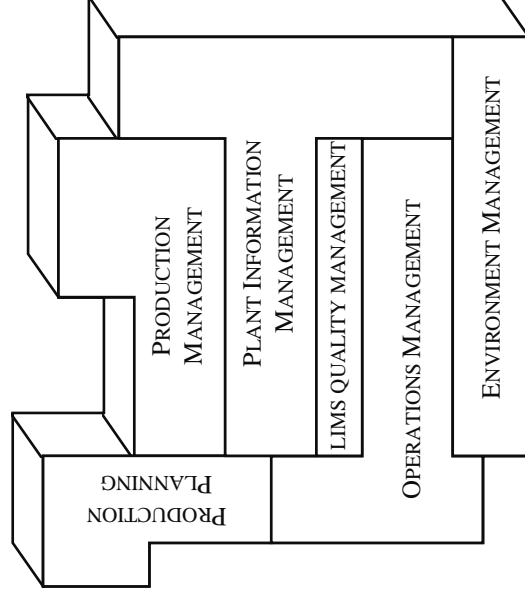


PHD Manual Input, Data Put, Data Edit, and Data Routing



Lesson Objective

Objective

- Configure PHD tags to accept manual inputs, download values to the DCS, allow editing of existing archive values, and route data from one tag to another.

Topics

- Manual Input Tag
- Put Download data to source system
- Screens to Manually Input data
- Screens to Edit data archive
- Data Routing from one tag to another
- Hands-on Exercise

References

PHD User Guide, Using the Tag Configuration Form, Using the Enable Flags Panel

PHD System Manual, User API Reference
Automated Data Routing
Data Editing
PHD System Security

Visual PHD User Guide, Put

Manual Input Tags

Manual Input tags allow unsolicited input of data values into PHD through

- Uniformance application forms and functions,
- VisualPHD functions, or
- API calls.

Manual input tags may be used for

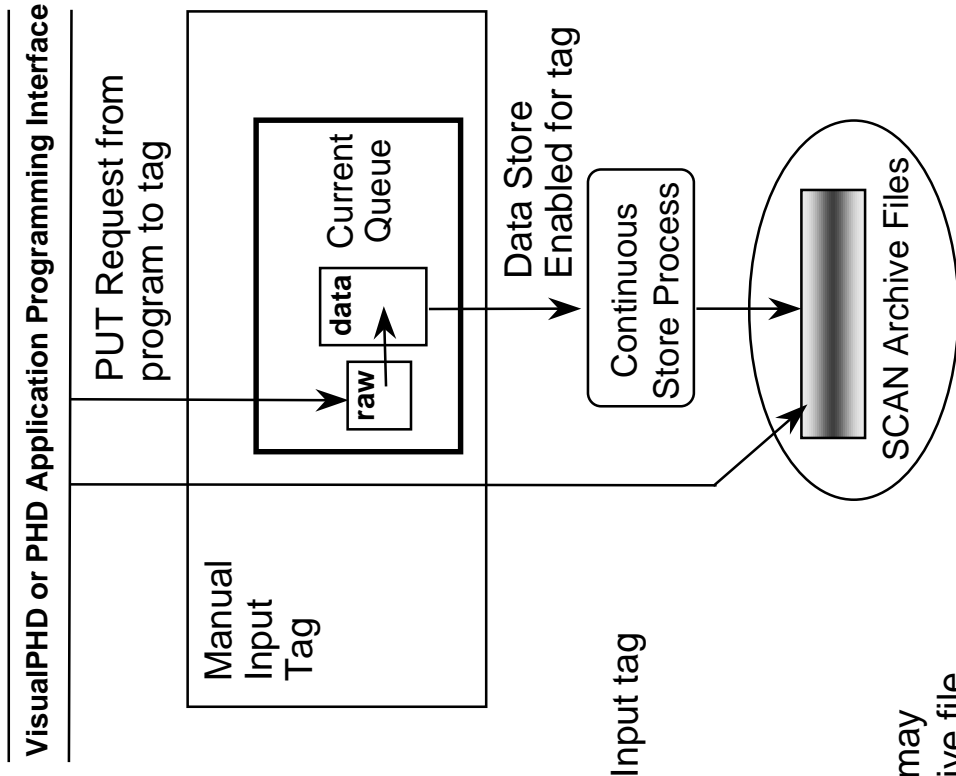
- storage of lab test results,
- manually entered tank gauge readings,
- manual flow entries,
- readings stored using application programs, or
- other non-collected data.

An application program can set the value of a Manual Input tag (make a PUT request to the tag), and specify

- a time stamp,
- a value (such as a critical lab quality value), and
- a confidence factor.

Depending on the specified timestamp, Put Requests may bypass the data queue and store the value to the archive file.

Application Programs



Manual Input Tags, continued

Data Store saves the value of the tag to the archive.

Data Edit allows the modification (but not deletion) of archive data values for a tag, such as for corrections to manual inputs.

Normally, the **System Type** for Manual Input tags is LOCAL, and the **Source Tag Spec** is not needed.

If the Manual Input tag is to download its value to a source system, then the **Put Download** flag must be enabled, and the **Source Tag Spec**, **System Type**, and **Collector Name** must specify the destination for the Put Download.

