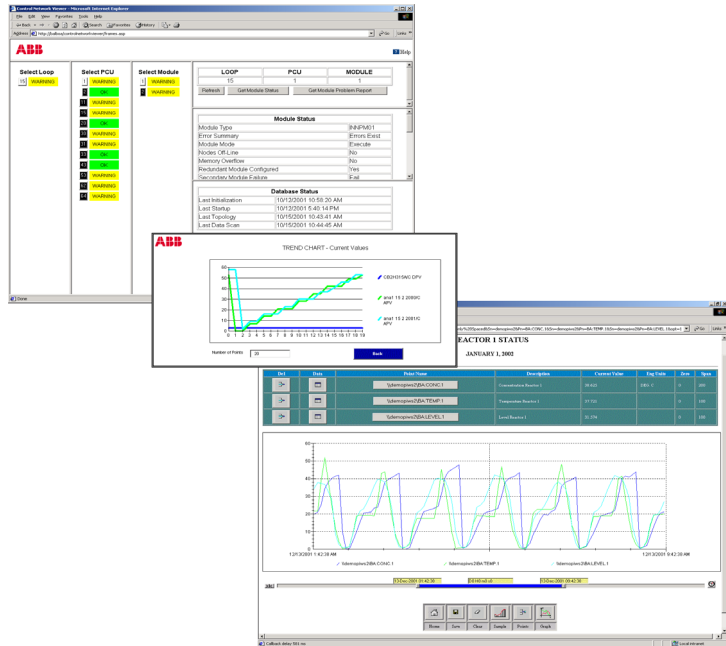


## Features and Benefits

- Real-time and historical process monitoring:** Process Information Web Server (PIWS) allows web based querying, monitoring and graphing of process data from any @aGlance/IT<sup>™</sup> server.
- Control network status viewing:** Control Network Viewer (CNV) allows monitoring, analysis, and diagnosis of the complete Symphony system via any web browser.
- SODG graphics viewing:** Process Graphic Viewer (PGV) allows SODG process data graphics to be viewed via any ActiveX<sup>®</sup> capable web browser.
- SL graphics viewing:** SL Viewer (SLV) allows SL Conductor NT process data graphics to be viewed via any ActiveX capable web browser.
- PI historian data viewing:** PIWS-PI Viewer allows access to process data in Oil Systems Incorporated (OSI) PI<sup>™</sup> data archives via Microsoft<sup>®</sup> Internet Explorer.
- Operate IT B viewing:** The PIWS-Operate IT<sup>™</sup> B Viewer (OPITBV), allows graphics from Operate IT Process Portal B consoles to be remotely viewed on client systems. These graphics contain animated process values coming from the Operate IT Process Portal B.



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Operator consoles are designed to provide detailed, instantaneous notification of process alarms and statuses to local plant operators, but not necessarily to support casual, ad hoc queries from multiple plant or enterprise management personnel located in the same building or across the world. How does one access the huge amount of process information contained in the consoles, while at the same time address very valid concerns of control system security and process safety? The answer is the ABB Process Information Web Server (PIWS), which effectively leverages the operator console functions to serve a larger audience via a LAN, WAN, Intranet, or the Internet.

The basic PIWS is compatible with @aGlance servers which include Conductor NT, Conductor VMS<sup>™</sup>, Conductor UX, OIS-42/43/44, and other manufacturers' offerings. In addition, there are available options to allow viewing (no control) of actual Conductor NT or Conductor VMS graphics in a web browser client machine.

## PIWS - Base

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The Process Information Web Server for @aGlance (PIWS-Base) option allows a variety of process related information to be delivered anywhere in the enterprise it is required. Information can be delivered within a company LAN, WAN, or even over the Internet. This remote capability can be used for problem diagnosis, performance optimization and firmware/software revision data access. Using OIS42 and higher, Conductor VMS, or Conductor NT consoles, this option allows web based access to data from any @aGlance server. The data can then be displayed both in real-time and historical modes in a number of tabular and graphical formats.

### Tag Query and Selection

This facility allows filtering criteria to be entered for selection of tags and tag attributes to be trended or monitored from any @aGlance server. Tags can then be selected by mouse or by manually typing in the tag information.

### Real-Time Monitoring and Trending

Any specified tags and attributes can be monitored on a real-time basis according to the specified scan rate. The status of each attribute and its description can also be displayed. The data can be copied and pasted into any spreadsheet or word-processing program.

Real-time trending allows graphs to be viewed in real-time with data updated according to the specified scan rate. The data can be graphed in a variety of 2D and 3D formats including line, pie, bar, area and polar graphs. This facility also displays several different types of summary statistical graphs such as standard deviation, mean, minimum/maximum, best fit and several types of curve fits. It also allows customization of appearance. The graph control can also be used in custom developed pages.

### Historical Monitoring and Trending

Historical monitoring and trending allows the viewing of process data over a specified time period. The feature supplies both tabular data as well as a graphical representation of the data. The tabular data can be copied and pasted into spreadsheets or word processing programs. The graphical data can also be copied and pasted into a variety of office programs.

### Java™ Templates

Several standard Java templates are shipped with the product. These templates display standard real-time and historical representations of requested process data. These templates function with either Microsoft Internet Explorer 3.0 or Netscape™ 3.0 or later versions.

### Customizable Web Page Generation

Web pages can be generated that include real-time and historical data, either through the included PIWS Page Wizard or by scripting pages with other ActiveX display components such as third-party graph and gauge components. PIWS Page Wizard allows the generation of custom web pages within the Microsoft FrontPage® environment.

