

Pipeline Front End

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GLAST SAS Developers Workshop
March 23, 2005

Pipeline Front End Overview

- ColdFusion Web Application
 - <http://glast-ground.slac.stanford.edu>
 - web pages, plots, tables, etc.
 - Monitor all pipelines – where users typically find problems
 - Configure pipelines
 - Fusebox application 15 circuits (mini-applications), 187 pages, 154 classes
 - CVS module “glast-ground”
- CAS authentication web application
 - Java + JSP (Spring application)
- Java Servers
 - <http://glast06.slac.stanford.edu/gino-prod/status> (and ginro-dev and gino-test)
 - One for each instance of Oracle (prod, dev and test)
 - currently only used for configuring pipelines
 - could easily be used for scheduling jobs, particularly with batch job web service
 - Spring + Hibernate application (needed for large number of database operations occurring in transactions).
 - 4 projects, 153 classes, ~10k LOC (CVS modules “grits-common”, “grits-gino”, “grits-gino-web”, “grits-gino-xml”)
- Tool for user and developers

Pipeline Monitoring

- Monitor status of pipelines of all three servers (prod, dev and test)
 - Global statistics
 - “How many runs have succeeded”
 - “How many runs have failed”
 - “How many datasets were produced by my job”
 - Drill down to specific batch job statistics
 - View log file
 - Download log file
 - Date and time when batch job was submitted
 - Memory used by batch job
 - Access to data products
 - “Click to download” of all output products of pipeline
 - Filter by dataset type and/or run number range and/or run date range

Pipeline Configuration

- Responsible for configuring pipelines
 - Pipelines are defined in an explicitly specified XML format (backed by an extensible XSD schema)
 - Specify paths to executables
 - Specify order of execution
 - Specify required input and output data files
 - Specify LSF batch queue and batch group
 - Specify other meta-data (“TaskType”, Dataset Type”, “Dataset File Type”).

Pipeline Configuration

The screenshot displays an XML configuration editor for a pipeline. The left pane shows a tree view of the XML structure, and the right pane shows the corresponding XML code. Three red callout boxes provide annotations:

- Reads XSD Schema from web site:** A red arrow points to the `xsi:schemaLocation` attribute in the XML code, which specifies the location of the XSD schema for the pipeline element.
- Drop down menu with allowed values from the XSD Schema:** A red arrow points to the `queue` attribute in the `batch-job-configuration` element, which has a dropdown menu showing allowed values: `express`, `short`, `xlong`, `medium`, `xxl`, and `express`.
- Insures proper element order and XML syntax:** A red arrow points to the `foreign-input-file` element in the XML code, which is part of a `processing-step`.

```
version="1.0" encoding="UTF-8"
<?xml
  <e pipeline
    <a xmlns
      <a xmlns:xsi
      <a xsi:schemaLocation
        <e name
        <e type
        <e dataset-base-path
        <e run-log-path
      <e executable
      <e executable
      <e batch-job-configuration
        <a name
        <a queue
        <a group
        <e working-directory
        <e log-file-path
      <e batch-job-configuration
      <e file
      <e foreign-input-file
        <a name
        <a pipeline
        <a file
      <e processing-step
        <a name
        <a executable
        <a batch-job-configuration
      <e input-file
      <e input-file
      <e output-file
      <e processing-step
```

Configure prod, dev and test servers

Configure a Pipeline

From this page you can edit a pipeline, upload a configuration file, or download a configuration file.

Click here to upload a new configuration file.

28 items found, displaying 1 to 25.

Type	View	Download	Edit
SimReconDigi	View	Download	Edit
Reconstruction	View	Download	Edit
SimReconDigi	View	Download	Edit
SimReconDigi	View	Download	Edit
TwoTowerData	View	Download	Edit
allGamma-GR-HEAD1.403	View	Download	Edit
allGamma-GR-v4r6-test-cfmx	View	Download	Edit

Change GINO Server

You are currently using the **Production** server.

