



Plant Applications 8.2

Web Reporting



Proprietary Notice

The information contained in this publication is believed to be accurate and reliable. However, General Electric Company assumes no responsibilities for any errors, omissions or inaccuracies. Information contained in the publication is subject to change without notice.

No part of this publication may be reproduced in any form, or stored in a database or retrieval system, or transmitted or distributed in any form by any means, electronic, mechanical photocopying, recording or otherwise, without the prior written permission of General Electric Company. Information contained herein is subject to change without notice.

© 2021, General Electric Company. All rights reserved.

Trademark Notices

GE, the GE Monogram, and Predix are either registered trademarks or trademarks of General Electric Company.

Microsoft® is a registered trademark of Microsoft Corporation, in the United States and/or other countries.

All other trademarks are the property of their respective owners.

We want to hear from you. If you have any comments, questions, or suggestions about our documentation, send them to the following email address:

doc@ge.com

Table of Contents

Web Server Administrator Environment _____	1
Server Architecture _____	1
Client Architecture _____	2
The Plant Applications Web Report Server _____	2
The Plant Applications Add-in for Excel _____	2
Setting Up an SSO Login for the Web Server _____	2
Installation _____	2
Troubleshooting _____	4
Using Command or Link Objects _____	5
SharePoint Services _____	6
Changing SharePoint Port Number _____	6
Web Report Server Administration _____	7
Logging on to the Web Administrator _____	7
Managing Web Server Security _____	7
Performing System Backups _____	8
Refreshing the Server _____	8
Managing Web Reports _____	8
Five Types of Web Content _____	8
Excel _____	8
Access _____	9
Active Server Page _____	9
Active Server Application _____	9
Internal or External Web site _____	9
Customizing a Web Page _____	9
Adding New Content to the Web Server _____	10
Viewing SQL Server Report Services Reports _____	11
Creating a New Report Definition _____	13
Changing Report Definition Properties _____	13
Report Packages _____	14

Importing a Plant Applications Report Package _____	14
Exporting a Plant Applications Report Package _____	14
Editing Web Content _____	14
View Settings _____	16
Controlling Report Security _____	16
Scheduling a Report _____	17
Running a Scheduled Report _____	21
Printing Reports _____	22
Removing Reports from the Print Queue _____	22
Removing Reports from the Engine Queue _____	23
Creating Default Web Reports _____	23
Editing Report Parameters _____	25
Previewing a Web Report _____	26
Using the URL to Call Reports and Definitions _____	26
Examples _____	26
Report Schedule _____	27
Report Types _____	27
Searching for a Saved Batch Analysis _____	27
Printers _____	28
Adding a Printer _____	28
Removing a Printer _____	28
Report Engines _____	28
Configuring Report Engines Errors _____	29
Controlling the Web Engines _____	29
Engine Parameters _____	29
Viewing a Report Engine's Activity _____	30
Deleting Report Engine Messages _____	30
Parameters _____	30
Adding Parameters _____	31
Editing Web Server Parameters _____	31
Deleting Web Server Parameters _____	32

Plant Applications Web Reporting

Dialogs _____	32
Adding Dialogs (Web pages) _____	32
Editing Dialogs (Web Pages) _____	33
Exporting Web Pages (Dialogs) _____	33
Deleting Dialogs (Web pages) _____	33
Time Options _____	34
What are Time Options? _____	34
Viewing Time Options _____	34
Creating Time Options _____	34
Editing Time Options _____	34
Deleting Time Options _____	35
Managing Web Users _____	35
Organizing the Client Environment _____	35
Organizing Users and Templates _____	35
Organizing Tree Templates _____	36
User Trees _____	36
Creating a New User Tree _____	36
Deleting a User Tree _____	36
Tree Users _____	36
Adding a User to a User Tree _____	36
Removing a User Tree Member _____	37
Changing the User Properties _____	37
Configuring Web Content for Users _____	37
Deleting a Tree Configuration Folder _____	38
Renaming a Tree Configuration Folder _____	38
Monitoring Report Activity _____	39
Viewing System Log Files _____	39
Viewing a Report Engine's Activity _____	39
Viewing Reports in the Schedule Queue _____	39
Viewing the Print Queue _____	40
Web Report Client Interface _____	40

The Toolbar Icons and Buttons _____	40
Using the Web Report Client _____	41
Logging on to the Web Report Client _____	42
Creating an Ad Hoc Report _____	42
Printing Reports _____	42
Making Changes to a Report Type _____	43
Creating a New Report Definition _____	43
Site Parameters _____	44
Ad Hoc Report Life (Days) _____	44
Dashboard Engine Server site parameter _____	44
Gallery Physical Path site parameter _____	45
Gallery Virtual Path site parameter _____	45
Microsoft Dashboard Catalog Site Parameter _____	45
Microsoft Dashboard Server Site Parameter _____	46
Proficy Dashboard Server site parameter _____	46
Proficy Dashboard Virtual Path site parameter _____	47
Show Additional Web Part Configuration Tabs site parameter _____	47
Web App Physical Path Site Parameter _____	48
Standard Web Reports Overview _____	49
Alarm Detail _____	53
Trend Analysis _____	53
Audit Trail Reports _____	54
Downtime Detail _____	55
Event Information _____	55
Cause or Action Information _____	56
Event Analysis _____	56
Product Analysis _____	57
Crew Analysis _____	57
Fault Analysis _____	58
Cause Analysis _____	58
Action Analysis _____	58

Plant Applications Web Reporting

Location Analysis _____	58
Category Analysis _____	59
Non-productive Time _____	59
Capability Analysis _____	59
Trends _____	59
Data Summary _____	60
Criteria Summary _____	60
Event Detail Report _____	60
Event History Color _____	61
Event History Color Web Report _____	61
Event History Grid _____	62
Event History Grid Web Report _____	63
Event Detail Report _____	63
Interactive Trend _____	63
Inventory Listing _____	63
Inventory Listing Web Report _____	64
Event Detail Report _____	64
Line Production Timeline _____	65
Line Production Timeline Web Report _____	65
Line Time Accounting _____	66
Line Time Accounting Report _____	66
OEE Summary _____	67
OEE Summary _____	68
Production Listing _____	68
Grand Totals _____	68
Production Day Summary _____	69
Shift Summary _____	69
Crew Summary _____	69
Process Order Summary _____	69
Product Summary _____	69
Status Summary _____	69

Event Details _____	70
Sequence of Events _____	70
Sequence of Events Report _____	70
Simple Trend _____	71
SPC Chart _____	72
Prerequisites _____	73
SPC Chart Functionality _____	73
X-Bar and Range Chart _____	73
X-Bar and MR Charts _____	75
X-Bar and Sigma Charts _____	77
Statistics _____	78
Criteria Summary _____	79
Raw Data _____	80
SPC Chart Calculations _____	80
Population Size (n) _____	80
Number of Subgroups (k) _____	80
Subgroup Size (m) _____	80
Average _____	80
Minimum _____	81
Maximum _____	81
Process Standard Deviation (S) _____	81
Estimated Sigma () _____	82
X/MR _____	82
Z Numbers _____	82
Lower Process Capability Index (Cpl) _____	83
Upper Process Capability Index (Cpu) _____	83
Process Capability (Cp) _____	83
Process Capability Index (Cpk) _____	84
Process Capability Ratio (Cr) _____	84
Taguchi Capability Index (Cpm) _____	84
Lower Process Performance (Ppl) _____	85

Plant Applications Web Reporting

Upper Process Performance (Ppu)	85
Process Performance (Pp)	85
PpK	86
SPC Chart Options and Data	86
SPC Chart Options and Control Limits	86
Configure and Run the SPC Chart	87
Running the SPC Chart from an Autolog display	91
Editing an SPC Chart	92
Test Conformance By Product	94
Test Conformance By Shift	95
Thumbnail Trends	96
Simple Trend Report	97
Time History Color	97
Transaction Detail	98
Unit Time Accounting	99
User-defined Event Detail	100
Research Summary Information	100
Variable Centerline Analysis	101
Variable Centerline Analysis Web Report	102
Variable Conformance Summary	103
Variable Conformance Summary Report	104
Variable Scatter Analysis	104
Variable Specification	105
Specification by Unit Report	106
Specification History Report	106
Interactive Trend Report	107
Variable Statistics Summary	107
Variable Statistics Summary Report	107
Control Summary	107
Run Analysis	108
Process Capability	108

Product Capability _____	109
Control Chart _____	110
Cusum Analysis _____	110
Trend _____	111
Criteria Summary _____	111
Products Analyzed _____	112
Viewing History _____	112
Waste Detail _____	112
Event Information _____	113
Cause or Action Information _____	113
Parameter Summary _____	113
Web Part Administrator Environment _____	113
Getting Started with Web Parts _____	115
What Is a Web Part? _____	115
Logging on to the Web Parts Administrator _____	115
Web Part Administration Dialog Box _____	115
Creating Web Parts _____	116
Configuring Your Web Part _____	117
Editing Default Parameter Values _____	118
Scheduling your Web Part _____	118
Viewing Statistics _____	119
Adding Dialogs _____	120
Adding Parameters _____	120
Columns Tab _____	121
CrewFilter Tab _____	121
Deleting Parameters _____	121
Page Caching _____	121
Query Results Page _____	122
Selecting Batches _____	122
Specifying Start and End Times _____	122
Pre-defined Time Options _____	123


Plant Applications Web Reporting

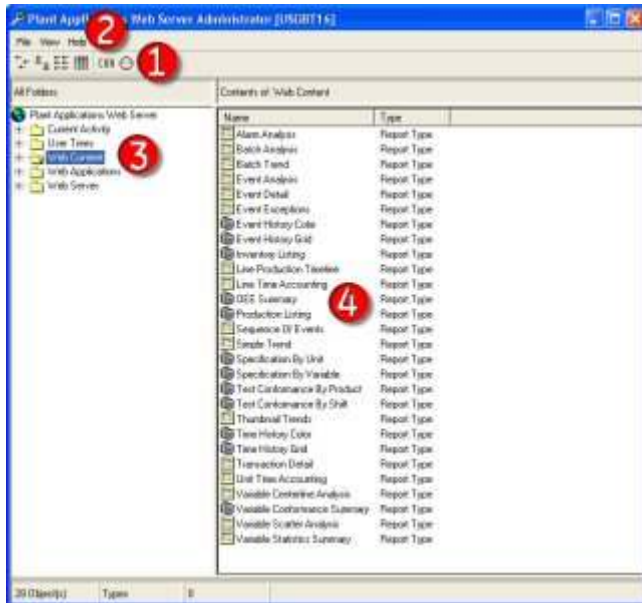
User-defined Time Options _____	123
Viewing a Report _____	123
Viewing the Report Engine Queue _____	123
Managing Web Part Templates _____	124
Column Names _____	124
Associated Templates and Reports _____	125
Editing Template Parameter Values _____	125
Copying Templates _____	125
Exporting a Template _____	126
Exporting All Templates _____	127
Configuring Available Web Parts _____	128
Creating Web Parts _____	128
Configuring Your Web Part _____	128
Web Part Display Settings _____	129
Deleting Web Parts _____	130
Previewing Web Parts _____	131
Copying Web Parts _____	131
Editing Web Part Parameter Values _____	131
Changing Web Part Properties _____	132
Scheduling your Web Part _____	132
Associated Templates and Reports _____	133
Exporting Web Parts _____	133
Using Web Parts in a Portal _____	134
Using Web Parts in Windows® SharePoint™ Services _____	134
Web Part Services and Parameters _____	135
Webpart Content Generator service _____	135
Standard Web Parts Overview _____	136
Alarm Count by Variables Web Part _____	141
Alarm Details by Production Event Web Part _____	142
Alarm List By Units Web Part _____	143
Alarm List By Variables Web Part _____	145

Downtime Distribution Charts by Units Web Part _____	147
Downtime Top N Chart by Unit Web Part _____	150
Efficiency Statistics by Unit Web Part _____	152
Inventory Distribution Charts By Units _____	153
My Report Search Dialog Web Part _____	155
My Reports Favorites Dialog Web Part _____	156
Operating Downtime Distribution Web Part _____	157
Overview Statistics by Path Web Part _____	160
Performance Distribution Web Part _____	161
Process Order (Active) List by Lines Web Part _____	162
Process Order Search By Paths Web Part _____	163
Process Order Search Dialog Web Part _____	164
Product Statistics By Units Web Part _____	165
Production Distribution Charts By Units Web Part _____	167
Production Event Alarms By Unit Web Part _____	168
Production Event Search By Unit Web Part _____	169
Production Event Search Dialog Web Part _____	170
Production Event Status List By Units Web Part _____	171
Production Statistics By Lines Web Part _____	173
Quality Statistics By Variables Web Part _____	174
Specification Search By Units Web Part _____	177
Specification Search Dialog Web Part _____	178
Unit OEE Web Part _____	178
Waste Distribution Charts by Units Web Part _____	180
Waste Top N Charts by Units Web Part _____	183

Web Server Administrator Environment

The Plant Applications Web Server is configured through the Web Administrator, which is accessed through the Plant Applications Administrator program. Therefore, the Web Administrator can be started from any computer that has the Plant Applications Administrator program installed on it.

To open the Web Administrator, in the Plant Applications Server Manager tree, expand the **Server Management** node and double-click **Administrator Web Server**. 



- 1 The toolbar allows you to change the view of the contents in the right pane, start the COA applications and schedule a report.
- 2 From the File menu, you import Web report packages and exit the application. From the View menu, you can refresh the view. From the Help menu, you access the online help file and view information about your version of the Web Server Administrator.
- 3 The left pane displays the Web Administrator tree. This is where you add users, schedule reports, manage the Web Server, and manage Web reports.
- 4 The right pane displays the contents of the node that you've selected in the left pane.

Server Architecture

The Plant-wide Reporting module is supported by the Plant Applications Server, Microsoft Internet Information Server, the Plant Applications Web Report Server, the Plant Applications Scheduler, and one or more Plant Applications Report Engines.

The role of the Plant Applications Web Report Server is to interact with the Web Client and service navigational and ad hoc requests for data.

The Plant Applications **Scheduler** submits work for the Report Engine(s) to perform based on reports that are regularly scheduled and ad hoc requests from users. Each Web Engine bids for work and when completed, publishes the content to the Plant Applications Web Site.

The Plant Applications **Server** manages the Plant Applications database.

The Plant Applications **Add-in** for Excel is serviced directly by the Plant Applications Server.

Client Architecture

The two primary client tools are the Plant Applications Report Server Web site and the Plant Applications Add-in for Excel. The Report Server Web site is a sub-web site under your company's intranet Web site and is installed on the Plant Applications Web Server. The Excel Add-in works directly off the Plant Applications Server.

The Plant Applications Web Report Server

The Plant Applications Server maintains a profile of each user to ensure that each user gets the appropriate reports when they log on to the Report Server Web site. Users can then view pre-processed web content and reports simply by clicking on the desired title. Additionally, users can create ad hoc reports, save reports, and make local copies of data for import into other applications, if they've been given the proper User Rights.

The Report Server Web site does not require any software installation, and is configured through the Plant Applications Web Administrator.

The Plant Applications Add-in for Excel

The Excel Add-in provides a specialized menu and set of standard functions to create dynamic reports with Excel. After you have created your reports, you can save them and re-use them. Additionally, you can create Excel templates and publish those templates for use through the Web Report Server.

The Excel Add-in must be installed on each computer that will use the Add-in.

Setting Up an SSO Login for the Web Server

After installing the Plant Applications Web Server (Report Server), configuration is required to enable log-in using an SSO user name. This feature is available with Plant Applications 5.0 SIM (June 2012) and Plant Applications 6.1 release or higher.

NOTE: It is advisable to enable SSO log-in for only those users for whom you want to make SSO log-in available. When SSO is enabled, it creates an extra login step for some Plant Applications features, for example, when accessing Administer Web Server.

Installation

Setting up and enabling the SSO log-in is a shared task between you, the customer, and GE Intelligent Platforms support:

Plant Applications Web Reporting

1. Obtain the URL for the installed web server. (Customer)
2. Request an SSO by contacting GE Corporate, Identity and Access Management at http://supportcentral.ge.com/products/sup_products.asp?prod_id=18322. (Customer)

SSO will be enabled during implementation using the standard GE mechanism as described in “What does it take to SSO enable an application” under the Quick Tips section. (GE Corporate support)

3. Communicate to GE Corporate to use the certain HTTP headers, which are needed for the integration to work. (Customer)

The following HTTP headers are needed by the Site Minder configuration for the integration to work. The Plant Applications Web Server reads these headers to generate session cookies:

NOTE: Either HTTP_SM_USER or HTTP_SM_SSOID is needed to indicate the SSO ID of the logged in user.

- HTTP_SM_USER is the SSO ID of the user and/or HTTP_SM_SSOID is the SSO ID of the user reserved for GE Aviation
 - HTTP_SM_SDOMAIN is the SiteMinder cookie domain
 - HTTP_GESSOSTATUS is the status of the SSO account ('A' indicates the user is valid and active.)
4. Setup and implement necessary headers using SiteMinder and accessing the web server that the customer installed. (GE Corporate support)
 5. Enable “Anonymous Authentication” for URLs in the following Plant Applications web applications (Default Web Server) under SSO protection unless all the SSO users have web server file system access: (GE Corporate support)
 - PAReporting
 - Apps
 - ProficyDashboard

Do this by selecting the application in the **Connections** pane, double-clicking Authentication under IIS in the Features View, and ensuring that Anonymous Authentication is enabled.

Afterwards, ensure web service URLs with an .asmx suffix under /Apps/WebServices are unprotected by an SSO.

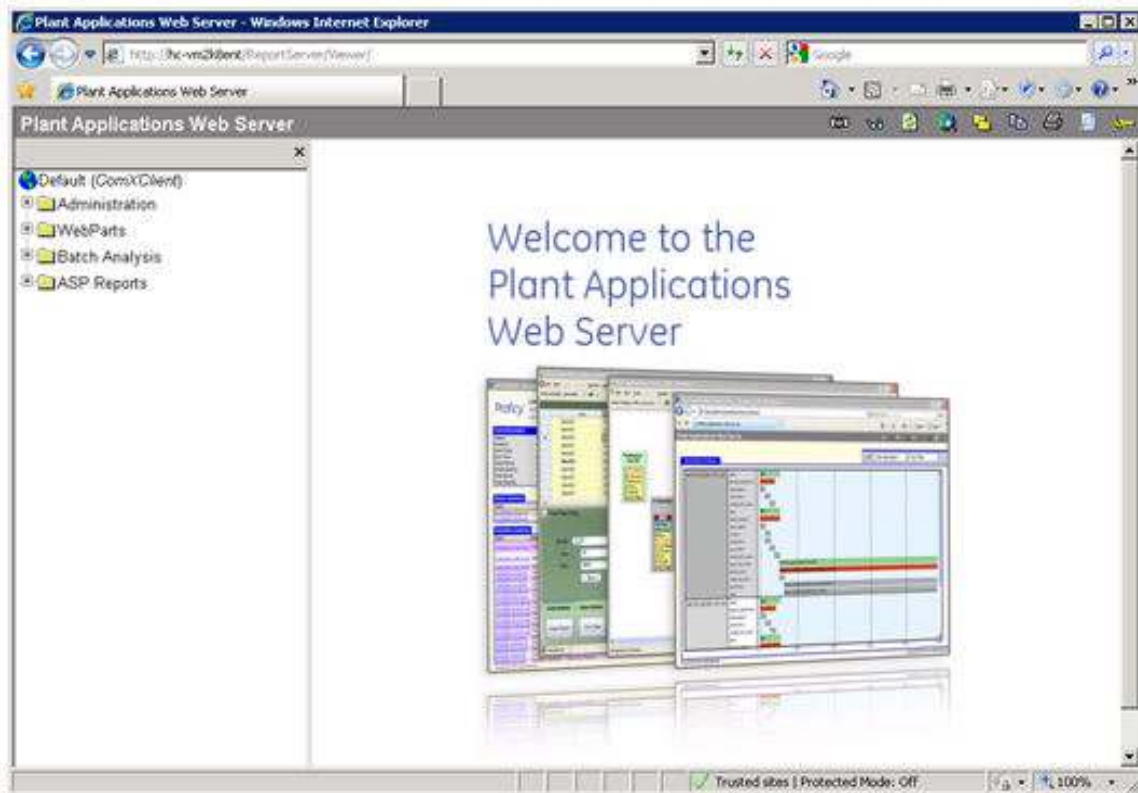
6. Use the Plant Applications Administrator to set up using the SSO log-in. (Customer)
 - Under the listed server, double click to select Administer Site Parameters from Global Configuration to display the Site Parameters screen. Under Client, click the ellipsis button (...) in the Edit column. Set the Value to **True**. Close the panel.
 - Under Security Management, expand Site Users. Right-click on a user name, and select Edit <username> Properties. Click the Use SSO Login check box. Supply the SSO ID, using browse to find the ID if necessary.

NOTE: An asterisk (*) is a valid wildcard to limit searches. For example, enter “John” and “Sm*” in the First and Last Name fields to search for “John Smith.” You can also limit the the search by using a partial SSO. For example, enter “2080*” to locate employees with an SSO beginning with those four digits.

Setting Up an SSO Login for the Web Server

When setup is complete, a user logs into the Web Server using SSO. After logging in, the user should see the Plant Applications Web Server “Welcome” screen with their user name displayed in the left-hand menu list as shown in the figure.

NOTE: When SSO is set up, the Plant Applications Report Server is accessible only through SSO authentication. Plant Applications authentication and Windows authentication cannot be used.



Troubleshooting

If the Plant Applications Web Server “Logon” screen (shown below) is displayed when attempting an SSO login, you (the customer) should check the CookieInfo.aspx file to verify that GE Corporate support used the correct headers. If the headers are not correct, contact GE Corporate support.



Using Command or Link Objects

Use the Command and Link to launch a window inside or outside an Internet Explorer window:

1. Select **Tree Configuration** in the Plant Applications Web Server Administrator to display a list of Command or Link objects.
2. Right-click a (New Window) or (Same Window) Command or Link object in the **Name** column, and select **Copy Node**.
3. Right-click on the Default (Tree) icon or a subfolder, and select **Paste Node**.
4. Right-click on the new object and select **Properties** to display the Node Properties window.
5. Enter a URL and set parameters.

The following example demonstrates how to set up a Command or Link object. Begin by copying an existing URL for a Web Server Report or definition. Paste it in the URL field in the Node Properties window as shown:

When you access the Web Server viewer, the Command or Link object is displayed in the Users Tree configuration.

Selecting the object launches a preconfigured URL.

You may want to store predefined SOPs in a specific virtual folder for users to access through the web. Using the Command Link, you can open specific documents or files, for example, Word for Windows documents or Excel files. In the next example, a Command or Link object is created to open a Word for Windows document.

The URL field in the Node Properties dialog for the object points to TESTDOC.docx.

When a user selects the Command Link from the User Tree in Internet Explorer, a prompt is displayed to open the document. The document is opened in a Word for Windows window that is outside of Internet Explorer.

SharePoint Services

If the Plant Applications Web Server is installed on a computer running Windows 2000 Server or Windows 2003 Server, the Web Parts will run on Windows SharePoint Services.

If you are upgrading from Windows SharePoint Services 2.0 to Windows SharePoint Services 3.0, please go to the Microsoft web site for more information:

<http://www.microsoft.com/technet/solutionaccelerators/collaboration/default.aspx>

IMPORTANT: SharePoint Portal Services 3.0 installs on port 80, which conflicts with the Plant Applications Web Server, which also uses port 80. You must change SharePoint to use a different port, such as port 81 or another port that is not used.

Changing SharePoint Port Number

SharePoint Services 3.0 automatically installs using port 80, which is the port used by the Plant Applications Web server. You must change the port used by SharePoint.

To change the port used by SharePoint

1. On the Plant Applications Web server, open Internet Information Services (IIS) Manager. (**Start > Administrative Tools > Internet Information Services (IIS) Manager**)
2. Expand the server.
3. Expand Web Sites.
4. Right-click **SharePoint - 80** and select **Properties**. The **SharePoint – 80 Properties** dialog box appears.
5. On the **Web Site** tab, under **Web site identification**, type an unused port number in the **TCP Port** box.
6. Click **OK**.
7. Right-click **SharePoint Central Administration v3** and select **Browse**. The **SharePoint Central Administration** page appears.
8. Click the **Operations** tab.
9. Under **Global Configurations**, click **Alternate access mappings**.
10. Under **Internal URL**, click the URL for the server (for example, <http://myservername/>).
11. In the **URL protocol, host and port** box, add the port number you used in step 5 to the end of the computer name (for example, <http://myservername:85/>).
12. Click **OK**.
13. If necessary, start the Default Web Site.

IMPORTANT: Remember to add the port number to the SharePoint URL. For example, if you used port 81, the URL would be: <http://myservername:81>.

Web Report Server Administration

The Plant Applications Web Server is configured through the Web Administrator, which is accessed through the Plant Applications Administrator program. Therefore, the Web Administrator can be started from any computer that has the Plant Applications Administrator program installed on it.

You must have at least **Manager** rights to the **Administrator** security group to start the Web Administrator.

You can use the Plant Applications Web Administrator to:


- Manage Web Report Server users
- Manage Web content
- Schedule reports
- Configure printers
- Configure report parameters
- Control and audit operation of Web engines

Logging on to the Web Administrator

To log on to the Web Administrator:

1. Log in to the Plant Applications Administrator program.

TIP: You must have at least **Manager** rights to the **Administrator** security group.

2. Expand  Server Management.
3. Right-click **Administer Web Server** and choose **Administer Web Server**.
4. If necessary, enter your Plant Applications user name and password. Optionally, you can enter your SSO credentials, which may require the fully qualified domain name (FQDN) if SSO authentication is enabled.

Managing Web Server Security

The Internet Information Server (IIS) uses standard Windows file and folder permissions as well as virtual directories to secure the Plant Applications Web site. Virtual directories provide pseudo folder names and directory to the Internet client while shielding actual names and locations on the hosting server.

By default, all Web Sites and sub-web sites in IIS have anonymous security. This means that anyone can request any Web page they like provided they know the file name and location. By applying windows security to a web site, you can require all visitors to be authenticated with a standard Windows Domain account.

Also see [Setting Up for Using an SSO Login](#).

To set authentication for PAReporting:

1. On the Plant Applications Web Report Server, click **Start** and open your Windows **Control Panel**.
2. Double-click **Administrative Tools**.
3. Double-click **Internet Information Services (IIS) Manager**.
4. Locate and click the **Default Web Site**, which may be located inside other directories.
5. In the **Features** view, select **Authentication** from the IIS section.
6. Set **Anonymous Authentication** to "enabled" and all other authentication options to "disabled."

Performing System Backups

Performing system backups should be a part of your daily maintenance routine. The key elements of the Plant Applications Web Server that need to be protected include:

- Plant Applications Database (SQL Server)
- Plant Applications Web Site (IIS)
- Report Templates (MDB, XLT)
- Reports

Your organization should have standard measures to adequately preserve and restore a Microsoft SQL Server Database. This can be done with software, such as Backup Exec or ARCserve. Additionally, all the files, web pages, and images that make up the Web site, as well as the configuration data that Internet Information Server uses to make the site available to the inter/intranet, should be backed up. This will also include all the Report Templates (Access and Excel documents) and all the reports that were generated.

Refreshing the Server

After you have made changes to the Plant Applications Administrator program, you should refresh the server to make sure your changes are recognized and have taken affect.

To refresh the server:

Right-click on the server and select **Refresh Server** from the pop-up menu.

Managing Web Reports

Five Types of Web Content

There are five types of Web content available to you. Four can be used to create Web-based reports and one can be used to link to internal or external Web sites. Each type is identified with an icon.


Excel

 This icon identifies the Web content as an Excel-based report type.


 This icon identifies the Web content as an Excel-based report definition.


Access

 This icon identifies the Web content as an Access-based report type.


 This icon identifies the Web content as an Access-based report definition.


Active Server Page

 This icon identifies the Web content as an Active Server Page report type.


 This icon identifies the Web content as an Active Server Page report definition.


Active Server Application

 This icon identifies the Web content as an Active Server Application report type.

 This icon identifies the Web content as an Active Server Application report definition.

Internal or External Web site


 This icon identifies the Web content as a link to an external or internal Web site. The page will open in a new window (browser).

 This icon identifies the Web content as a link to an external or internal Web site. The page will open in the same window (browser).

Customizing a Web Page

You can customize Web page titles and prompts on each Web page, add or remove parameters, and add or remove dependencies.

To customize a Web page




1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Click the **Dialogs** folder to display the Web pages in the right pane.
4. In the right pane, right-click on a Web page and click **Properties**. The **Configure <web page name>** dialog box appears.
5. Do one or more of the following:
 - Click the **Web Page** tab to change the following:
 - In the **Path** box, type the path to the Web page or click  to locate the Web page.
 - In the **Page Title** box, type the title of the Web page.
 - In the **Tab Description** box, type the description that you want to appear on the Web page tab. If no description is typed, the Page Title will be used for the Tab Description.
 - In the **Prompt 1** box, type the new name for the first prompt.
 - In the **Prompt 2** box, type the new name for the second prompt.
 - In the **Prompt 3** box, type the new name for the third prompt.
 - In the **Prompt 4** box, type the new name for the fourth prompt.
 - In the **Prompt 5** box, type the new name for the fifth prompt.





- Click the **Parameters** tab to add or remove the parameters that will be available when you include this Web page in a new Report Type.
 - Click the **Dependencies** tab to add or remove dependencies that will be included if you create a Plant Applications Report Package.
6. Click **OK**.

Adding New Content to the Web Server



Through the Web Administrator, you can add new content to the Web server. Once you've added the new content, you can make it available to the Plant Applications users.

To add new content

1. Open the Plant Applications Web Administrator. [How?](#)
2. Right-click on the **Web Content** folder and click **Add**. The **Report Type Properties** dialog box appears
3. Click the **General** tab, do the following:
 - a. In the **Template Name** box, type the name of the template. This is the name that will be displayed in the Web Content folder.
 - b. In the **Class Name** box, select the type of content you want to add from the drop-down list.
 - c. In the **Path** box, type the location (the full path) of the file, or click **Browse**  and navigate to the file's location.
 - d. In the **Stored Procedure** box, you can attach a stored procedure if you selected a Class Name of either **Active Server Page** or **Active Server Application**.
How?
 - e. In the **Report Type Version** box, enter the version number. By default the version number is **1**.
 - f. **optional:** In the **Min. Server Version** box, type the minimum version number this Report Type will be compatible with or click  to enter the current server version number.
 - g. **optional:** In the **Description** box, type a brief description of the report type.
 - h. **optional:** In the **Owner** box, select an owner from the drop-down list. This is used to identify the person who created the new Report Type.
 - i. **optional:** In the **Security Group** box, select a security group from the drop-down list.
 - j. **optional:** In the **File Name** box, to save the file to the database, type the file name, then click  and browse to the file you want saved to the database.
 - k. **optional:** Select the **Send Parameters** check box to pass the report parameters via the URL. If this is a user-defined Active Server Page or Active Server Application report, this option must be selected.
 - l. **optional:** Select the **Force Run Mode** check box to automatically run the report when it is clicked in the browser. If this option is selected, the report dialogs will not open; the report will automatically run as originally configured.

4. Click the **Display** tab to determine the type of output and to change the number of printed copies.
 - a. Under **File Output** select the type of file you want to create. The selection you made in **step 3.b** will determine the types of files you can create.
 - b. Under **Screen Output**, select the file format you want to display in the browser. The available options in each of the drop-down lists will be determined by the selections you made in **step 4.a**.
 - c. Under **Printed Output**, double-click the printer to change the number of printed copies.
5. Click the **Web Pages** tab to select the Web pages that will be used to create the content of the report type.
 - a. Under **Available Web Pages**, select the Web page(s) you want to use to create your report type. Click **Move Selected**  to add the selected web page(s) to the **Used Web Pages** list or click **Move All**  to move all of the Web pages to the **Used Web Pages** list.
 - b. Click **Up**  or **Down**  to specify the order that the pages will be presented to the user when they run the report.
6. Click the **Parameters** tab to edit the parameter default values by double-clicking on the default value you want to change. To make the parameter optional, select the **Optional** check box.

The list of parameters is determined by the Web pages you selected in [step 5](#).

7. Click the **Dependencies** tab to include dependencies, such as stored procedures, files or Web dialogs. These dependencies are included when you export the report type as a Plant Applications Report Package (.prp).
 - a. Click **Add**.
 - b. In the **Add Dependency** dialog box, do one of the following:
 - Select **Stored Procedure** and then click **Browse**  to add a stored procedure.
 - Select **File or Web Dialog**, select an **FTP Location Prefix**, then click  and browse to the file or web dialog you want to add as a dependency.
 - c. Click **OK**.
8. Click **OK**.

After creating your new Web content, you'll need to make it available for use. For more information, see the topic [Configuring Web Content for Users](#).

Viewing SQL Server Report Services Reports

Using SQL Server Reporting Services, developers can create reports using Microsoft Visual Studio. After reports have been deployed to IIS (Internet Information Services), the reports can be run and viewed from the Plant Applications Web Report server.





After the report and been created and deployed, there are five site parameters that must first be configured.



- SQL Reporting Services Database Name
- SQL Reporting Services http Location
- SQL Reporting Services Password
- SQL Reporting Services Server Name
- SQL Reporting Services Username

For information on configuring these five site parameters, see SQL Reporting Services Site Parameters.

After you have configured the site parameters, there are steps required to create a Plant Applications report type that acts as a shell pointing to the SQL report.

To create a Plant Applications report type

1. Open the Plant Applications Web Administrator. [How?](#)
2. Right-click **Web Content** and click **Add**. The **Report Type Properties** dialog box appears
3. Click the **General** tab, do the following:
 - a. In the **Template Name** box, type the name of the template. This is the name that will be displayed in the Web Content folder.
 - b. In the **Class Name** box, select **SQL Report**.
 - c. In the **Path** box, click the **Browse** button . The **SQL Reporting Services URL Builder** dialog box appears.
4. Next to the **Report Name + Path** box, click the **Browse** button . The **SQL Report Browser** dialog box appears.
5. Select the report and click **OK**. The **SQL Report Browser** dialog box closes and you are returned to the **SQL Reporting Services URL Builder** dialog box.
6. Under **Available Parameters**, double-click the parameters needed to create the report.
7. Click **OK**. The **SQL Reporting Services URL Builder** dialog box closes and you are returned to the **Report Type Properties** dialog box with the correct URL in the **Path** box.
8. Click the **Display** tab to determine the type of output and to change the number of printed copies.
 - a. Under **File Output** select the type of file you want to create. The selection you made in step 3.b will determine the types of files you can create.
 - b. Under **Screen Output**, select the file format you want to display in the browser. The available options in each of the drop-down lists will be determined by the selections you made in step 8.a.
 - c. Under **Printed Output**, double-click the printer to change the number of printed copies.
9. Click the **Web Pages** tab to select the Web pages that will be used to create the content of the report type.
 - a. Under **Available Web Pages**, select the Web page(s) you want to use to create your report type. Click **Move Selected**  to add the selected web page(s) to the **Used Web Pages** list or click **Move All**  to move all of the Web pages to the **Used Web Pages** list.

- b. Click **Up**  or **Down**  to specify the order that the pages will be presented to the user when they run the report.
 - c. Click **Apply**.
10. Click the **Parameters** tab to edit the parameter default values by double-clicking on the default value you want to change. To make the parameter optional, select the **Optional** check box.

The list of parameters is determined by the Web pages you selected in step 9.

11. Click **OK**.

After creating your new Web content, you'll need to make it available for use. [How?](#)

Creating a New Report Definition

If you find that you run the same report with the same information over and over, you can create a Report Definition, which will save your options and prevent you from having to select any option. Then, you can simply run the Report Definition without having to select the same options each time you run the Report Type. You can create a report definition in the Web Server Administrator or the Web Client.

NOTE: The Create Definition/Edit Default Parameters/View options will produce errors if Internet Explorer Enhanced Security is enabled on Plant Applications Web Reports Server. To resolve the issue, disable Internet Explorer Enhanced Security in the Windows Server Manager on the machine that is running the Plant Applications Web Report Server. On the Windows11 Plant Applications Client environment, these options (Create Definition/ Edit Default Parameters/View) work only if the Plant Applications Web Server SSL certificate is installed under Trusted Root Certification Authorities.

NOTE: Microsoft Windows11 does not allow Internet Explorer to run. Please use Internet Explorer mode in the Edge Browser instead. Open the Settings in Edge Browser and select Open 'Default Browser' under Internet Explorer Compatibility. Select the Allow sites to be reloaded in Internet Explorer mode, and then restart. Click the Add button from the Internet Explorer mode pages section and then type or paste the address of the Web Reports URL `https://<Servername>/PAReporting/` and click Add. Now, when you open the Web Reports URL in Edge, it loads in Internet Explorer mode.

For more information on creating report definitions in the Web Client, see [Creating a new Report Definition](#). To create a report definition from the Web Server Administrator:

1. Log in to the Web Server Administrator. [How?](#)
2. Expand **Web Content**.
3. Right-click the report type from which you want to create your report definition and choose **Create Definition**. The web pages for configuring the report appear.
4. Make any changes in the web pages. On the **Finish** tab, type a name for your report definition and click **Submit**. The report definition is saved under the originating report type.