Tag Config | **Enable** | **Collect** | **Process** | **General** | **Alarm** | **Enter Query** | **TotalPlant**

Tagname: INPUT1 | Units: | Parent Tag: | Class: | Active: ☒ | Send Changes to PHD: ☐

Description: Manual Input Tag configured to download to source system

Effective | **Enable Flags** | **Inherited**

Collection	<input type="checkbox"/>	<input type="checkbox"/>
Demand Calc	<input type="checkbox"/>	<input type="checkbox"/>
Manual Input	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Put Download	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Data Store	<input type="checkbox"/>	<input type="checkbox"/>
Data Edit	<input type="checkbox"/>	<input type="checkbox"/>
Arc Resample	<input type="checkbox"/>	<input type="checkbox"/>

Record: 1 of 1 (Filtered)

Source Tag Spec | **System Type** | **Attribute** | **Convert From Units** | **Collector Name** | **Scan Seconds** | **Tolerance, Type**

Source Tag Index A: B | C | D | LOCAL | F | FLOAT | 30 | TDC1 | 30 |

Data Collection

Source Tag Spec: AMNUMERIC | System Type: TDC_LXS | Attribute: R | Convert From Units: PV | Collector Name: TDC1 | Scan Seconds: 30 | Tolerance, Type: |

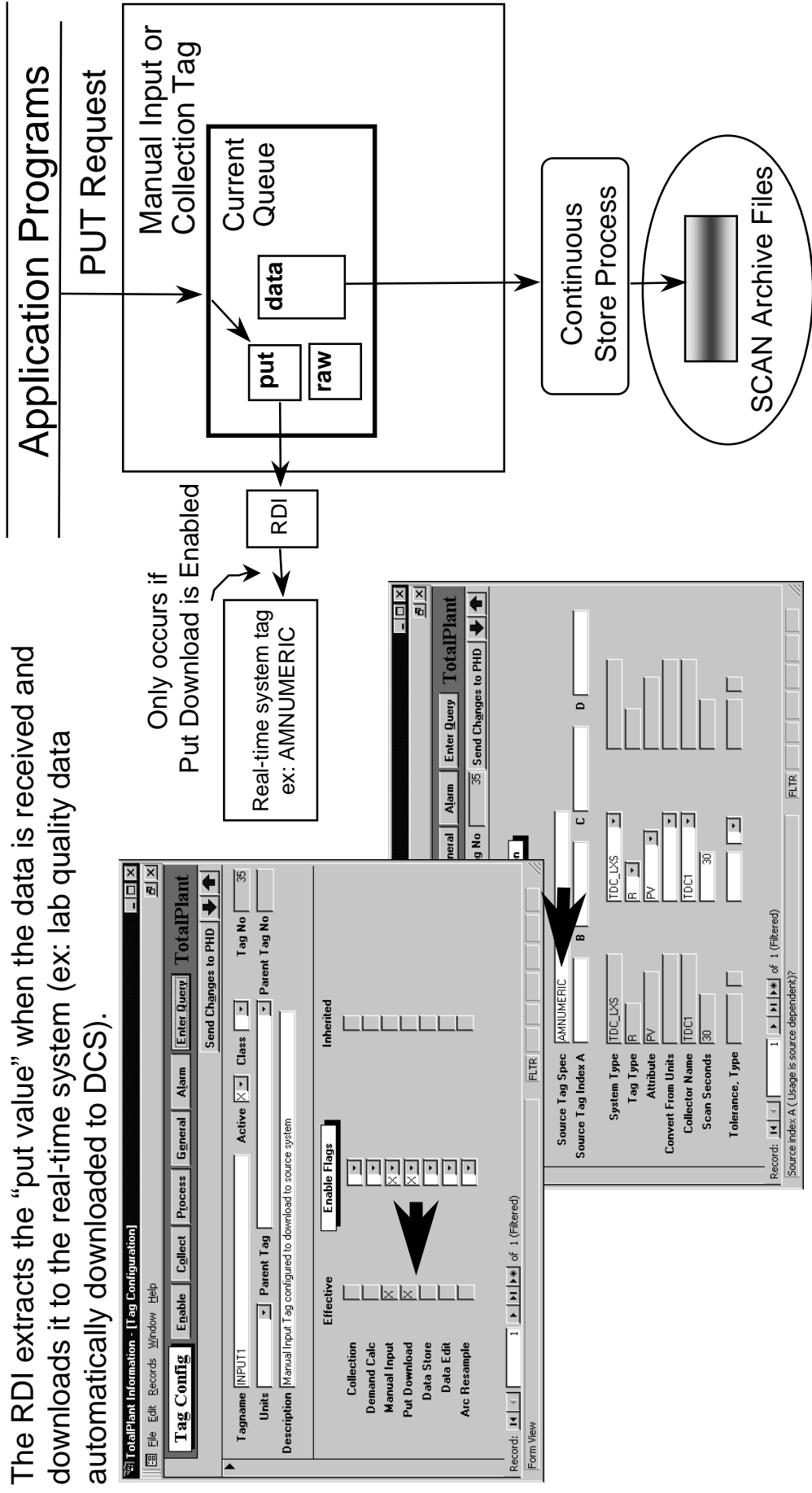
Record: 1 of 1 (Filtered)

Source Index A (Usage is source dependent):

Put Download

An application program can make a PUT request for a Manual Input tag or a Collection tag. The **Put Download** function can be enabled for Manual Input tags and Collection tags. If **Put Download** is enabled for a tag, the PUT value is held in the current queue separately from the raw and data queues.

The RDI extracts the “put value” when the data is received and downloads it to the real-time system (ex: lab quality data automatically downloaded to DCS).



Guidelines

An application program can make a PUT request for a Manual Input tag or a Collection tag.
For a Collection tag, you cannot Put a value later than the last value collected.

