Fast and Easy IMS Modernization

(Putting your IMS resources to work with zLinux)

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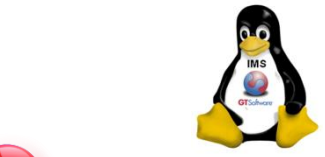
The Future????????

"What would you rather have to plow a field - two strong oxen or 1,024 chickens?"

Seymour Cray



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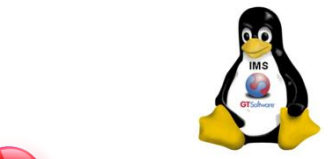
IMS Pieces and Parts

- MFS Screens (MIDS/MODS)
- COBOL Programs as Transactions
- PL/1 Programs as Transactions
- Conversational Transactions
- IMS Data Bases
- DB2 Data Bases
- Hogan, Natural,…….
- Calling other External Systems
- Other(packages)



Mainframe Modernization Easy????

- 3270 Screens to Web GUI's
- 3270 Screens to Services
- IMS transactions to services
- IMS Data to Services
- Combinations of the above
- Other????

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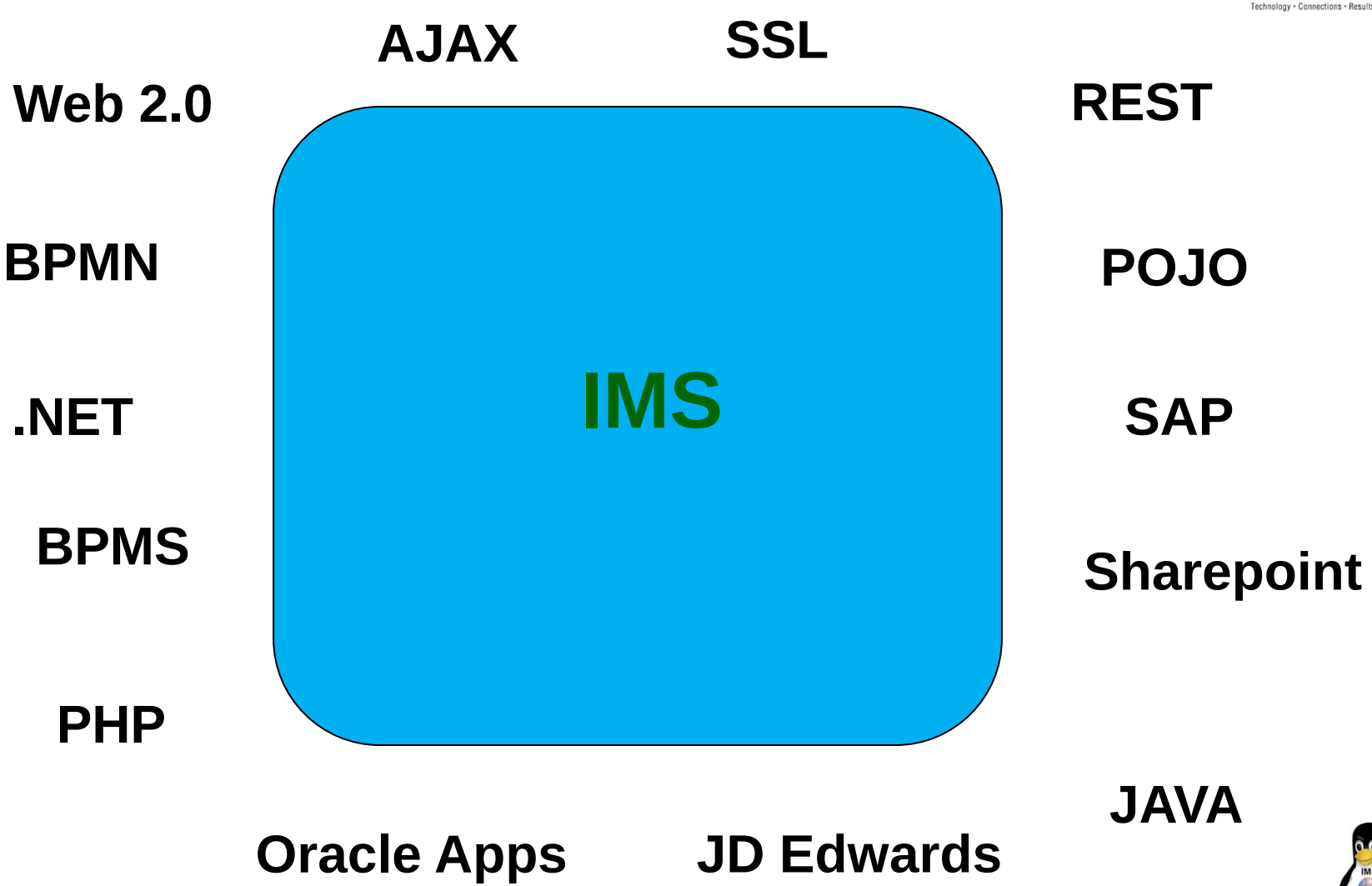
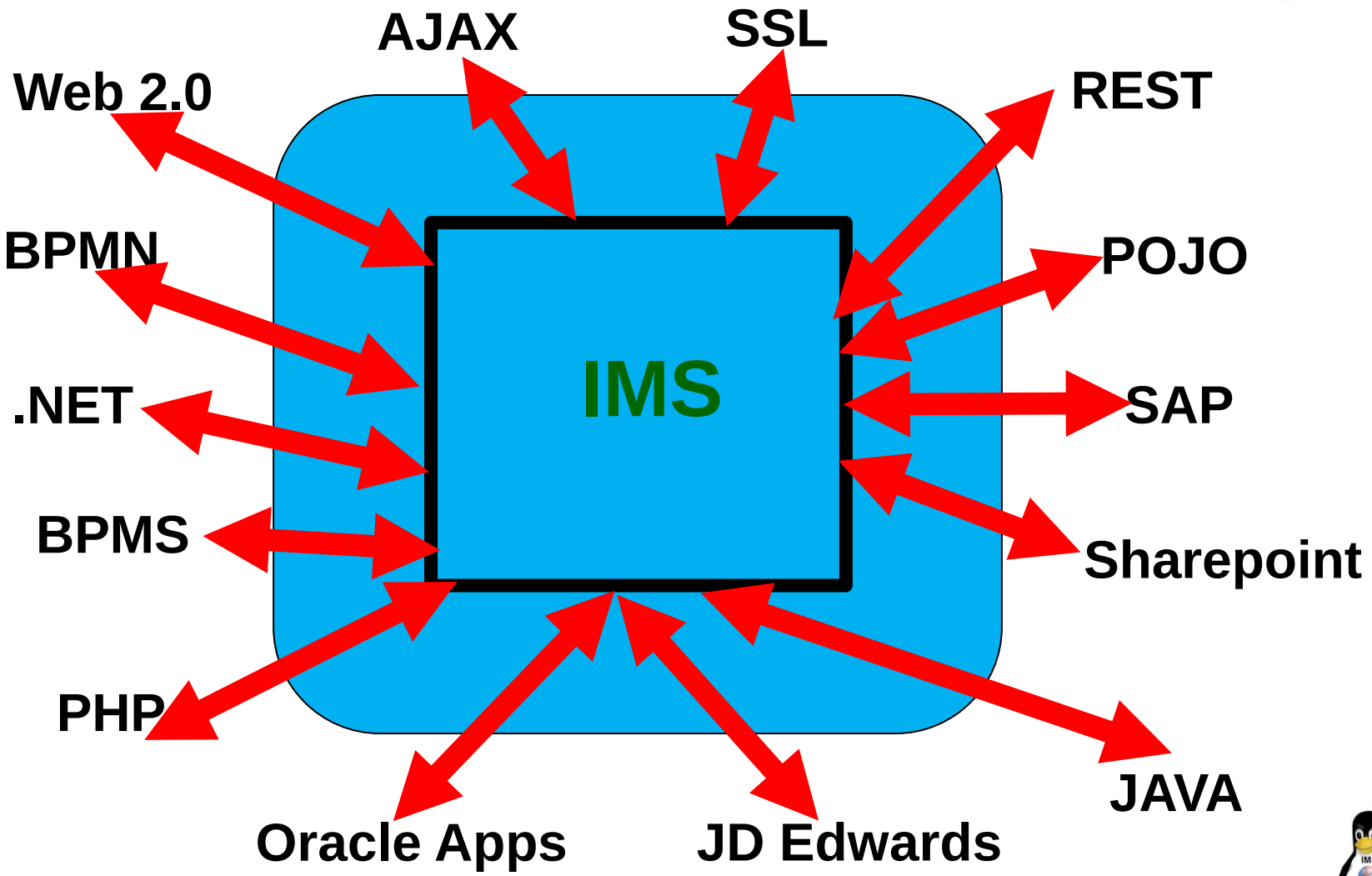

