Planning your Migration From IBM WESB to IBM Integration Bus

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Agenda

- Approaches to conversion
- WESB Convert Tool
  - What's new in the open beta
  - WESB Convert Tool Demo
  - Extending the conversion tool

Approaches to conversion

Possible approaches to conversion

There are **two** key parts to the conversion:

- Future integration solutions
- Existing integration solutions

Possible approaches to conversion

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- Future integration solutions
- Existing integration solutions

Look to move future development of integration solutions to IBM Integration Bus.

Limiting future development on the WebSphere ESB platform will minimise the potential conversion work. If future development is required on WebSphere ESB, then structuring this in a IIB friendly manner is sensible to allow straight forward conversion.

Possible approaches to conversion

There are two key parts to the conversion:

- Future integration solutions
- Existing integration solutions

Understand the existing WebSphere ESB estate and determine the best approach for conversion to IIB.

Conversion of existing integrations is normally handled using a combination of the following strategies:

- Run in parallel
- Gradual migration toward IIB
- Immediate migration towards IIB

Possible approaches to conversion

- Run in parallel – Wait
  - Move future development of integration solutions to IIB.
  - Start training activities to understand IIB as the target platform for future applications
  - Wait to convert existing WebSphere ESB estate.
  - Build long term plan for conversion to IIB.
  - Consider the infrastructure and license requirements for running in parallel
- Gradual migration toward IIB
  - Initiate conversion pilot to build skills and learn lessons.
  - Phased conversion of integration solutions.
  - Run in parallel until conversion complete.
  - Consider the infrastructure and license requirements for running in parallel
- Immediate migration towards IIB
  - Determine the sizing of the overall migration and the associated risk.
  - Determine if a fall back strategy is required
  - Generally only recommended for customers with a limited WebSphere ESB deployment or at the early stages of deployment

Considerations for conversion

- **Topology**
  - From WESB Golden Topology to..
  - The choice of topology depends on the customers specific needs.
  - Starting point would an active – active topology with multiple parallel IIB nodes. More later..
- **Monitoring**
  - Similar granularity of monitoring.
  - IBM or 3rd party external monitoring solutions.
  - IIB built-in monitoring and statistics support.
- **Security**
  - WESB based on WAS security model.
  - IIB supports LDAP, SSL, User Token, SAML etc.
  - Security gateway..
- **Administration and operations**
  - WESB based on WAS admin model
  - IIB supports scripting for administration and operations.
- **Applications**
  - Analyze your WESB applications and categorize according to the ease and approach of conversion. ….
- **Architectural approach**
  - Consider your WESB architectural approach and plan an architectural approach in IIB.
  - Similarity of approach will effect the conversion strategy for applications.

Application Conversion Categories

- **Category 1: Tool accelerated**
  - The conversion tool is a sensible approach and the resulting applications will require limited customization.
  - Extensive use of the tool as-is for conversion.
- **Category 2: Tool assisted**
  - A standard template is used across multiple integration solutions and customization of the conversion tool or pattern templates represent a sensible approach to accelerate the conversion.
  - Extensive use of the tool with customizations.
- **Category 3: Manual conversion**
  - The core functionality is available within the product.
  - The integration solution may contain extensive custom use of custom code.
  - Due to the complexity of the solution a literal mapping of primitive to corresponding nodes would provide a sub-standard solution.
  - The customer may wish to combine conversion with a change of architectural approach.
  - Some use of the tool to kick start conversions.
- **Category 4: Custom solution –**
  - Similar to category 3, custom coding need in additional to core functionality in the product.

Conversion Offerings from IBM SW Services and Partners

ISSW Summary offerings

Conversion Introduction (CI)

GOAL: Client wishes to understand the IBM Integration software strategy in more detail and what they might need to consider to plan for a successful conversion from WESB.

FORMAT: Remote presentations and conference calls (<= 4 hours duration in total)

Conversion Planning Workshop (CPW)

GOAL: Client wishes to understand more detail on the implications of conversion as it specifically relates to their own deployment of WESB in order to build an initial conversion roadmap or plan.

FORMAT: Conducted on site in IBM consultant led workshop (3-5 days)

Conversion Quick-Start (CQS)

GOAL: Client participated in a CPW (or equivalent) which has resulted in selection of this offering, which is a typical “Quick Start” style engagement to accelerate client adoption.

FORMAT: This activity will be conducted at client location by ISSW in IBM consultant led workshops and hands-on mentoring. (typically 2-4 weeks).

Conversion Quick-Win Pilot (CQWP)

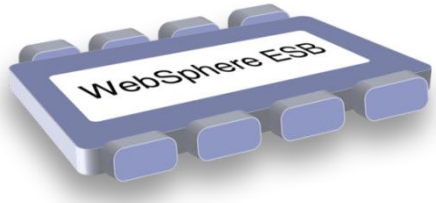
GOAL: Client participated in a CPW (or equivalent) which has resulted in selection of this offering, for delivery of a well-defined pilot project to accelerate conversion and build confidence

FORMAT: On site pilot project within an agreed time frame

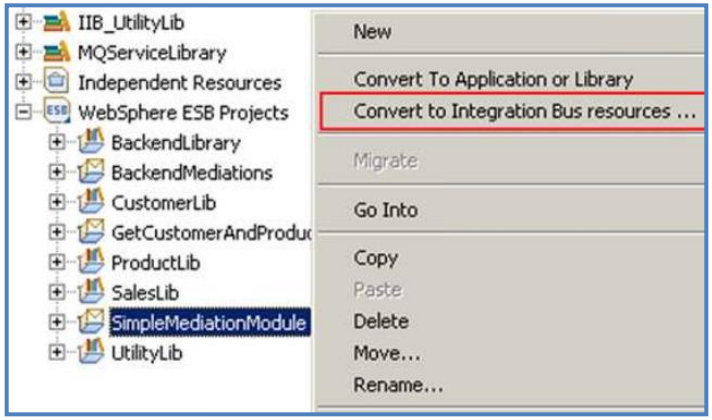
WESB to IIB Conversion tooling

Accelerate conversion of WebSphere ESB source artefacts to IIB.

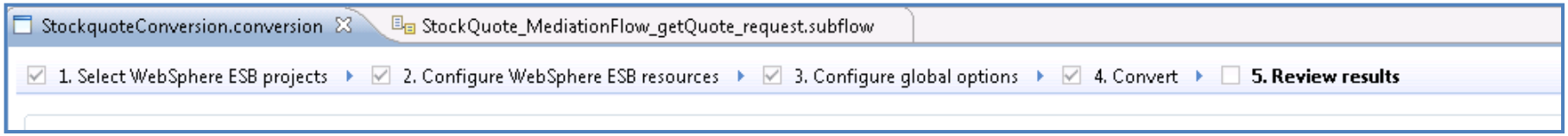
Conversion from WebSphere Enterprise Service Bus



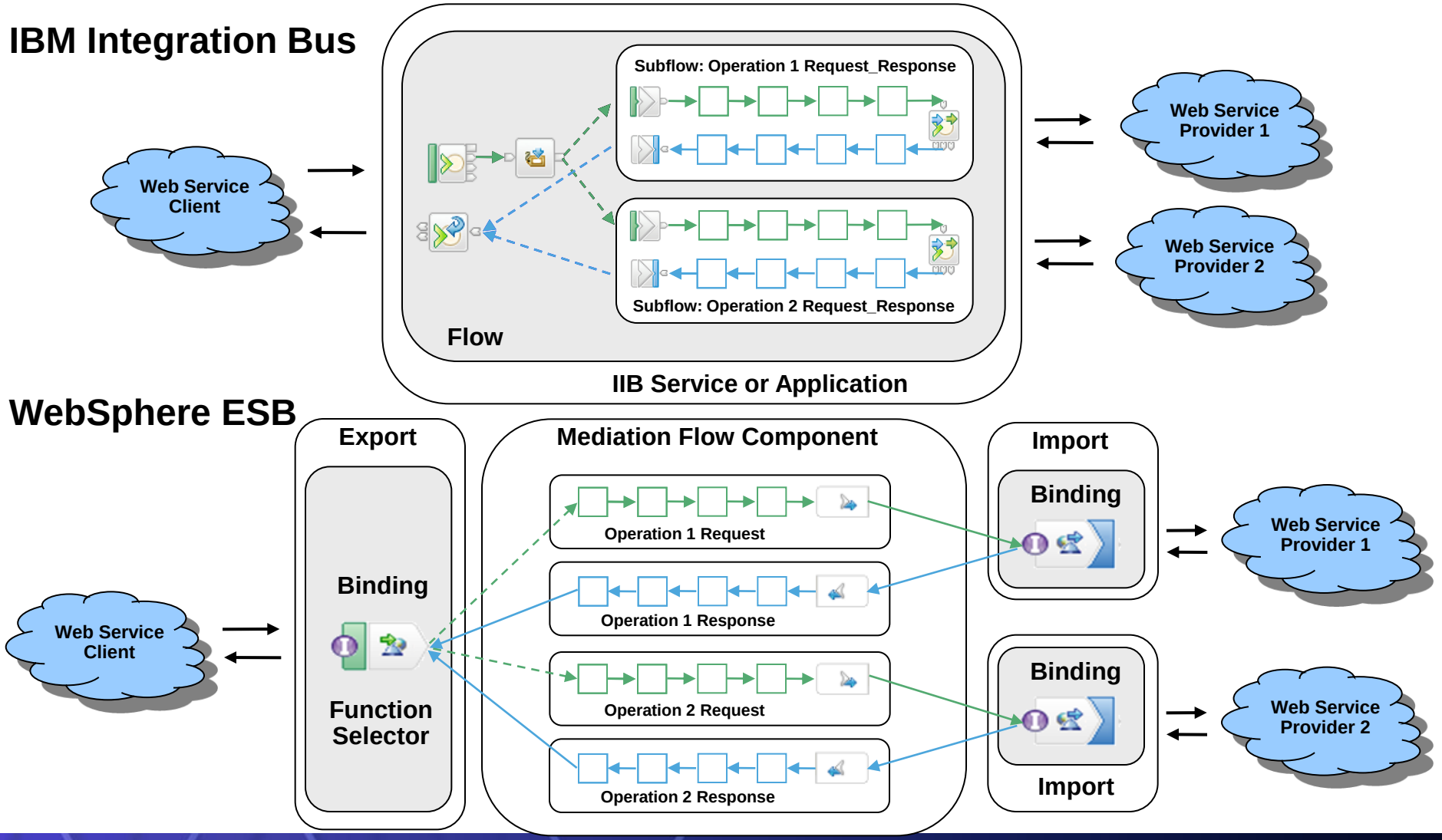
- Built-in conversion tools for WESB source assets
  - Accelerate conversion of WESB source assets to IIB source assets.
  - Tool improvements increase breadth and depth on conversion. Reducing further work.
  - Open framework for user and partner extensions to allow customization of the tool.