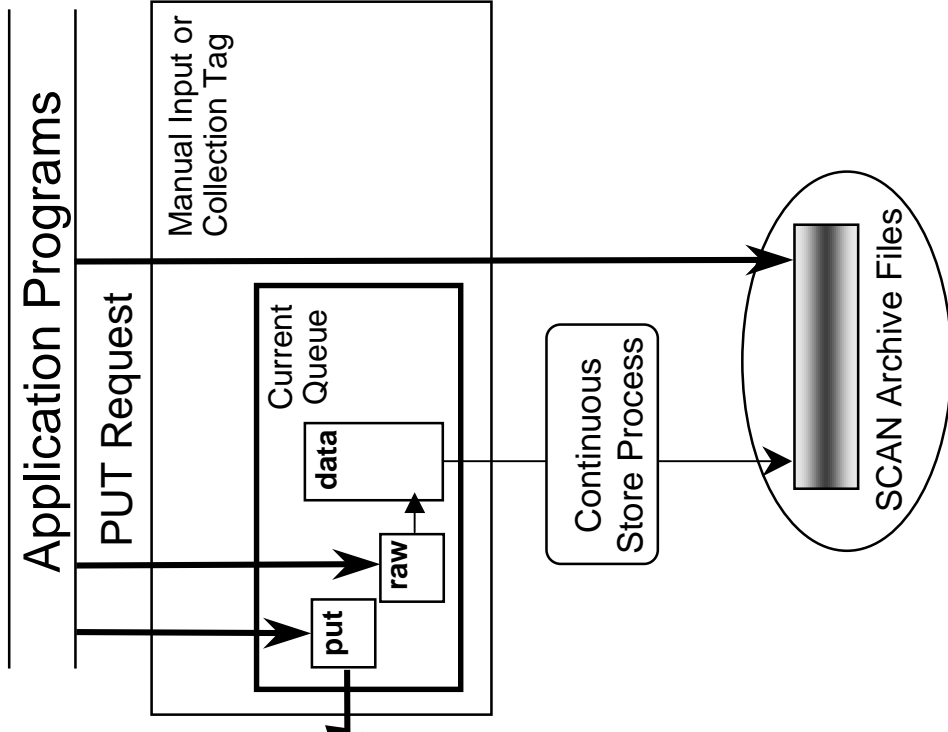
Put Download only occurs if it is Enabled for the tag.

Real-time system tag
ex: AM Numeric

RDI

Manual Input tags and Collection tags must have Data Edit enabled in order to allow modification of archive data values.

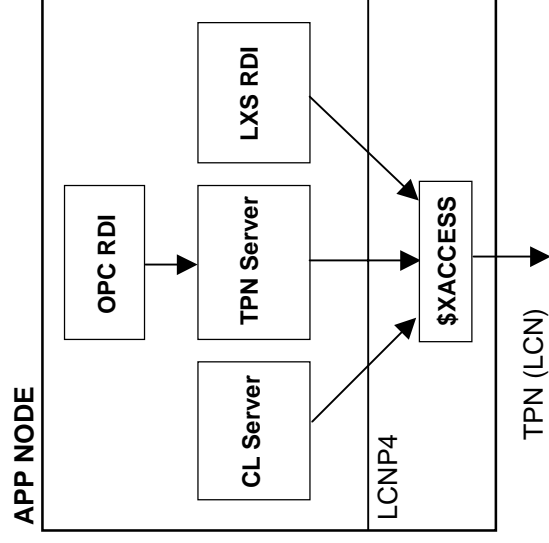
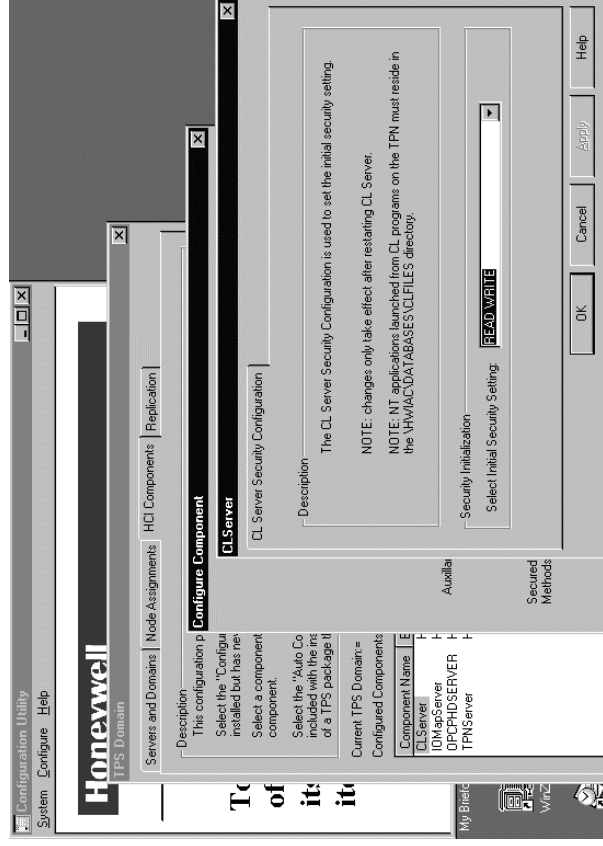
A TPS Node cannot do PUT Download unless the node's security has read/write enabled.



