

Install and Configure IOMap Server

Objective

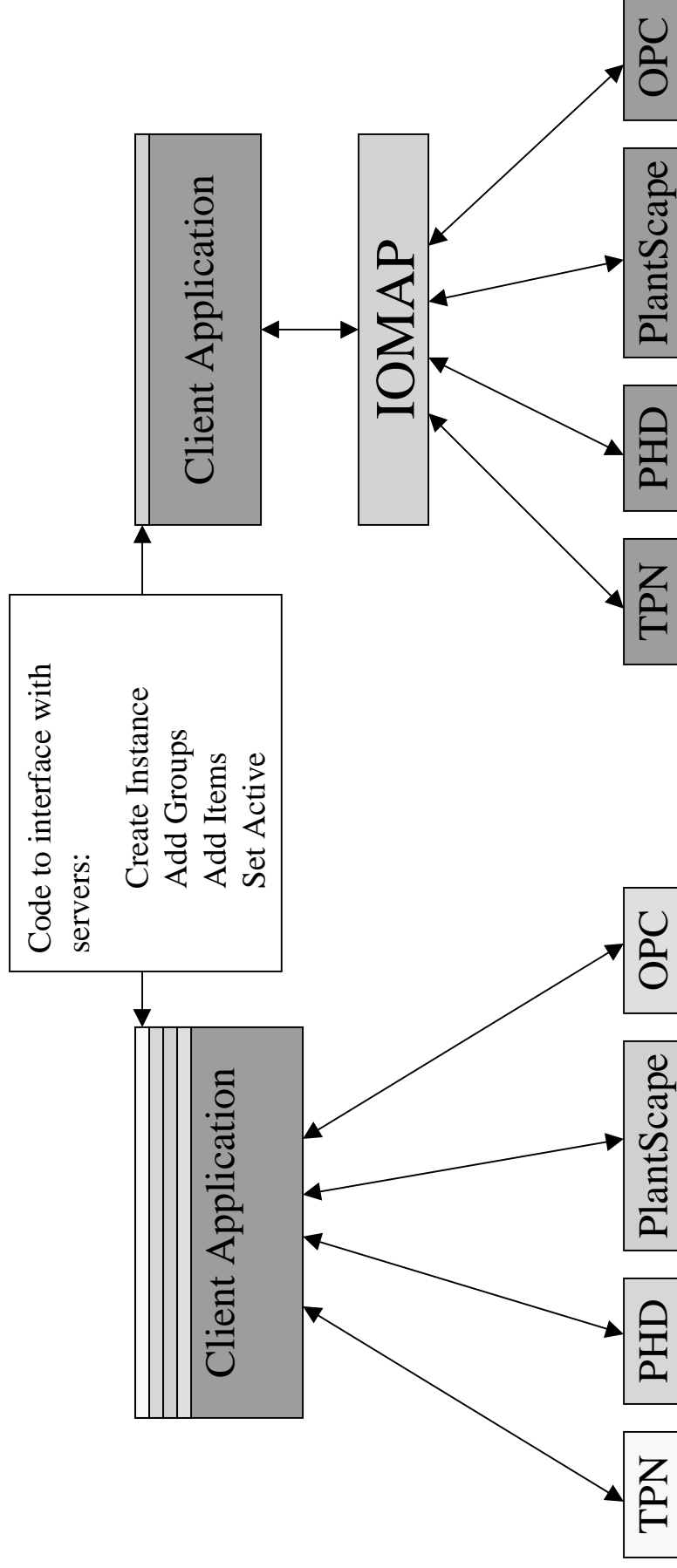
Given a configured TPS System, install and configure the IOMap Server on all nodes.