Changing Report Definition Properties

Report definition properties enables you to edit your report definition. Report definition properties define various characteristics of the report, such as name and web pages. Report definition properties is also where a security group and owner can be assigned. To change report definition properties:

1. Log in to the Web Server Administrator. [How?](#)
2. Expand **Web Content**.
3. Right-click the report definition and select **Properties**. The **Report Definition Properties** dialog box appears.
- 13 4. Make any desired changes and click **OK**.

Report Packages

Plant Applications Report Packages are collections of new Report Types and supporting web pages and updates. A growing library of packages are available on the GE Intelligent Platforms Support web site (<https://digitalsupport.ge.com>). Browse to the support web site and download the package(s) of your choice.

Importing a Plant Applications Report Package

To import a Report Package

1. Log on to the Web Administrator. [How?](#)
2. Do one of the following:
 - From **File** menu, click **Import Package**.
 - Right-click the **Web Content** folder and click **Import** on the pop-up menu.
3. Select a Plant Applications Report Package from the **Open File** dialog box and click **Open**.

Exporting a Plant Applications Report Package

In addition to [importing packages](#), the Plant Applications Web Administrator can export existing Report Types and Web pages.

To export a report package

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Content** folder.
3. Right-click the Report Type or Web page and click **Export..** The **Save Export Package As** dialog box appears.
4. Type a file name (*The file name must include the .prp file extension*) and navigate to where you want to save the report package.
5. Click **Save**.







Once exported, the PRP file can be distributed to any Plant Applications Web Server.



Editing Web Content

The parameter values for each report definition are inherited from its parent Report Type and possibly modified from the Web Report Server. The navigational path for each report definition is also inherited from the parent Report Type. Any or all of the parameters and navigational path for a report can be modified.



To modify a report

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Content** folder.
3. Right-click on the Web content that you want to modify and click **Properties**. The **Report Type Properties** dialog box appears.

4. Click the **General** tab, and change any of the following:
 - a. In the **Template Name** box, type the name of the template. This is the name that will be displayed in the Web Content folder.
 - b. In the **Class Name** box, select the type of content you want to add from the drop-down list.
 - c. In the **Path** box, type the location (the full path) of the file, or click **Browse**  and navigate to the file's location.
 - d. In the **Stored Procedure** box, you can attach a stored procedure if you selected a Class Name of either **Active Server Page** or **Active Server Application**. How?
 - e. In the **Report Type Version** box, enter the version number. By default the version number is **1**.
 - f. **optional:** In the **Min. Server Version** box, type the minimum version number this Report Type will be compatible with or click  to enter the current server version number.
 - g. **optional:** In the **Description** box, type a brief description of the report type.
 - h. **optional:** In the **Owner** box, select an owner from the drop-down list. This is used to identify the person who created the new Report Type.
 - i. **optional:** In the **Security Group** box, select a security group from the drop-down list.
 - j. **optional:** In the **File Name** box, to save the file to the database, type the file name, then click  and browse to the file you want saved to the database. To retrieve the file and save it locally, click .
 - k. **optional:** Select the **Send Parameters** check box to pass the report parameters via the URL. If this is a user-defined report or an ASP.NET report, the option must be selected.
 - l. **optional:** Select the **Force Run Mode** check box to automatically run the report when it is clicked in the browser. If this option is selected, the report dialogs will not open; the report will automatically run as originally configured.
5. Click the **Display** tab to determine the type of output and to change the number of printed copies.
 - a. Under **File Output** select the type of file you want to create. The selection you made in [step_4.b](#) will determine the types of files you can create.
 - b. Under **Screen Output**, select the file format you want to display in the browser. The available options in each of the drop-down lists will be determined by the selections you made in [step_4.a](#).
 - c. Under **Printed Output**, double-click the printer to change the number of printed copies.
6. Click the **Web Pages** tab to select the Web pages that will be used to create the content of the report type.
 - a. Under **Available Web Pages**, select the Web page(s) you want to use to create your report type. Click **Move Selected**  to add the selected web page(s) to the **Used Web Pages** list or click **Move All**  to move all of the Web pages to the **Used Web Pages** list.

- b. Click **Up**  or **Down**  to specify the order that the pages will be presented to the user when they run the report.
7. Click the **Parameters** tab to edit the parameter default values by double-clicking on the default value you want to change. To make the parameter optional, select the **Optional** check box.

The list of parameters is determined by the Web pages you selected in [step 5](#).

- a. Click **Add** and in the **Add Dependency** dialog box, do one of the following:
 - o Select **Stored Procedure** and then click  to add a stored procedure.
 - o Select **File or Web Dialog**, select an **FTP Location Prefix**, then click  and browse to the file or Web dialog you want to add as a dependency.
 - b. Click **Remove** to remove a dependency.
9. Click **OK**.
10. Click **OK**.

View Settings

View Settings determine the format that the user will be able to view Web content when they log in to the Web Report Server via their browser. When a Report Type is created and edited, the image and native formats are defined on the **Display** tab of the **Report Type Properties** dialog box.

To determine a user's view settings

1. Log on to the Web Administrator. [How?](#)
2. Open the **User Trees** folder.
3. Open the desired tree.
4. Click on **Tree Users** to display the list of users in the right-hand pane.
5. In the right-hand pane, right-click on the desired user and click **Properties**. The **User Properties For: <user name>** dialog box appears.
6. Under **View Settings**, select one of the following options:
 - **Report Images Only:** This option limits the user to viewing only images of generated reports. Report images formats can be HTML, PDF or SNP.
 - **Images and Native Documents:** Native format is the actual native documents and can be HTML or XLS files. This option allows the user to view both the report image and native format of reports.
7. Click **OK** to save your changes and close the dialog box.

Controlling Report Security

Report security is based on the configuration of the user tree. Every member of a user tree has access to everything listed in the user tree's Tree Configuration. When you add content to the tree configuration, every member of the user tree will at least be able to view the content.

What an individual member is able to do with the content is controlled by the user properties. By setting the user properties for each member of the tree, you can control what each member can do with the contents of the tree configuration. Keep in mind that the user properties control access at the user level, not the report level. In other words, the user properties will apply to all the content that the individual member has access to.

Scheduling a Report

Scheduling a report will allow it to run repeatedly at specific intervals. If a Web client is viewing a report that is scheduled, they can be sure they are looking at the most current data available. The client's browser will continually refresh itself and request the latest copy of the report.

Page Caching must be turned off on the client browser. If it is not, when your browser requests the latest copy of a previously viewed report, you will get the cached report, rather than the report with the most current data.

You can schedule only  ASP (Active Server Page) report definitions. You can not schedule  ASA (Active Server Application) reports.

A report can't have more than one schedule. If you want the same report to run on more than one schedule, create multiple report definitions and schedule them separately.

You can schedule a report from the **Schedule** queue or you can select a report in the **Web Contents** folder and schedule it from there.

To schedule a report:

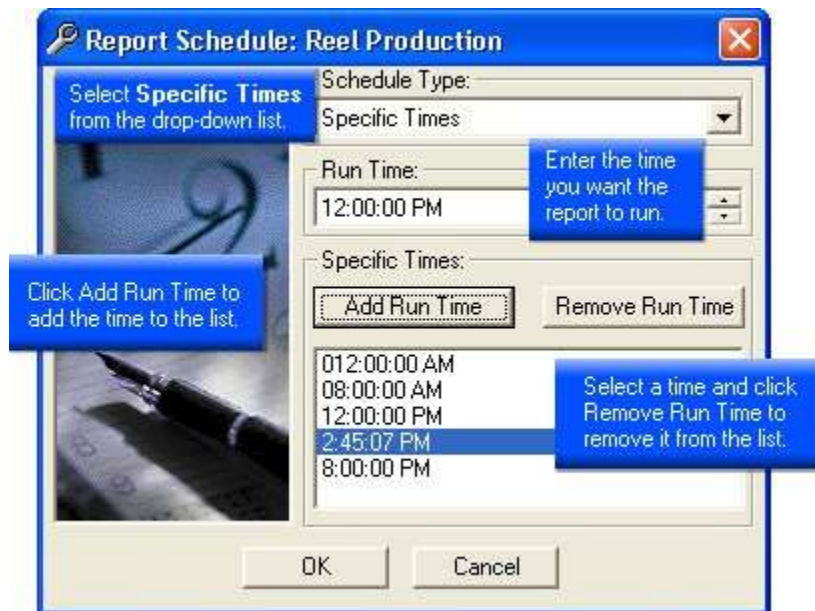
1. Log on to the Web Administrator. [How?](#)
2. Do one of the following:
 - To schedule a report from the **Schedule** queue:
 - a. Open the **Current Activity** folder.
 - b. Right-click **Schedule** and select **Schedule New Report** from the pop-up menu.
 - c. In the **Available Reports** dialog box, select a report and click **OK**.
 - To schedule a report from the **Web Contents** folder:
 - a. Open the **Web Contents** folder.
 - b. Locate the specific report definition, right-click on it and select **Schedule Definition** from the pop-up menu.

The Schedule Definition option will not be available if the report is currently scheduled.

3. In the Report Schedule dialog box, under Schedule Type:
 - Select **Time Interval** to schedule the report to run in minute or hour intervals. For example, you can schedule a report to run every five minutes, or every five hours, or even every five hours and five minutes. [How?](#)



- Select **Specific Times** to schedule the report to run at the same time every day. For example, you can schedule the report to run every day at 1:00:00 P.M. [How?](#)



- Select **Days Of Week** to schedule the report to run at a specified time on specific days of the week. For example, you can schedule a report to run at 7:00:00 A.M. every Monday, Wednesday, and Friday. [How?](#)



- Select **Monthly** to schedule the report to run on a specific day of the month (for example, the 15th) or a specific day of the week (for example, the 2nd Monday of the month).
[How?](#)



4. Click **OK**.

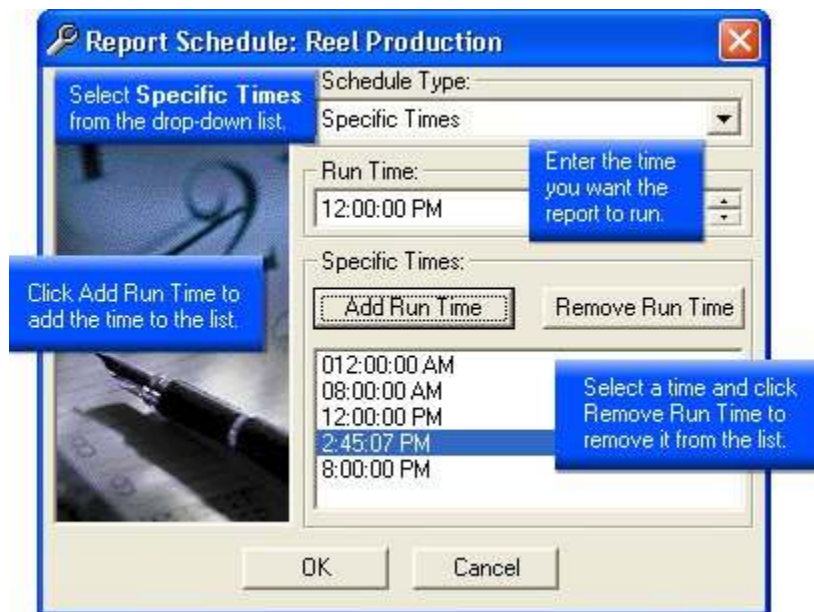
To change a report's schedule:

1. Log on to the Web Administrator. [How?](#)
2. Open the **Current Activity** folder.
3. Click **Schedule** to display the scheduled reports in the right pane.
4. Right-click on the desired report and select **Schedule Properties** from the pop-up menu.
5. In the **Report Schedule** dialog box, under **Schedule Type**:

- Select **Time Interval** to schedule the report to run in minute or hour intervals. For example, you can schedule a report to run every five minutes, or every five hours, or even every five hours and five minutes. [How?](#)



- Select **Specific Times** to schedule the report to run at the same time every day. For example, you can schedule the report to run every day at 1:00:00 p.m. [How?](#)



- Select **Days Of Week** to schedule the report to run at a specified time on specific days of the week. For example, you can schedule a report to run at 7:00:00 a.m. every Monday, Wednesday, and Friday. [How?](#)



- Select **Monthly** to schedule the report to run on a specific day of the month (for example, the 15th) or a specific day of the week (for example, the 2nd Monday of the month). [How?](#)



6. Click **OK**.

Running a Scheduled Report

Even though a report is scheduled, you can force it to run immediately without having to wait for the next scheduled time.

To force a scheduled report to run

1. Log on to the Web Administrator. [How?](#)


2. Open the **Current Activity** folder.
3. Click **Scheduled** to display the list of scheduled reports in the right pane.
4. In the right pane, right-click on the report you want to run now and click **Force Report To Run**.
5. Click **Yes** to run the report immediately.

Printing Reports

Not only can you display reports in your browser, but you can also automatically print the report. If you schedule a report, you can have the report print based on the scheduled run time.

NOTE: Printing and scheduling reports created from Active Server Applications (.ASPX) is not supported in this version of Plant Applications. If you do print a report, you will get unexpected and inaccurate results.

To print a report

1. Log on to the Web Report client. [How?](#)
2. Click the report you want to print.
3. After the report runs, click  on the Plant Applications Report Server toolbar.

[If the report has multiple pages or sheets, select the sheet you want to print.](#)

To schedule a report to print

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Content** folder.
3. Right-click on the report that you want to print and click **Properties**. The **Report Type Properties: <report name>** dialog box appears.
4. Click the **Display** tab.
5. Under **Printed Output**, select the printer.
6. To change the number of printed copies, double-click the selected printer and enter the number of copies in the **Edit Copies** dialog box.
7. Click **OK**.
8. Click **OK**.
9. [Schedule the report.](#)

Removing Reports from the Print Queue

You can remove one or more reports from the Print Queue if you decide not to print the report(s).

To remove reports from the Print Queue

1. Log on to the Web Administrator. [How?](#)
2. Open the **Current Activity** folder.
3. Do one of the following:

Plant Applications Web Reporting

- To **remove all reports**, right-click **Print Queue** and click **Remove All**.
- To **remove one report**, right-click the report and click **Remove**.

Removing Reports from the Engine Queue

You can remove one or more reports from the Engine Queue if you decide not to process the report(s).

To remove reports from the Engine Queue

1. Log on to the Web Administrator. [How?](#)
2. Open the **Current Activity** folder.
3. Do one of the following:
 - To **remove all reports**, right-click **Engine Queue** and click **Remove All**.
 - To **remove one report**, right-click the report and click **Remove**.

Creating Default Web Reports

To help you get up and running with Plant Applications, you can automatically create default Web reports. Based on your configurations, Plant Applications will automatically create a variety of pre-configured Web reports.

You can either create a new User Tree from the Web Administrator, which you can then select when you create your default reports, or you can simply let Plant Applications automatically create a User Tree, called **Plant Model**, for you.

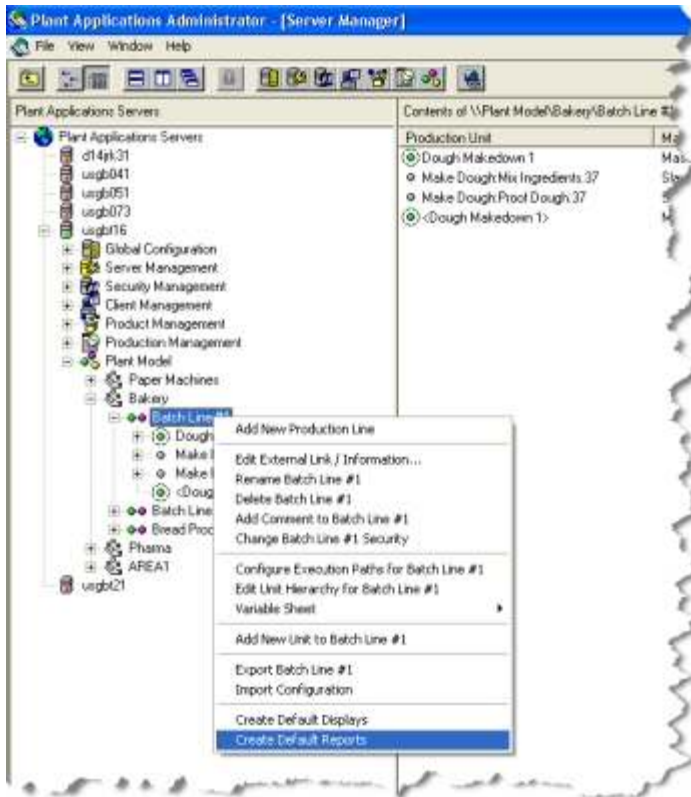
Plant Applications will create the necessary Web reports for the selected level and all levels to which the selected level belongs. For example, if you select a Production Unit, all necessary Web reports will be created for the selected Production Unit, the Production Line that the Production Unit belongs to, and the Department. If you select a Production Line, all necessary Web reports will be created for **all** Production Units that belong to the Production Line, the Production Line, and the Department that the Production Line belongs to.

Select this:	Get Web reports for this:
Department	All Production Lines under the Department All Production Units under the Department
Production Line	Selected Production Line All Production Units under the selected Production Line
Production Unit	Production Line the Production Unit belongs to Selected Production Unit

To automatically create default Web reports

1. Log in to the Plant Applications Administrator.

2. Open the **Plant Model** and select the desired Department, Production Line, or Production Unit. Right-click and click **Create Default Reports**. The **Tree Selection** dialog box appears.



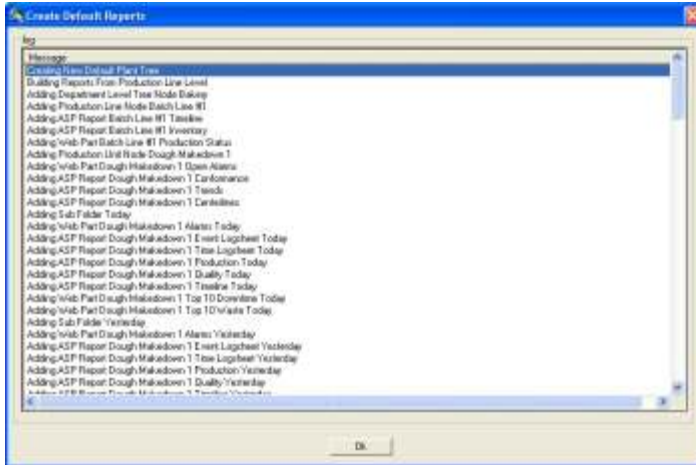
3. Do one of the following:
 - Select an existing User Tree and click **OK**.
 - Click **OK** to create the default User Tree, **Plant Model**.

If you have an existing User Tree named Plant Model, clicking **OK** will simply append any new reports to the existing Plant Model User Tree configuration.



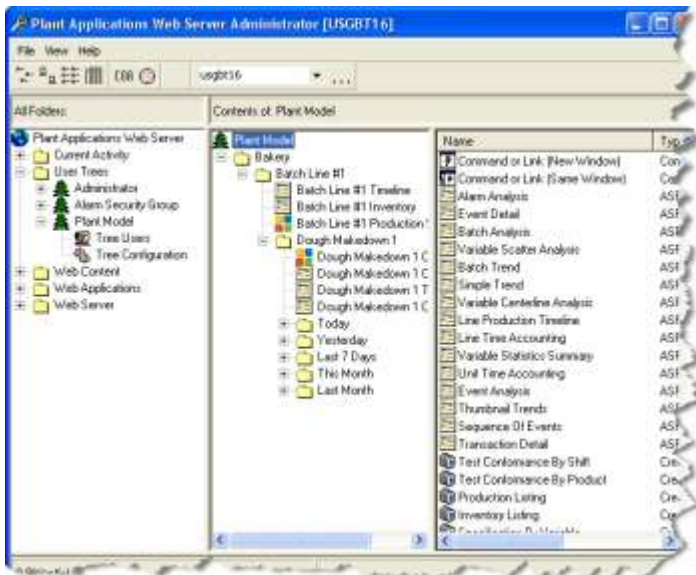
4. In the **Create Default Reports** dialog box, review the message logs and click **OK**.

Plant Applications Web Reporting



To view the Web reports

1. Open the Plant Applications Web Administrator. [How?](#)
2. Double-click on **User Trees**.
3. Double-click on the **User Tree** that you selected when you created the default reports.
4. Click on **Tree Configuration**.
5. In the middle pane, click to expand the levels of the report tree.



Editing Report Parameters

You can define the options selected when you configure your web report so that each time the report is run, your specified options will always be pre-selected.

To edit the default parameters

1. Log on to the Web Administrator. [How?](#)
2. Expand the **Web Content** folder.

3. Right-click on the web report you want to modify and click **Edit Default Parameters**. The ASP pages appear.
4. Click the various tabs and make your changes.
5. When finished, click the **Finish** tab and click **Submit** to save your changes.

Previewing a Web Report

You can configure and preview a web report prior to adding it to a user's [Configuration tree](#).

To preview a web report

1. Log on to the Web Administrator. [How?](#)
2. Expand the **Web Content** folder.
3. Right-click on the web report you want to preview and click **View**. The ASP pages appear.
4. Click the various tabs and make your changes.
5. When finished, click the **Finish** tab and click **Submit**. Your web report will appear.

Using the URL to Call Reports and Definitions

You can use the URL to call ASP Report Types and ASP Definitions directly via URL. You must know what Report Type or Report Definition you want.

To determine the Report_Type_IDs or Report_IDs

1. Open the Web Server Administrator.
2. Open the Web Content folder.
3. Click on either a Report Type or Report Definition.
4. Look at the status bar on the bottom of the Web Server Administrator.
 - If it is a Report Type, the status bar will display "Types" and show the ID of the Report Type that is selected.
 - If it is a Report Definition, the status bar will display "Definitions" and show the ID of the Definition that is selected.

To create a new report from a report type

In this example, the Report_Type_Id = -4 (which is the Variable Conformance Report. Inventory Report = -10)

```
http://<YourServerName>/PAReporting/Viewer/rsFrontDoor.asp?ReportTypeId=-4
```

To view an existing report

In this example, the local Report_Id = 672

```
http://<YourServerName>/PAReporting/Viewer/rsFrontDoor.asp?ReportId=672
```

Examples

Plant Applications Web Reporting

In the examples below, the following information will be used:

- Report_Type_Id = -4
- StartTime and EndTime will be user defined, therefore, the TimeOption parameter must be set to 0.
- Master unit ID = 2
- Variable IDs = 124,120,121,122,123,13
- Product IDs = 3,4,5,6

To create a new report from a report type and pass in parameters:

```
http://YourServerName/PAREporting/Viewer/rsFrontDoor.asp?ReportTypeId=-4&TimeOption=0&StartTime=2005-08-20 7:00:00AM&EndTime=2005-08-25 7:00:00AM&MasterUnit=2&variables=124,120,121,122,123,13&Products=3,4,5,6
```

To create new report from a report type, pass in parameters and have the report automatically execute without user intervention:

```
http://YourServerName/PAREporting/Viewer/rsFrontDoor.asp?ReportTypeId=-4&TimeOption=0&StartTime=2005-08-20 7:00:00AM&EndTime=2005-08-25 7:00:00AM&MasterUnit=2&variables=124,120,121,122,123,13&Products=3,4,5,6&ForceRunMode=1
```

Report Schedule

The Schedule contains a list of all the reports currently set to run at a particular interval. The queue contains a list of all the reports the Plant Applications Report Schedule Service has determined need to run and are waiting to be picked up by a Report Engine.

Report Types

A Report Type is a template used to create any number of reports. To re-configure or view the information that each Report Type uses, right-click on a Report Type and select **Properties** from the pop-up menu.

Searching for a Saved Batch Analysis

To search for a saved Batch Analysis

1. Log in to the Plant Applications Web Report Server. [How?](#)
2. If necessary, expand the report tree in order to see **Batch Analysis**.
3. In the report tree, click **Batch Analysis**.
4. In the **Saved Batch Analysis** page, do one of the following:
 - To find all saved batch analysis reports, click **Search**.
 - To filter your results, type all or part of the batch analysis report name and then click **Search**.
5. In the list of returned reports, click the hyperlinked name. This will open the [Query Results_page](#).

Printers


In the Web Administrator, the **Printers** folder contains all the printers that are installed and available for your system to use. These can range from real printers, such as a laser or ink jet printer to virtual printers. A distiller printer is set up during installation.

Adding a Printer

Before you can print Web content, the printer must be made available to the Web Report Server. Through the Web Administrator, you can add both virtual printers such as a distiller printer and real printers for printing the Web content and reports.

You can add only installed printers.

To add a printer:


1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Right-click on the **Printers** folder and click **Configure**. The **Configure Printers** dialog box appears
4. Select the printer(s) in the **Available** list and click **Add Selected** .
5. Click **OK** to save your changes and close this dialog box.

Removing a Printer

If a printer no longer is available, has been moved to a different server, or is simply no longer needed by the Plant Applications Web Report Server, you can easily remove it from the list of printers.

NOTE: Removing a printer is not the same as un-installing it or deleting it. The printer will still be available to other programs and can be made available to the Plant Applications Web Report Server again.

To remove a printer:

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Right-click on the **Printers** folder and select **Configure** from the pop-up menu.
4. In the **Configure Printers** dialog box, select the printer(s) in the **Used** list and click **Remove Selected** .
5. Click **OK** to save your changes and close this dialog box.

Report Engines

Plant Applications Web Reporting

The Plant Applications Report Engine is a service that performs the work of creating a report in conjunction with a VBA-supporting office application, such as Microsoft Excel. Engines can be running on the Plant Applications Web Report Server or remotely on computers distributed across your network.

Each Report Engine bids for work and when completed, publishes the content to the Plant Applications Web Report Server site or directs the output to a printer.

The **Engines** folder contains a list of all the Report Engines that are currently configured for your system. By clicking on each engine, you can view that engine's activity log. Additionally, by right-clicking on the **Engines** folder, you can add an engine and configure error messages for all engines in the folder.

Configuring Report Engines Errors

You can control how the report engines respond when encountering an error while running a report. For example, if you are doing any error checking in an Excel template, you can determine how the report engine will respond when encountering a specific error.

For each error, you can elicit one of six responses:

- Shut down the engine
- Shut down the VBA application (for example, Excel)
- Increment the Report Run counter
- Increment the Engine Fail counter
- Increment the Report Run and the Engine Fail counters
- Do nothing

To configure report engine errors:

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Right-click on the **Engines** folder and select **Configuration**. The **Engine Error Configuration** dialog box appears
4. Do the following:
 - a. In the **Error ID** column enter the error ID used in your VBA application.
 - b. In the **Description** column enter a description of the error.
 - c. In the **Response** column select one of the responses from the drop-down list.
 - d. Click **OK** to save your changes and close the dialog box.

Controlling the Web Engines

All the elements the engine can control come in the form of parameters. Each Report Type has the following parameters:

Engine Parameters

Engine Parameter	Description
ReportTimeout	The number of minutes a report will run before timing out.
FileLocation	The FTP path to the report and should be in the form of <name of ftp server>/<sub folder name>.
ServerFileLocation	The actual file path to the report <C:\Report Server\Reports\>.
PrintStyles	Indicates the type of output the engine is to produce and can be in the form of any one or more of the following: 1 = Paper: A print style of 1 indicates the engine will print to a physical printer attached to the host computer either locally or via the network. In this case, the ID of a valid printer must be in the Printers parameter. Ex. PrintStyles = 1, Printers = 9 would printer a paper copy to printer nine. 2 = HTML: A print style of 2 would cause the engine to create an HTML version of the report. 3 = PDF: A print style of 3 would cause the engine to create an Acrobat PDF version of the report. Acrobat must be installed on the host computer. 4 = SNP: A print style of 4 would cause the engine to create an Access Snap Shot version of the report. Access must be installed on the host computer. 5 = XLS: A print style of 5 would cause the engine to save the report as an Excel .xls file.
Printers	A collection of valid paper printer IDs configured in the system. If no physical printer will be used, PrintStyles should contain a value of 1 otherwise the ID of the printer(s) being used in a comma separated string. (i.e. 4,9,12,?)
AppName	The name of the application, such as Excel or Access, that will be used to create a report.
TimeOption	Used to dynamically configure the Start Time/Date and End Time/Date parameters.

Viewing a Report Engine's Activity

You can view a log of activity for each Report Engine. The **EngineLoggingLevel** site parameter determines the level of error messages that will be recorded by the report engine. The number of days error messages are kept are determined by the site parameter, **LogfilePurgeDays**.

To view a Report Engine's activity:

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Open the **Engines** folder.
4. Click on a Report Engine to display the activity messages in the right pane.

Deleting Report Engine Messages

You can delete one or more messages in the Report Engine activity log.

To delete messages:

1. While [viewing the report engine's messages](#), select one or more messages.
2. Right-click on the selected message(s) and choose **Delete Message**.

Parameters

Adding Parameters

You can create and add parameters to use in creating or editing Web content.

To add a parameter:

1. Log on to the Web Administrator.
2. Open the **Web Server** folder.
3. Right-click on **Parameters** and select **Add**. The **Create New Parameter** dialog box appears.
4. Do the following:
 - a. In the **Name** box, type the name of your new parameter.
 - b. In the **Type** box, select the type of data used by the parameter.
 - c. **optional:** In the **Group** box, select a group type from the drop-down list.
 - d. **optional:** In the **SP Name** box, enter the name of the stored procedure.

The stored procedure that you enter in the **SP Name** box will determine the choices you are presented with when you attempt to modify parameter data for this parameter (using the Web Administrator).

- e. **optional:** If the stored procedure allows for the selection of multiple values, select the **Select Multiple Values** option.
- f. If you want the parameter to be a default (or system) parameter, select **Include as Default Parameter**.
- g. **optional:** In the **Default Value** box, type the default value.
- h. **optional:** In the **Description** box, type a brief description of the parameter.
- i. Click **OK**.

Editing Web Server Parameters

When you edit a parameter, you can change:

- The default value
- The description
- Whether it is a default parameter

To edit a parameter:

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Click the **Parameters** folder.
4. In the right pane, right-click the parameter you want to edit and select **Properties**. The **Report Parameter Properties** dialog box appears.
5. Do one or more of the following:
 - a. Select or clear the **Include as Default Parameter** option.
 - b. In the **Default Value** box, type a new default value.

- c. In the **Description** box, type a new description or edit an existing description.
6. Click **OK**.

Deleting Web Server Parameters

You can delete any of the Web Server parameters.

Keep in mind that if you delete a parameter, it will be deleted from all Report Types and Report Definitions that use the parameter.

To delete a parameter:



1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Click on the **Parameters** folder.
4. In the right pane, right-click on the parameter you want to delete and click **Delete**.
5. Click **Yes** to confirm the deletion.

Dialogs

Adding Dialogs (Web pages)

Dialogs are used to create new Web content. You can add dialogs and then use the dialogs to create a new [Report Type](#).

To add a new dialog:

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Right-click on the **Dialogs** folder and click **Add**. The **Configure Report Web Page** dialog box appears
4. Do the following:
 - a. On the **Web Page** tab, enter the following information:
 - In the **Path** box, type the path to the ASP or HTML file. You can click  to locate the file.
 - In the **Page Title** box, type the title for the page.
 - **optional:** In the **Tab Description** box, type the name you want displayed on the tab. If you do not type a description, the page title will be used.
 - **optional:** In the **Prompt** boxes, type the text you want to use to override the default prompts.
 - b. On the **Parameters** tab, select the parameters you want to add to the dialog and click .
 - c. On the **Dependencies** tab, click **Add** to add either stored procedures or additional files or dialogs.
 - d. Click **OK** to save your changes and to close the dialog box.

Editing Dialogs (Web Pages)

You can change any of the properties of Web dialogs.

To edit dialogs:

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Click on the **Dialogs** folder.
4. In the right pane, right-click on the dialog you want to edit and click **Properties**. The **Configure <dialog name>** dialog box appears.
5. Do one of the following:
 - a. Click the **Web Page** tab to change the path to the source file, change the page title, the tab description, or the prompts.
 - b. Click the **Parameters** tab to add new parameters or remove parameters.
 - c. Click the **Dependencies** tab to add or remove dependent stored procedures or files.
 - d. Click **OK**.

Exporting Web Pages (Dialogs)

After you create new dialogs or configure existing dialogs, you can export them to other servers or local machines.

To export a Web page (dialog):

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Click the **Dialogs** folder.
4. In the right pane, right-click on a dialog (Web page) and click **Export Web Page**. The **Save Export Package As** dialog box appears.
5. Navigate to where you want to save the Plant Applications Report Package, type a new file name, if desired, and click **Save**.

Deleting Dialogs (Web pages)

When you delete a dialog, the source file still remains, but all of the changes are gone and the file is deleted from the list of available dialogs. Furthermore, the dialog will be deleted from any Report Type or Report Definition that uses the dialog.

To delete a dialog:

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Click the **Dialogs** folder.
4. In the right pane, right-click on the dialog you want to delete and click **Delete**.

5. Click **Yes** to confirm the deletion.

Time Options

What are Time Options?

Time options are pre-defined time parameters that are used on any dialog that uses start or end times. In addition to the seven pre-defined options, you can create user-defined time options. There is a template provided to aid you in defining your time options.

Time options are defined by both date and time. In Time Options, you can define the date portion. There are two site parameters that are used to define the time portion: **EndOfDayHour** and **EndOfDayMinute**.

Viewing Time Options

You can view the start and end times for all your defined time options.

To view your time options:

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Click on the **Time Options** folder to display the time options in the right pane.

Creating Time Options

In addition to the seven pre-defined time options, you can also create your own, user-defined time options. To aid you in this text, we have included a template of the SQL code necessary to define your time option.

This function allows you to define the date portion of your start and end times. To define the time portion of your time option, you need to set the **EndOfDayHour** and **EndOfDayMinute** site parameters.

To create a time option:

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Right-click on the **Time Options** folder and click **Add**.
4. After reading the message, click **OK**. The **Time Option** dialog box appears.
5. Make the necessary changes to the SQL code.
6. Click **Test** to view your newly defined Start or End time.
7. Click **OK** to save your changes and close the dialog box.

Editing Time Options

You can edit only your user-defined time options. For the seven default time options, you can only view the SQL code and the defined start and end time.

To edit a time option:

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Click the **Time Options** folder to display the time options in the right pane.
4. Right-click on the desired time option and select **Properties** from the pop-up menu.
5. In the **Time Option** dialog box, make your changes.

Keep in mind that you can edit only user-defined time options. You can only view the default time options.

6. Click **Test**.
7. Click **OK** to save your changes and close the dialog box.

Deleting Time Options

You can delete only your user-defined time options.

To delete a user-defined time option

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Click the **Time Options** folder to display the time options in the right pane.
4. Right-click on the user-defined time option that you want to delete and select **Delete** from the pop-up menu.
5. Click **Yes** to confirm the deletion.

Managing Web Users

Organizing the Client Environment

Organizing Users and Templates

Within the Web Administrator, you determine which site users can use the Web Report Server, the content those users have access to, and what the users can do with the content.

A Tree Template models what the user can see when they log on to the Report Server through their browser. This is the primary means of organizing content and controlling security to that content. A user cannot access information or reports not explicitly added to the Tree Template for that user (or group of users).

The concept of a template is used to allow several users with the same job functions or concerns to share the same Tree. This allows an administrator to maintain the Web Client environment for many users at the same time and provides a consistent look and feel to end users.

It is very easy to initially start with a single Tree Template and apply it across all users. As needs develop further, it is easy to create new Tree Templates and re-arrange users without disrupting the operation of the system.

Organizing Tree Templates

This tree should be organized with the most important information at the top of the tree and within the first level of the tree. Content should be organized by area of the plant and/or by operational topic, such as Quality or Efficiency.

User Trees

User Trees help you organize and manage access to the various Web content available through the Plant Applications Web Report Server. A User Tree consists of two parts:

Tree Users: Tree Users is where you add new users and manage existing users.

Tree Configuration: Tree Configuration is where you determine what content the User Tree members have access to, and what the individual User Tree members can do with that content. All members of the User Tree will see the same content, but you can control what individual users can do with the content.

Creating a New User Tree

To create a new User Tree:

1. Log on to the Web Administrator. [How?](#)
2. Right-click the **User Trees** folder and select **Add Template** from the pop-up menu.
3. Type the name of the template and press ENTER.
4. Open the new User Tree to add users and to configure the users' content.

Deleting a User Tree

If you delete a User Tree, all the members of the tree and the reports associated with the tree will also be deleted. The users and reports can be added to another tree, however.

To delete a User Tree

1. Log on to the Web Administrator. [How?](#)
2. Open the **User Trees** folder.
3. Right-click on the User Tree you want to delete and select **Delete Template** from the pop-up menu.
4. Click **Yes** to confirm the deletion.

Tree Users

Before anyone can use the Web Report Server, they must first be added as a user. Only users that exist in the Plant Applications database (site users) can be added as Plant Applications Web Report users.

Adding a User to a User Tree

To add a user to the web server:

Plant Applications Web Reporting

1. Open the Plant Applications Web Administrator. [How?](#)
2. Open the **User Trees** folder.
3. Open the desired Tree.
4. Right-click on **Tree Users** and click **Add User**. The **Add User** dialog box appears.
5. Select the user you want to add and click **OK**.