AJAX
SSL
Web 2.0
REST
BPMN
POJO
IMS
.NET
SAP
BPMS
Sharepoint
PHP
JAVA
Oracle Apps
JD Edwards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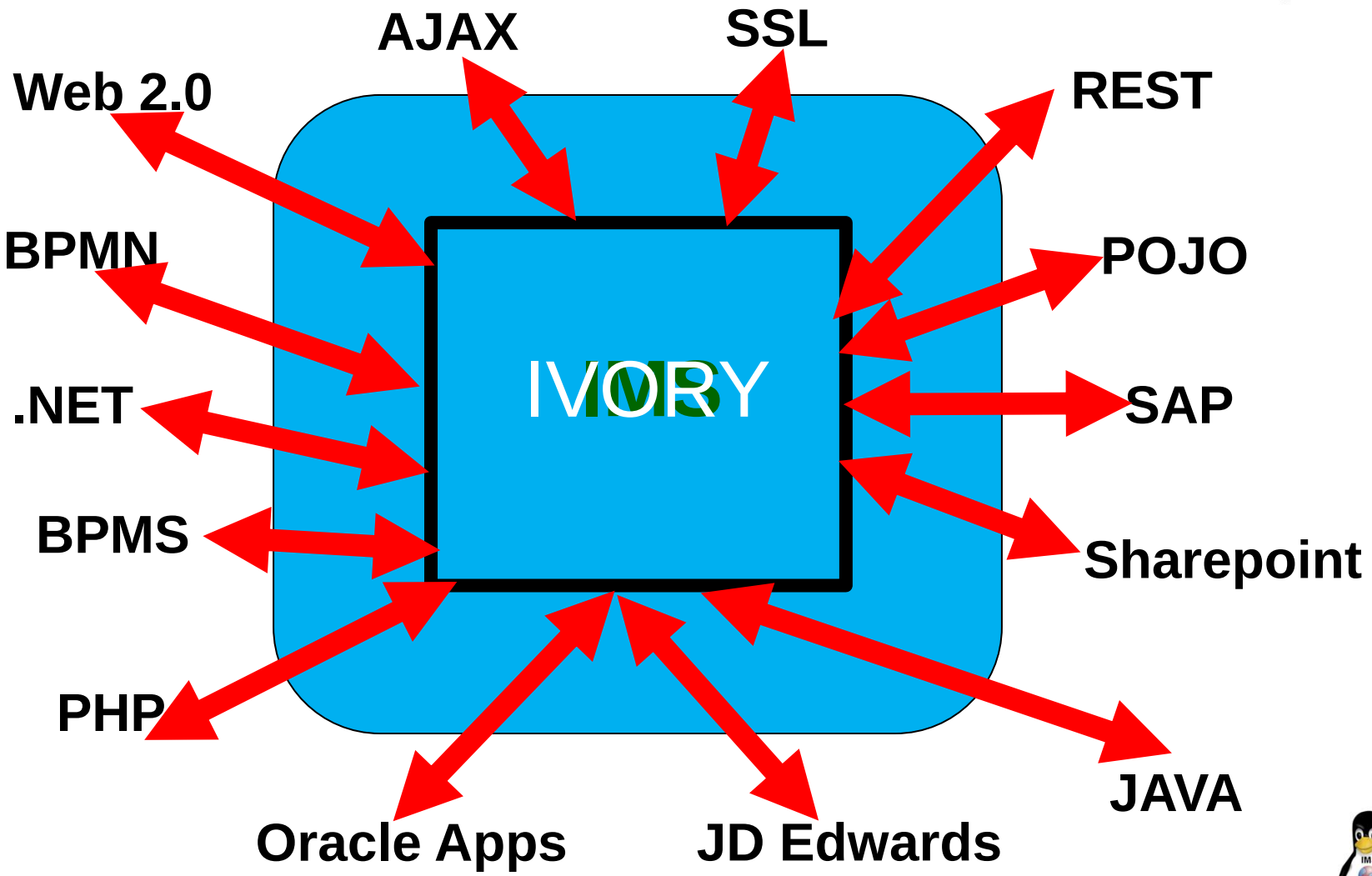
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Mainframe Integration Issues and Opportunities

3270

CICS

IMS

CSC Hogan Systems

CA IDMS™ CA Ideal™

DB2 VSAM

etc…

Web Services

SQL
(ODBC/JDBC)

ORACLE

SAP

Dist RDBMS

etc…

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Hard Questions

- Does your Service requests only match a single existing IMS transaction?
- Does your COBOL Copybook “exactly” match the required WSDL(Business Service)?
- Do you currently have future needs for XML schemas?
- Do you have the need for 1 IMS tran per service with no other mainframe artifacts?
- Are you are at the current latest edition/version of IMS?
- Do you only want to run the services strictly on the mainframe?
- Do you only have simple IMS transactions, no conversational IMS transactions?

Easy Answers!

Does your Service requests only match a single existing IMS transaction?

- Ivory allows you to use multiple IMS transactions in one service.
- Ivory allows you to orchestrate multiple IMS and mainframe artifacts
- Ivory does not require any other software installs
- Ivory does not generate code

Easy Answers!

Does your COBOL Copybook “exactly” match the required WSDL(Business Service)?

- Ivory allows you to use only the parts of the copybooks needed.
- Ivory support All WSDL data types
- Ivory allows Rapid iterations in service creation, with no code generation required
- Ivory supports all COBOL data types supported(including ODO and redefines)

Easy Answers!

Do you currently have future needs for XML schemas?

- Ivory allows you import reference WSDL with imbedded XSD's.
- Ivory fully supports importing industry WSDL and XSD's (i.e IFX, ACORD)
- Ivory supports most WSDL data types
- Ivory supports company specific XSD's

Easy Answers!

Do you have the need for 1 IMS tran per service with no other mainframe artifacts?

- Ivory allows multiple IMS transactions in a service.
- Ivory allows other mainframe artifacts(CICS, DB2 data(etc.) in a service.
- Ivory allows web services on other platforms to be included in a service

Easy Answers!

Are you are at the current latest edition/version of IMS?

- Ivory has no IMS release requirement.
- Ivory does not require WebSphere, it compliments it.
- Ivory does not requires RD/z, but can use WSDL created in it.

Easy Answers!

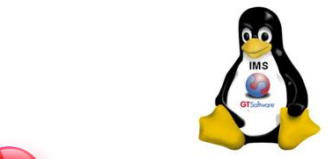
Do you only want to run the services strictly on the mainframe?

- Ivory Server can run on the mainframe (in CICS or started task).
- Ivory Server can run in zLinux (on an IFL).
- Ivory Server can run on Windows or Linux
- Ivory Server can exploit the zIIP and zAAP.

Easy Answers!

Do you only have simple IMS transactions, no conversational IMS transactions?

- Ivory fully supports IMS non-conversational transactions.
- Ivory fully supports IMS conversational transactions.



