

# CICS Explorer



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# CICS Explorer

*Looking for new ways to accelerate the transfer of knowledge, skills, and best practice to the next generation of technical staff/experts? The CICS Explorer provides task-oriented views, powerful context-sensitive resource editors, and integrated access to broad range of data and control capabilities for CICS TS. CICS Explorer V5.1 has been restructured to separate the CICS-specific perspectives and capabilities from the connectivity infrastructure and z/OS platform views to create greater consistency across CICS, CICS Tools other embedding IBM products. This session provides an introduction to the CICS Explorer as well as diving into some of the key enhancements in the latest release.*



# CICS Cloud Enablement

## Monday

1:30 PM *CICS TS V5.1 Technical Overview*

## Tuesday

9:30 AM *CICS and the Cloud, Mobile and Big Data*

11:00 AM Reinventing the CICS Application Lifecycle

1:30 PM CICS as a Platform Service Provider

## Wednesday

## Thursday

**12:15 PM CICS Explorer**

4:30 PM *Modernizing CICS - Hands on Lab, Part 1 of 2*

6:00 PM *Modernizing CICS - Hands on Lab Part 2 of 2*

## Friday



# How to install CICS Explorer

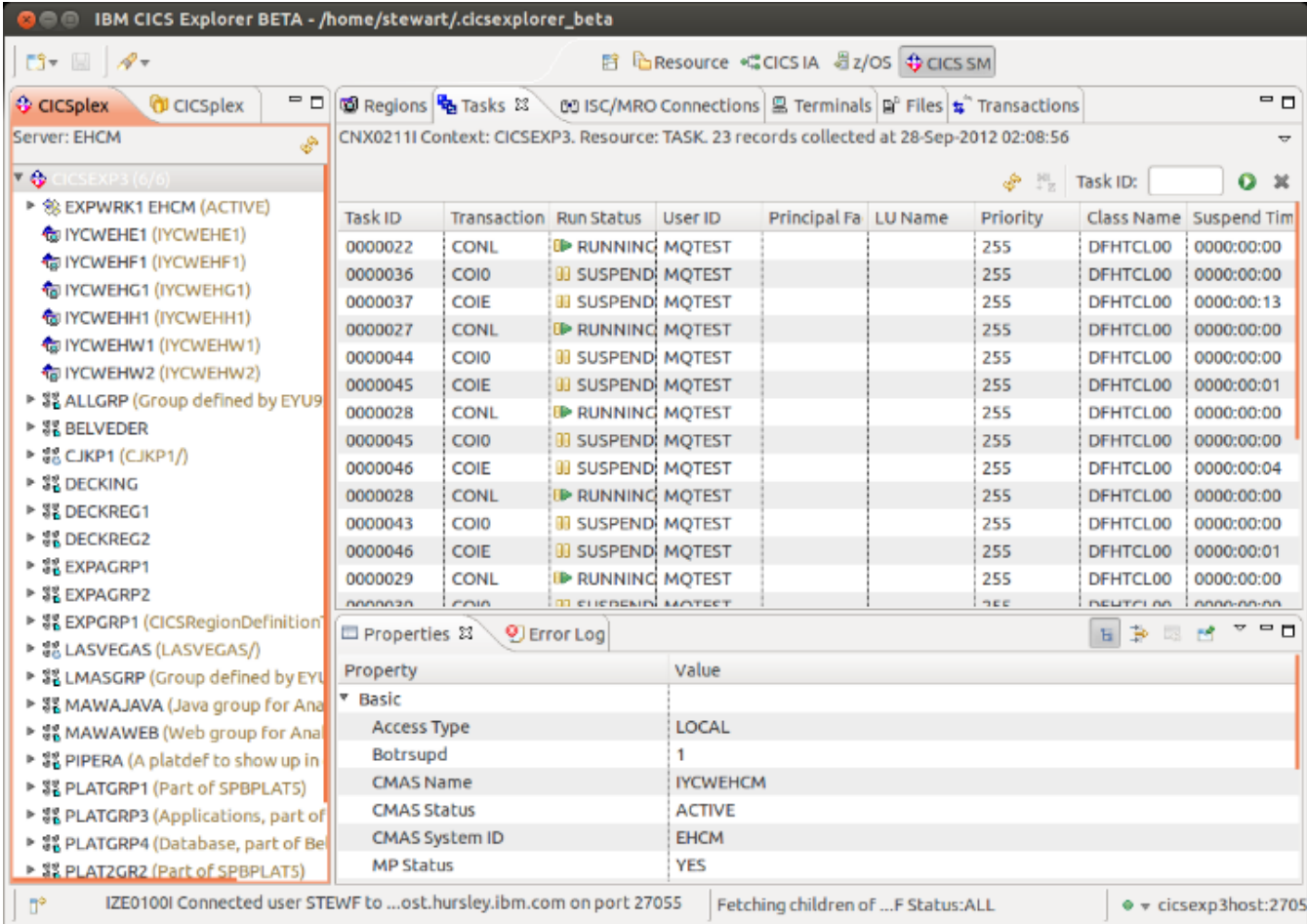
- Basic
  - Download from our website: [www.ibm.com/cics/explorer](http://www.ibm.com/cics/explorer)
  - Comes with RD/z 8.0.3 (1.1.1)
- Advanced
  - More installation solutions described later!
- Supported platforms
  - Windows – most flavours
  - Linux – RHEL v5 & v6 32/64-bit, SLES 10 & 11 32/64-bit



# Introductory Demo



# CICS SM Perspective



IBM CICS Explorer BETA - /home/stewart/.cicsexplorer\_beta

Server: EHCN

CN0211I Context: CICSEXP3. Resource: TASK. 23 records collected at 28-Sep-2012 02:08:56

Task ID	Transaction	Run Status	User ID	Principal Fa	LU Name	Priority	Class Name	Suspend Tim
0000022	CONL	▶ RUNNING	MQTEST			255	DFHTCL00	0000:00:00
0000036	COIO	▶ SUSPEND	MQTEST			255	DFHTCL00	0000:00:00
0000037	COIE	▶ SUSPEND	MQTEST			255	DFHTCL00	0000:00:13
0000027	CONL	▶ RUNNING	MQTEST			255	DFHTCL00	0000:00:00
0000044	COIO	▶ SUSPEND	MQTEST			255	DFHTCL00	0000:00:00
0000045	COIE	▶ SUSPEND	MQTEST			255	DFHTCL00	0000:00:01
0000028	CONL	▶ RUNNING	MQTEST			255	DFHTCL00	0000:00:00
0000045	COIO	▶ SUSPEND	MQTEST			255	DFHTCL00	0000:00:00
0000046	COIE	▶ SUSPEND	MQTEST			255	DFHTCL00	0000:00:04
0000028	CONL	▶ RUNNING	MQTEST			255	DFHTCL00	0000:00:00
0000043	COIO	▶ SUSPEND	MQTEST			255	DFHTCL00	0000:00:00
0000046	COIE	▶ SUSPEND	MQTEST			255	DFHTCL00	0000:00:01
0000029	CONL	▶ RUNNING	MQTEST			255	DFHTCL00	0000:00:00
0000030	COIO	▶ SUSPEND	MQTEST			255	DFHTCL00	0000:00:00

Properties

Property	Value
Basic	
Access Type	LOCAL
Botrsupd	1
CMAS Name	IYCWEHCM
CMAS Status	ACTIVE
CMAS System ID	EHCN
MP Status	YES

IZE0100I Connected user STEWF to ...ost.hursley.ibm.com on port 27055 Fetching children of ...F Status:ALL cicexp3host:2705



# Browse

Regions Tasks ISC/MRO Connections Terminals Files Transactions

CNX02111 Context: CICSEXP3. Resource: TASK. 22 records collected at 28-Sep-2012 02:30:53

Task ID: Transaction ID: CO\*

Task ID	Transaction	Run Status	User ID	Principal Faci	LU Name	Priority	Class Name	Suspend Time
0000047	COVG	SUSPENDED	MQTEST			255	DFHTCL00	0000:00:12
0000045	COVG	SUSPENDED	CICSUSER			255	DFHTCL00	0000:00:02
0001941	COVA	SUSPENDED	CICSUSER			150	DFHTCL00	0000:00:08
0001944	COVA	SUSPENDED	CICSUSER			150	DFHTCL00	0000:00:08
0000029	CONL	RUNNING	MQTEST			255	DFHTCL00	0000:00:00
0000029	CONL	RUNNING	CICSUSER			255	DFHTCL00	0000:00:00
0000028	CONL	RUNNING	MQTEST			255	DFHTCL00	0000:00:00
0000022	CONL	RUNNING	MQTEST			255	DFHTCL00	0000:00:00
0000027	CONL	RUNNING	MQTEST			255	DFHTCL00	0000:00:00
0000028	CONL	RUNNING	MQTEST			255	DFHTCL00	0000:00:00
0000045	COIO	SUSPENDED	MQTEST			255	DFHTCL00	0000:00:00
0000030	COIO	SUSPENDED	MQTEST			255	DFHTCL00	0000:00:00
0000043	COIO	SUSPENDED	MQTEST			255	DFHTCL00	0000:00:00
0000044	COIO	SUSPENDED	MQTEST			255	DFHTCL00	0000:00:00



# Create

**New Program Definition**

**Create Program Definition**

CICSplex:

☐ Region (CSD)

Resource Group:

Name:

Description:

Program Type


☐ Assembler, C/C++, COBOL, or PL/I

☒ Java

Service Name:

JVM Server:

☒ Open editor





# Edit

Program Definition (ZTU) ZTU

**Overview**

CICSEXP3 ▸ ZTU ▾

**Basic**

Name: ZTU Description: ZTU

Version: 1 Created: 28-Sep-2012 02:15:31

☒ Enabled Changed: 28-Sep-2012 02:15:31

**Details**

Language: N/A ▾

☒ Display Execution Diagnostic Facility (EDF) screens

**Open Transaction Environment**

Programs that are coded to threadsafe standards can exploit the CICS open transaction environment (OTE). OTE provides the opportunity for performance improvements and toleration of APIs that are not normally permitted in a CICS application program.