Put Download - Honeywell TPS Node Security

APP Node

- To allow Put Download to be performed by an LCNP in an APP Node, its security may need to be configured to allow writes to TPS network data, depending on what software has been installed on the node:
 - If the node has CL Server installed, the \$XACCESS parameter affects all data access (as shown in the diagram below). If CL Server is not installed, the \$XACCESS parameter is ignored.
 - Set \$XACCESS to READWRITE through CL Server configuration. The default setting is Read Only.
 - If the node has TPN Server installed, TPN Server security must be configured.
 - TPN Server Security - The TPN Server checks a proxy file to see if a client is authorized to use the Write method. (Reference: *TPN Server User's Guide*, Setting the Secured Methods)
 - If the node has both CL Server and TPN Server installed, set \$XACCESS to READWRITE through CL Server configuration, then let the TPN Server do the security.



Put Download - Honeywell TPS Node Security, *continued*

GANT TPS Node

To allow Put Download to be performed by an LCNP in a GANT TPS Node, its security must be configured to allow writes to TPS network data:

Start/Programs/Honeywell TPS
Configure Utility
Configure/CL_Init
READWRIT

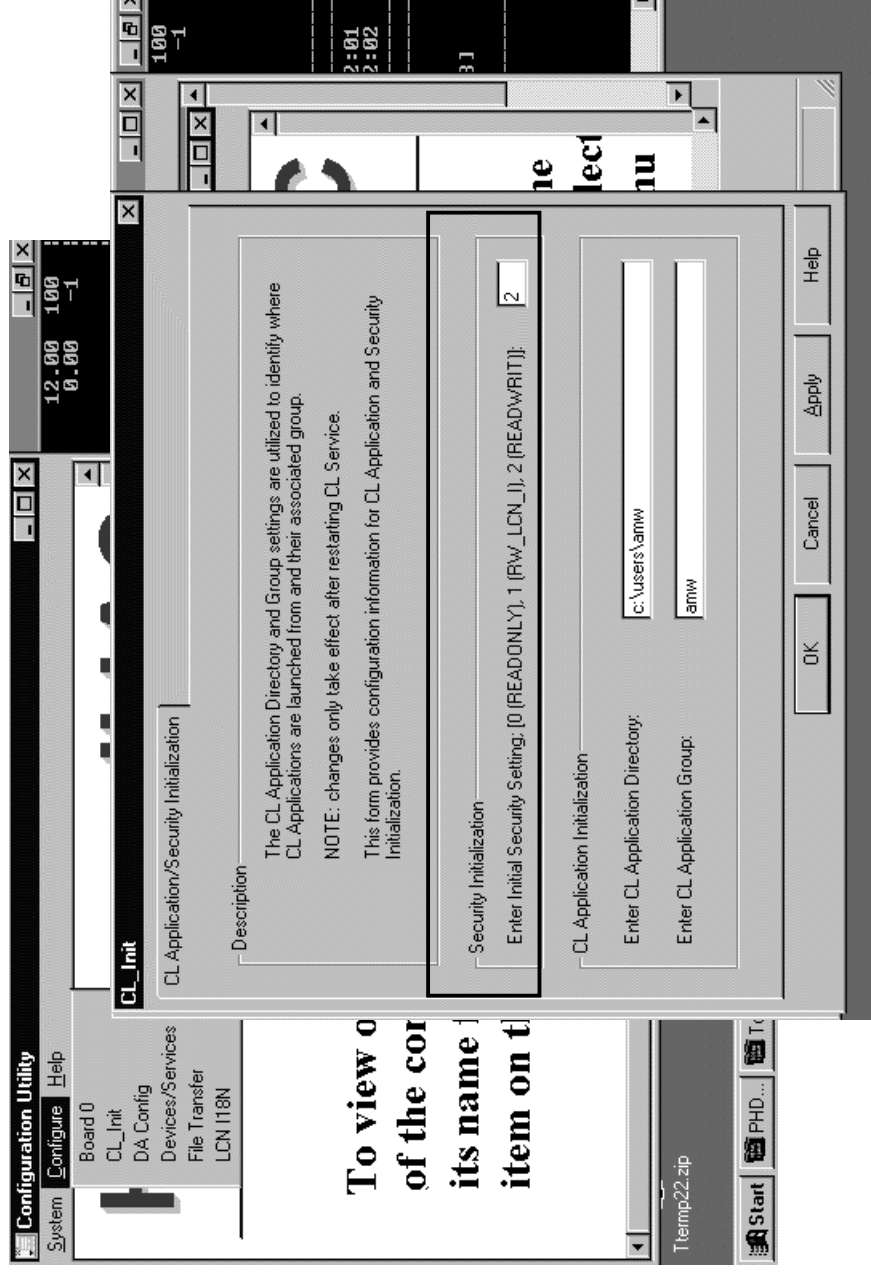
To implement the security after changing it from READ to READWRIT:

- Reboot or
- If you do not want to reboot at this time, go to one of the following displays (through PERFMENU schematic at US or GUS native window):

–AXMPERF display- Change \$XACCESS parameter to READWRIT.

or

–DATACHG display- Change \$PRST\$nn.\$XACCESS to READWRIT.



Refer to *TPS Node with AM Personality Customer Release Guide*, AW04100

Put Download Application Examples

Typically, the PHD PUT Download function is used to send the following types of data to the DCS:

- Lab data
- Data from other systems, such as optimization and simulation packages
- Data calculated by virtual tags
- Data from manual input sources
- Data collected from other source DCS/PLC systems
- Data from the internet

Screens to Manually Input and Edit Data

Several TPI screens can be used to **manually input** data values or to **edit** existing data values:

- PHD Data Query/Edit
- Tag Matrix Entry is a spreadsheet style entry of event data for tags (customized using Matrix Configuration) - Edit Only
- Log Entry (customized using Log Configuration)
- Several LIMS screens (Lab Information Management System)

The image displays three screenshots of the PHD software interface, each showing a different screen for manual data entry and editing.