- Simple workflow creates IIB resources
  1. Export WESB PI from IID
  2. Import mediations into Eclipse Toolkit
  3. Right-click “convert” task to start conversion
  4. Follow guided editor to generate resources
  5. Task List will identify remaining manual steps
  6. Iterate as necessary



Architectural Concepts



What's new in the tool ..

- At IIB v9 the tool offered some capability to convert web services based integrations.
  - Single export, single mediation component, single import.
  - Web services binding only.
  - Built-in converters for few mid-flow primitives
- New capabilities in IIB open-beta (current) expand the breadth and depth of conversion
  - Convert multiple exports with any binding
  - Convert multiple connected mediation components with multiple interfaces
  - Built-in converters for most mid flow primitives
  - WESB style encapsulation of logic
  - Enhanced Documentation
- What next ?
  - Look out for further enhancements as they appear in the IIB open-beta :

https://ibm.biz/iibopenbeta

https://ibm.biz/iibwesbconvert

IBM's plans, directions, and intent are subject to change or withdrawal

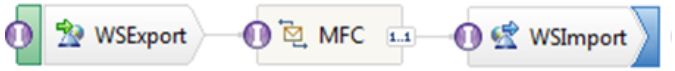
What's new in the tool ..

IBM's plans, directions, and intent are subject to change or withdrawal

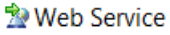
IIB v9(GA)

Some built-in primitive converters

Single Export Single MFC Single Import



Built-in converter for WS binding only



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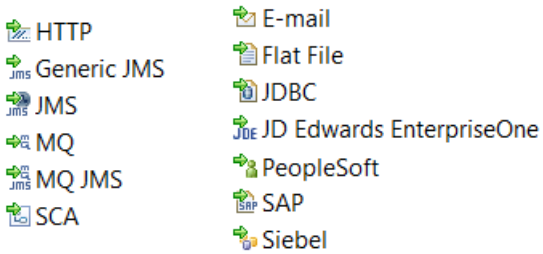
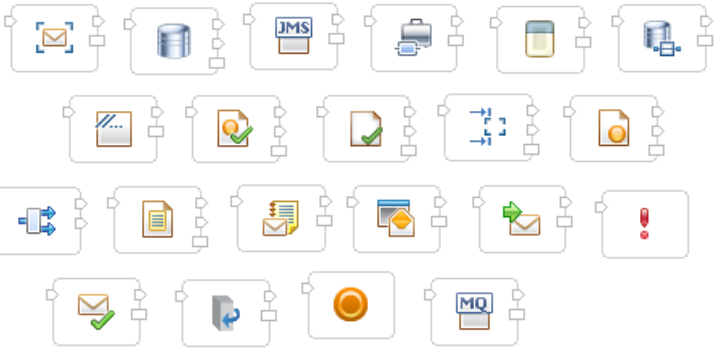
New built-in binding converters



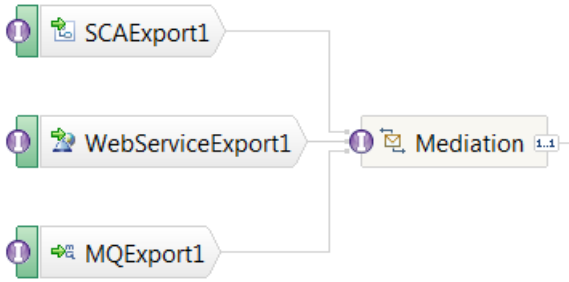
New Multiple Mediation Component

IIB open-beta (current)