☒ This Program is threadsafe

This Program is CPU intensive, which might include threadsafe CICS commands, and issues few non-threadsafe CICS commands, or uses APIs that are not normally permitted by CICS

☒ This Program

- \* is only run on versions of CICS later than v4.1
- \* issues many external resource manager calls
- \* only uses APIs that are always permitted by CICS

**Storage**

☐ Can handle 31 bit addresses (above the 16MB line)

Overview Remote Java™ Attributes

Program Definition (ZTU) ZTU

**Attributes**

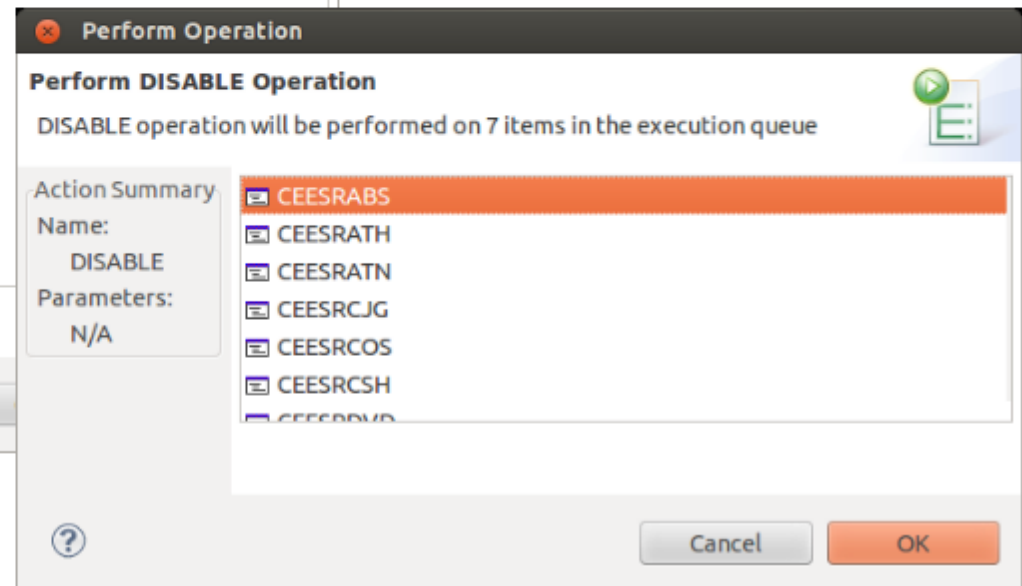
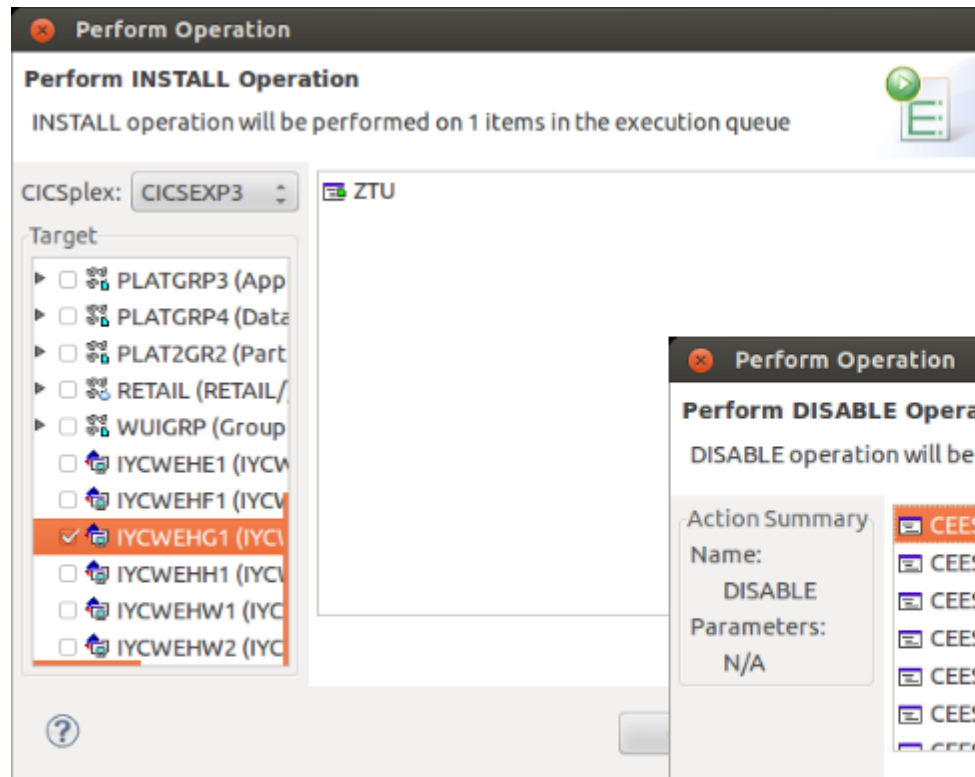
CICSEXP3 ▸ ZTU ▾

Property	Value
Basic	
CSDGroup	
Description	ZTU
Name	ZTU
Version	1
Definition Signature	
Change Agent	DREPAPI
Change Release	0680
Change Time	28-Sep-2012 02:15:31
Change User ID	CICSUSER
Create Time	28-Sep-2012 02:15:31
Details	
Api	CICSAPI
Cedf	YES
Concurrency	REQUIRED
Datalocation	BELOW
Execkey	CICS
Language	N_A
Reload	NO
Resident	NO
Status	ENABLED

