FieldServer ENOTE

How to Decide Implicit or Explicit Addressing

APPLICABILITY & EFFECTIVITY

Effective for all systems manufactured after January 2021.

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1   Description

A FieldServer can be installed into a LonWorks network in many different configurations. These configurations are setup by choosing the required Lon_Function parameter in the LonWorks Map descriptors. Understanding the configuration needed is key to making the right selection of the Lon_Function parameter. Here are some guidelines to assist in making the correct choice of network configuration for the required application:

- Calculate the number of nodes that will be communicating with the FieldServer. LonWorks address tables only permit any single device to be bound to no more than 15 other nodes when set up in an implicit addressing configuration. So, if connection to more than 15 other devices is necessary, then implicit Lon_Functions are not an option.

- When considering an explicit configuration, it is necessary to know the domain, subnet, node and variable index information of the remote devices. This information can be acquired using an LNS Browser or equivalent (after devices have been commissioned).

- Consider using NMFETCHC as the recommended explicit method for configuration. This function allows read/write capability on inputs and can read outputs as well. It can be compared to the method used by the LonMaker Browser for viewing data as it uses the same mechanism. If the device information is known (see the second bullet before this one), then this is the most robust method of polling a device for information.

- If an implicit configuration setup is chosen, there are several different functions available in this category. The most common functions used are NVUI for inputs and NVUOIMX for outputs, so consider using these functions as a departure point. Some of the other functions may also be useful depending on the application need.

- Changes to an implicit configuration usually result in changes to the external interface file. Making it necessary to re-commission and rebind the FieldServer when changes are implemented. Explicit addressing does not suffer from this drawback, but does require that the address information of the remote devices is known.

Choosing functions other than those mentioned above should only be necessary in rare circumstances where the application specifically calls for these features.