After you add a user, you can change the user's access rights and determine whether they can view only the report images or both the report image and the native document. [How?](#)

Removing a User Tree Member

You can remove users from User Trees. Once the user has been removed, they will no longer have access to the Tree Configuration reports. However, they will be available to be added to other User Trees.

To remove a user from a User Tree:

1. Log on to the Web Administrator. [How?](#)
2. Open the **User Trees** folder.
3. Open the desired User Tree.
4. Click **Tree Users** to display the list of members in the right pane.
5. Right-click on the user you want to remove and select **Remove User** from the pop-up menu.

Changing the User Properties

You can edit a new or existing user's access rights and view settings. These settings determine what the user can do and see in the Web Report Server.

To change a user's properties:

1. Log on to the Web Administrator.
2. Open the **User Trees** folder.
3. Open the desired Tree.
4. Double-click on **Tree Users** to display the list of users in the right-hand pane.
5. In the right-hand pane, right-click on the desired user and select **Properties** from the pop-up menu.
6. In the **User Properties For: <user name>** dialog box, make the desired changes.
7. Click **OK** to save your changes and close the dialog box.

Configuring Web Content for Users

Before users can view and run reports and other web content, it must first be added to the user's **Tree Configuration**. After the User Tree has been created and users have been added to the User Tree, the content must be added to the **Tree Configuration**. This will determine what the

members of each User Tree will see when they log on to the Plant Applications Web Report Server.

To determine the Web user's content:

1. Log on to the Web Administrator. [How?](#)
2. Open the **User Trees** folder.
3. Open the desired User Tree.
4. Right-click on **Tree Configuration**. The right pane will be divided into two panes. The left pane will display the User Tree name and the right pane will display a list of all available web content.
5. In the middle pane, right-click on the User Tree name and select **Add Folder** from the pop-up menu.
6. Type the folder name and press ENTER.
7. Repeat steps **5** and **6** to add additional folders.
8. Drag the selected [Web content](#) into the folder.

Deleting a Tree Configuration Folder

In the Web Administrator, you can open the User Tree and delete any or all of the folders in the Tree Configuration. If you delete a folder, you will delete all of the content inside the folder. These changes will affect all the members of the selected User Tree.

[Deleting the folder only deletes the content from the user's view. The original content is still available and can be added to a new or existing folder.](#)

To delete a folder:

1. Log on to the Web Administrator. [How?](#)
2. Open the **User Trees** folder.
3. Open the desired User Tree and click **Tree Configuration**.
4. In the middle pane, right-click on the folder you want to delete and select **Delete Node** from the pop-up menu.
5. Click **Yes** to confirm the deletion.

Renaming a Tree Configuration Folder

You can rename a folder in the Tree Configuration. However, when you rename the folder, it is renamed for every user in the User Tree.

To rename a folder:

1. Log on to the Web Administrator. [How?](#)
2. Open the **User Trees** folder.
3. Open the desired User Tree.
4. Click on **Tree Configuration** to display the Web content in the right pane.

5. Right-click on the folder you want to rename and choose **Properties**. The **Node Properties** dialog box appears.
6. Type the new folder name in the **Node Name** box.
7. Click **OK** to save your changes and close the dialog box.

Monitoring Report Activity

Viewing System Log Files

The Plant Applications Report Scheduler and engines keep a record of their activity in both the Plant Applications database and in log files. The log file contains information about each individual report run, such as the time it ran, run duration, how many files were generated and what the engine did with them.

The log files can be found on the computer hosting these services in the ReportServer\Logs directory. They are ASCII text files and can be opened with Notepad or any other text editor.

Viewing a Report Engine's Activity

You can view a log of activity for each Report Engine. The **EngineLoggingLevel** site parameter determines the level of error messages that will be recorded by the report engine. The number of days error messages are kept are determined by the site parameter, **LogfilePurgeDays**.

To view a Report Engine's activity:

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Server** folder.
3. Open the **Engines** folder.
4. Click on a Report Engine to display the activity messages in the right pane.

Viewing Reports in the Schedule Queue

In the **Schedule** queue, you can see the reports that have been scheduled to run. For each scheduled report, the following information is displayed.

- Report name
- Last run time
- Next run time
- Current status
- Last run result
- Run time error
- Run attempts
- Description

To view reports in the Schedule Queue

1. Log on to the Web Administrator. [How?](#)
2. Open the **Current Activity** folder.
3. Click **Schedule** to view the list a scheduled reports.

Viewing the Print Queue

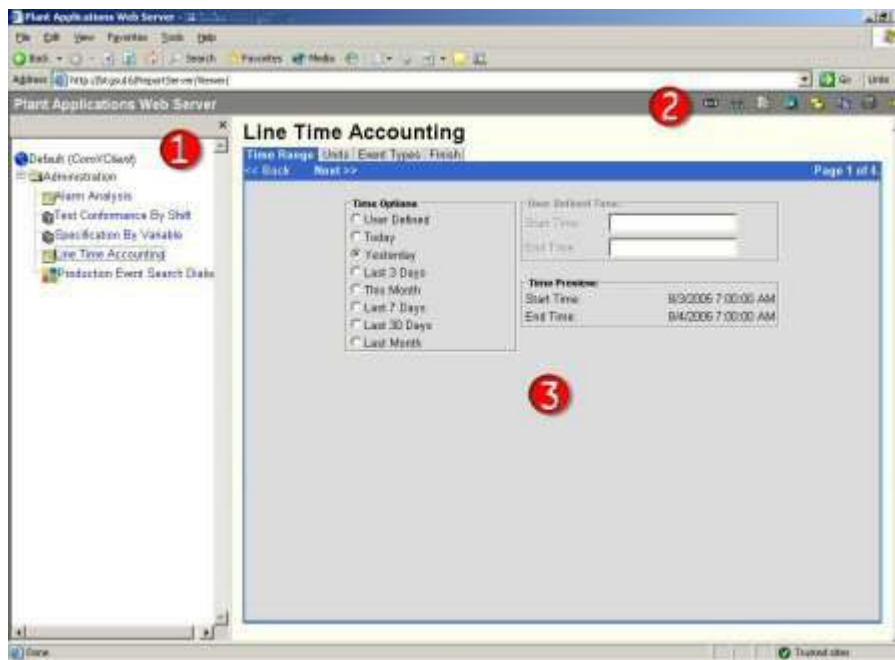
The Print Queue lets you see which reports are waiting to be printed, which printer they will be printed on, and the number of copies. From the Print Queue you can also [remove reports](#) from the queue.

To view reports in the Print Queue

1. Log on to the Web Administrator. [How?](#)
2. Open the **Current Activity** folder.
3. Click **Print Queue** to display the reports waiting to be printed.




Web Report Client Interface

The Web client is accessed by using your Internet Explorer and has the look and feel of the Windows Explorer. The window is divided into two panes.





- 1 The left pane displays the reports and web content available to the current user.
- 2 The right pane displays reports when you click a [report definition](#) or [web content](#). When you click a [report type](#), the report dialogs are displayed in the right pane.


The Toolbar Icons and Buttons


 This icon indicates that the report is set to automatically refresh every 30000 milliseconds while you are viewing the report. This icon is visible only if the **Auto Refresh** option has been selected. If you do not want the report to automatically refresh while you are viewing the report, click the  icon. It will switch to the  icon.




NOTE: You set the Auto Refresh option in the **Report Definition Properties** dialog box, which is opened by right-clicking a report definition in the Web Server Administrator and selecting **Properties**.


 This icon indicates that the report will be viewed in the format designated as its [image](#) (primary) format when the report type was created. Click this icon to view the content in its [native](#) (secondary) format. This functionality is controlled by the user's **View Setting**.

 This icon indicates that the report will be viewed in the format designated as its [native](#) (secondary) format when the Report Type was created. Click this icon to view the content in its [image](#) (primary) format. This functionality is controlled by the user's **View Setting**.


 This icon indicates the browser is in **View** mode. In order to generate new content from a [report type](#), the browser must be in **View** mode. Click this icon to change to **Edit** mode.

 This icon indicates the browser is in **Edit** mode. In order to run a [report definition](#), the browser must be in **Edit** mode. Click this icon to change to **View** mode.

 This icon indicates the report will automatically run when the report title is clicked in the left pane of the browser. The report dialogs will not appear and the report will run as originally configured. Click the icon to switch to  **View** mode or  **Edit** mode.

 Click this button to refresh your browser.

 Click this button to search for Plant Applications Web content.

 Click this button to view the list of available content. The content is determined by the user's **Tree Configuration**.

 Click this button to copy the contents of the right pane to your Clipboard.

 Click this button to print your report.

 Click this button to log off from the Plant Applications Web Report Server.

Using the Web Report Client

The Plant Applications Web Report Server uses Internet Explorer as the web browser. If you have a connection to your company's intranet or the World Wide Web, then you can log in to Plant Applications. In most cases, the address uses one of following formats, where "servername" is the name of the server where the Plant Applications Web Server is installed:

http://servername/ReportServer

https://servername/ReportServer

Another site parameter, UseHTTPS, controls whether a secure site is used.

NOTE: The name of the virtual directory under the web site is changed in release 6.2 to PAReporting from ReportServer.

Logging on to the Web Report Client

To view, run, or edit reports, you need to log on to the Web Report client.

To log on to the Web Report client:

1. Start Microsoft Internet Explorer.
2. In the address bar, enter the address of the Web Report Server, and press **Enter**.
3. In the Plant Applications Web client log on screen, enter your Plant Applications user name and password. This is the user name and password you were assigned as a site user. This may or may not be the same as your Windows user name and password. Optionally, you can enter your SSO credentials, which may require the fully qualified domain name (FQDN) if SSO authentication is enabled.

Creating an Ad Hoc Report

You can create ad hoc reports by clicking a **report type** (*Similar to a template. You can use the report type to create ad hoc reports or you can save the report as a report definition*) in the left pane. After clicking the report type, the right-pane will display the different dialogs used to determine the content of the report. After you've finished determining the content, you'll be able to save the changes.

To create an ad hoc report

1. Log on to the Plant Applications Web Report client. [How?](#)
2. In the left pane, open the desired folder and click the appropriate title.
3. In the right pane, click the tabs to determine the report's content.
4. On the **You're Finished** tab, select **Execute Immediately** and click **Submit** to create an ad hoc version of this report.

Printing Reports

Not only can you display reports in your browser, but you can also automatically print the report. If you schedule a report, you can have the report print based on the scheduled run time.

NOTE: Printing and scheduling reports created from Active Server Applications (.ASPX) is not supported in this version of Plant Applications. If you do print a report, you will get unexpected and inaccurate results.

To print a report

1. Log on to the Web Report client. [How?](#)

2. Click the report you want to print.
3. After the report runs, click  on the Plant Applications Report Server toolbar.

If the report has multiple pages or sheets, select the sheet you want to print.

To schedule a report to print

1. Log on to the Web Administrator. [How?](#)
2. Open the **Web Content** folder.
3. Right-click on the report that you want to print and click **Properties**. The **Report Type Properties: <report name>** dialog box appears.
4. Click the **Display** tab.
5. Under **Printed Output**, select the printer.
6. To change the number of printed copies, double-click the selected printer and enter the number of copies in the **Edit Copies** dialog box.
7. Click **OK**.
8. Click **OK**.
9. [Schedule the report.](#)

Making Changes to a Report Type

Within the Web Report client, when you execute a report type, any changes you make can be permanently saved. Then, the next time you execute the report, the report will run using your changes.

Keep in mind that when you save the changes, the report is permanently changed. The changes cannot be undone.

To change a Report Type:

1. Log on to the Web Report client. [How?](#)
2. Click the report you want to change.
3. Select the parameters you want to use.
4. On the **You're Finished** tab, select **Save Changes To <report name>**.
5. Click **Submit**.

Creating a New Report Definition

If you find that you run the same report with the same information over and over, you can create a Report Definition, which will save your options and prevent you from having to select any option. Then, you can simply run the Report Definition without having to select the same options each time you run the Report Type.

To create a Report Definition:

1. Log on to the Web Report client. [How?](#)
2. Click the Report Type to run the report.

3. Make any changes to the information.
4. On the **You're Finished** tab, select **Save As Definition And Execute Immediately**.
5. In the **Save As** box, type the name of your new Report Definition. By default, the name of the Report Type and the current time stamp are used to name the Report Definition.
6. Click **Submit**.

Site Parameters

Ad Hoc Report Life (Days)

Use the Ad Hoc Report Life (Days) site parameter to specify the number of days an ad hoc report is kept in the database. The date is based off the date the report was last accessed.

To edit the Ad Hoc Report Life (Days) site parameter

1. Log in to the Plant Applications Administrator.

You must have **Administrator access** to the **Administrator security group** to change site parameters.

2. Open Global Configuration.
3. Right-click on the Administer Site Parameters folder and click Edit Site Parameter. The Site Parameters dialog box appears.
4. Double-click on Ad Hoc Report Life (Days). The Edit Parameter dialog box appears.
5. Type the number of days in the Value box. For example, if you type 4 in the Value box, ad hoc reports will be kept in the database up to four days from the date they were last accessed.
6. Click the OK button to save your changes and close the dialog box.
7. Click the Close button to close the Site Parameters dialog box.
8. Refresh the server.

Dashboard Engine Server site parameter

The Dashboard Engine Server parameter should contain the name of the server where the Plant Applications dashboard services are installed.

To edit the Dashboard Engine Server site parameter

1. Log in to the Plant Applications Administrator.

You must have **Administrator access** to the **Administrator security group** to change site parameters.

2. Open Global Configuration.
3. Right-click on the Administer Site Parameters folder and click Edit Site Parameters. The Site Parameters dialog box appears.
4. Double-click on Dashboard Engine Server. The Edit Parameter dialog box appears.
5. Type the server name in the Value box.

Plant Applications Web Reporting

6. Click the **OK** button to save your changes and close the dialog box.
7. Click the **Close** button to close the **Site Parameters** dialog box.
8. Refresh the server.

Gallery Physical Path site parameter

The Gallery Physical Path parameter contains the physical path of the Web Part gallery.

To edit the Gallery Physical Path site parameter

1. Log in to the Plant Applications Administrator.

You must have **Administrator access** to the **Administrator security group** to change site parameters.

2. Open Global Configuration.
3. Right-click on the Administer Site Parameters folder and click Edit Site Parameters. The Site Parameters dialog box appears.
4. Double-click on Gallery Physical Path. The Edit Parameter dialog box appears.
5. Enter the physical path to where the Web Parts are located.
6. Click the OK button to save your changes and close the dialog box.
7. Click the Close button to close the Site Parameters dialog box.
8. Refresh the server.

Gallery Virtual Path site parameter

The Gallery Virtual Path site parameter contains the virtual path of the Web Part gallery.

This is used only if you are using DDRK for your dashboard.

To edit the Gallery Virtual Path site parameter

1. Log in to the Plant Applications Administrator.

You must have **Administrator access** to the **Administrator security group** to change site parameters.

2. Open Global Configuration.
3. Right-click on the Administer Site Parameters folder and click Edit Site Parameters. The Site Parameters dialog box appears.
4. Double-click on Gallery Virtual Path. The Edit Parameter dialog box appears.
5. Enter the virtual path to where the Web Parts are located.
6. Click the OK button to save your changes and close the dialog box.
7. Click the Close button to close the Site Parameters dialog box.
8. Refresh the server.

Microsoft Dashboard Catalog Site Parameter

The Microsoft Dashboard Catalog site contains the name of the Microsoft dashboard catalog.

This is used only if you are using DDRK (Digital Dashboard Resource Kit) for your dashboard.

To edit the Microsoft Dashboard Catalog site parameter

1. Log in to the Plant Applications Administrator.

You must have **Administrator access** to the **Administrator security group** to change site parameters.

2. Open Global Configuration.
3. Right-click on the Administer Site Parameters folder and click Edit Site Parameters. The Site Parameters dialog box appears.
4. Double-click on Microsoft Dashboard Catalog. The Edit Parameter dialog box appears.
5. Type the name of the Microsoft dashboard catalog.
6. Click the OK button to save your changes and close the dialog box.
7. Click the Close button to close the Site Parameters dialog box.
8. Refresh the server.

Microsoft Dashboard Server Site Parameter

The Microsoft Dashboard Server parameter contains the name of the server where the Microsoft dashboard is installed.

This is used only if you are using DDRK for your dashboard.

To edit the Microsoft Dashboard Server site parameter

1. Log in to the Plant Applications Administrator.

You must have **Administrator access** to the **Administrator security group** to change site parameters.

2. Open Global Configuration.
3. Right-click on the Administer Site Parameters folder and click Edit Site Parameters. The Site Parameters dialog box appears.
4. Double-click on Microsoft Dashboard Server. The Edit Parameter dialog box appears.
5. Type the name of the server where the Microsoft dashboard is installed.
6. Click the OK button to save your changes and close the dialog box.
7. Click the Close button to close the Site Parameters dialog box.
8. Refresh the server.

Proficy Dashboard Server site parameter

The Proficy Dashboard Server parameter contains the name of the server where the Proficy dashboard is installed.

To edit the Proficy Dashboard Server site parameter

1. Log in to the Plant Applications Administrator.

You must have **Administrator access** to the **Administrator security group** to change site parameters.

2. Open Global Configuration.
3. Right-click on the Administer Site Parameters folder and click Edit Site Parameters. The Site Parameters dialog box appears.
4. Double-click on Proficy Dashboard Server. The Edit Parameter dialog box appears.
5. Type the name of the server where the Proficy dashboard is installed.
6. Click the OK button to save your changes and close the dialog box.
7. Click the Close button to close the Site Parameters dialog box.
8. Refresh the server.

Proficy Dashboard Virtual Path site parameter

The Proficy Dashboard Virtual Path site parameter contains the virtual path of the Proficy dashboard.

To edit the Proficy Dashboard Virtual Path site parameter

1. Log in to the Plant Applications Administrator.

You must have **Administrator access** to the **Administrator security group** to change site parameters.

2. Open Global Configuration.
3. Right-click on the Administer Site Parameters folder and click Edit Site Parameters. The Site Parameters dialog box appears.
4. Double-click on Proficy Dashboard Virtual Path. The Edit Parameter dialog box appears.
5. Enter the virtual path to where the Proficy dashboard is located.
6. Click the OK button to save your changes and close the dialog box.
7. Click the Close button to close the Site Parameters dialog box.
8. Refresh the server.

Show Additional Web Part Configuration Tabs site parameter



Use the Show Additional Web Part Configuration Tabs parameter to control the display of the **Manage Parameter Types** tab and the **Manage Dialogs** tab in the Web Parts Administration dialog box.

CAUTION: You must be very careful when using this feature. Only someone with advanced knowledge of Plant Applications, server technology, and web technology should use this feature.

To edit the Show Additional Web Part Configuration Tabs site parameter

1. Log in to Plant Applications Administrator.

You must have **Administrator access** to the **Administrator security group** to change site parameters.

2. Expand  Global Configuration.
3. Right-click on  Administer Site Parameters folder and select Edit Site Parameters. The Site Parameters dialog box appears.
4. Double-click Show Additional Web Part Configuration Tabs. The Edit Parameter dialog box appears.
5. Select True to display the tabs or select False to hide the tabs.
6. Click the OK button to save your changes and close the dialog box.
7. Click the Close button to close the Site Parameters dialog box.
8. Refresh the server.

Web App Physical Path Site Parameter

The Web App Physical Path site parameter contains the value for the physical path of the Plant Applications dashboard.

To edit the Web App Physical Path site parameter

1. Log in to the Plant Applications Administrator.

You must have **Administrator access** to the **Administrator security group** to change site parameters.

2. Open Global Configuration.
3. Right-click on the Administer Site Parameters folder and click Edit Site Parameters.
4. In the Site Parameters dialog box, double-click on Web App Physical Path. The Edit Parameter dialog box appears.
5. Type the physical path of the Plant Applications dashboard in the Value box.
6. Click the OK button to save your changes and close the dialog box.
7. Click the Close button to close the Site Parameters dialog box.
8. Refresh the server.

Standard Web Reports Overview

X = Required; **●** = Optional

	Quality Module			Product Module		Efficiency Module			Production Module		All						
	Production Event	Production Event Status	Production Event Dimensions	Cre w/S hift	Pro ducts and Pro duct Change s	Dow ntim e	W as te	Us er Def ine d Ev ent s	Proc ess Ord ers and Schedul es	Pro ces s Ord er Sta tus	Vari able s	Varia ble Specif icatio ns	Fault/ Reaso ns	Act ion s	Ala rm s	Elec troni c Sign atur e	Conf igure d Displ ays
Event Analysis				●	●	●	●	●					●	●	●		
Event History Color	●				X	●	●	●	●		X	X			●		
Event History Grid	●				X	●	●	●	●		X	X			●		
Inventory	X	X	X		X						●	●				●	

Listin g																	
Line Produ ction Timeli ne	x																
Line Time Accou nting	●			●	●	●	●	●	●						●		
Proce ss Order Detail	x	x	x				●		x	x	●	●			●	●	
Produ ction Listin g	x	●	●	●	●	●	●		●								
Sequ ence of Event s	●			●		●	●	●	●						●		
Simpl e Trend	●			●		●	●	●	●		x	●	●		●		
Test Confo rmanc e by					x						x	x					

Plant Applications Web Reporting

Product																	
Test Conformance by Shift				x	x						x	x					
Thumbnail Trends					●						x	●					x
Transaction Detail											x	x					
Unit Time Accounting	●			●	●	●	●	●	●						●		
Variable Centerline Analysis					x						x	x					x
Variable Conformance Summary					x						x	x					

Variable Scatter Analysis					●						✘						
Variable Specification Report					✘						✘	✘					
Variable Statistics Summary					✘						✘	✘					

Alarm Detail

This web report provides detailed alarm information on a specific variable. This web report is accessed from the following web parts:

- [Alarm List By Variables Web Part](#)
- [Alarm List By Units Web Part](#)
- [Sequence of Events](#)

These web parts pass configuration information to this web report. The only option when viewing this report is whether to display electronic signature information. See below.


The report includes a drop-down menu for quick navigation to the various summaries presented.

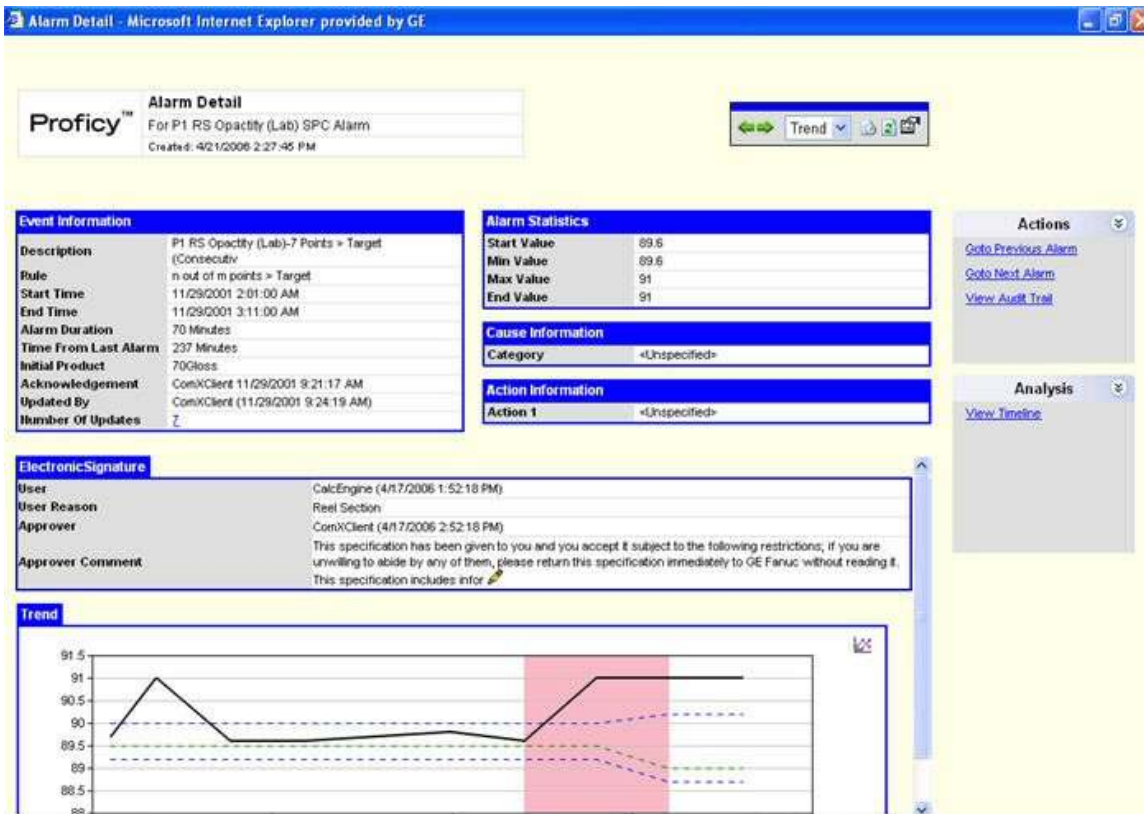
Click **View Timeline** to open the [Unit Time Accounting](#) web report.

Click **View Audit Trail** to view an [audit report](#) of the changes made to the alarm.

To display electronic signature information, click the  **Properties** icon on the web report's toolbar and select **Display Electronic Signature Information**.

Trend Analysis

The Trend Analysis displays the target value (indicated by a green dash line) and the upper and lower specification limits (indicated by a blue dash line). The actual value and timestamp are plotted on the chart. The alarm duration is indicated in red. Click  to view the interactive trend chart.



Audit Trail Reports

Audit information can be viewed from a variety of reports by clicking **View Audit Trail** link. These audit reports provided detailed information about changes made to specific events, such as downtime or alarm.

The information provided by these reports includes:

- **Update Time:** This is the date and time the change was made.
- **Update User:** This is the electronic signature of the person who made the change.
- **Operation:** This describes the action that was taken.
- **Field:** This describes the field that was changed.
- **From Value:** This displays the original value of the field.
- **To Value:** This displays the change that was made to the field.

Update Time	Update User	Operation	Field	From Value	To Value
4/27/2006 12:35:14 PM	EventMgr	Added	StartTime	-	4/27/2006 12:35:00 PM
		Added	Duration	-	50.416666 Minutes
		Added	Uptime	-	25.00 Minutes
4/27/2006 1:01:18 PM	ComXClient	Added	EndTime	-	4/27/2006 1:01:14 PM
		Updated	Duration	50.416666 Minutes	26.233333 Minutes
		Added	ESigPerformer	-	ComXClient
		Added	ESigPerformedTime	-	4/27/2006 1:01:17 PM
4/27/2006 1:01:28 PM	ComXClient	Added	ESigPerformerReason	-	Packaging
		Added	Location	-	unit
		Updated	ESigPerformedTime	4/27/2006 1:01:17 PM	4/27/2006 1:01:28 PM
4/27/2006 1:01:35 PM	ComXClient	Added	Cause1	-	Minor Stops
		Updated	ESigPerformedTime	4/27/2006 1:01:28 PM	4/27/2006 1:01:35 PM
4/27/2006 1:01:39 PM	ComXClient	Added	Cause2	-	Operator Assist
		Updated	ESigPerformedTime	4/27/2006 1:01:35 PM	4/27/2006 1:01:39 PM
4/27/2006 1:01:44 PM	ComXClient	Added	Cause3	-	Stop for Quality
		Added	Cause4	-	Stop for Quality
		Updated	ESigPerformedTime	4/27/2006 1:01:39 PM	4/27/2006 1:01:44 PM

Audit Trail Report for a Downtime Event

Downtime Detail

This web report is accessed from the following web reports:

- [Sequence of Events](#)
- [Line Time Accounting](#)

Click **View Audit Trail** to view an [audit trail report](#).

To display electronic signature information, click the  **Properties** icon on the web report's toolbar and select **Display Electronic Signature Information**.

Event Information

The Downtime Detail report displays the following information for the downtime event:

- **Start Time:** The date and time the downtime event began.
- **End Time:** The date and time the downtime event ended.

- **Time to Repair:** The duration of the downtime event.
- **Time Between Failure:** The amount of time since the last downtime event ended and this downtime event began.
- **Product:** The product that was being produced.
- **Product Description:** The description of the product that was being produced.
- **Added By:** This is the service (for example, EventMgr) or user who inserted the downtime event.
- **Updated By:** If the downtime event has been edited, this is the person who last made a change to the downtime event.

NOTE: If the downtime event has not been changed, Added By will be displayed. If the downtime event has been changed, Updated By will be displayed.

- **Number of Updates:** This is the number of times the downtime event was changed. Click the number to view an [audit trail report](#).

Cause or Action Information

Additionally, detailed cause and action information is provided if reason trees have been configured for the downtime event. For more information on attaching reason trees to downtime events, please see How to Attach Reason Trees to Downtime Locations.

The screenshot displays a web browser window titled "Downtime Detail - Microsoft Internet Explorer provided by GE". The main content area is titled "Proficy™ Downtime Detail" and includes the following sections:

- Event Information:**

Start Time	4/27/2006 12:35:00 PM
End Time	4/27/2006 1:01:14 PM
Time To Repair	26.2 Minutes
Time Between Failure	25 Minutes
Failure	
Product	D&Beer
Product Description	Dark Beer
Updated By	ComXClient
Number Of Updates	2
- Cause Information:**

Location	unit
Fault	<Unspecified>
Type	Minor Stops
Reason	Operator Assist
Detail	Stop for Quality
	Stop for Quality
- Electronic Signature:**

User	ComXClient (4/27/2006 1:01:44 PM)
User Reason	Packaging
Approver	
- Actions:**
 - [Goto Previous Event](#)
 - [Goto Next Event](#)
 - [View Audit Trail](#)
- Analysis:**
 - [View Timeline](#)

At the bottom of the page, it says "Powered By Plant Applications®".

Downtime Detail Report


Event Analysis

This application provides comprehensive pareto and statistical analysis of the selected event type. In general, raw data is gathered based on the filter criteria specified. That data is then summarized in a specific way for each chart. The following parameters are required:

- The start and end times
- The production unit(s)

- The specific event you want to analyze

If you choose events that are quantity based instead of time based, the report displays quantities instead of times. For example, waste doesn't show durations, it shows the amount of waste.

While viewing the report, you can hover over most items to view detailed information, and most charts and graphs can be clicked to view more specific information. You can also dynamically change the information on the report by clicking the  **Properties** icon to open the **Event Analysis Options** dialog box, where you can change the following information:

- Event type
- Security group
- Time period
- Production units
- Products
- Causes and actions
- Which analysis to perform

Definitions	
Duration	The duration of the event but pro-rated so that none of the event falls out of the reporting range.
Time to repair	The duration of the event. If the event doesn't have an end time, the current time is assumed.
Time previous failure	The amount of uptime between the events. Uptime that starts before the reporting time is not counted, but the last uptime that starts within the reporting range is fully counted.
MTTR	Mean time to repair. The average time it takes to repair something.
MTBF	Mean time between failures. The average length of time between failures.
MAPE	The mean amount of waste per event. MAPE replaces MTTR for waste events.
MABE	The mean amount produced between waste events. MABE replaces MTBF for waste events.
Operating Time	Operating time is Gross Running Time.

Product Analysis

% Operating Time: This pie chart shows the percentage of time that each product ran out of the total operating time. Example: (Prod1 Operating time) / (Total Operating time)

% Fault Time: This bar chart shows percentage of downtime that occurred, grouped by the product that was running. Example: Product 1 Fault Time % = (downtime during Product 1) / (operating time of Product 1)

Crew Analysis

% By Crew: This pie chart shows the percent of downtime attributed to a specific crew.

MTTR By Crew: This bar chart shows the average time to repair, in minutes, for each crew.
Example: $\text{sum}(\text{crew1 time to repair}) / \text{crew 1 downtime occurrences}$

MTBF By Crew: The bar chart shows the average uptime, in minutes, for each crew.

Occurrences By Crew: This bar chart shows the number of downtime events that occurred during each crew.

Fault Analysis

% By Fault: This pie chart shows the percent of downtime attributed to a specific fault.

MTTR By Fault: This bar chart shows the average time to repair, in minutes, for each fault.
Example: $\text{sum}(\text{fault1 time to repair}) / \text{fault1 downtime occurrences}$

MTBF By Fault: The bar chart shows the average uptime, in minutes, for each fault.

Occurrences By Fault: This bar chart shows the number of downtime events that occurred during each fault.

Cause Analysis

% By Cause: This pie chart shows the percent of downtime attributed to a specific cause.

MTTR By Cause: This bar chart shows the average time to repair, in minutes, for each cause.
Example: $\text{sum}(\text{cause1 time to repair}) / \text{cause1 downtime occurrences}$

MTBF By Cause: The bar chart shows the average uptime, in minutes, for each cause.

Occurrences By Cause: This bar chart shows the number of downtime events that occurred during each cause.

Action Analysis

% By Action: This pie chart shows the percent of downtime attributed to a specific action.

MTTR By Action: This bar chart shows the average time to repair, in minutes, for each action.
Example: $\text{sum}(\text{action1 time to repair}) / \text{action1 downtime occurrences}$

MTBF By Action: The bar chart shows the average uptime, in minutes, for each action.

Occurrences By Action: This bar chart shows the number of downtime events that occurred during each action.

Location Analysis

% By Location: This pie chart shows the percent of downtime attributed to a specific location.

MTTR By Location: This bar chart shows the average time to repair, in minutes, for each location.
Example: $\text{sum}(\text{location1 time to repair}) / \text{location1 downtime occurrences}$

MTBF By Location: The bar chart shows the average uptime, in minutes, for each location.

Occurrences By Location: This bar chart shows the number of downtime events that occurred during each location.

Category Analysis

% By Category: This pie chart shows the percent of downtime attributed to a specific category.

MTTR By Category: This bar chart shows the average time to repair, in minutes, for each category. Example: $\text{sum}(\text{category1 time to repair}) / \text{category1 downtime occurrences}$

MTBF By Category: The bar chart shows the average uptime, in minutes, for each category.

Occurrences By Category: This bar chart shows the number of downtime events that occurred during each category.

Non-productive Time

These charts are reporting on non-productive time for the entire reporting range, not just what occurred during the event being analyzed. For more information, see Non-Productive Time.

Non-Productive time reasons. Displays the amount of non-productive time that can be attributed to each reason.

Productive time vs. non-productive time. The ratio of productive vs. non-productive time.

Non-productive reason occurrences. The number of occurrences of each type of non-productive reason.

Capability Analysis

The curved line represents a normal distribution curve based on the standard deviation and average. The bars represent the number of occurrences of a "time to repair" range. For example, one bar could represent a time to repair of 10 minutes. The height of the bar determines how many times the time to repair was 10 minutes.

The background colors represent the specification limits (upper warning, lower reject, and so on). The MTBF analysis is the same, except that the time since the previous failure is used.

Trends

The trend line overlays the actual data to show a rough representation of the slope of the data. The trend is a linear regression analysis of the data points, and represents a best fit straight line. The least square method is used to calculate the *slope* and *y* intercept.

The background is shaded based on the average and standard deviation values of the data.

- The **yellow** zone start value is calculated using the formula **$\text{Avg} + (2 \times \text{StdDev})$** .
- The **red** zone is calculated using **$\text{Avg} + (3 \times \text{StdDev})$** .
- The rest of the background is **green**.

The standard deviation uses the StdDevP function, which calculates standard deviation based on the entire population.

The total time trend plots the duration of the event in the number of buckets specified in the parameters.

The MTBF trend plots the time since previous failure.

The MTTR plots the time to repair.

Data Summary

Cause: This is the cause of the event.

Total: The sum of the duration (in minutes) of the cause. If the event is a Waste event, then the total is the total waste amount for the cause.

MTTR: Mean Time To Repair. This is the average number of minutes that the event lasts. In other words, it is the average amount of time it took to repair the problem. The number in the parentheses is the standard deviation of MTTR. For alarms, MTTR is the time to acknowledge the alarm plus the time to repair.

MTBF: Mean Time Between Failure. This is the average number of minutes before a fault occurs. The number in parentheses is the standard deviation of MTBF. MTBF is a direct indication of the probability that a particular fault will be the fault that will cause failure. The shorter the MTBF for a particular fault, the higher the probability that it will be the fault that will cause failure. If the event type is a Waste event, then MTBF becomes MABF (Mean Amount Between Failure), which is the mean production amount between waste events.

MTTA: Mean Time To Acknowledge. This applies only to alarms and is the average number of minutes it takes for an alarm to be acknowledged.

#Occurrences: The sum of the number of causes.

%Total: The duration of this event compared to the operating time.

%Fault: The duration of this event compared to the total production time.

Inc MTTR (Incremental Mean Time To Repair). The standard deviation of the time to repair compared to the total production time.

Inc MTBF (Incremental Mean Time Between Failure). The standard deviation of the mean time between failures compared to the total production time.

Comparing Inc MTTR to Inc MTBF can help you statistically determine if more benefit can be realized by improving repair times (MTTR) or preventing failures (MTBF).

Criteria Summary

This chart is a summary of the criteria used to create the Web report.

Event Detail Report

The Event Detail report displays detailed information about a specific production event. This report can be accessed by clicking on a production event hyperlink in the [Event History Color report](#).