New built-in primitive converters



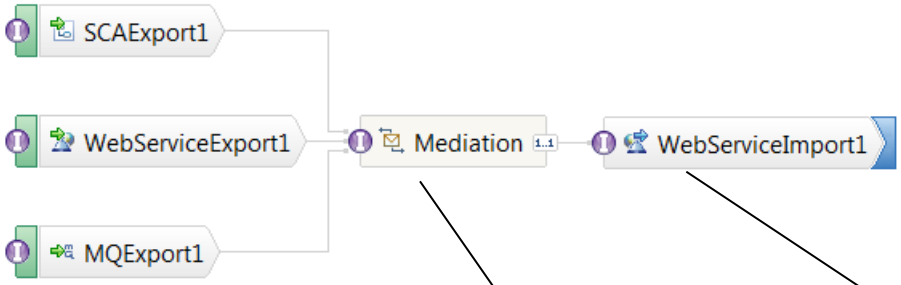
New Multiple Export



Look out for further updates at : https://ibm.biz/iibopenbeta

WESB Convert Tool

Example Mediation Module - IID

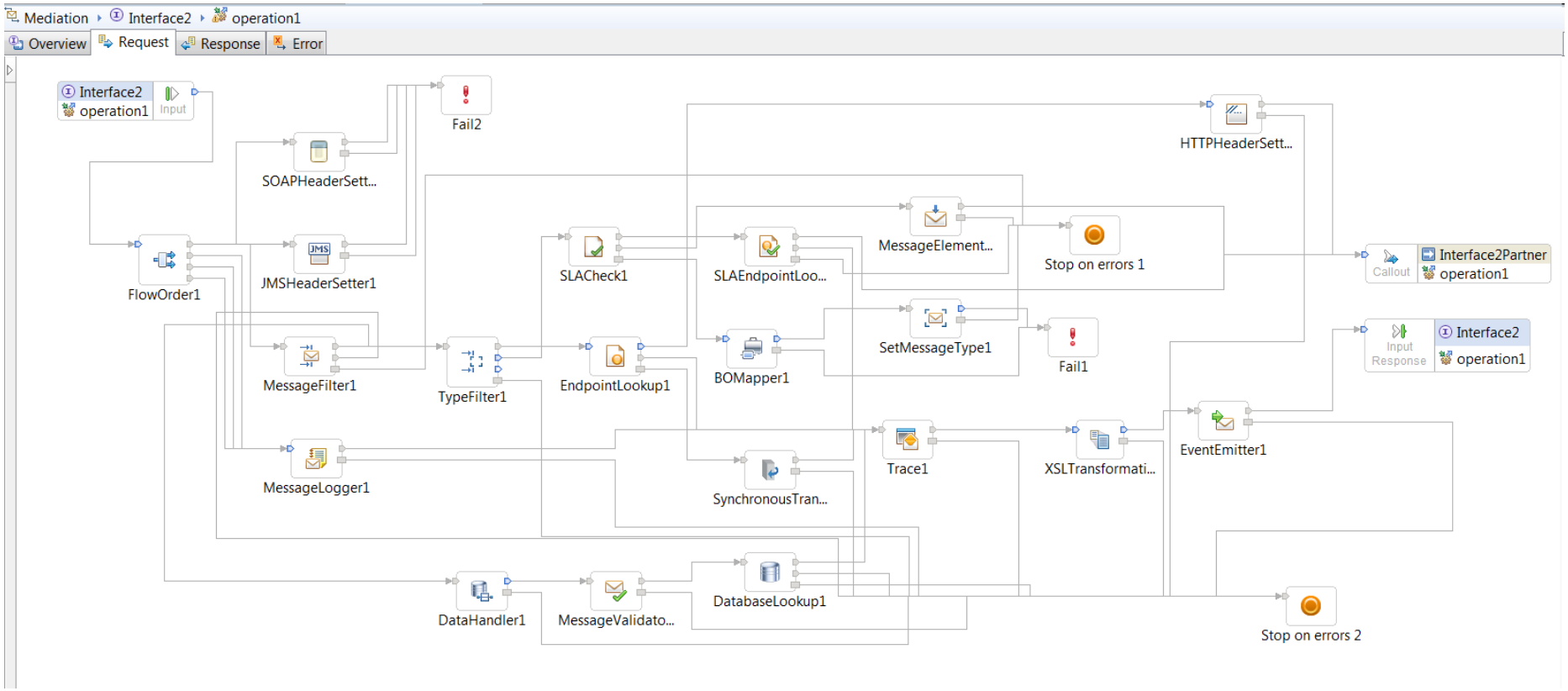


Multiple Exports with different bindings

Mediation Component with multiple interfaces

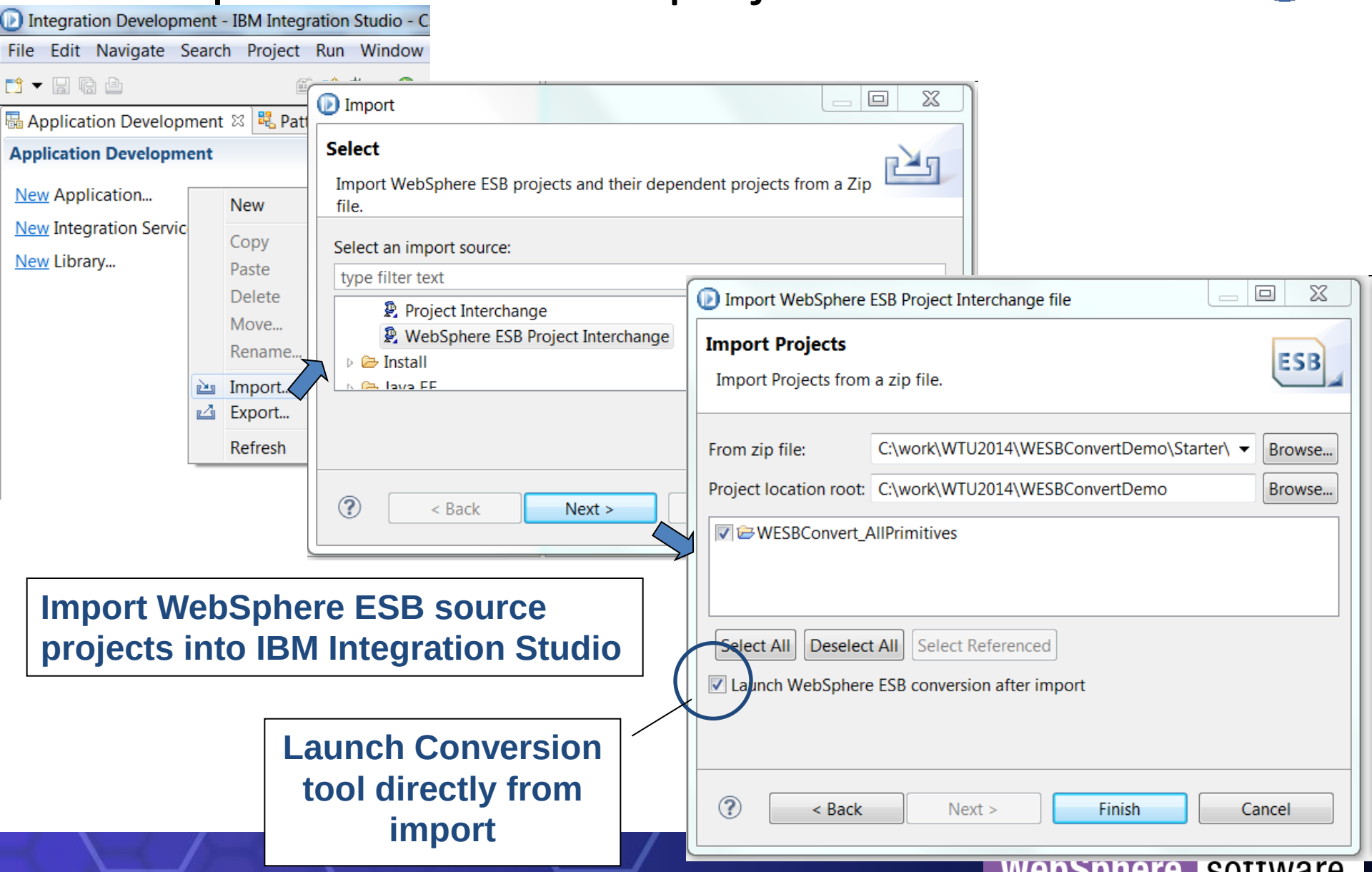
Import with Webservices binding

Example Mediation Module - IID



Message Flow with wide variety of primitives and complex wiring

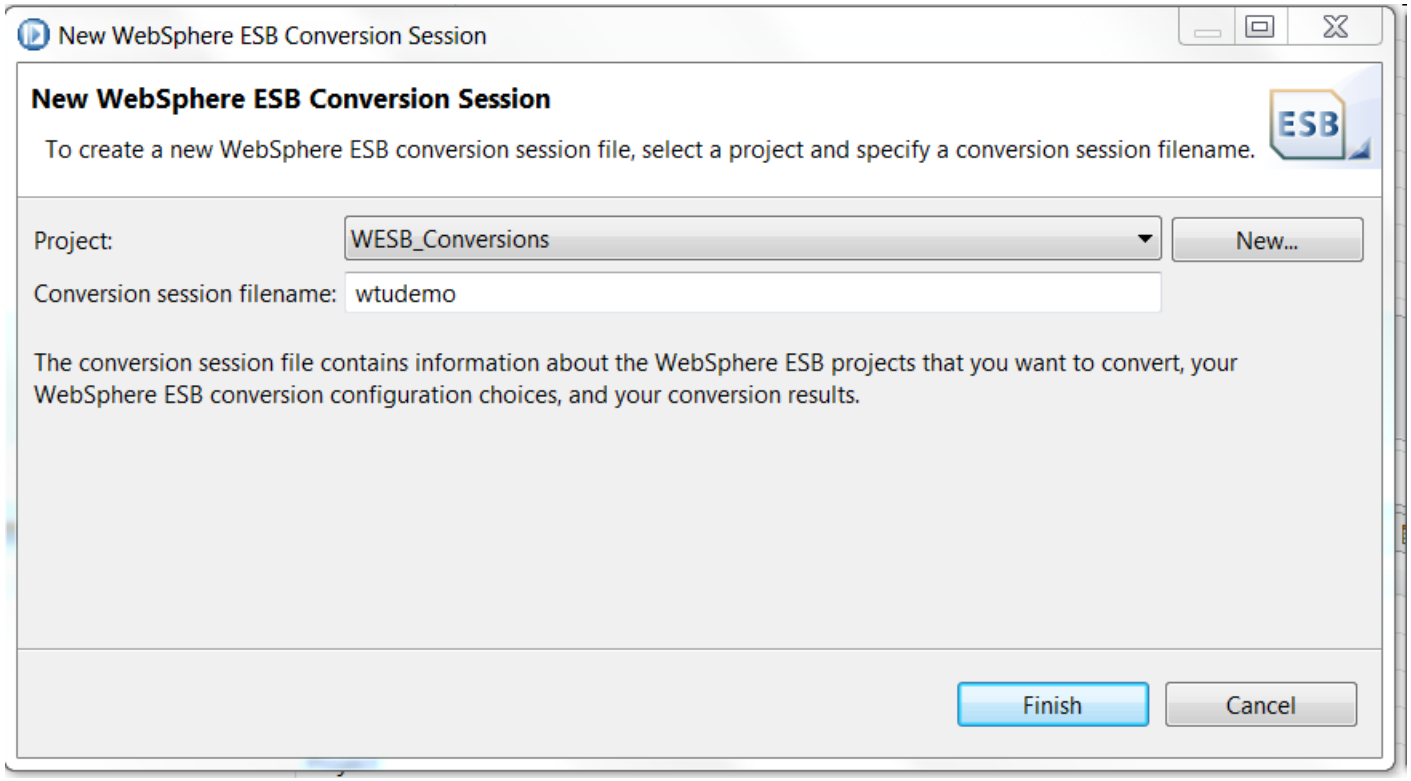
Import WESB source projects into IIB Studio



