



TAURUS

Integrating Tools in Eclipse IBM SCLM Integration

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Udo Partsch (SoforTe GmbH)

partsch@soforte.de

<http://www.soforte.com>

- **Focus**

- SoforTe is specialized in optimizing mainframe based application development processes and team collaboration
- Eclipse, RDz, RTC EE, RAA,
- SCLM, Endeavor, ChangeMan, ...

- **Clients**

- Mainframe customers across all industries

- **Technology**

- TAURUS



- **Lessons learned**

- Integrating existing mainframe development processes and tools in Eclipse is time consuming and requires special skills
- Risk – Implementation is not done to the full extend and developers reject Eclipse
- Current Eclipse “out of the box” solutions are not sufficient.

- **Consequence**

- Eclipse implementations need to be simplified and easily customizable for the customers existing development process
- => development of TAURUS Integration Toolkit

- **Supports standard mainframe utilities in Eclipse**
 - MVS dataset explorer
 - JES Job explorer
- **Model driven tool integration**
 - Modeling of user interfaces and tool integration
 - Supports integration of SCLM, Endeavor, ChangeMan, ...
 - Fully customizable
 - Fully integrated into Eclipse or RDz
- **Reducing effort**
 - Integration with major SCM systems out of the box
 - Predefined models for different development processes
 - Integration with all kinds of tools like RAA, RTC, ...
 - Existing skill is sufficient – no plug-in development skill required
- **10 times faster compared to plug-in development**
 - Plug-in development becomes obsolete
 - Complete and deep integration becomes affordable
 - High functionality and quality of UI increase developer acceptability and productivity

SoforTe – TAURUS – Architecture

Windows / Linux

z/OS

Eclipse or RDz Client

TAURUS

TAURUS
Generic
User
Interface

TAURUS
MVS
Explorer

TAURUS
JES Job
Explorer

TAURUS
Error
Feedback

TAURUS
User
Extension

TAURUS
Syntax-
check

TCP/IP

MVS

TAURUS
zServer

TAURUS
Config XML

TCP/IP

zServer
ISPF
Interface

Tool

Tool

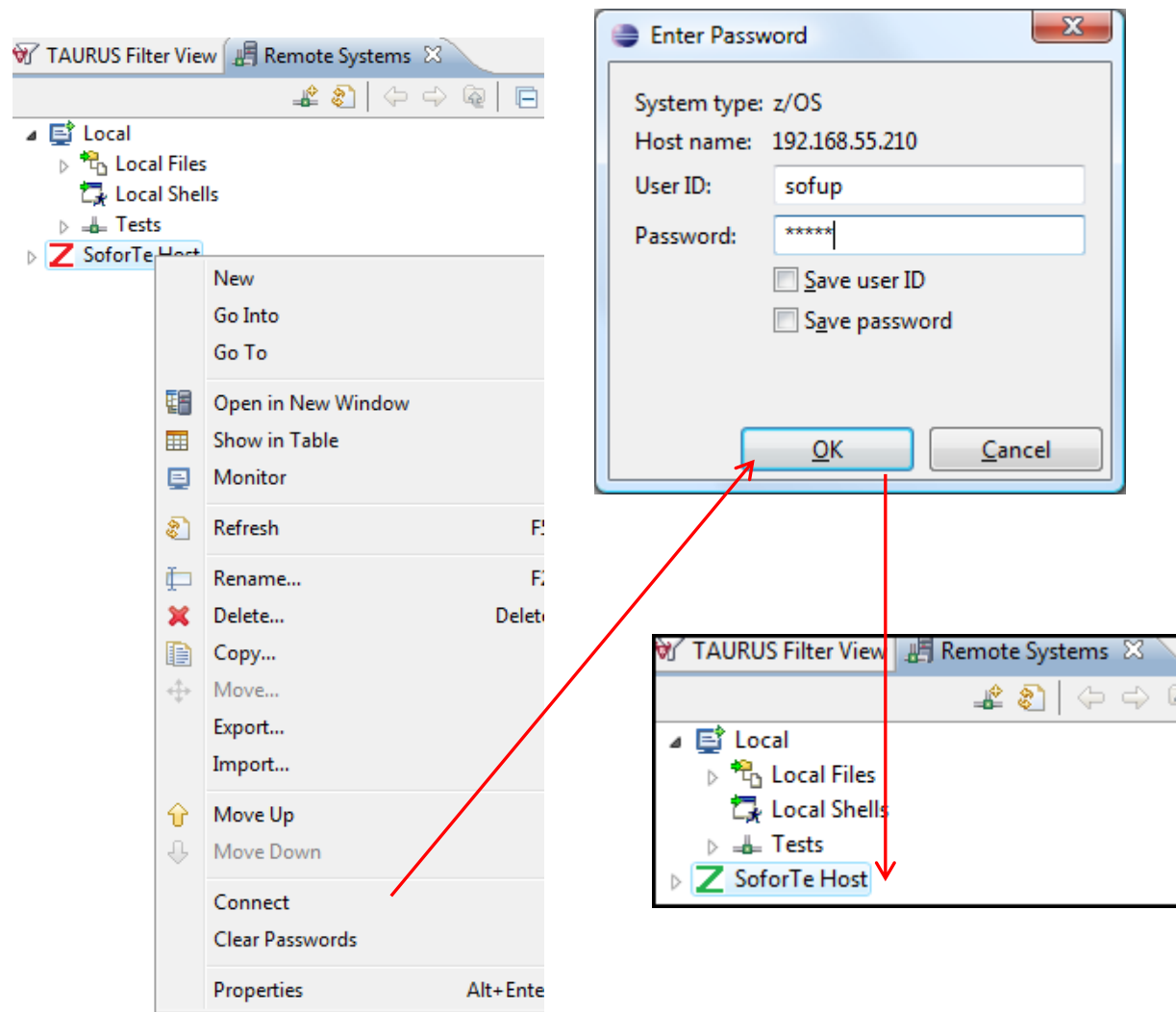
TSO / ISPF

Job

Batch

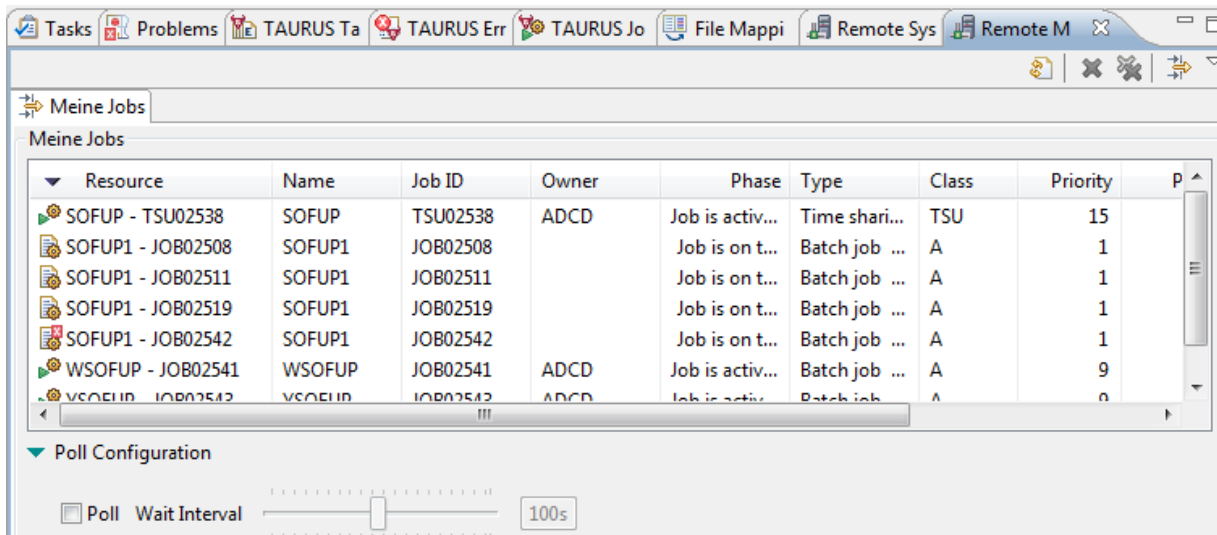
Connecting to the TAURUS zServer on z/OS

- Connecting to a z/OS system
- RACF Logon



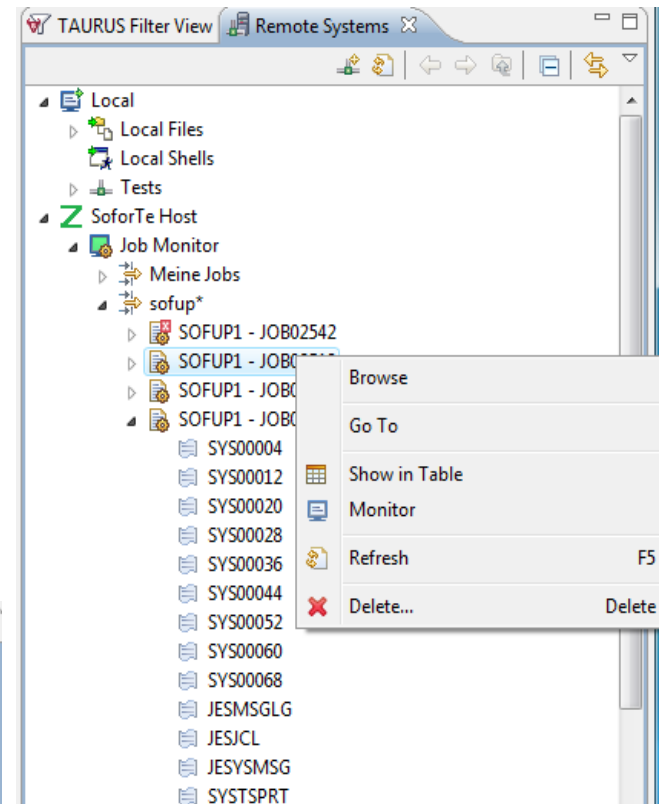
TAURUS – JES JOB Explorer

- Creating Job Filter
- High Performance Communication:
 - List Jobs
 - List Job Parts
 - Browse Jobs / Parts
- Submit Jobs
- Show in Table (Column sort ...)
- Automatic Refresh (Polling)



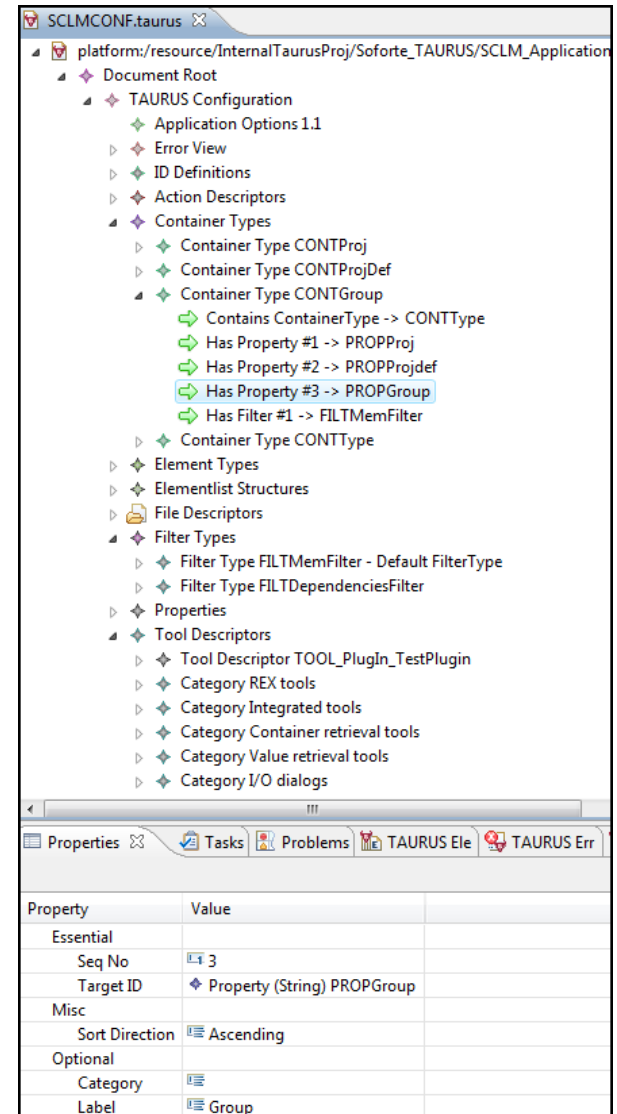
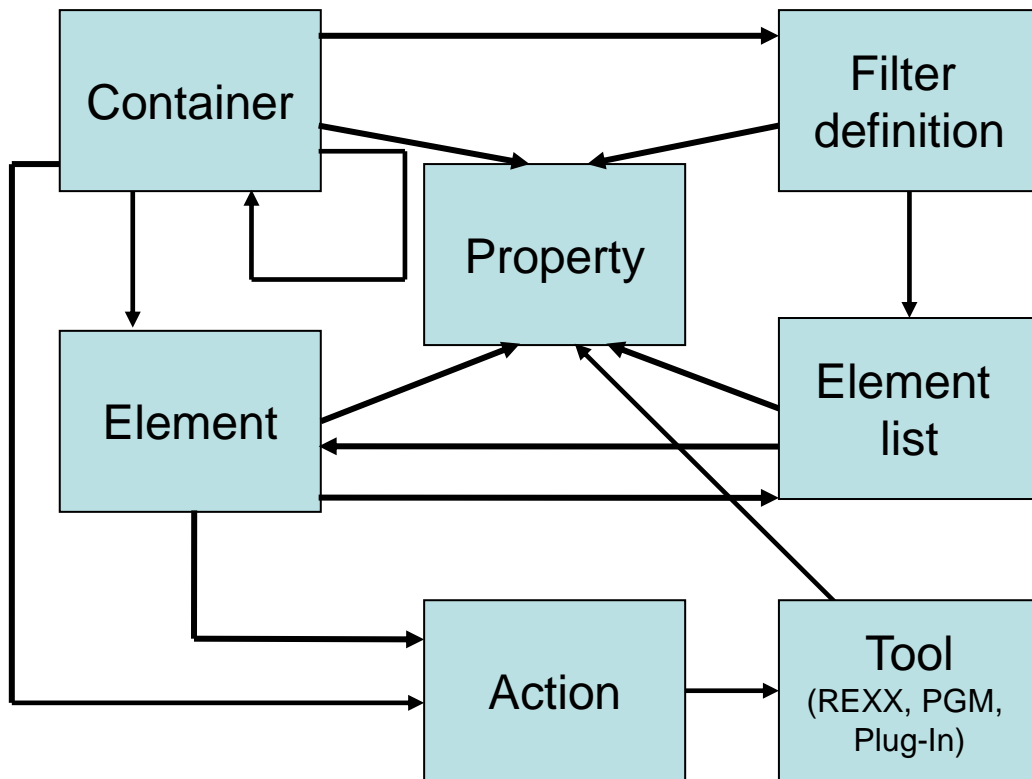
The screenshot shows the TAURUS Filter View window with a table of jobs. The table has columns for Resource, Name, Job ID, Owner, Phase, Type, Class, and Priority. Below the table is a Poll Configuration section with a checkbox for 'Poll' and a 'Wait Interval' slider set to 100s.