Overview Remote Java™ Attributes

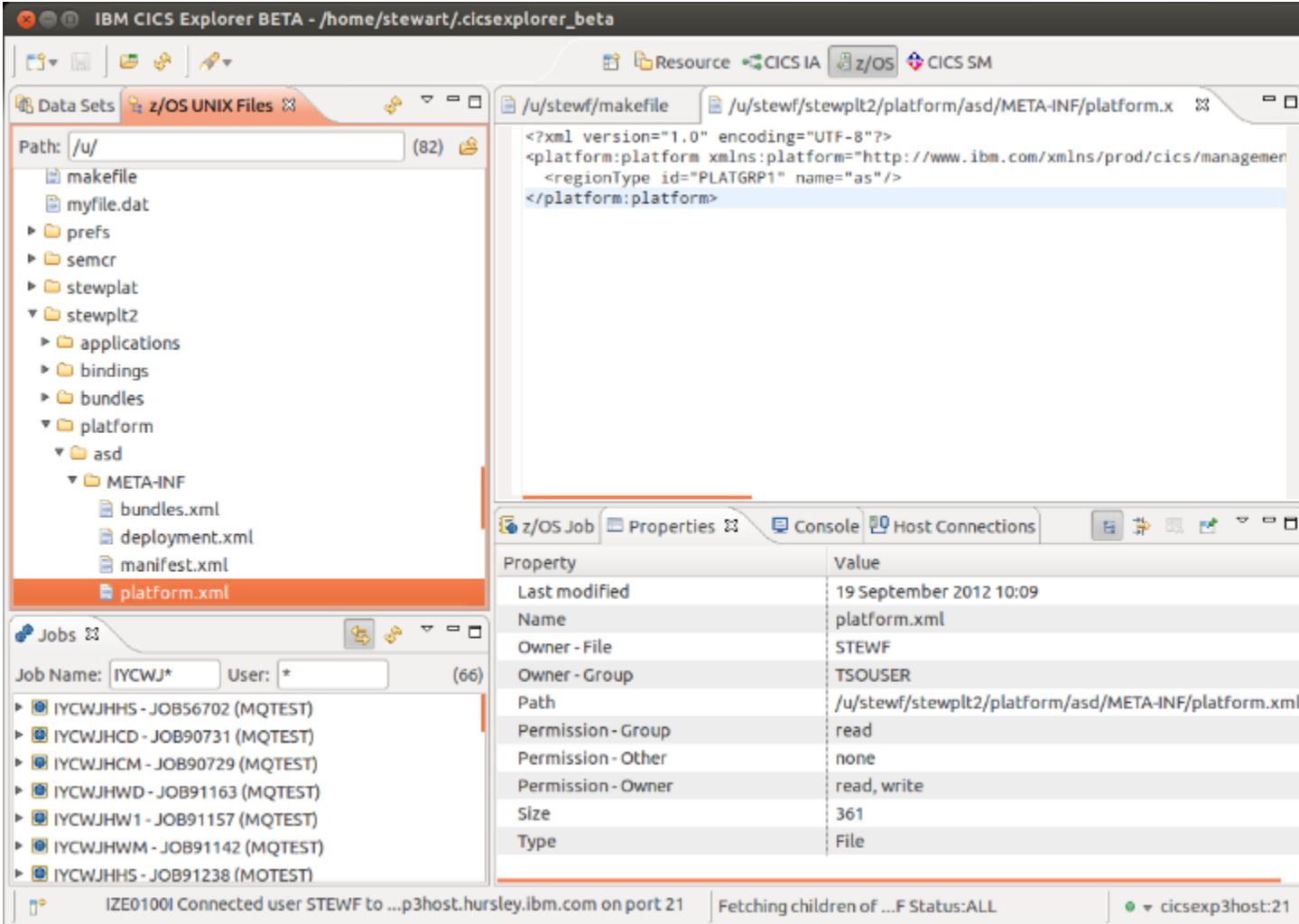


# Lifecycle





# z/OS Perspective



The screenshot displays the IBM CICS Explorer BETA interface. The top toolbar includes icons for Data Sets, z/OS UNIX Files, and Resource. The main window is divided into three panes:

