Setup and Configuration of iLabs ELVIS
Version 1.0

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A. Install SQL Server, Service Broker, and Microsoft Visual Studio .NET

Directions for these installations are in the document iLabs Service Broker Machine Build 6.1-1.doc

B. Install LabVIEW

C. Install ELVIS software

D. Install Apache Ant

Apache Ant is used to compile the Java client for ELVIS.
An installation manual should be found in the ant folder under docs\manual\install.html
You need to have the Java SDK installed on your computer and you should put the ant folder on the same drive that has your ELVIS client code

The main instructions to focus on are below. You should run these commands in the command prompt.

Windows and OS/2

Assume Ant is installed in `c:\ant\`. The following sets up the environment:

```
set ANT_HOME=c:\ant
set JAVA_HOME=c:\jdk1.2.2
set PATH=%PATH%;%ANT_HOME%\bin
```

Comment [BJH1]: Directory where ant folder is

Comment [BJH2]: Directory where Java SDK was installed

Now any time you make changes to the client you should go to the command prompt, navigate to the client\java directory (usually something like C:\Inetpub\wwwroot\Client\client\java) and type this command:

```
ant elvis
```

This should recompile the client and place a new copy in the Client\client\java\jar folder.

E. Configure Lab Server and Service Broker

Overview: This portion of the document is intended to outline the process of putting an experiment online and registering a service broker, lab server, and client for the first time. Specific portions may be helpful in adding or modifying experiment setups later, or registering more service brokers, servers, and clients in the future.

There are two main pages that you will use in the administration of iLabs.

Lab Server Management (LSM) page: http://localhost/LabServer/index.aspx
Default Username: admin
Default Password: mrroot

Service Broker (SB) : http://localhost/ServiceBroker/
Default Username: superuser
Default Password: ilab
*Note: Any user that is a member of the superuser group has administrator priveledges

1. In LSM go to System Status→Configuration Settings

Lab Status Settings section:
- WebLab Web Service Interface: Enabled
- Click "Update"
- Experiment Execution Engine: Enabled
- Click "Update"

Note: "Update All Lab Status Settings" does not work

Configuration Settings section:
- Click "Generate New ID"
- Record this Server ID for future reference

2. Create a new experiment setup: Go to Experiment Setup Management→Experiment Setups

- Click "Create New Setup"
- Enter a name, image (e.g. schematic), and description for the experiment
- Click "Create Setup" and you know have an option to "Add New Terminal"

Note: A terminal is an ELVIS device, and currently the options are "FGEN" (function generator) and "SCOPE" (oscilloscope). You should use each device.
- Fill out the form for an FGEN with appropriate values. Pixel locations are where the devices should be connected to the image.
- Click "Create terminal"
- Repeat steps for SCOPE terminal

3. Activate the experiment: Go to Experiment Setup Management→Active Setups
- Click checkbox next to experiment to activate it. An active experiment will be available to the user in the client
- Click "Commit Assignment"

4. Go to SB as an administrator and go to Lab Servers & Clients→Manage Lab Servers
- Complete the form:
  - Lab Server Name: <enter name>
  - Lab Server GUID: This is the Server ID (found in LSM page, System Status→Configuration Settings)

- o Web Service URL:
    http://yourlabservername/LabServer/services/weblabservice.asmx
  - o Description: <enter description>
  - o Lab Info URL: <enter url if you have a page that contains lab info>
  - o Contact First Name, Last Name, Email: <enter info of lab administrator>

- Click "Go" for Generate New Incoming Passkey. This is the "Lab Server Passkey" that will be used in Step 5.
- Click "Save Changes" and leave this page open.

5. Create a broker. On the LSM page, go to Accounts→Broker Management
  - Click "Create New Broker"
  - Complete the form:
    - o Name: <enter name>
    - o Usage Class: Guests
    - o Description: <enter description>
    - o Broker service URL:
      http://yourservername/ServiceBroker/services/servicebrokerservice.asmx
    - o Contact First Name, Last Name, Email: <info of administrator>
    - o Broker ID: <copy from Service broker's web.config file. This is the service broker ID>
    - o Lab Server Passkey: This is the "Incoming Passkey" that the SB generated in Step 4.

  - Click "Create Service Broker" and a "Broker Passkey" will be created. This will be used in Step 6.

6. Check Usage Class permissions: In LSM go to Access Control→Usage Classes
  - Click "Guests"
    - o Check all boxes for "WSInterface" and "Setup Management" resource.
    - o Check "View" and "Grant" boxes for any of the experiment setups listed in the "Resources" column

7. In the SB Manage Lab Servers page
  - Fill out the "Outgoing Passkey" for your server with the "Broker Passkey".
  - Click "Save Changes"

8. In the SB, go to the Lab Servers & Clients→Manage Lab Clients tab
  - Complete the form:
    - o Lab Client Name: <enter name>
    - o Version: <enter version #>
    - o Short Description: <enter short description>
    - o Long Description: <enter long description>
    - o Contact First Name, Last Name, Email: <enter info of lab admin>
    - o Documentation URL: <Enter if have documentation of client>
    - o Notes: <enter if have notes>

- o Client Type: Applet Client
- o Loader Script:

```
<APPLET
  height=50 width=100
  archive="http://localhost/ServiceBroker/jar/Weblab.jar"
  code="weblab.client.graphicalUI.GraphicalApplet"
  ALT="This is ALT text.  Couldn't load the applet.">
<PARAM NAME="serviceURL"
VALUE="http://localhost/ServiceBroker/Services/ServiceBrokerSe
rvice.asmx">
<PARAM NAME="labServerID"
VALUE="59de99d2742f483cad530c2b52a35568">
<PARAM NAME="helpURL" VALUE="http://localhost/">
This is alternateHTML.  Couldn't load the applet.
</APPLET>
```

*Note: change the bold information to reflect the actual location of those files on your servers. Also the labServerID should be changed to what the Lab Server ID is (See Step 1 or Step 4)

- • Click "Save Changes"

9. In SB, Lab Servers & Clients→Manage Labs
- • Select the client you will use
- • Under the "Available" category select any group you want to use the lab and Click "Add".
  *Note: You can create and administer a group in the SB "Users & Groups" tab
- • Click "Save Changes"

10. In SB, go to Grants
- • Under "Users and Groups" click the group you want to grant access to a lab
- • Under "Functions" click "useLabClient"
- • Under "Qualifiers" click <name of client>
- • Click "Add Grant"
- • Under "Functions" click "useLabServer"
- • Under "Qualifiers" click <name of server>

You are done!