Import WebSphere ESB source projects into IBM Integration Studio

Launch Conversion tool directly from import

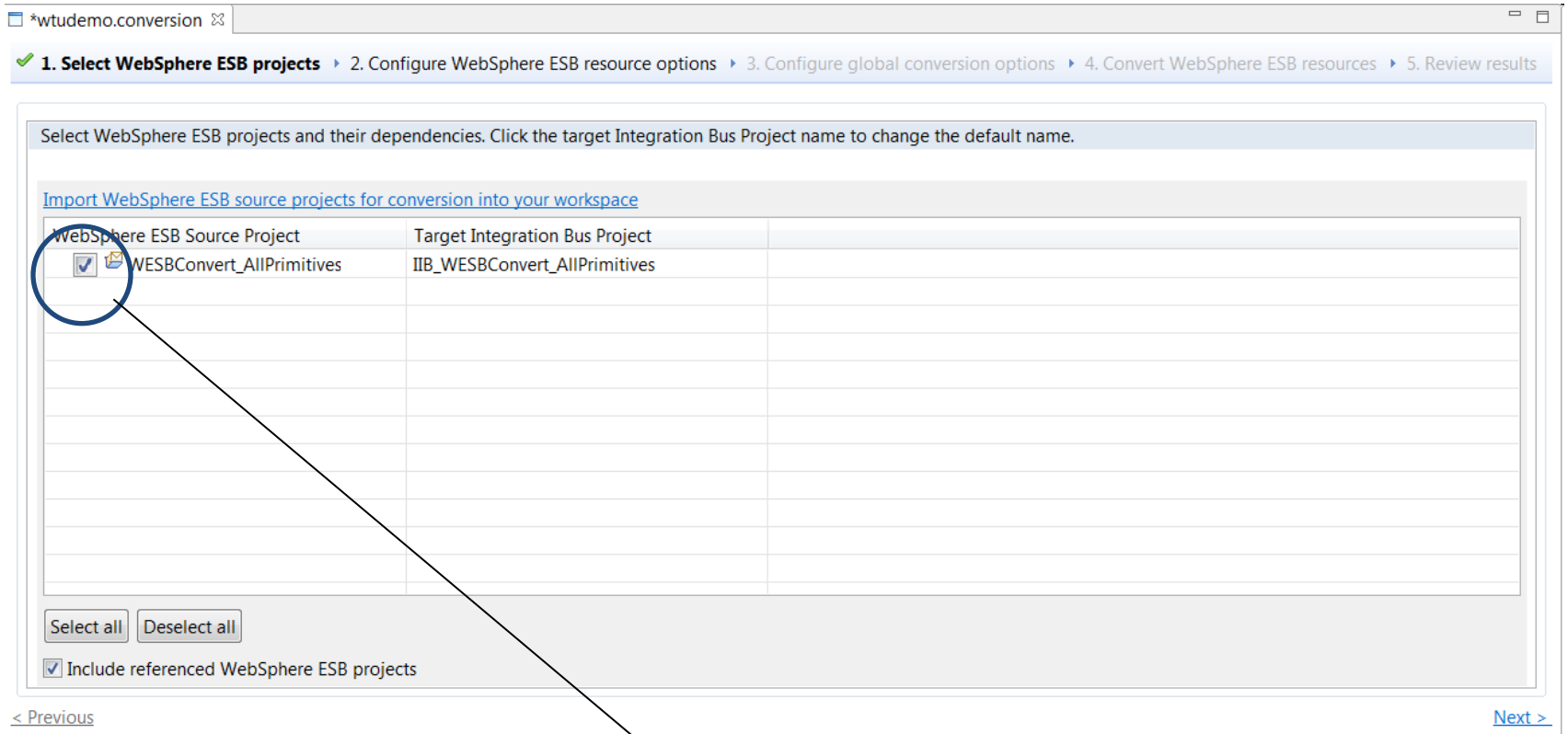
Create WESB Conversion tool session



Create a new conversion session.

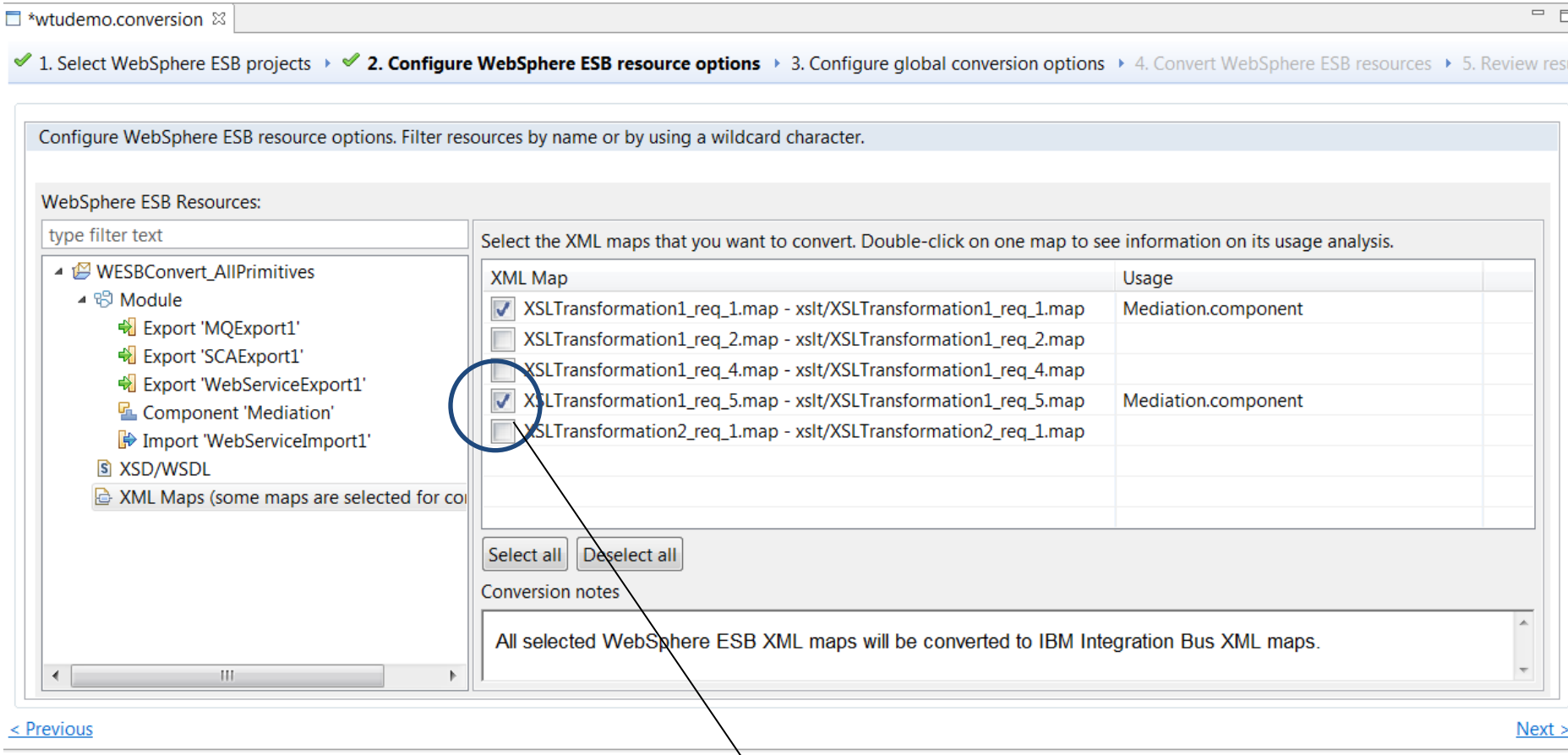
This will persist any state associated with the conversion, such as TODO tasks generated by the conversion.

WESB Conversion tool in IIB Studio



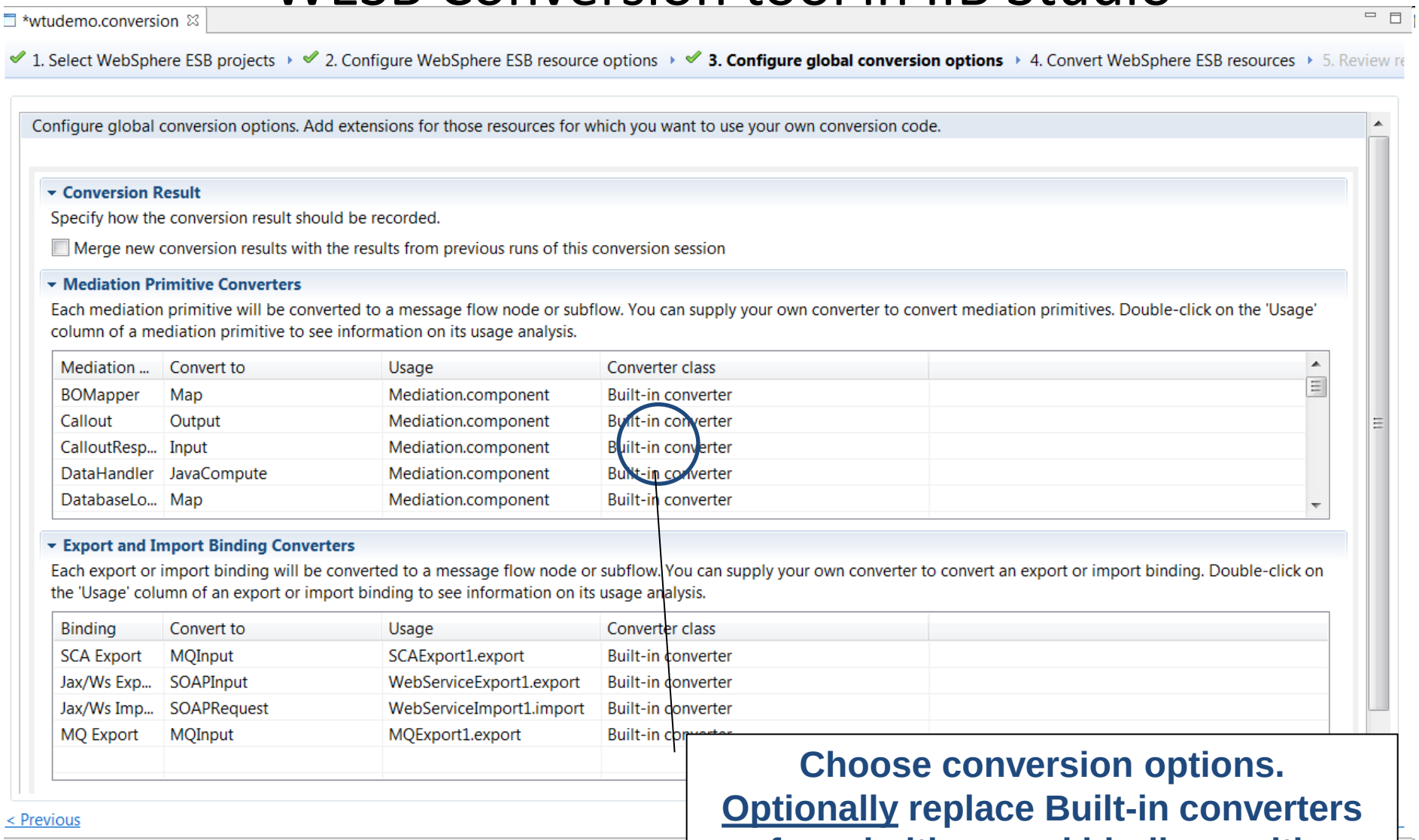
Select mediation projects and libraries to include in the conversion.