Resource	Name	Job ID	Owner	Phase	Type	Class	Priority
SOFUP - TSU02538	SOFUP	TSU02538	ADCD	Job is activ...	Time shari...	TSU	15
SOFUP1 - JOB02508	SOFUP1	JOB02508		Job is on t...	Batch job ...	A	1
SOFUP1 - JOB02511	SOFUP1	JOB02511		Job is on t...	Batch job ...	A	1
SOFUP1 - JOB02519	SOFUP1	JOB02519		Job is on t...	Batch job ...	A	1
SOFUP1 - JOB02542	SOFUP1	JOB02542		Job is on t...	Batch job ...	A	1
WSOFUP - JOB02541	WSOFUP	JOB02541	ADCD	Job is activ...	Batch job ...	A	9
VSOFUP - JOB02542	VSOFUP	JOB02542	ADCD	Job is activ...	Batch job ...	A	0



The screenshot shows the TAURUS Filter View window with a tree view of jobs. A context menu is open over the 'SOFUP1 - JOB02542' job, showing options: Browse, Go To, Show in Table, Monitor, Refresh, and Delete... The tree view shows a hierarchy of Local Files, Local Shells, Tests, SoforTe Host, Job Monitor, Meine Jobs, and sofup*.

TAURUS – Modeling the UI and Tool Integration



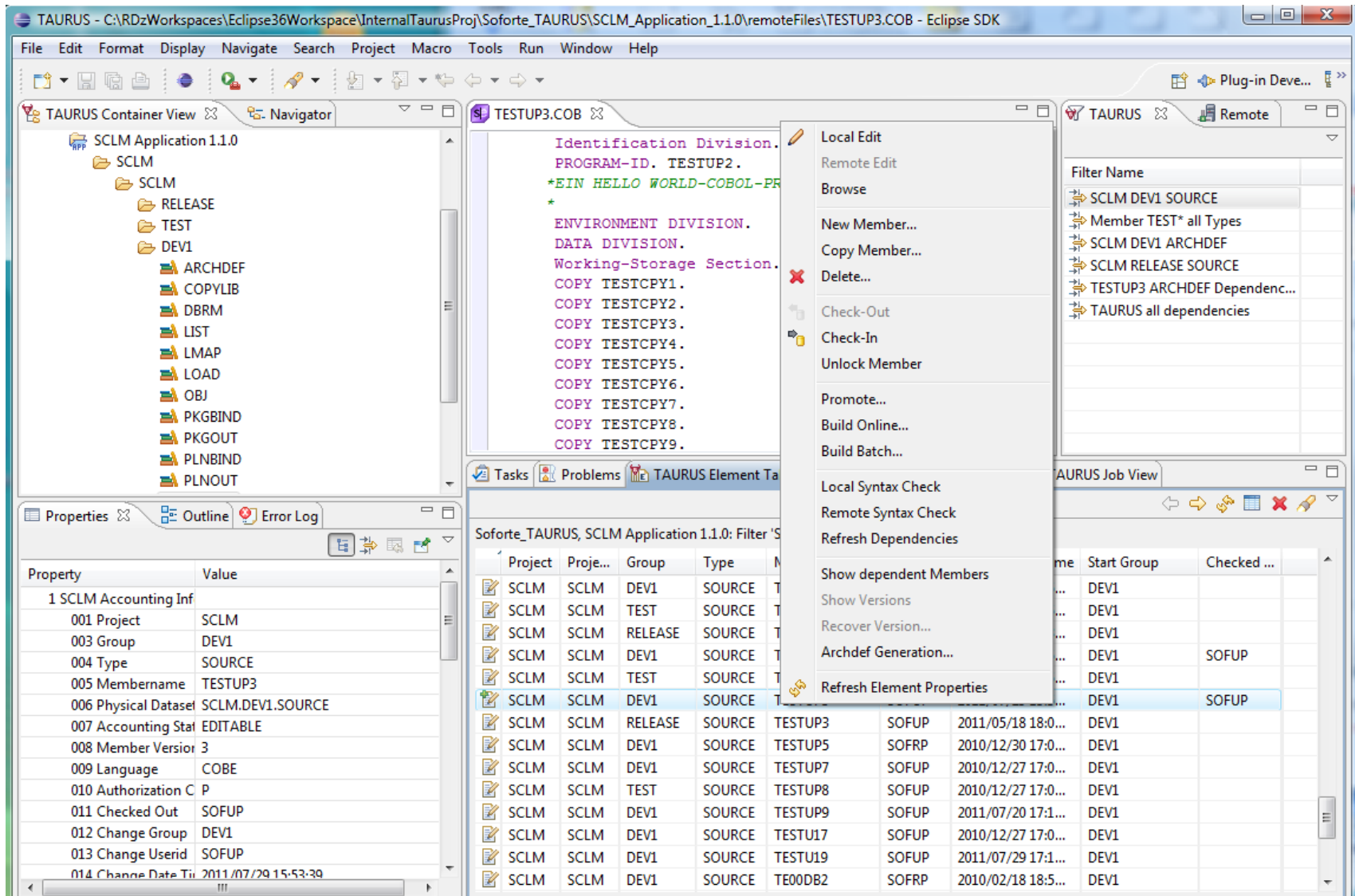
SCLMCONF.taurus

- platform:/resource/InternalTaurusProj/Soforte_TAURUS/SCLM_Application
 - Document Root
 - TAURUS Configuration
 - Application Options 1.1
 - Error View
 - ID Definitions
 - Action Descriptors
 - Container Types
 - Container Type CONTProj
 - Container Type CONTProjDef
 - Container Type CONTGroup
 - Contains ContainerType -> CONTType
 - Has Property #1 -> PROPProj
 - Has Property #2 -> PROPProjdef
 - Has Property #3 -> PROPGroup
 - Has Filter #1 -> FILTMemFilter
 - Container Type CONTType
 - Element Types
 - Elementlist Structures
 - File Descriptors
 - Filter Types
 - Filter Type FILTMemFilter - Default FilterType
 - Filter Type FILTDependenciesFilter
 - Properties
 - Tool Descriptors
 - Tool Descriptor TOOL_Plugin_TestPlugin
 - Category REX tools
 - Category Integrated tools
 - Category Container retrieval tools
 - Category Value retrieval tools
 - Category I/O dialogs

Properties

Property	Value
Essential	
Seq No	3
Target ID	Property (String) PROPGroup
Misc	
Sort Direction	Ascending
Optional	
Category	
Label	Group

SoforTe – TAURUS – SCLM Integration



The screenshot displays the Eclipse IDE interface for the TAURUS project. The main editor shows the source code for 'TESTUP3.COB', which includes sections for 'Identification Division', 'Environment Division', and 'Working-Storage Section'. A context menu is open over the code, listing actions such as 'Local Edit', 'Remote Edit', 'Browse', 'New Member...', 'Copy Member...', 'Delete...', 'Check-Out', 'Check-In', 'Unlock Member', 'Promote...', 'Build Online...', 'Build Batch...', 'Local Syntax Check', 'Remote Syntax Check', 'Refresh Dependencies', 'Show dependent Members', 'Show Versions', 'Recover Version...', 'Archdef Generation...', and 'Refresh Element Properties'.

The left sidebar shows the 'TAURUS Container View' with a tree structure of the SCLM Application 1.1.0 project, including folders for SCLM, RELEASE, TEST, and DEV1, and sub-folders like ARCHDEF, COPYLIB, DBRM, LIST, LMAP, LOAD, OBJ, PKGBIND, PKGOUT, PLNBIND, and PLNOUT.

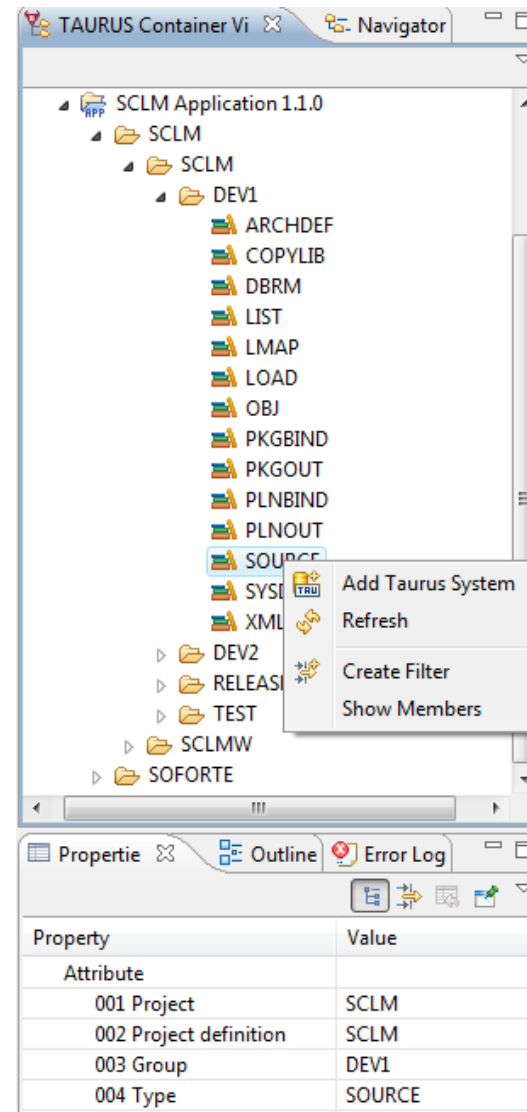
The bottom-left pane shows the 'Properties' view for the selected member, listing various attributes such as Project, Group, Type, and Member Name.

The bottom-right pane shows the 'TAURUS Job View' table, which lists job execution details:

Project	Proj...	Group	Type	M	me	Start Group	Checked ...
SCLM	SCLM	DEV1	SOURCE	T	...	DEV1	
SCLM	SCLM	TEST	SOURCE	T	...	DEV1	
SCLM	SCLM	RELEASE	SOURCE	T	...	DEV1	
SCLM	SCLM	DEV1	SOURCE	T	...	DEV1	SOFUP
SCLM	SCLM	DEV1	SOURCE	T	...	DEV1	SOFUP
SCLM	SCLM	RELEASE	SOURCE	TESTUP3	SOFUP	2011/05/18 18:0...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTUP5	SOFUP	2010/12/30 17:0...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTUP7	SOFUP	2010/12/27 17:0...	DEV1
SCLM	SCLM	TEST	SOURCE	TESTUP8	SOFUP	2010/12/27 17:0...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTUP9	SOFUP	2011/07/20 17:1...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTU17	SOFUP	2010/12/27 17:0...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTU19	SOFUP	2011/07/29 17:1...	DEV1
SCLM	SCLM	DEV1	SOURCE	TE00DB2	SOFUP	2010/02/18 18:5...	DEV1

