



## Gen Troubleshooting Tips

Session # 23

October 30, 2007 11:00 a.m. – 12:00 p.m.

Andy Hebert, CA

# Agenda

- What's covered and not covered
- Toolset Diagnostics
- Build Tool Diagnostics
- Runtime Diagnostics
- Recommendations



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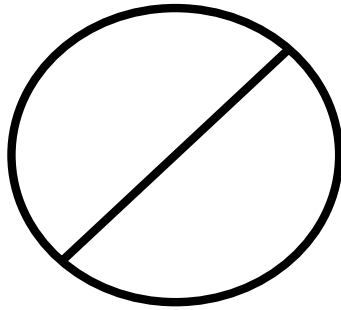
## What's Covered

- Reports, log files, and tools available inside Gen
- High level overview only
- Windows, UNIX, JVM and CLR platforms
- Where to find more information



## What's Not Covered

- Encyclopedia diagnostics
- Operating system and 3<sup>rd</sup> party diagnostics
- Mainframe diagnostics



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## Toolset Diagnostics

- Consistency Check
- Reports
- Structure Chart and Action Block Usage
- Rapid Test



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## Consistency Check



- **What it tells you**
  - Anything inconsistent or incomplete
  - Can target specific objects, or the whole subset
  - Warnings vs. Errors
- **When to use it**
  - Automatic during Transformation and Generation
  - At regular intervals
  - Before sending a model in to Customer Support



## Consistency Check (cont.)

- How to access it
  - From Planning, Analysis, or Design menus
  - From the check-mark icon on almost all diagram toolbars

```
Consistency Check
Model : GEN SAMPLE MODEL
Subset: (complete model)
May 23, 2005 12:35

Level:      ** ALL **
Reporting:  Warnings, Severe Warnings, Errors, Fatal Errors
-----
Business System GUI_CORPORATE_MANAGEMENT
-----
Primary Window Corporate Divisions
ERROR      : ICCWM15E Generation does not support multiple window control
Primary Window Corporate Employees
```

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# Reports

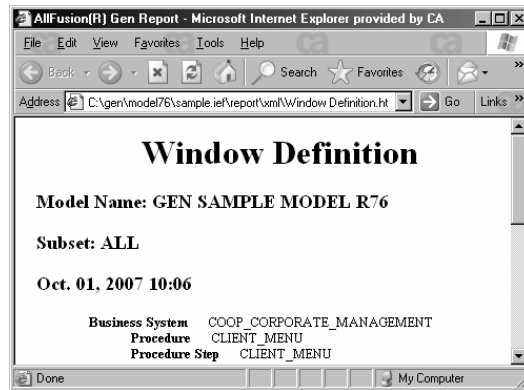
- **What they tell you**
  - Listings of objects
  - Details associated with those objects
- **When to use them**
  - As part of your documentation
  - To get an overview



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## Reports (cont.)

- How to access them
  - Model->Reports
  - Reports



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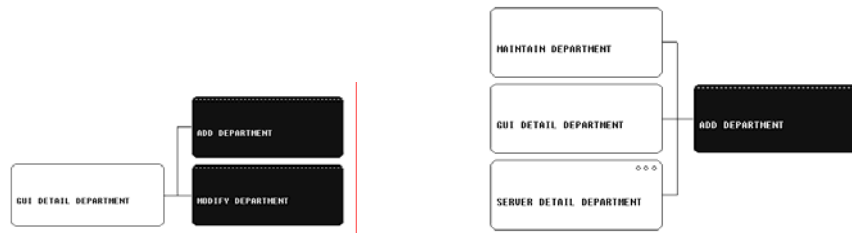
## Structure Chart & Action Block Usage

- **What they tell you**
  - Layout and flow of action blocks in your application
- **When to use them**
  - To find which action blocks call a specific action block
  - To find which action blocks are being called



## Structure Chart & Action Block Usage (cont.)

- How to access them
  - From Design menu, choose Structure Chart or Action Block Usage