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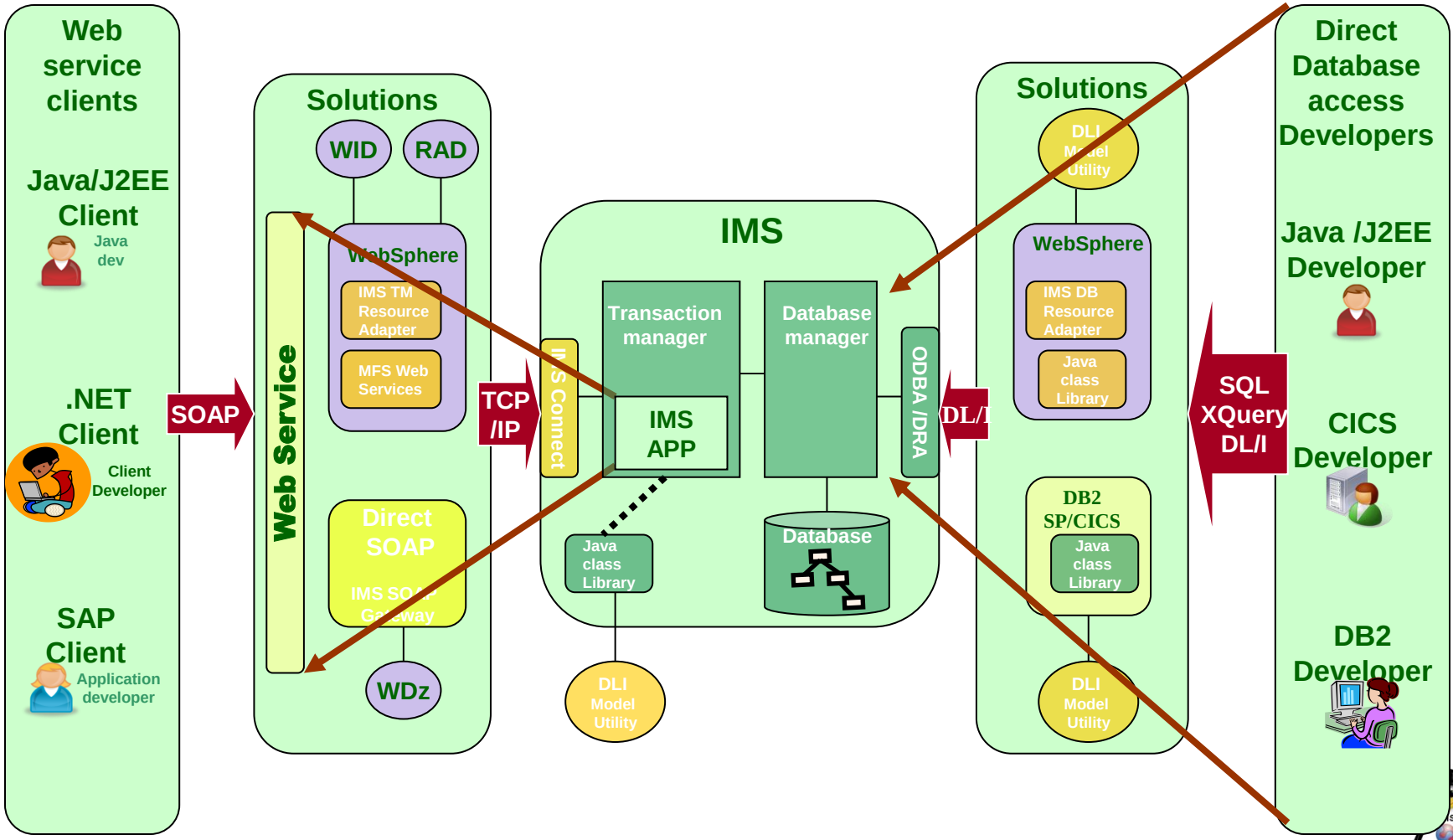
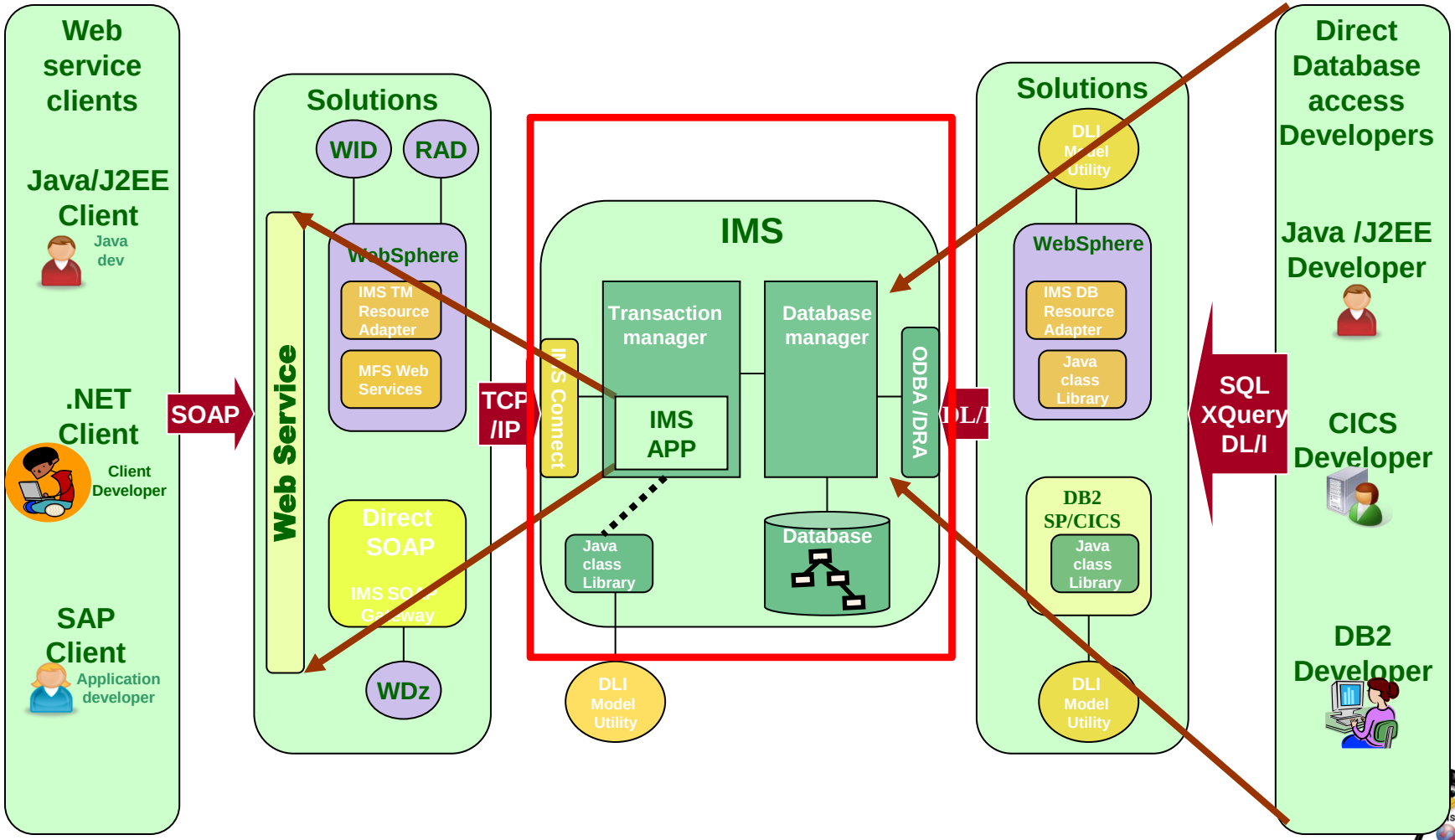
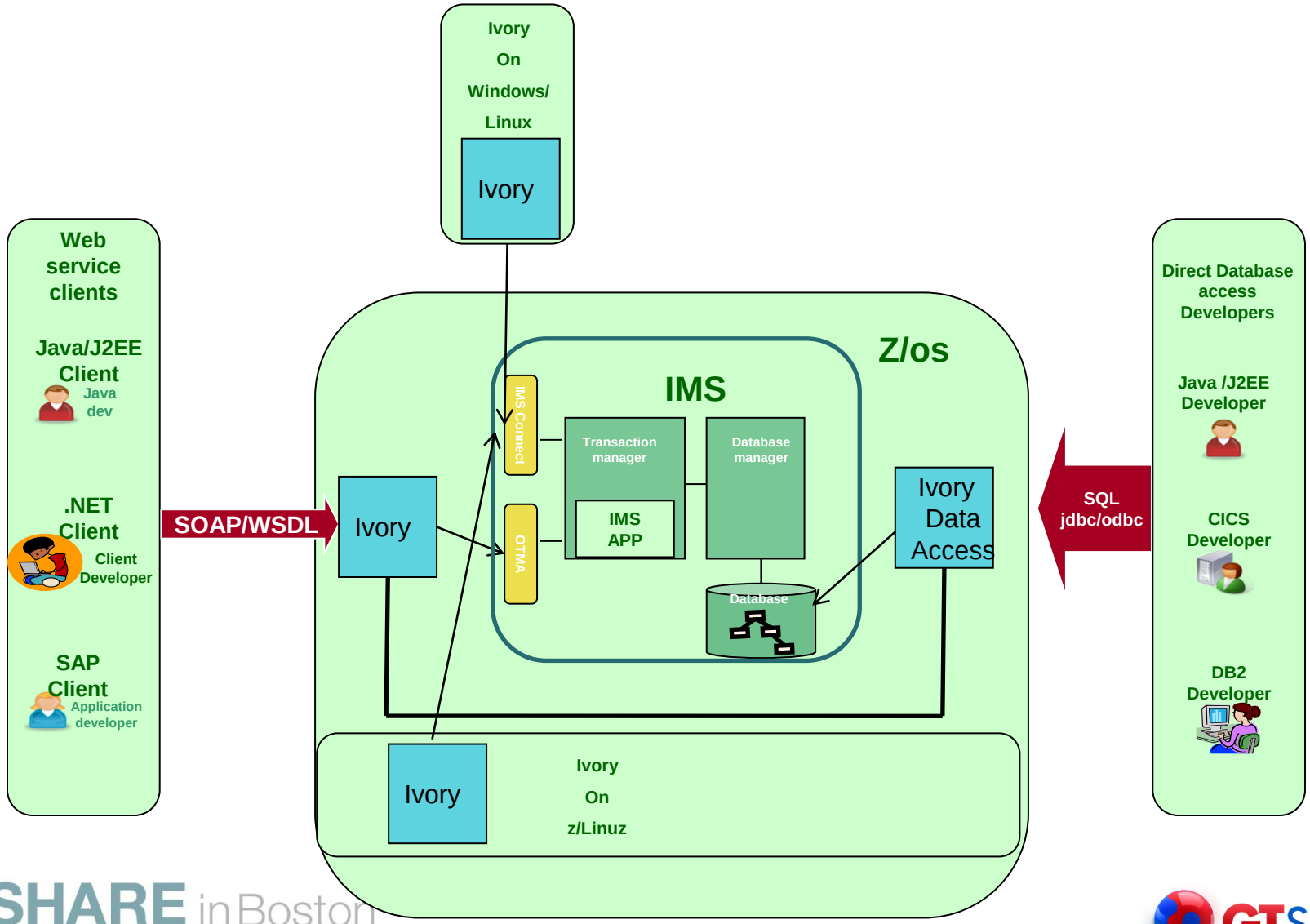
IMS Standard Architecture Slide



