

UCS

Amazing tools suite in CORBA
world





Agent

- UCS

- What's UCS
- Simulate CORBA client
- Simulate CORBA server
- Organize business testing flow
- UCS performance/loading test
- UCS Extendable plugin
- UCS test notify application
- UCS test naming application
- UCS utility



Agent

- UCS

- UCS Naming browser
- UCS Notify browser
- UCS GIOP interceptor
- UCS generate run able java code
- UCS support Orbix6 with SSL
- UCS change IOR hostname &port
- UCS IDL browser
- UCS configuration
- Summary

A decorative graphic on the left side of the slide featuring several black cords hanging vertically, each with a clear incandescent light bulb attached. The bulbs are arranged in a staggered, vertical line, with some appearing to be on and others off, creating a modern, industrial aesthetic.

What's UCS?

- UCS is a CORBA tools suite
- UCS can be used to test almost all CORBA applications
 - Orbix6
 - Orbix3
 - ORBacus
 - TAO
 - JacORB
 -



What's UCS?

- **Cross platform**

- It is 100% pure java based, so can be executed on any operation system with JRE1.4.x or later

- **High maturity**

- First UCS version (ucs v1.0.0) is released in July, 2007.
 - The latest UCS version (ucs v1.3.1) is released in September, 2011.

- **Easy to extend**

- Provide powerful Servant extension interface, so that the servant's response could not only be fixed value, but also dynamic value based on client's input.
 - Provide powerful plug-in interface, so that any useful function could be developed by customer during Automatic Test case execution

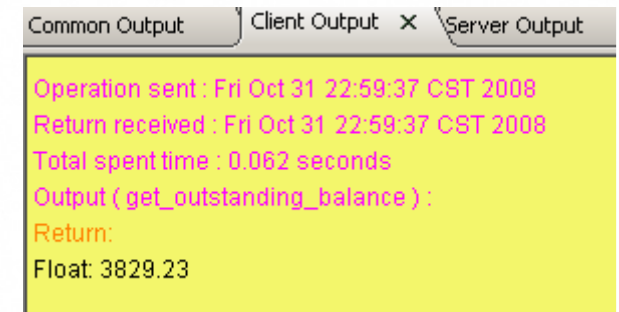
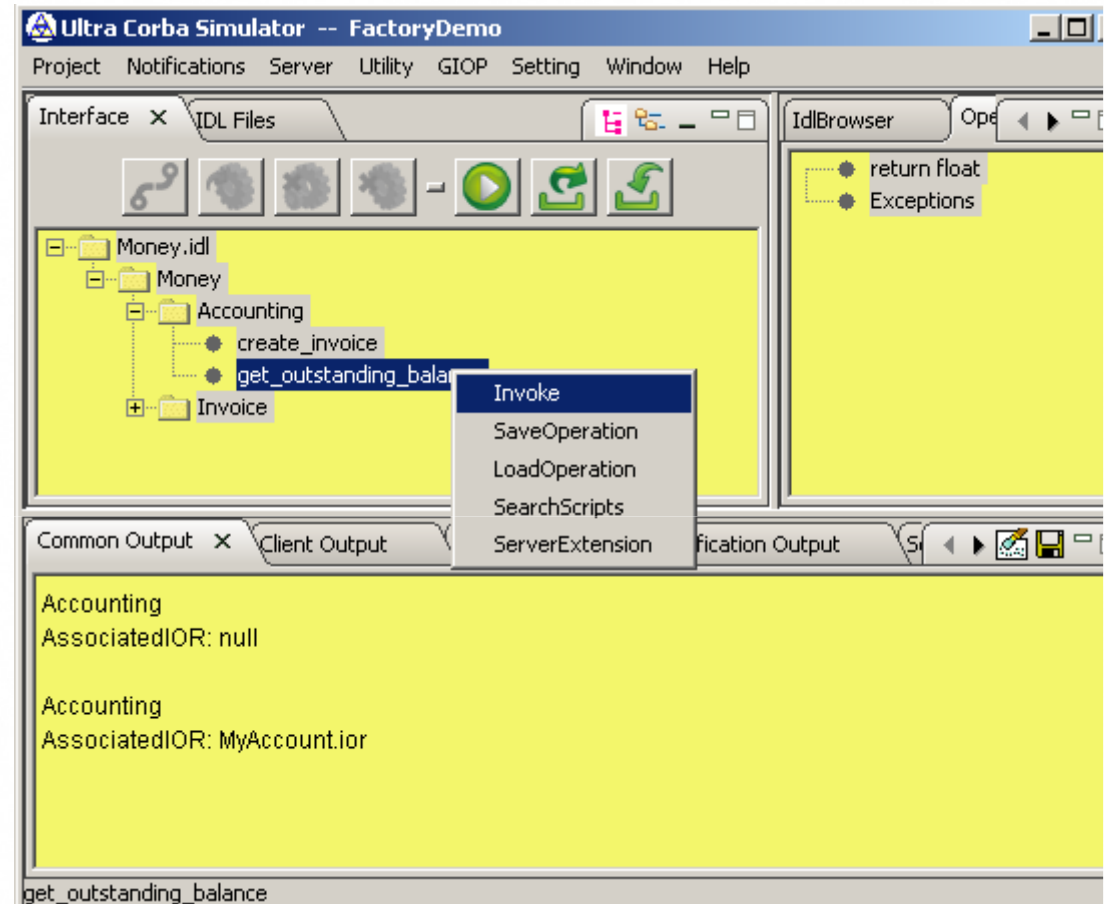
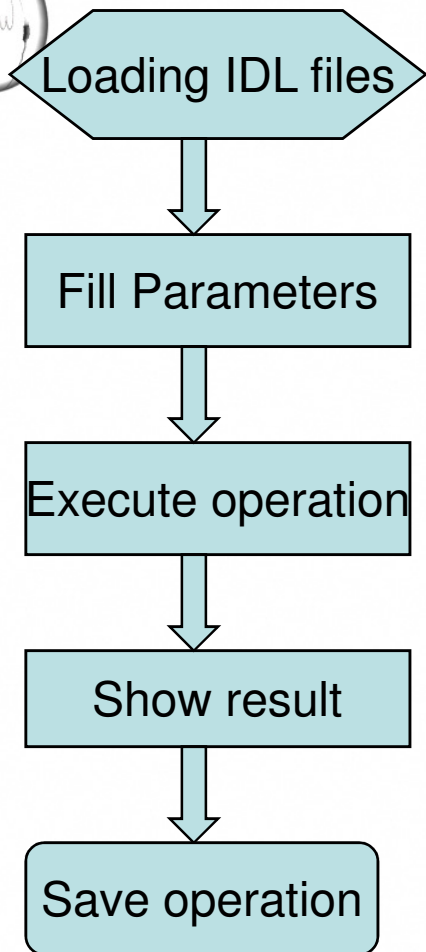


What's UCS?

