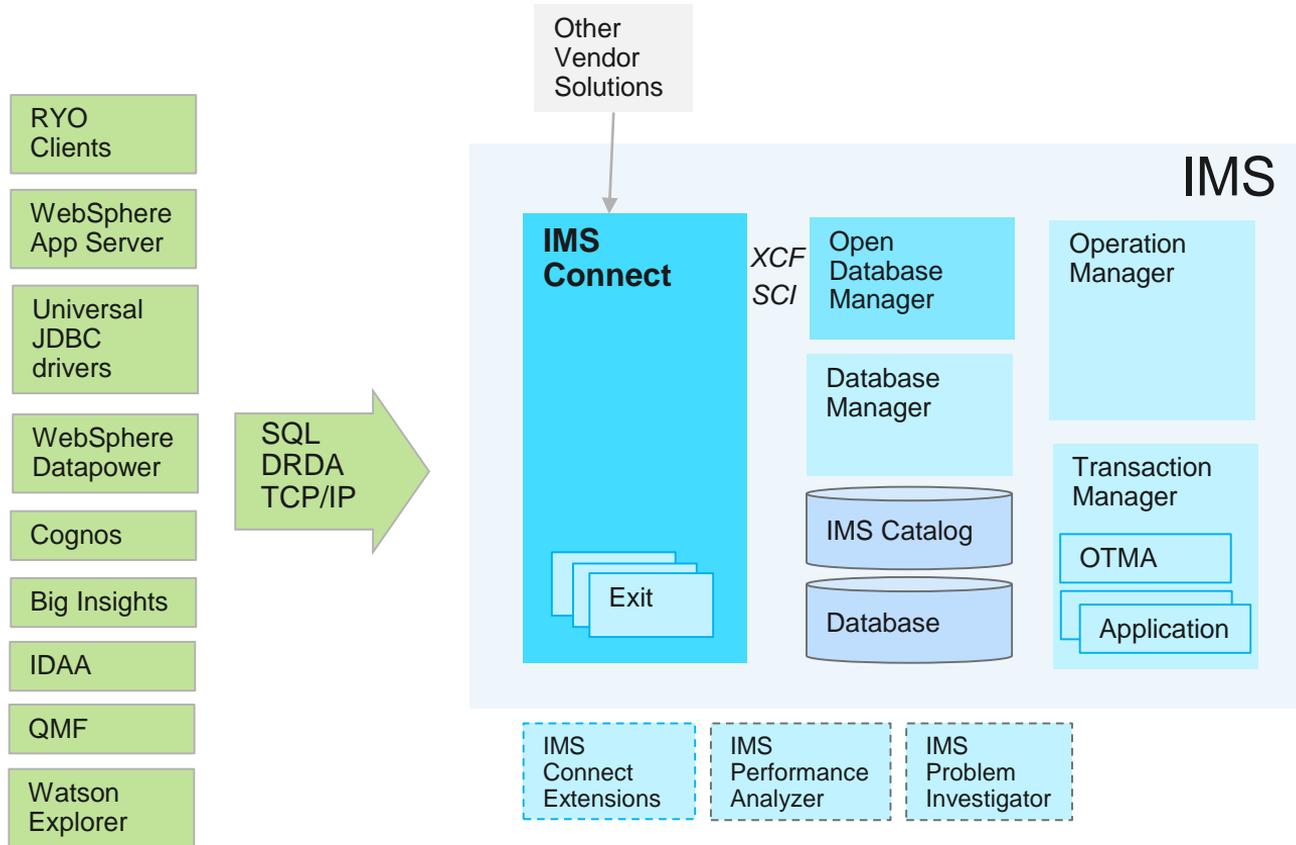


As a standard socket server, IMS Connect is open to a variety of IMS, IBM and other vendor solutions



IMS Connect Capabilities....