- Data Sets / z/OS UNIX Files:** Shows a tree view of the file system. The path is `/u/`. The tree structure includes `makefile`, `myfile.dat`, `prefs`, `semcr`, `stewplat`, `stewplt2` (expanded), `applications`, `bindings`, `bundles`, `platform` (expanded), and `asd` (expanded). Under `platform`, there is a `META-INF` directory containing `bundles.xml`, `deployment.xml`, `manifest.xml`, and `platform.xml` (selected).
- XML Editor:** Displays the content of `platform.xml`. The XML is as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<platform:platform xmlns:platform="http://www.ibm.com/xmlns/prod/cics/management">
  <regionType id="PLATGRP1" name="as"/>
</platform:platform>
```
- Jobs:** Shows a list of jobs. The Job Name is `IYCWJ*` and the User is `*`. The list includes:
  - IYCWJHHS - JOB56702 (MQTEST)
  - IYCWJHCD - JOB90731 (MQTEST)
  - IYCWJHCM - JOB90729 (MQTEST)
  - IYCWJHWD - JOB91163 (MQTEST)
  - IYCWJHW1 - JOB91157 (MQTEST)
  - IYCWJHWM - JOB91142 (MQTEST)
  - IYCWJHHS - JOB91238 (MQTEST)

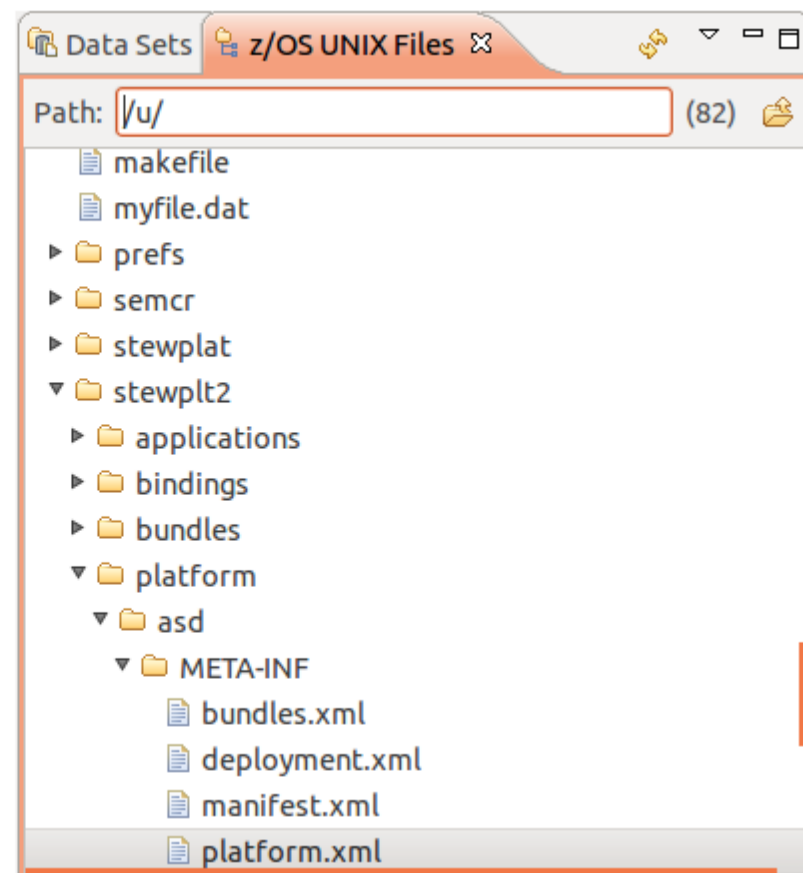
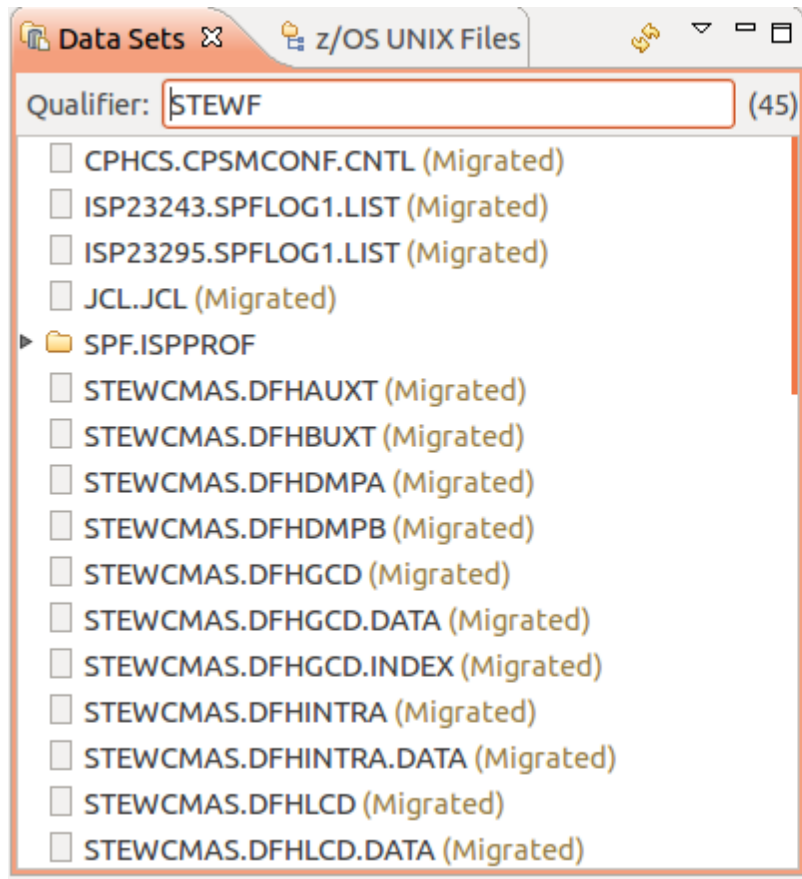
The bottom status bar shows the connection: `IZE0100I Connected user STEWF to ...p3host.hursley.ibm.com on port 21`. The right side of the status bar shows `Fetching children of ...F Status:ALL` and `cicsexp3host:21`.







# Datasets and Unix Files





# Job output

z/OS Job x Properties Console Host Connections

Job ID: JOB56702 Name: IYCWJHHS User: MQTEST Status: OUTPUT

JESMSG LG 1 JES2 JOB LOG -- SYSTEM MV2C -- NODE WINM 0

JESJCL  
JESYSMSG  
DFHCXRF  
MSGUSR

12.39.04 JOB56702 ---- THURSDAY, 27 SEP 2012 ----  
12.39.04 JOB56702 IRR010I USERID MQTEST IS ASSIGNED TO THIS JOB.  
12.39.04 JOB56702 ICH70001I MQTEST LAST ACCESS AT 12:39:00 ON THURSDAY, SEPTEMBER 27, 2  
12.39.04 JOB56702 \$HASP373 IYCWJHHS STARTED - INIT 132 - CLASS A - SYS MV2C  
12.39.04 JOB56702 IEF403I IYCWJHHS - STARTED  
12.39.05 JOB56702 DFHPA1101 IYCWJHHS DFHSIT6\$ IS BEING LOADED.  
12.39.05 JOB56702 DFHPA1108 IYCWJHHS DFHSIT6\$ HAS BEEN LOADED. (GENERATED AT: MM/DD= 09/  
12.39.05 JOB56702 DFHPA1100 IYCWJHHS OVERRIDE PARAMETERS FROM JCL EXEC STATEMENT: SYSIN  
12.39.05 JOB56702 DFHPA1102 IYCWJHHS OVERRIDE PARAMETERS FROM SYSIN:  
12.39.05 JOB56702 DFHPA1927 IYCWJHHS USSHOME=/itbld/cics.ts.spa/BSF/dist  
12.39.05 JOB56702 DFHPA1927 IYCWJHHS APPLID=IYCWJHHS  
12.39.05 JOB56702 DFHPA1927 IYCWJHHS AICONS=AUTO



