

# Appendix E: NetPower Integrator

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## Overview

NetPower Integrator is a graphical, multi-vendor integration package that allows you to display facility site plans, one-lines, elevations, and trend profiles, and handles alarming. Graphical elements, such as breakers and starters, may be animated to indicate an open, closed, or tripped status. NetPower Integrator includes Wonderware InTouch software bundled with the NetPower DDE Server application for use within a PowerNet system. The entire Wonderware manual is supplied on the CD ROM and may be printed if a hardcopy is required.

## NetPower Integrator

### Development Version

The development version of NetPower Integrator includes the ability to create graphical screens and the ability to show live data through those screens, and also includes the full suite of Wonderware drivers for communicating with many different vendors' types of equipment through Wonderware's DDE and Suite Link servers.

### Runtime Version

The runtime version of NetPower Integrator includes the ability to show live data through the graphical interface and allows you to run any of the Wonderware DDE or Suite Link servers.

### Viewer

The view version of NetPower Integrator includes the ability to show live data through the graphical interface from any third-party DDE Server. Wonderware DDE or Suite Link Servers cannot be run on the same machine as the view version of NetPower Integrator. The view version does not support two-way DDE conversations or allow alarm acknowledgment through Wonderware's distributed alarming.

## Licensing

Wonderware InTouch does not use the floating licensing common to other PowerNet Software applications. A separate license must be purchased for each computer where Wonderware InTouch is loaded. The software is available with both a software key and a software/hardware key combination. NetPower DDE Server does use a floating license, like other PowerNet Software applications.

## ActiveX Capability

NetPower Integrator allows use of the ActiveX Monitor windows, which you received when you purchased your PowerNet Software. The ActiveX windows allow you to link faceplate data from IMPACC devices without creating custom screens or using tags for the parameters displayed within those windows. These are the same display plates used by NetPower Monitor. This feature makes it possible to use the new 256-tag version of NetPower Integrator, even when bringing back data from more than 256 parameters.

ActiveX components allow the user to log on and off using the user security defined within the PowerNet Software system. An inactive terminal can automatically log a user out to prevent unauthorized access. Security privileges do not need to be recreated within NetPower Integrator.

By using NetPower Monitor ActiveX Controls, you can:

- ◆ Connect to NetPower DeviceServers
- ◆ Display/monitor device real-time data
- ◆ Display/monitor device real-time mix/max values
- ◆ Execute device control functions
- ◆ Show graphical historical trending for selected device attribute

## NetPower DDE Interface

NetPower Integrator receives information through NetPower DDE Server. One copy of NetPower DDE Server was included with your copy of NetPower Integrator. Upgrades of NetPower Integrator require a separate purchase of the NetPower DDE Server, if one is not already present on your computer. NetPower DDE Server must first be running on a machine before information can be viewed from the PowerNet network through NetPower Integrator. If you cannot guarantee that a user will first start NetPower DDE Server before starting NetPower Integrator, it is recommended that you start NetPower DDE Server in your startup script within NetPower Integrator.

## Logic Scripting Language

NetPower Integrator includes a full-featured scripting language that allows the user to perform logic based on monitored values. Scripting may be customized by the user to perform functions, such as load shedding for energy management purposes.

## Sample Graphics

Included on your NetPower Integrator CD are sample NetPower Integrator graphics screens. These graphics may be used as the basis for developing one-lines, elevations, and site plans. Also included are a sample historical trending screen, a distributed alarming screen, and standard elevation and one-line symbols.

Sample one-lines are included for:

- ◆ Medium-voltage Motor Control Centers
- ◆ Medium-voltage Switchgear
- ◆ Low-voltage Switchgear
- ◆ Low-voltage Switchboards
- ◆ Low-voltage Motor Control Centers

Sample elevations are included for:

- ◆ Medium-voltage Motor Control Centers
- ◆ Medium-voltage Switchgear
- ◆ Low-voltage Switchgear
- ◆ Low-voltage Switchboards
- ◆ Low-voltage Motor Control Centers

## Installing NetPower Monitor ActiveX

1. Select Special|Configure|Wizard/ActiveX Installation... from the menu bar.
2. Click on the ActiveX Control Installation tab.
3. From the Available ActiveX controls list box, select ChDevices Control, ChIgps Controls, and ChIOGate Control.
4. Click on the Install button.
5. Click on the Close button to close the window.