Select new GINO server

- Production
- Development
- Test

[Change Server](#)

Use CAS for Security

The screenshot shows a web interface for configuring pipelines. On the left is a navigation menu with items like 'Home', 'Workbook', 'System Tests', 'Logout langston', 'GINO (prod)', 'Task Run Summary', 'Configure Pipelines', 'Change Server', 'Dataset Catalog', 'Dataset Catalog (beta)', 'Initialize Application', 'External Libraries', 'Admin', 'Manage Users', and 'Initialize Application'. The main content area is titled 'Configure a Pipeline' and contains the text: 'From this page you can edit a pipeline, upload a configuration file, or download a configuration file.' Below this text is a link 'Click here to upload a new configuration file.' which is circled in red. A red arrow points from a box on the right to this link. Another red arrow points from a box on the left to the 'Logout langston' menu item. Below the link is a summary of 28 items found, displaying 1 to 25, with pagination controls. A table lists pipeline items with columns for Name, Type, View, Download, and Edit.

Configure a Pipeline

From this page you can edit a pipeline, upload a configuration file, or download a configuration file.

[Click here to upload a new configuration file.](#)

28 items found, displaying 1 to 25.
[First/Prev] 1, 2 [Next/Last]

Name	Type	View	Download	Edit
_test	SimReconDigi	View	Download	Edit
ardoTest	Reconstruction	View	Download	Edit
	SimReconDigi	View	Download	Edit
TowerData	SimReconDigi	View	Download	Edit
allGamma-GR-HEAD1.403	SimReconDigi	View	Download	Edit
allGamma-GR-v4r6-test-cfmx	SimReconDigi	View	Download	Edit

You must be logged in before you see this option.

Click here to upload a new Pipeline XML configuration file.

Upload Pipeline XML configuration files from web interface or command line

The screenshot shows a web interface for configuring pipelines. The main area is titled "Configure Pipelines / Upload Configuration File". A text field labeled "File to upload" contains the path "C:\java\eclipse\workspace\grits-gino\example\allGamma-GR-v5r0p2.xml" and a "Browse..." button. Below this is an "Upload Configuration File" button. A "File Upload" dialog box is open, showing the "example" folder containing several files, including "allGamma-GR-v5r0p2.xml". The dialog box has "Look in: example" and "File name: allGamma-GR-v5r0p2.xml". A text box with red text says: "Click 'Browse...', select and open a file from you local hard drive, then click 'Upload Configuration File'".

Home

- Workbook
- System Tests
- Logout langston

GINO (prod)

- Task Run Summary
- Configure Pipelines
- Change Server
- Dataset Catalog
- Dataset Catalog (beta)
- Initialize Application

External Libraries

- Initialize Application

Admin

- Manage Users
- Initialize Application

Configure Pipelines /

Upload Configuration File

File to upload

C:\java\eclipse\workspace\grits-gino\example\allGamma-GR-v5r0p2.xml

Browse...

Upload Configuration File

File Upload

Look in: example

- CVS
- .cvsignore
- allGamma-GR-v5r0p2.xml
- b33-hsk-import.xml
- demo-linked-1.xml
- demo-linked-2.xml
- exposure-mdl-test.xml
- pipeline.xslt
- recon-EM2-v1r0.xml
- recon-EM2-v1r0-mdl-test.xml
- recon-EM2-v1r0-raw.xml
- ReconTask.xml

File name: allGamma-GR-v5r0p2.xml

Files of type: All Files

Open

Cancel

1

2

3

Click "Browse...", select and open a file from you local hard drive, then click "Upload Configuration File".

Download XML Configurations

Configure a Pipeline

From this page you can edit a pipeline configuration file.

Click here to upload a new configuration file.

28 items found, displaying 1 to 25.
[First/Prev] 1, 2 [Next/Last]

Name	Type	View	Download	Edit
DC1_test	SimReconDigi	View	Download	Edit
EduardoTest	Reconstruction	View	Download	Edit
Test	SimReconDigi	View	Download	Edit
TwoTowerData	SimReconDigi	View	Download	Edit
allGamma-GR-HEAD1.403	SimReconDigi	View	Download	Edit
allGamma-GR-v4r6-test-cfm	SimReconDigi	View	Download	Edit

Click here to view a Pipeline XML configuration file in the browser, or to download it to your local hard drive.