WESB Conversion tool in IIB Studio

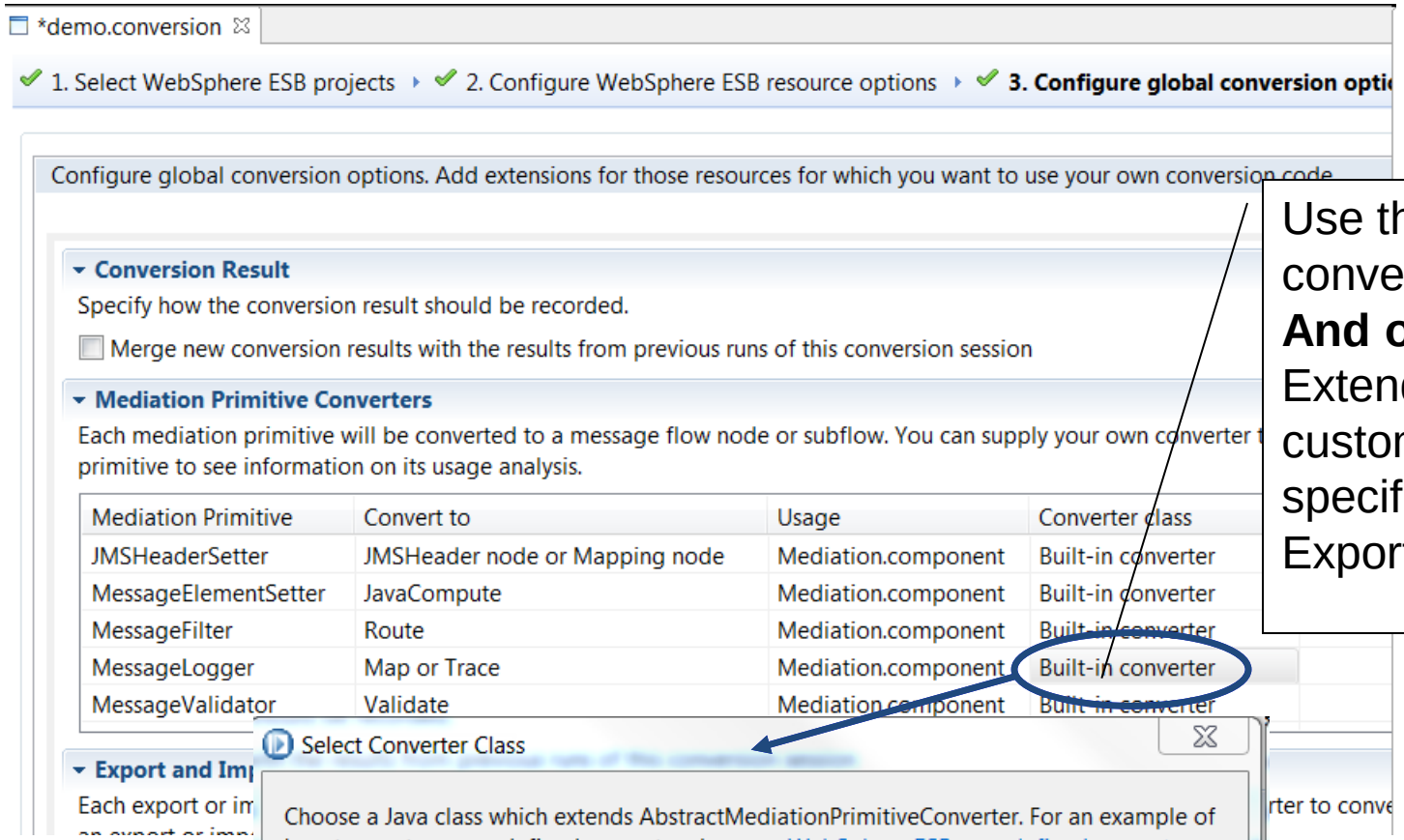


Choose resources to convert. eg. By default only maps referenced in the module will be converted.

WESB Conversion tool in IIB Studio

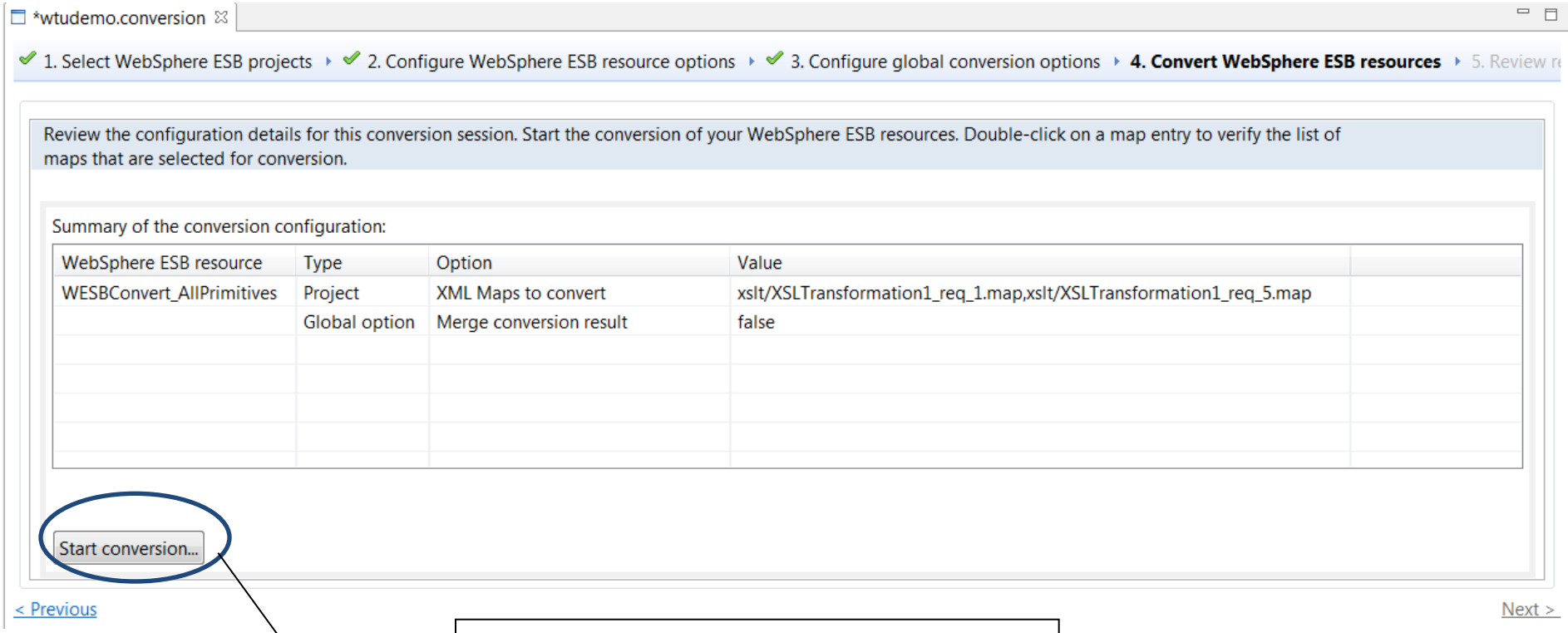


Choose conversion options.
Optionally replace Built-in converters for primitives and bindings with custom converters.



Use the built-in converters
And optionally
Extend the tool with custom converters for specific primitives or Export/Import bindings