In This Module

- Overview of IOMap
 - IOMap Server Installation and Configuration
 - Overview of building an IOMap using TPS Builder
-

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Scatter/Gather for Multiple Servers



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IOMAP Greatly Reduces the Code Requirements

This is a portion of the script of a VB access to a TPN Server

```
' Add group. OPC pg 115
Set group = server.AddGroup("tl_group", False, 1000, 1, PercentDeadband, &H409, _
    shandle, revisedupdate)

' Attempt to force error to test error handler
' Set group2 = server.AddGroup("tl_group", False, 1000, 1, PDb, &H409, _
    sh, revisedrate)

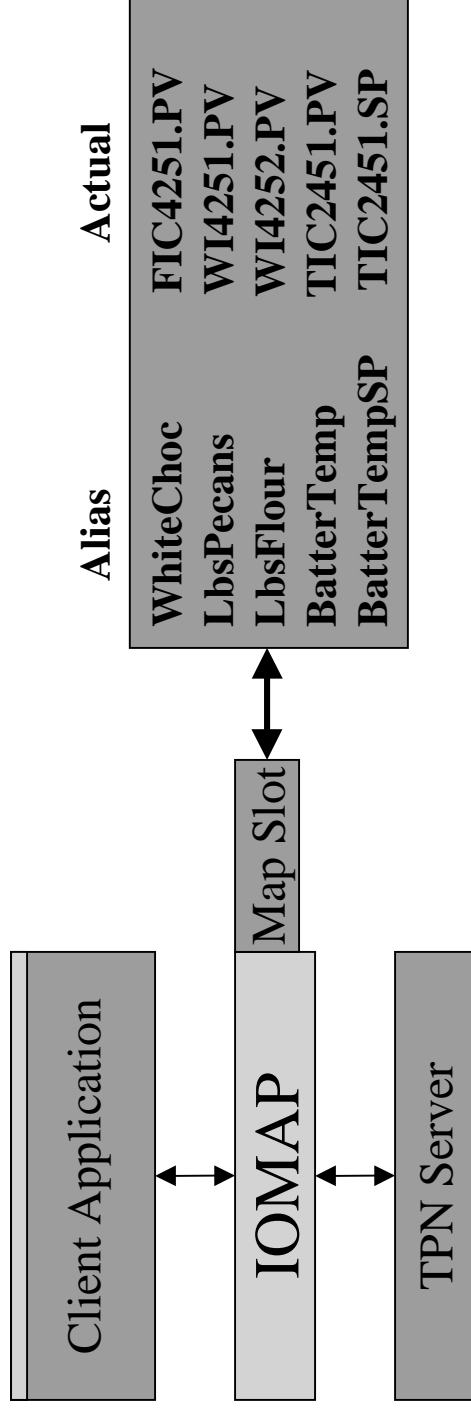
Dim numItems As Long
Dim ActiveStates(MAXITEMS) As Boolean
Dim ClientHandles(MAXITEMS) As Long
Dim ItemSHandles As Variant
Dim errors As Variant
Dim ItemObjects As Variant
Dim i As Long

' If input files for points (TPN) then read points from file
If Dir("c:\temp\group1.txt") <> "" Then
    Open "c:\temp\group1.txt" For Input As #1

    Dim strInput As String
    Do While Not EOF(1)
        Line Input #1, strInput
        ClientHandles(numItems) = numItems
        ActiveStates(numItems) = True
        ItemIDs(numItems) = strInput
        numItems = numItems + 1
```

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Alias Names



```
IF FIC4251.PV > 3 * WI4251.PV THEN
  SET TIC2451.SP = 32
END IF
```