All Web Applications and Web Services run on JRun4 Servers



Password is in escrow as
"jrun_glast"

Web Service Maintenance

The screenshot shows the JRun admin console interface. The browser address bar displays `http://glast06.slac.stanford.edu:8000/`. The left sidebar contains a navigation menu with items like `admin`, `cfusion`, `cfusion-ear`, and `GINO`. The main content area shows the `J2EE Components on cfusion` page, which includes a table of Enterprise Applications and a table of Web Applications. Red arrows and callout boxes provide instructions: one points to the `admin` link, another to the `cfusion` link, a third to the `GINO` entry in the Web Applications table, and a fourth to the `cfusion-ear` entry in the Enterprise Applications table. A fifth callout box points to the `cfusion-ear` entry in the Enterprise Applications table.

Click here to get a list of web applications

The JRun admin console always listens on port 8000

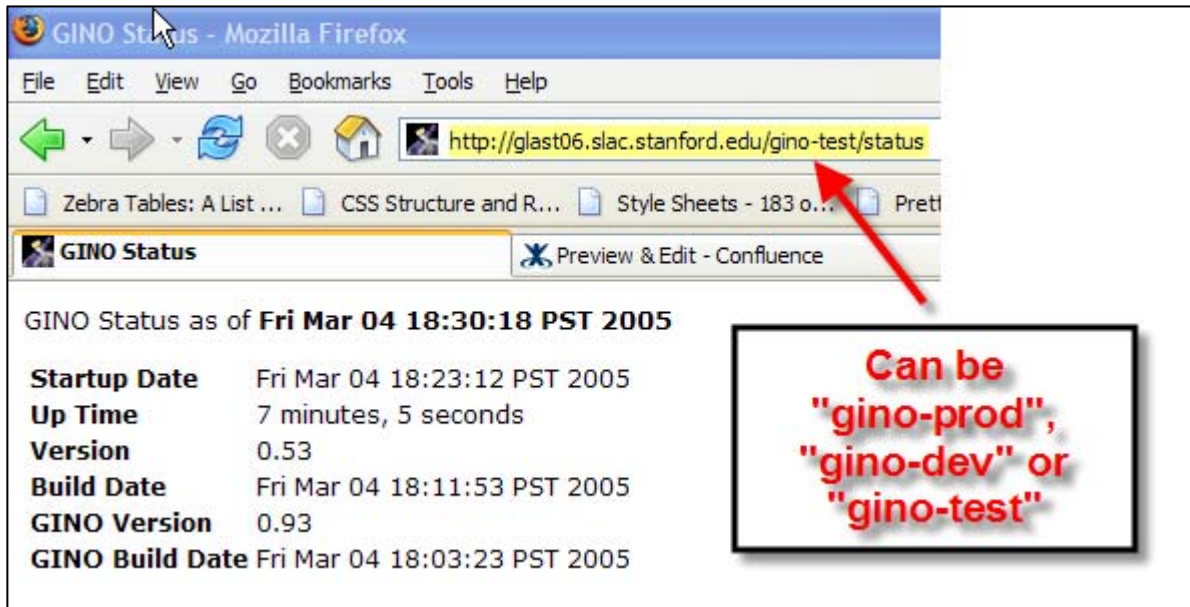
Click Here to re-deploy

Choose the version of GINO you want to re-deploy

Actions	Name	Root Directory
	cfusion-ear	file:/

Actions	Name	Context Root	Root Directory
	GINO	/gino-dev	file:/C:/Documents and Settings/langston/Desktop/gino-dev-0.51.war
	GINO	/gino-prod	file:/C:/Documents and Settings/langston/Desktop/gino-prod-0.51.war
	GINO	/gino-test	file:/C:/Documents and Settings/langston/Desktop/gino-test-0.52.war