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## Rapid Test

- **What it tells you**
  - How a window will look
  - Tab sequencing
  - Action diagram tracing via Diagram Trace Utility (DTU)
- **When to use it**
  - To verify window design
  - To trace through action diagram code



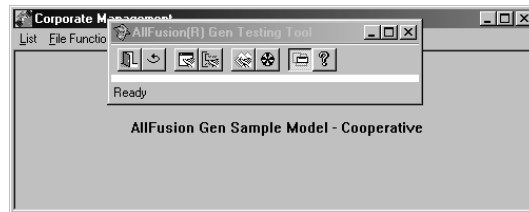
## Rapid Test (cont.)

- How to access it in the Navigation Diagram

- Rapid Test icon



- Mode->Test



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## Build Tool Diagnostics

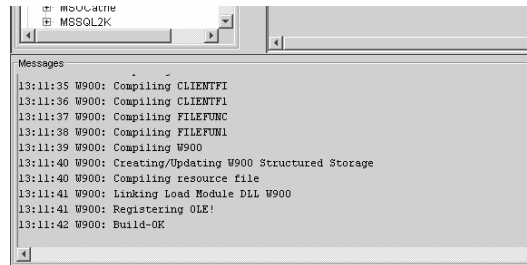
- Messages Area
- Load Module .out files
- Assembly .out files
- Load Module test



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## Messages Area

- **What it tells you**
  - Summary and Status information on Build Tool activity
- **When to use it**
  - To monitor activity
- **How to access it**
  - Automatic
  - Can resize



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## Load Module .out Files

- **What they tell you**
  - What was compiled
  - Compiler options used
  - Path and classpath contents
  - Warning and error messages
- **When to use them**
  - Diagnose a failed build
  - Get compiler options for compiling EABs



## Load Module .out Files (cont.)

- How to access them
  - Action->Review
  - Review icon on toolbar
  - With the load module inside the model directory



```
PROO.out - Notepad
File Edit Format View Help

AllTrusion(x) gen build tool compose
Copyright(C) 2004 Computer Associates International, Inc.
All rights reserved.

Compose Succeeded

Microsoft Windows [Version 5.2.3790]
(C) Copyright 1985-2003 Microsoft Corp.

C:\Program Files\CA\AllTrusion\Gen\GEN>C:\Program
Files\CA\SharedComponents\JRE\1.4.2_04\bin\java.exe - -classpath
C:\Program Files\CA\AllTrusion\Gen\GEN\bat\jar - com.ca.gen%bt.execute
C:\Models\70\sample\lef\CV900.bat Setting environment for using Microsoft
Visual Studio .NET 2003 tools.
(If you have another version of Visual Studio or Visual C++ installed and
wish
to use its tools from the command line, run vcvars32.bat for that version.)
Initial search for build executables
NMAKE.EXE, CL.EXE, LINK.EXE, RC.EXE

--- Found NMAKE.EXE
--- Found CL.EXE
--- Found LINK.EXE
--- Found RC.EXE

...Copying C:\Program Files\CA\AllTrusion\Gen\GEN\defaultw.fco to
defaultw.fco

-----Load Module Script Environment-----
Operating System: WINDOWS
Database Manager: COC
Environment:
Language: C
Codepage: 1252
Model: GEN SAMPLE MODEL
Subset: ALL
Level: 9.1.A5.01
Module Type: SHV
-----SUMMARY-----
```



## Assembly .out Files

- **What they tell you**
  - Path and classpath contents
  - Contents of resulting EAR or MSI
  - Any errors that occurred
- **When to use them**
  - To verify what's included in the EAR or MSI
  - To diagnose any problems



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## Assembly .out Files (cont.)