IMS Standard Architecture Slide



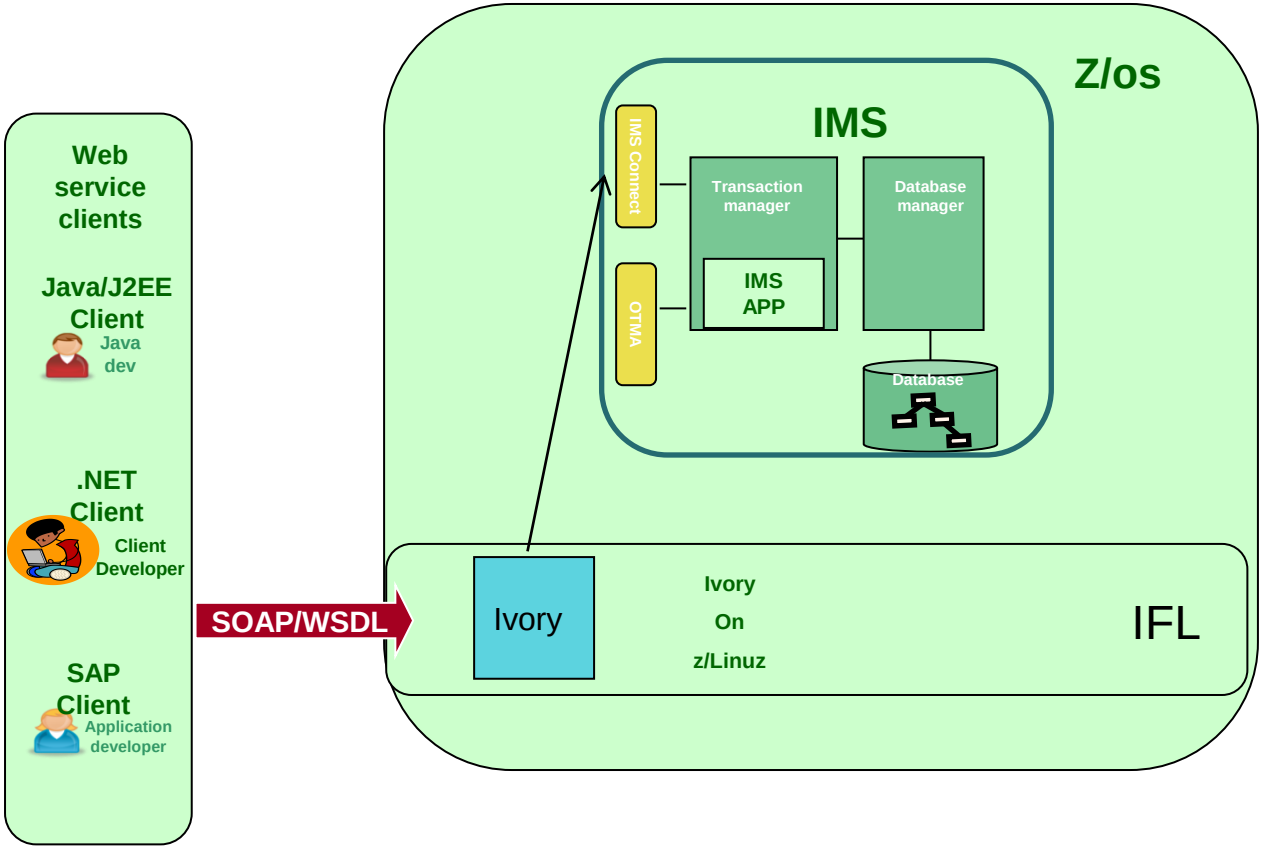
IMS Architecture with Ivory



Issues with Services on the Mainframe

- SOAP/XML Processing on the GPP = More MIPS
- New Compiled programs running on GPP = More MIPS
- More installed programs/products = More Support $$$
- No zIIP or zAAP use the IFL

IMS Architecture with Ivory(zLinux)

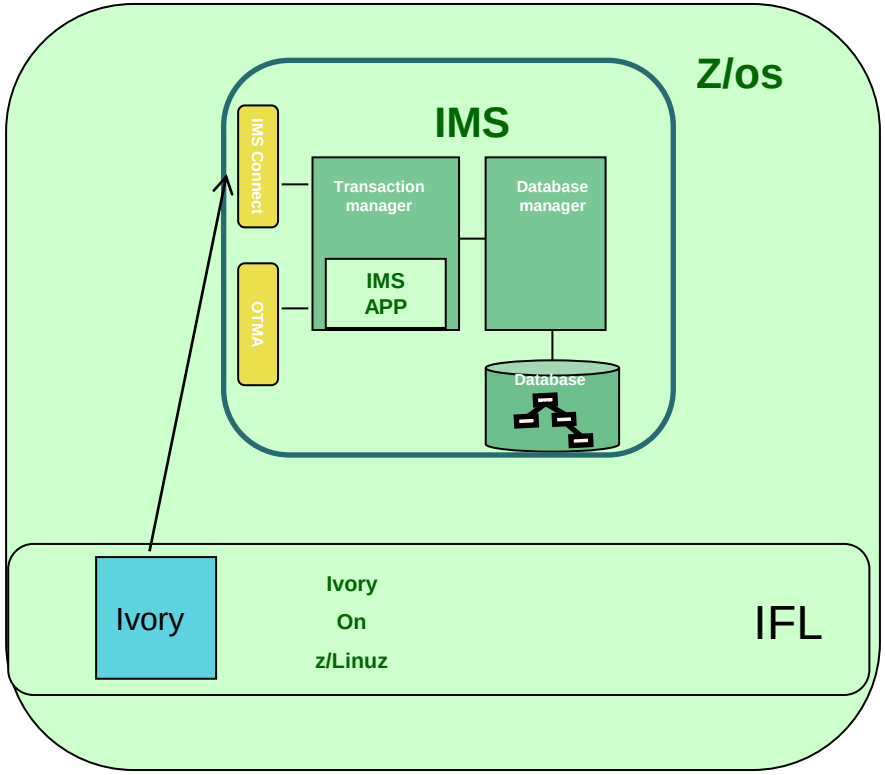


IMS Architecture with Ivory(zLinux)

AJAX

SSL

Web 2.0



REST

BPMN

POJO

.NET

SAP

BPMS

PHP

Sharepoint

Oracle Apps

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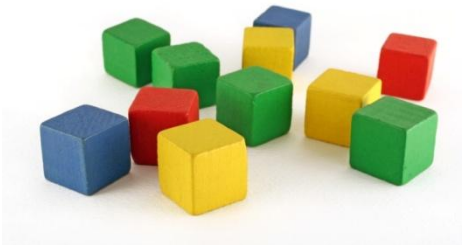
JAVA

Mainframe Integration Requirements

Requirement	Details	Implication
Service Interface Definition	Top-down and bottom-up	Removes layers of required software and complexity
Service granularity	Coarse and fine grained	Have the mainframe provide the RIGHT service based on need
Mainframe sub-system support	CICS, IMS, Batch, CA IDEAL, CA IDMS, Natural, Data, etc.	One tool for all integration needs reduces training and complexity
Speed	Development and execution	Deliver quickly with the required performance
Deployment	On the mainframe using specialty engines, or off the mainframe	Control costs related to integration and SOA workload
Flexibility and Dynamism	Today's choice shouldn't effect tomorrow	Quickly adapt to changing requirements and cost control strategies

Developing Services with Ivory Easy!!

- Easy to learn Windows-based development tool
- Any service can include CICS, IMS, CA IDMS, CA IDEAL, Natural, Batch, Data, and Web services
- Easy Top-down and bottom-up service development (with orchestration)



Fine-grained Web Services

Coarse -grained Web Services

IMS and Ivory

- Service Enable IMS transactions
  - Including Support for IMS Conversational
  - Support for MFS as service definition
  - LTERM Name if needed
  - Composite Service Support
  - Support for all mainframe artifacts
  - MFS Mod 3
  - Outbound Support to any remote system
  - REST Support (available in August) for IMS
  - JCA Support(coming……) for IMS

The Ivory IMS Point Node Easy !!!