Taurus - SCLM Tree View

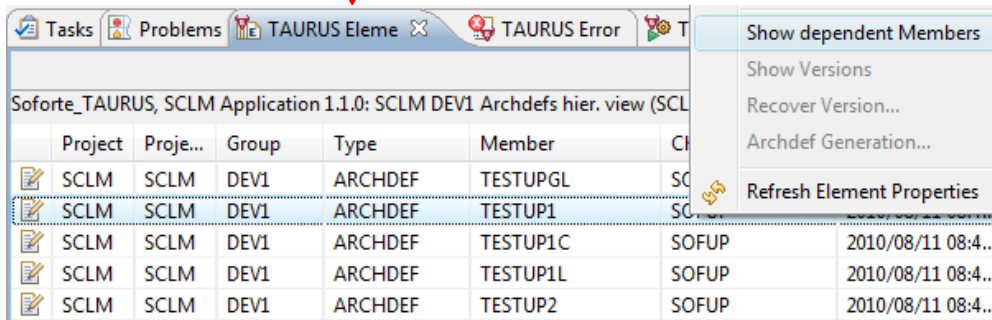
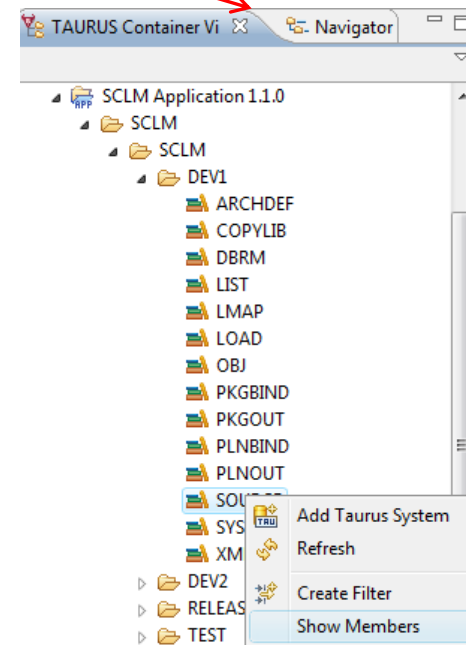
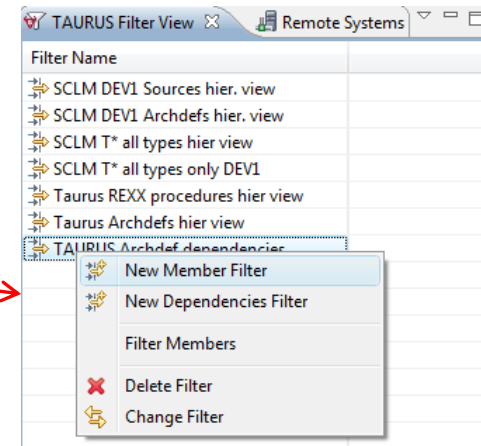
- **Supports a hierarchical view to:**
 - Projects
 - Project Definitions
 - Groups
 - Types



TAURUS – Create a SCLM Member List

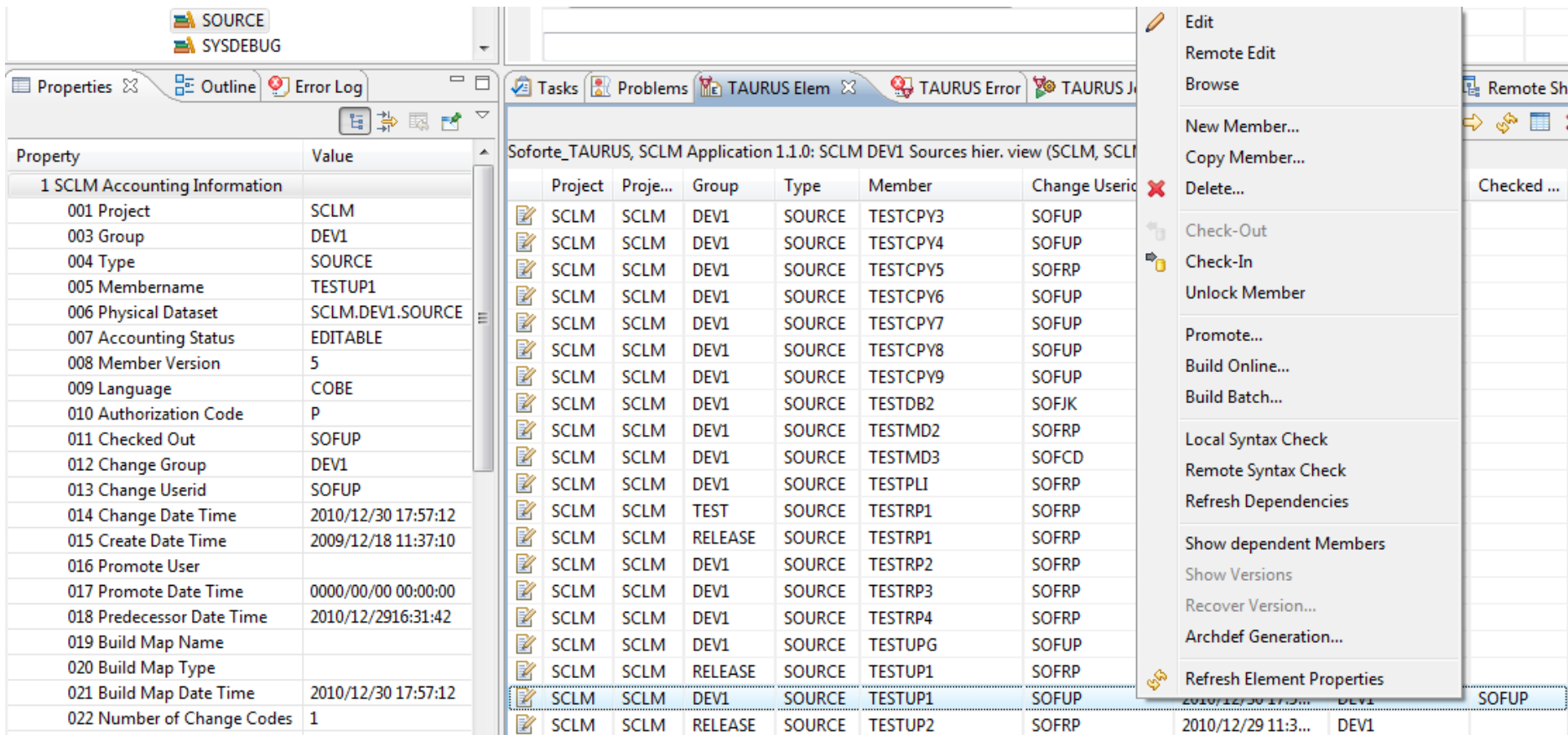
- **Several ways to create a member list:**

- From the filter view
- From the tree view
- From another member list



Project	Proje...	Group	Type	Member	Ch...
SCLM	SCLM	DEV1	ARCHDEF	TESTUGL	SC...
SCLM	SCLM	DEV1	ARCHDEF	TESTUP1	SC...
SCLM	SCLM	DEV1	ARCHDEF	TESTUP1C	SOFUP
SCLM	SCLM	DEV1	ARCHDEF	TESTUP1L	SOFUP
SCLM	SCLM	DEV1	ARCHDEF	TESTUP2	SOFUP

TAURUS – SCLM Member Functions

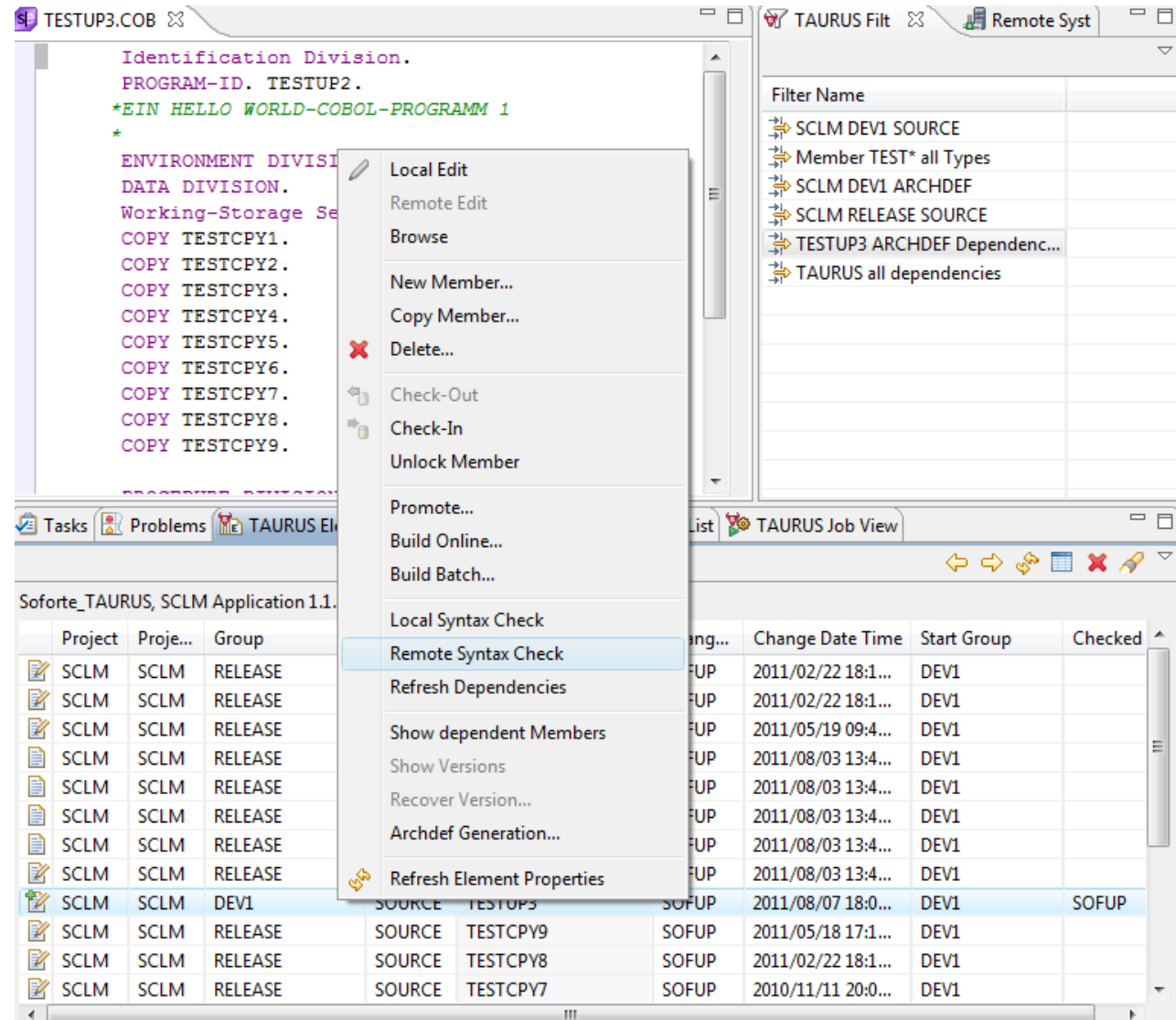


The screenshot displays the IBM Rational SCLM interface. On the left, the 'Properties' window shows details for '1 SCLM Accounting Information'. The main area shows a table of SCLM members. A context menu is open over the table, listing various actions such as 'Edit', 'Delete...', 'Check-Out', and 'Refresh Element Properties'.

Project	Proje...	Group	Type	Member	Change Userid
SCLM	SCLM	DEV1	SOURCE	TESTCPY3	SOFUP
SCLM	SCLM	DEV1	SOURCE	TESTCPY4	SOFUP
SCLM	SCLM	DEV1	SOURCE	TESTCPY5	SOFUP
SCLM	SCLM	DEV1	SOURCE	TESTCPY6	SOFUP
SCLM	SCLM	DEV1	SOURCE	TESTCPY7	SOFUP
SCLM	SCLM	DEV1	SOURCE	TESTCPY8	SOFUP
SCLM	SCLM	DEV1	SOURCE	TESTCPY9	SOFUP
SCLM	SCLM	DEV1	SOURCE	TESTDB2	SOFJK
SCLM	SCLM	DEV1	SOURCE	TESTMD2	SOFRP
SCLM	SCLM	DEV1	SOURCE	TESTMD3	SOFCD
SCLM	SCLM	DEV1	SOURCE	TESTPLI	SOFRP
SCLM	SCLM	TEST	SOURCE	TESTRP1	SOFRP
SCLM	SCLM	RELEASE	SOURCE	TESTRP1	SOFRP
SCLM	SCLM	DEV1	SOURCE	TESTRP2	SOFRP
SCLM	SCLM	DEV1	SOURCE	TESTRP3	SOFRP
SCLM	SCLM	DEV1	SOURCE	TESTRP4	SOFRP
SCLM	SCLM	DEV1	SOURCE	TESTUPG	SOFUP
SCLM	SCLM	RELEASE	SOURCE	TESTUP1	SOFRP
SCLM	SCLM	DEV1	SOURCE	TESTUP1	SOFUP
SCLM	SCLM	RELEASE	SOURCE	TESTUP2	SOFRP

Taurus – Editing an SCLM Member

- **Modeling your own Edit Scenario:**
 - Scenario A:
 - Remote Edit
 - Scenario B:
 - Check-Out from SCLM to the Eclipse workspace
 - Local Edit
 - Check-In
 -
- **Support of remote syntax check**



The screenshot displays the Taurus IDE interface. The main editor shows a COBOL program named TESTUP3.COB with the following code:

```
Identification Division.  
PROGRAM-ID. TESTUP2.  
*EIN HELLO WORLD-COBOL-PROGRAMM 1  
*  
ENVIRONMENT DIVISION.  
DATA DIVISION.  
Working-Storage Section.  
COPY TESTCPY1.  
COPY TESTCPY2.  
COPY TESTCPY3.  
COPY TESTCPY4.  
COPY TESTCPY5.  
COPY TESTCPY6.  
COPY TESTCPY7.  
COPY TESTCPY8.  
COPY TESTCPY9.
```

A context menu is open over the member TESTUP3, listing various actions such as Local Edit, Remote Edit, Browse, New Member..., Copy Member..., Delete..., Check-Out, Check-In, Unlock Member, Promote..., Build Online..., Build Batch..., Local Syntax Check, Remote Syntax Check, Refresh Dependencies, Show dependent Members, Show Versions, Recover Version..., Archdef Generation..., and Refresh Element Properties. The 'Remote Syntax Check' option is highlighted.