- High performance and independence
 - It use DII/DSI, but doesn't depend on third-party CORBA Interface Repository Service. So no IDL file compiling time consumed.
 - Up to now, being used in more than 58 countries & areas demonstrates its reliabilities & stabilities

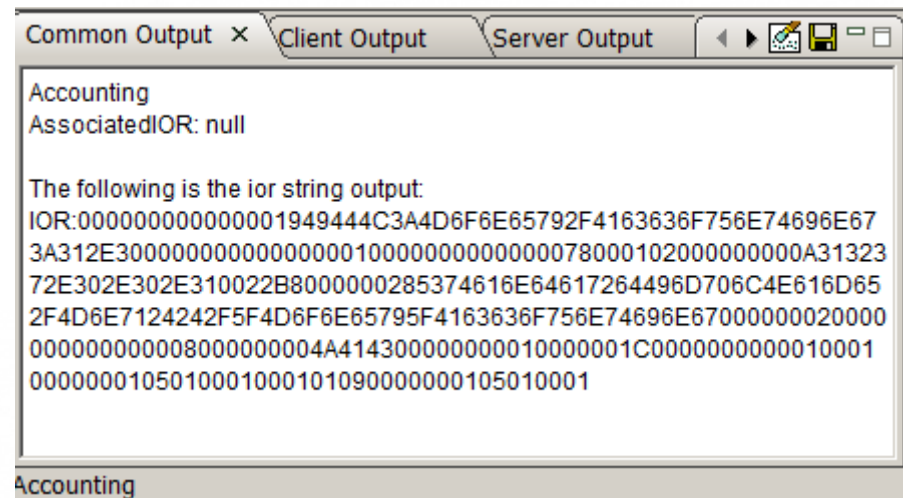
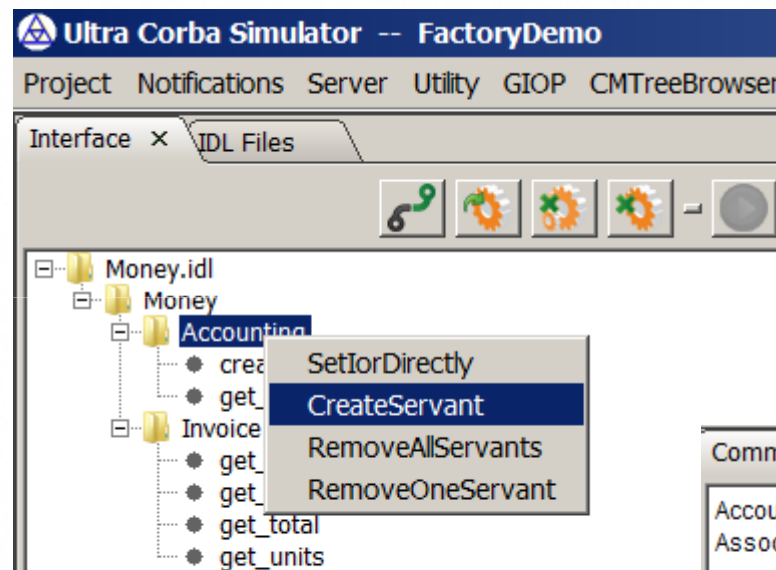
UCS can simulate CORBA client without writing any code.

Function test procedure



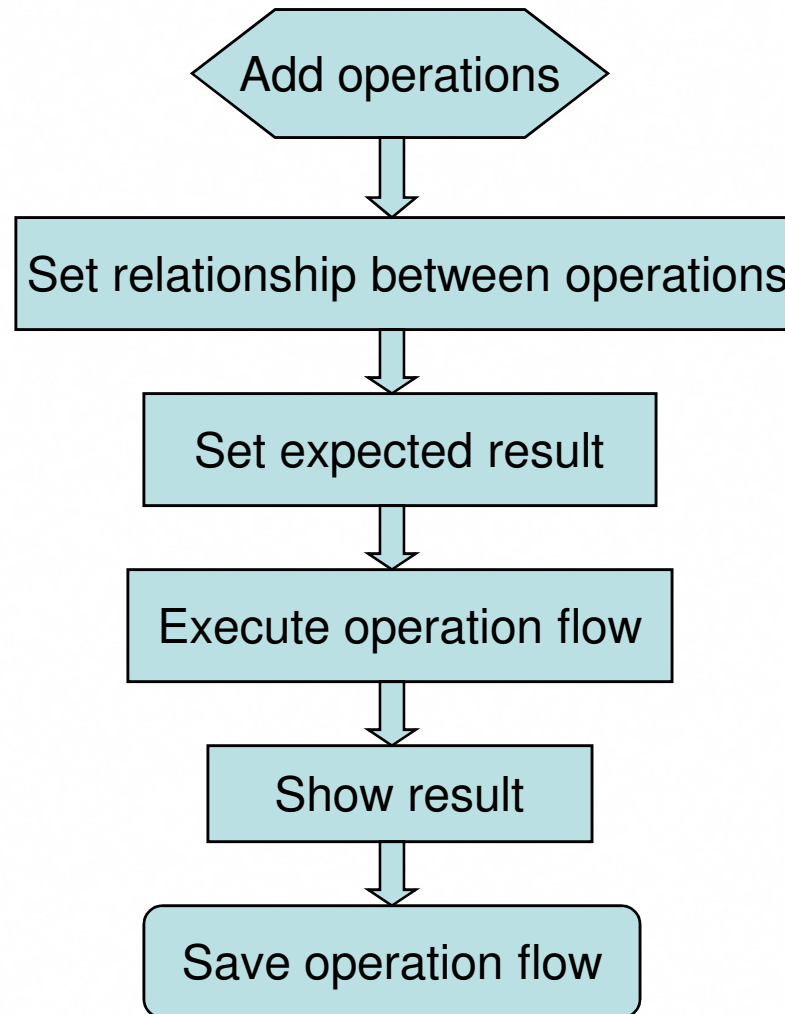
UCS can simulate CORBA server without writing any code.

- Choose your interface
Right click it, then create you servant



UCS can organize a test flow(0)

Build business test flow procedure



UCS can organize a test flow(1)

- UCS can organize many CORBA calls to a business flow

Common Output x Client Output Server Output Notification Outp

Execute Operation0:get_outstanding_balance.op[get_outstanding_balance](1)
Result:no rule needs to be matched
OK!--:)

Execute Operation1:create_invoice.op[create_invoice](1)
Result:no rule needs to be matched
OK!--:)

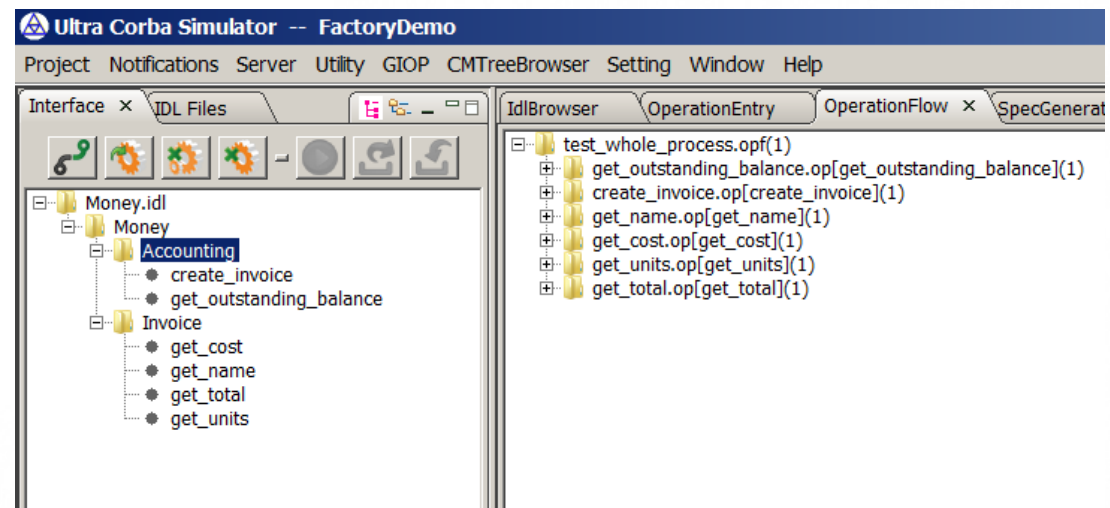
Execute Operation2:get_name.op[get_name](1)
Result:no rule needs to be matched
OK!--:)

Execute Operation3:get_cost.op[get_cost](1)
Result:no rule needs to be matched
OK!--:)

Execute Operation4:get_units.op[get_units](1)
Result:no rule needs to be matched
OK!--:)