- How to access them
  - Action->Review
  - Review icon on toolbar
  - With assembly inside model directory



```
assembly.EAR.out - Notepad
File Edit Format View Help

Allfusion(*) gen build Tool compose
Copyright(C) 2004 Computer Associates International, Inc.
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Compose Succeeded

Microsoft Windows [Version 5.2.3790]
(C) Copyright 1985-2003 Microsoft Corp.

C:\Program Files\CA\Allfusion\gen\bin> "C:\Program
Files\CA\ShareComponents\JRE\1.4.2_04\bin\java.exe" -classpath
"C:\Program Files\CA\Allfusion\gen\bin\all.jar" com.ca.gen70.bt.Execute
"C:\Model70\sample.tef.java\assembly.eab.out"

=====EARFILE Assemble Information=====
EAB FILE: sample.eab
EAB Modules:
  P000
  WAB Modules:
    W000
  Additional Files:
    - EAB File:
      - WAB () File:

C:\Program Files\CA\Allfusion\gen\bin> "C:\Program
Files\CA\Allfusion\gen\bin\all.jar" com.ca.gen70.bt.Execute
"C:\Model70\sample.tef.java\assembly.eab.out"

Java version 1.3.1.05
Java(TM) 2 Runtime Environment, Standard Edition (build 1.3.1.05-b02)
Java HotSpot(TM) Client VM (build 1.3.1.05-b02, mixed mode)
Built file: C:\Model70\sample.tef.java\assembly.eab.out
Trying to override old definition of task manifest

dirs:
  [mdir] Created dir: C:\Model70\sample.tef.java\deploy.j2ee
  [mdir] Created dir: C:\Model70\sample.tef.java\deploy.j2ee\temp
  [mdir] Created dir:
  C:\Model70\sample.tef.java\deploy.j2ee\temp\META-INF
manifest:
  [exec] instmsg sample creating sample.manifest.mf
```



## Load Module Test

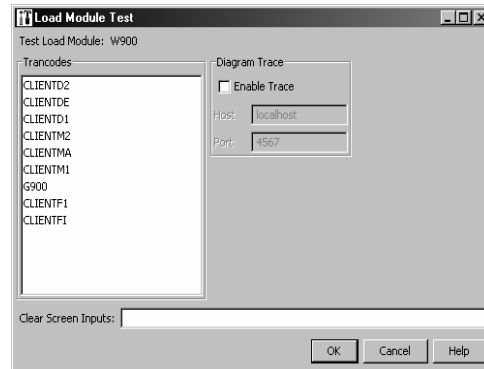
- **What it tells you**
  - If your application starts and runs OK
- **When to use it**
  - Test-drive your application
  - Diagram Tracing
  - Available for GUI Clients, Window-Packaged and Block Mode Applications on Windows platform only



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## Load Module Test (cont.)

- How to access it
  - Action->Test or Test icon on toolbar
  - Select Trancode
  - Clear Screen inputs
  - Select Enable Trace if needed
  - Click OK



## Runtime Diagnostics

- Business Logic Tracing
- Middleware Logging
- Proxy Test Harness



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## Business Logic Tracing

- **What it tells you**
  - Flow of action diagram logic
  - Values of Import/Export/Local/External Action Views
- **When to use it**
  - Debugging your application
- **Must generate code with the Tracing option (Trce) selected**



## Diagram Trace Utility (DTU)

- Trace all Clients, Servers and Platforms except Mainframe
- Client on Windows platform only
- Activate by:
  - start the DTU
  - selecting the Diagram Tracing Enabled radio button when using Load Module Test from the Build Tool
  - /trace parameter when starting from command line



/trace option documented in AllFusion Gen Workstation Construction Guide in the chapter on Application Testing

## Middleware Logging

- **What it tells you**
  - Details about message traffic from a certain perspective
  - Flows between cooperative clients or proxies and servers
  - Can vary the logging level
- **When to use it**
  - To debug problems with communication between load modules



## Middleware Logging Types

- CMIDEBUG
- Client Manager Log
- Communications (Comm)  
Bridge Log
- Transaction Enabler Log