# z/OS + CICS

IBM CICS Explorer BETA - /home/stewart/.cicsexplorer\_beta

Resource CICS IA z/OS CICS SM

Project Explorer

- demo
  - META-INF
    - cics.xml
  - fileopenevent.evbind
  - Interdependency Analyzer Queries

Outline

An outline is not available.

Specifications

/u/stewf/makefile /u/stewf/stewplt2/platform/as fileopenevent.evbind

▼ Catalog\_file\_notopen

Check\_EXMPCAT\_g

▼ General

Identify and describe the event.

Name Catalog\_file\_notopen\_check Edit...

Description Generate an event when the Catalog Stock File goes from the open state

▼ Emitted Business Information

Describe and order the business information to be emitted by the event.

Name	Type	Length	Precision	Description	
File_name	Text	8	0	Name of the file	Add...
Dataset_Name	Text	44	0	Name of the dataset	Edit...
From_Open_Status	Text	16	0	The file was open when the event was generated	Delete...
To_Open_Status	Text	16	0	The file was closed when the event was generated	Move Up
Enable_Status	Text	16	0	The event was enabled when the event was generated	Move Down

▼ Capture Specifications

Add Capture Specifications to this event.

Add a Capture Specification...

▼ Automatic Capture Specification

Event Binding Specification Adapter

Fetching children of ...F Status:ALL



# End of Introductory Demo





# CICS Explorer Releases



- Previous: CICS Explorer 1.1.1
  - 11th May 2012
- Current CICS Explorer 5.1
  - December 14th 2012
  - Same branding as CICS TS

Let's look at some of the new functionality for 2012



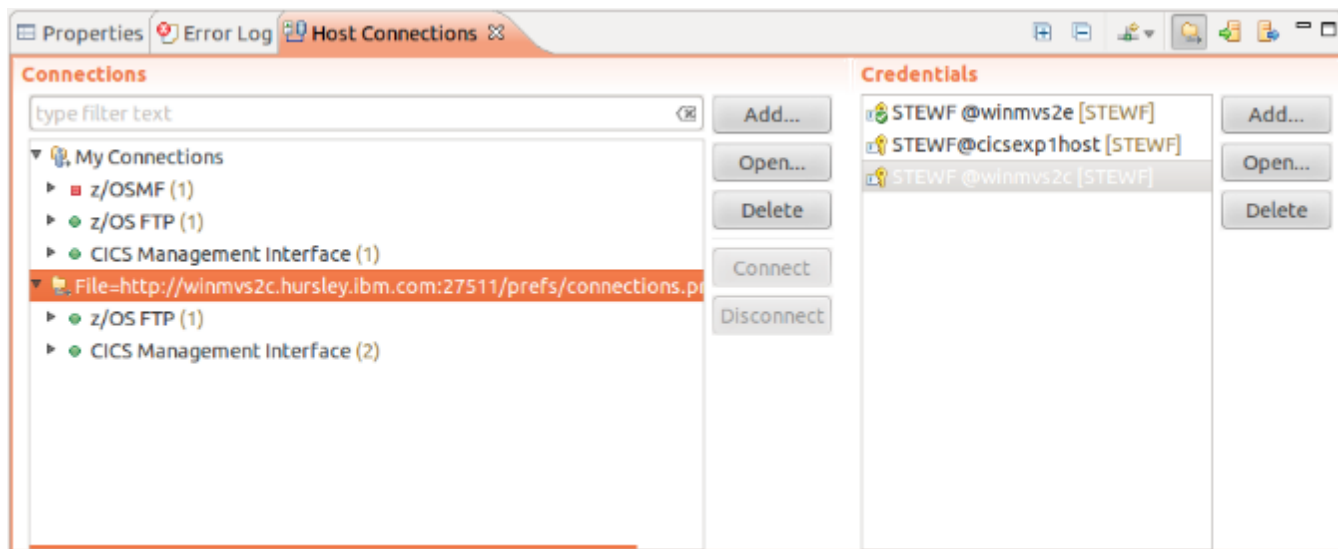
# New Functionality Demos





# Simplified Connections UI

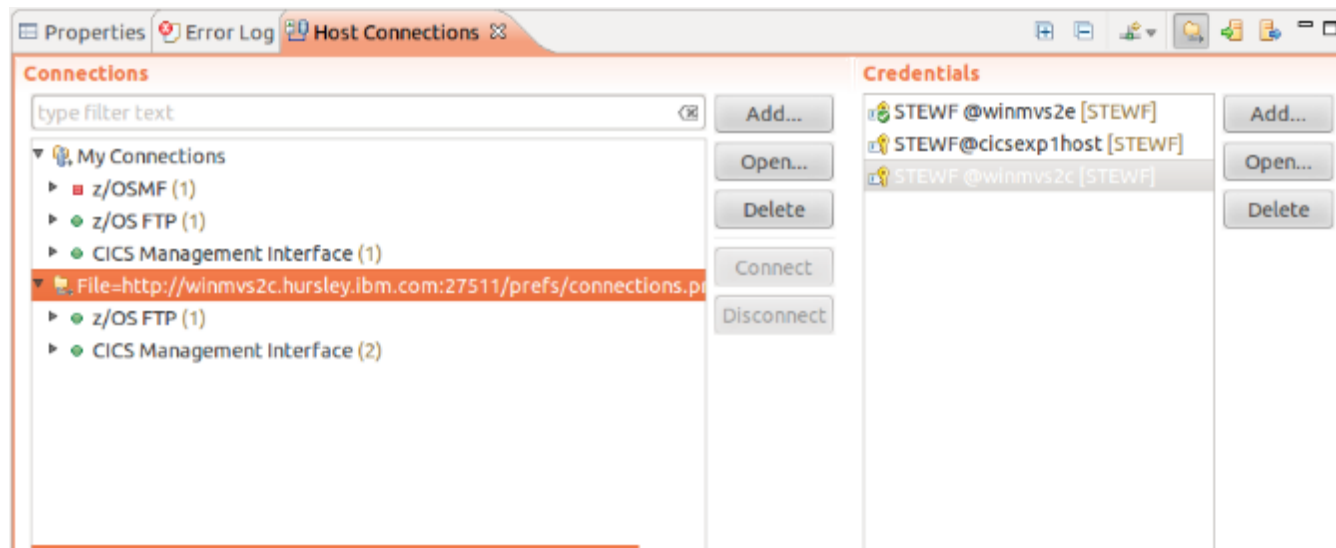
- Connections organised by category
- View state of all connections simultaneously
- Improved connection management
- Better visibility of credentials





# Improved connection management

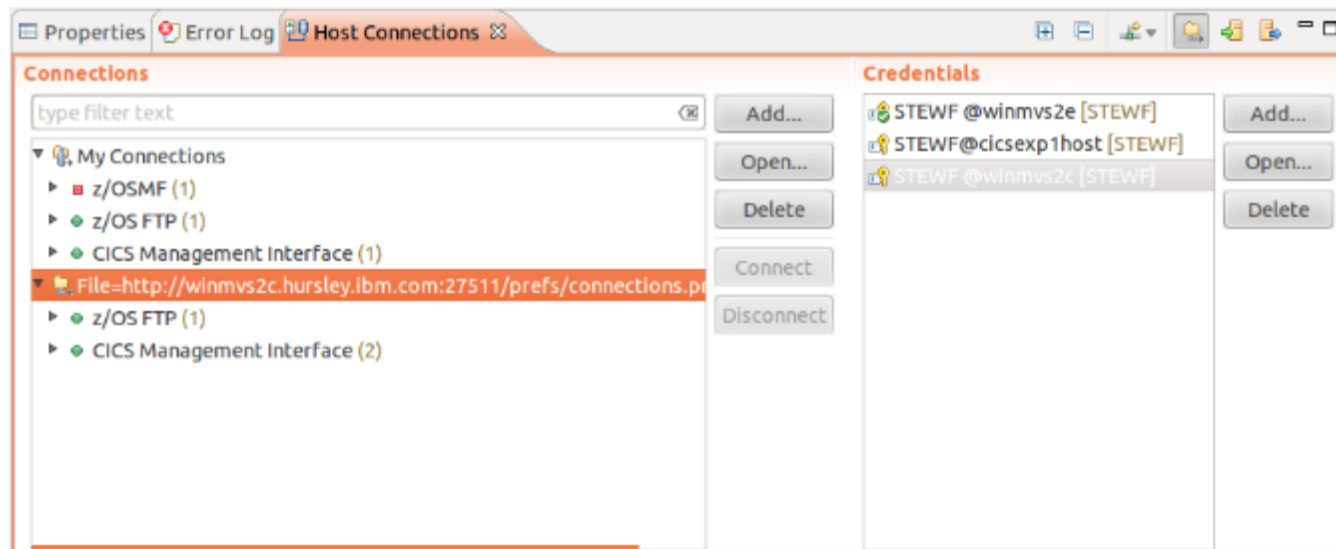
- Export connections to XML file (not new)
- Import connections from existing XML file (not new)
- Deploy CICS Explorer with preconfigured connections
  - connections.prefs
- Load connections from network drive/share
- Load connections from webserver





# Hosting connections from CICS

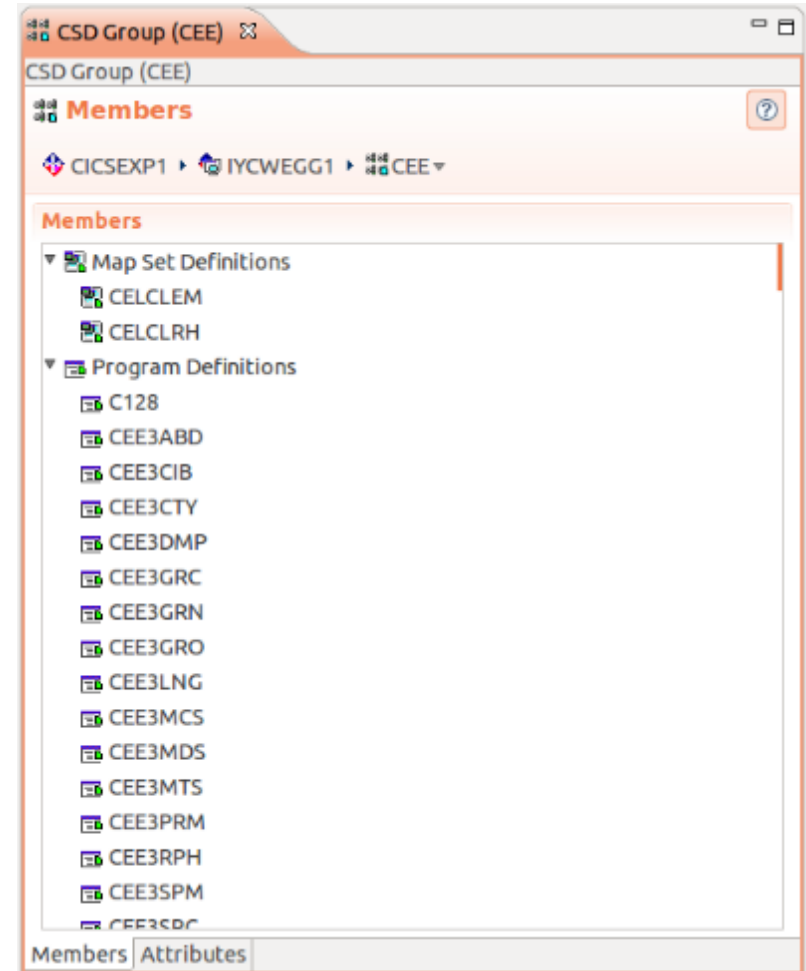
- Export connections to HFS
  - Region must have read + execute permissions on file & parents
- TCPIP Service
  - PORT=<MYPORT>
- URI Map
  - HFSFILE=/path/to/connections.prefs