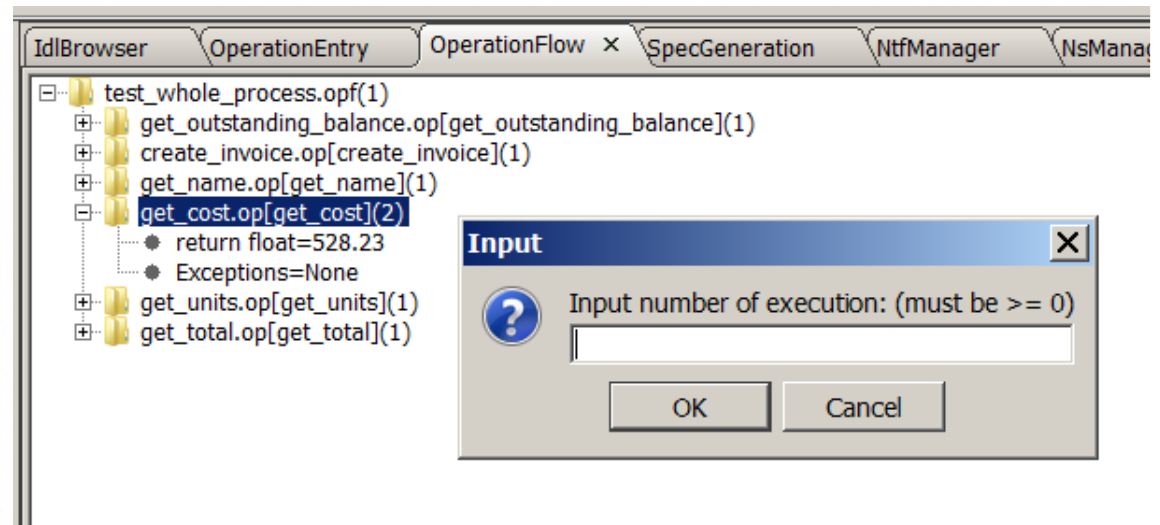
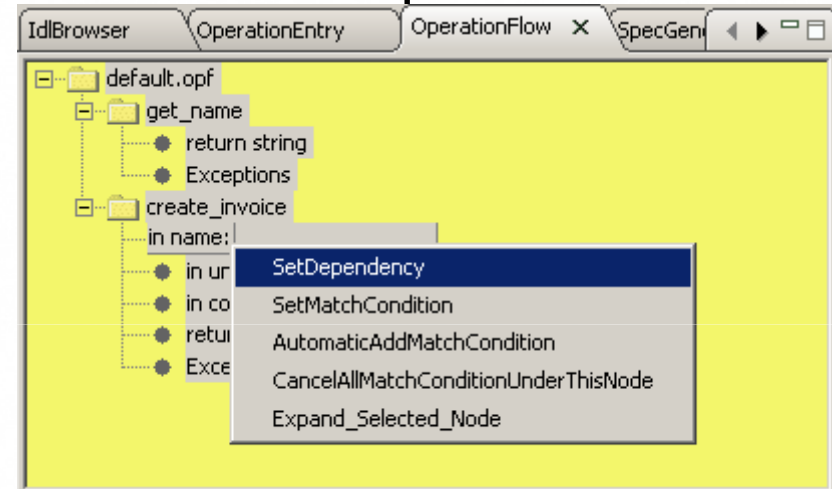
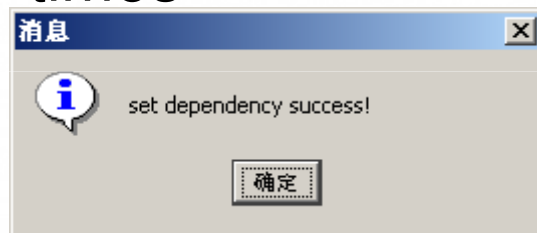
Execute Operation5:get_total.op[get_total](1)
Result:no rule needs to be matched
OK!--:)

Test Report:
Total Operation Num:6
Passed:6
Failed:0



UCS can organize a test flow(2)

- You can set dependency for the flow
- One method's return is another's input parameter
- You can set loop times



UCS can organize a test flow(3)

- You can set test condition in your flow

Common Output x Client Output Server Output Notification Output

Execute Operation0:get_outstanding_balance.op[get_outstanding_balance](1)
Result:no rule needs to be matched
OK!-:)

Execute Operation1:create_invoice.op[create_invoice](1)
Result:no rule needs to be matched
OK!-:)

Execute Operation2:get_name.op[get_name](1)
Result:no rule needs to be matched
OK!-:)

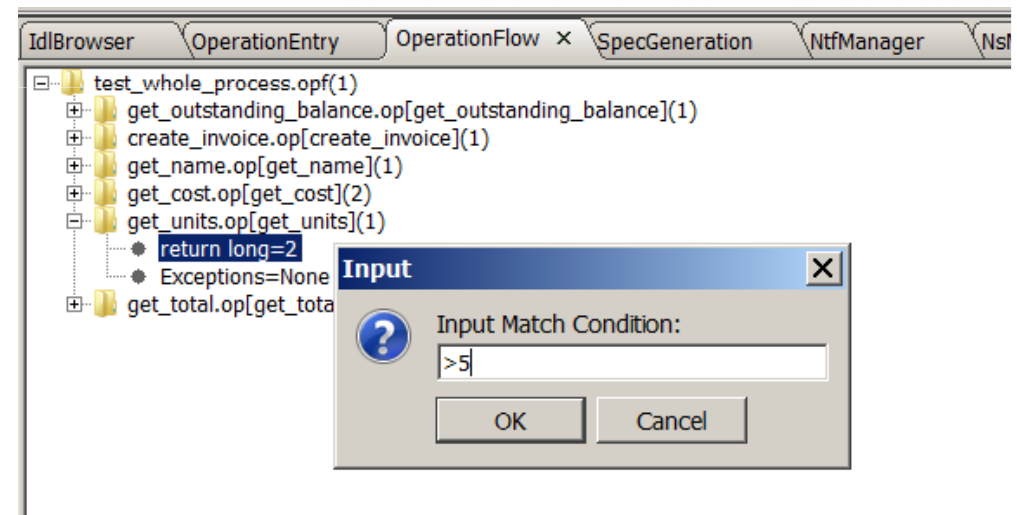
Execute Operation3:get_cost.op[get_cost](2)
Result:no rule needs to be matched
OK!-:)

Execute Operation4:get_units.op[get_units](1)
Result:
IdlBase=get_units.op[get_units](1)[4].return long[0]
Pattern=>5
Received Value=2
Failed!!!-:(((

Execute Operation5:get_total.op[get_total](1)
Result:no rule needs to be matched
OK!-:)

Test Report:
Total Operation Num:6
Passed:5
Failed:1
return long=2 :
no replacement happened on this node.

Pattern=>5





UCS can organize a test flow(4)