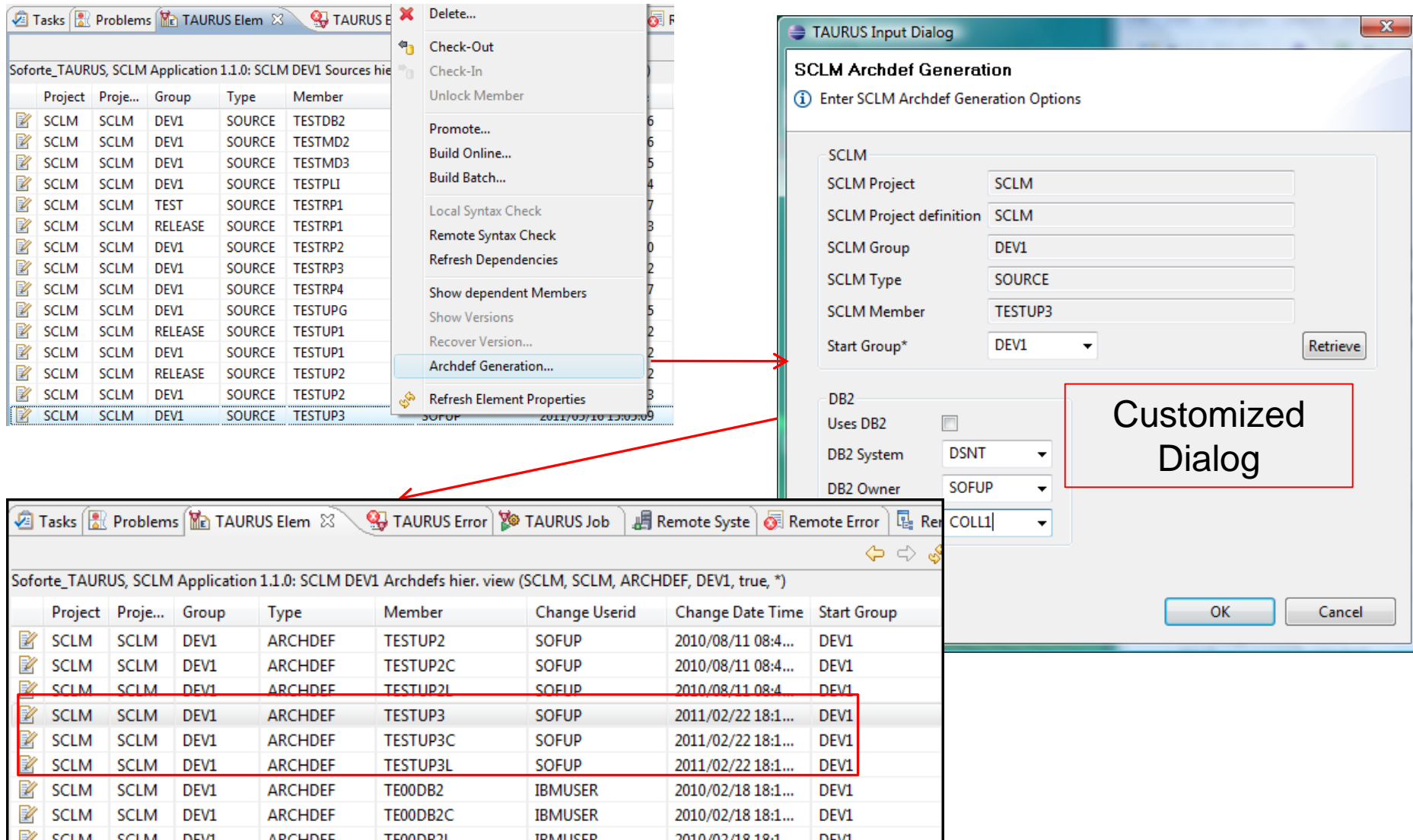
The Project Browser at the bottom left shows a table of SCLM members:

Project	Proje...	Group
SCLM	SCLM	RELEASE
SCLM	SCLM	RELEASE
SCLM	SCLM	RELEASE
SCLM	SCLM	RELEASE
SCLM	SCLM	RELEASE
SCLM	SCLM	RELEASE
SCLM	SCLM	RELEASE
SCLM	SCLM	RELEASE
SCLM	SCLM	DEV1
SCLM	SCLM	RELEASE
SCLM	SCLM	RELEASE
SCLM	SCLM	RELEASE

The Taurus Job View at the bottom right shows a table of job entries:

ang...	Change Date Time	Start Group	Checked
FUP	2011/02/22 18:1...	DEV1	
FUP	2011/02/22 18:1...	DEV1	
FUP	2011/05/19 09:4...	DEV1	
FUP	2011/08/03 13:4...	DEV1	
FUP	2011/08/03 13:4...	DEV1	
FUP	2011/08/03 13:4...	DEV1	
FUP	2011/08/03 13:4...	DEV1	
FUP	2011/08/03 13:4...	DEV1	
FUP	2011/08/07 18:0...	DEV1	SOFUP
FUP	2011/05/18 17:1...	DEV1	
FUP	2011/02/22 18:1...	DEV1	
FUP	2010/11/11 20:0...	DEV1	

Taurus – Generate SCLM Archdefs (custom.)



The screenshot illustrates the workflow for generating SCLM Archdefs in Taurus. It shows the source list, the context menu action, the input dialog configuration, and the resulting archdef list.

Source List (Top Left):

Project	Proje...	Group	Type	Member
SCLM	SCLM	DEV1	SOURCE	TESTDB2
SCLM	SCLM	DEV1	SOURCE	TESTMD2
SCLM	SCLM	DEV1	SOURCE	TESTMD3
SCLM	SCLM	DEV1	SOURCE	TESTPL1
SCLM	SCLM	TEST	SOURCE	TESTRP1
SCLM	SCLM	RELEASE	SOURCE	TESTRP1
SCLM	SCLM	DEV1	SOURCE	TESTRP2
SCLM	SCLM	DEV1	SOURCE	TESTRP3
SCLM	SCLM	DEV1	SOURCE	TESTRP4
SCLM	SCLM	DEV1	SOURCE	TESTUPG
SCLM	SCLM	RELEASE	SOURCE	TESTUP1
SCLM	SCLM	DEV1	SOURCE	TESTUP1
SCLM	SCLM	RELEASE	SOURCE	TESTUP2
SCLM	SCLM	DEV1	SOURCE	TESTUP2
SCLM	SCLM	DEV1	SOURCE	TESTUP3

Context Menu (Top Middle):

- Delete...
- Check-Out
- Check-In
- Unlock Member
- Promote...
- Build Online...
- Build Batch...
- Local Syntax Check
- Remote Syntax Check
- Refresh Dependencies
- Show dependent Members
- Show Versions
- Recover Version...
- Archdef Generation...**
- Refresh Element Properties

TAURUS Input Dialog (Top Right):

SCLM Archdef Generation

Enter SCLM Archdef Generation Options

SCLM

SCLM Project: SCLM

SCLM Project definition: SCLM

SCLM Group: DEV1

SCLM Type: SOURCE

SCLM Member: TESTUP3

Start Group*: DEV1

Retrieve

DB2

Uses DB2:

DB2 System: DSNT

DB2 Owner: SOFUP

COLL1: COLL1

OK Cancel

Archdefs hier. view (Bottom):

Soforte_TAURUS, SCLM Application 1.1.0: SCLM DEV1 Archdefs hier. view (SCLM, SCLM, ARCHDEF, DEV1, true, *)

Project	Proje...	Group	Type	Member	Change Userid	Change Date Time	Start Group
SCLM	SCLM	DEV1	ARCHDEF	TESTUP2	SOFUP	2010/08/11 08:4...	DEV1
SCLM	SCLM	DEV1	ARCHDEF	TESTUP2C	SOFUP	2010/08/11 08:4...	DEV1
SCLM	SCLM	DEV1	ARCHDEF	TESTUP2L	SOFUP	2010/08/11 08:4...	DEV1
SCLM	SCLM	DEV1	ARCHDEF	TESTUP3	SOFUP	2011/02/22 18:1...	DEV1
SCLM	SCLM	DEV1	ARCHDEF	TESTUP3C	SOFUP	2011/02/22 18:1...	DEV1
SCLM	SCLM	DEV1	ARCHDEF	TESTUP3L	SOFUP	2011/02/22 18:1...	DEV1
SCLM	SCLM	DEV1	ARCHDEF	TE00DB2	IBMUSER	2010/02/18 18:1...	DEV1
SCLM	SCLM	DEV1	ARCHDEF	TE00DB2C	IBMUSER	2010/02/18 18:1...	DEV1
SCLM	SCLM	DEV1	ARCHDEF	TE00DB2L	IBMUSER	2010/02/18 18:1...	DEV1

Taurus – Build an SCLM Archdef

SCLM Archdefs Table:

Project	Proje...	Group	Type	Member
SCLM	SCLM	DEV1	ARCHDEF	TESTRP1L
SCLM	SCLM	DEV1	ARCHDEF	TESTUP
SCLM	SCLM	DEV1	ARCHDEF	TESTUPG
SCLM	SCLM	DEV1	ARCHDEF	TESTUPGC
SCLM	SCLM	DEV1	ARCHDEF	TESTUPGL
SCLM	SCLM	DEV1	ARCHDEF	TESTUP1
SCLM	SCLM	DEV1	ARCHDEF	TESTUP1C
SCLM	SCLM	DEV1	ARCHDEF	TESTUP1L
SCLM	SCLM	DEV1	ARCHDEF	TESTUP2
SCLM	SCLM	DEV1	ARCHDEF	TESTUP2C
SCLM	SCLM	DEV1	ARCHDEF	TESTUP2L
SCLM	SCLM	DEV1	ARCHDEF	TESTUP3
SCLM	SCLM	DEV1	ARCHDEF	TESTUP3C

SCLM Build Online Dialog:

Enter SCLM Build options

SCLM Project: SCLM
 SCLM Project definition: SCLM
 SCLM Group: DEV1
 SCLM Type: SOURCE
 SCLM Member: TESTUP3
 Build group*: DEV1
 Build Mode*: Conditional

Taurus Output Dialog:

```

Build message  BUILD TESTUP3 ENDED WITH ERRORS. SEE MSGS AND REPORT
FLM42000 - BUILD PROCESSOR INITIATED - 18:11:15 ON 2011/08/07
FLM44500 - >> INVOKING BUILD TRANSLATOR(S) FOR TYPE: SOURCE  MEMBER: TESTUP3
FLM06501 - TRANSLATOR RETURN CODE FROM ==> DEBUGDAT          ==> 0
FLM06501 - TRANSLATOR RETURN CODE FROM ==> ENTERPRISE COBOL  ==> 12
FLM44513 - TRANSLATOR ERROR FOR MEMBER: TESTUP3 TYPE: SOURCE
FLM45000 - ERROR PROCESSING CURRENT BUILD
Build messages FLM46000 - BUILD PROCESSOR COMPLETED - 18:11:22 ON 2011/08/07
* Additional Messages from SYSTSPRT:
* Build Exit TAUSCXBD started
Build Exit TAUSCXBD ended

SOFTWARE CONFIGURATION AND LIBRARY MANAGER (SCLM)

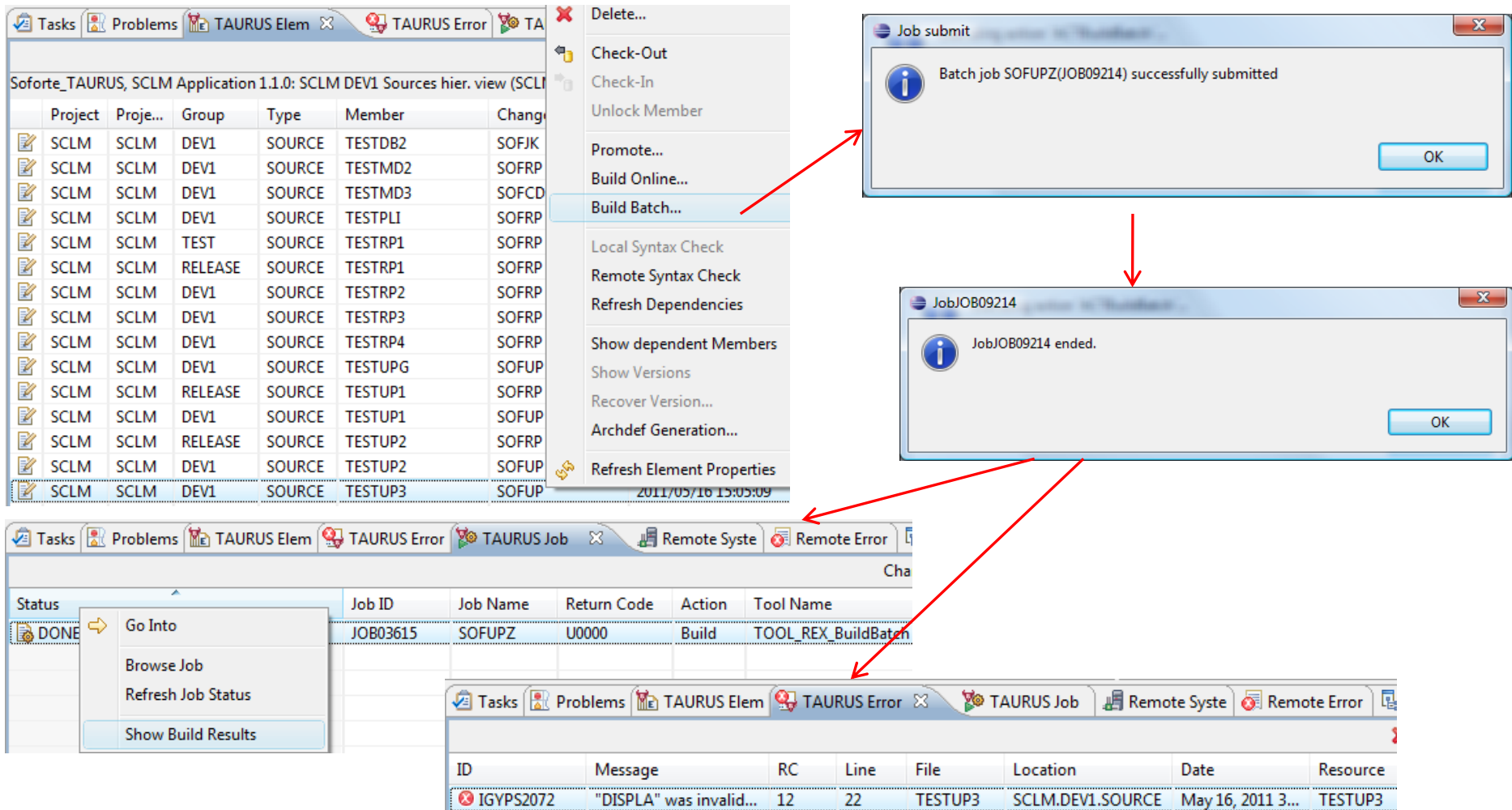
BUILD REPORT
2011/08/07 18:11:15

PROJECT: SCLM
GROUP: DEV1
TYPE: SOURCE
MEMBER: TESTUP3
ALTERNATE: SCLM
SCOPE: NORMAL
    
```