  - Scheme=HTTP
  - Tcpipservice=<TCPIPS NAME>
  - Path=/pathtomapto.prefs
- Load → `http://myhost.com:<MYPORT>/pathtomapto.prefs`





# Resource Group Editors

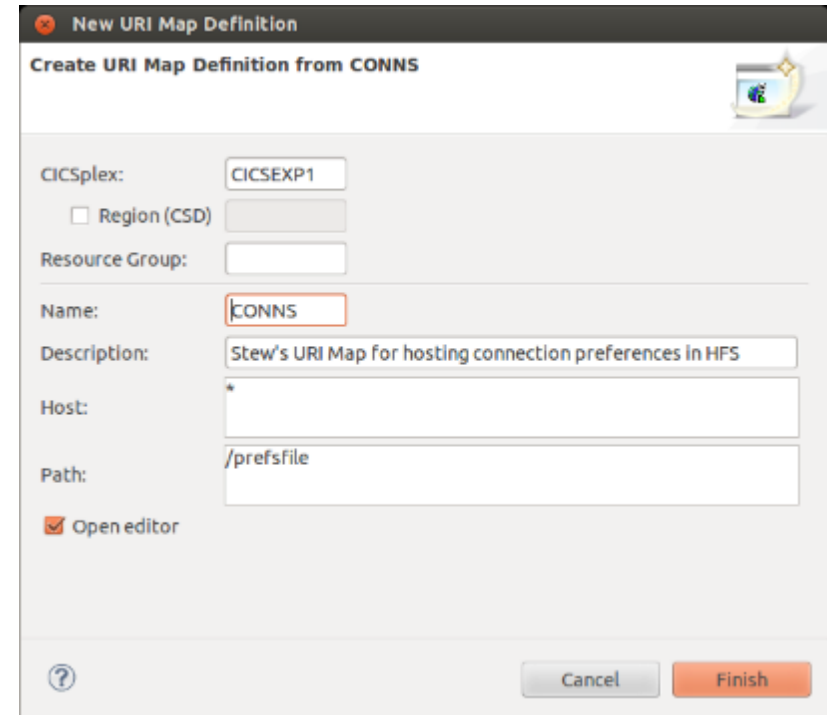
- Show resource group members
  - Broken down by type
  - Works for BAS and for CSD
  - Can open editors for individual definitions
- 
- All editors have improved actions button
    - Can install resource groups directly from the editor





# New From...

- Create a definition based on another definition
- Existing attributes are copied to the new definition
  - Not limited only to visible attributes
- Definition can be tailored in the editor

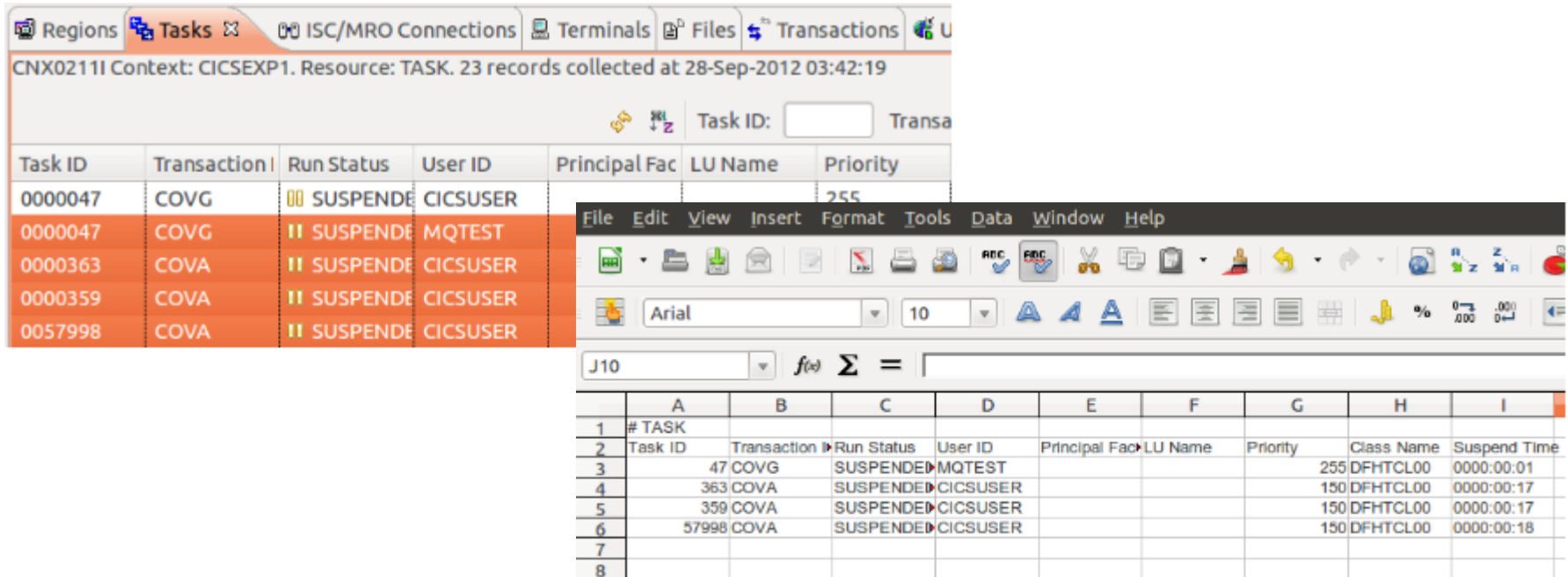


The screenshot shows a dialog box titled "New URI Map Definition" with a subtitle "Create URI Map Definition from CONNS". The dialog contains several input fields and a checkbox. The "CICSpex:" field is set to "CICSEXP1". The "Region (CSD)" checkbox is unchecked. The "Resource Group:" field is empty. The "Name:" field is set to "CONNS" and is highlighted with a red border. The "Description:" field contains the text "Stew's URI Map for hosting connection preferences in HFS". The "Host:" field is empty. The "Path:" field is set to "/prefsfile". The "Open editor" checkbox is checked. At the bottom right, there are "Cancel" and "Finish" buttons. A help icon (?) is located at the bottom left.



# Copy to clipboard

- Multi-select
- Ctrl + C or Right Click → Copy
- Definitions copied to clipboard as CSV
- Can paste into text editor or spreadsheet
- Visible columns copied
- Great for reporting



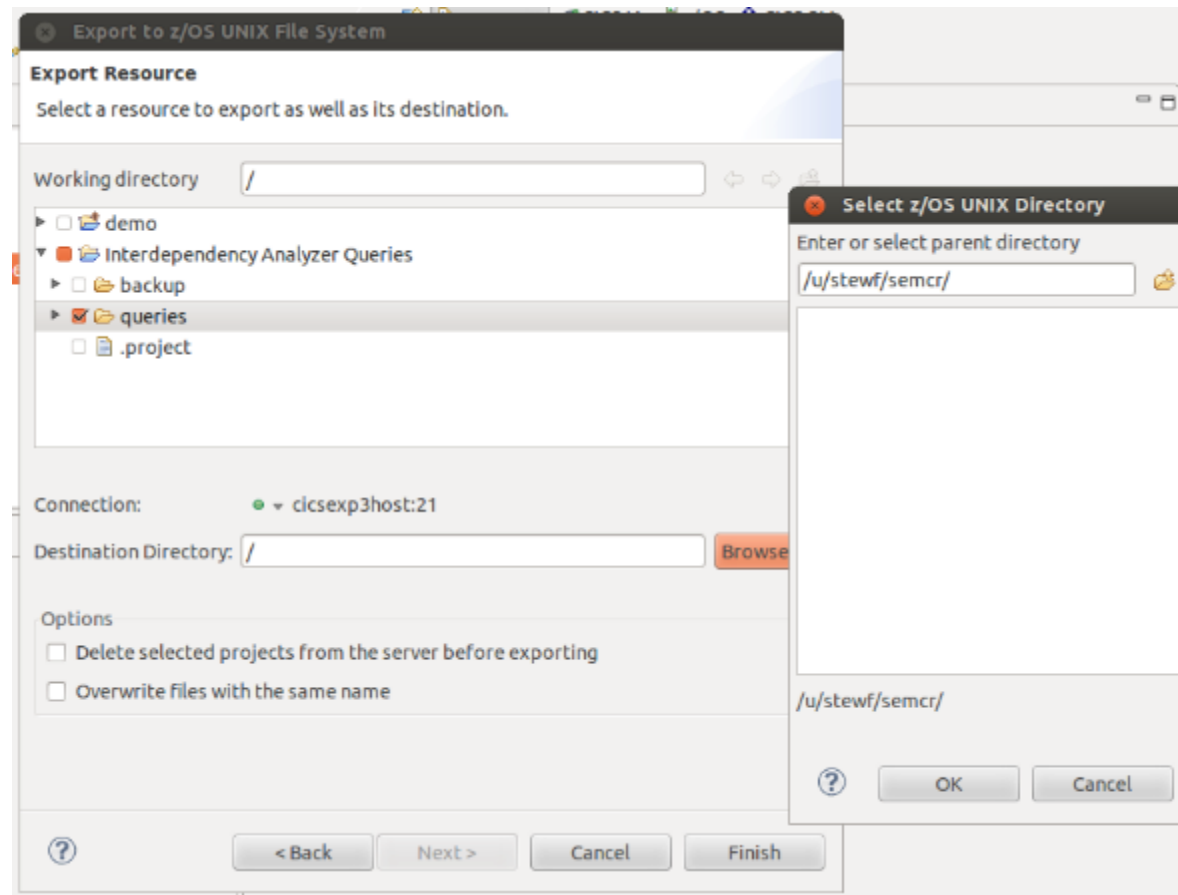
The screenshot shows the SHARE application interface. The top tab is 'Tasks', displaying a list of tasks. Below the task list, a spreadsheet view is shown, which is a copy of the task data. The spreadsheet has columns for Task ID, Transaction, Run Status, User ID, Principal Fac, LU Name, Priority, Class Name, and Suspend Time.

Task ID	Transaction	Run Status	User ID	Principal Fac	LU Name	Priority	Class Name	Suspend Time
0000047	COVG	SUSPENDED	CICSUSER				255 DFHTCL00	0000:00:01
0000047	COVG	SUSPENDED	MQTEST				150 DFHTCL00	0000:00:17
0000363	COVA	SUSPENDED	CICSUSER				150 DFHTCL00	0000:00:17
0000359	COVA	SUSPENDED	CICSUSER				150 DFHTCL00	0000:00:18
0057998	COVA	SUSPENDED	CICSUSER					



# Export to z/OS

- Export to files to HFS