Matrix Configuration: This screen shows a table with two columns: 'Tagname' and 'Value'. The 'Tagname' column contains 'TANK SERVICE' and '33FIC1'. The 'Value' column contains '33FIC16'. The screen has a menu bar with 'File', 'Edit', 'Records', 'Window', and 'Help'. Below the menu bar is a toolbar with various icons for file operations and editing.

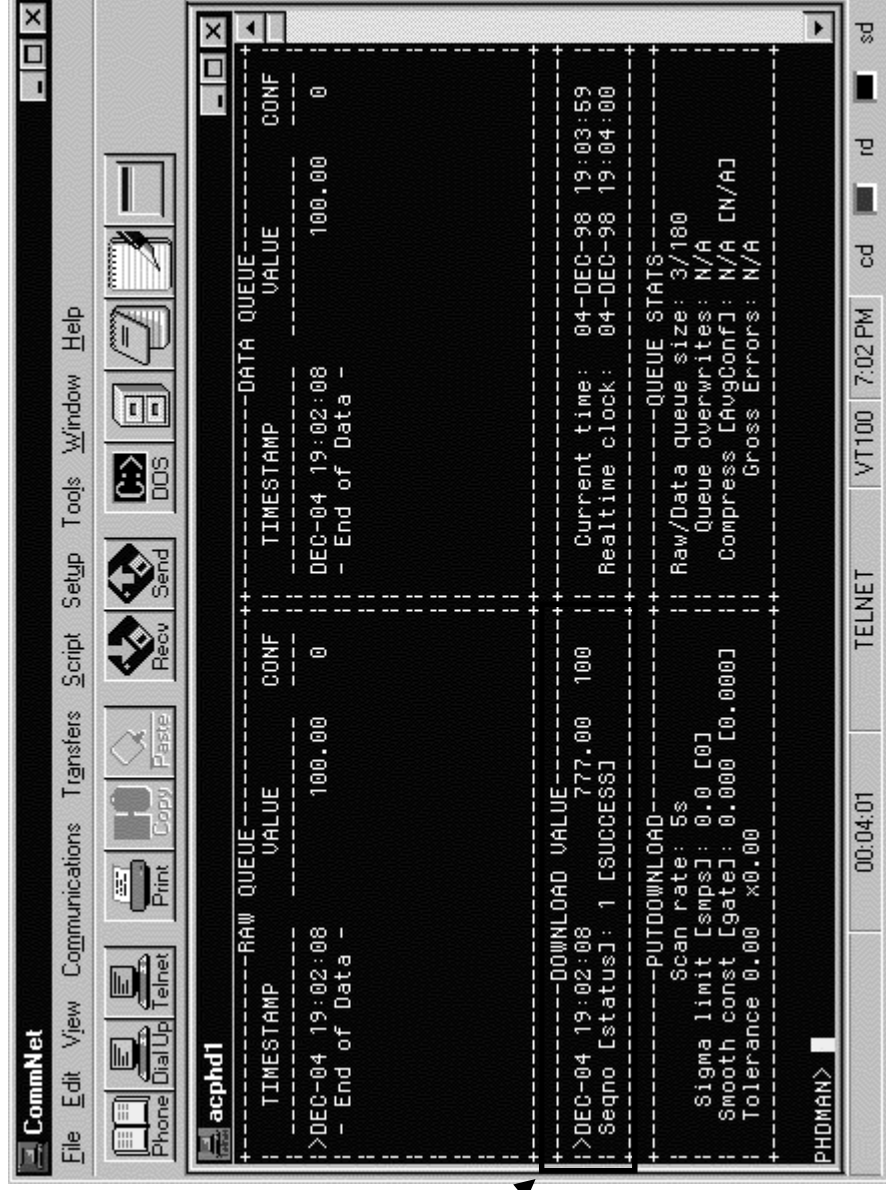
Tag Matrix Entry: This screen shows a table with two columns: 'Tagname' and 'Value'. The 'Tagname' column contains 'TANK SERVICE' and '33FIC1'. The 'Value' column contains '9-7-98' and '0.000000'. The screen has a menu bar with 'File', 'Edit', 'Records', 'Window', and 'Help'. Below the menu bar is a toolbar with various icons for file operations and editing.

PHD Data Query/Edit: This screen shows a table with two columns: 'Tagname' and 'Value'. The 'Tagname' column contains 'TANK1SERVICE'. The 'Value' column contains '12798'. The screen has a menu bar with 'File', 'Edit', 'Records', 'Window', and 'Help'. Below the menu bar is a toolbar with various icons for file operations and editing.

PHDMAN - Put Request

You can use PHDMAN to do a Put Request: PHDMAN> PUT <tagname> <value>

You can view the value and status of Put Download in the tag's queue: PHDMAN> SHO QUE <tagname>



Put Download value in Current Queue.

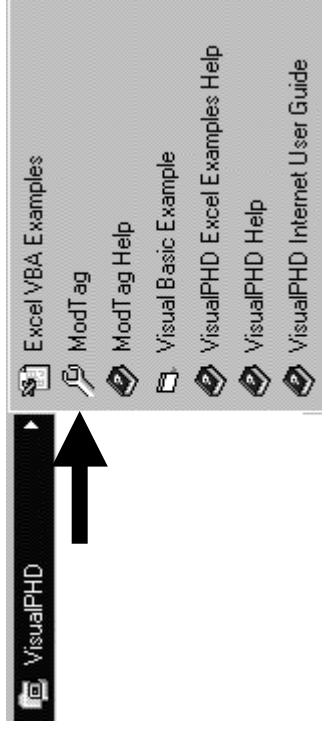
Look at the PHD event log if the Put Download fails.