When you create the report, you must specify:

- The time period for which you want to search for production events
- The production unit where the production event occurred

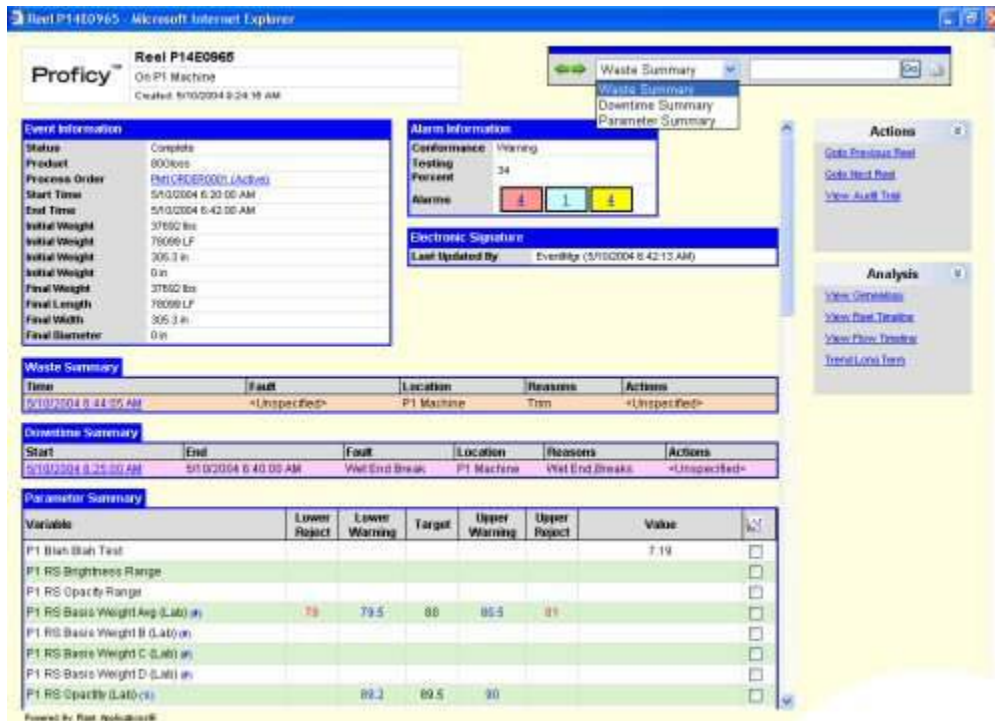
Plant Applications Web Reporting

- The production event

The Event Detail report will display a summary of any events, such as downtime or waste, that occurred during the selected production event. In addition, a list of variables and the associated specifications will be displayed in a Parameter Summary.

Click **View Audit Trail** to view an [audit report](#) of the changes made to the alarm.




To display electronic signature information, click the  **Properties** icon on the web report's toolbar and select **Display Electronic Signature Information**.



Event History Color

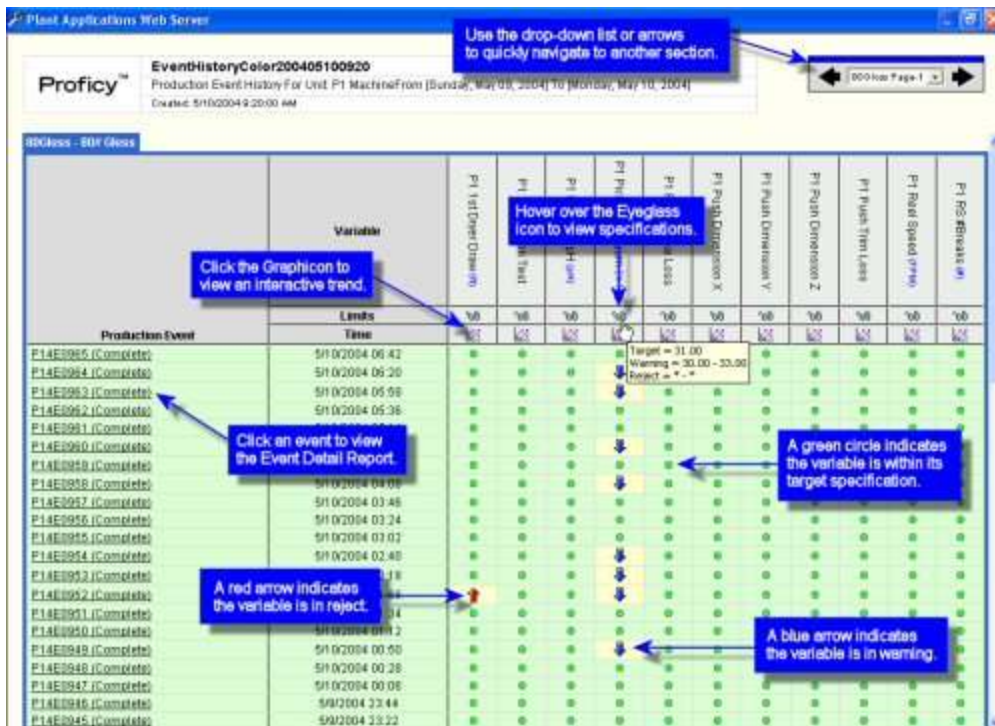
This ASP-based report lists events and event data for selected variables. The report requires the following parameters:

- Start and end time
- The variables you want on the report
- The event type


For each event, the report will graphically show whether the selected variables were within the specifications. Comments are indicated with the Pencil icon . Hover over the pencil to view the comment. Below each variable, you can hover over the Eyeglass icon  to view specifications for the variable. Click the Graph icon  to view an interactive trend. You can click inside the Interactive Trend chart to view information over a shorter time period.

You can click each event to view detailed information about the event.

Event History Color Web Report





When you click an event on the Event History Color report, you can view an [Event Detail report](#).

When you click the  Graph icon on the Event History Color report, you can view an [interactive trend analysis](#) of the selected variable.

Event History Grid

This ASP-based report lists events and event data for selected variables. This report requires the following parameters:

- Start and end time
- The variables
- The event type

For each event, the report will show whether the selected variables were within the specifications. The cell color indicates whether the value was within specification limits. Below each variable are the Target, Warning, and Reject specifications. Comments are indicated with the Pencil icon . Hover over the pencil to view the comment. Click the Graph icon  to view an interactive trend analysis of the selected variable. You can click inside the Interactive Trend to view information over a shorter time period.

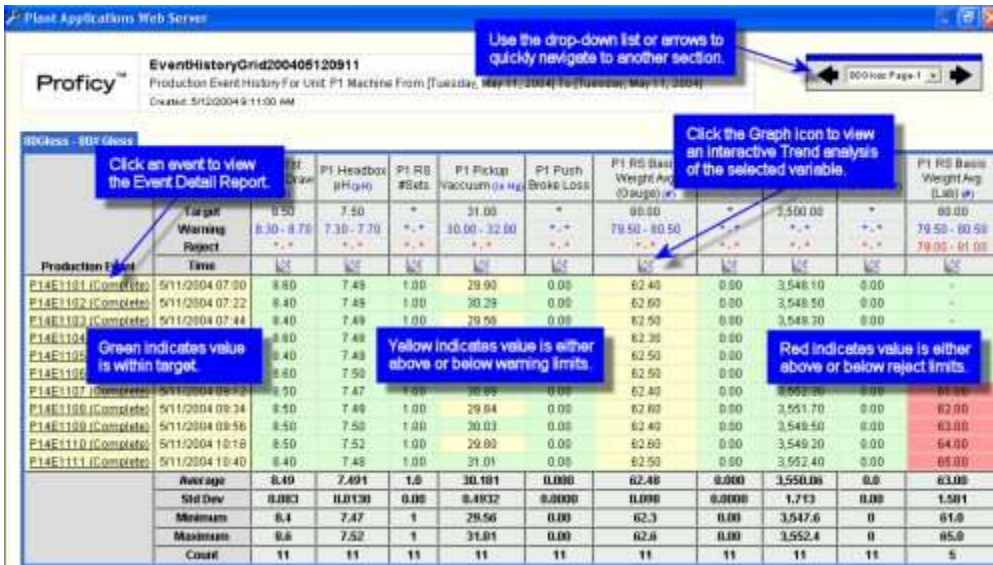
You can click each event to view the detailed information about the event.

The cell background color indicates whether the value is within specification limits.

- **Green:** The value is within the target limits.
- **Yellow:** The value is either above or below the warning limits.
- **Red:** The value is either above or below the reject limits.

If the variable has no specification limits, the cell is always green.

Event History Grid Web Report

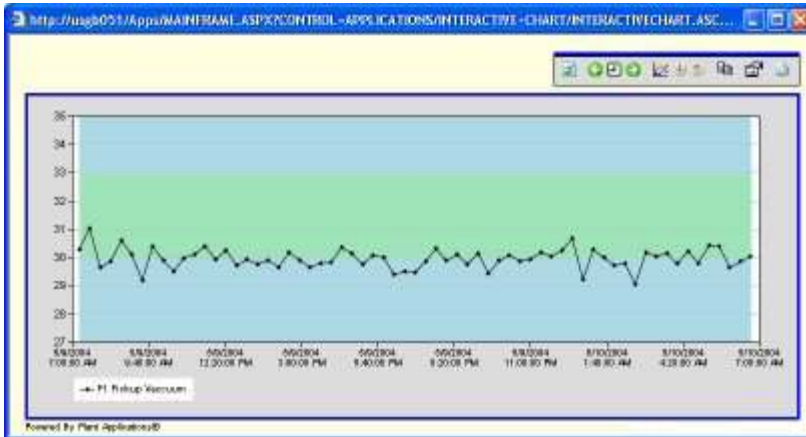


Event Detail Report

When you click an event on the Event History Grid report, you can view an [Event Detail](#) report.

Interactive Trend

When you click the Graph icon on the Event History Grid report, you can view an interactive trend analysis of the selected variable.



Inventory Listing

This application lists summary statistics and details about inventory for specific units. This report requires the following parameters:

- The production units

- The products

The report provides a summary of inventory by production unit, by product, and by status.

Inventory Listing Web Report

For each unit that produced inventory, the report lists the following information:

- The event name
- The production unit
- The product
- Conformance: If all variables are within target, then conformance is Good. If one or more variables are in warning, then conformance is Warning. If one or more variables are in reject, then conformance is reject. The number in parentheses () is the percentage of variables that have data. The variable must have Conformance Variable selected in the Variable sheet.
- Dimensions: Hover over the dimensions to see more detailed information.
- Age: How long the product has been in inventory, in the format: DDD HH:MM:SS
- Signed By: If electronic signature is used, the person who signed off on the event.
- Approved By: If electronic signature is used, the person who approved the event.

The screenshot shows the Proficy web interface for an Inventory Listing report. It includes a search bar at the top with a callout: "Type a search term and click the Search icon." Below the search bar are four summary tables: Unit Summary, Product Summary, Status Summary, and a main data table. A callout points to the Unit Summary table: "Click the arrows or use the drop-down list to quickly navigate between report sections." Another callout points to the Product Summary table: "Hover over a product's dimensions to view additional information." A third callout points to an event in the main data table: "Click an event to view the Event Detail report." The main data table has columns for Real, Unit, Product, Conformance, Dimensions, Age, Signed By, and Approved By.

Unit	Total Count	Total Amount
P1 Machine	9	313965

Product	Total Count	Total Amount
800glass - 80# Glass	8	225491
800glass - 80# Glass	2	74996
800glass - 60# Glass	1	13478

Status	Total Count	Total Amount
Inventory	9	313965

Real	Unit	Product	Conformance	Dimensions	Age	Signed By	Approved By
P12L0702 (Inventory)	P1 Machine	80Glass	Warning (47%)	13478.00 lbs	563 23:55:00	-	-
P14E1208 (Inventory)	P1 Machine	80Glass	Good (47%)	37555.00 lbs	23:32:00	-	-
P14E1209 (Inventory)	P1 Machine	80Glass	Good (80%)	37604.00 lbs	Weight = 32478.00 lbs Length = 26288.00 lf Width = 305.80 in	-	-
P14E1210 (Inventory)	P1 Machine	80Glass	Good (47%)	37557.00 lbs	22:26:00	-	-
P14E1211 (Inventory)	P1 Machine	80Glass	Good (50%)	37584.00 lbs	22:26:00	-	-
P14E1212 (Inventory)	P1 Machine	80Glass	Good (47%)	37594.00 lbs	22:04:00	-	-
P14E1213 (Inventory)	P1 Machine	80Glass	Good (80%)	37627.00 lbs	21:42:00	-	-
P14E1214 (Inventory)	P1 Machine	80Glass	Good (47%)	37498.00 lbs	21:20:00	-	-
P14E1215 (Inventory)	P1 Machine	80Glass	Good (47%)	37498.00 lbs	20:58:00	-	-

Event Detail Report

When you click an event on the Inventory Listing report, the Event Detail Report opens.

Plant Applications Web Reporting

Proficy™ Reel P14D1307
On P1 Machine
Created: 4/15/2004 12:46:40 PM

Waste Summary

Event Information

Status	Inventories
Product	700000
Process Order	RS18102 (Concrete)
Start Time	4/15/2004 9:10:00 AM
End Time	4/15/2004 9:32:00 AM
Initial Weight	21257 lbs
Initial Weight	44147 LF
Initial Weight	304.6 in
Initial Weight	0 in
Final Weight	21257 lbs
Final Weight	44147 LF
Final Weight	304.6 in
Final Weight	0 in

Alarm Information

Conformance: Warning
Testing Percent: 44
Alarms: 5 0 1

Electronic Signature
Last Updated By: ComClient (4/15/2004 11:05:37 AM)

Waste Summary

Time	Fault	Location	Reasons	Actions
4/15/2004 10:55:55 AM	<Inspected>	P1 Machine	Trim	<Inspected>

Parameter Summary

Variable	Lower Reject	Lower Warning	Target	Upper Warning	Upper Reject	Value	
P1 Blah Blah Test						7.25	<input type="checkbox"/>
P1 RS Brightness Range							<input type="checkbox"/>
P1 RS Opacity Range							<input type="checkbox"/>
P1 RS Basis Weight Avg (Lab) (g)	88	89.6	78	70.6	71		<input type="checkbox"/>
P1 RS Basis Weight B (Lab) (g)							<input type="checkbox"/>
P1 RS Basis Weight C (Lab) (g)							<input type="checkbox"/>
P1 RS Basis Weight D (Lab) (g)							<input type="checkbox"/>
P1 RS Opacity (Lab) (%)		89.2	89.5	90			<input type="checkbox"/>
P1 RS Brightness (Lab) (%)		80.5	81	81.5			<input type="checkbox"/>
P1 RS Glines Top (Lab) (%)		80	81.2	82			<input type="checkbox"/>
P1 RS Glines Bottom (Lab) (%)		80	81.3	82			<input type="checkbox"/>

Powered by Real Applications®

Line Production Timeline

This application displays a timeline of production events across multiple units. You can select production units from multiple production lines. The following parameters are required:

- Start and end times
- Production units

You can click the Properties icon  on the report's toolbar to dynamically change the time frame and add or remove production units in the [Line Production Timeline Properties](#) dialog box.

Line Production Timeline Properties - Microsoft Internet Expl...

Time | Units

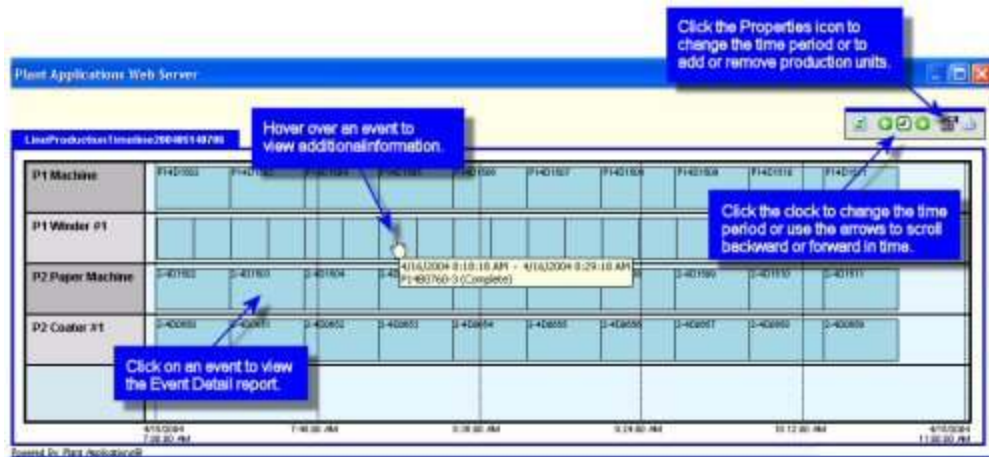
Start Time: 4/15/2004 7:33:00 AM

End Time: 4/15/2004 11:33:00 AM

Go Apply

Line Production Timeline Web Report


In the Line Production Timeline report, you can click an event to view the Event Detail report or hover over an item to view additional details.



Line Time Accounting

This application displays the timeline of selected events over multiple production units during a specified period of time. You can select production units from multiple production lines. This report requires the following parameters:

- The start and end time
- The production units
- The event types

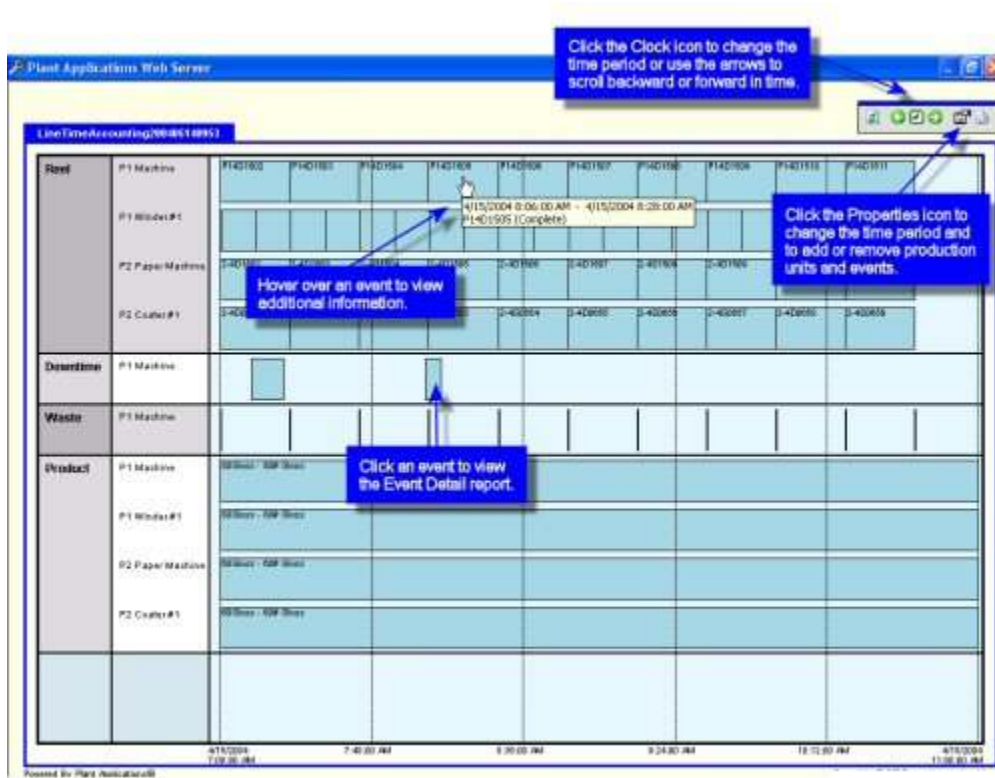
Click the Properties icon  to open the [Line Time Accounting Properties](#) dialog box where you can change the time period, the units, and the events included in the report.

The screenshot shows a dialog box titled "Line Time Accounting Properties - Microsoft Internet Explorer". The dialog has three tabs: "Time", "Units", and "Events". The "Time" tab is selected. It contains two time selection fields: "Start Time" and "End Time". Both fields are set to "4/15/2004 10:43:00 AM". Below the fields are "Ok", "Cancel", and "Apply" buttons.


Line Time Accounting Report

Plant Applications Web Reporting

You can click each event to view the Event Detail report. You can hover over an event to view additional information about the event.



OEE Summary

The OEE Summary report shows OEE and other crucial production summary statistics. From this report you can also click the  symbol to access individual [Unit OEE Web Parts](#).

The report includes a drop-down menu for quick navigation to the various summaries presented.

An asterisk (*) next to the performance rate indicates that performance is capped at 100%. To allow this number to exceed 100%, change the value in the site parameter, OEE Max Limit Override.

Available parameters are:

- Start and end times (with shortcut options)
- Line and unit selection
- Summary display options

If the report start time or end time falls outside of an event start or end time, then loading time for events partially outside the reporting period are calculated. The production for the event is awarded to the reporting period on the basis of the following proration:

$$\left(\frac{\text{Total Event Production}}{\text{Total Event Loading Time}} \right) \times \text{Event Loading Time Within Reporting}$$

Period

In cases where the last event in the specified reporting period has not yet ended, the Report End Date for all calculations is actually the end date of the last completed event. That is, all availability and production calculations are based on the end date/time of the last completed event, and not the specified reporting end date.

OEE Summary

Plant Applications Web Server

Proficy™ OEESummary20060831103338
 Production For PM1 Dry End
 (NPT) Contains Non-Productive Time
 * Value Is Capped At 100%
 8/30/2006 07:00 - 8/31/2006 07:00
 Created 8/31/2006 10:33

OEE Summary

Actual Speed	Ideal Speed	Performance Rate	Net Production	Waste	Quality Rate	Run Time	Loading Time	Available Rate	OEE
19514.81 #/Hour	19514.81 #/Hour	*100.00 %	414315.92 #	2000.00 #	99.52 %	21:20:00	21:45:00	98.08 %	97.61 %

Production Day Summary

Production Day	Product Desc	Actual Speed	Ideal Speed	Performance Rate	Net Production	Waste	Quality Rate	Run Time	Loading Time	Available Rate	OEE
2006-08-30	50Gloss	19514.81 #/Hour	19514.81 #/Hour	*100.00 %	414315.92 #	2000.00 #	99.52 %	21:20:00	21:45:00	98.08 %	97.61 %
2008-08-30	== SubTotal ==	19514.81 #/Hour	19514.81 #/Hour	*100.00 %	414315.92 #	2000.00 #	99.52 %	21:20:00	21:45:00	98.08 %	97.61 %
	== Grand Total ==	19514.81 #/Hour	19514.81 #/Hour	*100.00 %	414315.92 #	2000.00 #	99.52 %	21:20:00	21:45:00	98.08 %	97.61 %

Shift Summary

Shift Desc	Product Desc	Actual Speed	Ideal Speed	Performance Rate	Net Production	Waste	Quality Rate	Run Time	Loading Time	Available Rate	OEE
1	50Gloss	17985.41 #/Hour	17985.41 #/Hour	*100.00 %	134890.58 #	0.00 #	100.00 %	07:30:00	07:45:00	96.77 %	96.77 %
2	50Gloss	20528.89 #/Hour	20528.89 #/Hour	*100.00 %	141991.50 #	0.00 #	100.00 %	06:55:00	07:00:00	98.81 %	98.81 %
3	50Gloss	20159.11 #/Hour	20159.11 #/Hour	*100.00 %	137433.84 #	2000.00 #	98.57 %	06:55:00	07:00:00	98.81 %	97.39 %
	== Grand Total ==	19514.81 #/Hour	19514.81 #/Hour	*100.00 %	414315.92 #	2000.00 #	99.52 %	21:20:00	21:45:00	98.08 %	97.61 %

Crew Summary

Crew Desc	Product Desc	Actual Speed	Ideal Speed	Performance Rate	Net Production	Waste	Quality Rate	Run Time	Loading Time	Available Rate	OEE
A	50Gloss	17985.41 #/Hour	17985.41 #/Hour	*100.00 %	134890.58 #	0.00 #	100.00 %	07:30:00	07:45:00	96.77 %	96.77 %

Production Listing

This report provides a summary of production event information for the selected production unit and variables over the specified time period. This report requires the following parameters:

- The start and end time
- Production unit and variable(s)

You have the option of displaying Downtime, Genealogy, Waste, and Non-productive time information. You can also summarize the information by one or more of the following: Crew, Day, Process Order, Product, Shift, Status.

Grand Totals

The Grand Totals section displays the total number of production events and totals and percentages for any events that were selected when the report was configured.

Event Count	Initial Weight	Waste Events	Waste Amount	Waste Percent	Downtime Events	Runtime Amount	Downtime Amount	Downtime Percent
119	10958915.0 lbs	114	7808985.50 lbs	71.26	42	1 18:18:00	05:30:00	13.00

Production Day Summary

The Production Day Summary section displays production information summarized by production day. Variable values are averaged per shift.

Production Day Summary													
Production Day	Event Count	Initial Weight	Waste Amount	Waste Percent	NP Time	RunTime Minutes	Downtime Minutes	Downtime Events	Percent DownTime	P1 1st Dryer Draw	P1 Headbox pH	P1 Pickup Vacuum	P1 Reel Speed
2006-01-26	54	8778746.00 lbs	7628956.70 lbs	86.90	01:00:00	21:18:00	02:30:00	17	11.74	458.50	405.11	1620.49	191699.30
2006-01-27	65	2180169.00 lbs	180028.80 lbs	8.26	00:00:00	21:00:00	03:00:00	25	14.29	554.50	487.44	1952.55	230729.70

Shift Summary

The Shift Summary section displays production information summarized by shift over the specified time period. Variable values are averaged per shift.

Shift Summary													
Shift Desc	Event Count	Initial Weight	Waste Amount	Waste Percent	NP Time	RunTime Minutes	Downtime Minutes	Downtime Events	Percent DownTime	P1 1st Dryer Draw	P1 Headbox pH	P1 Pickup Vacuum	P1 Reel Speed
Day	31	7800777.00 lbs	7649979.90 lbs	98.07	01:00:00	13:37:00	01:55:00	13	14.08	263.70	232.70	934.08	110041.10
Evening	44	1503925.00 lbs	77611.90 lbs	5.16	00:00:00	14:18:00	01:50:00	15	12.82	374.50	329.75	1317.31	156200.10
Night	44	1654213.00 lbs	81393.70 lbs	4.92	00:00:00	14:23:00	01:45:00	14	12.17	374.80	330.10	1321.65	156187.80

Crew Summary

The Crew Summary section displays production information summarized by crew over the specified time period. Variable values are averaged per crew.

Crew Summary													
Crew Desc	Event Count	Initial Weight	Waste Amount	Waste Percent	NP Time	RunTime Minutes	Downtime Minutes	Downtime Events	Percent DownTime	P1 1st Dryer Draw	P1 Headbox pH	P1 Pickup Vacuum	P1 Reel Speed
A	22	827110.00 lbs	40677.80 lbs	4.92	00:00:00	06:59:00	01:05:00	8	15.51	187.50	164.93	660.95	78101.00
B	10	7199675.00 lbs	7547558.80 lbs	104.83	01:00:00	06:46:00	00:55:00	5	13.58	84.40	75.08	300.00	35508.80
C	43	1353070.00 lbs	143103.10 lbs	10.58	00:00:00	14:01:00	01:55:00	14	13.67	366.10	322.48	1293.87	152636.00
D	44	1579060.00 lbs	77645.80 lbs	4.92	00:00:00	14:33:00	01:35:00	15	10.88	375.00	330.06	1318.22	156183.20

Process Order Summary

The Process Order Summary section displays production information for each process order. Variable values are averaged per process order.

Process Order Summary													
Process Order Number	Event count	Initial Weight	Waste Amount	Waste Percent	NP Time	RunTime Minutes	Downtime Minutes	Downtime Events	Percent DownTime	P1 1st Dryer Draw	P1 Headbox pH	P1 Pickup Vacuum	P1 Reel Speed
P011395	119	10958915.0 lbs	7808985.50 lbs	71.26	01:00:00	1 18:18:00	05:30:00	42	13.00				

Product Summary

The Product Summary section display production information for each product. Variable values are averaged per product.


Product Summary													
Prod Desc	Event count	Initial Weight	Waste Amount	Waste Percent	NP Time	RunTime Minutes	Downtime Minutes	Downtime Events	Percent DownTime	P1 1st Dryer Draw	P1 Headbox pH	P1 Pickup Vacuum	P1 Reel Speed
80# Gloss	56	1992375.00 lbs	103639.00 lbs	5.20	00:55:00	18:12:00	02:20:00	15	12.82	476.50	420.17	1681.61	198792.60
50# Gloss	1	0.00 lbs	39431.30 lbs	00	00:05:00	00:17:00	00:05:00	1	29.41	8.30	7.52	30.19	3548.80
70# Matte	4	7049158.00 lbs	7498913.70 lbs	106.38	00:00:00	05:23:00	00:05:00	1	1.55	33.60	29.95	119.61	14204.10
90# Matte	58	1917392.00 lbs	167001.50 lbs	8.71	00:00:00	18:28:00	03:00:00	25	16.27	494.80	434.91	1741.63	205883.50



Status Summary

The Status Summary section displays production information by production status (for example, Complete). Variable values are averaged per production status.

Status Summary													
Event Status	Event Count	Initial Weight	Waste Amount	Waste Percent	NP Time	Runtime Minutes	Downtime Minutes	Downtime Events	Percent Downtime	P1 1st Dryer Draw	P1 Headbox pH	P1 Pickup Vacuum	P1 Reel Speed
Complete	119	10958915.0 lbs	7808985.50 lbs	71.26	01:00:00	1 18:18:00	05:30:00	42	13.00	1013.00	892.55	3573.04	422429.00

Event Details

The Event Details section provides detail information for each production event on the selected production unit for the specified time period. Click the  **Event Detail** icon to view the [Event Detail](#) report.

Event Details															
Production Day	Shift Name	Crew Name	Event Number	Process Order Number	Prod Desc	Event Status	Start Time	End Time	Initial Weight	Final Weight	Waste Amount	Event Downtime Minutes	NP Time	Event Downtime Count	P1 1st Dryer Draw
2006-01-26	Day	B	 P16A2601	P011395	70# Matte	Complete	2006-01-26 07:00:00	2006-01-26 11:22:00	7049158.00 lbs	0	7395838.00 lbs	00:05:00	00:00:00	1	8.50
2006-01-26	Day	B	 P16A2602	P011395	70# Matte	Complete	2006-01-26 11:22:00	2006-01-26 11:44:00	0.00 lbs	0	24108.00 lbs	00:00:00	00:00:00	0	8.20
2006-01-26	Day	B	 P16A2603	P011395	70# Matte	Complete	2006-01-26 11:44:00	2006-01-26 12:06:00	0.00 lbs	0	39468.20 lbs	00:00:00	00:00:00	0	8.40
2006-01-26	Day	B	 P16A2604	P011395	70# Matte	Complete	2006-01-26 12:06:00	2006-01-26 12:28:00	0.00 lbs	0	39499.50 lbs	00:00:00	00:00:00	0	8.50
2006-01-26	Day	B	 P16A2605	P011395	50# Gloss	Complete	2006-01-26 12:28:00	2006-01-26 12:50:00	0.00 lbs	0	39431.30 lbs	00:05:00	00:05:00	1	8.30

Sequence of Events

This application chronologically lists all events that occurred during the specified period of time. The report requires the following parameters:


- The start and end time
- The production unit(s)
- The event type(s)


The report is organized chronologically by parent events. You can click a parent event to show or hide the child events and then click on each child event to view detailed information about the event. You also can hover over an item on the report to view additional details.


 This icon indicates a Crew Schedule Change event.

 This icon indicates a Downtime event.

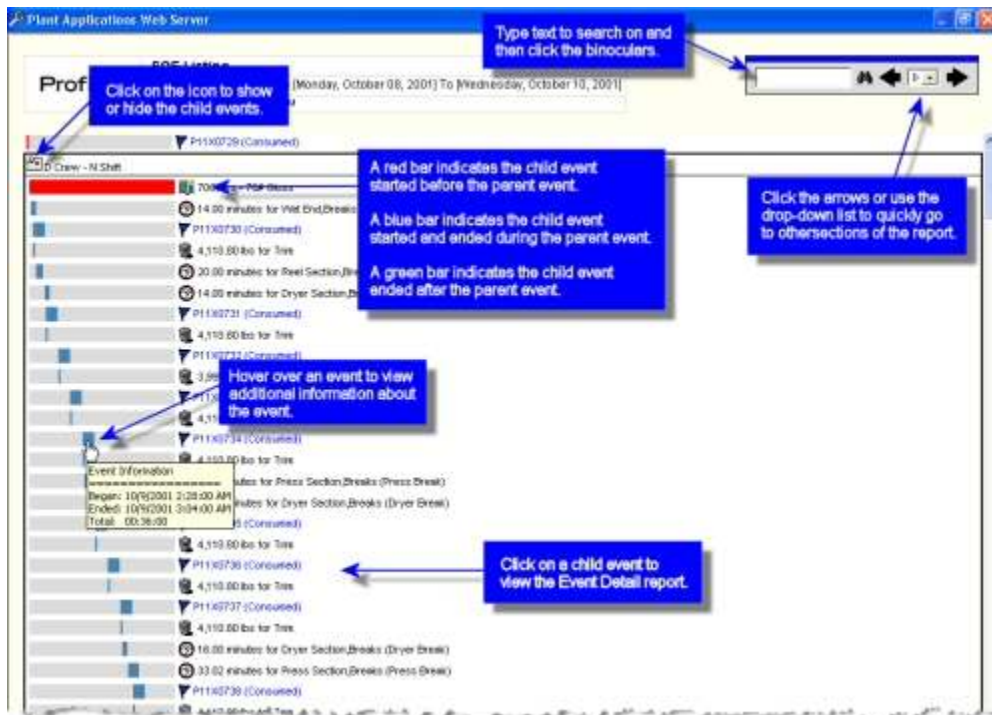
 This icon indicates a Waste event.

 This icon indicates a Product Change event.

 This icon indicates a Production event. The color of the flag indicates the production status.

 This icon indicates a User-Defined event.

Sequence of Events Report



Simple Trend

This application, also called **Interactive Trend**, allows you to trend multiple variables on a selected production unit. When you configure the report, you can:

- Specify the start and end time
- Select the variables by unit
- Select events by variables
- Filter on events (event ID is on the x-axis)

NOTE: Control limits can be automatically calculated as an option based on a configurable sample size. When available, calculated sigma values are reflected by control limits in trend charts.

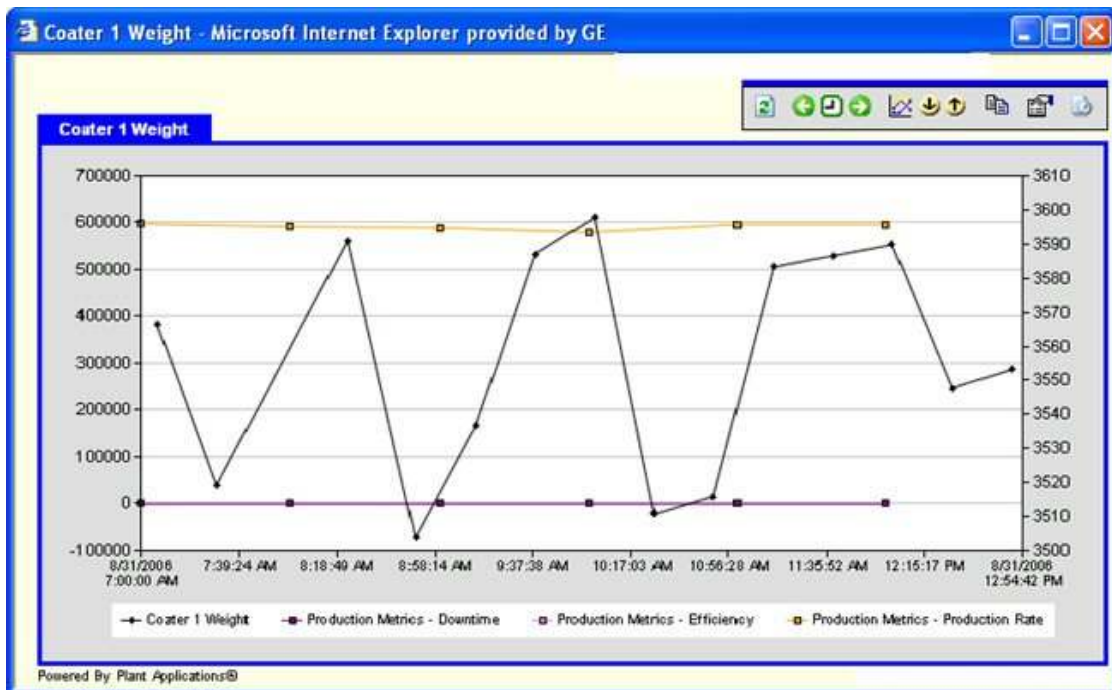
You can left-click anywhere in the report to decrease the time period (zoom in). You can right-click in the report to increase the time period (zoom out).

Click the **Properties** icon and then click the **Advanced** tab to adjust the "zoom" factor. On the **Data** tab, you can determine whether the data points for the selected variables are plotted relative to either the primary axis or the secondary axis. Variables plotted relative to the secondary axis are identified with squares on the plot line. You can also add additional variables or overlay event information, such as Downtime and Waste events.

NOTE: When you select Plot By Number Of Points on the Time tab, the Units, Event Type and Events tabs disappear. This is because these options conflict with the Plot By Number Of Points option.

