You must use RSNetWorx for ControlNet software to enable any connection in a remote chassis. In addition, RSNetWorx software transfers configuration information for the remote modules, verifies and saves NUT and other user-specified network parameters, and establishes a schedule that is compliant with the RPI and other connection options specified for each module.

IMPORTANT RSNetWorx for ControlNet software must be run whenever a scheduled connection is added to, removed from, or changed in your system.

Control of Scheduled I/O

Scheduled connections let you send and receive data repeatedly at a predetermined rate. You can use the 1756-CNB or the 1756-CN2 module to control scheduled I/O when you use it in conjunction with a ControlLogix controller. When you place the module in the I/O configuration list of a ControlLogix controller and configure a second ControlLogix chassis with a remote 1756-CNB or 1756-CN2 module on the same ControlNet network, you can perform remote control operations on the I/O, or to a second controller in the second chassis.

In this case, the ControlLogix controller and the 1756-CN2 module in the local chassis together act as a scanner, while the 1756-CN2 module in the remote chassis with the I/O plays the role of an adapter.

Understand the Network Keeper

Every ControlNet network requires at least one module to store programmed parameters for the network and configures the network with those parameters when the module is started. This module is called a keeper because it keeps the network configuration. RSNetWorx for ControlNet software configures the keeper.

To avoid a single point of failure, a ControlNet network supports multiple redundant keepers. These ControlNet communication modules are keeper-capable devices:

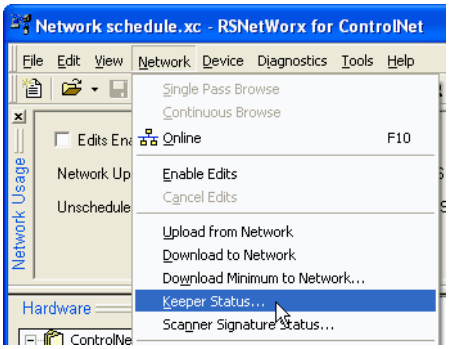
- 1756-CN2 and 1756-CN2R modules
- 1756-CNB and 1756-CNBR modules
- 1768-CNB and 1768-CNBR modules
- 1769-L32C and 1769-L35CR controllers
- 1784-PCICS and 1784-PKTCS cards
- 1788-CN*x* cards
- PLC-5C module

On a multi-keeper network, any keeper-capable module can keep the network at any legal node address (01...99). The multi-keeper-capable node with the lowest node address becomes the active keeper provided it is valid. It has been configured by RSNetWorx for ControlNet software and that configuration is the same as that of the first keeper that became active after the network was formed or reconfigured by RSNetWorx software.

If the active keeper is taken off the network, a valid back-up keeper can take over for it and continue to act as keeper. As long as at least one valid multi-keeper device is present on the network, new scheduled connections can be established.

To review the valid keeper devices on your network, follow this procedure in RSNetWorx for ControlNet software.

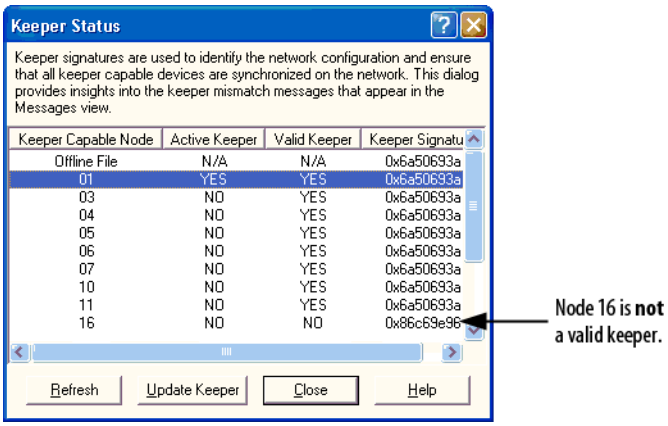
1. From the Network menu, choose **Keeper Status**.



2. Review the keeper devices on the Keeper Status dialog box.

   On a typical network, the following must be true:

   - There must be only one active valid keeper.
   - All other keepers must be valid. If a keeper is not valid, it cannot perform any scheduled communication. However, all unscheduled communication occurs as expected.
   - The keeper signature, shown in hex, must be the same for all nodes.



Default Parameters

When a ControlNet network is first established, it relies on a default set of parameters capable of sending only unscheduled data. Default parameters in all ControlNet devices include the following:

- Network Update Time (NUT) = 100 ms
- Scheduled Maximum Node Address (SMAX) = 1

  The SMAX is the highest network address of a node that can use the scheduled service.

- Unscheduled Maximum Node Address (UMAX) = 99