DB Access



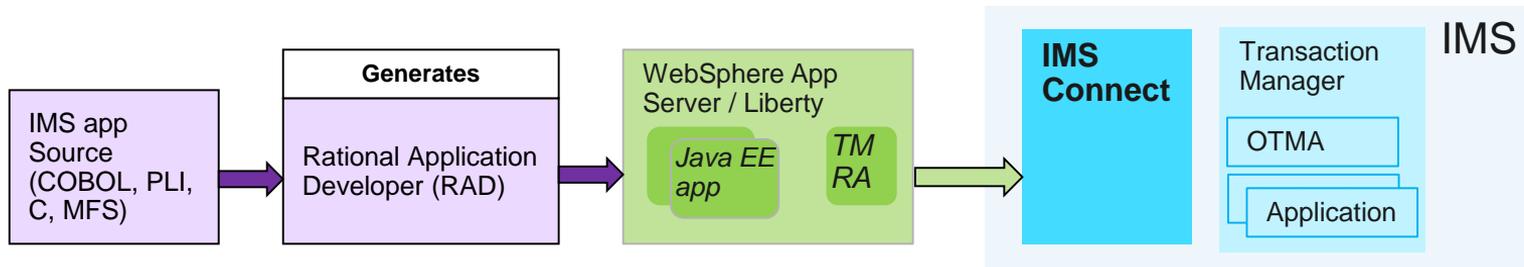
IMS Enterprise Suite Connect API

- Simple callable interfaces to send/receive messages to/from IMS Connect
 - Java, C and C++ support
- Normally use in Roll-Your-Own application that does not run in an application server
- Extensible profiles that define connections and interactions
- User does not have to understand:
 - Sockets programming
 - IMS Connect IRM headers and flags
 - Support all IMS Connect functions
- Simplifies development of new IMS Connect client applications to access IMS transactions



IMS TM Resource Adapter

- Access IMS transaction with full Java EE and Web Services support
- Customer-proven IMS modernization solution for over a decade
- Industry-standard Java EE Connector Architecture (JCA/J2C) compliant
- Integrate with a variety of WebSphere or non-IBM Java EE based servers (e.g. Weblogic, JBOSS) with built-in QoS support (Connection pooling, security management)
- Support both call-in and callout from IMS
- Support rapid application development with Rational tooling
- Recommended to use with Java EE or WebSphere servers



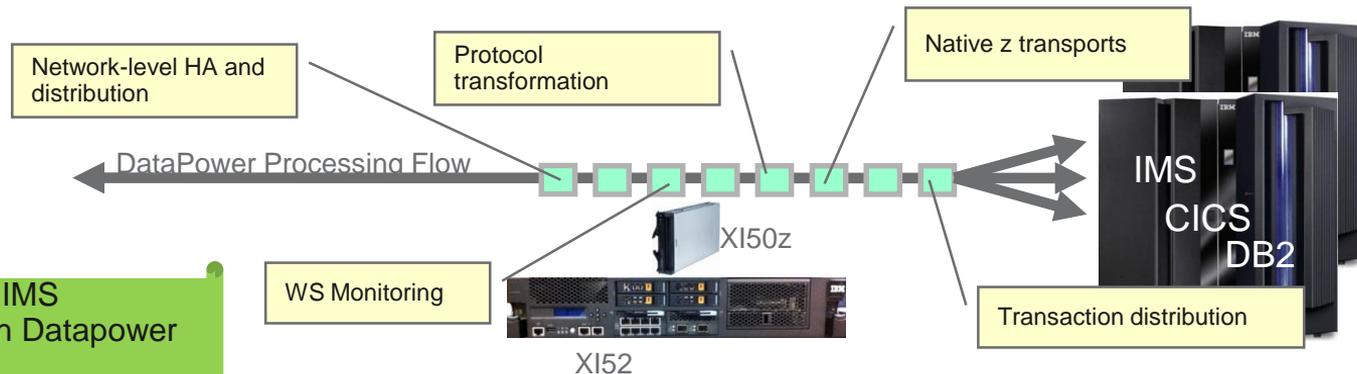
IMS Enterprise Suite SOAP Gateway

- Enable IMS transactions as both web service providers and consumer
- Support industry web service and security standards
 - HTTP(S), SSL, SOAP, WSDL, WS-Security, AT-TLS, SAML 1.1 and 2.0
- Support both call-in and callout from IMS
- Integrate with Rational Developer for System z tooling
 - Supports Top-down, Meet-in-the-middle and Bottom up application design approach
 - Supports COBOL and PL/I converter generation that handles XML/Unicode to EBCDIC bytes conversion



