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Project	**Kayenne**
Subject	**Control Panel Logs in Kayenne V2.0 (Preliminary Information)**

Revision history

Status/Ver	Date	Drafter(s)	Description of changes
Draft/0.2	13-Oct-2010	Don Childers	Initial Draft with revisions
Draft/0.3	04-Mar-2011	Andrew Raiche	Added comment 5.4
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Status: Draft or Approved - Date: dd-Mmm-yy

Reviewers

Name	Role

Table of Contents

1.   Introduction

The Kayenne V2.0 software added logging capabilities to the control panel. These logs contain a great deal of information some of which is useful for tracking down problems in the field. The control panel logs are captured as part of the "Capture Software Diagnostic Data" procedure along with logs and other diagnostics data from the rest of the Kayenne system. This document focuses on information that will be useful to the Customer Service Engineers and Field Service Engineers. **This information is not to be shared with customers at this time.**

2.   Types of Panel Logs

Unlike the frame logs, the control panel logs consist of several different types of log files. Each type of log file contains messages that are specific to different functions. These logs are located in the control panel directory **/var/log**. The log files and the information they contain are:

HwDriver.log – This contains information relating to the hardware including a list of modules installed on the system, which distributions boards are connected to the PCU, which modules are connected to which distribution board, when a module rebooted and why, reporting of communications errors between the PCU, Distributions boards and panel modules, etc.

CPLClient.log - Cpl connection messages

MainFrameDriverSystem.log - Mainframe driver discovery messages (disabled by default)

PanelDriver.log - Timestamp messages triggered by the menu. This can be used to properly correlate the time between the menu logs and the panel logs.

NetworkIO.log - Low-level RDP and UDP messages. This log is where timeout from RDP connections are recorded.

Startup.log - Contains start-up messages recorded during the initial start up process. This will include the boot time of the panel.

Note: Linux keeps other logs in the /var/log folder.   These panel logs are the primary logs we are concerned with.

3.   Message Types

These logs contain several types of messages. The first word of each line logged indicates the type of message which is then followed by the date and time that the message was logged.

INFO – This type of message is used to log the status of the system and occur as part of the normal operation of the switcher. Common message report when the Control Panel was booted, what software version is installed, what modules are installed in the system, etc.

WARN – These messages indicate a non-fatal problem or operational aberration was detected. This could include a legitimate "file not found" problem or an operator tried to perform an illegal operation, etc.

ERROR – This message reports that a hardware or software error may have been detected. Not all ERROR messages indicate a real problem. (Example: An error count of 0 means that no errors were detected at that time of the error message.)

The time and date are read from the clock on the control panel itself. The clock for the control panel can be set using the Multi-Function Module. Panl / Time. (This is fixed with the V2.0 software.) Therefore it is important to make sure that the time and date of the control panel is set after installing the V2.0 software.

4.   Meaning of data in messages

Port – This refers to the communications link between the PCU and a Distribution Board of a stripe in the control panel. On a four M/E Control Panel, the typical numbering of the Ports would be:

> Port 5 – The Aux Panel Stripe
>
> Port 1 – The M/E Stripe furthest from the operator. (M/E 1 in a default configuration.)
>
> Port 2 – The M/E Stripe one slot closer to the operator. (M/E 2 in default configuration.)
>
> Port 3 – The M/E Stripe one slot closer to the operator. (M/E 3 in default configuration.)
>
> Port 4 - The M/E Stripe closest to the operator. (Prog./Preset in default configuration.)

Connector - The connector on the Distribution Board that connects the board to an individual Panel Module. This connection is done using a CAT 6 cable. The numbers of the connectors are marked inside the control panel next to the connectors themselves. Since any module can be connected to any connector on that stripe, you will need to see the numbers to confirm which modules is connected to that stripe.

The System Bar has a special direct connection to the distribution board and does not use CAT 6.

Module ID – Which type of module is connected to the Distribution Board Connector.

> **4310** - 15 button source select
>
> **4316** - 25 button source select
>
> **4320** - 25 button aux bus control
>
> **4323** - 35 button source select
>
> **4326** - 35 button aux bus control
>
> **4330** - Transition
>
> **4335** - Local E-MEM
>
> **4340** - Multi-Function
>
> **4350** - Master E-MEM
>
> **4355** - Machine Control
>
> **4370** - System Bar

5. Messages to ignore

Some Examples of when the Field Service Engineer should be not be concerned about an error message:

1) An error count of 0 means that no errors were detected at that time of the error message.

2) After each reboot, it is normal for the modules to report some communications errors (CRC or PLL errors etc.) on startup. A count of a few dozen on boot and then no more reported after the system is completely running is OK. Any more reported after that should be looked into. It may also be a problem if a particular module has this start up error count steadily growing over time.

3) If a module is physically connected or disconnected and that event is recorded in the error logs.

4) On boot there is a message from the Device Control Module 4355. The warning comes from the jog knob on the DCM. That knob can't be pushed down like all the other knobs on the control panel, and the behavior is expected, but not filtered out of the logs.

ERROR 03 Mar 2011 13:38:02 missing bit address definition of parameter button in MHL file for widget 209 of module 1.13.1
INFO 03 Mar 2011 13:38:02 X2 Module 1.13.1 of type 4355 discovered on port 2, connector 4

6. Sample Panel Log Messages and Their Meaning

- **Message:**

"INFO 02 Apr 2009 00:19:25 X2 Module 1.1.21 of type 4335 discovered on port 1, connector 2"
Meaning:
A local E-MEM module was found on port 1 connector 2 and has been mapped to workspace 1, stripe 1, module id 21 (the 1.1.21 identifier)

- **Message:**

"ERROR 02 Apr 2009 00:00:47 Distribution board on port 1 reports 6 CRC error(s) for connector 1"
Meaning:
CRC communication errors were found on the db board connected to port 1 on the PCU.

- **Message**:

"WARN 02 Apr 2009 00:23:21 Module connected to port 1 connector 2 reports that the 'PLL locked' status bit is not set during check 1 of 2."

Meaning:
Phase lock loop status was set to 0 during the 12ms interval at which it is checked. Module disconnect eminent. This can be a loose connection or a bad cable between the distribution board and the module, a bad module or a bad distribution board.