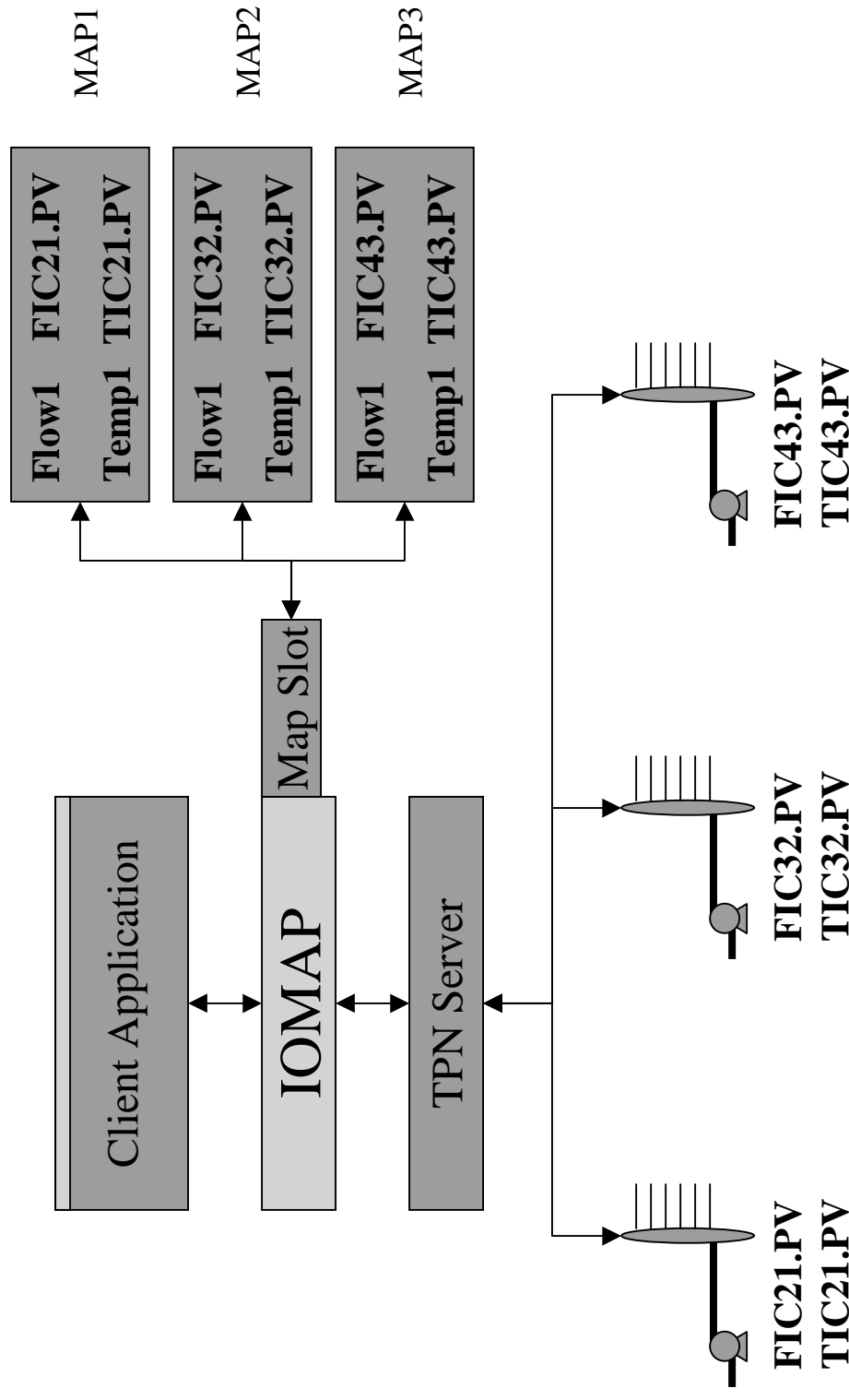
Which is easier?



```
IF WhiteChoc > 3 * LbsPecans THEN
  SET BatterTempSP = 32
END IF
```