Websphere Datapower

- An appliance provides secure mobile, Web and API access with SOA, B2B connectivity and security gateways
- Integrated IMS connectivity support
 - IMS Connect Send/Receive Support (XI52, XI50B, XB62)
 - Enables a direct connection to an IMS transaction
 - IMS ICAL Synchronous Callout Support (XI50, XI52, XI50B, XI50Z, XB62)
 - Enables access from IMS transaction to external service
 - IMS Database Support (XG45, XI52, XI50B, XB62)
 - Enables a direct connection to an IMS database



C11 Power your IMS
Performance with Datapower
Wed 13:30



IMS Callout

- IMS application callout to external application and web services
 - Enable IMS to synchronously and asynchronously callout to Java applications and web services
 - IMS TM Resource adapter, SOAP Gateway, Connect API and Datapower
- Asynchronous callout
 - IMS application invokes external applications without waiting for response. Response can be received by another IMS application
- Synchronous callout
 - IMS application invokes external application and synchronously wait for the response
- A new DL/I call, ICAL, is added for synchronous callout with timeout capability and support large messages; exists since IMS V10 SPE

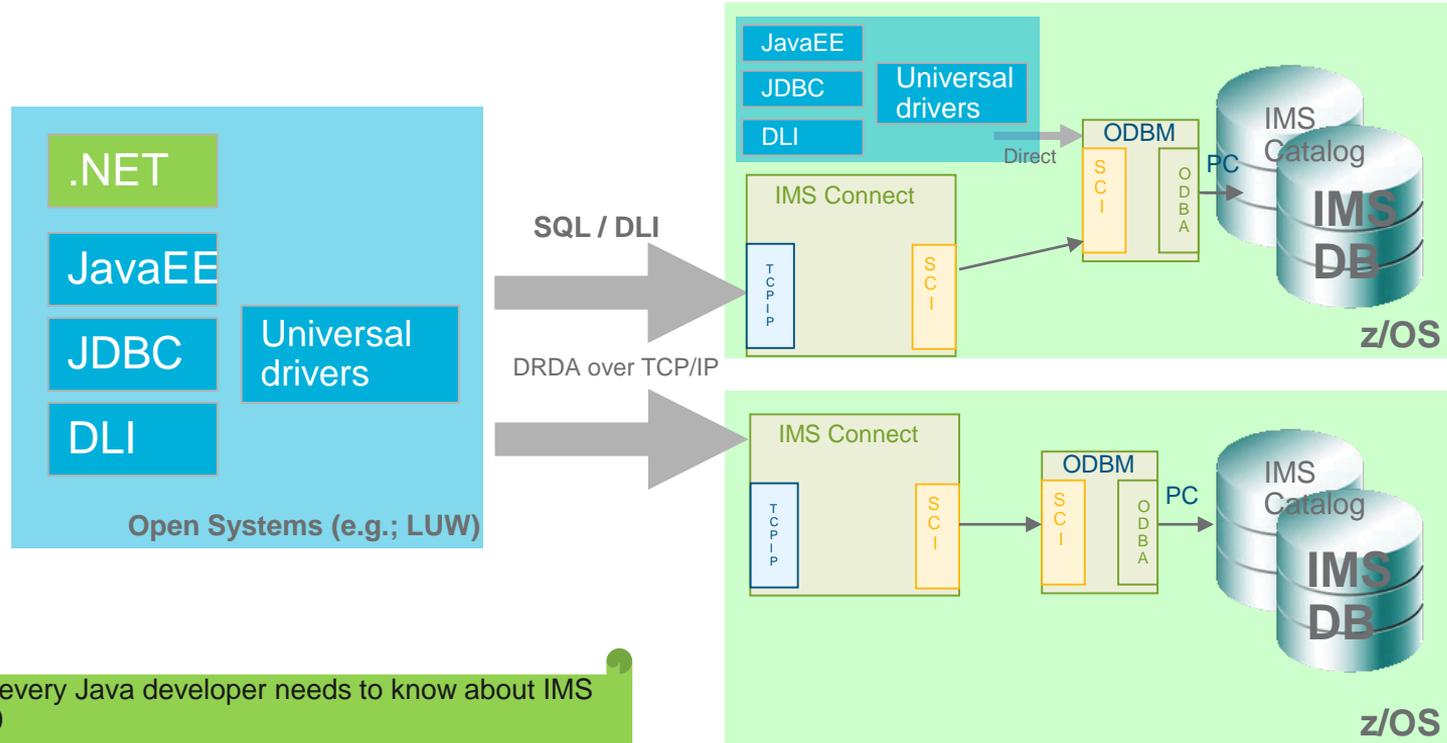


Database Access with IMS Connect