For description of PUT Download statuses (such as PENDING), refer to

- *PHD System Manual*, User API Reference, PHD_GETPUTSTATUS
- *Visual PHD User Guide*, Download Status

ModTag - Put Request and Data Edit

The VisualPHD desktop application 'Mod Tag' can be used to Put and Edit (Modify) data values.



ModTag - putdownload

File Edit Defaults Advanced Help

PHD Details

Hostname: [acphd1] Tagname: [putdownload] [Iag Defn] [Defaults]

Write Data to PHD

Timestamp: [NO'w] Value: [888] Confidence: [100] [Put] [Modify] [Remove]

Retrieve Data from PHD

Start Date: [NO'w:1] End Date: [NO'w] Offset: [] Units: []

Data Sampling: Type: [Snapshot] Frequency: [300] Max Rows: [400]

Data Reduction: Type: [(none)] Frequency: [60] Offset: [Around]

[Fetch] [Read Units]

timestamp	value	conf
12/4/98 19:09:54	100	0
12/4/98 19:04:54	100	0
12/4/98 18:59:54	100	0
12/4/98 18:54:54	100	0
12/4/98 18:49:54	100	0
12/4/98 18:44:54	100	0
12/4/98 18:39:54	100	0
12/4/98 18:34:54	100	0
12/4/98 18:29:54	100	0
12/4/98 18:24:54	100	0
12/4/98 18:19:54	100	0
12/4/98 18:14:54	100	0
12/4/98 18:09:54	100	0

value written successfully to PHD

Honeywell

version 130.0

Hands-on Exercise

In this exercise, you will configure two tags:

Gnn.MAN - A Manual Input tag that simply stores its value to the archive file.

Gnn.PUT - A Collection tag that performs a put download, sending its value to tag AMNUM### on the DCS.

1. Configure a Manual Input tag named Gnn.MAN.
Enable Data Store for the tag. Set the system type to LOCAL.
2. Use PHDMAN to put a value to the Manual Input tag:
PHDMAN> PUT Gnn.MAN 50
(You will not be allowed to do this unless PHDMAN security is configured for your username. Check the user security.)
3. Verify that your entry is in the Current Queue of Gnn.MAN.
4. Return to Tag Configuration. Configure a Collection tag named Gnn.PUT.
Enable Put Download and Data Store for the tag. Make the PV of DCS tag AMNUM### the destination for the PUT.
(If the TPS node does not have write access, the RDI state will remain DOWNLOAD and the tagstate PENDING.)

5. Use PHDMAN to PUT a value of to the tag: PHDMAN> PUT Gnn.PUT 10

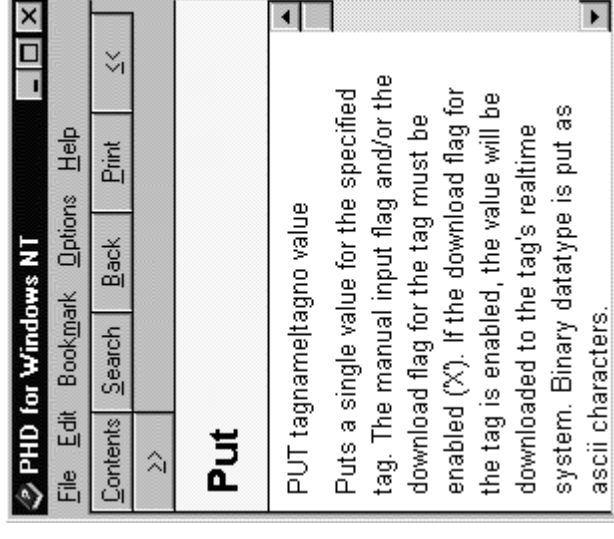
6. Show the queue of Gnn.PUT to verify that your entry is in the current queue.

There should be a PUT DOWNLOAD queue also. The download status should be SUCCESS.

If the tag cannot be accessed, the status shows PENDING (for example, if the TPS node does not have write access).

If the put fails, the status shows FAILED (for example, if you attempt to PUT a value to the PV of a control slot).

Look at the event log to see failed puts.



Hands-on Exercise, continued

In this exercise, you will edit the archived history of a Manual Input tag.

1. Configure a tag matrix of four points, including the Manual Input point you just built Gnn.MAN. Make the tagname the column header.

Matrix Configuration

Enter Query

TotalPlant

Matrix Entry Type

GUESTNN

Description

Lab Exercise

Seq

1

Tagname 1

MANnn

Tagname 2

PUTnn

Tagname 3

NUMnn

TagName 4

1VTAGnn

Manual Input

MAN

PUT

REACT941.NN

1VTAG02

*

2. Call up the Tag Matrix Entry form for the matrix you just configured. To see the current values of the tags, select RETRIEVE PHD. Manually enter a value for Gnn.MAN. Use MODTAG to verify that the history values were changed.