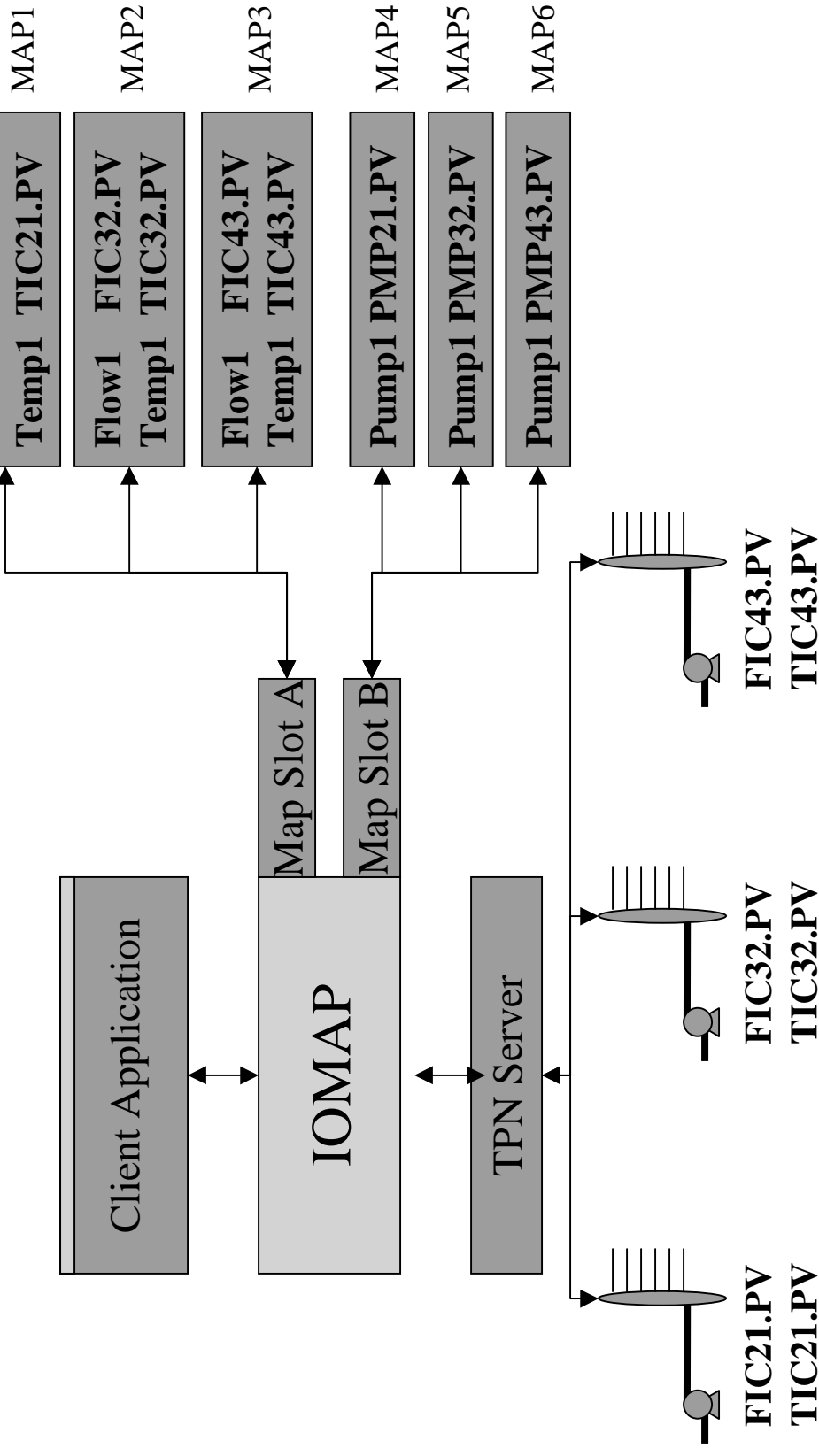
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Single Application Controls Multiple Processes