- Offer scalable, distributed, and high-speed local access to IMS database resources via IMS Connect
- Value
 - Business growth: Allow more flexibility in accessing IMS data to meet growth challenges
 - Market positioning: Allow IMS databases to be processed as a standards-based data server
- Key Differentiators
 - Standards-based approach (Java Connector Architecture, JDBC, SQL, DRDA, .NET)
 - Solution packaged with IMS
- Enable new application design frameworks and patterns
 - JCA 1.5 (Java EE), JDBC, Microsoft .NET



IMS Open Database



B11 What every Java developer needs to know about IMS
Wed 13:30

B06/C15 Scaling your applications with IMS catalog
Tues 14:45



Enabling Analytics and more...

- BI, dashboarding, reporting of IMS data



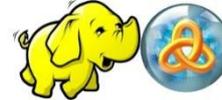
- Cognos 10.2 BI



- Merge HDFS data with trusted OLTP
- IT analytics (log data)



- IBM InfoSphere BigInsights



- Bring analytics to the data



- IBM DB2 Analytics Accelerator



- Visualize entire big data landscape



- IBM Watson Explorer

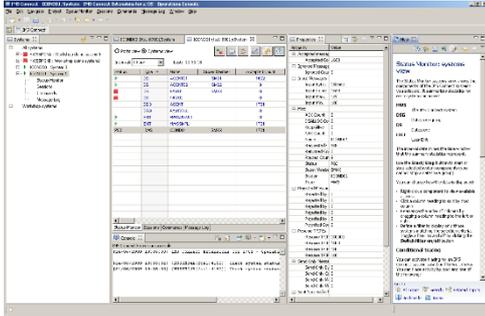


A05 The Simplest Way to Search Your Big Data Sources
C14 How IBM Analytics can open a new Universal for your Enterprise Applications

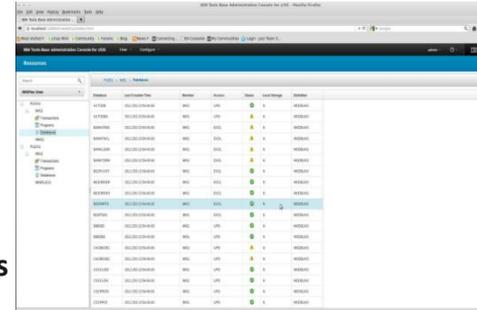


IMS new user interfaces also uses IMS Connect

IMS Explorer for Development (Eclipse)