Tag Matrix Entry

Enter Query

TotalPlant

Matrix Entry Type

GUESTNN

Date/Time

01-Oct-97 14:41:35

Retrieval PHD

Lab Exercise

MANnn

PUTnn

NUMnn

1VTAGnn

Manual Input

50.0000000

30.0000000

0.0000000

Hands-on Exercise, *continued*

3. Return to Tag Configuration and **Enable Data Edit** for your Collection tag Gnn.TI.PV.
4. Go to the PHD Data Query/Edit form and retrieve data for the past hour for the tag.
5. Edit one of the values.
6. Use the ModTag application (in the PHD Connect menu) to view the values and see the results of your edit.
7. Use ModTag to do another tag data edit and view the results.

Hands-on Exercise, continued

In this exercise, you will setup the system to audit edits (!), then you will retrieve a Tag Data Edit Audit log.

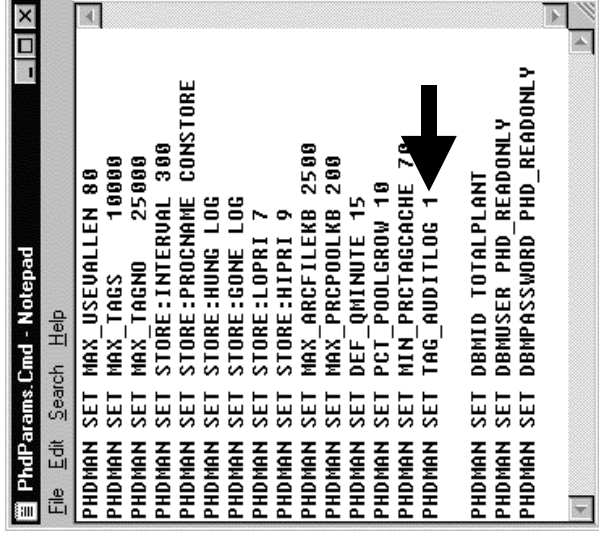
The file that stores tag audit information is in

- directory PHD_ARCHIVE (environment variable)
- file PHD_AUDIT.log

The file PHD_AUDIT.prc is a temporary file used when importing the log file into Oracle.

Instructions:

1. Set the PHD server's TAG_AUDITLOG parameter to 1: PHDMAN SET TAG_AUDITLOG 1
2. To cause the value of TAG_AUDITLOG to stay on after a restart, insert the following line into the PHD parameters command file (%PHD_PATH%\ntsite\phdparams.cmd):
PHDMAN SET TAG_AUDITLOG 1



Hands-on Exercise, continued

- Specify the path for the Tag Data Audit files:

In the TPI Main Menu, under Select Applications, select **Fixed Plant Databook Configuration**.
Select the **Lookup Value Configuration** form.
Query for lookup types like TAGDATA*.

Configure the following values:

Lookup Type:	TAGDATAAUDITFILE
Lookup Value:	X
Description:	D:\PHDServer\archive\phd_audit.log
and	
Lookup Value:	TAGDATATMPAUDIT
Lookup Value:	X
Description:	D:\PHDServer\archive\phd_audit.prc

NOTE: When you run TPI on client PCs, you must specify the complete path, to allow the client PCs to access the files.
Example:

PHD Server machine name = **acphd1**

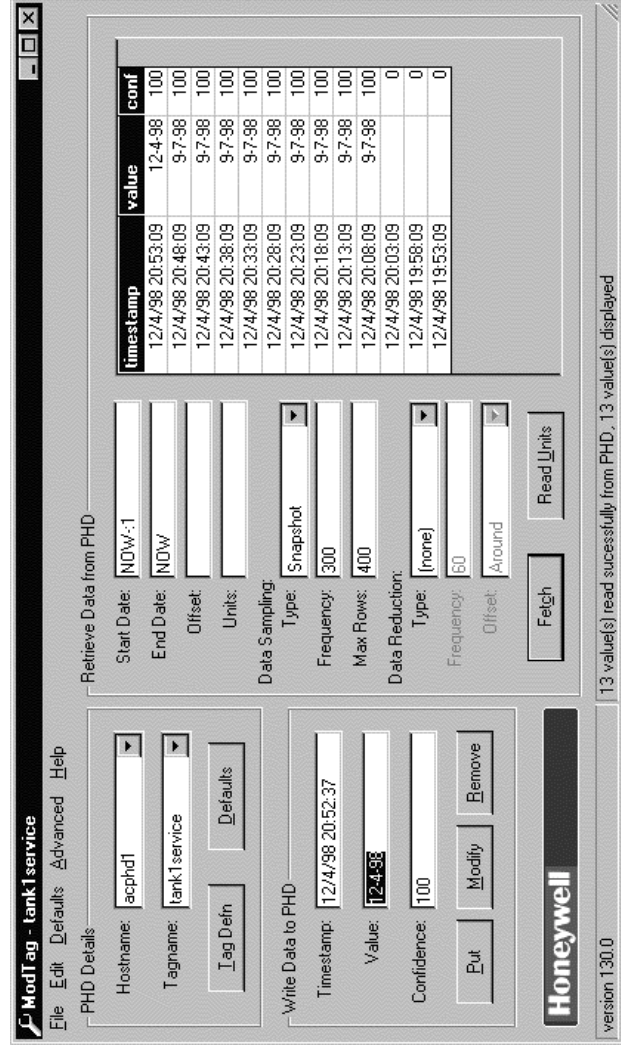
- The archive directory is **e:\archive** (hence the value of the environment variable PHD_ARCHIVE on acphd1 is e:\archive).
- Drive **e:** is shared (so it can be accessed from other PCs)—In this example, the share name is **phd_archive**.