This report can be accessed from the:

- [Thumbnail Trends](#) report
- [Variable Specification](#) report
- [Event History Color](#) report



On the toolbar:

- Click the clock or arrows to adjust the report's time period.
- Click the **Graph** icon to add or remove variables.
- Click the **Properties** icon to modify the report.

A green bar indicates the target limits.

Blue bars indicate the warning limits.

Red bars indicate the reject limits.

Left-click the report to zoom in or right-click to zoom out.

SPC Chart

A control chart enables you to:

- Reduce scrap and rework and for improving productivity.
- Prevent defects, which means less chance of nonconforming units produced.
- Prevent unnecessary process adjustments by distinguishing between common cause variation and special or assignable cause variation.
- Determine the state of the process by looking at patterns within the data. You can then make the necessary changes to improve the process performance.
- View information about important process parameters over time.

This SPC Chart is designed for operators and ongoing monitoring by Process Engineers and is not intended to be an in-depth analysis tool.

The X/MR, XBar/Range and XBar/Sigma charts all show the same control chart (in addition to the respective MR, R or S chart) and are differentiated only in how the control limits are calculated. If fixed limits are selected, the X, XBar-Range and XBar-Sigma charts will all be identical.

NOTE: Control limits can be automatically calculated as an option based on a configurable sample size. When available, calculated sigma values are reflected by control limits in SPC charts.








Prerequisites

To use the SPC Chart report, you must configure a variable and include that variable on an Autolog display.

To run or view the SPC Chart report in your browser, you must do one of the following:

- Add the SPC Chart report to your Users Tree.
- Create a report definition of the SPC Chart and add the definition to your Users Tree.

SPC Chart Functionality

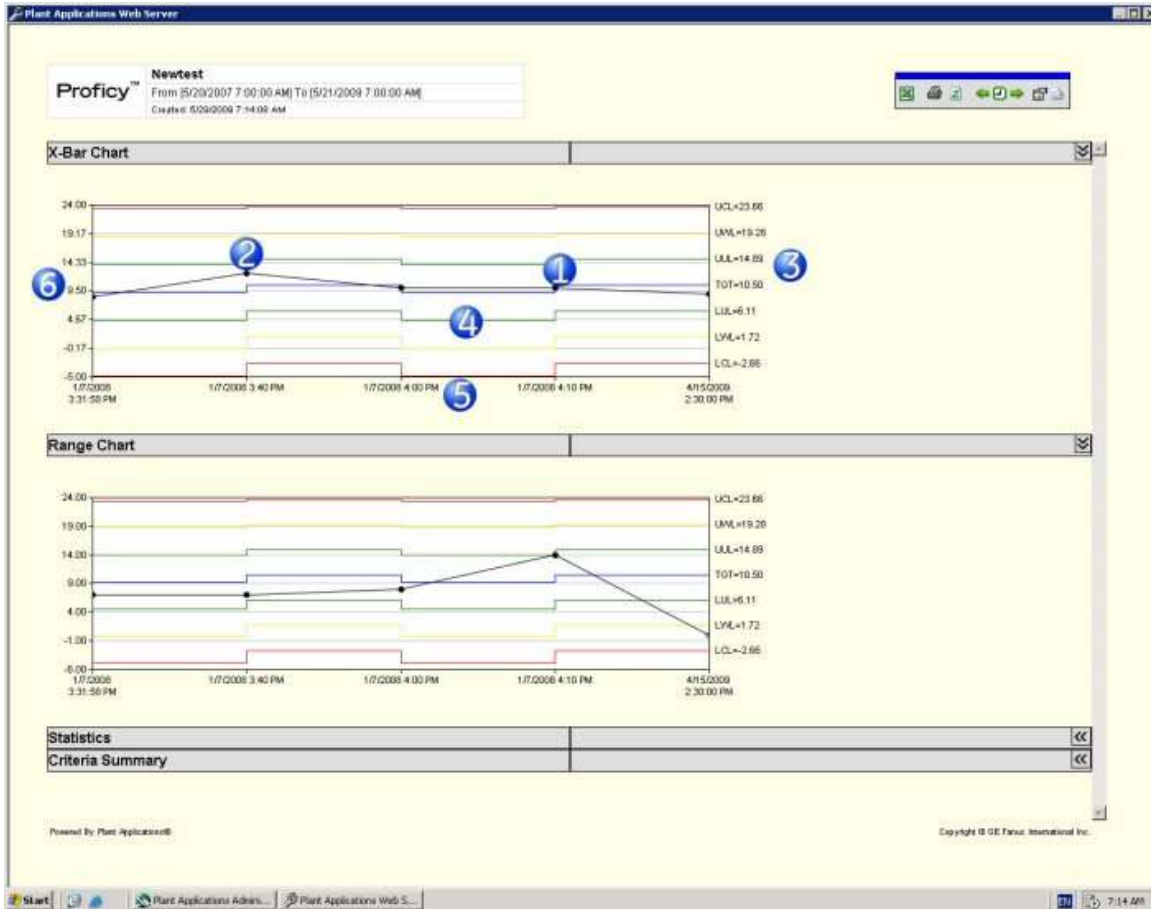
- The toolbar  enables you to:
 -  export the report to Excel
 -  print the report
 -  move the report forward or backward in time
 -  reconfigure the report (for more information, see page 27).
 - Click  to hide a section of the report.
 - Click  to view a section of the report.

X-Bar and Range Chart

An XBar-Range chart is a pair of control charts used with processes that have a subgroup size of two or more. The standard chart for variables data, X-bar and R charts help determine if a process is stable and predictable. The X-bar chart shows how the mean or average changes over time and the R chart shows how the range of the subgroups changes over time. It is also used to monitor the effects of process improvement theories. As the standard, the X-bar and R chart will work in place of the X-bar and s or median and R chart.

For the X-Bar chart, the value of the average will be plotted on the chart. The value will be the selected variable value itself (in other words, SPC variable subgroup type) or it could be a calculated value (in other words, time-series subgroup).

For the Range Chart, the value of the range will be plotted on the chart. The value will be the SPC range variable value or the calculated value for time-series subgroup.



1 Hover over a data point to view the value and subgroup, and any alarm violations, unless Automatic Control Limits has been enabled.

2 Color-coded data points indicate alarms for fixed limits and centerline violations for calculated limits.

Limit Type	Condition	Color
Fixed	SPC template alarm record exists	Red
Calculated	Value exceeds the control limit	Red

3 Limit values are displayed to the right of the chart.

4 Limit lines are color coded, as follows:

SPC Limit	Plant Applications Limit	Color
Specification	Reject	Purple
Control	Control	Red
Zone 2	Warning	Yellow

Zone 1	User	Green
Target	Target	Blue

5 The data on the X-axis is evenly spaced by subgroup. For Variable Subgroups the X-axis displays the timestamp of the data points at automatically determined intervals. For Time-Series subgroups, the X-axis displays the timestamp of the last data point in the subgroup.

6 The Y-axis is automatically defaulted to a range that is representative of the data set. You can fix the Y-axis to a set range on the Advanced tab of the Properties dialog box.

XBar Chart Control Limit Formulas

$$CL = \bar{\bar{X}}$$

$$UCL = CL + j \frac{\hat{s}}{\sqrt{m}}$$

$$LCL = CL - j \frac{\hat{s}}{\sqrt{m}}$$

- j is a multiplier for calculating control limit. The default value is 3.

The other zones on the chart (i.e. Zone 1/User Limit and Zone 2/Warning Limit) are 1/3 and 2/3 respectively of the control limit.

Range (R) Chart Control Limit Formulas

$$CL = \bar{R}$$

$$UCL = CL + jd_3\hat{s}$$

$$LCL = CL - jd_3\hat{s}$$

- j is a multiplier for calculating control limit. The default value is 3.
- d_3 is a constant defined by standard 6-sigma rules.

The other zones on the chart (i.e. Zone 1/User Limit and Zone 2/Warning Limit) are 1/3 and 2/3 respectively of the control limit.

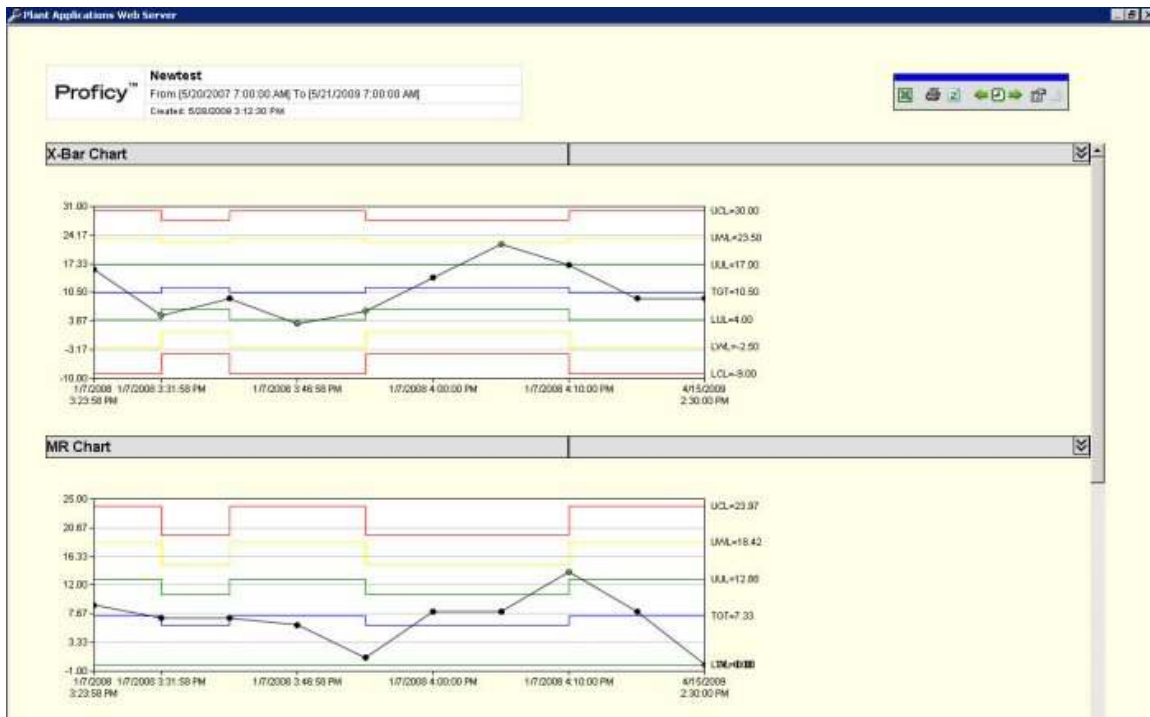
X-Bar and MR Charts

An individuals and moving range (X-MR) chart is a pair of control charts for processes with a subgroup size of one. Used to determine if a process is stable and predictable, it creates a picture of how the system changes over time. The individual (X) chart displays individual measurements. The moving range (MR) chart shows variability between one data point and the next. Individuals and moving range charts are also used to monitor the effects of process improvement theories.

The X/MR chart will show 2 charts the X chart for the individual values and the Moving Range (MR) chart for the ranges.

The format and layout of the X/MR chart is the same as the XBar/R chart described in the preceding section. The difference is in the data displayed and the calculation of the limits.

The MR chart shows the calculated moving range for each selected variable. The moving range is calculated based on a subgroup of 2 (the current and previous data points).



Individual (X) Chart Control Limit Formulas

$$CL = \bar{x}$$

$$UCL = CL + j \frac{\overline{MR}}{d_2}$$

$$LCL = CL - j \frac{\overline{MR}}{d_2}$$

- j is a multiplier for calculating control limit. The default value is 3.
- d_2 is a constant defined by standard 6-sigma rules.

The other zones on the chart (i.e. Zone 1/User Limit and Zone 2/Warning Limit) are 1/3 and 2/3 respectively of the control limit.

Moving Range (MR) Chart Control Limit Formulas

$$CL = \overline{MR}$$

$$UCL = CL + j \frac{\overline{MR} d_3}{d_2}$$

$$LCL = CL - j \frac{\overline{MR} d_3}{d_2}$$

- j is a multiplier for calculating control limit. The default value is 3.
- d_2 and d_3 are constants defined by standard 6-sigma rules.

Plant Applications Web Reporting

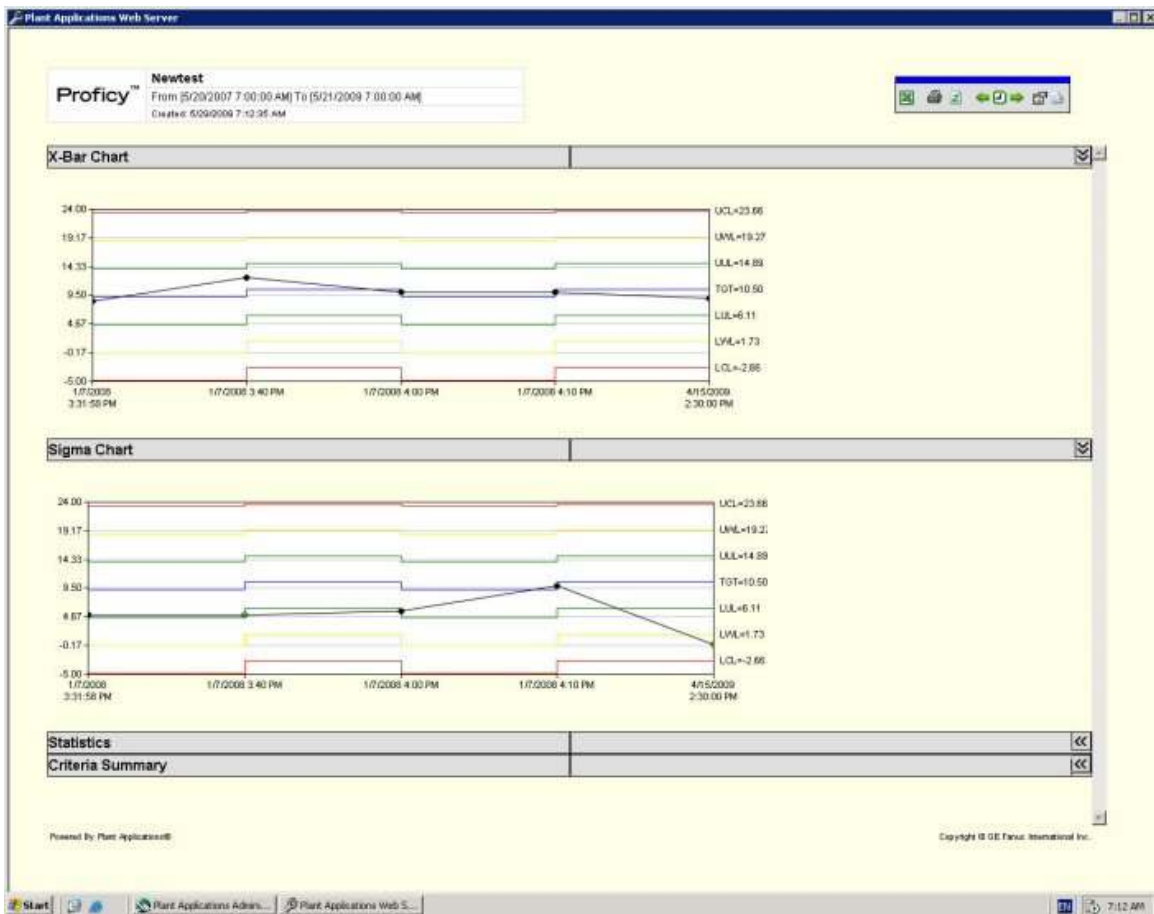
The other zones on the chart (i.e. Zone 1/User Limit and Zone 2/Warning Limit) are 1/3 and 2/3 respectively of the control limit.

X-Bar and Sigma Charts

An XBar Sigma chart is a special purpose variation of the X-bar and R chart. Used with processes that have a subgroup size of 11 or more, X-bar and s charts show if the system is stable and predictable. They are also used to monitor the effects of process improvement theories. Instead of using subgroup range to chart variability, these charts use subgroup standard deviation. Because standard deviation uses each individual reading to calculate variability, it provides a more effective measure of the process spread.

The format and layout of the X-Bar/S chart is the same as the X-Bar/R chart described previously. The difference is in the data displayed and the calculation of the limits. The X-Bar chart shows the averages while the S chart shows the SPC variable standard deviation values or the calculated standard deviation values. As such, the S chart will only be valid for subgroups > 2. If the subgroup size is less than 3, then the S chart will not show any data. Generally, the S chart should only be used for subgroups > 10.

The S chart uses the S chart formulas for calculated "estimated sigma" and, subsequently, the control limits. For information on calculations, see page 6.



Xbar Chart and Control Limit Formulas

$$CL = \bar{\bar{X}}$$

$$UCL = CL + j \frac{\hat{s}}{\sqrt{m}}$$

$$LCL = CL - j \frac{\hat{s}}{\sqrt{m}}$$

- j is a multiplier for calculating control limit. The default value is 3.

The other zones on the chart (i.e. Zone 1/User Limit and Zone 2/Warning Limit) are 1/3 and 2/3 respectively of the control limit.

Sigma (S) Chart and Control Limit Formulas

$$CL = \bar{S}$$

$$UCL = CL + j\hat{s}\sqrt{1-C_4^2}$$

$$LCL = CL - j\hat{s}\sqrt{1-C_4^2}$$

- j is a multiplier for calculating control limit. The default value is 3.
- C_4 is a constant defined by standard 6-sigma rules.

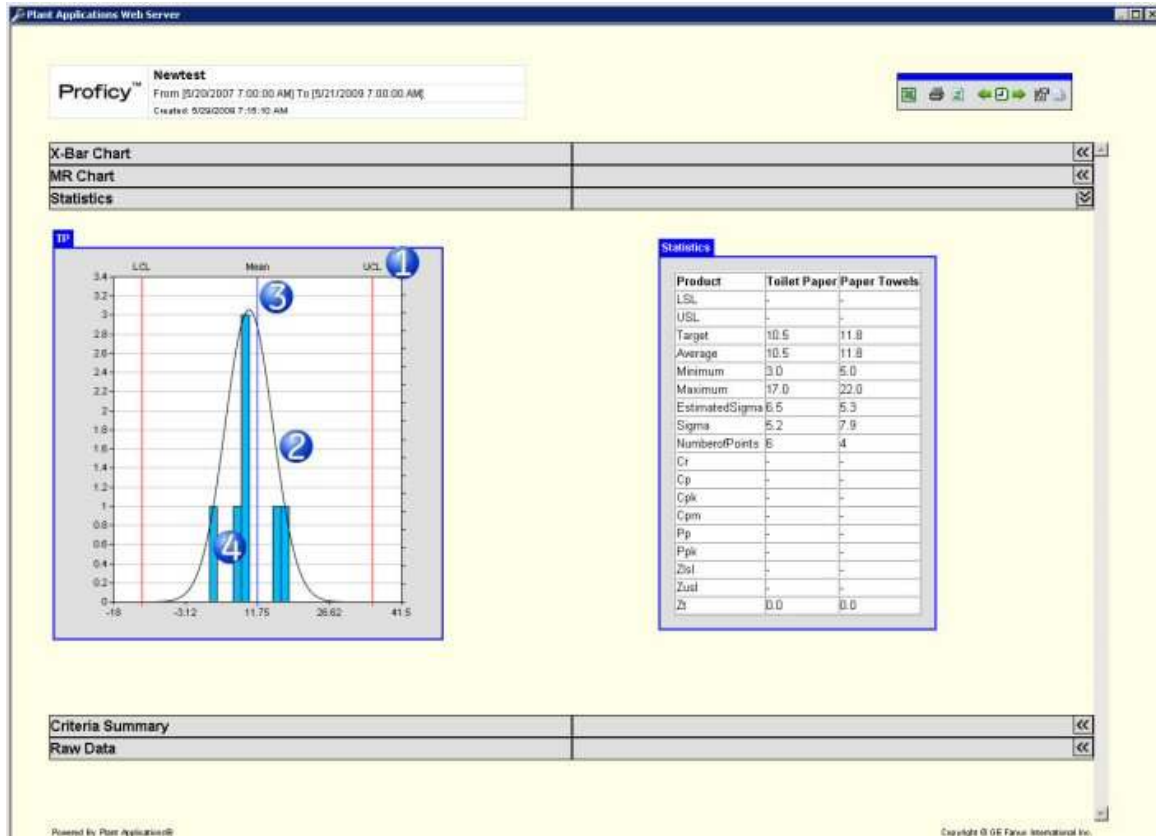
The other zones on the chart (i.e. Zone 1/User Limit and Zone 2/Warning Limit) are 1/3 and 2/3 respectively of the control limit

Statistics

The Histogram will show the distribution of the data against a normal curve. The Histogram will only be shown for the last product in the selected time range. The title of the Histogram will clearly show which product the data is shown for.

The statistics are based on the entire selected dataset (including multiple products if selected). The statistics are shown in a table that shows the values for each product that is included.

If multiple products are shown in the statistics table (and in the control chart), the Histogram only displays data for the most recent product.



1 If available, the upper and lower specification limits and the upper and lower control limits are displayed.

2 A normal curve for the data is displayed.

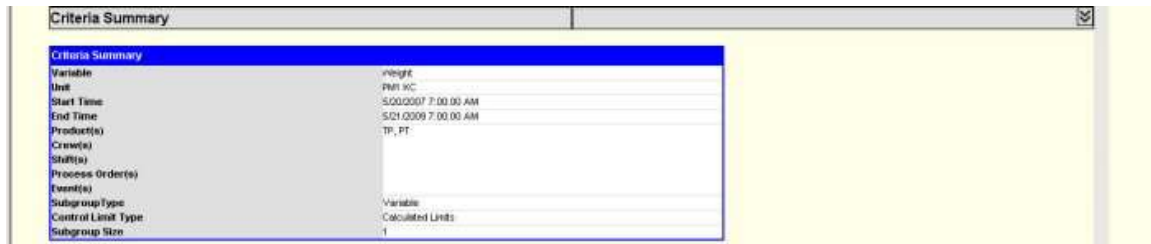
3 The calculated average is displayed.

4 Data are grouped into appropriate groups.

Criteria Summary

The criteria summary contains all of the filters and chart options:

- Variable
- Time Range
- Product(s)
- Crew(s)
- Shift(s)
- Process Order(s)
- Event(s)
- Subgroup Type
- Subgroup Size
- Control Limit Type



Raw Data

An optional section displays the raw data points that were the basis for the charts and statistical analysis. The raw data section displays the following fields:

Field	Description
Timestamp	Timestamp of the data point
Value	Value
Subgroup	If a time-series subgroup type was chosen this will show which subgroup the data point was assigned
Product	Product associated with the value

To view raw data, click the Properties  icon and click the Advanced tab.



SPC Chart Calculations

Population Size (n)

The Population Size (n) is the count of all the test values, regardless of which subgroup they are in.

Number of Subgroups (k)

The Number of Samples (k) will be the count of the selected samples/subgroups.

Subgroup Size (m)

The Subgroup Size (m) is the number of values within each subgroup.

Average

The Process Average (\bar{x}) is the mean of all the data points, ignoring the existence of subgroups.

$$\bar{x} = \frac{\sum_{i=1}^n x_i}{n}$$

The Sample Average (\bar{X}) is the mean of all the data points in the subgroup.

$$\bar{X} = \frac{\sum_{i=1}^m x_i}{m}$$

The Subgroup Average ($\bar{\bar{X}}$) is the mean of all the subgroups.

$$\bar{\bar{X}} = \frac{\sum_{i=1}^n x_i}{n}$$

Minimum

The Minimum will be calculated based on the entire dataset (including multiple products if selected).

Minimum = minimum value

Maximum

The Maximum will be calculated based on the entire dataset (including multiple products if selected).

Maximum = maximum value

Process Standard Deviation (S)

The Standard Deviation (s) is the average of the distance between each point and the mean for the entire population of data.

$$S = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{(n - 1)}}$$

Estimated Sigma ()

Estimated Sigma ($\hat{\sigma}$) is calculated as follows:

Xbar/R

If $2 \leq \text{Subgroup Size} \leq 25$ then

$$\hat{\sigma} = \frac{\bar{R}}{d_2}$$

Xbar/S

If Subgroup Size ≥ 2 then

$$\hat{\sigma} = \frac{\bar{S}}{c_4}$$

X/MR

If Subgroup Size = 1 then

$$\hat{\sigma} = \frac{\overline{MR}}{d_2}$$

Statistics

$$\hat{\sigma} = \begin{cases} \frac{\bar{R}}{d_2} & \dots 2 \leq m \leq 25 \\ \frac{\bar{S}}{c_4} & \dots m > 25 \\ \frac{\overline{MR}}{d_2} & \dots m = 1 \end{cases}$$

Z Numbers

The following Z numbers will be calculated:

$$Z_{LSL} = \frac{\bar{x} - LSL}{S}$$

If LSL is not specified, then no value will be calculated.

$$Z_{USL} = \frac{USL - \bar{x}}{S}$$

If USL is not specified, then no value will be calculated.

$$Z_T = \frac{\bar{x} - T}{S}$$

If Target is not specified, then no value will be calculated.

Because of the dependence on the specification limit, this statistic is product dependent and cannot be calculated for multiple products.

Lower Process Capability Index (Cpl)

Lower Capability Index (Cpl) is calculated as follows:

$$Cpl = \frac{\bar{\bar{X}} - LSL}{3\hat{S}}$$

If no limits are specified, then no value will be calculated.

Because of the dependence on the specification limit, this statistic is product dependent and cannot be calculated for multiple products.

Upper Process Capability Index (Cpu)

Upper Capability Index (Cpu) is calculated as follows:

$$Cpu = \frac{USL - \bar{\bar{X}}}{3\hat{S}}$$

If no limits are specified, then no value will be calculated.

Because of the dependence on the specification limit, this statistic is product dependent and cannot be calculated for multiple products.

Process Capability (Cp)

Capability (Cp) is calculated as follows:

- If there is both a USL and LSL specified then:

$$C_p = \frac{USL - LSL}{6\hat{\sigma}}$$

- If there is a USL specified but no LSL is specified then:

$$C_p = C_{pu}$$

- If there is a LSL specified but no USL is specified then:

$$C_p = C_{pl}$$

If no limits are specified, then no value will be calculated.

Because of the dependence on the specification limit, this statistic is product dependent and cannot be calculated for multiple products.

Process Capability Index (Cpk)

Capability Index (Cpk) is calculated as follows:

$$C_{pk} = \text{Min}(C_{pu}, C_{pl})$$

If no limits are specified, then no value will be calculated.

Because of the dependence on the specification limit, this statistic is product dependent and cannot be calculated for multiple products.

Process Capability Ratio (Cr)

Process Capability Ratio (Cr) is calculated as follows:

$$C_r = \frac{1}{C_p}$$

If no limits are specified, then no value will be calculated.

Because of the dependence on the specification limit, this statistic is product dependent and cannot be calculated for multiple products.

Taguchi Capability Index (Cpm)

Taguchi Capability Index (Cpk) is calculated as follows:

$$C_{pm} = \frac{USL - LSL}{6\sqrt{\hat{s}^2 + (\bar{\bar{X}} - T)^2}}$$

If either limit is not specified, then no value will be calculated.

Because of the dependence on the specification limit, this statistic is product dependent and cannot be calculated for multiple products.

Lower Process Performance (Ppl)

Lower Process Performance (Ppl) is calculated as follows:

$$P_{pl} = \frac{\bar{x} - LSL}{3S}$$

If no limits are specified, then no value will be calculated.

Because of the dependence on the specification limit, this statistic is product dependent and cannot be calculated for multiple products.

Upper Process Performance (Ppu)

Upper Process Performance (Ppu) is calculated as follows:

$$P_{pu} = \frac{USL - \bar{x}}{3S}$$

If no limits are specified, then no value will be calculated.

Because of the dependence on the specification limit, this statistic is product dependent and cannot be calculated for multiple products.

Process Performance (Pp)

Process Performance (Pp) is calculated as follows:

- If there is both a USL and LSL specified then:

$$P_p = \frac{USL - LSL}{6S}$$

- If there is an USL specified but no LSL is specified then:

$$P_p = P_{pu}$$

- If there is a LSL specified but no USL is specified then:

$$Pp = Ppl$$

If no limits are specified, then no value will be calculated.

Because of the dependence on the specification limit, this statistic is product dependent and cannot be calculated for multiple products.

PpK

Process Performance Index (Ppk) is calculated as follows:

$$Ppk = \text{Min}(Ppu, Ppl)$$

Because of the dependence on the specification limit, this statistic is product dependent and cannot be calculated for multiple products.

SPC Chart Options and Data

The relationships between the chart types, subgroup size, subgroup type and what chart data are shown is described in the following table:

Chart	Subgroup Size	Subgroup Type	Chart Data
X	1	Variable	Selected variable value
		Time-Series	No Data
	2+	N/A	No Data
\bar{x} (R)	1	N/A	No Data
	2+	Variable	Selected variable value
		Time-Series	Calculated variable average
\bar{x} (S)	1	N/A	No Data
	2+	Variable	Selected variable value
		Time-Series	Calculated variable average
R	1	N/A	No Data
	2+	Variable (SPC)	SPC calculation Range variable value
		Time-Series	Calculated variable range
S	1	N/A	No Data
	2+	Variable (SPC)	SPC calculation Standard Deviation variable value
		Time-Series	Calculated variable standard deviation
MR	1+	Variable (SPC)	SPC calculation Moving Range variable value
		Time-Series	Calculated moving range

SPC Chart Options and Control Limits

The relationships between the chart types, subgroup size and how the control limits are calculated is described in the following table.

NOTE: Control limits can be automatically calculated as an option based on a configurable sample size. When available, calculated sigma values are reflected by control limits in SPC charts.

Chart	Subgroup Size (m)	Control Limits	
		Fixed	Calculated
X	1	Selected variable	Individuals formula
	2+	N/A	N/A
\bar{x} (R)	1	N/A	N/A
	2-25	Selected variable	\bar{x} /R formula
	25+	N/A	N/A
\bar{x} (S)	1	N/A	N/A
	2+	Selected variable specifications	\bar{x} /S formula
R	1	N/A	N/A
	2-25	SPC Variable - Range only	R formula
	25+	N/A	N/A
S	1	N/A	N/A
	2+	SPC Variable - Standard Deviation only	S formula
MR	1+	SPC Variable - Moving Range only	MR formula

Configure and Run the SPC Chart

You can configure the SPC Chart report in one of two ways. You can:

- [Configure and run the report from the Web Server Administrator.](#)
- [Configure and run the report from Internet Explorer.](#)

To configure the report from the Web Server Administrator

1. Log on to the Web Server Administrator from the Plant Applications Administrator.
2. Click Web Content.
3. Right-click SPCCharts and click one of the following:

The option you select will determine the options available on the Finish tab.

- Edit Default Parameters: Select this option to save changes to the default SPC Chart report.
 - Create Definition: Select this option to create a new report based on the default SPC Chart report.
 - View: Select this option to only view the report. Tabbed pages appear which you use to configure the report.
4. Do the following:
 - a. On the Time Range tab, specify the time period you want to include on your report.
 - b. On the Variable tab, specify the variable you want to include on your report. You can use the Line, Unit and Group selections to filter the search for the relevant variable. When the variable is selected, some configuration options will be restricted based the variable type. For example, if an SPC variable is chosen, the Subgroup Size option will be grayed out because the subgroup size is automatically determined from the SPC variable configuration.
 - c. On the Product tab, specify products that will be used to filter the data selection. If one or more products are specified, then only the data recorded during those product runs will be selected; otherwise, all data will be selected. The list of the available products is based on which products have been assigned to the

selected variable's production unit, which is contained in the PU_Products table. The filtering of the data is based on the records in the Production_Starts table.

- d. On the Shifts tab, specify shifts that will be used to filter the data selection. If one or more shifts are specified, then only the data recorded during those shift runs will be selected; otherwise, all data will be selected. The shifts will be filtered by the production unit that the variable is associated with. Only those shifts on that unit will be shown in the list. The list of available shifts shown will also be based on the time range selected. Only those shifts occurring within the time range selected will be available to be selected for the filter. The filter itself will not change if the time range is changed. If the 'Plot By Number Of Points' option is selected, the start time of the range for shift selection will be defaulted to 1 month before the defined end time. The list of available shifts and the subsequent filtering of the data is based on the records in the Crew_Schedule table.
- e. On the Crews tab, specify crews that will be used to filter the data selection. If one or more crews are specified, then only the data recorded during those crew runs will be selected; otherwise, all data will be selected. The crews will be filtered by the production unit that the variable is associated with. Only those crews on that unit will be shown in the list. The list of available crews shown will be based on the time range selected. Only those crews occurring within the time range selected will be available to be selected for the filter. The filter itself will not change if the time range is changed. If the 'Plot By Number Of Points' option is selected, the start time of the range for crew selection will be defaulted to 1 month before the defined end time. The list of available crews and the subsequent filtering of the data is based on the records in the Crew_Schedule table.
- f. On the Event tab, select one or more production events to control which values are charted. The production events come from the same unit that the variable was selected on. The selected production events will be used to filter the data (in other words, only the values for the selected events will be charted). The tab will only be enabled if the selected variable(s) have an event type of "Production Event."
- g. On the ProcessOrders tab, specify which process orders that will be used to filter the data selection. If one or more orders are specified, the only the data recorded during those runs will be selected; otherwise, all data will be selected. The orders will be filtered by the production unit that the variable is associated with. Only those orders that have run on that unit will be shown in the list. The list of available process orders will be limited to those process orders that have run on the variable's production unit. The list will also be limited to those that have run within the time range selected. If the 'Plot By Number Of Points' option is selected, the start time of the range for order selection will be defaulted to one month before the defined end time. The list of available orders and the subsequent filtering of the data is based on the records in both the Production_Plan_Starts and Event_Details tables. The latter is for those process orders that are directly linked to the production event vs being linked by time through the Production_Plan_Starts table.
- h. On the SPC Options tab, do the following:
 - o Subgroup Type: Select either Time-Series or Variable. If you select Time-Series, the report will create subgroups from the data by dividing the data selected data set by the subgroup size. If you select Variable, the report will determine the

subgroup size based on the number of child variables with an SPC Variable type of 'Individuals' defined underneath it.

- Subgroup Size: If you select a Subgroup Type of Times-Series, type the size of the subgroup. The subgroups will be created from the start time and if there is a remainder it will be created as an incomplete subgroup. For example, if you pick a 24-hour range which brings back 52 test values and the subgroup size is defined as 5, this results in 10 subgroups of 5 values and 1 subgroup of 2 values for the statistics.

If your subgroup type is Time-Series, the following subgroup size restrictions are:

For MR charts, the subgroup size must be 1.

For Range charts, the subgroup size must be ≥ 2 and ≤ 25 .

For Sigma charts, the subgroup size must be ≥ 2 .

If you select a Subgroup Type of Variable, you cannot edit this field.

- Control Limit Selection: Select either Defined Specification Limits or Calculated Limits. If you select Defined Specification Limits, the limits that are associated with the selected variable will be used. If you select Calculated Limits, the limits will be calculated based on the defined subgroup. The method of calculating the limits is described on page 6.
 - Number of Data Points: The number you type defines how many values to include in the report rather than choosing the data points by the time range. The selection is based on the End Time parameter that is selected and the direction. For example, if 10 data points are chosen and the direction of "backwards," the last 10 entries for the variable will be selected starting from the end time. Any selected filters will be applied before the data points are selected.
 - Sigma Factor: This is a multiplier in the control limit calculation.
 - Select the type of control chart you want to use from the drop-down list. Your choices are: XBar/MR, XBar/Range, and XBar/Sigma.
- i. On the Finish tab, select one of the options and click Submit.

To configure the report from Internet Explorer

1. Ensure you have added the SPC Chart report to your User Tree. For more information, see page 3.
2. Log into the report server. For more information, see page 4.
3. In the left pane, click the SPC Chart report you want to run. Tabbed pages appear which you use to configure the report.
4. Do the following:
 - a. On the Time Range tab, specify the time period you want to include on your report.
 - b. On the Variable tab, specify the variable you want to include on your report. You can use the Line, Unit and Group selections to filter the search for the relevant variable. When the variable is selected, some configuration options will be restricted based the variable type. For example, if an SPC variable is chosen, the Subgroup Size option will be grayed out because the subgroup size is automatically determined from the SPC variable configuration.
 - c. On the Product tab, specify products that will be used to filter the data selection. If one or more products are specified, then only the data recorded during those

product runs will be selected; otherwise, all data will be selected. The list of the available products is based on which products have been assigned to the selected variable's production unit, which is contained in the PU_Products table. The filtering of the data is based on the records in the Production_Starts table.