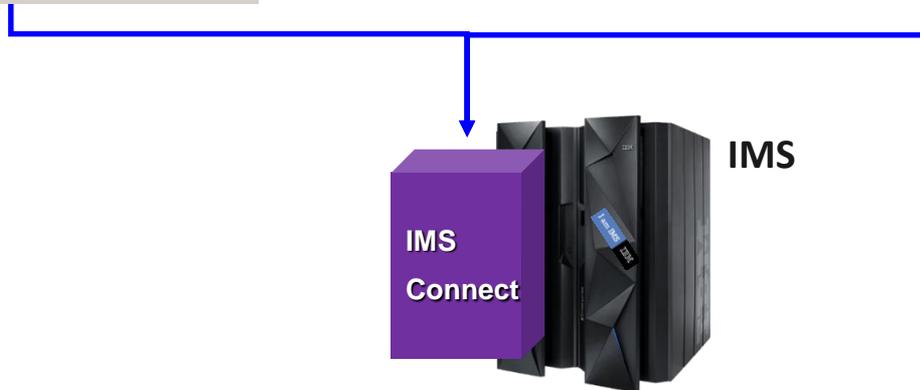
Management Console for IMS and DB2 (Web Browser)



Developers



Administrators



IMS Explorer for Development

Access IMS DB

The screenshot shows the IMS Explorer interface with a SQL query window at the top. The query is: `SELECT HOSPNAME, HOSPCODE, HOSPLL FROM PCB01.HOSPITAL`. Below the query window, there are filters for HOSPITAL (HOSPCODE, HOSPLL, HOSPNAME) and a 'DISTINCT' checkbox. The 'Columns' tab is selected, showing a table with columns: Status, Operation, Date, HOSPLL, HOSPCODE, and HOSPNAME. The results table shows four rows of data.

Status	Operation	Date	HOSPLL	HOSPCODE	HOSPNAME
✓	Succeed select * from pcb...	8/2/	1	R1210010000A	ALEXANDRIA
✓	Succeed select * from pcb...	8/2/	2	R1210020000A	SANTA TERESA
			3	R1210030000A	SANTA CLARA
			4	R1210040000A	NEW ENGLAND

19

Real time direct data query using SQL

Edit PSB sensitive segments and attributes

The screenshot shows the IMS Explorer interface with a database relationship diagram for DEALERDB and EMPDB. The DEALERDB diagram shows tables: DEALER (Total length: 61), MODEL (Total length: 37), ORDER (Total length: 74), SALES (Total length: 85), STOCK (Total length: 46), SALESINF (Total length: 15), and STOC SALE (Total length: 120). The EMPDB diagram shows tables: EMPL (Total length: 56), SALESEMP (Total length: VLC), EMPLINFO (Total length: 122), and SALESINF (Total length: 15). A green arrow points from the text 'See database relationships change DBD field attributes' to the relationship diagram. Another green arrow points from the text 'Edit PSB sensitive segments and attributes' to the detailed view of the current PCB (PCB01.HOSPITAL) shown in the bottom right. This view shows the table structure for DEALER, MODEL, ORDER, SALES, STOCK, SALESINF, and STOC SALE, with various fields and their attributes.

See database relationships change DBD field attributes



IMS Explorer for Development

Run and test IMS transactions

Run an IMS transaction test case

Execution time is 0.92800 seconds for the input and output message pair Display.

Test case name: Display.ttc

Input messages

Input and Output Message Pair	Field Value	Field Length
Display		
D2		
Segment 1		
INPUT_MSG		
IN_LL	59	2
IN_ZZ	0	2
IN_TRCD	IVTNO	10
IN_CMD	DISPLAY	8
IN_NAME1	LAST1	10
IN_NAME2		10
IN_EXTN		10