Taurus Error Dialog:

ID	Message	RC	Line	File	Location	Date	Resource
IGYPS2072	"DISPLA" was invalid...	12	22	TESTUP3	SCLM.DEV1.SOURCE	May 16, 2011 3...	TESTUP3

Taurus – SCLM Batch support (e.g. batch build)



The screenshot illustrates the process of submitting a batch build job in Taurus. It shows the 'SCLM Sources hier. view' with a context menu open over a source member, where 'Build Batch...' is selected. This triggers a 'Job submit' dialog box with the message 'Batch job SOFUPZ(JOB09214) successfully submitted'. Subsequently, a 'Job ended' dialog box appears with the message 'JobJOB09214 ended.'.

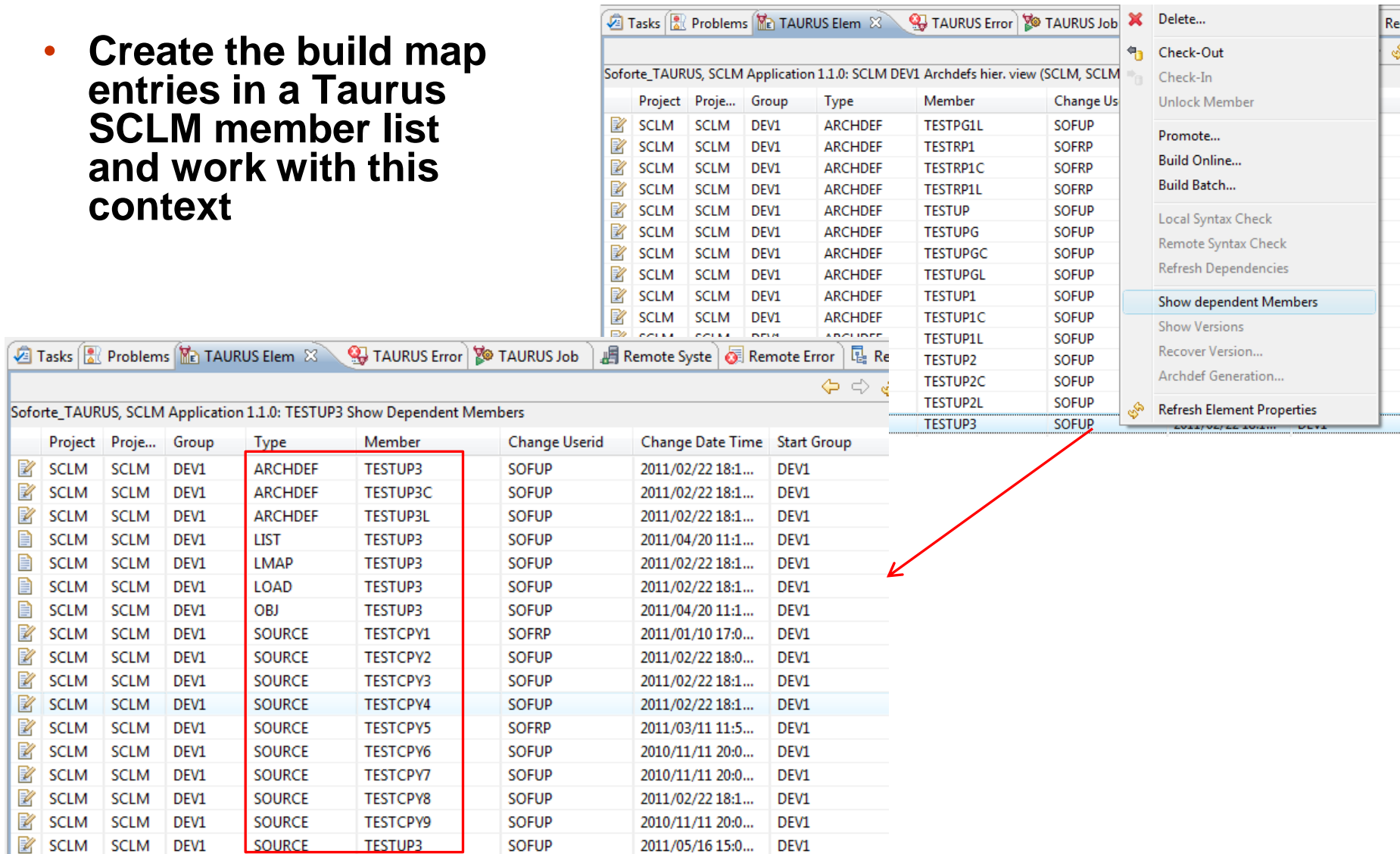
The bottom part of the screenshot shows the 'TAURUS Job' view with a table of job details and a 'Status' menu.

Status	Job ID	Job Name	Return Code	Action	Tool Name
DONE	JOB03615	SOFUPZ	U0000	Build	TOOL_REX_BuildBatch

ID	Message	RC	Line	File	Location	Date	Resource
IGYPS2072	"DISPLA" was invalid...	12	22	TESTUP3	SCLM.DEV1.SOURCE	May 16, 2011 3...	TESTUP3

Taurus – Create a Dependency Member List

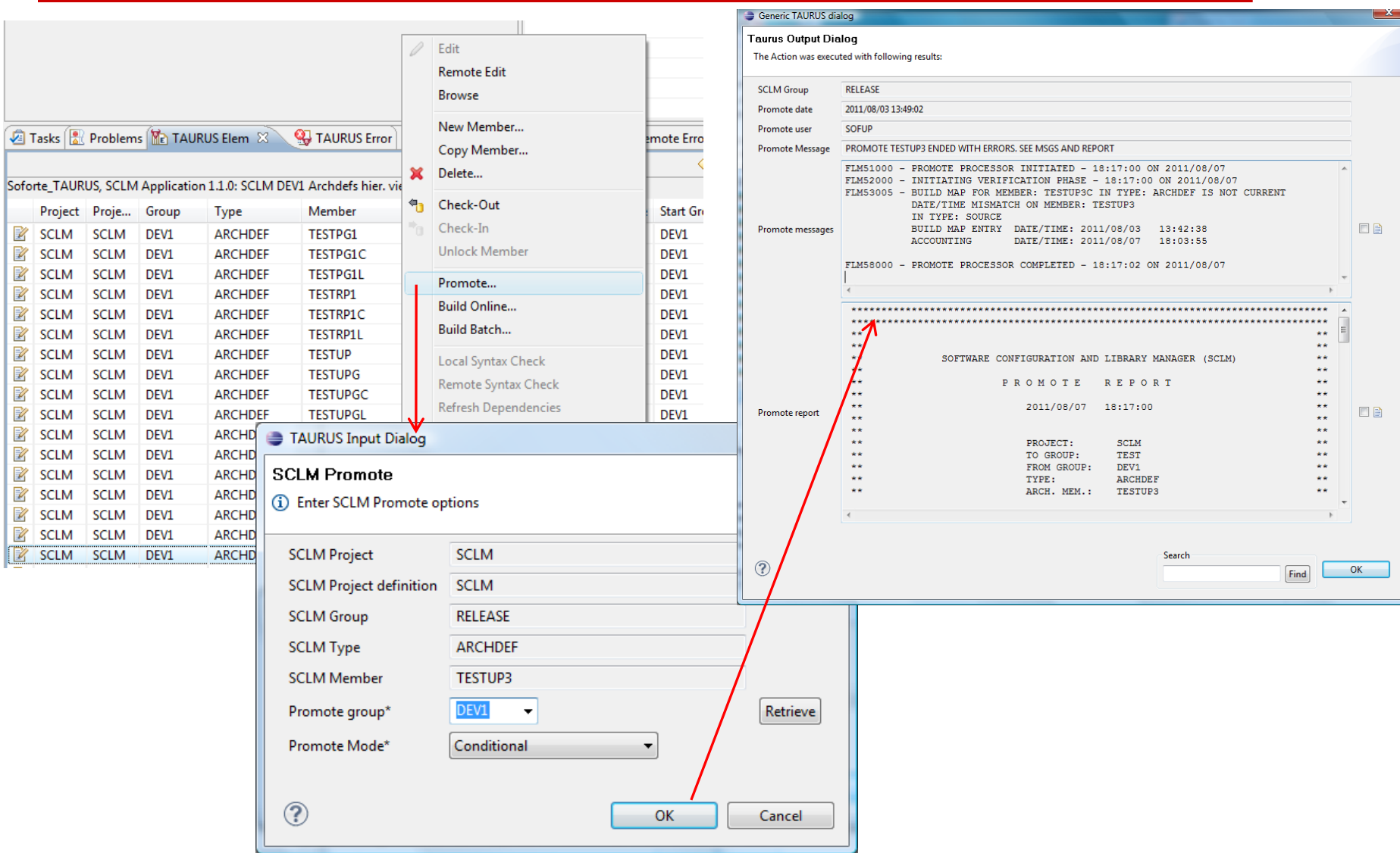
- Create the build map entries in a Taurus SCLM member list and work with this context



The screenshot shows the Taurus SCLM interface. The top window displays a table of members with columns: Project, Proj..., Group, Type, Member, and Change Us. The bottom window displays a table titled 'Soforte_TAURUS, SCLM Application 1.1.0: TESTUP3 Show Dependent Members' with columns: Project, Proj..., Group, Type, Member, Change Userid, Change Date Time, and Start Group. A red box highlights the 'Type' and 'Member' columns in the bottom table. A red arrow points from the 'Show dependent Members' option in the context menu to the 'Member' column in the bottom table.

Project	Proj...	Group	Type	Member	Change Userid	Change Date Time	Start Group
SCLM	SCLM	DEV1	ARCHDEF	TESTUP3	SOFUP	2011/02/22 18:1...	DEV1
SCLM	SCLM	DEV1	ARCHDEF	TESTUP3C	SOFUP	2011/02/22 18:1...	DEV1
SCLM	SCLM	DEV1	ARCHDEF	TESTUP3L	SOFUP	2011/02/22 18:1...	DEV1
SCLM	SCLM	DEV1	LIST	TESTUP3	SOFUP	2011/04/20 11:1...	DEV1
SCLM	SCLM	DEV1	LMAP	TESTUP3	SOFUP	2011/02/22 18:1...	DEV1
SCLM	SCLM	DEV1	LOAD	TESTUP3	SOFUP	2011/02/22 18:1...	DEV1
SCLM	SCLM	DEV1	OBJ	TESTUP3	SOFUP	2011/04/20 11:1...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTCPY1	SOFRP	2011/01/10 17:0...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTCPY2	SOFUP	2011/02/22 18:0...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTCPY3	SOFUP	2011/02/22 18:1...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTCPY4	SOFUP	2011/02/22 18:1...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTCPY5	SOFRP	2011/03/11 11:5...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTCPY6	SOFUP	2010/11/11 20:0...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTCPY7	SOFUP	2010/11/11 20:0...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTCPY8	SOFUP	2011/02/22 18:1...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTCPY9	SOFUP	2010/11/11 20:0...	DEV1
SCLM	SCLM	DEV1	SOURCE	TESTUP3	SOFUP	2011/05/16 15:0...	DEV1

Taurus – Promote an SCLM Archdef



The screenshot illustrates the process of promoting an SCLM Archdef in Taurus. It shows the SCLM Application hierarchy, the SCLM Promote dialog box, and the resulting Taurus Output Dialog.