Work flow can run in console model

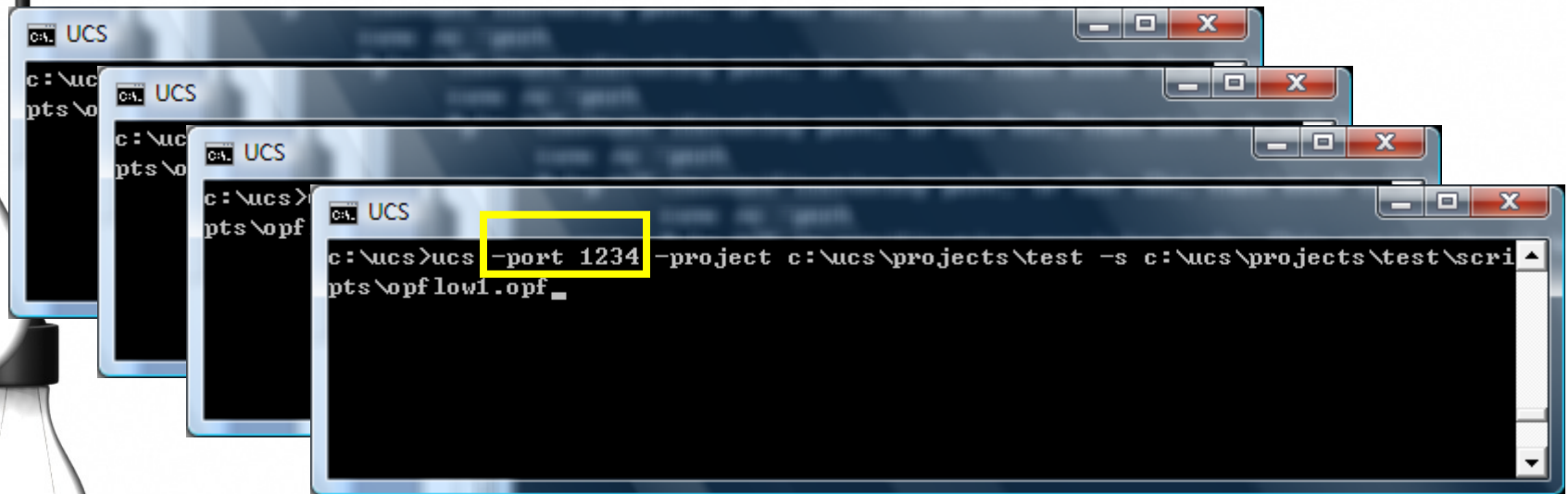
```
Administrator: UCS
09/06/2011  05:21 PM                501 ucs_console_client.bat
              7 File(s)            290,577 bytes
              10 Dir(s)           817,897,472 bytes free

E:\private\UCS\UCSU1.3.1\projects\FactoryDemo>ucs_console_client.bat
      1 file(s) copied.
Nov 23, 2011 8:25:07 PM com.corba.mnq.main.CorbaMNQ parseIds
INFO: Total IDL_Parse_Time: 0.031 seconds
Execute Case0:get_outstanding_balance.op
      OK!--:)
Execute Case1:create_invoice.op
      OK!--:)
Execute Case2:get_name.op
      OK!--:)
Execute Case3:get_cost.op
      OK!--:)
Execute Case4:get_units.op
      OK!--:)
Execute Case5:get_total.op
      OK!--:)
Test Report:
      Total Case Num:6
      Passed:6
      Failed:0
Press any key to continue . . .
```




UCS Performance/Loading Test

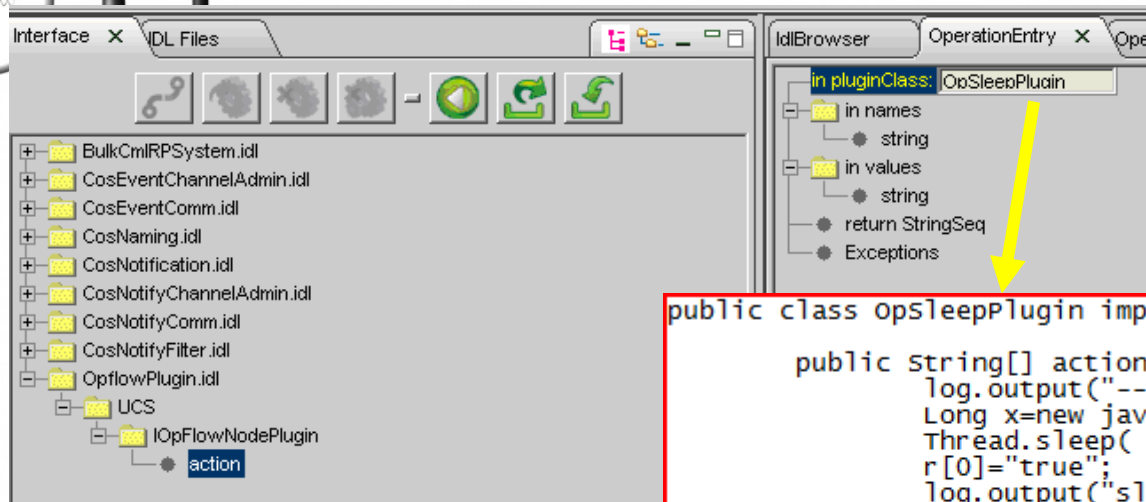
- UCS supports multi instances with different ports on the same machine. This feature is important for user to do performance/loading test. User could write a script to start e.g. 10 UCS client simulator in console mode to run different operation flow concurrently.



```
c:\ucs>ucs -port 1234 -project c:\ucs\projects\test -s c:\ucs\projects\test\scri
```


UCS Extendable Plug-in

- In the automation test, user may have special requirement, e.g. check file generated or sleep some seconds, which are not related to CORBA interface and cannot be covered by IDL interface. UCS provides a unified Plugin IDL interface to support user customized non-CORBA operation.

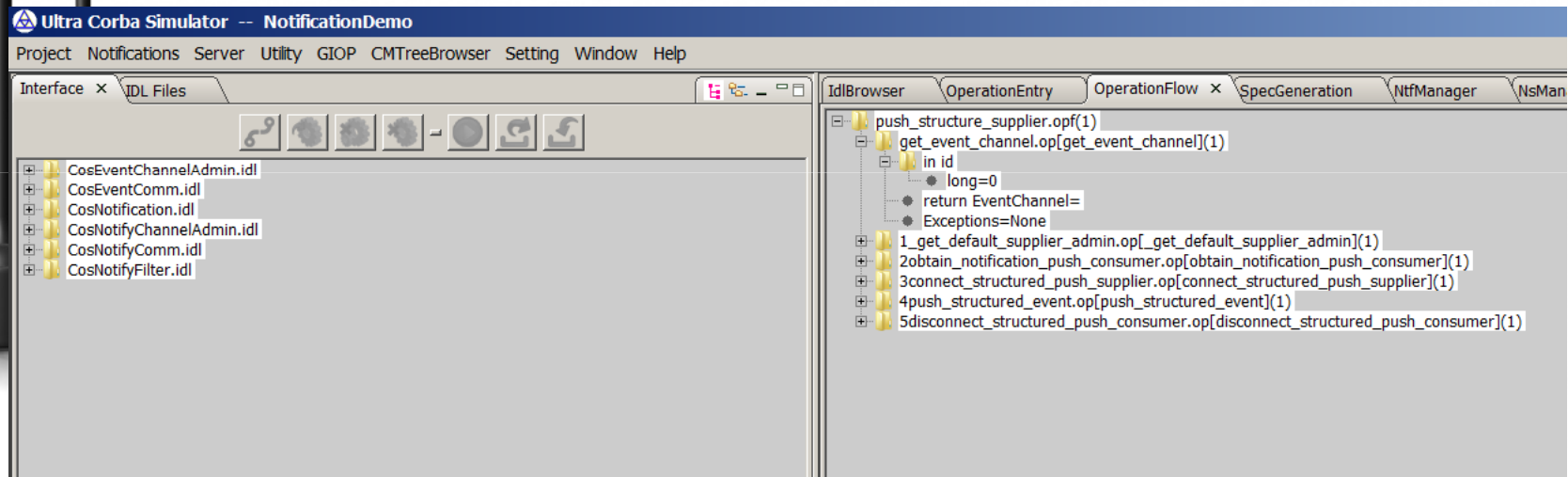


User customized plugin class

```
public class OpSleepPlugin implements IOpFlowNodePlugin {  
    public String[] action(String[] names, String[] values, ILog log){  
        log.output("----- Enter OpSleepPlugin-----");  
        Long x=new java.lang.Long(values[0]);  
        Thread.sleep( x.longValue() );  
        r[0]="true";  
        log.output("sleep finished");  
        log.output("----- Exit OpSleepPlugin-----");  
        return r;  
    }  
}
```