- d. On the Shifts tab, specify shifts that will be used to filter the data selection. If one or more shifts are specified, then only the data recorded during those shift runs will be selected; otherwise, all data will be selected. The shifts will be filtered by the production unit that the variable is associated with. Only those shifts on that unit will be shown in the list. The list of available shifts shown will also be based on the time range selected. Only those shifts occurring within the time range selected will be available to be selected for the filter. The filter itself will not change if the time range is changed. If the 'Plot By Number Of Points' option is selected, the start time of the range for shift selection will be defaulted to 1 month before the defined end time. The list of available shifts and the subsequent filtering of the data is based on the records in the Crew_Schedule table.
- e. On the Crews tab, specify crews that will be used to filter the data selection. If one or more crews are specified, then only the data recorded during those crew runs will be selected; otherwise, all data will be selected. The crews will be filtered by the production unit that the variable is associated with. Only those crews on that unit will be shown in the list. The list of available crews shown will be based on the time range selected. Only those crews occurring within the time range selected will be available to be selected for the filter. The filter itself will not change if the time range is changed. If the 'Plot By Number Of Points' option is selected, the start time of the range for crew selection will be defaulted to 1 month before the defined end time. The list of available crews and the subsequent filtering of the data is based on the records in the Crew_Schedule table.
- f. On the Event tab, select one or more production events to control which values are charted. The production events come from the same unit that the variable was selected on. The selected production events will be used to filter the data (in other words, only the values for the selected events will be charted). The tab will only be enabled if the selected variable(s) have an event type of "Production Event."
- g. On the ProcessOrders tab, specify which process orders that will be used to filter the data selection. If one or more orders are specified, the only the data recorded during those runs will be selected; otherwise, all data will be selected. The orders will be filtered by the production unit that the variable is associated with. Only those orders that have run on that unit will be shown in the list. The list of available process orders will be limited to those process orders that have run on the variable's production unit. The list will also be limited to those that have run within the time range selected. If the 'Plot By Number Of Points' option is selected, the start time of the range for order selection will be defaulted to one month before the defined end time. The list of available orders and the subsequent filtering of the data is based on the records in both the Production_Plan_Starts and Event_Details tables. The latter is for those process orders that are directly linked to the production event vs being linked by time through the Production_Plan_Starts table.
- h. On the SPC Options tab, do the following:
 - o Subgroup Type: Select either Time-Series or Variable. If you select Time-Series, the report will create subgroups from the data by dividing the data selected data

set by the subgroup size.

If you select Variable, the report will determine the subgroup size based on the number of child variables with an SPC Variable type of 'Individuals' defined underneath it.

The report will check the type of the selected variable to see if it is one of the following:

Standard Variable: The value of the selected variable will be used for the statistics and the subgroup size will be assumed to be 1.

SPC Calculation Variable: The statistics will be based on a subgroup size that matches all of the child variables with an SPC Variable Type of 'Individual' and the value of the parent variable will be plotted.

- Subgroup Size: If you select a Subgroup Type of Times-Series, type the size of the subgroup. The subgroups will be created from the start time and if there is a remainder it will be created as an incomplete subgroup. For example, if you pick a 24-hour range which brings back 52 test values and the subgroup size is defined as 5, this results in 10 subgroups of 5 values and 1 subgroup of 2 values for the statistics.

If you select a Subgroup Type of Variable, you cannot edit the Subgroup Size field.

- Control Limit Selection: Select either Defined Specification Limits or Calculated Limits, If you select Defined Specification Limits, the limits that are associated with the selected variable will be used. If you select Calculated Limits, the limits will be calculated based on the defined subgroup. The method of calculating the limits is described in the topic, [SPC Chart calculations](#).
 - Number of Data Points: The number you type defines how many values to include in the report rather than choosing the data points by the time range. The selection is based on the End Time parameter that is selected and the direction. For example, if 10 data points are chosen and the direction of "backwards," the last 10 entries for the variable will be selected starting from the end time. Any selected filters will be applied before the data points are selected.
 - Sigma Factor: This is a multiplier in the control limit calculation.
 - Select the type of control chart you want to use from the drop-down list. Your choices are: XBar/MR, XBar/Range, and XBar/Sigma.
- i. On the Finish tab, select one of the options and click Submit.

Running the SPC Chart from an Autolog display

You can launch the Variable SPC Chart report from Autolog. There are two new display options that must be configured before you can access the SPC Chart report from Autolog. The new display options are:

- DrilldownURLGeneratorFunctionName
- DrilldownURLTitle



To configure the display options

1. In the Plant Applications Administrator tree, expand Client Management.
2. Expand the Displays folder.

3. Expand the display group, and double-click the Autolog display. The Edit Display dialog box appears.
4. Click the Display Options tab.
5. Double-click DrilldownURLGeneratorFunctionName. The Assign Property Value dialog box appears.
6. In the Value box, type "spRS_ReportServerURLForSPCReport" (without the quotation marks). This is the stored procedure that is called when the report is run.
7. Click OK. The Assign Property Value dialog box closes.
8. Double-click DrilldownURLTitle. The Assign Property Value dialog box appears.
9. In the Value box, type the label that you want to appear in the right-click menu in the Autolog display.
10. Click OK. The Assign Property Value dialog box closes.
11. Click Save.
12. If prompted click OK to reload the services.
13. Close the Edit Display dialog box.

Editing an SPC Chart

To change an existing report

1. While viewing an existing report, click the Properties  icon on the report toolbar . The Options dialog box appears.
2. Do one or more of the following:
 - a. Click the General tab to save the report as a definition so that it can be run at a later date with the same configured parameters.
 - b. Click the Time tab to select the data selection type. You can select:
 - Plot By Number of Points
 - Plot By Time Range

NOTE: If Plot By Number of Points is selected, the Events tab will not be available.

- c. Click the Variable tab to select the variable for the report. You can use the Line, Unit and Group selections to filter the search for the relevant variable. When the variable is selected, some configuration options will be restricted based the variable type. For example, if an SPC variable is chosen, the Subgroup Size option will be grayed out because the subgroup size is automatically determined from the SPC variable configuration.
- d. Click the Products tab to specify products that will be used to filter the data selection. If one or more products are specified, then only the data recorded during those product runs will be selected; otherwise, all data will be selected. The list of the available products is based on which products have been assigned to the selected variable's production unit, which is contained in the PU_Products table. The filtering of the data is based on the records in the Production_Starts table.

- e. Click the Events tab to select one or more production events to control which values are charted. The production events come from the same unit that the variable was selected on. The selected production events will be used to filter the data (in other words, only the values for the selected events will be charted). The tab will only be enabled if the selected variable(s) have an event type of "Production Event."

NOTE: If Plot By Number of Points is selected on the Time tab, the Events tab will not be available.

- f. Click the Shifts tab to specify shifts that will be used to filter the data selection. If one or more shifts are specified, then only the data recorded during those shift runs will be selected; otherwise, all data will be selected. The shifts will be filtered by the production unit that the variable is associated with. Only those shifts on that unit will be shown in the list. The list of available shifts shown will also be based on the time range selected. Only those shifts occurring within the time range selected will be available to be selected for the filter. The filter itself will not change if the time range is changed. If the 'Plot By Number Of Points' option is selected, the start time of the range for shift selection will be defaulted to 1 month before the defined end time. The list of available shifts and the subsequent filtering of the data is based on the records in the Crew_Schedule table.
- g. Click the Crews tab to specify crews that will be used to filter the data selection. If one or more crews are specified, then only the data recorded during those crew runs will be selected; otherwise, all data will be selected. The crews will be filtered by the production unit that the variable is associated with. Only those crews on that unit will be shown in the list. The list of available crews shown will be based on the time range selected. Only those crews occurring within the time range selected will be available to be selected for the filter. The filter itself will not change if the time range is changed. If the 'Plot By Number Of Points' option is selected, the start time of the range for crew selection will be defaulted to 1 month before the defined end time. The list of available crews and the subsequent filtering of the data is based on the records in the Crew_Schedule table.
- h. Click the ProcessOrders tab to specify which process orders that will be used to filter the data selection. If one or more orders are specified, the only the data recorded during those runs will be selected; otherwise, all data will be selected. The orders will be filtered by the production unit that the variable is associated with. Only those orders that have run on that unit will be shown in the list. The list of available process orders will be limited to those process orders that have run on the variable's production unit. The list will also be limited to those that have run within the time range selected. If the 'Plot By Number Of Points' option is selected, the start time of the range for order selection will be defaulted to one month before the defined end time. The list of available orders and the subsequent filtering of the data is based on the records in both the Production_Plan_Starts and Event_Details tables. The latter is for those process orders that are directly linked to the production event vs being linked by time through the Production_Plan_Starts table.
- i. Click the SPC Options tab to do the following:
 - o Under Control Charts Options, select or clear the information you want to display on your report.

- Subgroup Type: Select either Time-Series Subgroup or Variable Subgroup. If you select Time-Series Subgroup, the report will create subgroups from the data by dividing the data selected data set by the subgroup size.

If you select Variable Subgroup, the report will determine the subgroup size based on the number of child variables with an SPC Variable type of 'Individuals' defined underneath it.

The report will check the type of the selected variable to see if it is one of the following:

Standard Variable: The value of the selected variable will be used for the statistics and the subgroup size will be assumed to be 1.

SPC Calculation Variable: The statistics will be based on a subgroup size that matches all of the child variables with an SPC Variable Type of 'Individual' and the value of the parent variable will be plotted.

- Subgroup Size: If you select a Subgroup Type of Times-Series, type the size of the subgroup. The subgroups will be created from the start time and if there is a remainder it will be created as an incomplete subgroup. For example, if you pick a 24-hour range which brings back 52 test values and the subgroup size is defined as 5, this results in 10 subgroups of 5 values and 1 subgroup of 2 values for the statistics.

NOTE: If you select a Subgroup Type of Variable, you cannot edit the Subgroup Size field.

- Control Limit Selection: Select either Defined Specification Limits or Calculated Limits, If you select Defined Specification Limits, the limits that are associated with the selected variable will be used. If you select Calculated Limits, the limits will be calculated based on the defined subgroup. The method of calculating the limits is described in the topic, [SPC Chart calculations](#).
- Under Additional Options, clear the Auto Scale Y Axis or Auto Scale Second Chart Y Axis to adjust the scale of the Y axis for the X-Bar chart and the secondary chart (MR, Range, or Sigma).
- Select Show Control Limits to display control limits on your report.

NOTE: Control limits can be automatically calculated as an option based on a configurable sample size. When available, calculated sigma values are reflected for control limits in SPC charts.

- j. Click Apply to apply your changes before saving them or click Ok to save the changes and close the dialog box.

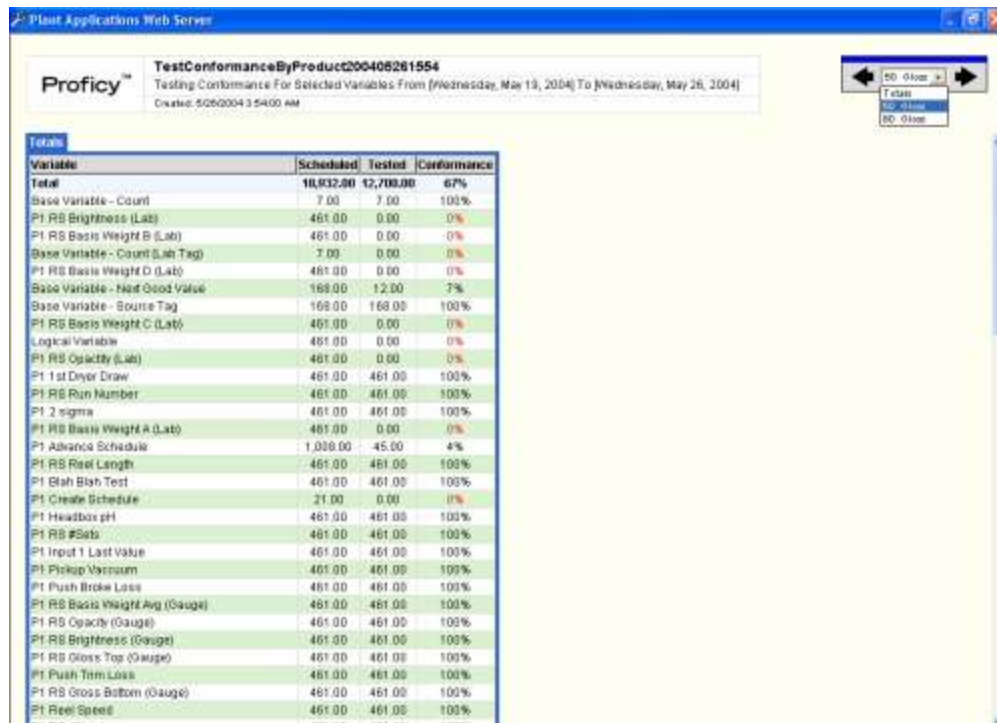
Test Conformance By Product

This ASP report shows conformance to test scheduling, grouped by product. This report requires the following parameters:

- The start and end times
- The variable(s)
- The product(s)

Plant Applications Web Reporting

For each variable, the report shows the number of times the variable was scheduled to be tested, the actual number of times it was tested, and the conformance percentage. The information is grouped by product. This report also provides a grand total of all variables for all products.



The screenshot shows a web browser window titled "Plant Applications Web Server" displaying a report from Proficy. The report title is "TestConformanceByProduct200405261554" and it covers the period from Wednesday, May 13, 2004, to Wednesday, May 26, 2004. The report is a table with the following columns: Variable, Scheduled, Tested, and Conformance. The table lists various variables such as "Base Variable - Count", "P1 RB Brightness (Lat)", "P1 RB Basis Weight B (Lab)", etc., along with their respective scheduled and tested counts and conformance percentages. A navigation menu in the top right corner includes "Home", "Test", "By Shift", and "By Date".

Variable	Scheduled	Tested	Conformance
Total	16,932.00	12,709.00	67%
Base Variable - Count	7.00	7.00	100%
P1 RB Brightness (Lat)	461.00	0.00	0%
P1 RB Basis Weight B (Lab)	461.00	0.00	0%
Base Variable - Count (Lab Tag)	7.00	0.00	0%
P1 RB Basis Weight D (Lab)	461.00	0.00	0%
Base Variable - Heat Good Value	169.00	12.00	7%
Base Variable - Source Tag	169.00	169.00	100%
P1 RB Basis Weight C (Lab)	461.00	0.00	0%
Logical Variable	461.00	0.00	0%
P1 RB Opacity (Lab)	461.00	0.00	0%
P1 1st Dyer Draw	461.00	461.00	100%
P1 RB Run Number	461.00	461.00	100%
P1 2 sigma	461.00	461.00	100%
P1 RB Basis Weight A (Lab)	461.00	0.00	0%
P1 Advance Schedule	1,038.00	45.00	4%
P1 RB Reel Length	461.00	461.00	100%
P1 Blah Blah Test	461.00	461.00	100%
P1 Create Schedule	21.00	0.00	0%
P1 Headbox pH	461.00	461.00	100%
P1 RB #Sets	461.00	461.00	100%
P1 Input 1 Last Value	461.00	461.00	100%
P1 Pickup Vacuum	461.00	461.00	100%
P1 Push Brake Loss	461.00	461.00	100%
P1 RB Basis Weight Avg (Gauge)	461.00	461.00	100%
P1 RB Opacity (Gauge)	461.00	461.00	100%
P1 RB Brightness (Gauge)	461.00	461.00	100%
P1 RB Gross Top (Gauge)	461.00	461.00	100%
P1 Push Trim Loss	461.00	461.00	100%
P1 RB Gross Bottom (Gauge)	461.00	461.00	100%
P1 Reel Speed	461.00	461.00	100%

Test Conformance By Shift

This ASP report shows conformance to test scheduling, grouped by shift. This report requires the following parameters:

- The start and end times
- The variable(s)

For each variable, the report shows the number of times the variable was scheduled to be tested, the actual number of times it was tested, and the conformance percentage. The information is grouped by shift. This report also provides a grand total of all variables for all shifts.

Plant Applications Web Server

Proficy™

TestConformanceByShift200405261605
 Testing Conformance By Crew From [Monday, October 08, 2001] To [Wednesday, October 10, 2001]
 Created: 5/26/2004 4:05:00 AM

← Crew: D →
 Total:
 Crew: C
 Shift: B
 Shift: D
 Shift: N

Crew: C				Crew: D			
Variable	Scheduled	Tested	Conformance	Variable	Scheduled	Tested	Conformance
Total	1,404.00	920.00	66.00%	Total	1,436.00	943.00	66.00%
P1 RS Basis Weight A (Lab)	40.00	0.00	0.00%	P1 RS Basis Weight A (Lab)	41.00	0.00	0.00%
P1 RS Gross Bottom (Lab)	20.00	0.00	0.00%	P1 RS Gross Bottom (Lab)	20.00	0.00	0.00%
P1 RS Opacity (Lab)	40.00	0.00	0.00%	P1 RS Opacity (Lab)	41.00	0.00	0.00%
P1 RS Brightness (Lab)	20.00	0.00	0.00%	P1 RS Brightness (Lab)	20.00	0.00	0.00%
P1 RS Basis Weight B (Lab)	40.00	0.00	0.00%	P1 RS Basis Weight B (Lab)	41.00	0.00	0.00%
P1 RS Basis Weight D (Lab)	40.00	0.00	0.00%	P1 RS Basis Weight D (Lab)	41.00	0.00	0.00%
P1 RS Basis Weight C (Lab)	40.00	0.00	0.00%	P1 RS Basis Weight C (Lab)	41.00	0.00	0.00%
P1 RS Gross Top (Lab)	20.00	0.00	0.00%	P1 RS Gross Top (Lab)	20.00	0.00	0.00%
P1 1st Dyer Draw	40.00	40.00	100.00%	P1 1st Dyer Draw	41.00	41.00	100.00%
P1 RS Run Number	40.00	0.00	0.00%	P1 RS Run Number	41.00	0.00	0.00%
P1 RS Reel Length	40.00	40.00	100.00%	P1 RS Reel Length	41.00	41.00	100.00%
P1 Advance Schedule	144.00	0.00	0.00%	P1 Advance Schedule	144.00	0.00	0.00%
P1 Headbox pH	40.00	40.00	100.00%	P1 Headbox pH	41.00	41.00	100.00%
P1 RS #Bats	40.00	40.00	100.00%	P1 RS #Bats	41.00	41.00	100.00%
P1 Pickup Vacuum	40.00	40.00	100.00%	P1 Pickup Vacuum	41.00	41.00	100.00%
P1 Push Brake Loss	40.00	40.00	100.00%	P1 Push Brake Loss	41.00	41.00	100.00%
P1 RS Basis Weight Avg (Gauge)	40.00	40.00	100.00%	P1 RS Basis Weight Avg (Gauge)	41.00	41.00	100.00%
P1 RS Opacity (Gauge)	40.00	40.00	100.00%	P1 RS Opacity (Gauge)	41.00	41.00	100.00%
P1 RS Brightness (Gauge)	40.00	40.00	100.00%	P1 RS Brightness (Gauge)	41.00	41.00	100.00%
P1 RS Gross Top (Gauge)	40.00	40.00	100.00%	P1 RS Gross Top (Gauge)	41.00	41.00	100.00%
P1 Push Trim Loss	40.00	40.00	100.00%	P1 Push Trim Loss	41.00	41.00	100.00%
P1 RS Gross Bottom (Gauge)	40.00	40.00	100.00%	P1 RS Gross Bottom (Gauge)	41.00	41.00	100.00%
P1 Reel Speed	40.00	40.00	100.00%	P1 Reel Speed	41.00	41.00	100.00%
P1 RS #Breaks	40.00	40.00	100.00%	P1 RS #Breaks	41.00	41.00	100.00%
P1 RS Basis Weight Avg (Lab)	40.00	0.00	0.00%	P1 RS Basis Weight Avg (Lab)	41.00	0.00	0.00%
P1 RS Reel Weight	40.00	40.00	100.00%	P1 RS Reel Weight	41.00	41.00	100.00%
P1 RS Brake Loss	40.00	40.00	100.00%	P1 RS Brake Loss	41.00	41.00	100.00%
P1 RS Crew	40.00	40.00	100.00%	P1 RS Crew	41.00	41.00	100.00%
P1 RS Reel Trim	40.00	40.00	100.00%	P1 RS Reel Trim	41.00	41.00	100.00%
P1 RS Theoretical Trim	40.00	40.00	100.00%	P1 RS Theoretical Trim	41.00	41.00	100.00%

Thumbnail Trends

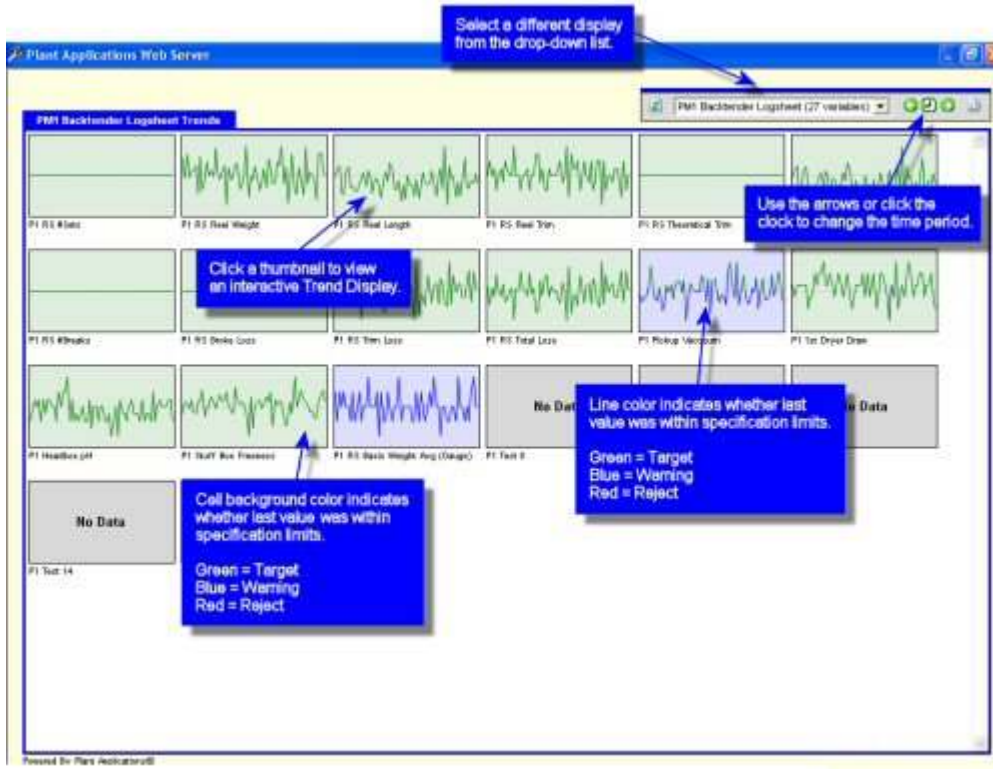
This application provides a thumbnail Trend analysis for each variable that is part of a selected display. Only displays that have more than one variable are available for selection. This application requires the following parameters.

- The start and end times
- The display

For each thumbnail, the background color indicates whether the last value was within specifications. If the background color is green, then the last value was within target limits. If the background color is blue, then the last value was within the warning limits. If the background color is red, then the last value was within reject limits. The line color indicates whether the values were within specification at each specific time. Within the report, you can click on each thumbnail to open an interactive Trend Display.

You can also select a different display from the drop-down list and change the time frame.

NOTE: With Plan Applications 6.3, control limits can be automatically calculated as an option based on a configurable sample size. When available, calculated sigma values are reflected by control limits in trend charts.



Simple Trend Report

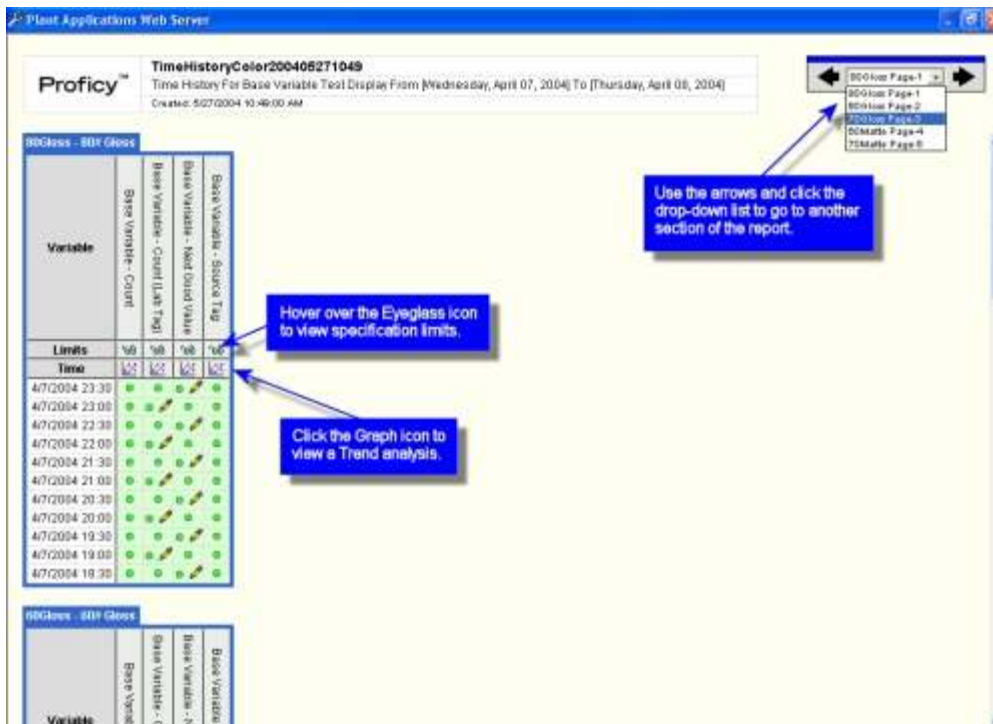
When you click a thumbnail trend, the [Simple Trend](#) report opens.

Time History Color

This ASP-based report graphically shows whether variables that are part of a selected time-based display are within the target, warning or reject limits. When you run the report, you specify the following parameters:

- Start and End time
- The time-based display
- The product(s)

For each event, the report will graphically show whether the variables were within the specifications. Comments are indicated with the Pencil icon . Hover over the pencil to view the comment. Below each variable, you can hover over the Eyeglass icon to view specifications for the variable. Click the Graph icon to view an interactive trend analysis of the selected variable.



Transaction Detail

This ASP application shows detailed information about the selected specification transaction. This report requires the following parameter:

- The selected transaction

When you run the report, you can select either pending or approved transactions.

Although you can select more than one transaction, only one transaction is displayed on the report.



Product	Variable	Operation	Field	From Value	To Value
50# Glass (50 Glass)	Upper Reject Alarm PI Machine Paper Line #1	Add	Upper Warning	-	1.00
		Add	Upper Reject	-	2.00
50# Glass (50 Glass)	Upper Warning Alarm PI Machine Paper Line #1	Add	Upper Warning	-	1.00
		Add	Upper Reject	-	2.00
60# Glass (60 Glass)	Upper Reject Alarm PI Machine Paper Line #1	Add	Upper Warning	-	1.00
		Add	Upper Reject	-	2.00
60# Glass (60 Glass)	Upper Warning Alarm PI Machine Paper Line #1	Add	Upper Warning	-	1.00
		Add	Upper Reject	-	2.00
60# Mabe (60 Mabe)	Upper Reject Alarm PI Machine Paper Line #1	Add	Upper Warning	-	1.00
		Add	Upper Reject	-	2.00
60# Mabe (60 Mabe)	Upper Warning Alarm PI Machine Paper Line #1	Add	Upper Warning	-	1.00
		Add	Upper Reject	-	2.00
70# Glass (70 Glass)	Upper Reject Alarm PI Machine Paper Line #1	Add	Upper Warning	-	1.00
		Add	Upper Reject	-	2.00
70# Glass (70 Glass)	Upper Warning Alarm PI Machine Paper Line #1	Add	Upper Warning	-	1.00
		Add	Upper Reject	-	2.00

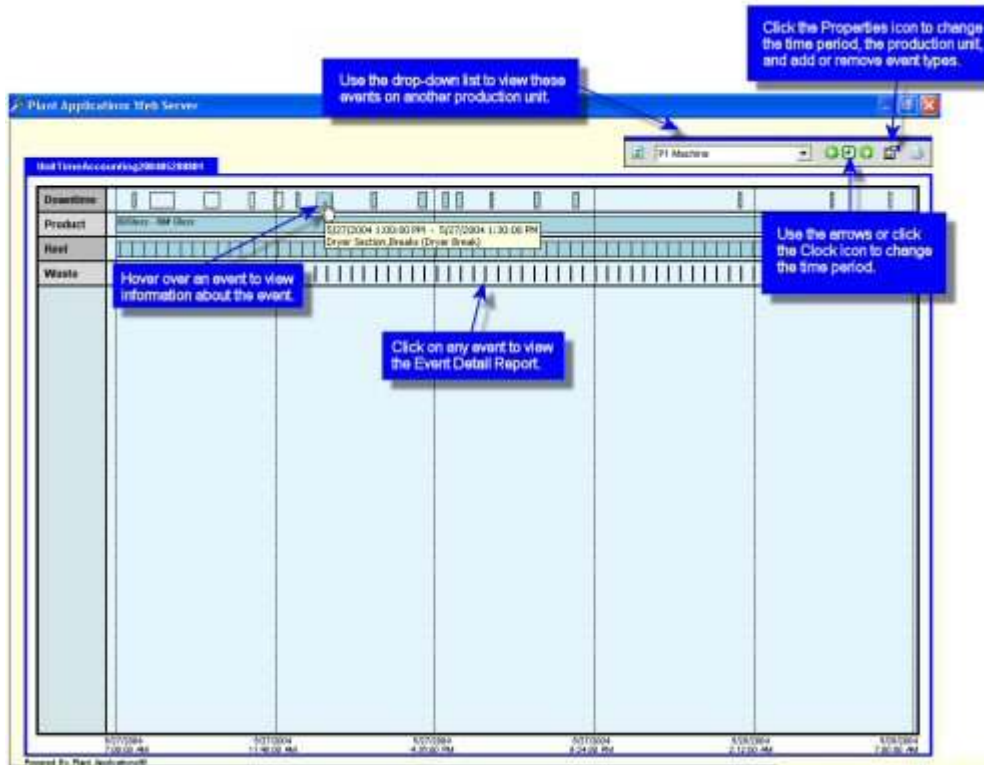
Unit Time Accounting

This ASP application provides a timeline of selected events on a selected unit. This report requires the following parameters:

- The start and end time
- The production line and production unit
- The event type(s)

Any event type, including process orders and user-defined events, can appear in the timeline. Within the report:

- You can click an event to view detailed information about the event.
- You can view the selected events on a different production unit by selecting a different production unit from the drop-down list.
- Click the  **Properties** icon to dynamically change the time period, the production unit, and add or remove event types.
- Click the  **Clock** icon to change the reporting time period.



User-defined Event Detail

This web report is accessed from the following reports:


- [Unit Time Accounting](#)
- [Sequence of Events](#)
- Batch Procedure Detail

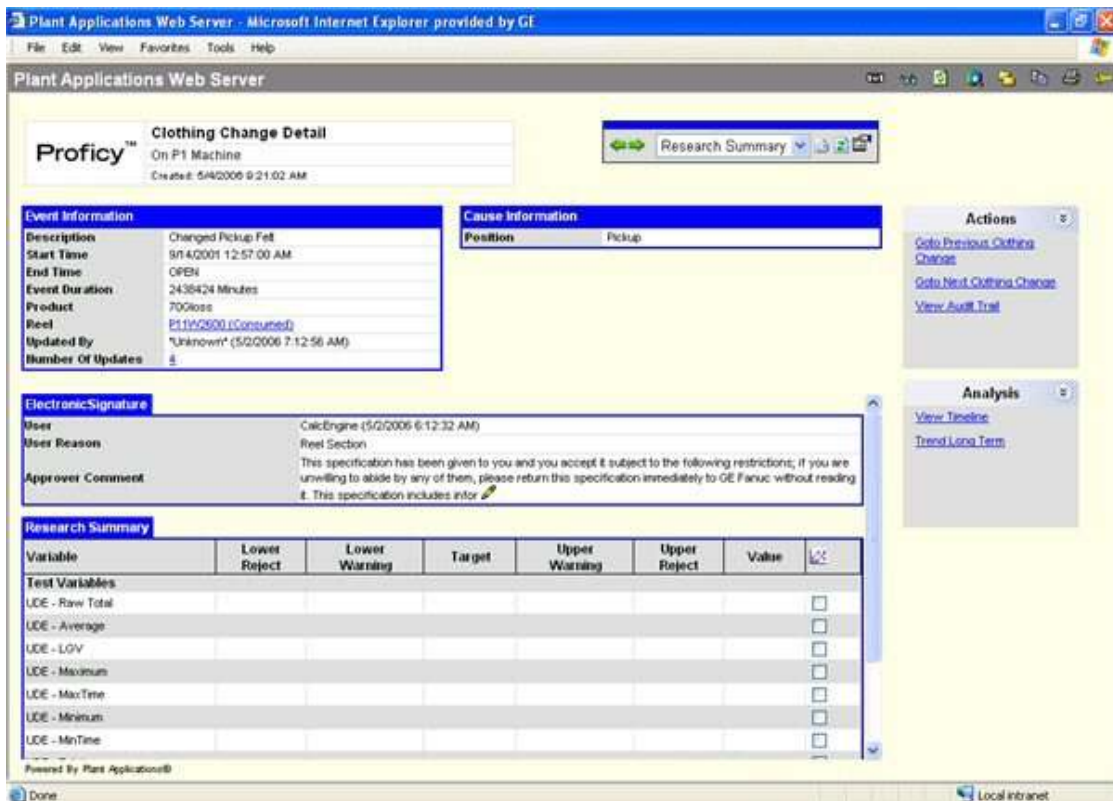
Click **View Audit Trail** to view an [audit trail report](#).

Click **View Timeline** to open the [Unit Time Accounting](#) web report.

To display electronic signature information, click the  **Properties** icon on the web report's toolbar and select **Display Electronic Signature Information**.

Research Summary Information

This section lists all the variables that have been defined with the event type of user-defined events. You can select the check box next to a variable and then click the  Trend icon to view a [trend analysis](#) report.



Variable Centerline Analysis

This ASA report graphically displays information about each variable on the selected display. When you configure the report, you can:

- Specify the start and end times
- Select the display that has the variables you want to analyze
- Filter by product
- Filter by event
- Include or exclude non-productive time

For each variable on the selected display, the report graphically indicates the upper and lower bounds, the mean, and the minimum and maximum values for the specified time period. The upper bound is the average plus three standard deviations. The lower bound is the average minus three standard deviations. The inverted triangle indicates the last value, which is also displayed next to the thumbnail trend.

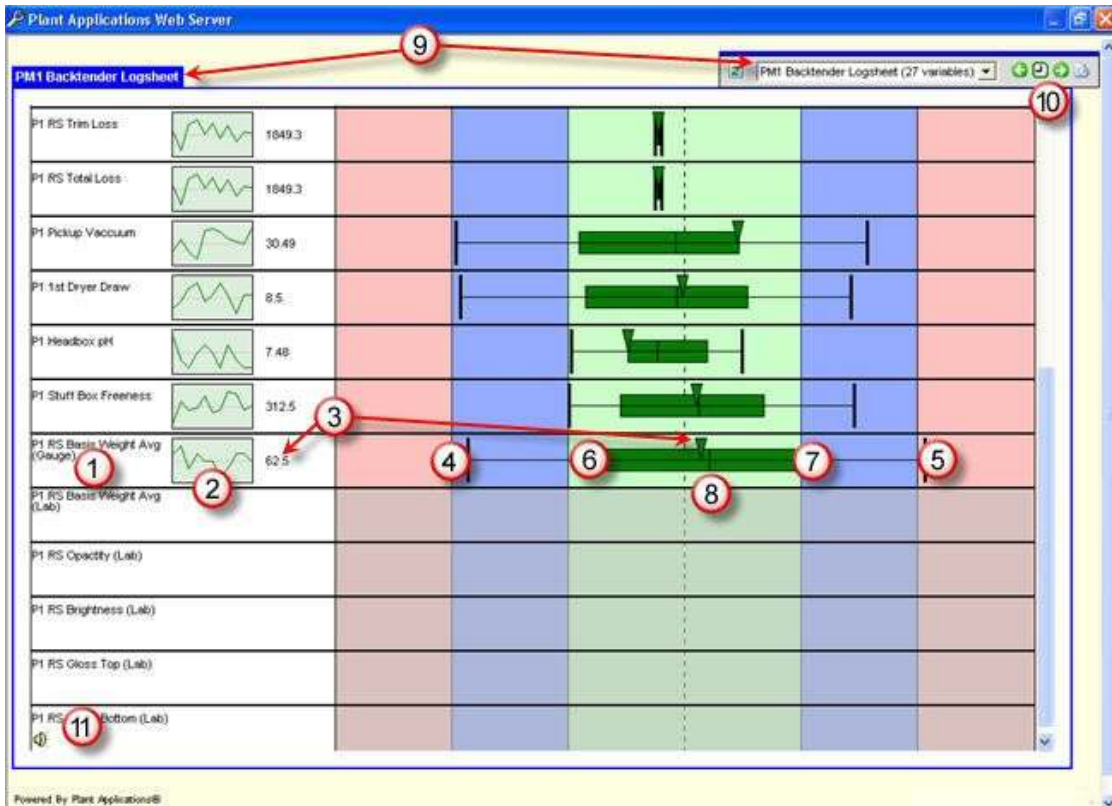
Each bar represents the range of data. The color of the bar shows whether the average value was within specification. To change the color scheme, see the topic, Color Schemes.