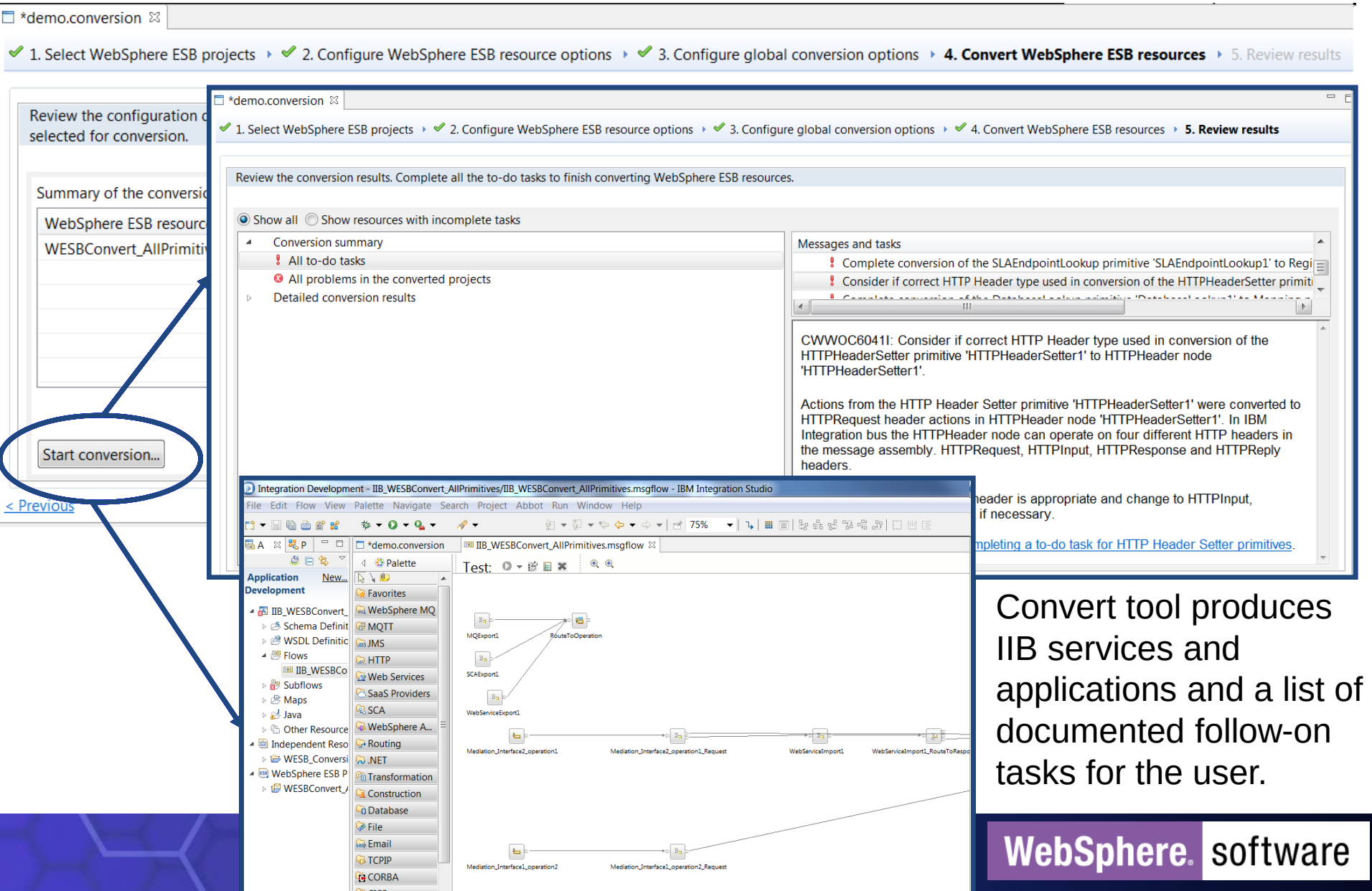
WESB Conversion tool in IIB Studio



Final summary of conversion

Start the conversion process

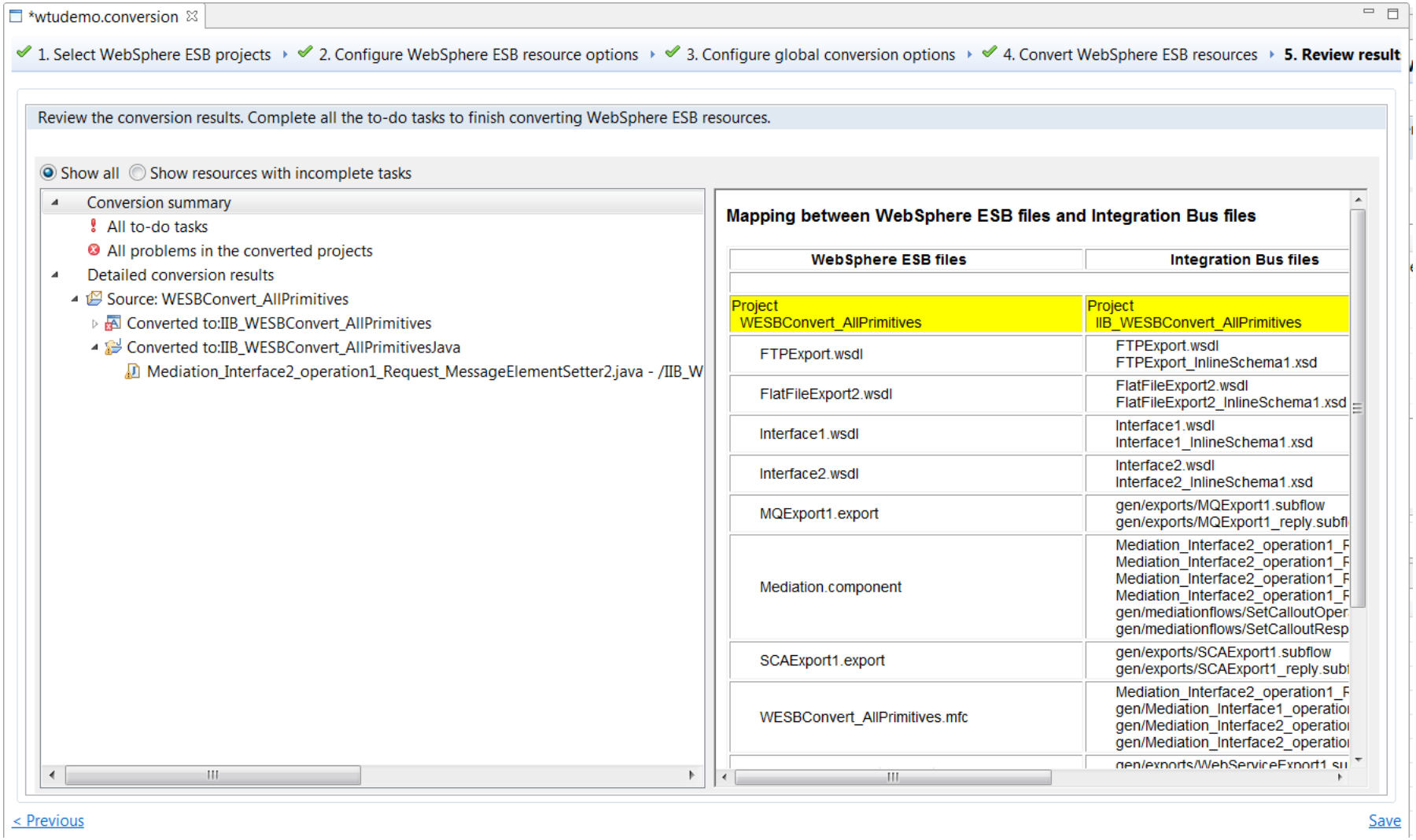
Conversion Tool – IIB open-beta Example



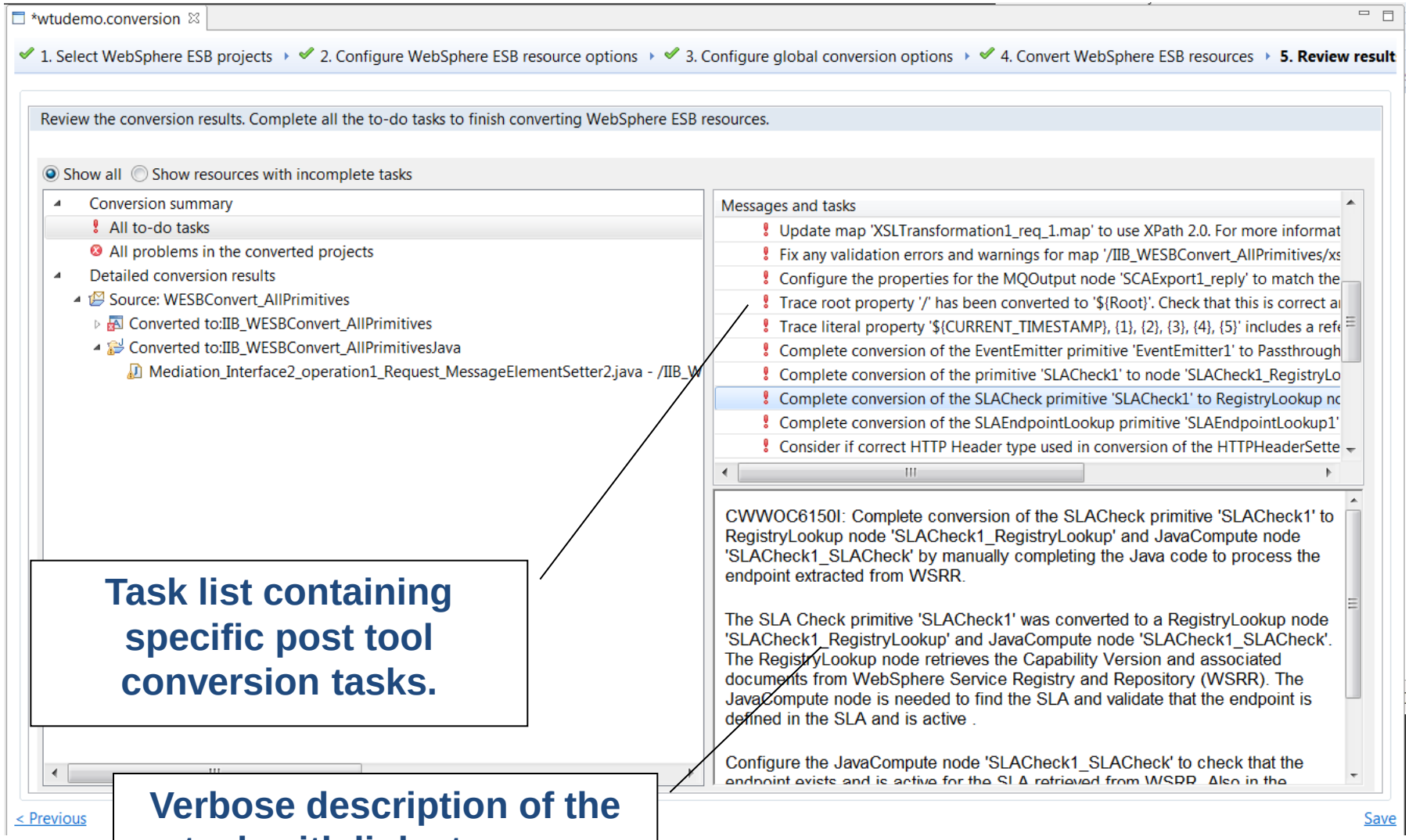
Convert tool produces IIB services and applications and a list of documented follow-on tasks for the user.