SCLM Application Hierarchy:

Project	Proje...	Group	Type	Member
SCLM	SCLM	DEV1	ARCHDEF	TESTPG1
SCLM	SCLM	DEV1	ARCHDEF	TESTPG1C
SCLM	SCLM	DEV1	ARCHDEF	TESTPG1L
SCLM	SCLM	DEV1	ARCHDEF	TESTRP1
SCLM	SCLM	DEV1	ARCHDEF	TESTRP1C
SCLM	SCLM	DEV1	ARCHDEF	TESTRP1L
SCLM	SCLM	DEV1	ARCHDEF	TESTUP
SCLM	SCLM	DEV1	ARCHDEF	TESTUPG
SCLM	SCLM	DEV1	ARCHDEF	TESTUPGC
SCLM	SCLM	DEV1	ARCHDEF	TESTUPGL
SCLM	SCLM	DEV1	ARCHD	ARCHD
SCLM	SCLM	DEV1	ARCHD	ARCHD
SCLM	SCLM	DEV1	ARCHD	ARCHD
SCLM	SCLM	DEV1	ARCHD	ARCHD
SCLM	SCLM	DEV1	ARCHD	ARCHD
SCLM	SCLM	DEV1	ARCHD	ARCHD

SCLM Promote Dialog:

Enter SCLM Promote options

SCLM Project: SCLM
SCLM Project definition: SCLM
SCLM Group: RELEASE
SCLM Type: ARCHDEF
SCLM Member: TESTUP3
Promote group*: DEV1
Promote Mode*: Conditional

Buttons: Retrieve, OK, Cancel

Taurus Output Dialog:

The Action was executed with following results:

SCLM Group: RELEASE
Promote date: 2011/08/03 13:49:02
Promote user: SOFUP
Promote Message: PROMOTE TESTUP3 ENDED WITH ERRORS. SEE MSGS AND REPORT

Promote messages:

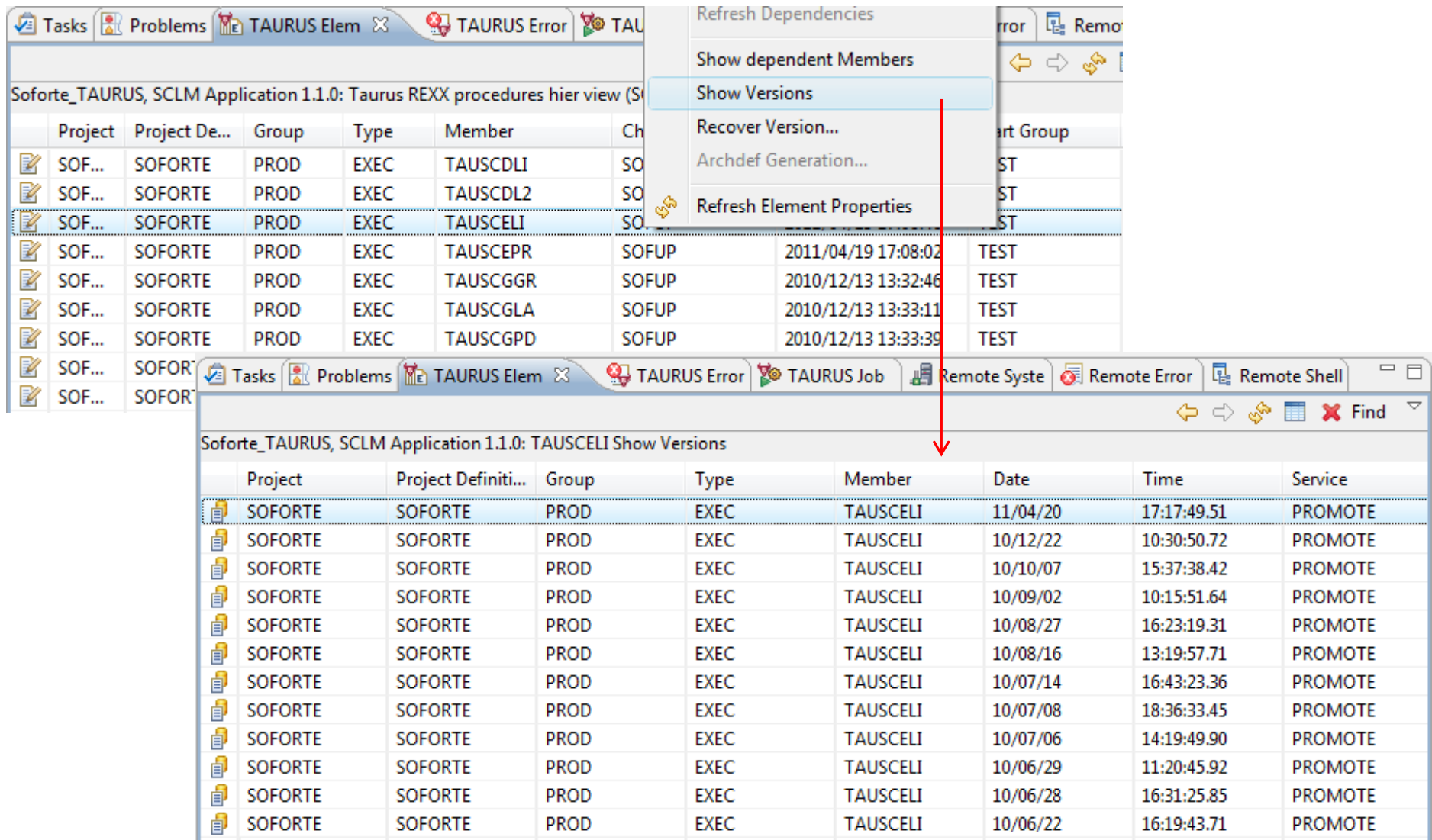
```
FIM51000 - PROMOTE PROCESSOR INITIATED - 18:17:00 ON 2011/08/07
FIM52000 - INITIATING VERIFICATION PHASE - 18:17:00 ON 2011/08/07
FIM53005 - BUILD MAP FOR MEMBER: TESTUP3C IN TYPE: ARCHDEF IS NOT CURRENT
          DATE/TIME MISMATCH ON MEMBER: TESTUP3
          IN TYPE: SOURCE
          BUILD MAP ENTRY DATE/TIME: 2011/08/03 13:42:38
          ACCOUNTING DATE/TIME: 2011/08/07 18:03:55
FIM58000 - PROMOTE PROCESSOR COMPLETED - 18:17:02 ON 2011/08/07
```

Promote report:

```
*****
**
**          SOFTWARE CONFIGURATION AND LIBRARY MANAGER (SCLM)
**
**          P R O M O T E   R E P O R T
**
**          2011/08/07 18:17:00
**
**          PROJECT:      SCLM
**          TO GROUP:    TEST
**          FROM GROUP:  DEV1
**          TYPE:        ARCHDEF
**          ARCH. MEM.:  TESTUP3
**
**          *****
```

Buttons: Search, Find, OK

Taurus – Create a version member list



The screenshot shows the SoforTe Taurus interface. The top window displays a hierarchy view of REXX procedures. A context menu is open over the 'TAUSCELI' member, with 'Show Versions' selected. A red arrow points from this menu item to the 'Show Versions' window below.

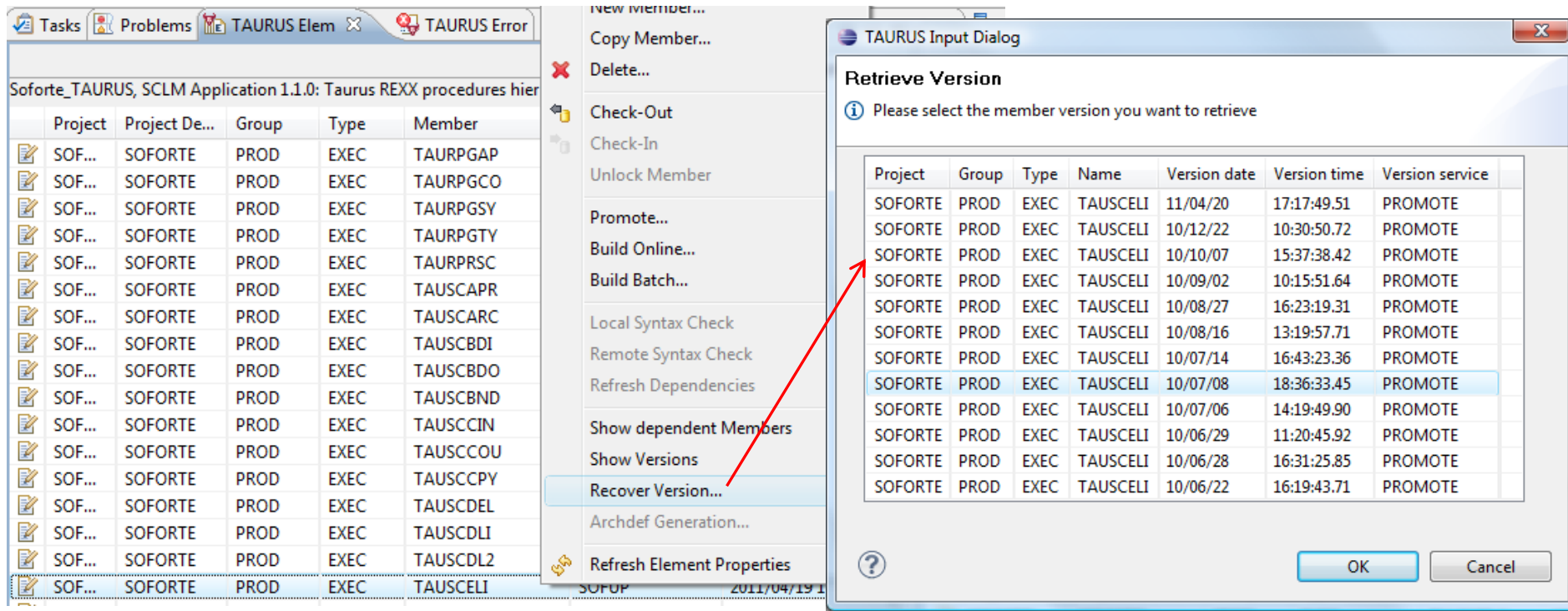
Soforte_TAURUS, SCLM Application 1.1.0: Taurus REXX procedures hier view (S)

Project	Project De...	Group	Type	Member	Ch		
SOF...	SOFORTE	PROD	EXEC	TAUSCDLI	SO		
SOF...	SOFORTE	PROD	EXEC	TAUSCDL2	SO		
SOF...	SOFORTE	PROD	EXEC	TAUSCELI	SO		
SOF...	SOFORTE	PROD	EXEC	TAUSCEPR	SOFUP	2011/04/19 17:08:02	TEST
SOF...	SOFORTE	PROD	EXEC	TAUSCGGR	SOFUP	2010/12/13 13:32:46	TEST
SOF...	SOFORTE	PROD	EXEC	TAUSCGLA	SOFUP	2010/12/13 13:33:11	TEST
SOF...	SOFORTE	PROD	EXEC	TAUSCGPD	SOFUP	2010/12/13 13:33:39	TEST

Soforte_TAURUS, SCLM Application 1.1.0: TAUSCELI Show Versions

Project	Project Definiti...	Group	Type	Member	Date	Time	Service
SOFORTE	SOFORTE	PROD	EXEC	TAUSCELI	11/04/20	17:17:49.51	PROMOTE
SOFORTE	SOFORTE	PROD	EXEC	TAUSCELI	10/12/22	10:30:50.72	PROMOTE
SOFORTE	SOFORTE	PROD	EXEC	TAUSCELI	10/10/07	15:37:38.42	PROMOTE
SOFORTE	SOFORTE	PROD	EXEC	TAUSCELI	10/09/02	10:15:51.64	PROMOTE
SOFORTE	SOFORTE	PROD	EXEC	TAUSCELI	10/08/27	16:23:19.31	PROMOTE
SOFORTE	SOFORTE	PROD	EXEC	TAUSCELI	10/08/16	13:19:57.71	PROMOTE
SOFORTE	SOFORTE	PROD	EXEC	TAUSCELI	10/07/14	16:43:23.36	PROMOTE
SOFORTE	SOFORTE	PROD	EXEC	TAUSCELI	10/07/08	18:36:33.45	PROMOTE
SOFORTE	SOFORTE	PROD	EXEC	TAUSCELI	10/07/06	14:19:49.90	PROMOTE
SOFORTE	SOFORTE	PROD	EXEC	TAUSCELI	10/06/29	11:20:45.92	PROMOTE
SOFORTE	SOFORTE	PROD	EXEC	TAUSCELI	10/06/28	16:31:25.85	PROMOTE
SOFORTE	SOFORTE	PROD	EXEC	TAUSCELI	10/06/22	16:19:43.71	PROMOTE

Taurus – Recover an SCLM version member



The screenshot shows the Taurus IDE interface. On the left, a tree view displays the project structure for 'Soforte_TAURUS, SCLM Application 1.1.0: Taurus REXX procedures hier'. A context menu is open over the 'TAUSCELI' member, with 'Recover Version...' highlighted. On the right, the 'TAURUS Input Dialog' window is open, showing a table of version members. A red arrow points from the 'Recover Version...' menu item to the dialog, and another red arrow points from the dialog back to the main table below.