- **Red**: Average is within the reject limits
- **Blue**: Average is within warning limits
- **Green**: Average is within target limits

Only variables with specifications for the **most recent** production run (product) are displayed. If your selected time period overlaps the start and end time of two production runs, then only the values for the variables associated with the most recent production run will be displayed.





You can select a different display from the drop-down list. You can click a thumbnail to view an interactive Trend Display.

Variable Centerline Analysis Web Report



- ① The variable name
- ② Click a thumbnail to view an interactive Trend analysis. The background color indicates whether the last value was within specifications.
 - Green: The last value was within target limits
 - Blue: The last value was within the warning limits
 - Red: The last value was within reject limits

The line color indicates whether the values were within specification at each specific time. The last value. The inverted green triangle also indicates the last value.
- ③
- ④ Lower bound = Average – 3 std. dev.
- ⑤ Upper bound = Average + 3 std. dev.
- ⑥ Minimum value

- 7 Maximum value
- 8 Mean
- 9 Displays the name of the Autolog display. Click the arrow to view a list of available displays.
- 10 Use the arrows or click the  **Clock** icon to change the time period. Click the  [View History](#) icon to view a history of visited pages. Click the  **Properties** icon to adjust the report time range, select a different display, or filter by product.
- 11 Click the  **Alarm** icon to view the [Alarm List by Unit](#) report.

Variable Conformance Summary

This ASP report provides comprehensive quality statistics for selected variables and products. The following parameters are required:

- The start and end time
- The unit
- The variable(s)
- The product(s)

The selected variables are grouped by product and the following statistics are provided for each variable:

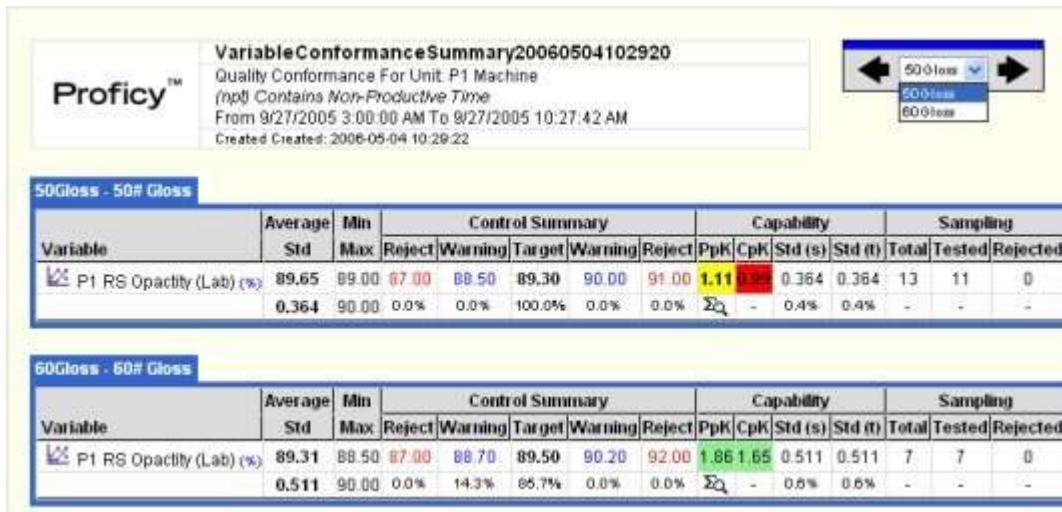
- Average
- Standard Deviation
- Specification limits:
 - Upper and lower reject
 - Upper and lower warning
 - Target
- Capability statistics:
 - Ppk
 - Cpk

For descriptions and calculation details for these and other statistics, see Variable Property Definitions.

- Std(s): Std(s) is standard deviation from the mean
- Std(t): Std(t) is standard deviation from the target
- Sampling details:
 - Total
 - Tested

- o Rejected

Variable Conformance Summary Report



The report includes a drop-down menu for quick navigation to the various summaries presented.

The capability statistics (Ppk, Cpk) are highlighted to show whether the calculated index falls in the target range (green), in the warning range (yellow), or in the reject range (red).

For each variable on the report, you can:

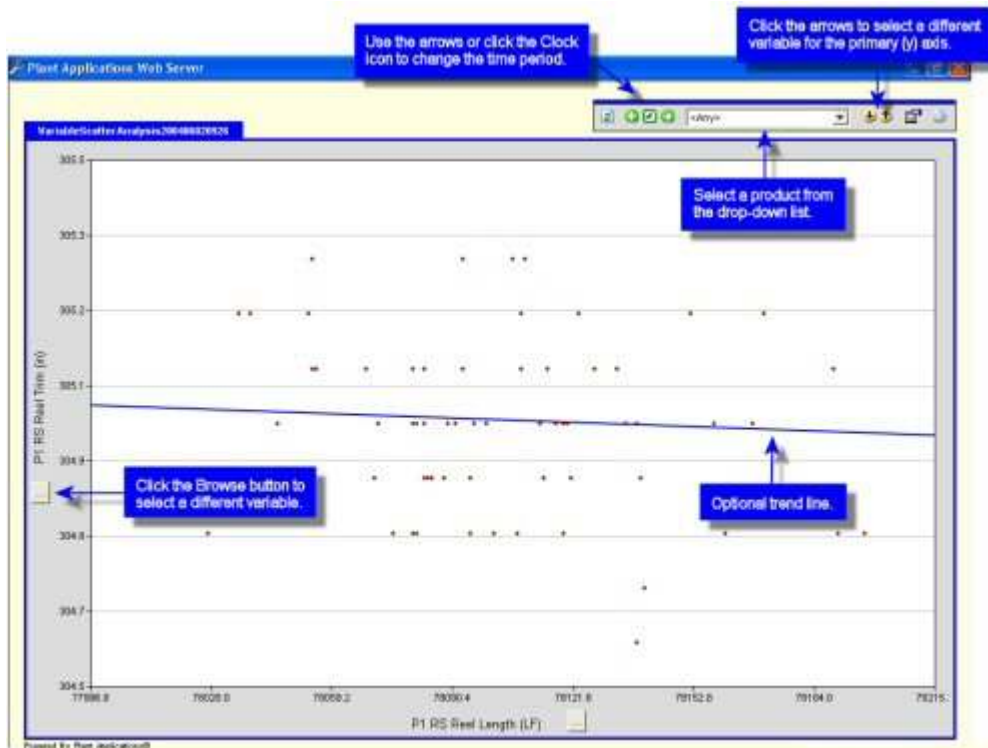
- Click the Graph icon to view an interactive Trend display.
- Click the Variable Statistics icon to view a detailed statistical analysis.
- Click the hyperlink next to the Pencil icon to view comments. The Pencil icon (and hyperlink) will appear only if comments have been entered for the variable.

Variable Scatter Analysis

This ASP application creates a scatter plot to help you evaluate variables by providing a visual picture of the relationship between two variables. The pattern of the points helps indicate the type and strength of the relationship between the two variables. The following parameters are required:

- The start and end time
- The variables

After you run the report, you can select a product from the drop-down list. Click the Properties icon to change the time period, select different variables and specify which variable is the primary variable (the variable that determines the timestamp for gathering the other variable data). You can also display a trend line and connect all points on the chart.



Variable Specification

There are two ASP reports that list specifications for variables, grouped by Variable Groups within the selected product(s).

The **Specification by Unit** report lists specifications for all variables on a selected unit, grouped by the selected product(s). This report requires the following parameters:


- The date
- The production unit
- The product(s)

The **Specification by Variable** report lists specifications for selected variables on a selected production unit for a selected product. You can search for variables by production line, production unit, or by Variable group. This report requires the following parameters:

- The date
- The variable(s)
- The product(s)

The main difference between the two reports is that the Specification by Variable report lets you select the variables you want to see on the report, while the Specification by Unit report lists all variables for the selected production unit.

Both reports group the variables by the Variable groups defined in your plant model. Click a link under the Effective Date column to view the specification history for a specific variable, which will show you who made changes to the specifications and when they were made. Any specification comments or transaction comments can also be viewed.

Click the Graph icon  to view a trend analysis of a selected variable.

Specification by Unit Report

This is an example of the Specification by Unit report, which is identical to the Specification by Variable report.



50Gloss - 50# Gloss

Quality Variables

Variable	Lower Reject	Lower Warning	Upper Warning	Upper Reject	Effective Date	Expiration Date
WLR Reject - Opacity (%)				98.00	12/3/2003 16:26	
% In Warning - Opacity (%)				95.00	12/1/2003 16:26	
P1 RS Basic Weight Avg (Lab) (#)	50.00	49.00	49.50	50.50	8/13/2001 22:21	
P1 RS Opacity (Lab) (%)	89.30	79.00	88.00	90.00	12/4/2003 16:05	
P1 RS Brightness (Lab) (%)	81.00	80.00	80.00	82.00	12/4/2003 16:05	
P1 RS Gloss Top (Lab) (%)	81.30				8/13/2001 22:21	
P1 RS Gloss Bottom (Lab) (%)	81.20				8/13/2001 22:21	

Process Variables

Variable	Target	Lower Reject	Lower Warning	Upper Warning	Upper Reject	Effective Date	Expiration Date
P1 1st Oper Draw (s)	8.50		8.30	8.70		8/13/2001 22:21	
P1 Headbox pH (ppm)	7.50		7.40	7.60		8/13/2001 22:21	
P1 Pickup Vacuum (k-Hg)	30.30		30.00	31.00		8/13/2001 22:21	
P1 Roll Speed (#/min)	3,540.00					8/13/2001 22:21	
P1 RS Basic Weight Avg (Gauge) (#)	50.00		49.50	50.50		8/13/2001 22:21	
P1 RS Brightness (Gauge) (%)	81.00	79.00	80.00	82.00		8/13/2001 22:21	
P1 RS Gloss Bottom (Gauge) (%)	81.20		80.00	82.00		8/13/2001 22:21	
P1 RS Gloss Top (Gauge) (%)	81.30		80.00	82.00		8/13/2001 22:21	
P1 RS Opacity (Gauge) (%)	89.30	87.00	88.50	90.00		8/13/2001 22:21	
P1 Stuff Box Freebase (CFR)	315.00		308.00	320.00		8/13/2001 22:21	

Test Alarms

Variable	Target	Lower Reject	Lower Warning	Upper Warning	Upper Reject	Effective Date	Expiration Date
----------	--------	--------------	---------------	---------------	--------------	----------------	-----------------

Specification History Report

To see this report, from the Specification by Unit or Specification by Variable report, click a hyperlink under the Effective Date column.




Specification History
All Specification Changes
Created: 5/24/2004 3:08:00 AM

P1 RS Brightness (Lab) on 50Gloss

Transaction	Target	Lower Reject	Lower Warning	Upper Warning	Upper Reject	Test Frequency	Effective Date	Expiration Date
ComXCClient on 03-Dec-2003 16:39 ComXCClient (12/3/2003 16:40)	81.00	78.00	80.00	82.00	90.00	2.00	12/3/2003 16:40	12/3/2003 16:56
ComXCClient on 03-Dec-2003 16:55 ComXCClient (12/3/2003 16:56)	81.00	69.00	80.00	82.00	89.00	2.00	12/3/2003 16:56	12/4/2003 16:05
ComXCClient on 04-Dec-2003 16:03 ComXCClient (12/4/2003 16:05)	81.00	68.00	80.00	82.00	88.00	2.00	12/4/2003 16:05	

Interactive Trend Report

To see this report, click the Graph icon  next to a variable on the Specification by Unit or the Specification by Variable report.

For more information on this report, see [Simple Trend](#).

Variable Statistics Summary

This ASP application displays detailed statistical analysis of a selected variable for one or more products. The following parameters are required:

- The start and end time
- The variable
- The product(s)
- The basis product

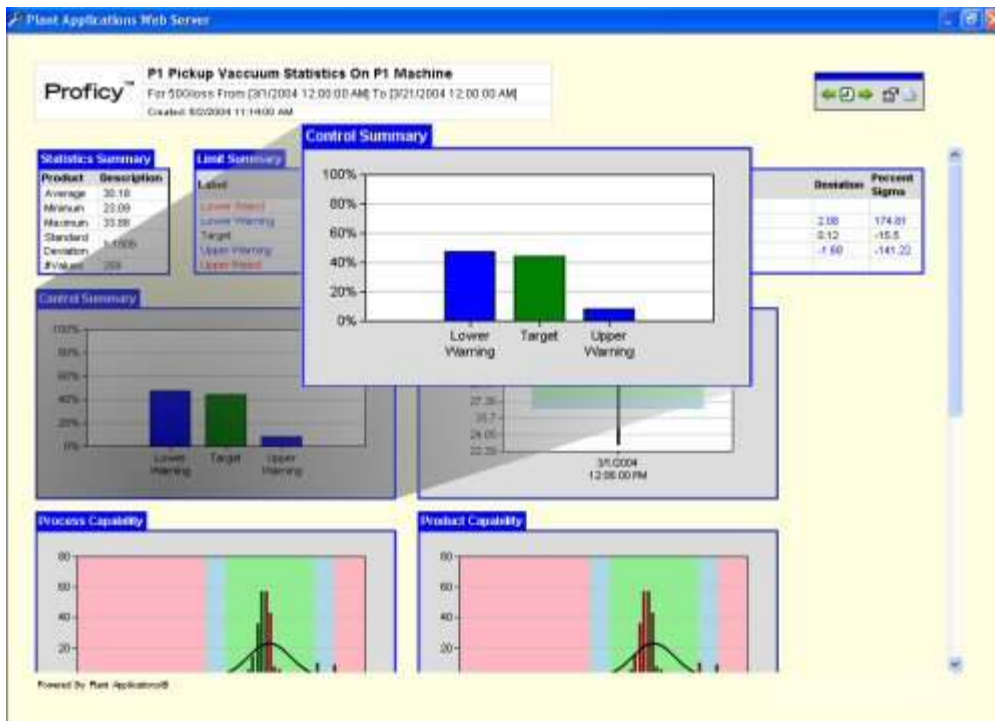
The basis product is the product that you use the specs from to calculate the theoretical limits. Data for the analysis will include data from all the products but the theoretical limit calculations will be based off the basis product.

Variable Statistics Summary Report

For the selected variable, the report provides the following charts:

Control Summary

The chart shows the percentage of values at the various specifications limits. Pause on the various bars to view the percentage.



Run Analysis

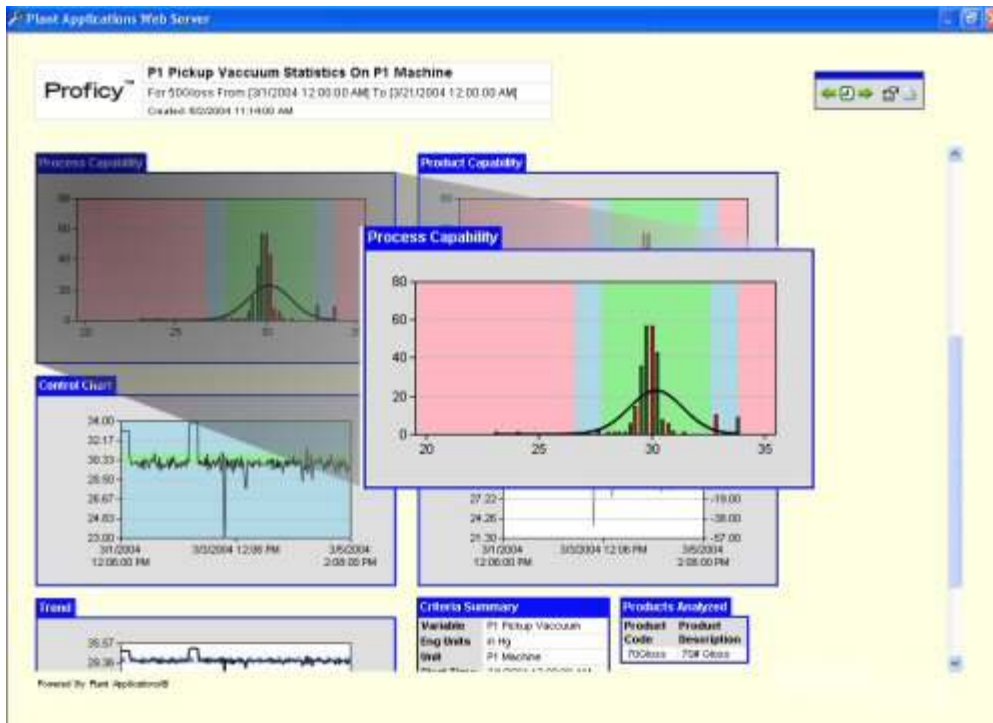
This chart is a graphical representation of the Statistics Summary and shows the minimum value, the maximum value and the average for the selected time period. The time stamp is the most recent production run after the specified start time.



Process Capability

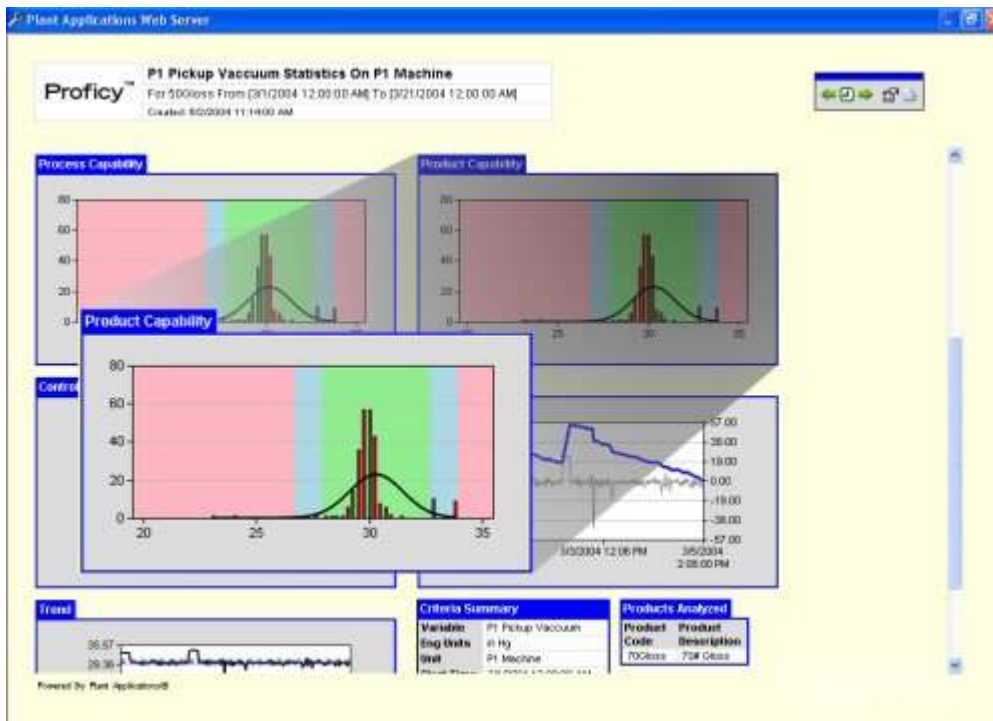
Plant Applications Web Reporting

This histogram shows the number of occurrences of a value. A normal curve based on the actual limits is overlaid as a reference.



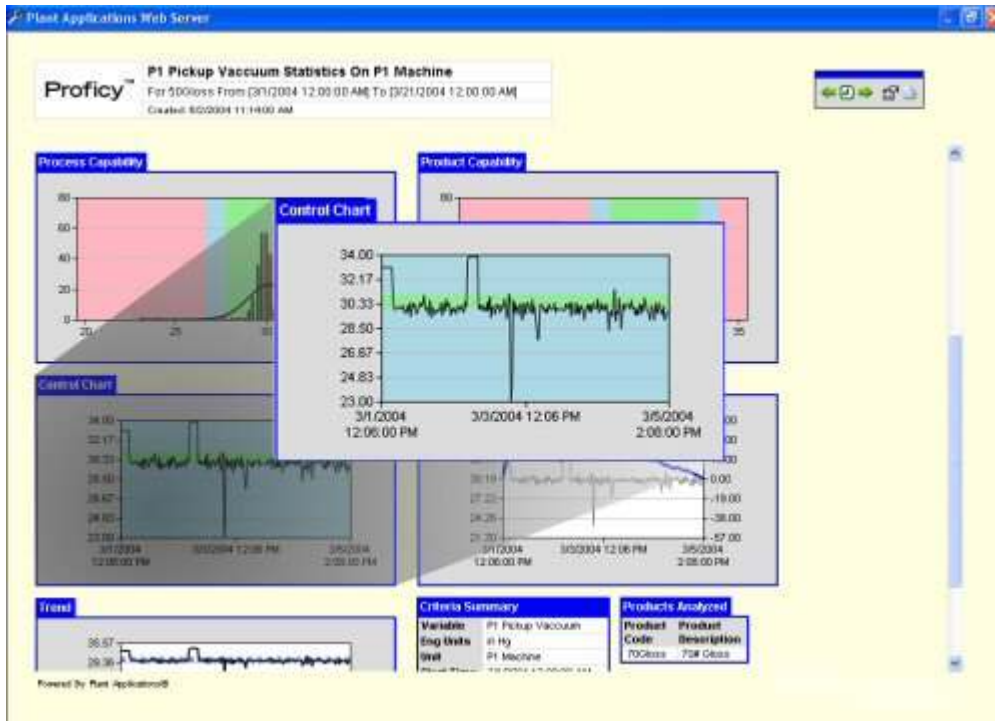
Product Capability

This histogram shows the number of occurrences of a value. A normal curve based on theoretical limits is overlaid as a reference.



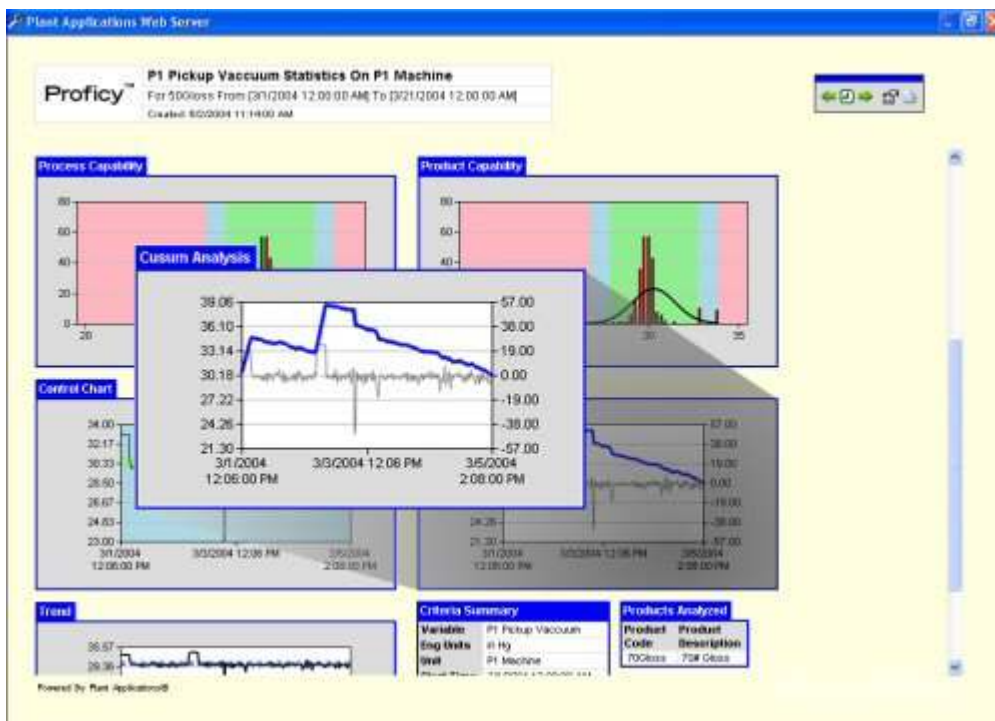
Control Chart

This chart plots the values over the specified time period.



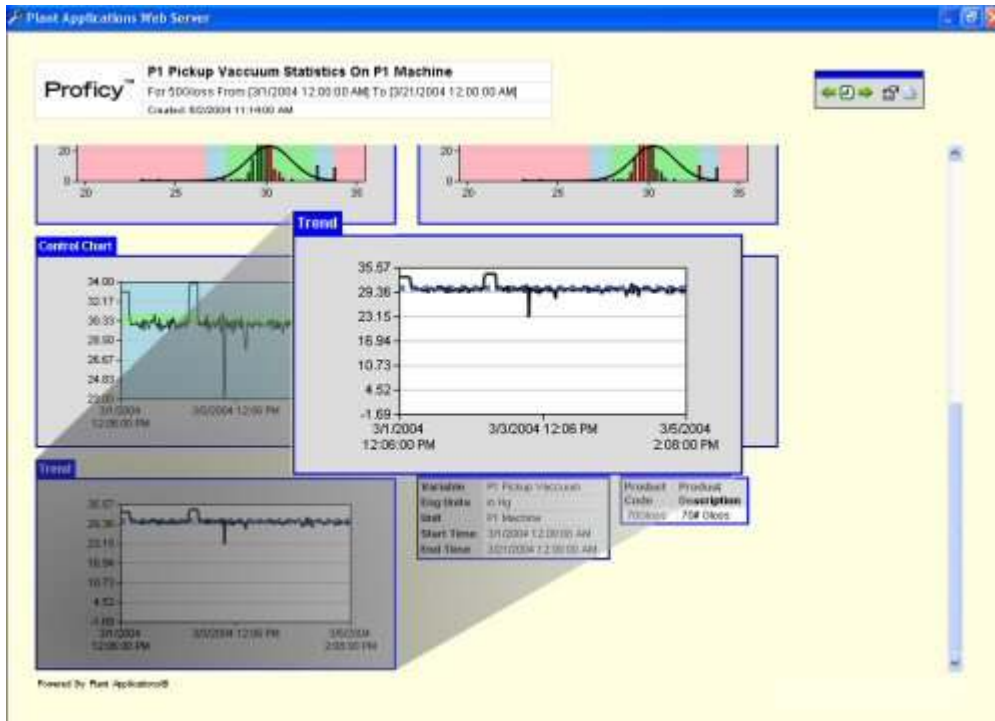
Cusum Analysis

This chart plots the cumulative deviation from the mean. The cusum line is on top of the actual values.



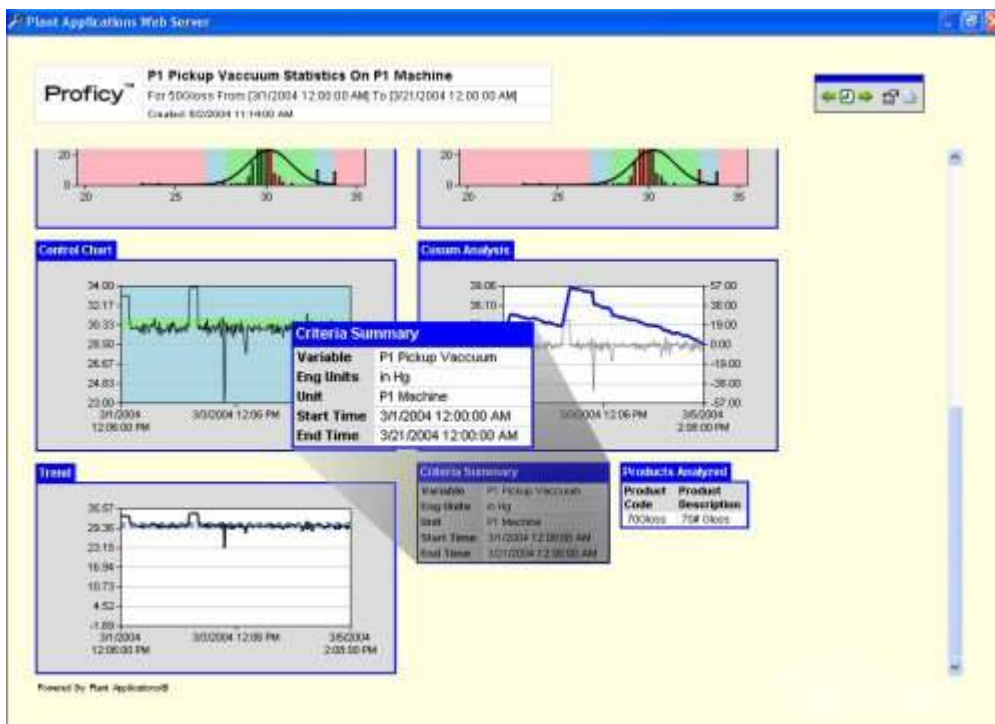
Trend

This chart plots values against the specification limits, which are indicated by a dashed line.



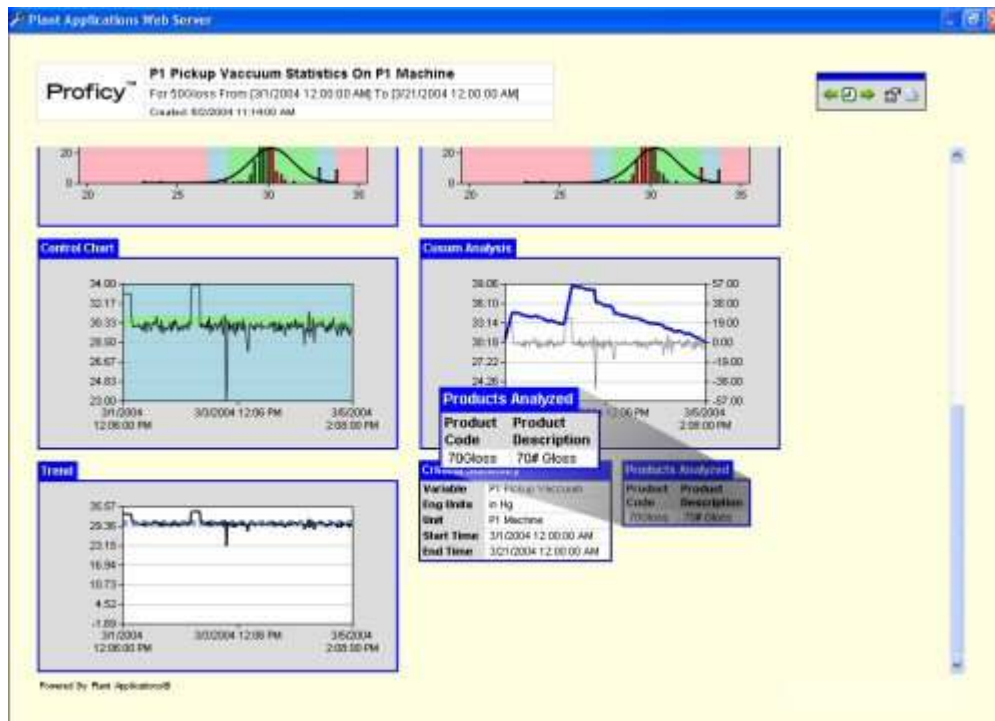
Criteria Summary

This chart is a summary of the criteria used to create the report.




Products Analyzed


This chart lists the products analyzed on the report.



Viewing History

Most Plant Applications Web reports have a toolbar which helps you navigate within a report, filter the report, or change the properties of the report. An important icon on the toolbar is the **View History** icon .

This icon should be used in place of using your browser's **Back** button.

Clicking the **View History**  icon will open the **History** dialog box, which contains a list of pages. Within the **History** dialog box, double-click a page to return to that page.

Waste Detail

This web report is accessed from the following web reports:

- [Sequence of Events](#)
- [Line Time Accounting](#)
- [Event Detail](#)

Click **View Audit Trail** to view an [audit trail report](#).

To display electronic signature information, click the  **Properties** icon on the web report's toolbar and select **Display Electronic Signature Information**.

Event Information

The Waste Detail report displays the following information for the Waste event:

- **Timestamp:** The date and time the Waste event occurred.
- **Type:** The type of waste. This is selected either during the event configuration or as part of the waste model.
- **Entered in:** The units of measure.
- **Time From Last Event:** The amount of time since the last Waste event ended and this Waste event began.
- **Product:** The product that was being produced.
- **Added By:** This is the service (for example, EventMgr) or user who inserted the Waste event.
- **Updated By:** If the Waste event has been edited, this is the person who last made a change to the Waste event.


NOTE: If the Waste event has not been changed, Added By will be displayed. If the Waste event has been changed, Updated By will be displayed.

- **Number of Updates:** This is the number of times the Waste event was changed. Click the number to view an [audit trail report](#).

Cause or Action Information

Additionally, detailed cause and action information is provided if reason trees have been configured for the Waste event. For more information on attaching reason trees to Waste events, please see How to Attach Reason Trees to Waste Locations.

Parameter Summary

The Parameter Summary lists the specifications for variables with an event type of waste. You can select the check box next to a variable and then click the  Trend icon to view a [trend analysis](#) report.

Web Part Administrator Environment

Using the automobile dashboard analogy, Web Parts are like the gauges and indicators on your car's dashboard. The Web Part Administrator is where you configure and manage your Web Parts, create new Web Parts, change default parameters, and access a variety of statistical reports.

To open the Web Administrator, from the Plant Applications Server Manager tree, expand the  **Server Management** node and double-click **Administrator Web Parts**.



- 1 The Manage WebPart Template tabbed page lists all of the templates used to create user-defined Web Parts. The Configure Available WebParts tabbed page lists all of the user-defined Web Parts and is where the Web Parts are created and configured.
- 2 This area lists all Web Parts or Web Part templates and information about each Web Part or template.
- 3 These buttons allow you to import or export Web Parts and Web Part templates.
- 4 This button allows you to preview the selected Web Part or Web Part template.
- 5 The WebPart Properties button is used to specify parameters that control things such as the placement of your Web Part or Web Part template in your dashboard.
- 6 These buttons are used to create new Web Part templates, copy existing templates, and delete templates.
- 7 These tabs provide information about the selected Web Part or Web Part template and are where you edit the default parameters for the associated Web Part or template.

Getting Started with Web Parts

What Is a Web Part?



Using the automobile dashboard analogy, Web Parts are like the gauges and indicators on your car's dashboard. Plant Applications Web Parts provide you important summary information. Then, if you need more specific information, you can click links within the Web Part that will provide you information with greater detail. By editing a Web Part, you can create ad hoc reports.

A great way to view and use your Plant Applications Web Parts is to add them to a portal, where you can build a "dashboard" of Web Parts. Currently, we support the use of Web Parts in [Windows® SharePoint™ Services](#) and Windows® SharePoint™ Portal Server.



Logging on to the Web Parts Administrator

You must have **Manager** or **Administrator** access to the **Administrator** security group before you can administer Web Parts.

To log on to the Web Parts Administrator:

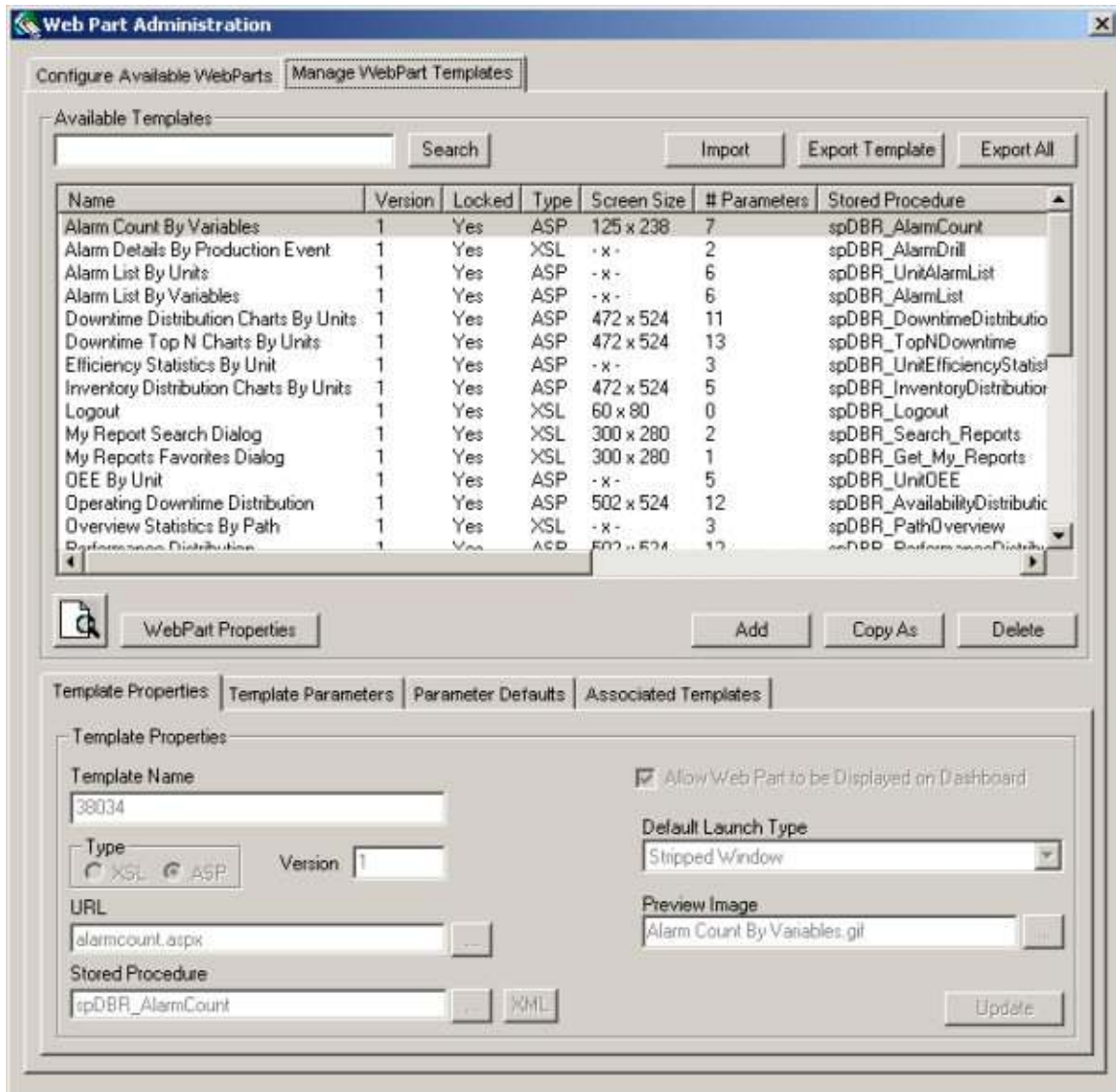
1. Open the Plant Applications Administrator.
2. Expand  **Server Management**.
3. Right-click  **Administer Web Parts** and choose **Administer Web Parts**.