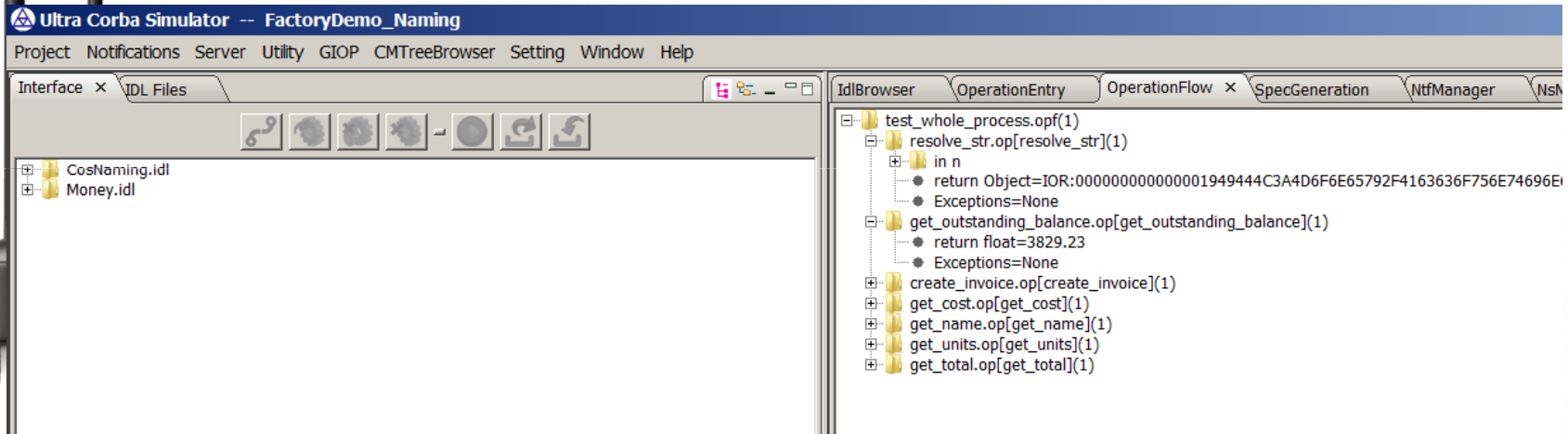
UCS can test naming application

UCS can organize CORBA naming service as part of its flow



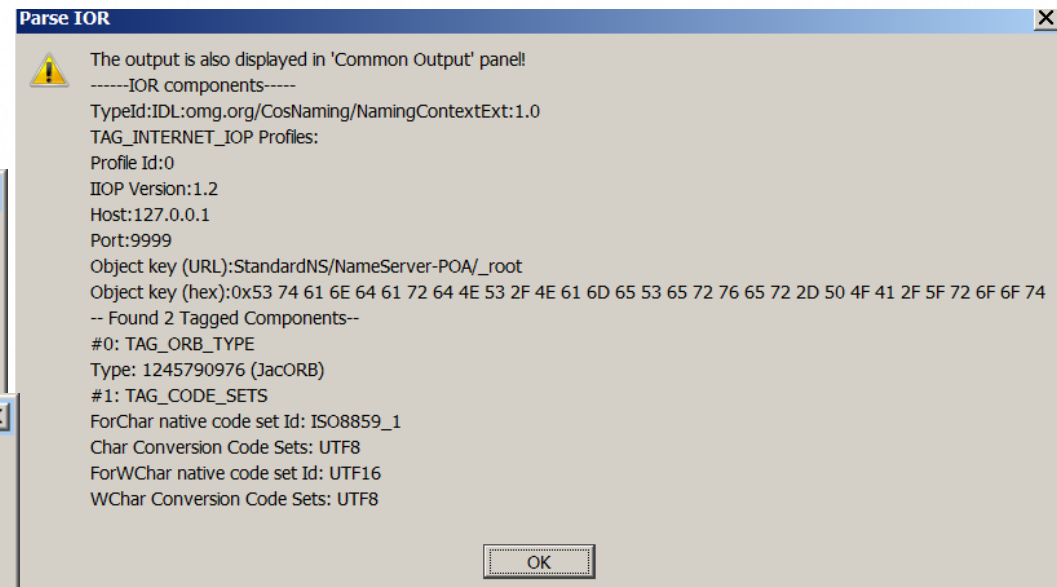
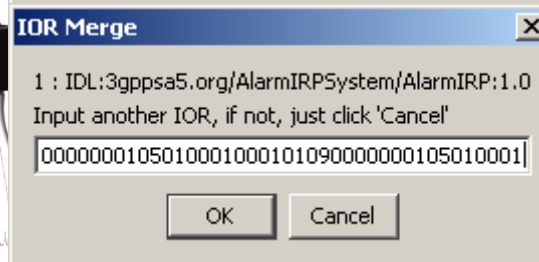
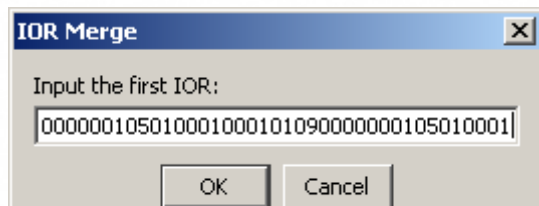
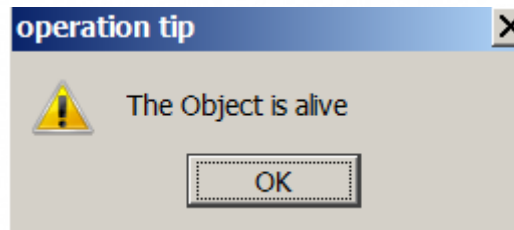
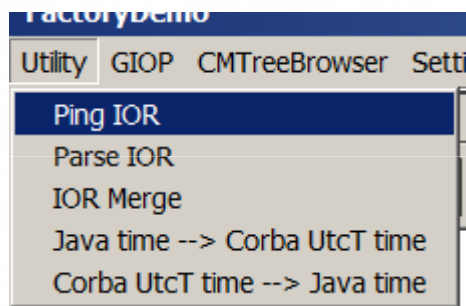
UCS can test notify application