# z/OS Enhancements

- Multi-select delete jobs/hfsfiles/datasets
- Create files/folders on HFS
- Create datasets

**New z/OS file**

Select a new file name and container.

Enter or select parent directory

/u/stewf/

- asd
- bigfile.txt
- demo\_1.0.0
- doef
- foo.xml
- makefile
- myfile.dat
- prefs
- semcr
- stewplat
- stewplt2

New file name: myfilename.txt

Cancel Finish

**New Data Set**

**New z/OS Data Set**

Data set name must have at least two qualifiers

Data Set Name STEWF

Predefined characteristics

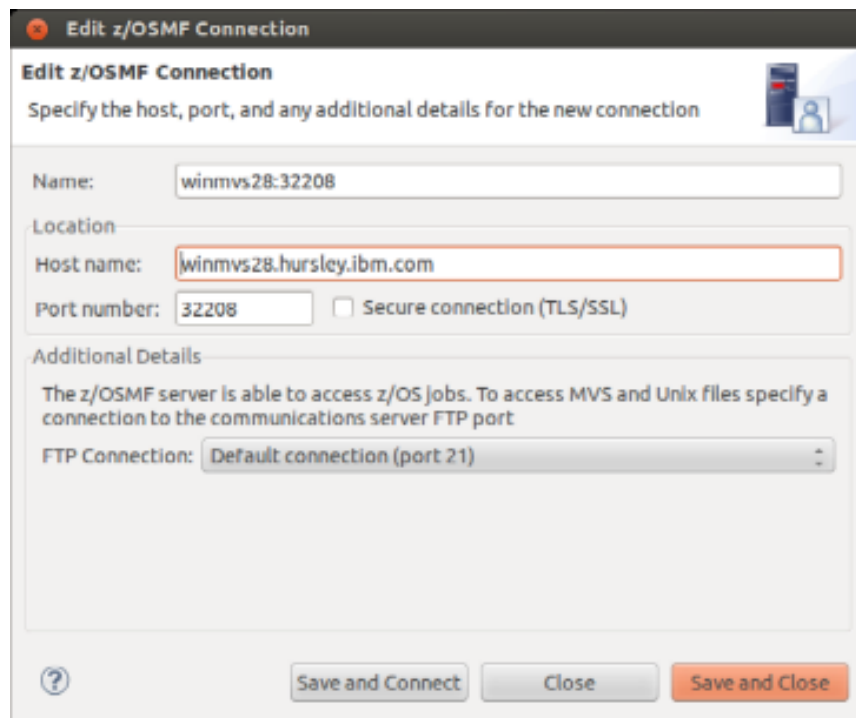
Name	Type	Record Format	Record Length	Primary	Secondary
Source Code, JCL	PDSE	FB	80	300	100
Listing - ASM	PDSE	FBA	133	300	150
Listing - BINDER	PDSE	FBA	121	300	150
Listing - COBOL	PDSE	FBA	133	300	150
Listing - PLiv3r1	PDSE	VBA	132	300	150
Listing - PLiv3r2	PDSE	VBA	137	300	150
ADATA[ASM]	PDSE	VBA	8188	300	100
DRMLIB	PDSE	FB	80	300	100
EQALANGX	PDSE	VBA	1562	300	100
LOADMOD	PDS	U	0	300	100
OBJECT	PDSE	FB	80	200	100
Program Object	PDSE	U	0	300	100
SYSDEBUG	PDSE	FB	1024	300	100
SYSEVENT	PDSE	VB	4095	300	100
SYSDEFSD	PDSE	FB	80	200	100
XML	PDSE	VBA	16383	200	100

Cancel Next > Finish



# z/OSMF

- Provides a RESTful interface to z/OS jobs
- Allows us to view active jobs
- Linked with an FTP connection to provide simultaneous access to HFS files and datasets



The screenshot shows a web-based dialog box titled "Edit z/OSMF Connection". The subtitle reads "Specify the host, port, and any additional details for the new connection". The form contains the following fields and options:

- Name:** A text input field containing "winmvs28:32208".
- Location:**
  - Host name:** A text input field containing "winmvs28.hursley.ibm.com".
  - Port number:** A text input field containing "32208".
  - ☐ Secure connection (TLS/SSL)
- Additional Details:**

The z/OSMF server is able to access z/OS jobs. To access MVS and Unix files specify a connection to the communications server FTP port

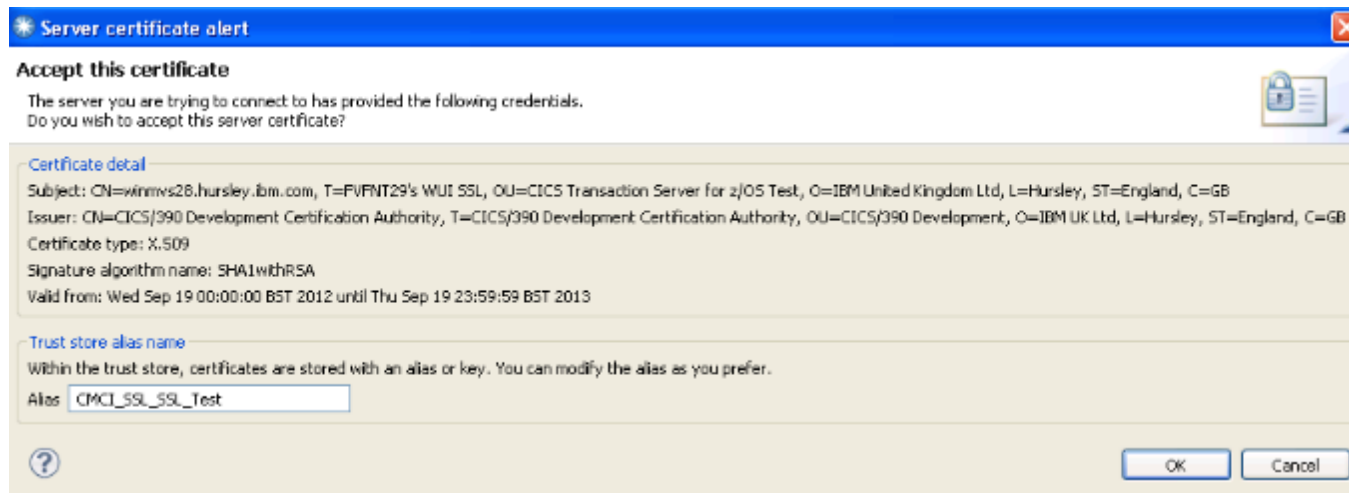
**FTP Connection:** A dropdown menu showing "Default connection (port 21)".

At the bottom of the dialog, there is a help icon (question mark), and three buttons: "Save and Connect", "Close", and "Save and Close".



# Improved SSL support

- Less ambiguous SSL behaviour
- Validate server identity based on certificate
- Certificates stored in a local keystore