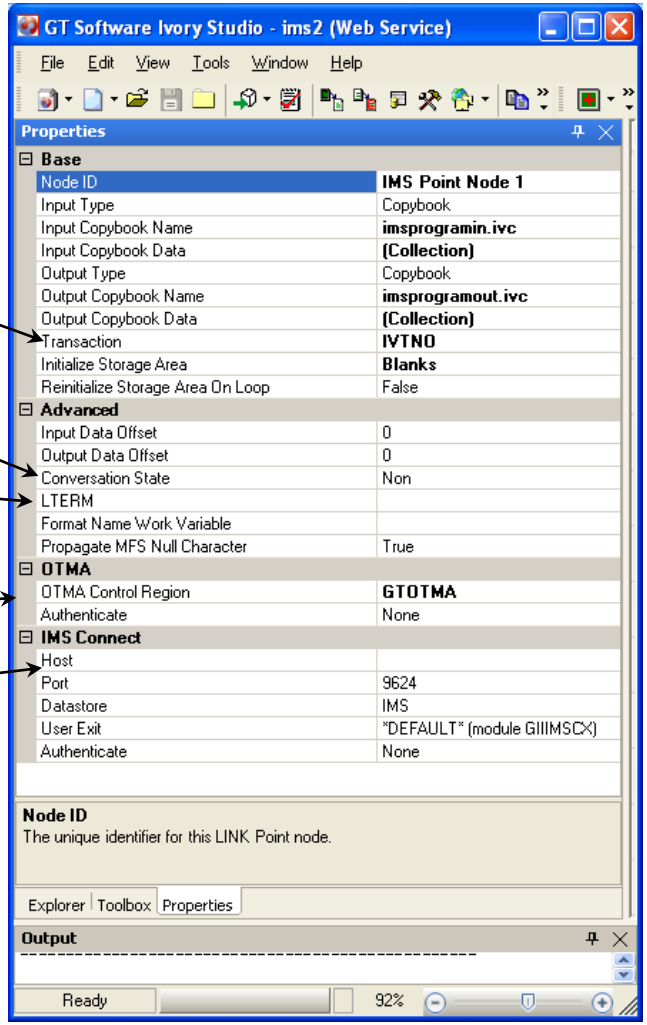
Transaction Name

Conversational Support

LTERM

OTMA Name

IMS Connect

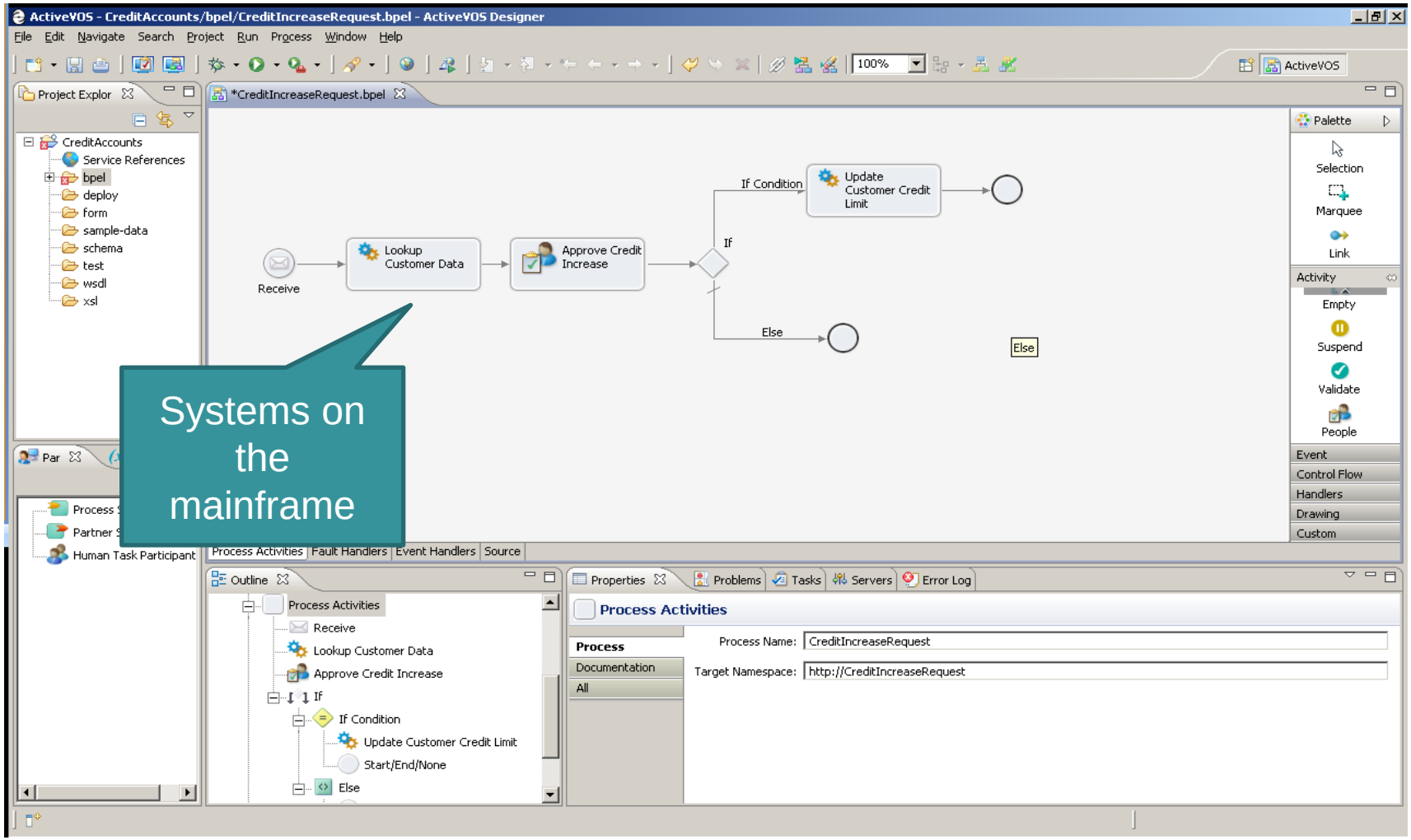


IMS and Ivory Other Implementations

- Batch Support
  - Enabling IMS Batch jobs to call external services
  - Server can be linked in for performance
  - All necessary code and linkage created

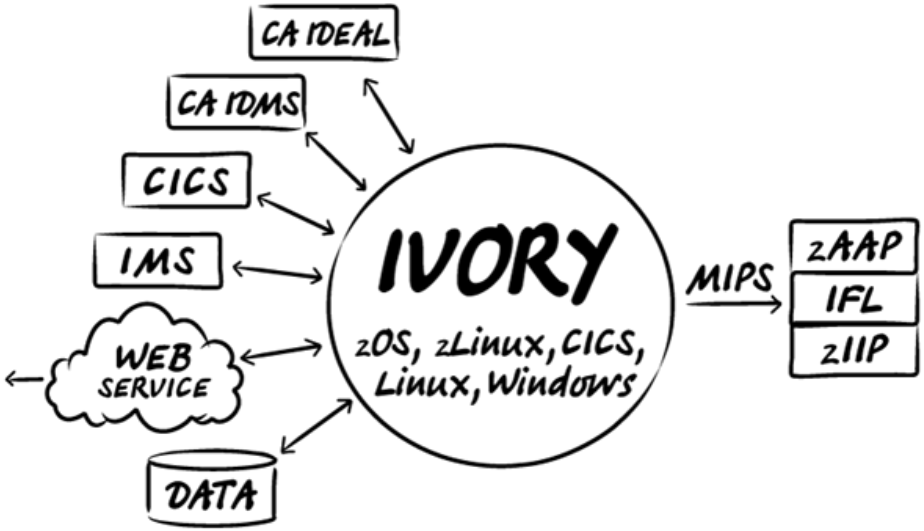
- Complete IMS Outbound Support
  - IMS transactions enabled to call external services
  - (like SAP, Oracle, Sharepoint etc)

Ivory and BPMN(ActiveVOS)