The supplied ActiveX component allows the development of customized displays. It serves as a supply of data when given a list of requested real-time or historical process tags. When this component is scripted with other components, it can be used to create customized graphical or textual web pages. This feature can be used only in Internet browsers supporting ActiveX components (e.g., Internet Explorer).

## PIWS - Control Network Viewer

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The Control Network Viewer (CNV) option is a complete system management, status monitoring, and diagnostic tool for the Symphony control system. This software provides a visual representation of all the components in the system to which it is connected. These components include Harmony Control Units (HCU), modules, and even related I/O. The software can be used as an effective tool since the whole system can be quickly analyzed.

### Local LAN, WAN or Internet Monitoring

Since the CNV is based on standard Internet technologies, customers can view CNV displays within their plant LAN, view another plant's information across a corporate WAN, or use the Internet to access CNV displays from any location. CNV can be used to access information about the control systems of multiple plants using any of these connections.

### Browser Independence

All of the work associated with CNV is done on the server. The only client requirement is a frames-capable browser (e.g., Netscape or Internet Explorer) on any type of computer. The CNV option allows the status of the components of the Symphony control system to be viewed locally or remotely from any web browser.

### Text Message Status and Problem Reports

The continuously updated status of each component is clearly and quickly presented with the use of text messages and color coding. Detailed information about any module can be obtained with full text descriptions to assist in diagnosis and analysis. This allows complete asset management of control equipment including firmware version and revision information. If modules or HCUs are removed temporarily, the system will show that they are offline.

### Loop, HCU, and Module Searches

When first activated, CNV performs an auto discovery procedure to detect all attached control equipment including loops, HCUs, modules, and attached I/O, and it builds a database of all detected components. A web server application then displays this information from any browser that supports frames such as Netscape or Internet Explorer. In order to assure that this process does not affect the control network performance, only one query is issued at a time, and a new query is not issued until the previous query is returned.

## PIWS - Process Graphic Viewer

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The Process Graphic Viewer (PGV) option is used to create custom hypertext markup language (HTML) web pages of Symphony system tag data. The option allows SODG graphics from consoles to be displayed within web pages rather than separate information displays having to be created. PGV automatically reads the tag information within a SODG console file and gets the real-time information from a specified @aGlance server via the data access capabilities of PIWS-AAG (required for the operation of PGV). The same escapes allowing movement between console graphics and faceplates will display in the PGV as they do on the console.

The web pages are published on the PIWS by linking system and process information with user-created graphics. These customized web pages can be created with most commercial web page authoring programs. Via a web-based interface, process graphic pages can be automatically created, and the symbol libraries for those process graphics can be managed.

Console graphics such as tanks, pumps, valves and other images can be used to add graphical representation to the process data. ActiveX components required to run PGV will automatically be installed on the client machine the first time the browser accesses PGV. The system will first present the official security validation from Verisign and then ask permission to have it loaded. This is a view-only technology, meaning no actual control can be done.

## PIWS - SL Viewer

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The SL Viewer (SLV), a new feature of PIWS, allows SL model graphics from Conductor NT consoles to be displayed within web pages. These graphics contain animated process values coming from single or multiple Conductor NT servers. The Conductor NT database (both tags and graphics) is used directly by the web client. This saves configuration and maintenance effort. All needed information, models, submodels and real-time data are supplied from the Conductor NT server.

Selection of a process graphic element within the SLV causes movement to another process graphic in the same manner as the console. To enable faster display times, the graphics are cached on the client machine the first time they are displayed for use on subsequent requests. The graphics are automatically resized to fit the browser window when the browser is resized.

This software allows access to Conductor NT graphics and data from anywhere in the world. The only requirements are a secure link such as a tunnel or VPN being available from the server to the client and both systems being part of the same Windows NT<sup>®</sup> domain. All access to control variable input is managed by the existing security settings in the Conductor NT server. Security must be enabled on the Conductor NT, and the default user must have control actions disabled. No login is provided on the web client, so only default user access rights are available to the client.

This product provides a low cost way to deliver process graphics. Using concurrent licensing, many client machines, depending on usage, can be serviced from a limited number of licenses. Also, to minimize maintenance and installation costs, the client software is loaded from a web page. This means that CD or floppy disks do not have to be carried from machine to machine, and upgrades can be easily distributed directly from the web server.

## PIWS - PI Viewer

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The PIWS-PI Viewer allows web page access to process data residing in OSI Software PI data archives. Internet Explorer is used to view current and historical process data from any PI data server on the corporate LAN or WAN. Multiple servers can be accessed on the same web page, and navigation among servers is provided by an easy-to-use tree control. The data is cached at the web server to provide fast data display.

Standard web pages are provided to allow out-of-the-box access to PI data. The standard pages include a graphical trend presentation, a tabular data report, and a view of relevant PI configuration data. In addition, a tag browser - complete with filters - is provided to allow the selection of a set of tags to be accessed. PI data can also be incorporated into custom web pages.

## PIWS - Operate IT B Viewer

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The OPITBV provides a low cost way to deliver process graphics to the casual user. Using concurrent licensing, many client machines, depending on usage, can be serviced from a limited number of Operate IT Process Portal B licenses. All needed information, models, sub-models and real-time data are supplied from the Operate IT Process Portal B. The OPITBV works for both Dynamic HTML Graphics and SLGMS graphics.

The OPITBV uses the graphics just as in the Operate IT Process Portal B Client. This saves configuration and maintenance effort. Selection of a process graphic element within the OPITBV causes movement to another process graphic in the same manner as on the Operate IT Process Portal B Client. The graphics are automatically resized to fit the window when it is resized.

All access to control variable input is managed by the existing security settings in the Operate IT Process Portal B Server. The login of clients will follow the permissions of the user as specified in the Operate IT Process Portal B system.





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