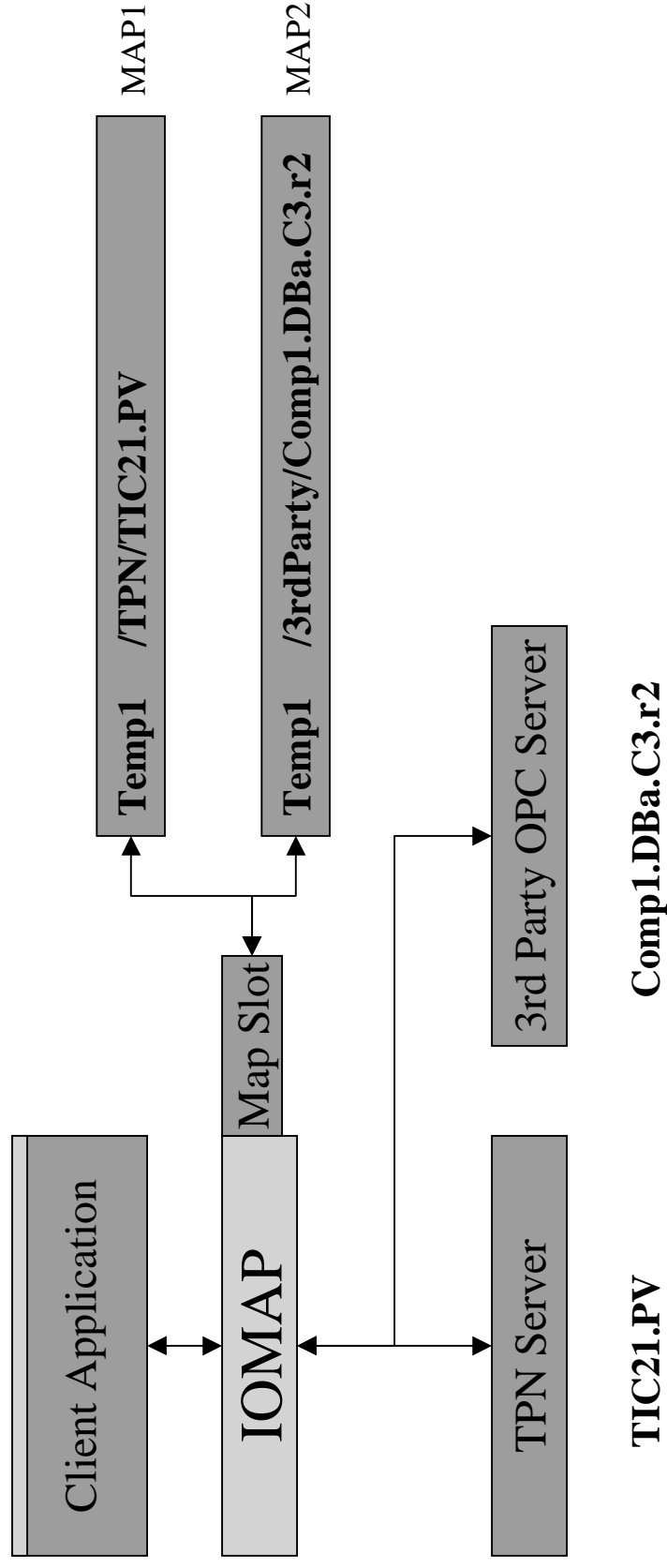
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Multiple Map Slots for Appropriate Granularity



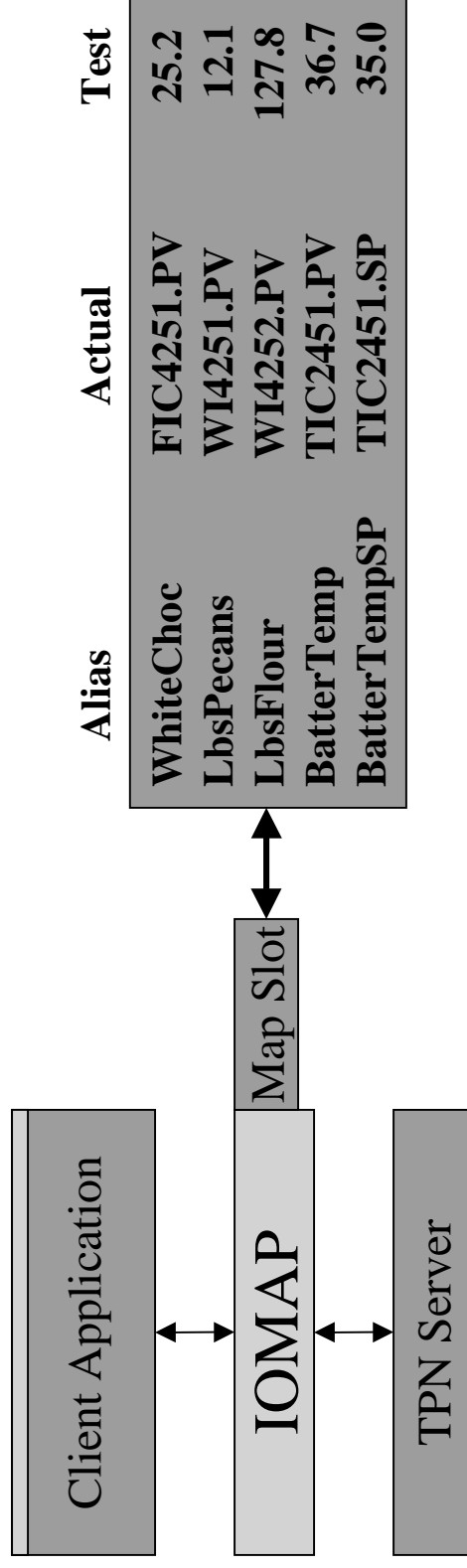
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Accommodates Different Server Data Models