WebSphere. software

WESB Conversion tool in IIB Studio



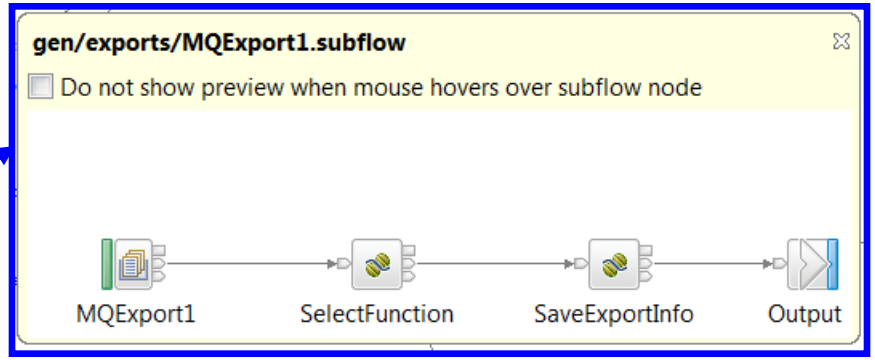
WESB Conversion tool in IIB Studio



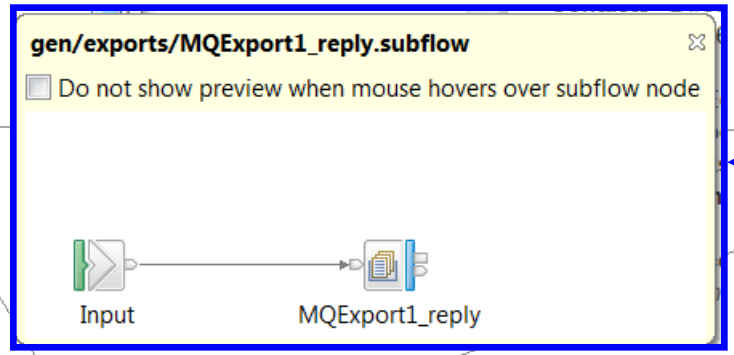
Task list containing specific post tool conversion tasks.

Verbose description of the task with links to more detailed documentation

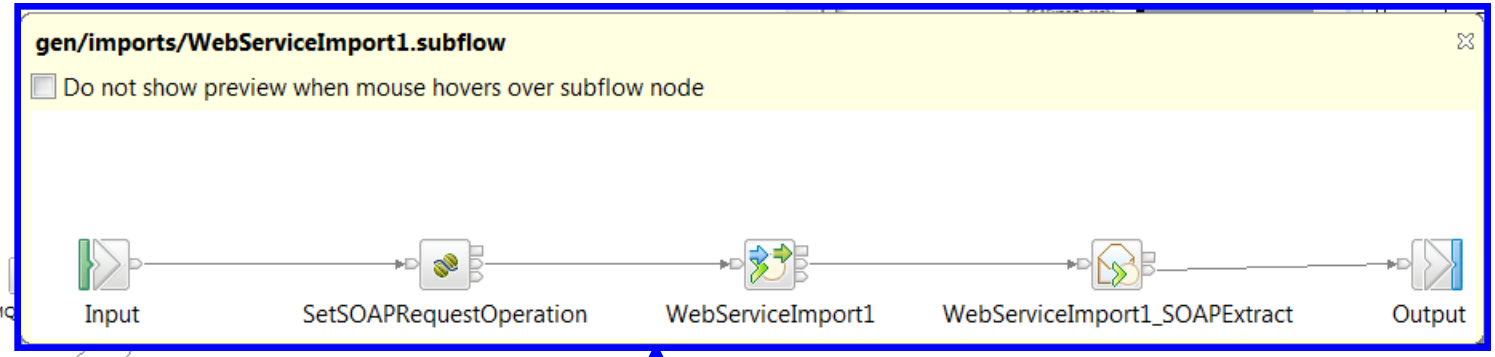
WESB Conversion tool in IIB Studio



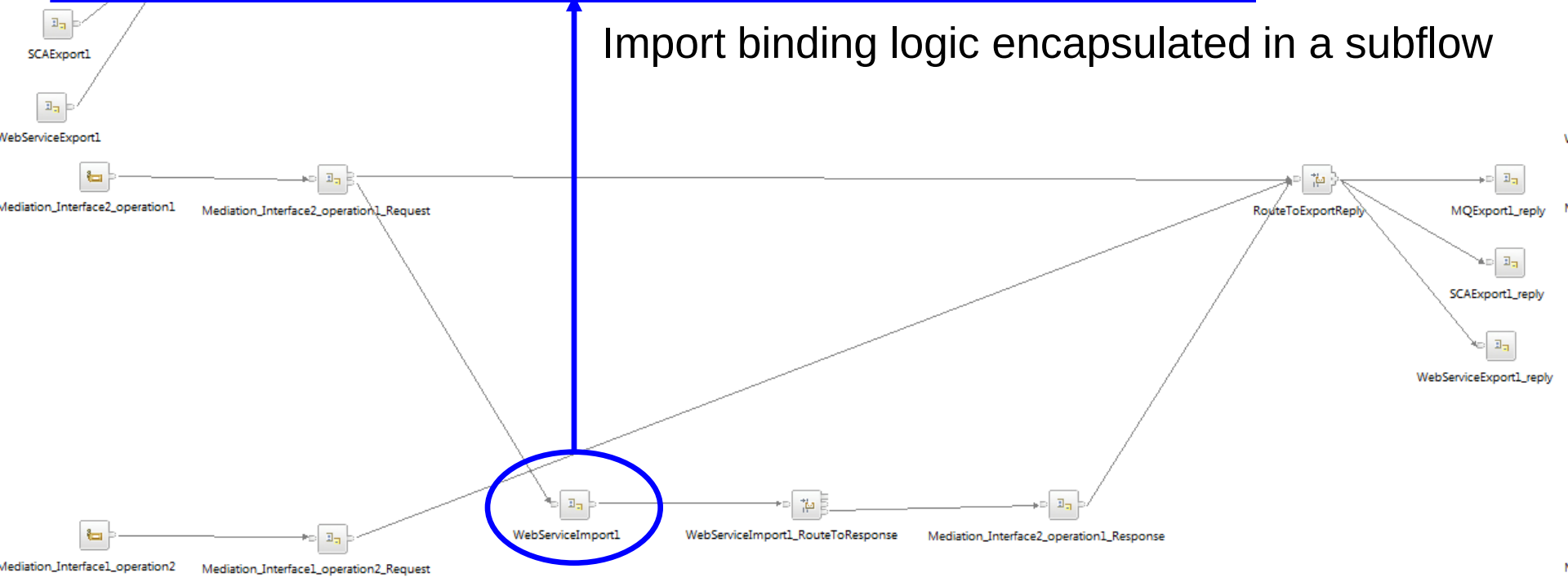
Export binding logic encapsulated in a export request and export response subflow