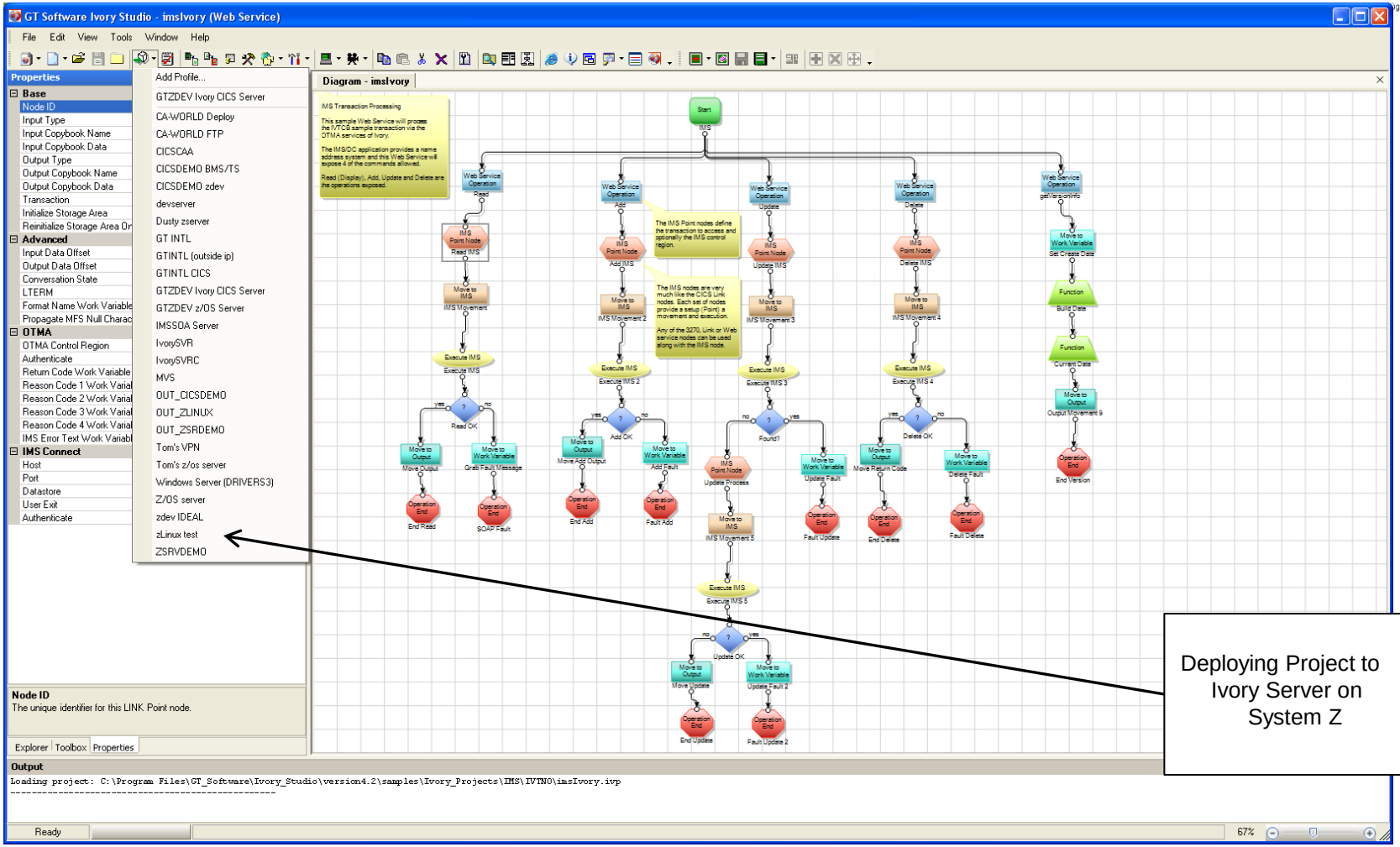


Deploying Services with Ivory

- Services deployed “instantly”
- Deployed to **mainframe** (CICS, Started task, z/Linux) or **off-platform** (Windows or Linux)
- Leverages specialty engines to *slash* CPU consumption

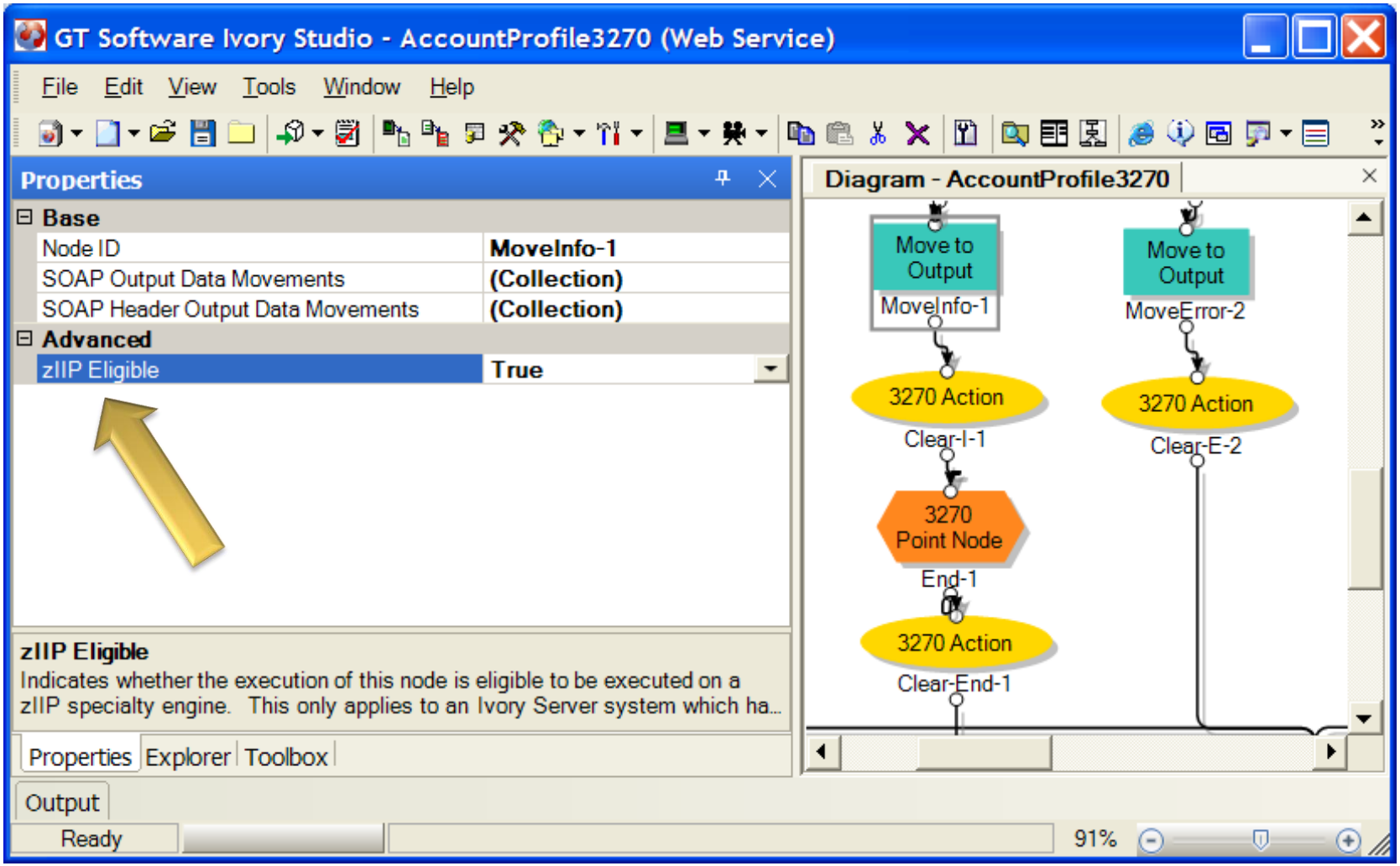


Deploying to Linux on System Z



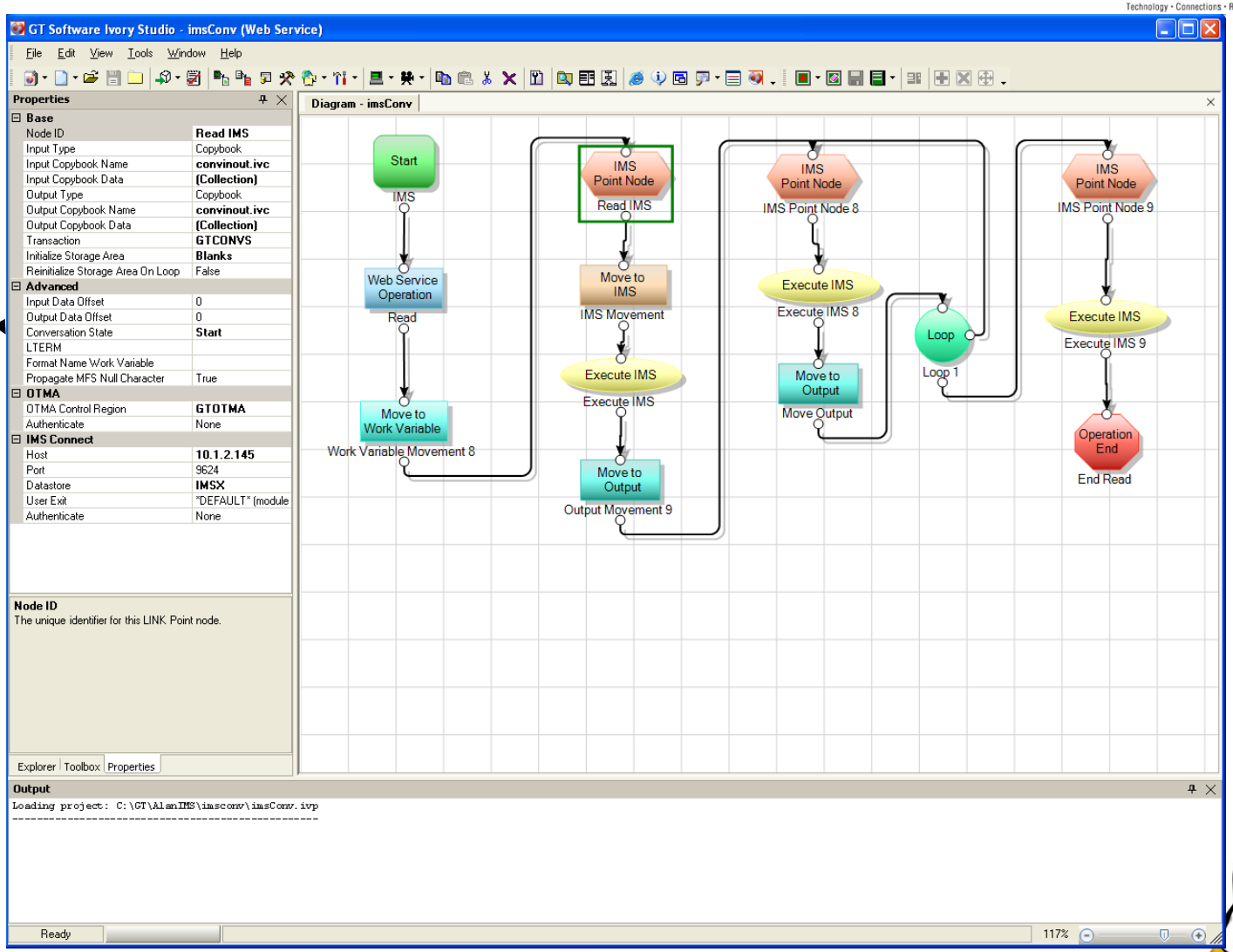
Deploying Project to Ivory Server on System Z