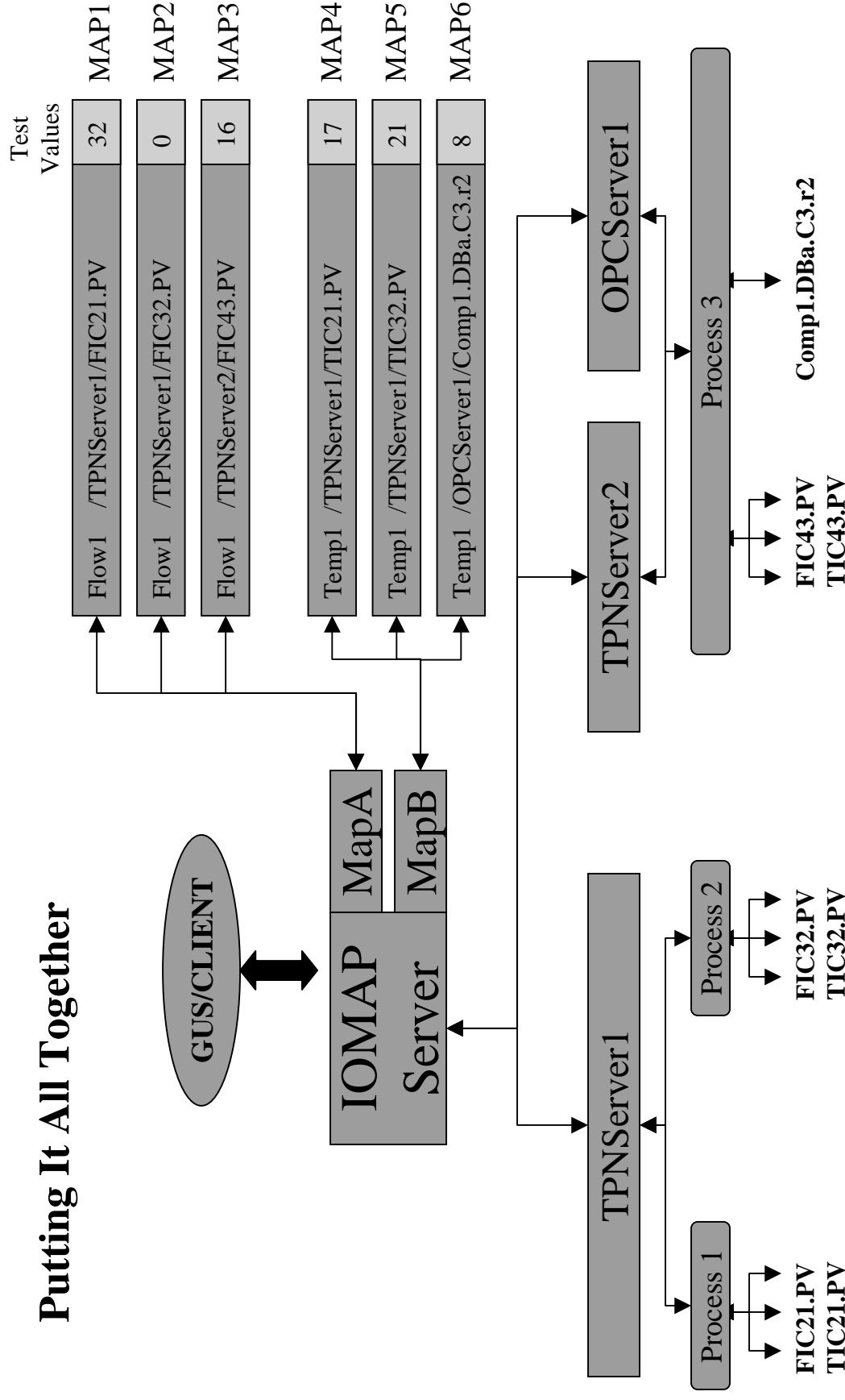
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Test Values



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Putting It All Together



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Overview of IOMaps

Makes Client Programs More Generic

- Write against functional “alias” names, rather than actual destination names.
- OPC external reference accommodates different server data models.
- Independent of server distribution: transparent-to-client distribution to multiple HCI/OPC servers (Scatter/Gather)

Builds an equipment model sharable by multiple applications/displays

- An IOMap Server can load Multiple Maps for appropriate granularity of map use.