UCS can organize CORBA notify service
as part of its flow



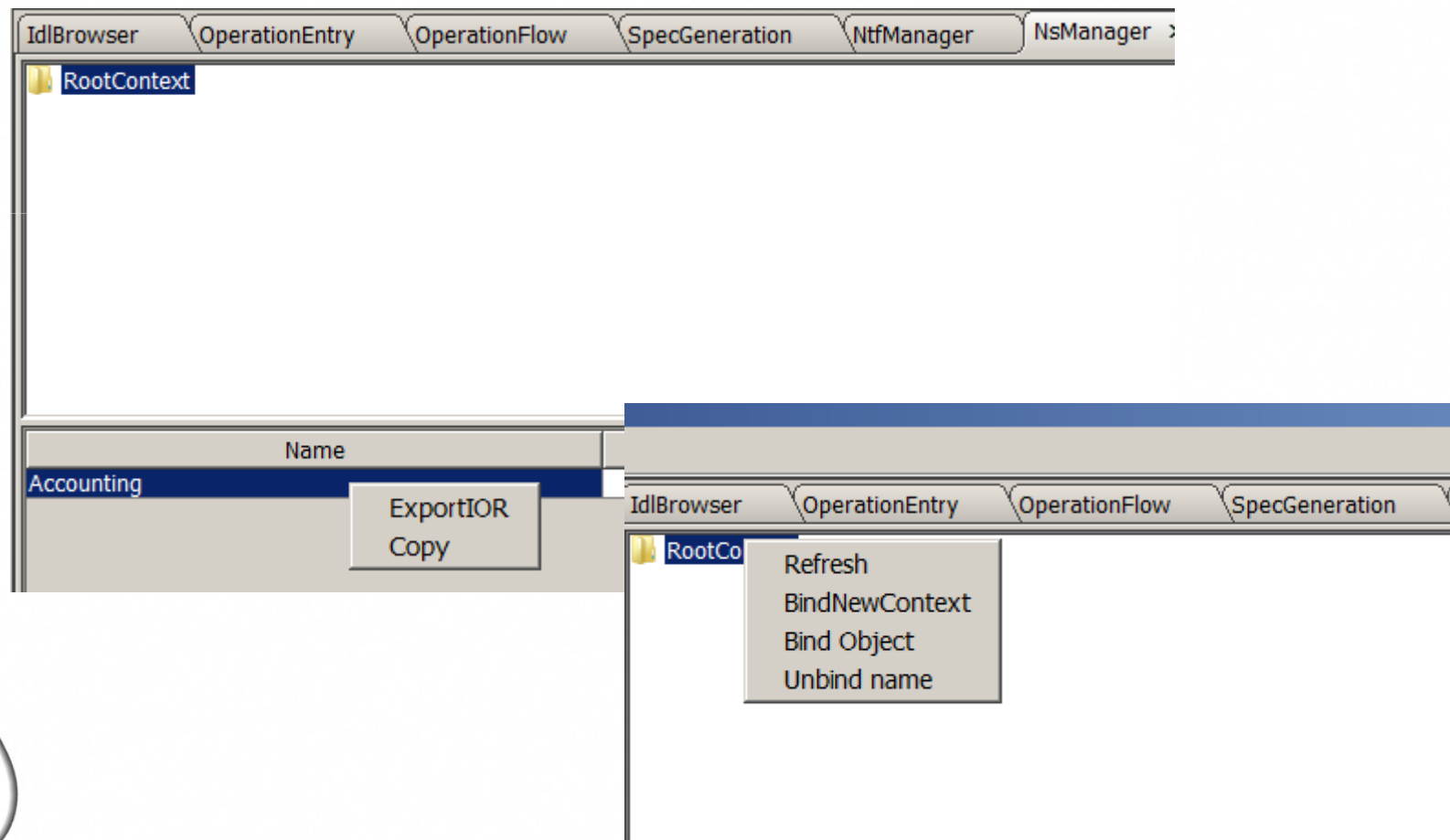
UCS useful utilities

Enjoy the small but useful CORBA utility



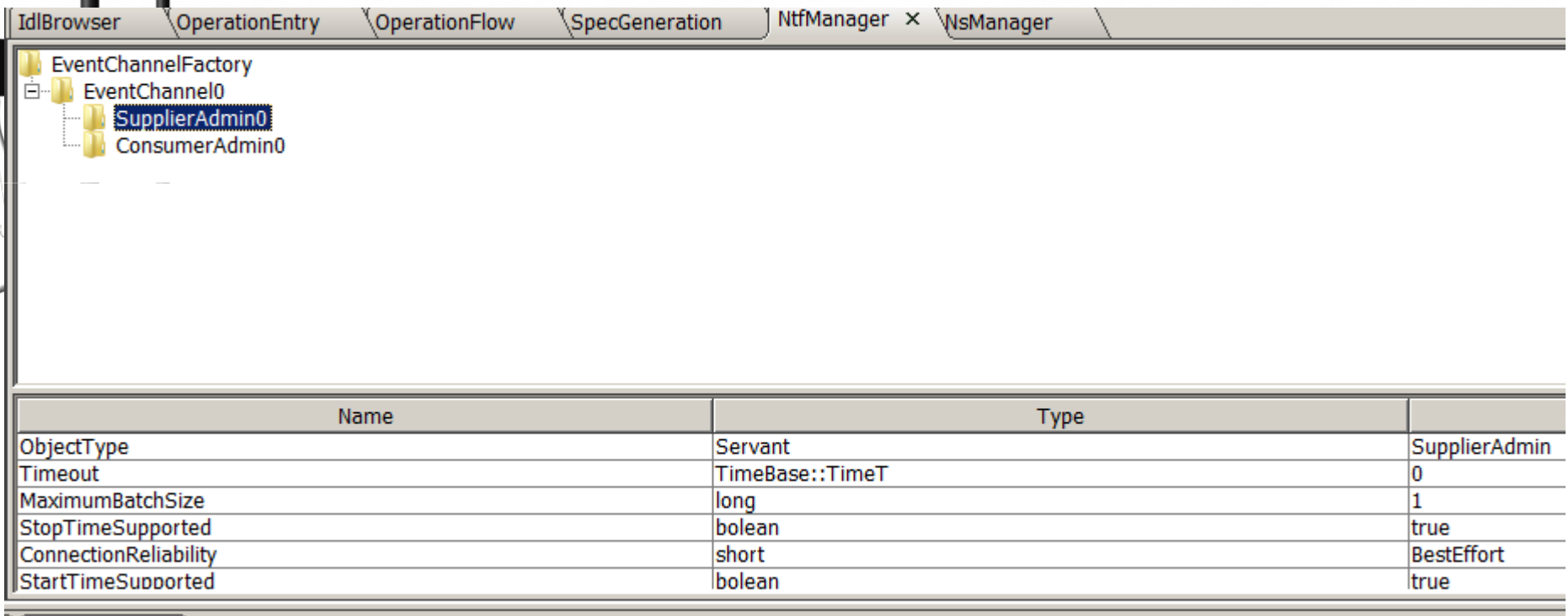
UCS Naming browser

You can manage your naming service with UCS naming browser



UCS Notify browser

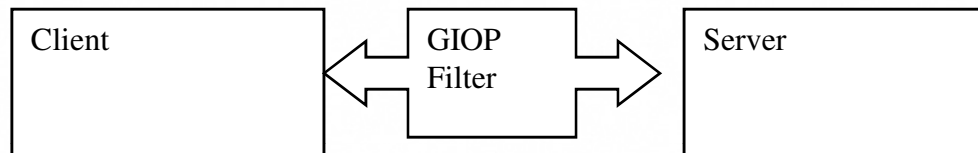
You can manage your Notify service with UCS Notify browser

The image shows a screenshot of the UCS Notify browser application. The window has a title bar with several tabs: 'IdlBrowser', 'OperationEntry', 'OperationFlow', 'SpecGeneration', 'NtfManager' (which is active and has a close button), and 'NsManager'. The main area is divided into a tree view on the left and a table on the right. The tree view shows a hierarchy: 'EventChannelFactory' -> 'EventChannel0' -> 'SupplierAdmin0' (which is selected) -> 'ConsumerAdmin0'. The table on the right lists properties for the selected 'SupplierAdmin0' object.

Name	Type	
ObjectType	Servant	SupplierAdmin
Timeout	TimeBase::TimeT	0
MaximumBatchSize	long	1
StopTimeSupported	boolean	true
ConnectionReliability	short	BestEffort
StartTimeSupported	boolean	true

UCS GIOP interceptor

UCS can work as middle layer, and
interceptor CORBA GIOP message.



The screenshot shows a window titled 'GIOP Output' with several tabs: 'Common Output', 'Client Output', 'Server Output', 'Notification Output', 'Server Extension Editor', and 'GIOP Output'. The 'GIOP Output' tab is active, displaying a log of intercepted messages. The log entries include timestamps, source IP addresses, and detailed message metadata such as version, size, type, and request ID.

```
Wed Aug 13 16:47:52 CST 2008-----Message from 192.168.1.107:12346
GIOP
The GIOP version is 1.2
Message size is 12
Message type is 1
isLittleEndian=true
Request ID is 4
Wed Aug 13 16:47:52 CST 2008-----Message from 127.0.0.1:3712
GIOP 4      :> 31 tony joke03      read
The GIOP version is 1.2
Message size is 52
Message type is 0
isLittleEndian=true
Request ID is 6
Wed Aug 13 16:48:02 CST 2008-----Message from 192.168.1.107:12346
GIOP
tonyzhang
The GIOP version is 1.2
Message size is 26
Message type is 1
isLittleEndian=true
Request ID is 6
```

Status Bar

UCS IDLgen

Generate run able standred java
CORBA code

```
Administrator: C:\Windows\System32\cmd.exe
Microsoft Windows [Version 6.1.7600]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

E:\private\UCS\UCSV1.3.1>idlgen
*****
idlgen.bat idlfile
For example idlgen.bat d:\myjava\test.idl
*****
E:\private\UCS\UCSV1.3.1>idlgen d:\test\hello.idl
*****
idlgen.bat idlfile
For example idlgen.bat d:\myjava\test.idl
*****
Begin to generate code...
Nov 23, 2011 10:18:43 PM com.corba.mnq.tool.GetEtcTool getProperties
SEVERE: No value for System property 'CorbaMNQ.dir', using current directory ins
tead
Generate code to ./UCSgen4Java
E:\private\UCS\UCSV1.3.1>
```

Name ^

- _helloStub.java
- build.xml
- Client.java
- hello.java
- helloHelper.java
- helloHolder.java
- helloImpl.java
- helloOperations.java
- helloPOA.java
- helloPOATie.java
- Server.java

11/23/2011 10:18 ...	JAVA File	2 KB
11/23/2011 10:18 ...	JAVA File	1 KB
11/23/2011 10:18 ...	JAVA File	1 KB
11/23/2011 10:18 ...	JAVA File	1 KB
11/23/2011 10:18 ...	JAVA File	2 KB
11/23/2011 10:18 ...	JAVA File	2 KB
11/23/2011 10:18 ...	JAVA File	6 KB

A decorative graphic on the left side of the slide featuring several black cords hanging vertically, each with a clear incandescent light bulb attached. The bulbs are at different heights, creating a staggered effect.