- Framework extensible by connections framework plugins





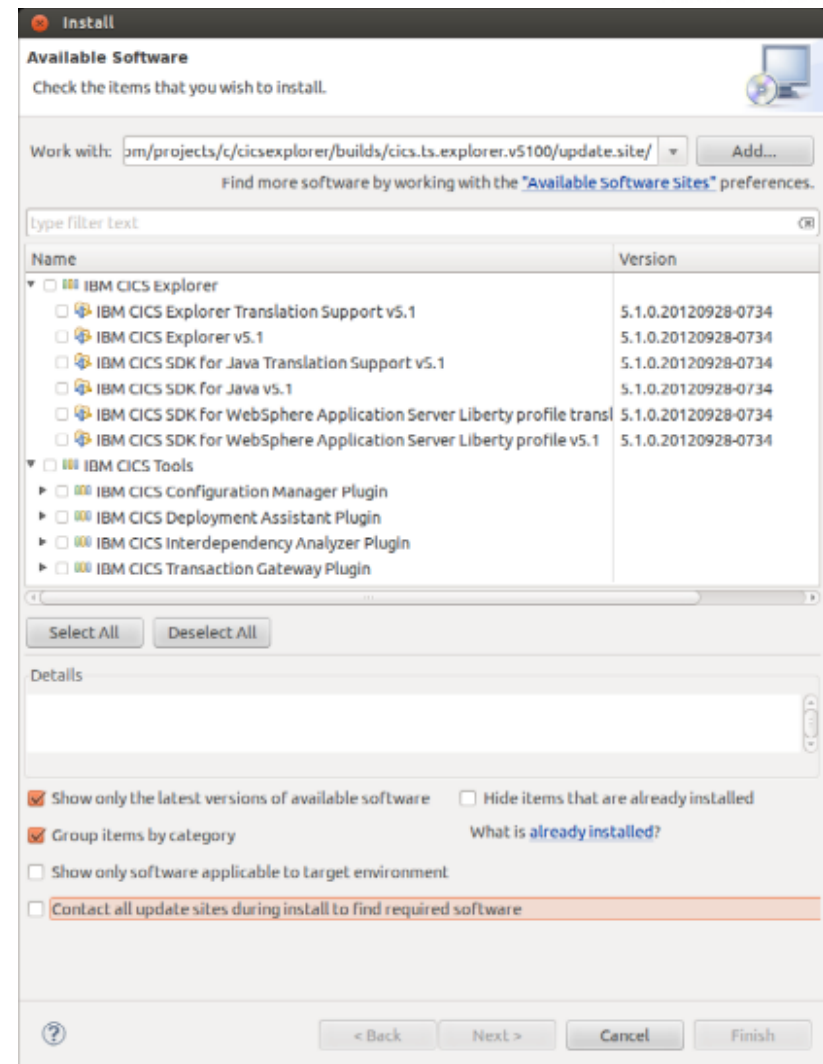
# Java web start

- Utility for launching web-hosted Java applications
- Built into the JVM
- CICS Explorer is supported in a web start environment
  - (Windows only)
- Guide to how to prepare CICS Explorer to be started over web start
  - Deploy CICS Explorer using java web start



# CICS Explorer SDK

- Not new but little known about
- Install CICS Explorer as a plugin into existing eclipse installations
- Can install by pointing eclipse at
  - A downloaded zip of the plugin
  - Our **new** composite update site
- Prereqs
  - Eclipse 3.6.2 full SDK
  - OGSi requires JDT
  - Liberty profile requires WST
- Missing dependencies automatically satisfied by eclipse





# Installation Manager module

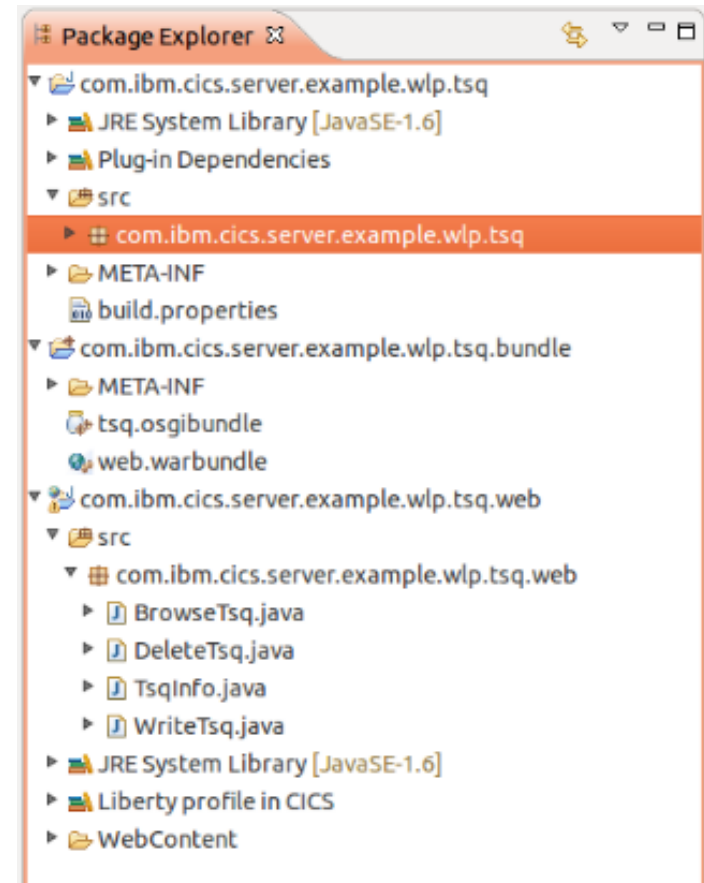
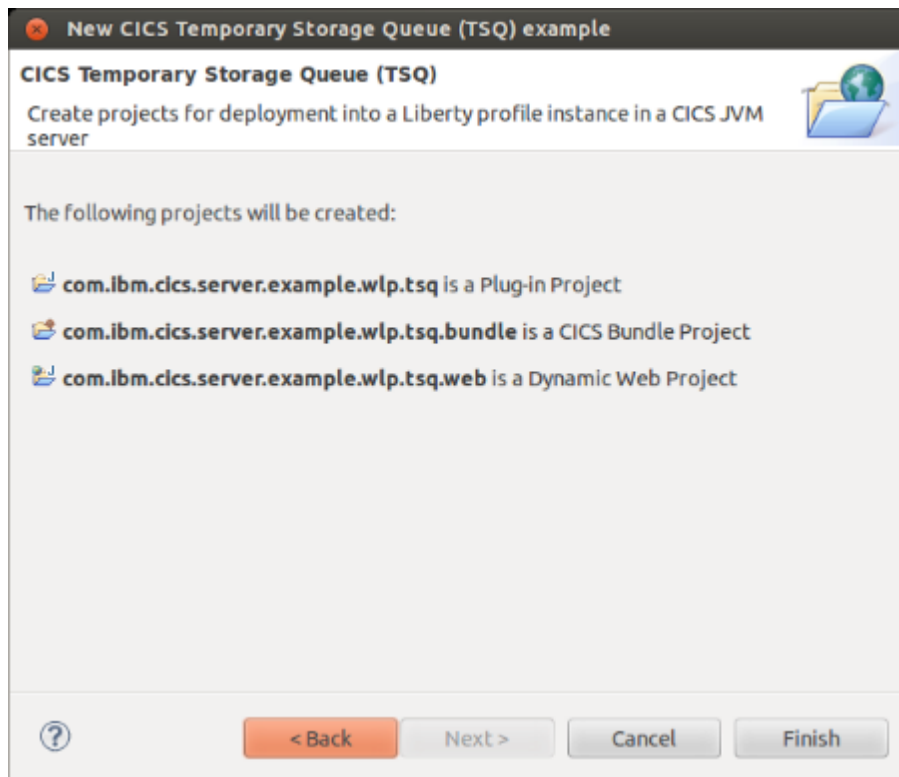


- CICS Explorer release now includes an installation manager module
- Use to install CICS Explorer SDK into an existing Installation Manager managed deployment
  - e.g. RSA, RTC
- Warning: don't use to update CICS Explorer in RD/z!



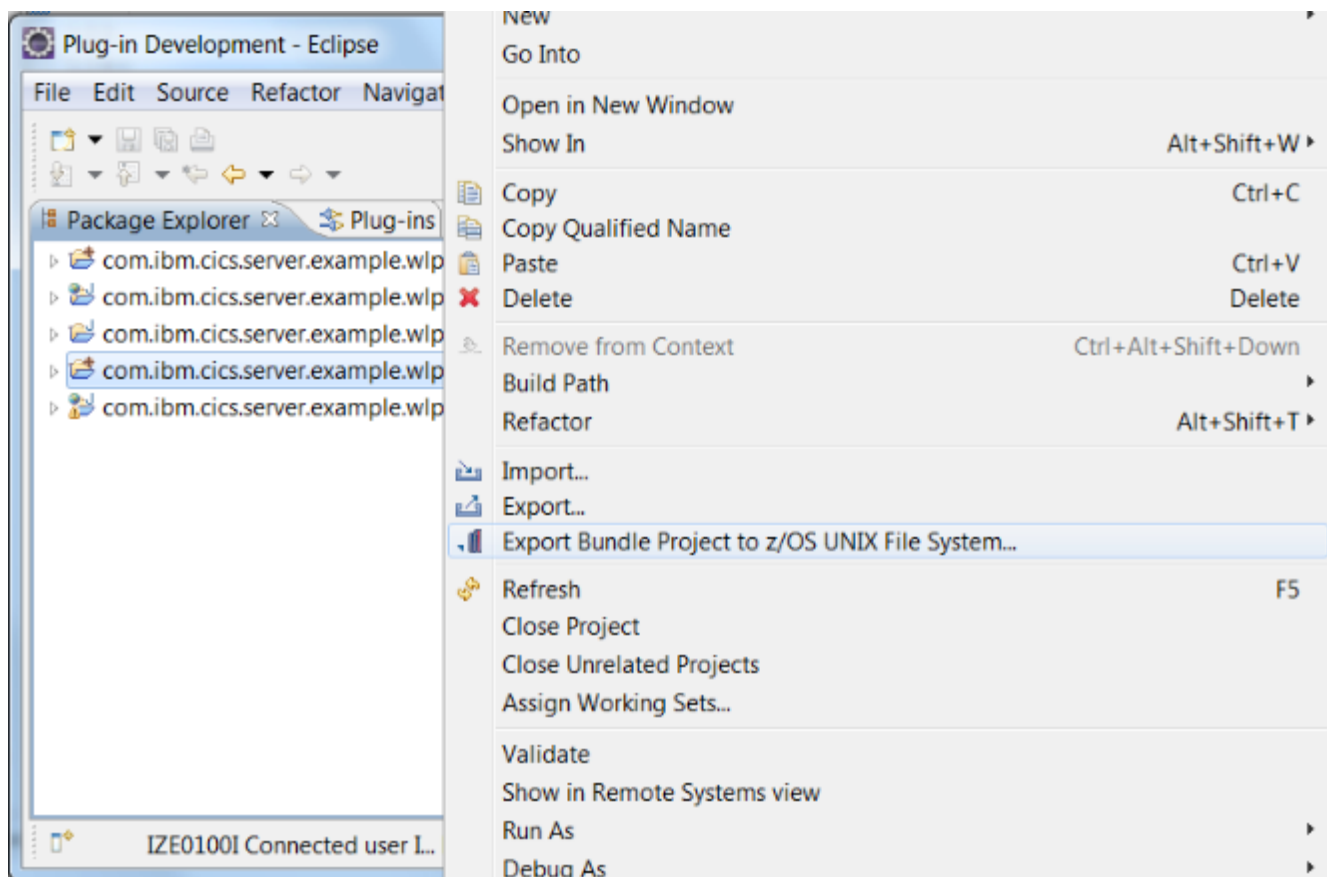
# WAS Liberty Profile Tooling

- WAS Liberty profile included in CICS TS 5.1 open beta
- CICS Explorer includes samples deployable to WAS Liberty Profile
- Servlet 3.0 API provided as an eclipse library





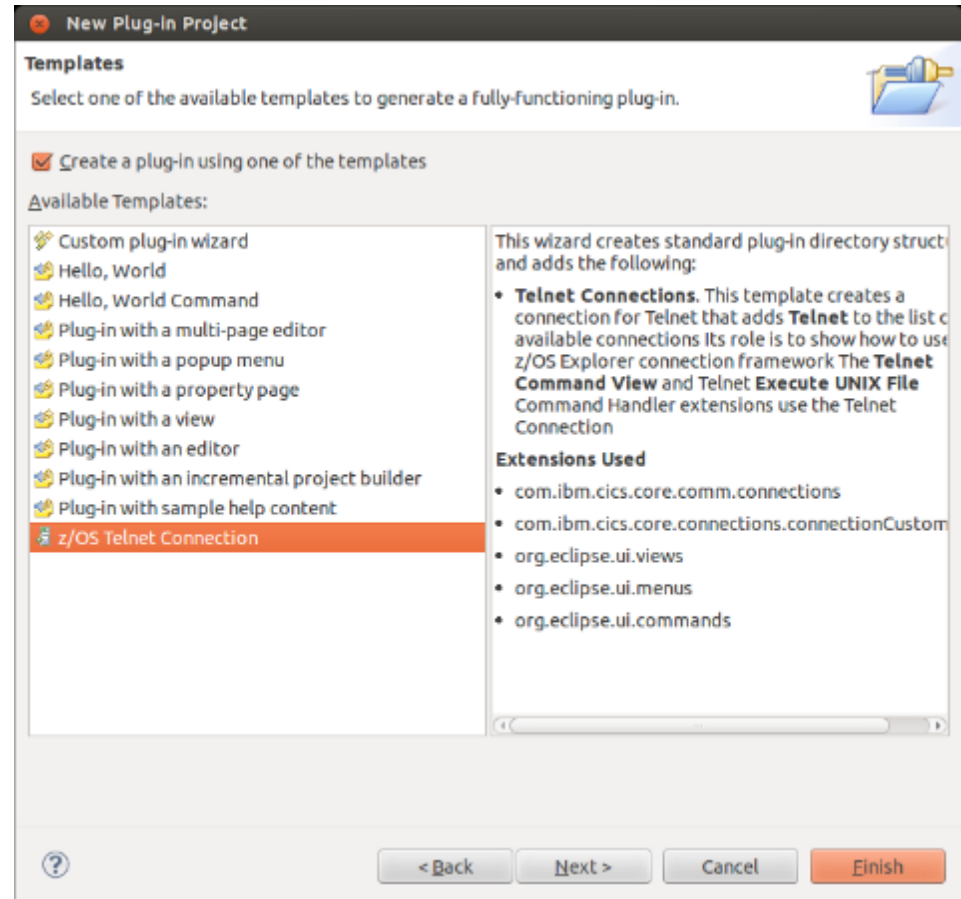
# WAS Liberty Profile Tooling





# Extending CICS Explorer

- SDK includes sample connection implementation
- Integrate your host component with connection/credentials management
- Roll your plugin out with your CICS Explorer installation





# Questions?



As a reminder, please fill out a session evaluation

Complete your sessions evaluation online at [SHARE.org/SanFranciscoEval](https://SHARE.org/SanFranciscoEval)



# CICS Cloud Enablement

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1:30 PM *CICS TS V5.1 Technical Overview*

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11:00 AM Reinventing the CICS Application Lifecycle

1:30 PM CICS as a Platform Service Provider

## Wednesday

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4:30 PM ***Modernizing CICS - Hands on Lab, Part 1 of 2***

6:00 PM ***Modernizing CICS - Hands on Lab Part 2 of 2***

## Friday



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<http://www.linkedin.com/pub/matthew-webster/31/b09/b16>