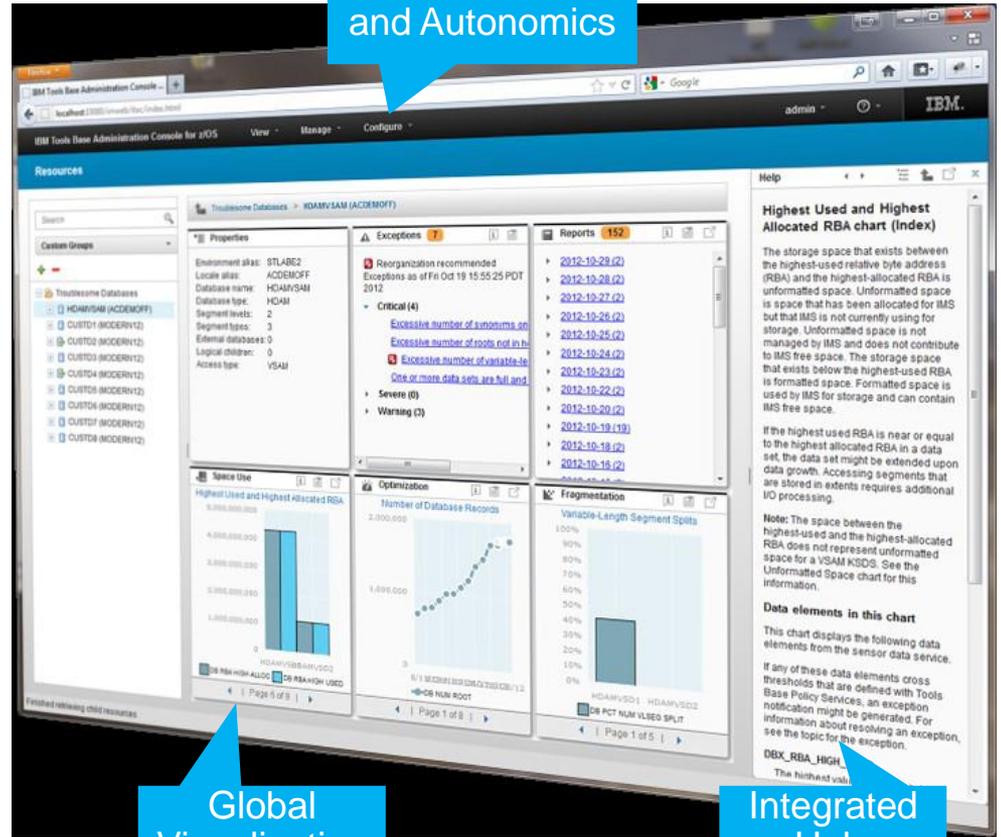
Output messages

View output message with: Display out

Input and Output Message Pair	Field Value	Field Length
Display		
Segment 1		
OUTPUT_MSG		
OUT_LL	93	2
OUT_ZZ	0	2
OUT_MSG	ENTRY WAS DISPLAYED	40
OUT_CMD	DISPLAY	8
OUT_NAME1	LAST1	10
OUT_NAME2	FIRST1	10
OUT_EXTN	8-111-1111	10

Management Console

- Provides a single, holistic easy-to use web-based interface
 - Provides a complete picture of IMS systems, databases and IMS Connect
 - Access from anywhere via the Internet using standard web browsers
 - Continue to extend integration to other Tools and DB2



Database Health and Autonomics

Global Visualization

Integrated Help

IMS Enterprise View

- IMS Resource and IMSplex discovery
- Gather IMS system information using IMS Connect, OM, SCI
- Manage IMS resources
 - Start and stop

