Chapter 29
Distributing Directory Changes to SRC Components

This chapter provides information about the directory eventing system (DES). Topics include:

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- Managing Directory Communication on page 234

Overview of the Directory Eventing System

The directory eventing system (DES) provides two functions:

- Automatic notification of changes in the directory

  DES polls the directory periodically to determine changes that affect the configuration or operation of a particular component. If DES finds relevant changes, it automatically provides the changes to the component. However, if DES does not find relevant changes, it does not provide any information.

- Redundancy

  You must define a primary directory for SRC components that require access to a directory. You can also define a list of secondary (backup) directories.

  DES detects when a connection to the primary directory fails, and:

  1. Connects to the first available secondary directory in the specified list.

  2. Reverts to the primary directory when it becomes available.

If a connection to a secondary directory fails, DES:

1. Connects to the primary directory if it is available.

2. If the primary directory is unavailable, connects to the first available directory in the specified list.

DES is not a central service for all SRC components; rather, you configure a DES for an individual SRC component. On a C-series Controller, you configure initial eventing for each component for each slot. Other components such as the SAE and the license manager have additional configuration for directory eventing.

Some components have connections to multiple directories; consequently you must configure DES properties for each connection. For example, the SAE may use different directories for service, configuration, and subscriber information.

DES is a Java Naming and Directory Interface (JNDI)–compliant service and accepts standard JNDI properties. For more information about JNDI, see http://java.sun.com/products/jndi/.

Managing Directory Communication

When an SRC component communicates with the directory, that component may pass a time (known as a server timeout) to the directory to specify a time limit for the directory to respond. If the directory is not working correctly, however, it may not respond during this time, and will cause the SRC component to stop operating.

DES recovers if the directory is not working correctly. In addition, you can configure DES to prohibit communications with a directory if that directory repeatedly fails to respond. If you do so, DES starts the following procedure for all communication with the directory:

1. Assigns a client timeout to the communication.

    The client timeout exceeds the server timeout.

2. If the directory does not respond during this time, DES closes the connection to the directory.

3. DES tries to reconnect to the directory and proceeds as follows:

    ■   If DES cannot connect to the directory, it connects to the next available directory specified by the DES redundancy properties.

    ■   If DES can connect to the directory, it contacts the directory again and repeats Steps 1 to 3.

4. If a directory fails to respond 10 times, DES prevents further communication with the directory.