Ivory uses the zIIP



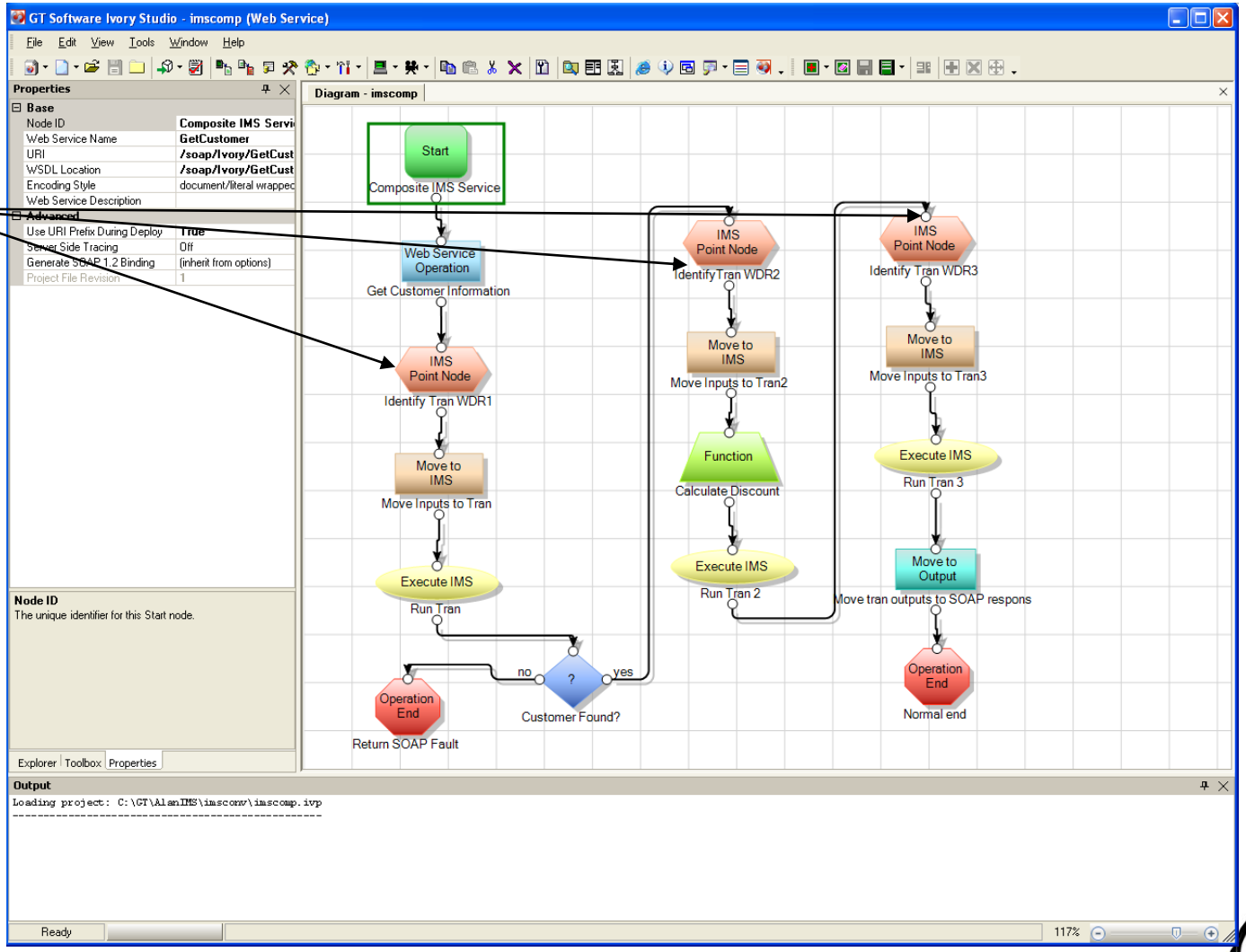
IMS Conversational as Service Easy!

Conversation State

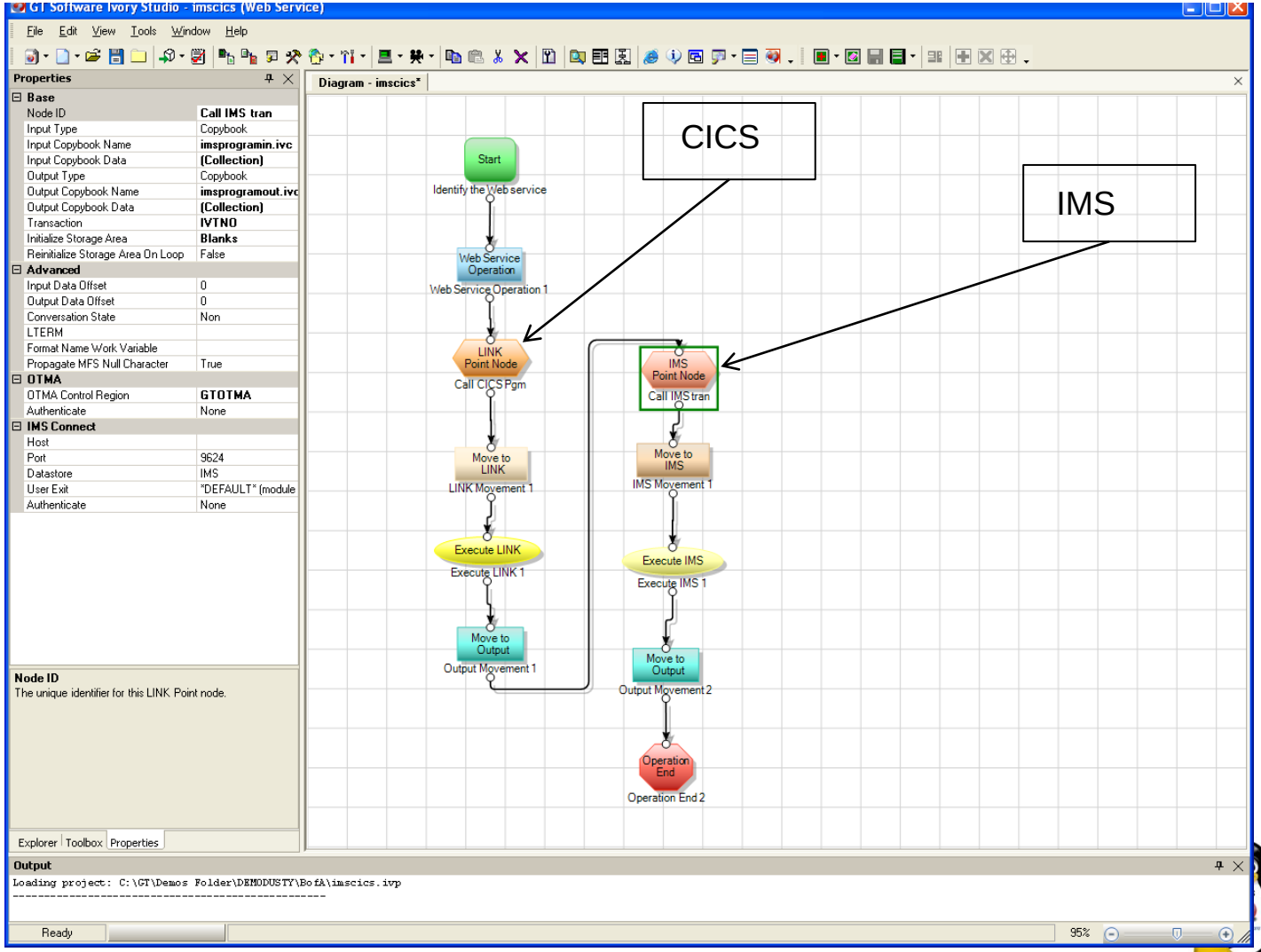


IMS Composite as Service Easy!!!