B04 IBM Management Console: Gain Insight into your Enterprise
Tues 11:30

D02 Hands-on Lab
Tues 13:30, Wed 16:00

Search

Enterprise View

- SYSPLEX1
 - PLEX1
 - IMS2
 - IMS1**
 - HWS1
 - PLEX2
 - HWS1
 - IMS3
 - HWS3
 - SYSPLEX2
 - SYSPLEX3

SYSPLEX1 > PLEX1 > IMS1

Resource Type: Select one

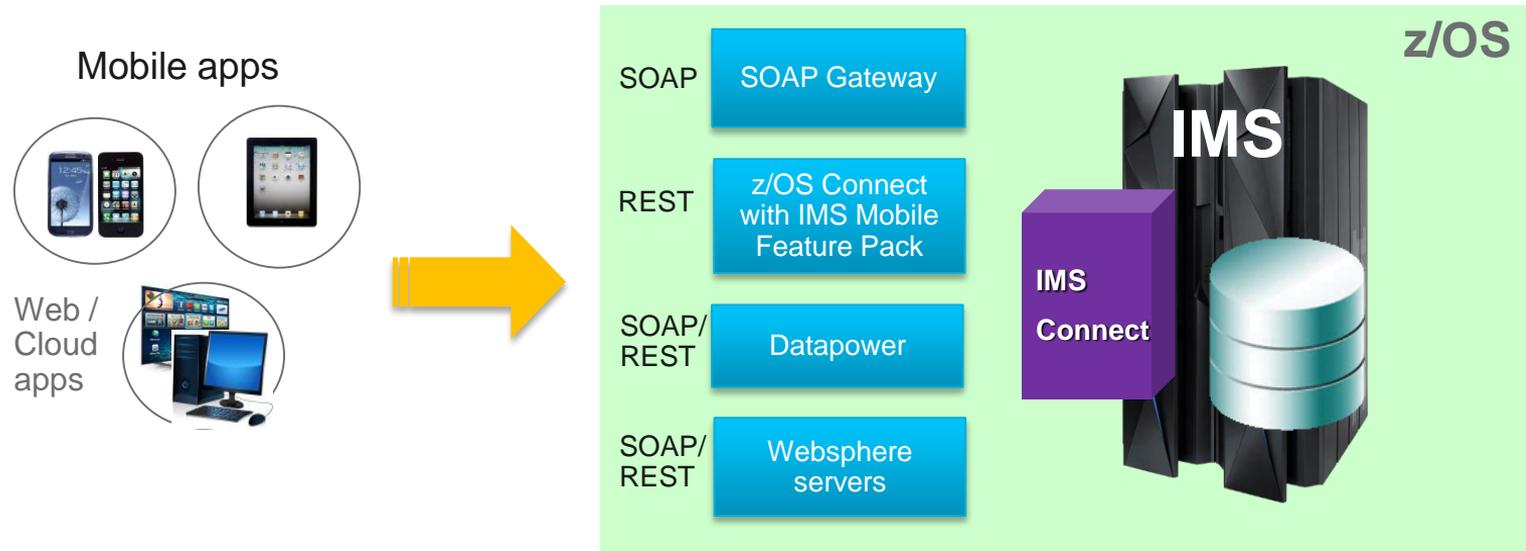
- Databases
- Programs
- Routing Codes
- Transactions

IMS1	
IMS Attribute	Value
Member Name	IMS1
Status	✓ READY, ACTIVE
Version	13.1.0
Member Type	IMS
IMSplex	CSLPLEX1
Completion Code	0
Responding Member	OM10M
OS Image	EC03127

Related ODRMs

IMS Mobile and Web services

- Today, IMS transactions can be invoke as SOAP or REST services via IMS Connect
 - No IMS application change
 - IMS transactions as SOAP services with Enterprise Suite SOAP Gateway
 - IMS transactions as REST services with z/OS Connect and IMS Mobile Feature Pack
 - IMS also provides SOAP/REST capability with Websphere and Datapower