UCS can support SSL for Orbix6

Configure UCS property file

Change %UCS_HOME%/etc/jacorb.properties to following

jacorb.security.support_ssl=on

jacorb.security.keystore=D:\\myjava\\ucs \\ keystore.jks

jacorb.security.keystore_password= bankserverpass

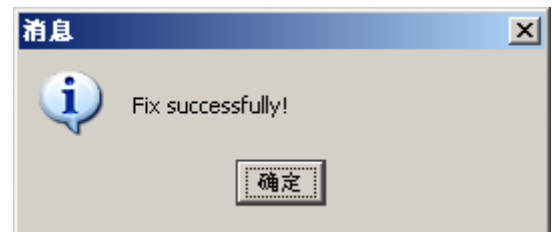
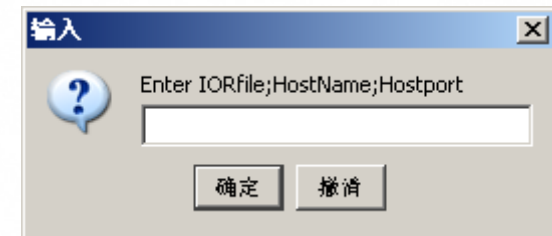
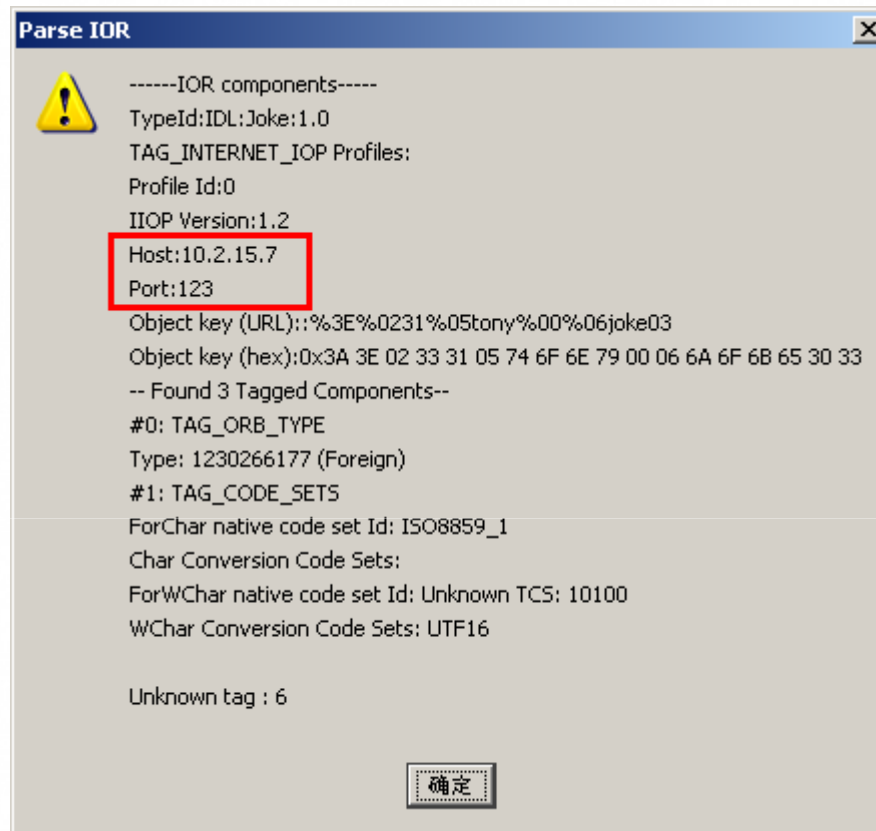
jacorb.security.ssl.client.supported_options=60

jacorb.security.ssl.client.required_options=4

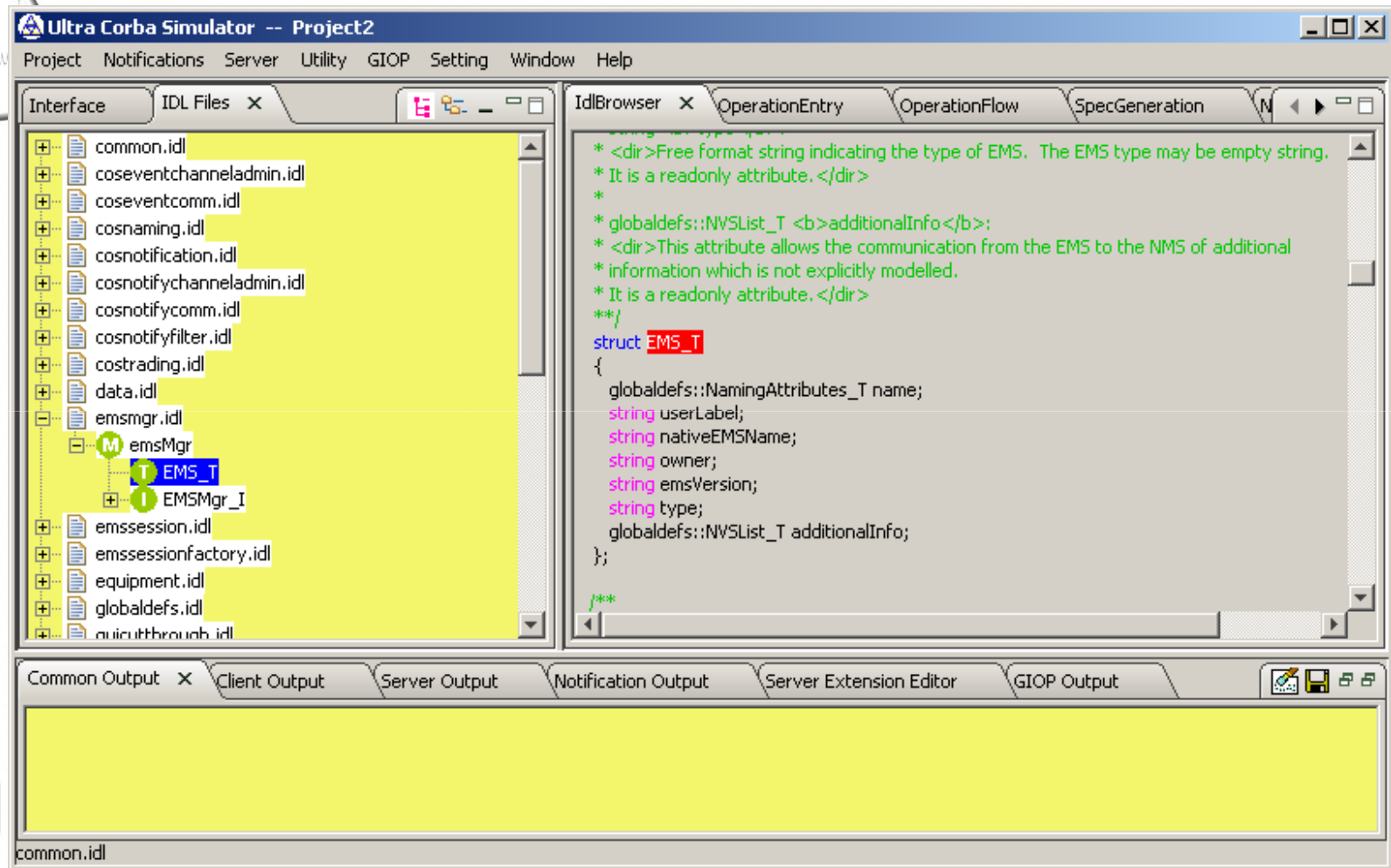
jacorb.security.ssl.server.supported_options=60