Multiple IMS Transactions



IMS & CICS in the same Service Easy!



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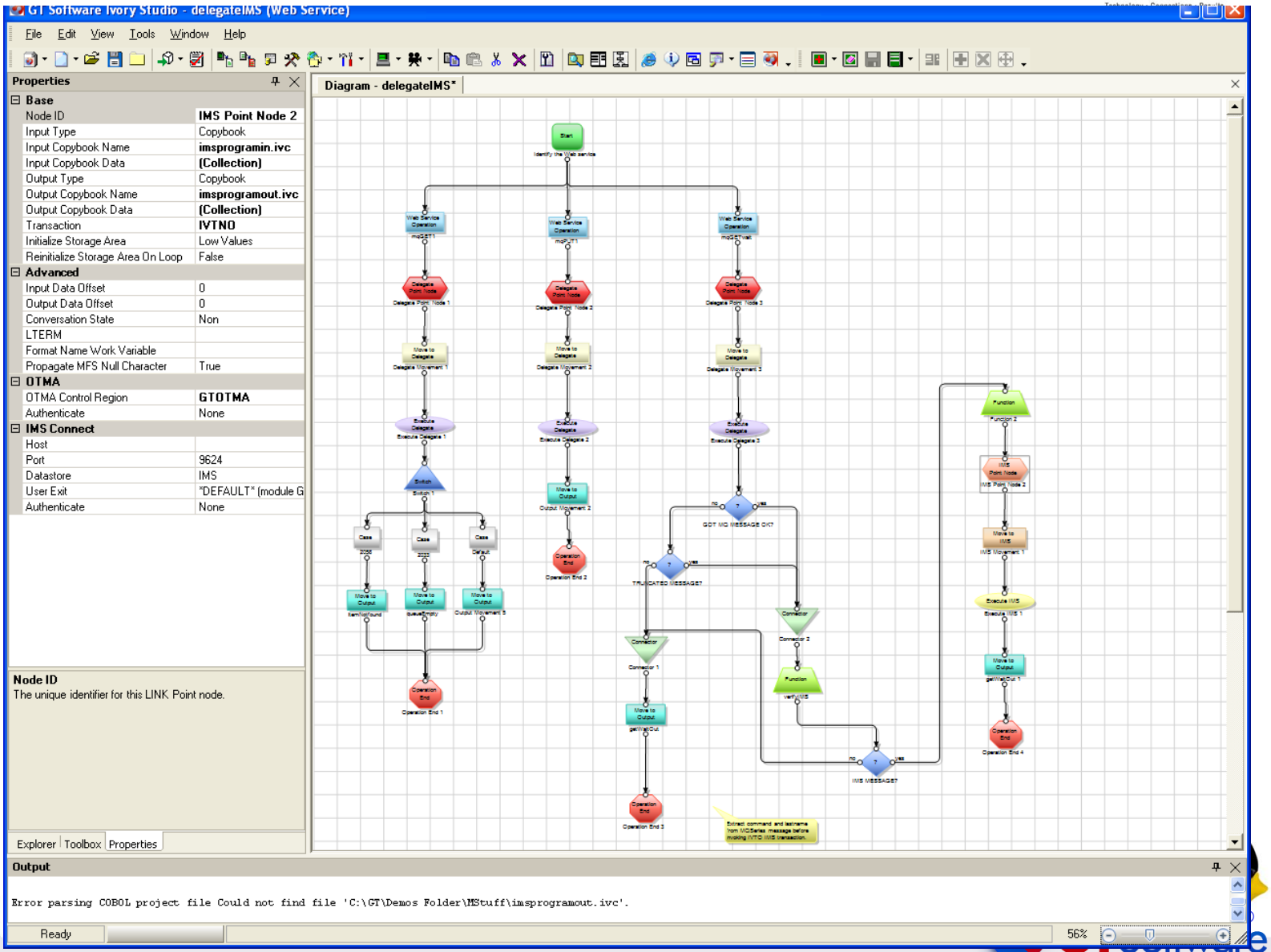
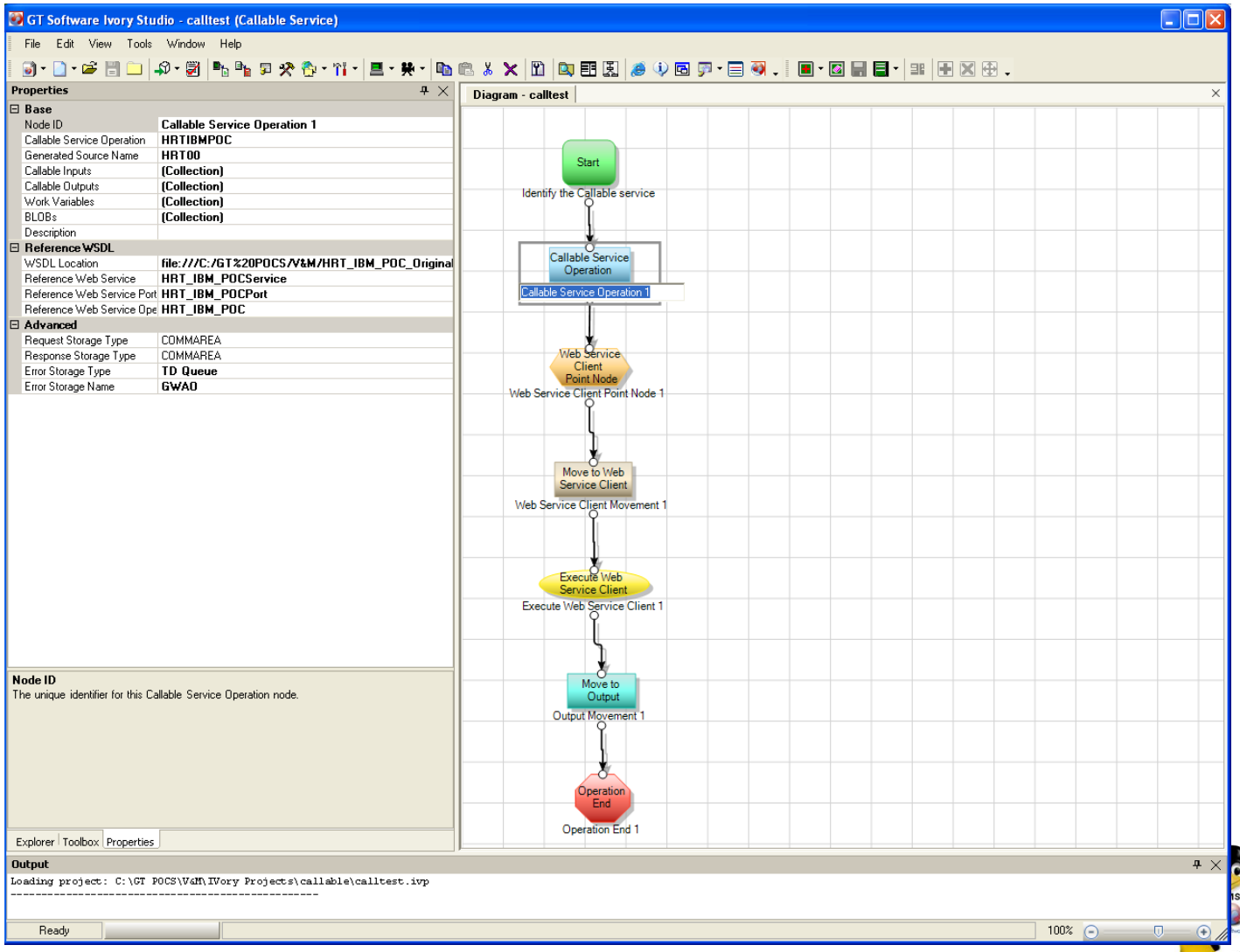
Custom code, MQ and IMS Easy!



IMS Calling external services Easy!!



IMS Calling external services Easy!!

- IMS transactions calling SAP processes
- IMS transactions calling Tandem processes
- IMS transactions calling Oracle processes
- IMS transactions calling Microsoft Sharepoint
- IMS Batch jobs calling distributed services

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Real-World Results

- Large South African Bank has over 800 IMS services in production. Over 3 million service invocations per day(moving to Ivory on zLinux.
- Large US based insurance firm that initially deployed to z/os moving all services to zLinux.
- Many others are looking.

Recommendations

- Linux for System Z, can be used to off-load workload and get to IMS

- Mainframe Modernization of your IMS systems can be done Easily!!!!!!!!!!!!!!!!