IMS Mobile

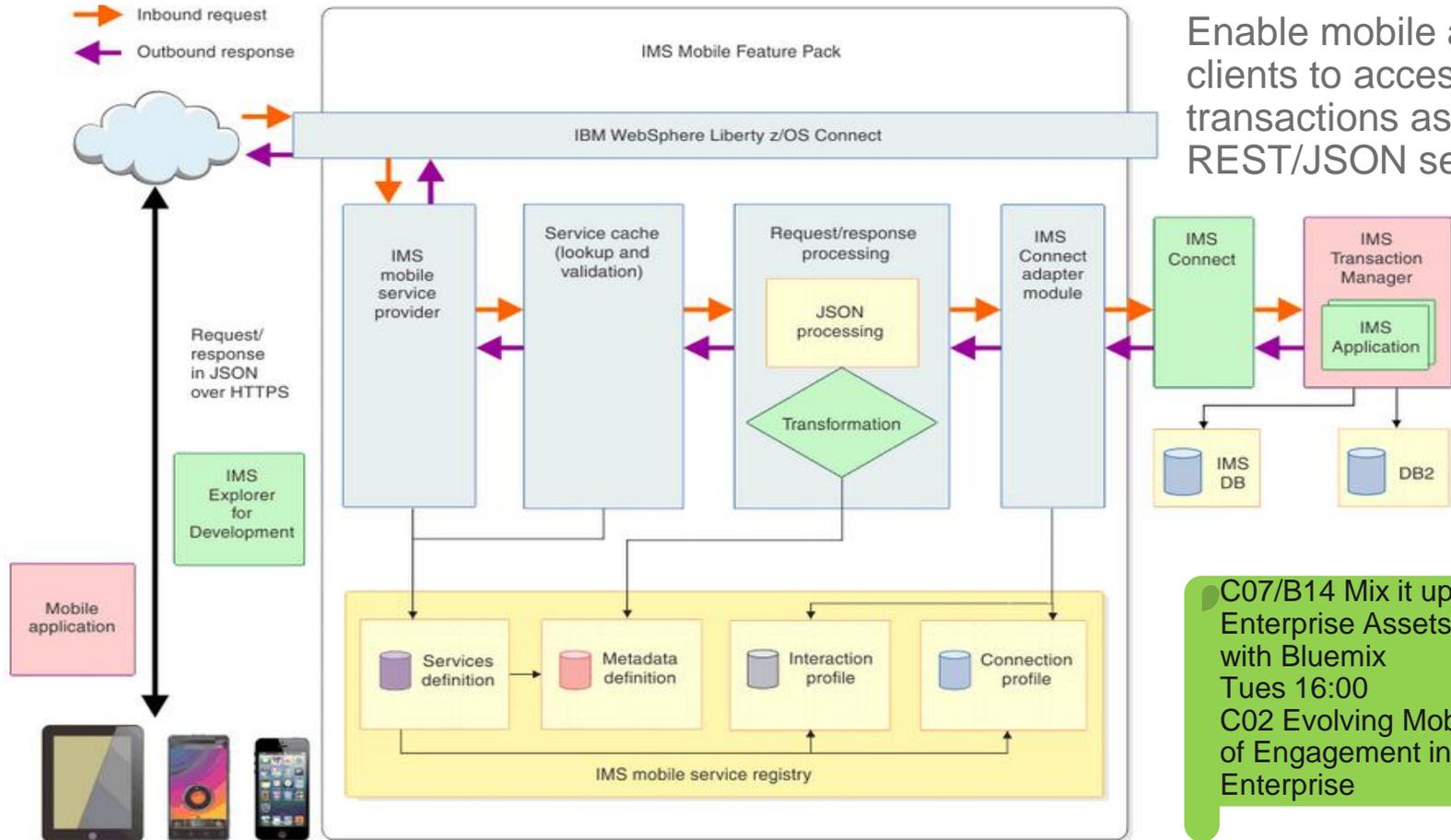
- The IMS mobile strategy provides a strategic and dependable mobile foundation
- Expands the IMS ecosystem via delivery of mobile infrastructure
- Offers an integrated platform for full discovery, modeling, deployment and execution of both transaction and data assets for mobile consumption
- REST interface with JSON wire protocol
 - JSON (JavaScript Object Notation) is a lightweight data-interchange format. It is easy for humans to read and write. It is easy for machines to parse and generate.



74% of CIOs say mobile solutions are part of their vision for increasing competitiveness



IMS Mobile Feature Pack



Enable mobile and cloud clients to access IMS transactions as REST/JSON services

C07/B14 Mix it up: How Your Enterprise Assets Fit Perfectly with Bluemix
Tues 16:00
C02 Evolving Mobile Systems of Engagement in your Enterprise

Summary

- IMS Connect provides a standard protocol for IMS access from TCP/IP sockets applications
- An essential component that enables IMS application, database, administration and mobile access
- Continues to be enhanced and provide new solutions that address the business and technical challenges that continue to evolve on a day to day basis