Project	Group	Type	Name	Version date	Version time	Version service
SOFORTE	PROD	EXEC	TAUSCELI	11/04/20	17:17:49.51	PROMOTE
SOFORTE	PROD	EXEC	TAUSCELI	10/12/22	10:30:50.72	PROMOTE
SOFORTE	PROD	EXEC	TAUSCELI	10/10/07	15:37:38.42	PROMOTE
SOFORTE	PROD	EXEC	TAUSCELI	10/09/02	10:15:51.64	PROMOTE
SOFORTE	PROD	EXEC	TAUSCELI	10/08/27	16:23:19.31	PROMOTE
SOFORTE	PROD	EXEC	TAUSCELI	10/08/16	13:19:57.71	PROMOTE
SOFORTE	PROD	EXEC	TAUSCELI	10/07/14	16:43:23.36	PROMOTE
SOFORTE	PROD	EXEC	TAUSCELI	10/07/08	18:36:33.45	PROMOTE
SOFORTE	PROD	EXEC	TAUSCELI	10/07/06	14:19:49.90	PROMOTE
SOFORTE	PROD	EXEC	TAUSCELI	10/06/29	11:20:45.92	PROMOTE
SOFORTE	PROD	EXEC	TAUSCELI	10/06/28	16:31:25.85	PROMOTE
SOFORTE	PROD	EXEC	TAUSCELI	10/06/22	16:19:43.71	PROMOTE

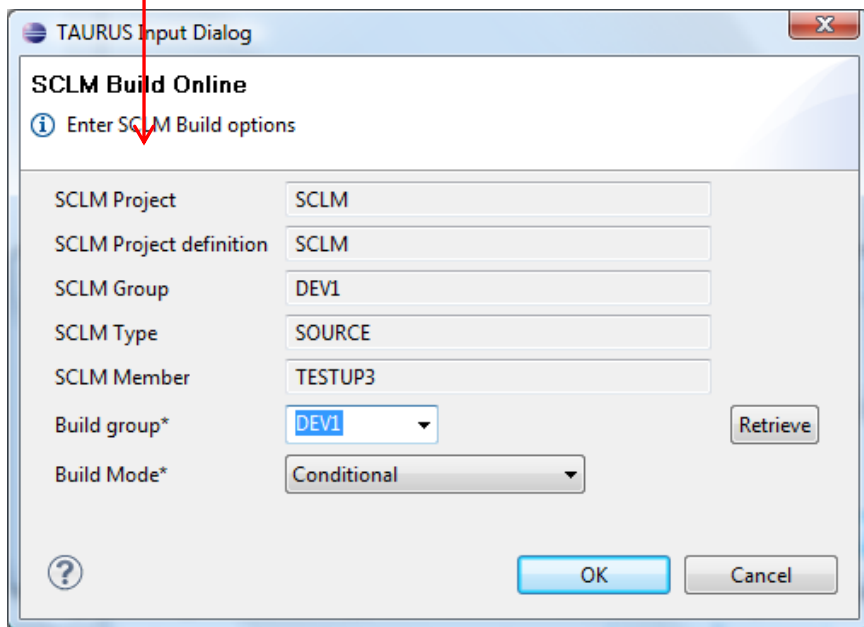
SOFORTE	SOFORTE	PROD	EXEC	TAUSCDLI	SOFUP	2011/04/19 17:04:37	TEST
SOFORTE	SOFORTE	PROD	EXEC	TAUSCDL2	SOFUP	2011/04/19 17:06:20	TEST
SOFORTE	SOFORTE	PROD	EXEC	TAUSCELI	SOFUP	2011/04/19 17:06:46	TEST
SOFORTE	SOFORTE	TEST	EXEC	TAUSCELI	SOFUP	2010/12/13 13:31:25	TEST
SOFORTE	SOFORTE	PROD	EXEC	TAUSCEPR	SOFUP	2011/04/19 17:08:02	TEST
SOFORTE	SOFORTE	PROD	EXEC	TAUSCGGR	SOFUP	2010/12/13 13:32:46	TEST
SOFORTE	SOFORTE	PROD	EXEC	TAUSCGLA	SOFUP	2010/12/13 13:33:11	TEST
SOFORTE	SOFORTE	PROD	EXEC	TAUSCGPD	SOFUP	2010/12/13 13:33:39	TEST

Taurus – How to model the SCLM build action

- **(1) Define a property for each dialog field**

Model
Result

Model
Definition



TAURUS Input Dialog

SCLM Build Online

Enter SCLM Build options

SCLM Project: SCLM

SCLM Project definition: SCLM

SCLM Group: DEV1

SCLM Type: SOURCE

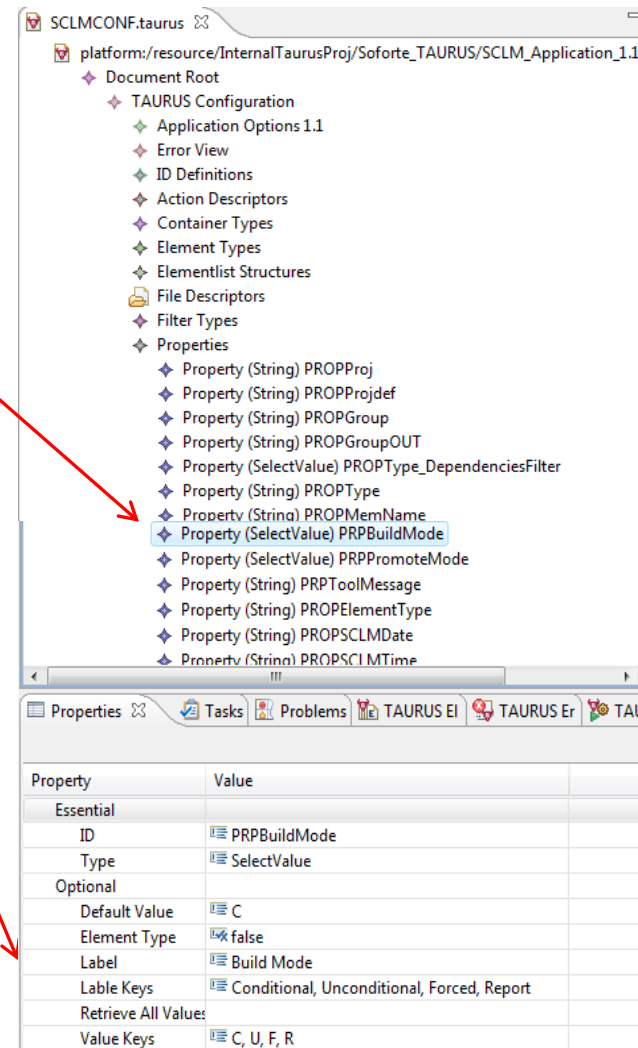
SCLM Member: TESTUP3

Build group*: DEV1

Build Mode*: Conditional

Retrieve

OK Cancel



SCLMCONF.taurus

platform:/resource/InternalTaurusProj/Soforte_TAUROS/SCLM_Application_1.1.

- Document Root
 - TAURUS Configuration
 - Application Options 1.1
 - Error View
 - ID Definitions
 - Action Descriptors
 - Container Types
 - Element Types
 - Elementlist Structures
 - File Descriptors
 - Filter Types
 - Properties
 - Property (String) PROPProj
 - Property (String) PROPProjdef
 - Property (String) PROPGroup
 - Property (String) PROPGroupOUT
 - Property (SelectValue) PROPTYPE_DependenciesFilter
 - Property (String) PROPTYPE
 - Property (String) PROPMemName
 - Property (SelectValue) PRPBuildMode**
 - Property (SelectValue) PRPPromoteMode
 - Property (String) PRPToolMessage
 - Property (String) PROPElementType
 - Property (String) PROPSCLMDate
 - Property (String) PROPSCLMTime

Properties

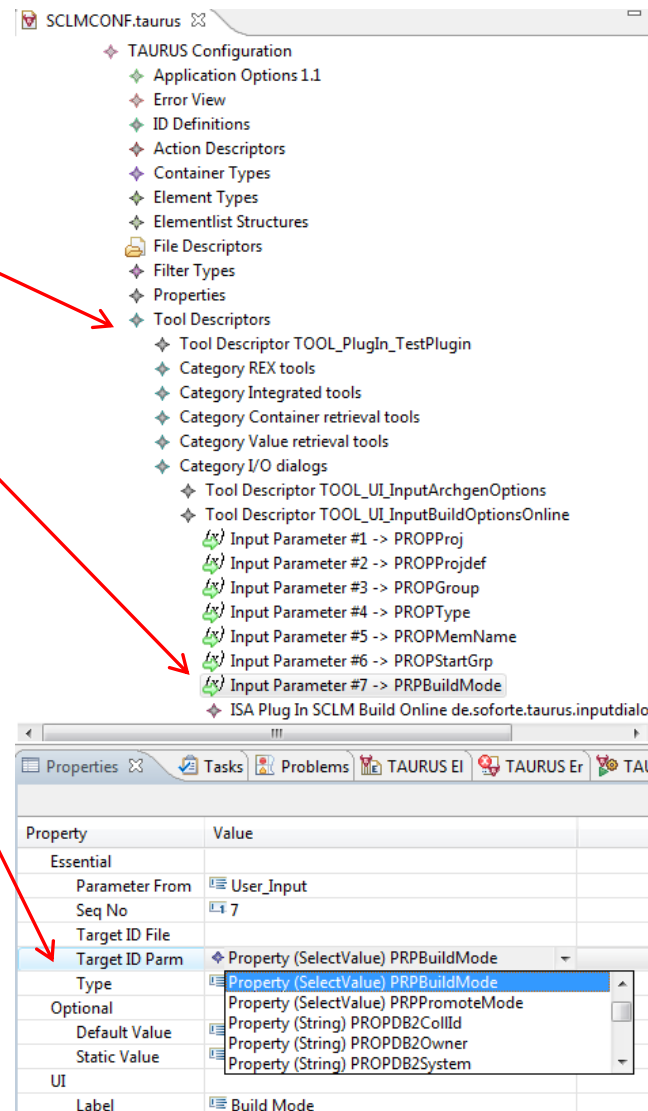
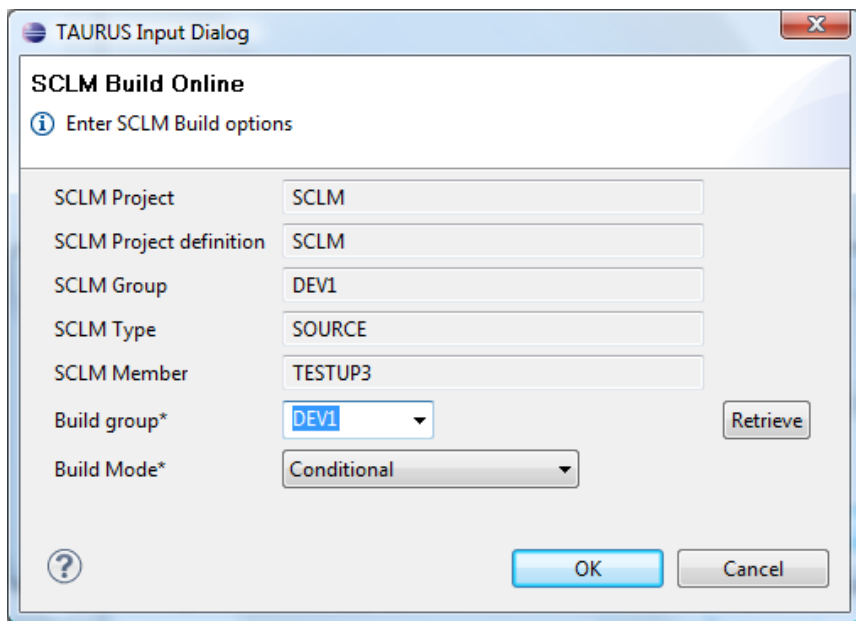
Property	Value
Essential	
ID	PRPBuildMode
Type	SelectValue
Optional	
Default Value	C
Element Type	false
Label	Build Mode
Label Keys	Conditional, Unconditional, Forced, Report
Retrieve All Values	
Value Keys	C, U, F, R

Taurus – How to model the SCLM build action

- **(2) Define the dialog and associate the dialog fields**

Model Result

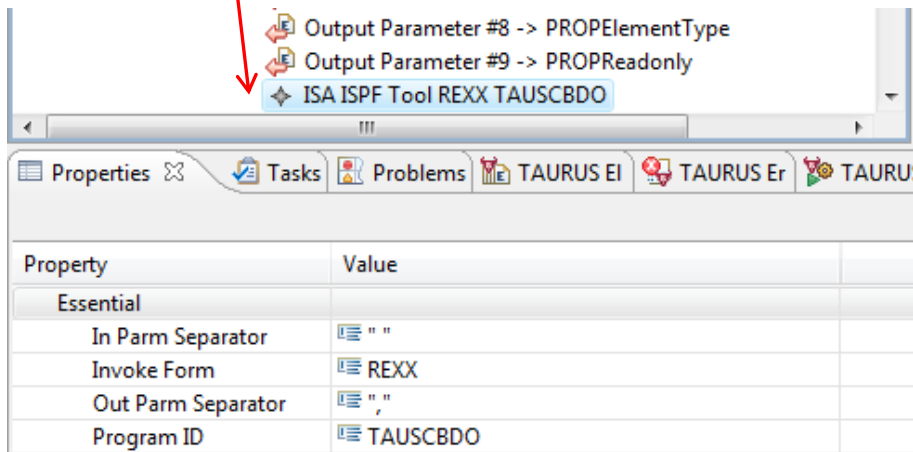
Model Definition



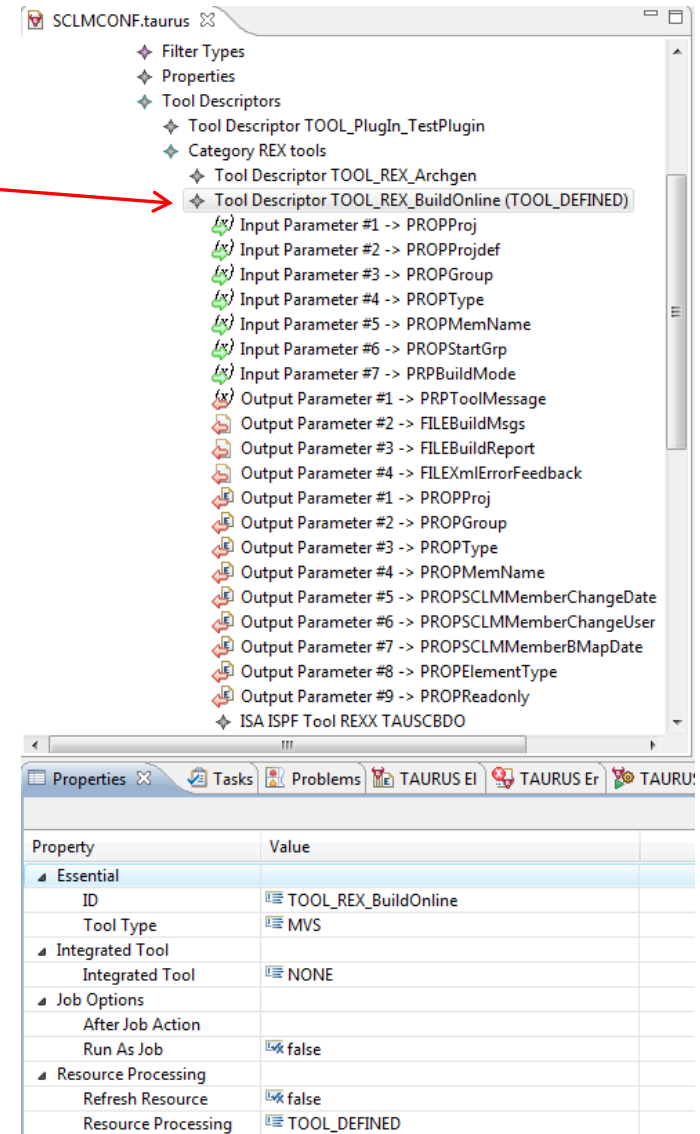
Taurus – How to model the SCLM build action

- (3) Define the REXX tool which calls the SCLM Build and associate the dialog fields as input parameters.

