Control System Studio Training

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Archive System Setup

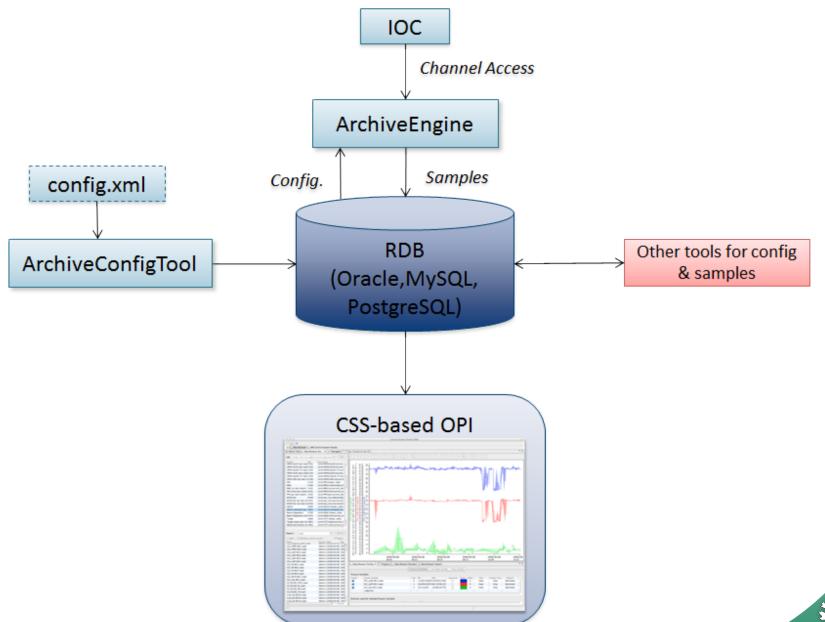**Kay Kasemir**

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Archive System Overview

Managed by UT-Battelle
for the Department of Energy

Setup Steps

- **Prepare RDB**

- **Create & Import initial configuration**

- **Run Archive Engine**

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Prepare RDB

Plugin `org.csstudio.archive.rdb`, folder `dbd/`:

Copy/paste the commands for the following from `mysql_schema.txt` into a mysql shell:

1. Create "archive" user with password "$archive"
2. Create "report" user with password "$report"
3. Create "archive" data base
4. Create tables, insert some demo data

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Create & import initial configuration

a) Directly manipulate tables in RDB?

b) Use ArchiveConfigTool to import XML file

Same format as Channel Archiver:

```
<engineconfig>
<group>
 <name>Cooling</name>
 <channel><name>demo:tank</name>
          <period>1.0</period><monitor/>
 </channel>
</group>
</engineconfig>
```

Import:

```
ArchiveConfigTool -pluginCustomization /path/to/settings.ini \
    -import -engine demo -config demo.xml
```

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settings.ini

Prepare file settings.ini, starting like this:

```
# Archive RDB (Config Tool, Archive Engine)
org.csstudio.archive.rdb/url=jdbc:mysql://localhost/archive
org.csstudio.archive.rdb/user=archive
org.csstudio.archive.rdb/password=$archive
org.csstudio.archive.rdb/schema=

# Channel Access (Archive Engine)
org.csstudio.platform.libs.epics/addr_list=127.0.0.1
org.csstudio.platform.libs.epics/use_pure_java=true
```
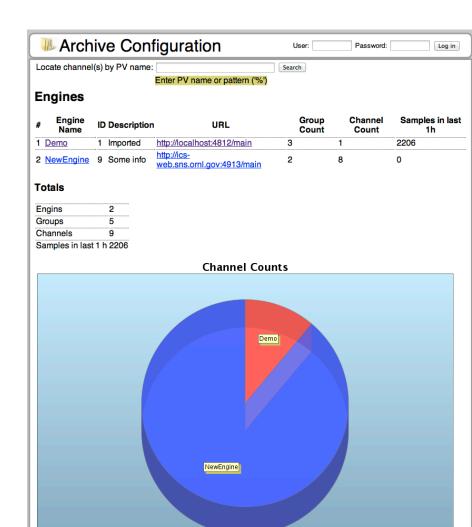
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Online Configuration Editor

Ongoing development…

- **Add `web.archive.war` to Tomcat**

- **Add to conf/catalina.properties:**

  ```
  web.archive.settings=
          /path/to/archive.properties
  ```

- **Example `archive.properties`:**

  ```
  # Database server URL
  rdb_url=jdbc:mysql://localhost/archive

  # Schema prefix to use. Must include trailing ".".
  schema=

  # User for read-only access
  anonymous_user=reports

  # Password for read-only access
  anonymous_password=secret
  ```

Run Archive Engine

Start:

```
ArchiveEngine –pluginCustomization /path/to/settings.ini \
    –engine demo
```

Monitor:

http://localhost:4812/main

- –Check start time, number of channels
- –Look at groups, individual channels
- –Values received and written for each channel

Stop:

http://localhost:4812/stop

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Multiple Archive Engines

On each host, need unique port numbers
(default: 4812)

`ArchiveConfigTool … -port 4813`

`ArchiveEngine … -port 4813`

Web access via http://localhost:4813/main

- **Consistency check: Engine compares its port with the number in the configuration.**

- **RDB configuration for engine also contains host:**

    `EngineConfigImport … -host some_host`

    In principle, on could create a tool that automatically starts archive engines on a host based on RDB info. Not implemented.

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