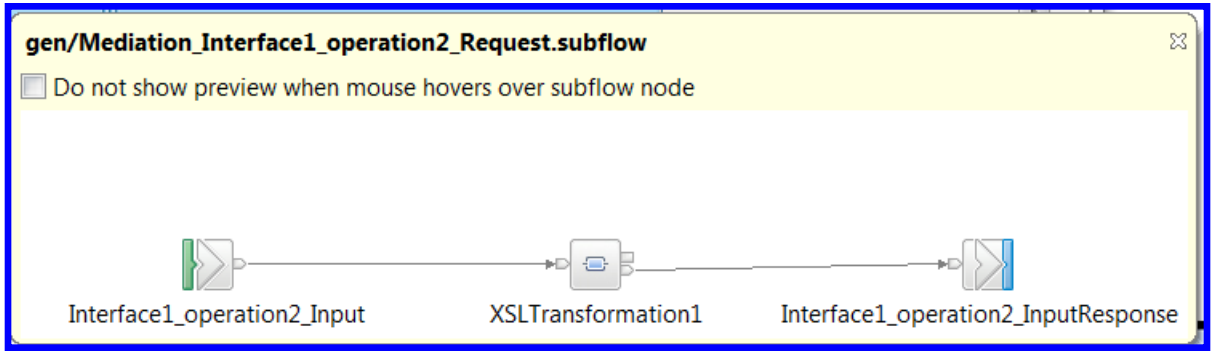
WESB Conversion tool in IIB Studio



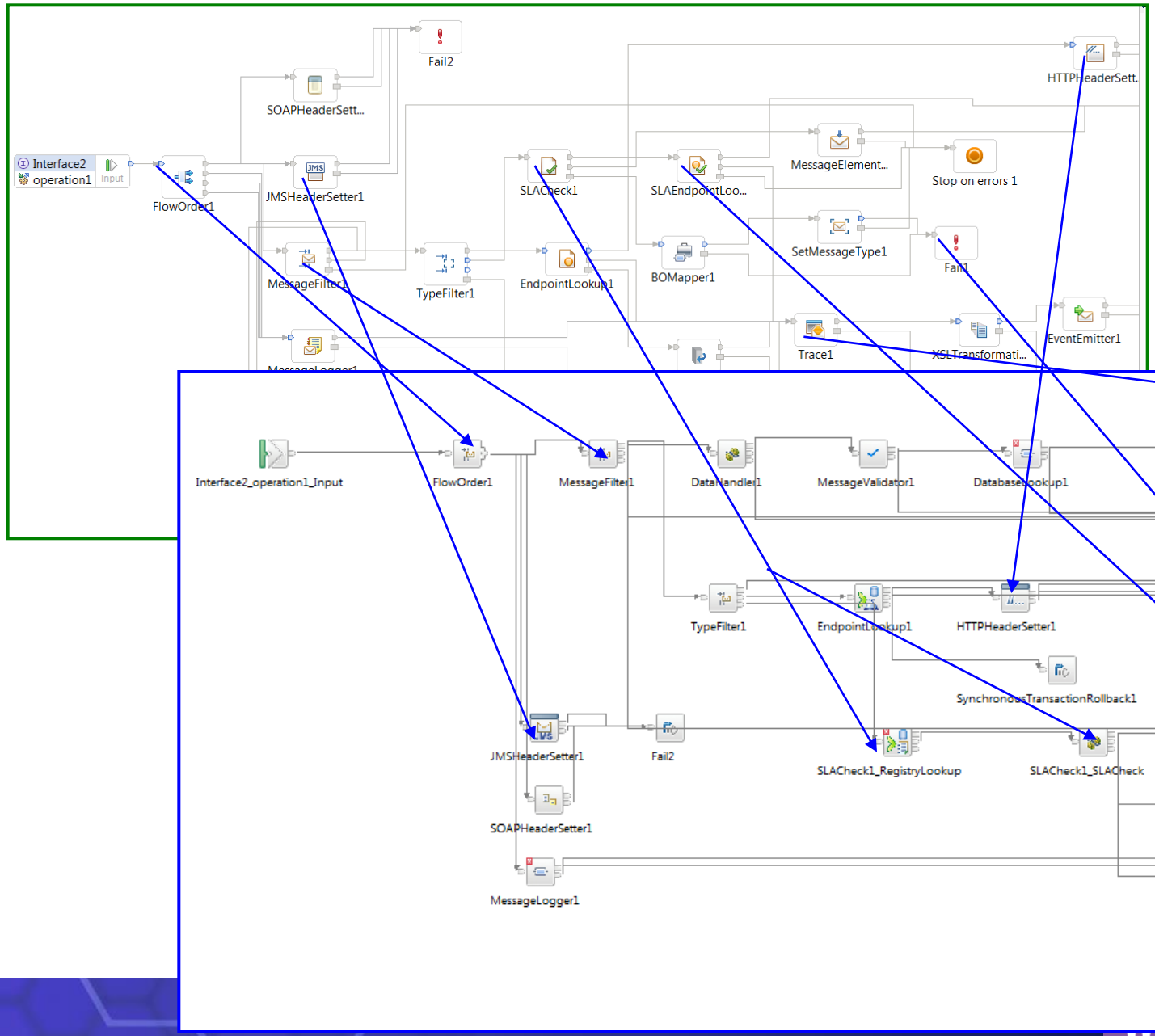
Import binding logic encapsulated in a subflow



WESB Conversion tool in IIB Studio



Each mediation component request / response / error operation flow encapsulated in a separate subflow for easy correlation with the original source.



Original flow wiring preserved.

Built-in converters convert to equivalent IIB node set.

Customizing the Tool for your needs

- The conversion tool is designed to be extensible.
  - Users can author custom conversion logic for mediation primitives and import/export bindings whilst leveraging the capabilities of the tool for everything else.
- Conversion tool source code is open and available on gitHub.
  - Users can modify the tool to for their specific needs.

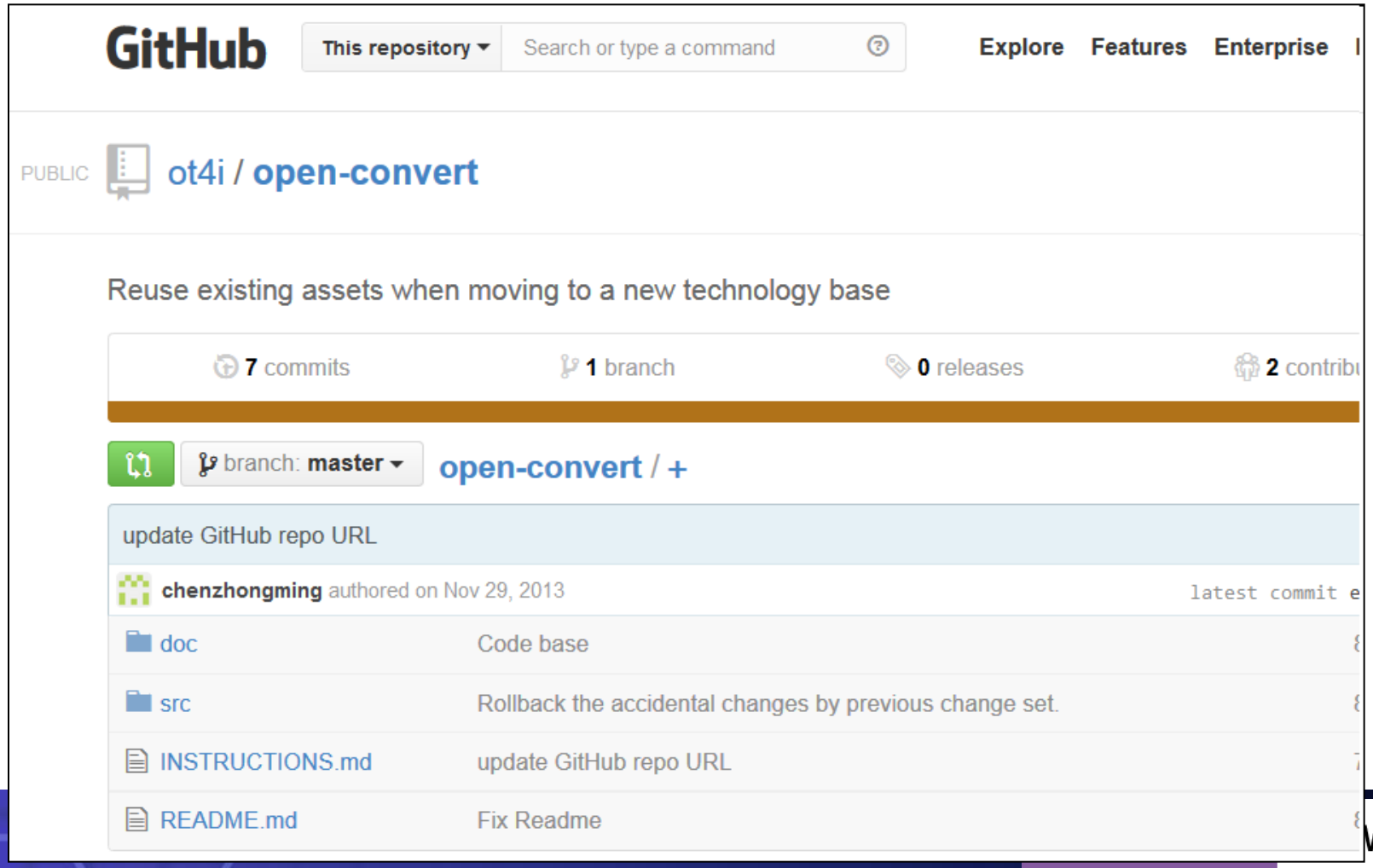
Extending the Conversion Tool

- Nearly all primitives and export/import bindings (as of current open-beta) are handled by a Built-in Converter class out of the box.
- However user-defined converters may help a specific customer where they have repeatable conversion logic they wish to include in the conversion.
- Extension points allow re-usable customer specific customizations of the tool.
- You can create a Java converter class which extends `AbstractMediationPrimitiveConverter`, which will provides a primitive conversion capability specific to a customers needs.
- You can create a Java converter class which extends `AbstractBindingConverter`, which will provides a export/import binding conversion capability specific to a customers needs.

Modify the tool.

WESB to IIB Conversion Tool on GitHub open source community

https://github.com/ot4i/open-convert



For Additional Information

- IBM Integration Bus vNext open beta:
  - **What's new: https://ibm.biz/iibopenbetawhatsnew**
  - **Download: https://ibm.biz/iibopenbeta**
  - **Documentation: https://ibm.biz/iibopenbetadocs**
  - **Discuss: https://ibm.biz/iibopenbetaforum**

- IBM Integration Community:
  - **IIB community https://ibm.biz/iibcommunity**

  - **WESB Convert Wiki https://ibm.biz/iibwesbconvert**
  - **WESB Convert Topologies https://ibm.biz/iibwesbconvert_topologies**