Web Service Monitoring



GINO Status - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://glast06.slac.stanford.edu/gino-test/status

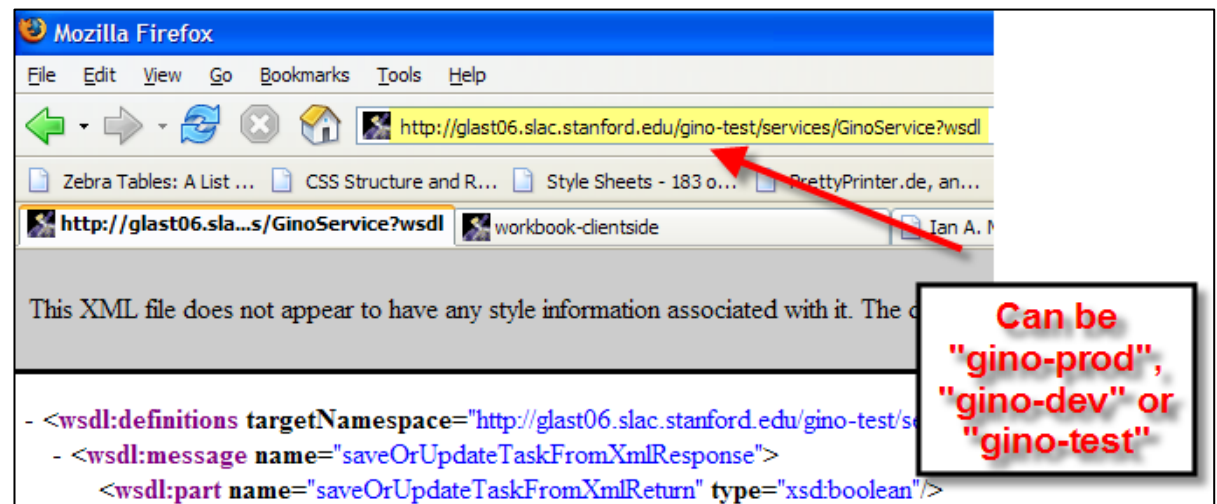
Zebra Tables: A List ... CSS Structure and R... Style Sheets - 183 o... Prett

GINO Status Preview & Edit - Confluence

GINO Status as of **Fri Mar 04 18:30:18 PST 2005**

Startup Date	Fri Mar 04 18:23:12 PST 2005
Up Time	7 minutes, 5 seconds
Version	0.53
Build Date	Fri Mar 04 18:11:53 PST 2005
GINO Version	0.93
GINO Build Date	Fri Mar 04 18:03:23 PST 2005

Can be "gino-prod", "gino-dev" or "gino-test"



Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://glast06.slac.stanford.edu/gino-test/services/GinoService?wsdl

Zebra Tables: A List ... CSS Structure and R... Style Sheets - 183 o... PrettyPrinter.de, an...

http://glast06.sla...s/GinoService?wsdl workbook-clientside Ian A. M

This XML file does not appear to have any style information associated with it. The d

```
- <wsdl:definitions targetNamespace="http://glast06.slac.stanford.edu/gino-test/s
- <wsdl:message name="saveOrUpdateTaskFromXmlResponse">
  <wsdl:part name="saveOrUpdateTaskFromXmlReturn" type="xsd:boolean"/>
```

Can be "gino-prod", "gino-dev" or "gino-test"

Conclusion and References

- Main web site:
<http://glast-ground.slac.stanford.edu/>
- Java Server:
 - <http://glast06.slac.stanford.edu/gino-prod/status>
 - <http://glast06.slac.stanford.edu/gino-devstatus>
 - <http://glast06.slac.stanford.edu/gino-test/status>
- Documentation:
 - <http://confluence.slac.stanford.edu/display/Gino/Pipeline+XML+Configuration+File+Format>
 - <http://confluence.slac.stanford.edu/display/SASHOW2FIX/GINO+Web+Services>