

## GnHost Software modules and functional overview

GnHost is an example client provided with the HART Server package as a utility/tool to assist the user in installing and debugging the HART Server installation. This MS Windows application uses the powerful OPC interface and the HART Pass through interface to perform such functions as:

1. monitoring process connections
2. monitoring device condition and status
3. re-ranging devices
4. service and test loop current
5. Instrument diagnostics

GnHost consists of 4 primary modules as described below. By examining these modules, the user can understand the structure of GnHost and use it as provided or modify it to fit user needs. In either case, GnHost is a good "blueprint" for client application development. HART Server allows the user to focus on the application and not become a HART expert. The HART Server handles the HART instrumentation communications automatically for GnHost or any client application.

### GnHost Modules



GnHost.exe

1. Obtains HART data values from lhartxport mgr.dll
2. Obtains eng. Units from tables.ini
3. Stores **digital** HARTdata in client windows( See attachment for description of GnHost windows and functions. These windows may be modified or replaced to meet any client app.)



iHartXportMgr.dll

1. Primary "engine" for communicating with the HAR
2. Called by GnHost.exe to supply indicated HART data via COM interfaces
3. Specifies data publish rates( update frequency)
4. Passes communications info to HART Server and receives data from device



HartOpcSelect.dll

1. Called by GhHost.exe
2. Browse HART Server Device configuration to identify device to supply data to GUI
3. Configures HART device ??



Tables.ini

1. Contain device engineering units for data values from field device
2. GnHost.exe will extract this data as necessary to populate the GUI
3. These tables are populated by...?

GNHost illustrates one method of developing a typical client application. GnHost may be used "as is" in many applications, and it also can serve as a footprint development platform since it demonstrates the use of all HART Server functions. The user may use the provided GnHost GUI (screens) or replace it with screens designed specifically for the new application. Alternatively the DEV. Studio wizard can be used to easily set up any functions desired by the user. It should be noted that the device addressing, communications, error checking, data transmission, etc. is performed by the HART Server and is completely transparent to the client application.

The HART Server was designed to operate with a client application like GnHost in a transparent manner to provide access to HART instrumentation.. The following block diagram illustrates the functional interaction of GnHost and the HART Server:

**Functional Block diagram of HART Server- Client Operation**