jacorb.security.ssl.server.required_options=4

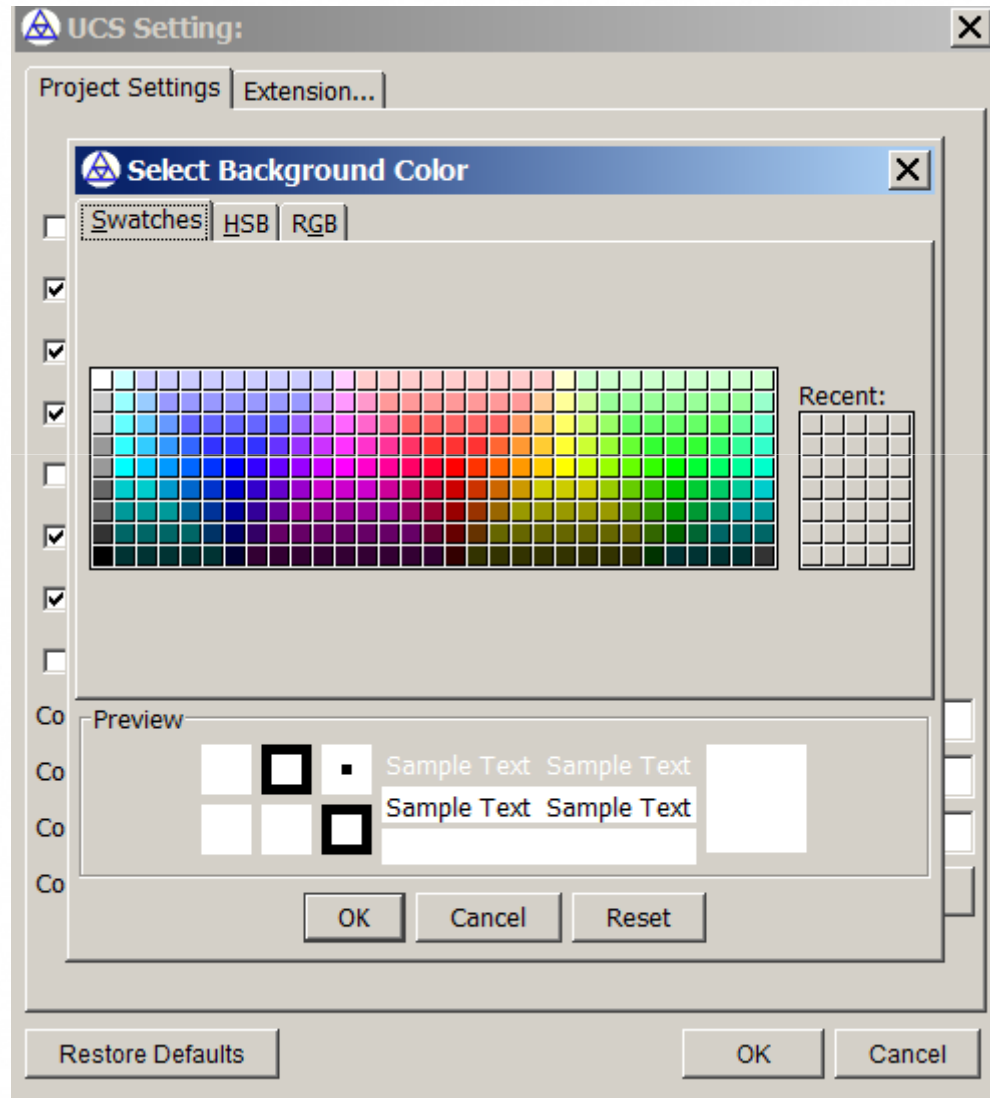
UCS can change IOR's hostname and port



UCS can help you understand your idl with a virtual way.

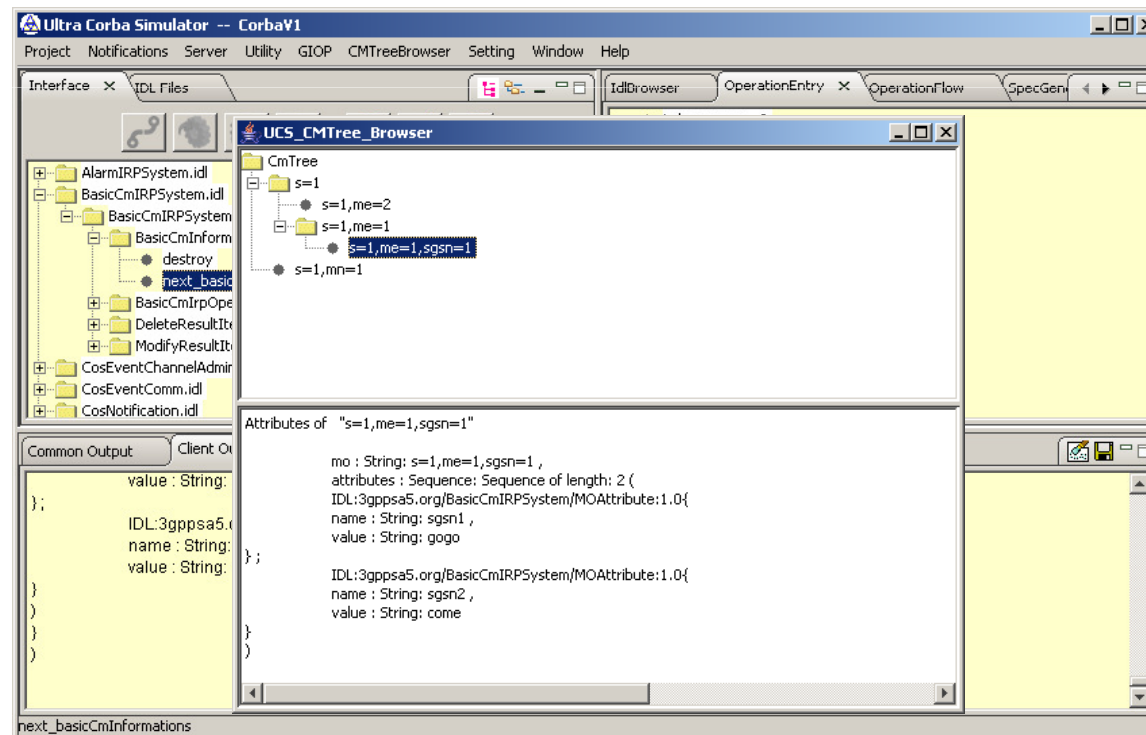


You choose the style that you like for your ucs project.



UCS CMTreeBrowser utility

- ✓ It can cache all kinds of configuration data, only if the configuration data is reported in the Struct type or Regular Value type.
- ✓ And then display those configuration data in the tree view.
- ✓ One example (3gpp Corba interface: BasicCmInformationIterator) see below picture:



A decorative graphic on the left side of the slide features several black cords hanging vertically. Attached to these cords are five incandescent light bulbs at various heights. The bulbs are unlit, showing their internal filaments. The cords and bulbs are arranged in a way that they appear to be part of a modern lighting fixture.

Summary

- UCS integrate almost all useful CORBA tools
- UCS is very powerful CORBA tool suite
- UCS is a little bit like SoapUI in WS world
- No CORBA user would refuse UCS



Ideas?