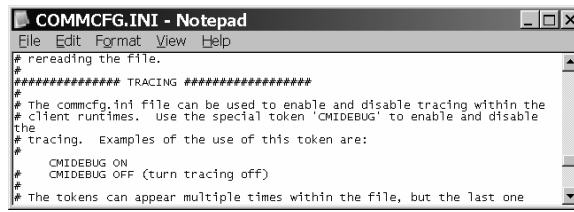
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## CMIDEBUG Log

- TCP/IP, MQ Series, or EJBRMI communication
- All types of cooperative clients and proxies, Java EJBs
- Client perspective or EJBs perspective
- Turn on and off in

COMMCFG.ini &  
COMMCFG.properties

- Produces trace.out  
or  
<loadmodule>.out

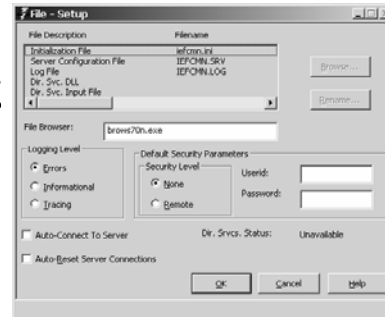


```
COMMCFG.INI - Notepad
File Edit Format View Help
# rereading the file.
#
# ***** TRACING *****
#
# The commcfg.ini file can be used to enable and disable tracing within the
# client runtimes. Use the special token 'CMIDEBUG' to enable and disable
# the tracing. Examples of the use of this token are:
#
# CMIDEBUG ON
# CMIDEBUG OFF (turn tracing off)
#
# The tokens can appear multiple times within the file, but the last one
```



## Client Manager Log

- GUI clients on Windows platform only
- All communication that passes through the Client Manager
- Client Manager's perspective
- Turn on and off and set logging level on the File – Setup window
- Produces a IEFCMN.log file in Client Manager's directory



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# Communications Bridge Log

- Used by Cooperative Clients and Proxies

• All communication that passes through the Comm Bridge

- Comm Bridge's perspective

• Turn on and off and set logging level on the File – Setup window

- Produces a IEFCBN.log file in Comm Bridge's directory



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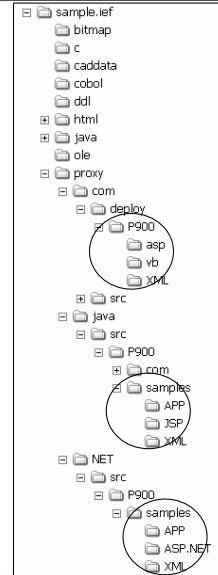
## Transaction Enabler Log

- Used when accessing C-code servers on Windows or UNIX
- All traffic passing through funnel and/or daemon
- Can collect logs for either or both
- Transaction Enabler's perspective
- Turn on or off and set logging level with -t parameter at startup
- Produces lgnnnnnn files in TE working directory



## Proxy Test Harness

- Simple programs generated to populate import views, call the server, and return export views
- Com Proxy – Visual Basic, ASP or XML
- Java Proxy
  - Applet/Servlet or Application Bean
  - Java program, JSP, or XML
- .NET Proxy – .NET application or XML



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## Recommendations

- Test early, test often – small changes are easier to debug
- When reporting an issue, get as much detail about the error as you can – exact message, when and how, and the configuration of your application
- When sending in a model
  - Clearing as many consistency check errors as you can is helpful.
  - checkout.trn is better when possible



## For More Information

- **Electronic Books**

Start -> Programs -> CA -> AllFusion -> Gen r7.6 ->  
Documents -> Electronic Book

- **Help Menu inside Toolset, Build Tool, Client Manager, Comm Bridge**
- **Knowledge Base and Technical Papers on <http://supportconnect.ca.com>**
- **If you can't find the information you're looking for, give us a call.**



## EDGE Needs Your Feedback!

- Please complete the conference evaluations
- Your feedback/suggestions are necessary to continue to bring you top-notch events
- Thank You for Coming – See you in 2008!