Lookup Type	Lookup Value	Description	Protect?
TAGDATAAUDITFILE	X	\\ACPHD1\PHD_ARCHIVE\ARCHIVE\PHD_AUDIT.LOG	
TAGDATATMPAUDIT	X	\\ACPHD1\PHD_ARCHIVE\ARCHIVE\PHD_AUDIT.PRC	

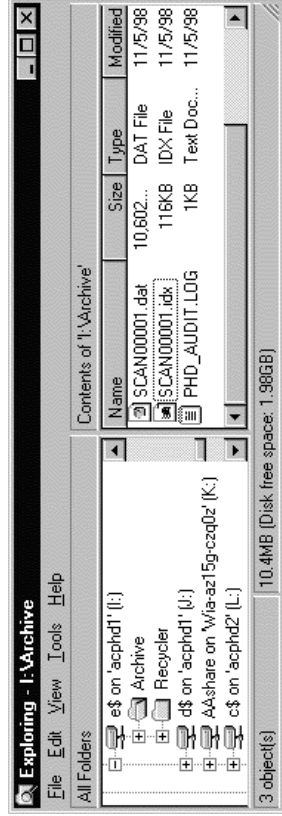
Record: 1 of 2 (Filtered)
Display form for entry of selection criteria

Hands-on Exercise, continued

4. To test the log function, you must perform a tag data edit. In the VisualPHD menu, use ModTag to edit (modify) a tag value.

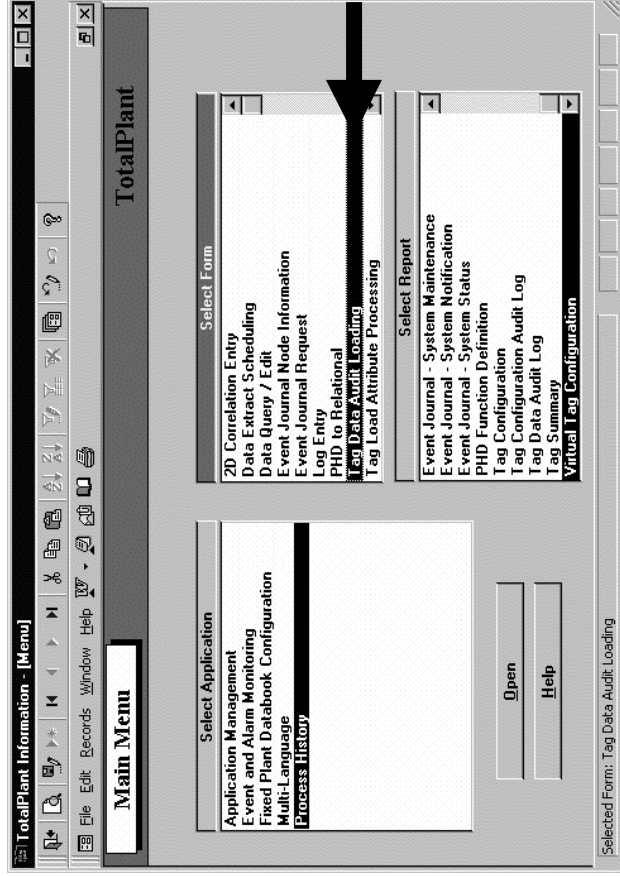


5. Verify that the file PHD_AUDIT.LOG was created in the specified path location.



Hands-on Exercise, continued

6. To move the log file into Oracle, select Tag Data Audit Loading. If TPI cannot access the log file, it generates an error message.



7. Once the file is moved to Oracle, you can run the **Tag Data Audit Log** report from TPI.

A screenshot of the "TotalPlant Information - [Tag Data Audit Log Report]" window. It displays a table with the following columns: Tag, Action, Data Timestamp, Old Value, New Value, and Modified Date. The table contains six rows of data for Tag "TTC21941.PV". The status bar at the bottom indicates "Page: 1 of 1" and "Ready".

Tag	Action	Data Timestamp	Old Value	New Value	Modified Date
TTC21941.PV	Update	11/5/98 07:15:05	77.74548	77.74548	11/5/98 08:14:58
TTC21941.PV	Update	11/5/98 07:13:06	77.68826	77.68826	11/5/98 08:14:56
TTC21941.PV	Update	11/5/98 07:15:05	63.74456	77.74548	11/5/98 08:14:53
TTC21941.PV	Update	11/5/98 07:13:06	63.68734	77.68826	11/5/98 08:14:49
TTC21941.PV	Update	11/5/98 06:42:05	77.37926	77.37926	11/5/98 07:40:55
TTC21941.PV	Update	11/5/98 06:41:05	77.90799	77.90799	11/5/98 07:40:53

Hands-on Exercise, continued

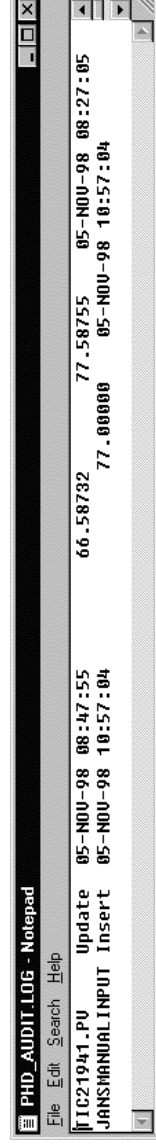
FYI:

PUTs are also logged as are all MODIFYs through the OLE Automation Server.

A **PUT** or a **MODIFY** of a new value (no value with that timestamp exists yet) appears in the audit log as an **INSERT**.

A **PUT** or a **MODIFY** of a value that already exists in PHD appears in the audit log as an **UPDATE**.

A **REMOVE** appears as a **DELETE**.



END OF EXERCISE

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