## Using NetPower Monitor ActiveX

1. Create a new application by using NetPower Integrator.
2. Within WindowMaker, create a new window, such as *Startup*, and make sure that this window is never reopened.
3. Make the window that you created the active window, then click on the Wizard icon.
4. Place one Igsp, one dev, and as many gates as needed (one gate for each DeviceServer that you intend to connect in your application) into the *Startup* window.
5. Right-click on each of the newly added ActiveX objects and select Properties... to change the ControlName as desired.
6. Create another window, such as MainScreen, with four buttons. This window should be created as a replacement style window. Note that this is just an example to show you how to use the four most commonly used functions. You can create windows according to the particular needs of your application.
7. Select Special|Scripts|Application Scripts... from the menu bar.

### On Startup

```
bIgspStarted = 0;
```

### On Shutdown

```
hGate = #ChGateTC.hGate;
```

```
IF hGate <> 0 THEN  
    #ChGateTC.GateDisconnect();  
ENDIF;
```

```
IF bIgspStarted <> 0 THEN  
    #ChIgsp.End();  
ENDIF;  
SHOW "MainScreen";
```

8. Make Startup the active window and select Special-Scripts-Window Scripts... from the menu bar.

### On Show

```
IF bIgspStarted == 0 THEN  
    lRet = #ChIgsp.StartApplication();  
    IF lRet == 0 THEN  
        bIgspStarted = 1;  
    ENDIF;  
ENDIF;
```

```
IF bIgspStarted <> 0 THEN  
    hGate = #ChGateTC.hGate;
```

```

        IF hGate == 0 THEN

            #ChGateTC.GateConnect("166.99.15.197");
            ENDIF ;

        ENDIF ;

```

9. Make MainScreen the active window and add the following scripts for the On Key Down event:

```

        Show Values button
        hGate = #ChGateTC.hGate;
        #CHDev.ShowDevice( hGate, 1);
        Show MinMax button
        hGate = #ChGateTC.hGate;
        #CHDev.ShowDeviceMinMax( hGate, 1);
        Logon button
        #ChIgsp.LogOn( );
        Logoff button
        #ChIgsp.LogOff( );

```

10. Select Special|Configure|WindowViewer... from the menu bar.  
 11. Uncheck "Always load windows from disk."

## ActiveX Controls Functions

### ChIgsp

#### End()

Disconnects all the NetPower DeviceServers and releases all the allocated resources. This must be the last function you call in an application.

#### IsAutoLogoffFromActiveX()

Returns true (1) if the auto-logoff feature is enabled.

#### IsViewOnly()

Returns true (1) if the current user has only view-only privileges.

#### LogOff()

Logs the current user off, i.e., the user can only perform view-only operations from now on.

#### LogOn()

Logs on or re-logs on to the system. Depends on the User ID and password provided, a valid user will be granted proper access privileges.

#### LogOnEx("userid", "password")

Logs on or re-logs on directly to the system without opening the log on screen.

*SetAutoLogoffFromActiveX(boolean);*

Enables or disables the auto-logoff feature.

*StartApplication();*

This must be the first function you call in order to setup the system properly. This function sets up the system, allocates the necessary resources, and displays a log on screen for the user to log on to the system (Note that the log on screen may not appear if you have already logged on to any of the PowerNet Software applications).

### **ChGate**

*GateConnect("IPAddress")*

Connects to a NetPower DeviceServer with the specified IP address.

*GateDisconnect()*

Disconnects from a currently connected NetPower DeviceServer.

*hGate*

The NetPower DeviceServer handle used by ChDev object.

### **ChDev**

*ShowDevice(hGate, DevNum)*

Displays the real-time device values monitor/control screen.

*ShowDeviceMinMax(hGate, DevNum)*

Displays the real-time device min/max values monitor/control screen.