GSI Data Acquisition System V3.0: Release Notes

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January 18, 2000

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Chapter 1

MBS Release v3.0

1.1 Overview

The new MBS 3.0 can be used in the same way as the old version except: All functions and programs must be rebuilt!

The new MBS version 3.0 provides several new features:

1. All tasks are started with the current directory as default. As a result, all file references in .scom files can be made relative.

2. Remote control is fully supported. Especially the Java GUI running an NT, AIX, Linux and OpenVMS can be used. The GUI can be used for full remote control or for monitoring purpose only.

3. Besides the memory mapped pipes new message transport layers are supported. This allows for using standard networks as data path between readout and event builder nodes.

4. Standard PCs running LynxOS can be used as event builder.

5. Using network switches one can run multiple event builders in parallel.

6. Supports the new Next Generation Fastbus controller NGF from SIS (formerly Struck) doing zero suppression during maximum speed readout.

7. New commands:
   - **mbs_stat**: Print status and setup segments.
   - **rate**: Show rate, rate s every s seconds.
• resl: Cleanup local mbs.
• resa: Cleanup mbs on all nodes found in node_list.txt.

8. The validity of user built programs like readout is checked on startup. In case of a future MBS release these programs print a message if they need to be rebuilt.

1.2 Java GUI

There is a new graphical user interface for MBS. It runs on Unix (AIX, Linux), OpenVMS, and Windows (95, NT). It provides full control of a remote running MBS.

1.3 MBS prerequisites

One needs everything as if running MBS 3.0 locally through an MBS prompter, i.e.
1. A project directory keeping all files.
2. A node_list.txt file containing the participating nodes. The node where the prompter should run must be first. This node is called MBSnode in the following.
3. The setup files, readout files, readout programs.
4. A startup procedure startup.scom
5. A shutdown procedure shutdown.scom
6. Add in the .rhosts file on home directory the node and username of the node where the GUI will be called. Username must be the Lynx user name and the GUI node username.

Default Path

We recommend to change all directory references in .scom files from absolute to relative (to project directory). All tasks on all nodes will run with the project directory as default.

1.4 GUI node

The following has to be done on the different platforms:

<table>
<thead>
<tr>
<th>Platform</th>
<th>Action</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX and Linux</td>
<td>Add in .profile</td>
<td>LOGIN.COM</td>
</tr>
<tr>
<td></td>
<td>Needs JDK 1.1.6/7/8</td>
<td></td>
</tr>
<tr>
<td>OpenVMS</td>
<td>Add to CLASSPATH:</td>
<td>P:\Application\Javaawt30</td>
</tr>
<tr>
<td>Windows NT</td>
<td>. toollogin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>javalgin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>mbslogin</td>
<td></td>
</tr>
</tbody>
</table>

P is gsi$gsiroot
1.4.1 Start GUI

To start the GUI type

Unix, VMS: mbs
WindowsNT: java MBS

A first prompter window appears with following fields:

- Node: You must enter the Lynx node which is first one in node_list.txt
- Directory: Directory of node_list.txt, relative to home. You can skip this if the MBS is already running, but must enter <RETURN> to enable the connect button.
- Display: Optionally enter the name of the display. This will be shown by the monitor.
- Password: Optionally enter a password. If a password was given when MBS was started, the password is required.

Optionally you can select an MBS version other than prod (default). If you want to startup a new MBS from scratch, enable cleanup. This will cleanup all MBS nodes found in node_list.txt. Press Connect button to start/connect MBS.

Now the GUI will start. When the MBS was not yet running, press @STARTUP button next to start your environment. This button executes your startup.scom procedure.

Now you can use the Go/Halt buttons to start/stop the acquisition.
The buttons with dots (Server..) start other windows, i.e. for servers and taping.
The GUI can be terminated any time and restarted on the same node. It will then reconnect to a running MBS. The directory needs not to be specified in this case, because it is got from MBS prompter. A password is needed only, if MBS has been started with password. If you forgot the password, you can only shutdown the whole MBS by enabling the cleanup option. As long as the GUI is up, no other GUI can connect to the MBS.

1.4.2 MBS Monitoring

A running MBS 3.0 (also when locally started) can be monitored any time by

Unix, VMS: mbsm <node> WindowsNT: java MBSMoni <node>
Unix, VMS: mbss <node> WindowsNT: java MBSMonis <node>

The second command starts a small version. When the GUI node name shown in the window ends with *, GUI control is locked by a password.
## Contents

1 MBS Release v3.0 ................................. 1
   1.1 Overview ........................................ 1
   1.2 Java GUI ........................................ 2
   1.3 MBS prerequisites .............................. 2
       Default Path .................................... 2
   1.4 GUI node ........................................ 2
       1.4.1 Start GUI .................................. 3
       1.4.2 MBS Monitoring ............................. 3