Model Definition



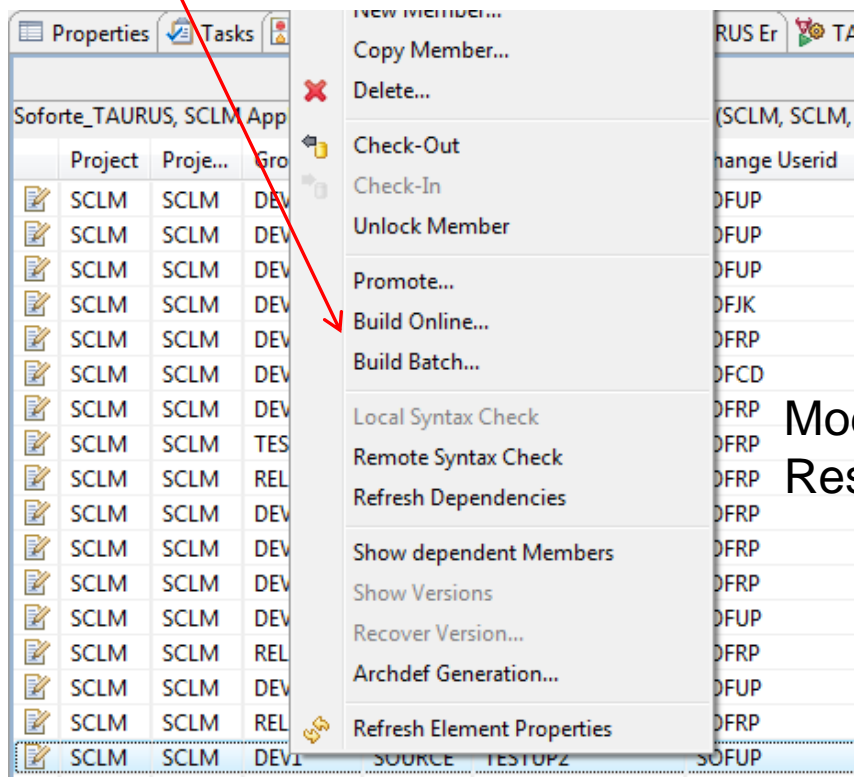
Property	Value
Essential	
In Parm Separator	" "
Invoke Form	REXX
Out Parm Separator	","
Program ID	TAUSCBDO



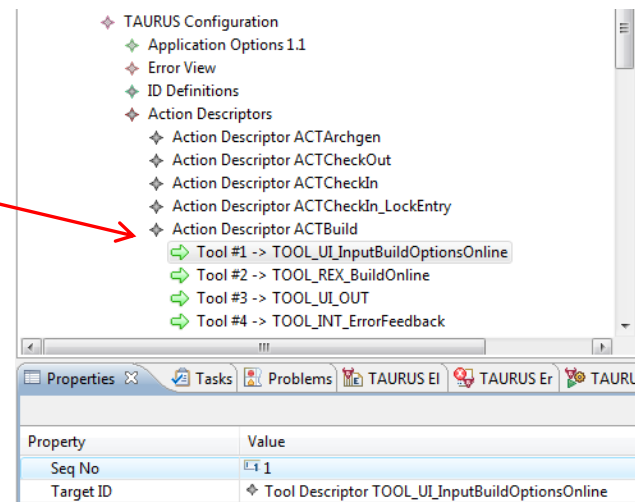
Property	Value
Essential	
ID	TOOL_REX_BuildOnline
Tool Type	MVS
Integrated Tool	
Integrated Tool	NONE
Job Options	
After Job Action	
Run As Job	false
Resource Processing	
Refresh Resource	false
Resource Processing	TOOL_DEFINED

Taurus – How to model the SCLM build action

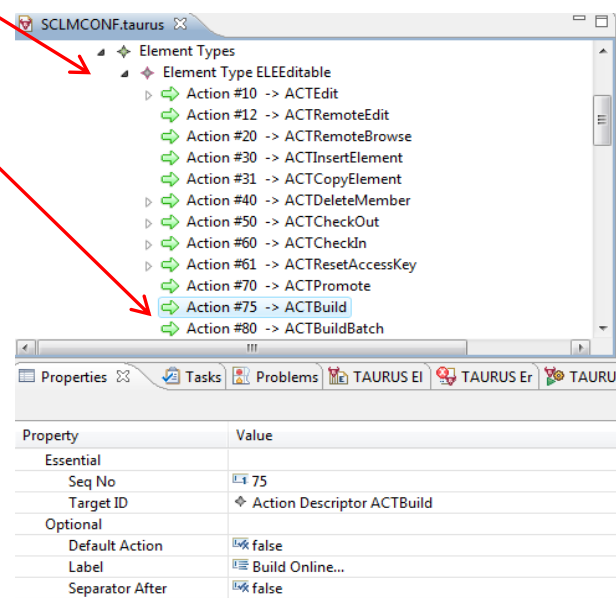
- (4) Define the build action and associate the input dialog, the REXX tool, an output dialog and error feedback support to this action
- (5) Associate the action to the SCLM editable type



Model Definition

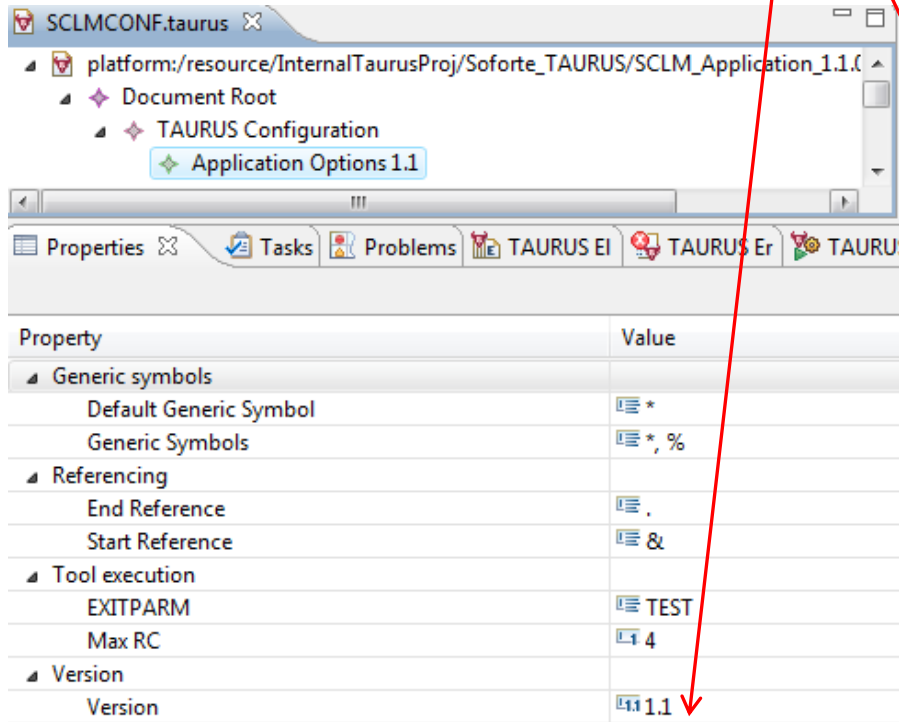


Model Result



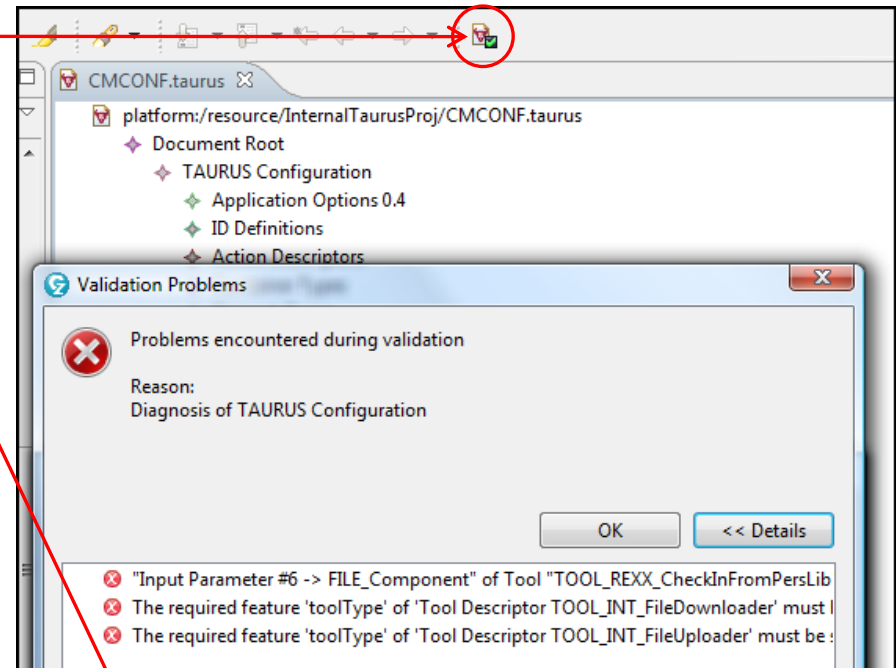
Taurus – How to model the SCLM build action

- (6) validate your model (consistency check)
- (7) Store the model in a PDS or USS and test your customization
- (8) Promote the new model to all client users only by changing the version number (no client installation process necessary)



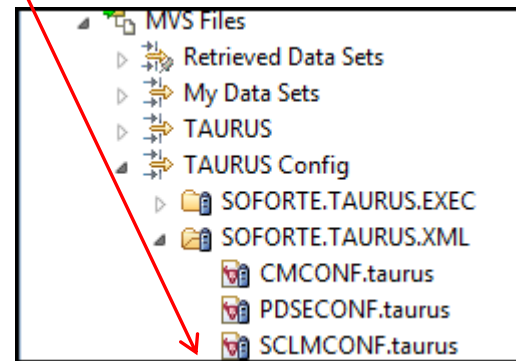
The screenshot shows the configuration window for SCLMCONF.taurus. The tree view is expanded to show the TAURUS Configuration section, with Application Options 1.1 selected. Below the tree is a table of properties and their values.

Property	Value
Generic symbols	
Default Generic Symbol	*
Generic Symbols	*, %
Referencing	
End Reference	.
Start Reference	&
Tool execution	
EXITPARM	TEST
Max RC	4
Version	
Version	1.1



The screenshot shows a 'Validation Problems' dialog box with a red 'X' icon. The text inside reads: 'Problems encountered during validation' and 'Reason: Diagnosis of TAURUS Configuration'. There are 'OK' and '<< Details' buttons. Below the dialog, three error messages are visible:

- ✗ "Input Parameter #6 -> FILE_Component" of Tool "TOOL_REXX_CheckInFromPersLib
- ✗ The required feature 'toolType' of 'Tool Descriptor TOOL_INT_FileDownloader' must be
- ✗ The required feature 'toolType' of 'Tool Descriptor TOOL_INT_FileUploader' must be



The screenshot shows a tree view of MVS Files. The tree is expanded to show the TAURUS Config folder, which contains subfolders for SOFORTE.TAURUS.EXEC and SOFORTE.TAURUS.XML. Under SOFORTE.TAURUS.XML, the files CMCONF.taurus, PDSECONF.taurus, and SCLMCONF.taurus are listed. Red arrows from the other screenshots point to the validation error messages and the SCLMCONF.taurus file.

- **High Performance Host Communication**
- **Mainframe utilities available out of the box**
 - MVS Explorer
 - JES JOB Explorer
- **Reduces hurdle for Host tool implementation**
 - The financial hurdle for Eclipse tool implementations is reduced significantly
- **Reduces risk for Eclipse Implementation**
 - Complete and deep integration becomes affordable
 - Predefined models for different development processes
 - Integration with all kinds of tools like RAA, RTC, SCLM, ChangeMan, Endeavor, ...
 - High functionality and quality of UI increase developer acceptability and productivity
- **Reduces Maintenance Effort**
 - TAURUS model is managed centrally on z/OS
 - Allows much faster deployment of changed or new functions