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Note specific
point.parameter
names

IOMap Properties
Grid Edit

	Name	External Reference	Data Type	Test Value	Test Mode
1	Flow1	/TPN_Server_APP5/FIC374S.pv	real(4-byte)		
2	Flow1SP	/TPN_Server_APP5/FIC374S.sp	real(4-byte)		
3	Flow1DP	/TPN_Server_APP5/FIC374S.op	real(4-byte)		
4	Flow2	/TPN_Server_APP5/FIC474S.pv	real(4-byte)		
5	Flow2SP	/TPN_Server_APP5/FIC474S.sp	real(4-byte)		
6	Flow2DP	/TPN_Server_APP5/FIC474S.op	real(4-byte)		
7	Flow3	/TPN_Server_APP5/FIC574S.pv	real(4-byte)		
8	Flow3SP	/TPN_Server_APP5/FIC574S.sp	real(4-byte)		
9	Flow3DP	/TPN_Server_APP5/FIC574S.op	real(4-byte)		
10	Flow4	/TPN_Server_APP5/FIC674S.pv	real(4-byte)		
11	Flow4SP	/TPN_Server_APP5/FIC674S.sp	real(4-byte)		
12	Flow4DP	/TPN_Server_APP5/FIC674S.op	real(4-byte)		
13	Flow5	/TPN_Server_APP5/FIC774S.pv	real(4-byte)		
14	Flow5SP	/TPN_Server_APP5/FIC774S.sp	real(4-byte)		
15	Flow5DP	/TPN_Server_APP5/FIC774S.op	real(4-byte)		
16	Flow6	/TPN_Server_APP5/FIC874S.pv	real(4-byte)		
17	Flow6SP	/TPN_Server_APP5/FIC874S.sp	real(4-byte)		
18	Flow6DP	/TPN_Server_APP5/FIC874S.op	real(4-byte)		
19	MainBreaker	/TPN_Server_APP5/I374S.pv	string		
20	Conveyor	/TPN_Server_APP5/I474S.pv	string		

Map Item Properties / Map Properties /

OK Cancel Help

CookieMap2
MapItems

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IOMap Packages

IOMap is a Honeywell **TotalPlant** Solution (TPS) product for use within a TPS system that consists of primarily two packages:

Package	Description
IOMap Server	Provides data access services to applications running on a TPS system. Provides an abstract way to read data from and write data to TPS components (such as TPS Process Network or non-Honeywell control system).
IOMap Client Development Kit	Contains the tools that enable application developers to create IOMap files for use in their applications. Included are header files, libraries, sample project workspaces, an IOMap Convert Tool, and sample client code.

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IOMap Server Configuration

The screenshot shows the 'Configure Component' dialog box for the IOMap Server. The dialog has a title bar with a close button. It contains several input fields and buttons:

- Host Node:** A text box containing 'GUS10'.
- Base PROGID:** A text box containing 'Hci.IOMap'.
- Component Name:** A text box containing 'IOMapServer'.
- Data Access:** A button labeled 'Data Access Options ...'.
- Secured Methods:** A table with two columns: 'Method' and 'Capability'.

Method	Capability
DPCRead	<OPEN ACCESS>
DPCWrite	<OPEN ACCESS>
Shutdown	<OPEN ACCESS>
- Edit Capability:** A button with a dropdown arrow.
- Remove Component Configuration:** A button.
- Buttons:** 'OK', 'Apply', 'Cancel', and 'Help' buttons are located at the bottom right.

Install and Configure IOMap Server

How It Works

Client to IOMap Server:

- Bind to IOMap Server
- Add IOMap
- Load IOMap
- Create OPC Groups
 - create groups
 - then add items
- Set Server Attributes (if desired)
- Read

IOMap Server to Underlying Server – only as needed:

- Create Group
- Add Items
- Set Server Attributes (if applicable)
- Read