Web Part Administration Dialog Box

To access this dialog box: From Plant Applications Administrator, expand the  **Server Management** node and double-click  **Administer Web Parts**

This dialog box is used to create, configure, and manage your Web Parts. Depending on how you've configured the site parameter, [Show Additional Web Part Configuration Tabs](#), you may see two or four tabs:

This tab...	Is where you...
Configure Available WebParts	Create your own Web Parts to use in your portal.
Manage WebPart Templates	Manage the Web Part templates that are used for creating your own Web Parts.
Manage Parameter Types	Create parameter types that are associated with dialogs that you've created. This tab is visible only if the Show Additional Web Part Configuration Tabs site parameter is set to True.
Manage Dialogs	Add dialogs to the Web Part system and then associated the dialogs with your user-defined parameter types. This tab is visible only if the Show Additional Web Part Configuration Tabs site parameter is set to True.



Creating Web Parts

Plant Applications comes with a certain number of templates, which can be found on the [Manage WebPart Templates](#) tab. Web Parts are based off these templates, which determine the stored procedures, parameters, and style sheets used to create your Web Part.

After you've created the Web Part, you can change the name, the parameter values, and determine when the Web Part gets updated.

To create a Web Part:

1. Log on to the Web Part Administrator. [How?](#)
2. In the [Web Part Administration](#) dialog box, click the **Configure Available WebParts** tab.
3. Click **Add**. The **Add Report** dialog box appears.
4. Under **Template**, select the template you want to base your Web Part on.

5. In the **Report Name** box, type the name of the Web Part.
6. Click **OK**.

Configuring Your Web Part

Configuring your Web Part is how you determine the location of the Web Part within your dashboard, the size of the Web Part within your digital dashboard, and certain cache options, among others. You can also change various properties of a specific Web Part, such as the Web Part name, parameter values, and scheduling.

Configuration changes made to a Web Part are applied only to that specific Web Part.

You can view a template's Web Part options, but you cannot edit them.

The WebParts Options dialog box is an interface for you to modify attributes of Web Parts viewed in Windows SharePoint portal.

To configure a Web Part

1. Log on to the Web Parts Administrator. [How?](#)
2. In the **Web Part Administration** dialog box, click the **Configure Available WebParts** tab.
3. Select the Web Part you want to configure and click **WebParts Properties**. The **WebParts Options** dialog box appears.
4. Do one or more of the following:
 - k. In the **Description** box, type a brief description of the Web Part. This description will be displayed on the **Import Web Parts** page within the Digital Dashboard.
 - l. Under **Position on Page** click the icon that represents where you want this Web Part positioned on the dashboard page.
 - m. If you have more than one Web Part with the same position on the dashboard page, you can type a number in the **Position in Column** box to specify the order you want the Web Parts displayed. For example, Web Part A and Web Part B both occupy the center of the dashboard page. If you type **1** in the **Position in Column** box for Web Part A and you type **2** in the **Position in Column** for Web Part B, Web Part A will be on top of Web Part B in the dashboard page.
 - n. Select or clear **Display this Web Part in a frame**. If you clear this option, the Web Part will not have a border around it and will not have a title bar. Without the title bar, you can not customize your Web Part.
 - o. Under **Default State**, click either the **Expanded** or **Minimized** button. This will determine whether the Web Part is minimized or expanded when the dashboard page is opened.
 - p. Select or clear **Allow users to remove this Web Part from their dashboard**. If you clear this option, users will not be able to delete this Web Part from the dashboard page.
 - q. Under **Should this Web Part be cached**,

Select ...	To ...
No	Re-fire the stored procedure each time the Web Part is loaded into the dashboard. The Web Part will <i>not</i> be cached and the contents will be updated.

Yes	Enable the Cache Options.
Cache Options	Description
Style	All Users: Share the cached output with all users. Per User: Cache the output for each individual user.
Seconds	Type the number of seconds before the dashboard automatically refreshes the Web Part content.

- r. Select **Provide help for this Web Part through the following link** if you want to link to a help file for this Web Part. If you select this option, type the help file's URL or full path in the box. The Web Part will have a Help icon **?** in the title bar that, when clicked, will open the help file.
- s. Click **Update** to save your changes.
- t. Click **Close** to close the dialog box.

Editing Default Parameter Values

Parameters are what make the Web Part unique. Parameters must be specified in order to schedule automatic content refresh. Changing the default values for a template's parameters won't affect any Web Parts that you have already created. It's not retroactive. However, any new Web Parts that use the template will have the new default values.

To edit the parameter values for a Web Part:

1. Log on to the Web Part Administrator. [How?](#)
2. In the **Web Part Administration** dialog box, click the **Configure Available WebParts** tab.
3. Click the **Report Parameters** tab to view a list of the parameters used in this Web Part.
4. Click **Edit Parameters** to change the default values for the parameters.
5. Make changes to the values.
6. On the **Finish** dialog box, click **Finish** to save your changes.

To edit the default parameter values for a template:

1. Log on to the Web Part Administrator. [How?](#)
2. In the **Web Part Administration** dialog box, click the **Manage WebPart Templates** tab.
3. Click the **Parameter Defaults** tab.
4. Click **Edit Parameters**.
5. Make changes to the default values.
6. On the **Finish** dialog box, click **Finish** to save your changes.


Scheduling your Web Part

You can control if or when your data is refreshed by selecting one of several scheduling options.

To schedule your Web Part:

1. Log on to the Web Parts Administrator. [How?](#)

Plant Applications Web Reporting

2. In the Web Parts Administration dialog box, click the Configure Available WebParts tab.
3. Click the Report Schedule tab.
4. Select Do Not Refresh Automatically if you do not want the Web Part to refresh automatically. Once the Web Part has valid data, the Web Part will never refresh unless you change a parameter value for the Web Part. You can force the Web Part to refresh by clicking  on the Web Part title bar.
5. Select Refresh on Each Load if you want the data to be refreshed (updated) each time the Web Part is viewed.
6. Select Refresh Automatically if you want to schedule when the content is refreshed. You can refresh the content at a specific time interval, based on a specific time, and based on an Event.

You can select one or more of the following options.

- a. To refresh the content of this Web Part on a fixed interval, select **Refresh On A Fixed Time Interval** and define your interval on the **Fixed Time Interval** tab. More information ...
- b. To refresh the content of this Web Part on a specific day or date, select **Refresh Based On A Specific Time** and specify the day or date on the **Specific Time** tab. More information ...
- c. To refresh the content of this Web Part based on a specific Plant Applications Event, select **Refresh Based On An Event** and configure the event on the **Event Trigger** tab. More information ...

Viewing Statistics

You can view information about report run times, CPU usage, and memory usage.

To view statistical information:

1. Log on to the Web Part Administrator. [How?](#)
2. In the Web Part Administration dialog box, click the Configure Available WebParts tab.
3. On the Report Properties tab, under Report Statistics, click Detailed Statistics. The Content Generator Statistics dialog box appears.
4. Double-click one of the items in the tree.
5. Under Graph Controls, you can change the start and end times to view statistics.
6. To automatically refresh the display, select Automatically Move Time Window With Refresh.
7. Under **Refresh Rate - Seconds**, choose how often you want the display to refresh.
8. Click **Graph Style** to select one of the following graph styles:
 - Step
 - Line
 - Bar
9. In the **Maximum Number of Samples to Show** box, type the number of samples to display.

- Click **Close** to close the dialog box.

Adding Dialogs

The Plant Applications Web Administrator comes with default dialogs. However, you can use your custom **.asp** pages to create new dialogs. When you create a new parameter type, you can associate the dialog with a [parameter type](#) so that the Web Parts know which dialogs to display.

CAUTION: You must be very careful when using this feature. Only someone with advanced knowledge of Plant Applications, server technology, and web technology should use this feature.

To add a dialog:

- Log on to the Web Parts Administrator. [How?](#)
- In the **Web Part Administration** dialog box, click the **Manage Dialogs** tab.
- Click **Add**. The **Add Dialog** dialog box appears.
- Do the following:
 - In the **Dialog Name** box, type the name of the dialog.
 - In the **URL** box, type the URL of the **.asp** page.
 - In the **# Parameters Expected** box, type the number of parameters used.
 - Click **OK**.

Adding Parameters


The **Manage Parameter Types** tab is used to create parameter types, such as unit collection, that can be used by other Web Parts. The parameter types you create can then be associated with the dialogs that you create on the **Manage Dialogs** tab.

CAUTION: You must be very careful when using this feature. Only someone with advanced knowledge of Plant Applications, server technology, and web technology should use this feature.

To add a parameter:

- Log on to the Web Parts Administrator. [How?](#)
- On the **Manage Parameter Types** tab, click **Add**.

The **Manage Parameter Types** tab is visible only if the **Show Additional Web Part Configuration_site** parameter has been set to true.

- In the **Add Parameter** dialog box, type a name for the new parameter in the **Parameter Name** box.
- Select a parameter type from the **Parameter Type** list.
- Click **Configure Dialogs** to select the dialogs to include with your parameter.
- In the **Available Dialogs** dialog box, select the dialog(s) and click the **Move Selected**  button.
- Click **OK**.

8. Click **OK**.

Columns Tab

You can customize this Web part by using the Columns tab to determine the information you want displayed on this Web part. The choices for columns is dependant on the Web part. Keep in mind that if you do not select a column, the information for that column will not be included in the Web part.

To use the Column tab

1. Under the **Available Columns** list, select the column(s) you want displayed on this Web part and click the **Move Selected** arrow. To display all columns click the **Move All** arrows.
2. Under the **Visible Columns** list, select the column(s) you do not want displayed on this Web par and click the **Remove Selected** arrow. To remove all columns, click the **Remove All** arrows.

CrewFilter Tab

This tab allows you to filter on a specific crew. If you select <Any>, you will get all crews.

To use this tab

- From the Crew list, select a specific crew to filter on. Only the crew you select will be included on the report.

Deleting Parameters

Before you can delete a parameter, you must delete it from all templates using the parameter.

To delete a parameter:

1. Log on to the Web Parts Administrator. [How?](#)
2. On the **Manage Parameter Types** tab, select the parameter you want to delete.
3. Click **Delete**.
4. Click **Yes** to confirm the deletion.

Page Caching

In order to be sure that the data in your report is the most current, you need to turn **Page Caching** off in Internet Explorer. If page caching is left on, then when you run the report, you will get the cached report, rather than the most current report.

To turn page caching off in Internet Explorer:

1. Open Internet Explorer.
2. From the **Tools** menu, select **Internet Options**.
3. In the **Internet Options** dialog box, on the **General** tab, click **Settings**.
4. In the **Settings** dialog box, select **Every visit to the page**.

5. Click **OK** to save your changes and close the dialog box.
6. Click **OK** to close the **Internet Options** dialog box.

Query Results Page

The Query Results page lists all of the batches that matched your criteria. You use this page to select the batches you want to analyze. For each batch in the analysis, the following information is provided:

- The batch name
- The product
- The status of the batch
- The department name (this is from your Plant Model)
- The production line name
- The production unit name
- The batch start time
- The batch end time

From this page you can run the following reports:

- Production Timeline
- Batch Genealogy
- Batch Summary
- Parameter Comparison
- Cycle Time Comparison
- Timeline Comparison

Selecting Batches

There are two ways to select batches. To select a single batch, click the option button (also known as a radio button) next to the batch you want to analyze. To select multiple batches, you can either click the check box at the top of the check box column to select all batches or you can click the check box next to the batches that you want to analyze. For the reports the multiple batch reports, you must select three or more batches. The batch that has the option button selected becomes the batch that the other batches are compared against.

Specifying Start and End Times



Certain web parts require you to specify a time span. To help you do that, when you configure one of these web parts, you are presented with a tabbed page that contains various pre-defined time options that you can select, or you can specify your own, user-defined, time span.

For the predefined time options, the start and end times are determined by the site parameters, **EndOfDayHour** and **EndOfDayMinute**, and a production day is the 24-hour period based on the values in the EndOfDayHour and EndOfDayMinute site parameters. For example, if EndOfDayHour is 7 and EndOfDayMinute is 0 (zero), then a production day starts at 7:00 am and ends the following day at 7:00 am.

Pre-defined Time Options

- **User-defined:** This option allows you to specify your own time span. If you select this option, you can enter specific dates or dates and times in the User Defined section of this page.
- **Today:** If you select this option, the start time will be the start time of the current date and the end time will be the current time.
- **Yesterday:** Select this option to retrieve the previous production days's information.
- **Last 3 Days:** Select this option to retrieve information from the previous three days.
- **This Month:** Select this option to retrieve information starting at the beginning of the first production day of the current month and ending at the current time.
- **Last 7 Days:** Select this option to retrieve information from the previous seven production days.
- **Last 30 Days:** Select this option to retrieve information from the previous 30 production days.
- **Last Month:** Select this option to retrieve information from the previous month.

User-defined Time Options

You can specify your own user-defined time span. In order to use this option, you must select **User Defined** under **Time Options**. You can click the **Calendar**  icon to view a calendar from which you can select a specific date. You can click the **Formula**  icon to view a list of pre-defined formulas.

You can also create your own formulas. Valid parameters are:

Now = the current date and time.

sec = seconds

min = minutes

h = hours

d = days

Valid operators are **+** and **-**. A space is required on both sides of the operator.

Viewing a Report

The Web client interface has the look and feel of the Windows Explorer. The windows is divided into two panes. The left pane displays the reports and web content available to the current user. When you click on a report definition or web content, it is displayed in the right pane. When you click a report type, the report dialogs are displayed in the right pane.



Viewing the Report Engine Queue

You can see which reports are currently waiting to be processed by the Report Engines by viewing the Engine Queue in the **Current Activity** folder. You can also [remove reports](#) from the Engine Queue.

To view the Engine Queue:

1. Log on to the Web Administrator. [How?](#)
2. Open the **Current Activity** folder.
3. Double-click **Engine Queue** to display the reports in the right pane.

Managing Web Part Templates

To access this dialog box: From Plant Applications Administrator, expand the  **Server Management** node, double-click  **Administer Web Parts**, then click the **Manage WebPart Templates** tab.

Templates are the building blocks for creating your own Web Parts. It is important to note that any changes you make to the template parameters become the default for any Web parts based off the template.

The **Manage WebPart Templates** tab lists all of the available templates. From this tab you can:

- Export a [single template](#) or [all templates](#)
- Import a .zip file containing Web Parts
- [Preview a template](#)
- [View and change the template properties](#)
- [Copy templates](#)
- Add (create) new templates
- Delete templates

Column Names

You can click a column heading to sort by that column.

Name: This is the name of the template.

Version: On initial import, the version number is set to **1**. When a copy is made of a template, the version of the copied template is set to **2**.

Locked: Templates are initially locked for security purposes. Locked templates can not be edited. If you need to edit a template, create a copy of it and then edit the properties of the copy.

Type: Templates can be either **ASP** or **XML**. If the template type is **ASP**, there is an associated **ASPX** page that will be displayed for the Web Part. If the type is **XML**, then there is **XSL** stored in the database for the template. The **XSL** and the **XML** will generate **HTML**, which will display the Web Part. **XSL** template are stored in the database. **ASP** and **ASPX** files are in the **inetpub** directory.

Screen Size: Some templates have a fixed size. The dimensions are displayed in this column. If there are no dimensions, the Web Part will automatically fit the zone in which they are placed. If you need to control the size of a Web Part, you can create a copy of the template and then edit the properties of the copy.

Parameters: The number of available inputs to the stored procedure associated with the template. This does not mean the number of required parameters for the stored procedure.

Stored Procedure: The name of the stored procedure used by the associated template.

Launch Type: The way the Web Part is displayed.

Template Filename: This is the file name for this Web part.

Template Preview Filename: This is the name of the image file used as a preview of the Web part.

Associated Templates and Reports

Templates can have other templates associated with them. These associated templates continue as links in your Web Parts and are passed any parameters, such as start and end time, from the originating Web Part.

For example:

- Template 1 is used to create Web Part 1.
- Template 1 has an associated template, Template 2.
- An operator opens Web Part 1 in the dashboard.
- Web Part 1 contains a link that will open Web Part 2, which is based on the associated Template 2. The parameters used to configure Web Part 1 are passed to Web Part 2.

You can view associated templates on the **Associated Templates** tab on the **Manage WebPart Templates** tab.

You can view associated reports on the **Associated Reports** tab on the **Configure Available WebParts** tab.

Editing Template Parameter Values

Parameters are what make the Web Part unique. Parameters must be specified in order to schedule automatic content refresh. Changing the default values for a template's parameters won't affect any Web Parts that you have already created. It's not retroactive. However, any new Web Parts that use the template will have the new default values.

To edit the default parameter values for a template:

1. Log on to the Web Part Administrator. [How?](#)
2. In the **Web Part Administration** dialog box, click the **Manage WebPart Templates** tab.
3. Click the **Parameter Defaults** tab.
4. Click **Edit Parameter**.
5. Make changes to the default values.
6. On the **Finish** page, click **Finish** to save your changes.

Copying Templates

All of the default templates that come with Plant Applications have been locked and can not be edited or changed. However, you can create a copy of a template, which will allow you to make changes to the template.

To copy a template:



1. Log on to the Web Part Administrator. [How?](#)
2. In the **Web Part Administration** dialog box, click the **Manage WebPart Template** tab.
3. Select the template you want to copy and click **Copy As**. The **Copy As** dialog box appears.
4. Click **Copy** to accept the default name and create a copy of the template, or type a new name for the template and then click **Copy**.
5. Make your changes to the copy of the template.


Exporting a Template

You can export a template for use on another server. When you export the template, you'll be able to determine the files that are also exported with the template, and whether the template will be locked (unable to be edited) on the other server.

You can export only one template at a time. If you want to export the entire database of Web Parts, see Exporting It All.

To export one template:


1. Log on to the Web Part Administrator. [How?](#)
2. In the Web Part Administration dialog box, click the Manage WebPart Templates tab.
3. Select the template you want to export and click Export Template. The Export Options dialog box appears.
4. Do one or more of the following:
 - To export the stored procedures associated with the template, click **Export Local Stored Procedures**.
 - To lock the template when it is imported, click **Lock Templates**.
5. Click **Export**. The **Export Finalization** dialog box appears.
6. Under **Generated Export Files** is the file that will be exported. The **.prdb** file is an XML-based file that maps the database structure for the selected template. Under **Additional Files Needed** is a list of additional files that are needed in order for this template to run. If the destination server already has these files, you do not need to add them. However, if the destination server does not have these files, then you will need to add them. Do one of the following:
 - **If you do not need to add the additional files:**
 - a. Under **Export File Name**, click **Browse** . The **Change Zip FileName** dialog box appears.
 - b. Specify the location of the export file.
 - c. Click **Export**.
 - **If you need to add the additional files:**
 - a. Click Browse  next to Set Base Path For Export.


- b. In the Select Base Path dialog box, browse to the location of the files you need to add and click OK.
- c. Under Added Files, click Add New. The Add Template Export Files dialog box appears.
- d. Select the file you want to add and click Open. The Export Relative Path dialog box appears.
- e. Type the path relative to the physical path, which is the path you specified as the base path in step b above. This will determine where the file is stored during the import.
- f. Click OK.
- g. Repeat steps c - f for each file you need to add.
- h. Under Export File Name, click Browse . The Change Zip FileName dialog box appears.
- i. Specify the location of the export file.
- j. Click Export.

Exporting All Templates

You can export all templates and associated files. If you want to export only one template, see [Exporting a Template](#).

To export all templates:

1. Log on to the Web Part Administrator. [How?](#)
2. In the **Web Part Administration** dialog box, click the **Manage WebPart Templates** tab.
3. Click **Export All**. The **Export Finalization** dialog box appears.
4. Under **Generated Export Files** are the files that will be exported. The **.prdb** file is an XML-based file that maps the database structure for the templates. Under **Additional Files Needed** is a list of additional files that are needed in order for these templates to run. If the destination server already has these files, you do not need to add them. However, if the destination server does not have these files, then you will need to add them.
5. Click **Browse**  next to **Set Base Path For Export**. The **Select Base Path** dialog box appears.
6. Browse to the location of the files you need to add and click **OK**.
7. Under **Added Files**, click **Add New**. The **Add Template Export Files** dialog box appears.
8. Select the file you want to add and click **Open**. The **Export Relative Path** dialog box appears.
9. Type the path relative to the physical path, which is the path you specified as the base path in step 6. This will determine where the file is stored during the import.
10. Click **OK**.
11. Repeat **steps 7 - 10** for each file you need to add.

12. Under **Export File Name**, click **Browse** . The **Change Zip FileName** dialog box appears.
13. Specify the location of the export file.
14. Click **Export**.

Configuring Available Web Parts

Creating Web Parts

Plant Applications comes with a certain number of templates, which can be found on the [Manage WebPart Templates](#) tab. Web Parts are based off these templates, which determine the stored procedures, parameters, and style sheets used to create your Web Part.

After you've created the Web Part, you can change the name, the parameter values, and determine when the Web Part gets updated.

To create a Web Part:

1. Log on to the Web Part Administrator. [How?](#)
2. In the [Web Part Administration](#) dialog box, click the **Configure Available WebParts** tab.
3. Click **Add**. The **Add Report** dialog box appears.
4. Under **Template**, select the template you want to base your Web Part on.
5. In the **Report Name** box, type the name of the Web Part.
6. Click **OK**.

Configuring Your Web Part

Configuring your Web Part is how you determine the location of the Web Part within your dashboard, the size of the Web Part within your digital dashboard, and certain cache options, among others. You can also change various properties of a specific Web Part, such as the Web Part name, parameter values, and scheduling.

Configuration changes made to a Web Part are applied only to that specific Web Part.

You can view a template's Web Part options, but you cannot edit them.

The [WebParts Options](#) dialog box is an interface for you to modify attributes of Web Parts viewed in [Windows SharePoint portal](#).

To configure a Web Part

1. Log on to the Web Parts Administrator. [How?](#)
2. In the Web Part Administration dialog box, click the **Configure Available WebParts** tab.
3. Select the Web Part you want to configure and click **WebParts Properties**. The **WebParts Options** dialog box appears.
4. Do one or more of the following:

- a. In the **Description** box, type a brief description of the Web Part. This description will be displayed on the **Import Web Parts** page within the Digital Dashboard.
- b. Under **Position on Page** click the icon that represents where you want this Web Part positioned on the dashboard page.
- c. If you have more than one Web Part with the same position on the dashboard page, you can type a number in the **Position in Column** box to specify the order you want the Web Parts displayed. For example, Web Part A and Web Part B both occupy the center of the dashboard page. If you type **1** in the **Position in Column** box for Web Part A and you type **2** in the **Position in Column** for Web Part B, Web Part A will be on top of Web Part B in the dashboard page.
- d. Select or clear **Display this Web Part in a frame**. If you clear this option, the Web Part will not have a border around it and will not have a title bar. Without the title bar, you can not customize your Web Part.
- e. Under **Default State**, click either the **Expanded** or **Minimized** button. This will determine whether the Web Part is minimized or expanded when the dashboard page is opened.
- f. Select or clear **Allow users to remove this Web Part from their dashboard**. If you clear this option, users will not be able to delete this Web Part from the dashboard page.
- g. Under **Should this Web Part be cached**,

Select ...	To ...						
No	Re-fire the stored procedure each time the Web Part is loaded into the dashboard. The Web Part will <i>not</i> be cached and the contents will be updated.						
Yes	Enable the Cache Options. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Cache Options</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Style</td> <td>All Users: Share the cached output with all users. Per User: Cache the output for each individual user.</td> </tr> <tr> <td>Seconds</td> <td>Type the number of seconds before the dashboard automatically refreshes the Web Part content.</td> </tr> </tbody> </table>	Cache Options	Description	Style	All Users: Share the cached output with all users. Per User: Cache the output for each individual user.	Seconds	Type the number of seconds before the dashboard automatically refreshes the Web Part content.
Cache Options	Description						
Style	All Users: Share the cached output with all users. Per User: Cache the output for each individual user.						
Seconds	Type the number of seconds before the dashboard automatically refreshes the Web Part content.						

- h. Select **Provide help for this Web Part through the following link** if you want to link to a help file for this Web Part. If you select this option, type the help file's URL or full path in the box. The Web Part will have a Help icon **?** in the title bar that, when clicked, will open the help file.
- i. Click **Update** to save your changes.
- j. Click **Close** to close the dialog box.

Web Part Display Settings

These options determine how the Web Part will be displayed in the dashboard or in the Plant Applications Web Server.

To control how your Web Part is displayed

1. Log on to the Web Parts Administrator. [How?](#)
2. In the Web Part Administration dialog box, click the Configure Available WebParts tab.

3. Select the Web Part you want to configure and click Web Parts Properties. The Web Parts Options dialog box appears.
4. Do one or more of the following:
 - a. In the **Description** box, type a brief description of the Web Part.
 - b. Under **Position on Page** click the icon that represents where you want this Web Part positioned on the dashboard or portal page.
 - c. If you have more than one Web Part with the same position on the dashboard or portal page, you can type a number in the **Position in Column** box to specify the order you want the Web Parts displayed. For example, Web Part A and Web Part B both occupy the center of the dashboard or portal page. If you type **1** in the **Position in Column** box for Web Part A and you type **2** in the **Position in Column** for Web Part B, Web Part A will be on top of Web Part B in the dashboard or portal page.
 - d. Select or clear the **Display this Web Part in a frame** option. If you clear this option, the Web Part will not have a border around it and will not have a title bar. Without the title bar, you cannot customize your Web Part.
 - e. Under **Default State**, click either the **Expanded** or **Minimized** button. This will determine whether the Web Part is minimized or expanded when the dashboard or portal page is opened.
 - f. Select or clear the **Allow users to remove this Web Part from their dashboard** option. If you clear this option, users will not be able to delete this Web Part from the dashboard or portal page.
 - g. Under **Should this Web Part be cached**, select **Yes** or **No**. If you select **Yes**, the output of a Web Part will be cached for a period of time before the dashboard or portal refreshes it. See **step h**.
 - h. If you chose **Yes** in **step g**, you can determine if the cached output can be shared by all users or cached separately for each individual user, and the period of time, in seconds, before the dashboard will refresh it. From the **Style** drop-down list, select **All Users** to share the cached output with all users or select **Per User** to cache the output for each individual user. In the **Seconds** box, type the number of seconds before the dashboard will automatically refresh the output.
 - i. Select the **Provide help for this Web Part through the following link** if you want to link to a help file for this Web Part. If you select this option, type the help file's URL or full path in the box. The Web Part will have a Help icon **?** in the title bar that, when clicked, will open the help file.
 - j. Click **Update** to save your changes.
 - k. Click **Close** to close the dialog box.

Deleting Web Parts

You can delete Web Parts from just the dashboard, but still have them available for use on other dashboards, or you can permanently delete them.

To permanently delete a Web Part from the Web Part Administrator:



1. Log on to the Web Part Administrator. [How?](#)
2. On the **Configure Available WebParts** tab, select the Web Part that you want to delete.

3. Click **Delete**.
4. Click **Yes** to confirm the deletion.

Previewing Web Parts

After you create a Web Part, you can quickly preview it to make sure it will contain the content you want.

To preview a Web Part:

1. Log on to the Web Part Administrator. [How?](#)
2. On the **Configure Available WebParts** tab, select the Web Part you want to preview.
3. Click **Preview** .
4. After the Web Part loads, verify that it contains the content you want and then click the **Close** button  on the title bar.

Copying Web Parts

When you copy a Web Part, the copied version will contain the same attributes as the original Web Part, so you do not have to create a Web Part from scratch. Once the Web Part has been copied, the copy will get a new version number based on the assumption that changes will be made to the copy.

To create a copy of a Web Part:

1. Log on to the Web Part Administrator.
2. In the Web Part Administration dialog box, click the **Configure Available WebParts** tab.
3. Select the Web Part you want to copy and click **Copy As**. The **Copy As** dialog box appears.
4. Type a new name for the Web Part.

You can accept the current name of the Web Part. If you do, the copy of the Web Part will be given a different version number. If you change the name of the template, the version number will be **1 (one)**.

5. Click **Copy**.

Editing Web Part Parameter Values

Parameters are what make the Web Part unique. Parameters must be specified in order to schedule automatic content refresh. Changing the default values for a Web Part's parameters won't affect any Web Parts that you have already created. It's not retroactive. However, any new Web Parts that use the template will have the new default values.

To edit the parameter values for a Web Part

1. Log on to the Web Part Administrator. [How?](#)
2. In the **Web Part Administration** dialog box, click the **Configure Available WebParts** tab.

3. Click the **Report Parameters** tab to view a list of the parameters used in this Web Part.
4. Click **Edit Parameter** to change the values for the parameters and click **Finish** on the **Finish** tab. You will return to the **Web Part Administration** dialog box.
5. On the **Report Properties** tab, click **Update**.

Changing Web Part Properties

After you've created your Web Part, you can change the name of the Web Part, the template that is associated with the Web Part, and assign a security group to the Web Part.


To change the Web Part properties:

1. Log on to the Web Part Administrator. [How?](#)
2. In the Web Part Administration dialog box, click the Configure Available WebParts tab.
3. Select the desired Web Part and click the Report Properties tab at the bottom of the dialog box.
4. Do one or more of the following:
 - To change the name of the Web Part, type the new name in the **Report Name** box.
 - To assign a new template to the Web Part, select a template from the **Report Template** drop-down list.
 - To apply a security group to the Web Part, select a security group from the **Security Group** drop-down list.
 - To determine the number of reports that get saved to the database, type a number in the **#Versions to Save** box.
5. Click **Update**.

Scheduling your Web Part

You can control if or when your data is refreshed by selecting one of several scheduling options.

To schedule your Web Part:

1. Log on to the Web Parts Administrator. [How?](#)
2. In the Web Parts Administration dialog box, click the Configure Available WebParts tab.
3. Click the Report Schedule tab.
4. Select **Do Not Refresh Automatically** if you do not want the Web Part to refresh automatically. Once the Web Part has valid data, the Web Part will never refresh unless you change a parameter value for the Web Part. You can force the Web Part to refresh by clicking  on the Web Part title bar.
5. Select **Refresh on Each Load** if you want the data to be refreshed (updated) each time the Web Part is viewed.
6. Select **Refresh Automatically** if you want to schedule when the content is refreshed. You can refresh the content at a specific time interval, based on a specific time, and based on an Event.

[You can select one or more of the following options.](#)

- a. To refresh the content of this Web Part on a fixed interval, select **Refresh On A Fixed Time Interval** and define your interval on the **Fixed Time Interval** tab. More information ...
- b. To refresh the content of this Web Part on a specific day or date, select **Refresh Based On A Specific Time** and specify the day or date on the **Specific Time** tab. More information ...
- c. To refresh the content of this Web Part based on a specific Plant Applications Event, select **Refresh Based On An Event** and configure the event on the **Event Trigger** tab. More information ...

Associated Templates and Reports

Templates can have other templates associated with them. These associated templates continue as links in your Web Parts and are passed any parameters, such as start and end time, from the originating Web Part.

For example:

- Template 1 is used to create Web Part 1.
- Template 1 has an associated template, Template 2.
- An operator opens Web Part 1 in the dashboard.
- Web Part 1 contains a link that will open Web Part 2, which is based on the associated Template 2. The parameters used to configure Web Part 1 are passed to Web Part 2.

You can view associated templates on the **Associated Templates** tab on the **Manage WebPart Templates** tab.



You can view associated reports on the **Associated Reports** tab on the **Configure Available WebParts** tab.

Exporting Web Parts

You can export all Web Parts and associated files, including templates, to a ZIP file that can be re-imported if you ever need to restore your database to a working state.

To export all Web Parts

1. Log on to the Web Part Administrator. [How?](#)
2. In the Web Part Administration dialog box, click the Configure Available WebParts tab.
3. Click Export Full. The Export Options dialog box appears.
4. Do one or more of the following:
 - Select **Export Local Stored Procedures** to include any user-created stored procedures in the export file.
 - Select **Lock Templates** to lock the templates. Templates are initially locked for security purposes. Locked templates cannot be edited. If you need to edit a template, create a copy of it and then edit the properties of the copy.
5. Click **Export**. The **Export Finalization** dialog box appears.

6. Under **Generated Export Files** are the files that will be exported. The **.prdb** file is an XML-based file that maps the database structure for the templates. Under **Additional Files Needed** is a list of additional files that are needed in order for these templates to run. If the destination server already has these files, you do not need to add them. However, if the destination server does not have these files, then you will need to add them.
7. Click **Browse**  next to **Set Base Path For Export**. The **Select Base Path** dialog box appears.
8. Browse to the location of the files you need to add and click **OK**.
9. Under **Added Files**, click **Add New**. The **Add Template Export Files** dialog box appears.
10. Select the file you want to add and click **Open**. The **Export Relative Path** dialog box appears.
11. Type the path relative to the physical path, which is the path you specified as the base path in step 8. This will determine where the file is stored during the import.
12. Click **OK**.
13. Repeat **steps 7 - 10** for each file you need to add.
14. Under **Export File Name**, click **Browse** . The **Change Zip FileName** dialog box appears.
15. Specify the location of the export file and click **Export**.

Using Web Parts in a Portal

Using Web Parts in Windows® SharePoint™ Services

Windows SharePoint Services is the engine that allows you to create Web sites for information sharing and document collaboration. A key piece of the information worker infrastructure delivered in Microsoft Windows Server 2003, Windows SharePoint Services provides additional functionality to the Microsoft Office System and other desktop applications, as well as serving as a platform for application development.

You can also use Plant Applications Web Parts in Windows SharePoint Portal Server, which extends the capabilities of Windows SharePoint Services by providing organizational and management tools for SharePoint sites, and by enabling teams to publish information to the entire organization.

The difference between Windows SharePoint Services and Windows SharePoint Portal Server is Windows SharePoint Services provides sites for team collaboration, while SharePoint Portal Server 2003 connects these sites, people, and business processes — facilitating knowledge sharing and smart organizations.

SharePoint Services is included with Microsoft Windows Server 2003 Service Pack 1. You can download a free copy from Microsoft's site at www.microsoft.com. Search on "sharepoint services."

To view Web Parts in SharePoint Services

Plant Applications Web Reporting

1. Open your SharePoint Services Web site and navigate to the desired Web page.
2. Click **Modify Shared Page**.
3. Point to **Add Web Parts**, and click **Browse**.
4. Click **Online Gallery**.
5. Drag the desired Web Part onto the Web page.

Only Web Parts that are user-configured (on the **Configure Available WebParts** tab) can be added to your portal.

Web Part Services and Parameters

Webpart Content Generator service

The Webpart Content Generator service:

- Performs database maintenance. It manages ad hoc reports and statistics.
- Looks for and removes ad hoc reports that are no longer needed.
- Monitors statistics and flushes the old statistics based on a configurable interval. See Session Manager Stat Life (Days) parameter for more information.
- Acts as the scheduler and is able to receive events.
- Monitors all Web Part reports that have been scheduled.
- Opens a socket and waits to receive an incoming event for a scheduled report. Once an incoming event is received, the Webpart Content Generator will get the template and run the report.

Standard Web Parts Overview

✘ = Required; ● = Optional

	Quality Module			Product Module	Efficiency Module						Production Module		All			
	Production Event	Production Event Status	Production Event Dimensions	Crew/Shift	Products and Product Changes	Downtime	Waste	Fault	Production Metric	Production Metric Specifications	Process Orders and Schedules	Execution Paths	Variables	Variable Specifications	Alarms	Reasons
Alarm Count by Variables					✘								✘	✘	✘	
Alarm Details by Production Event	✘				✘								✘	✘	✘	
Alarm List by Variables					✘								✘	✘	✘	

Plant Applications Web Reporting

Alarm List by Units					x								x	x	x	
Downtime Distribution Charts by Units				●	x	x		●								x
Downtime Top N Charts by Units						x										x
Efficiency Statistics by Unit						x	x		x	x						
Inventory Distribution	x	x	x	●	x											
Logout																
My Report Search Dialog																
My Report																

Favorites Dialog																
Operating Downtime Distribution				●	✘	✘		●								✘
Overview Statistics by Path	✘	✘	✘			✘	✘		✘		✘	✘				
Process Order (Active) List by Lines	✘										✘	✘				
Process Order Search by Paths											✘	✘				
Process Order Search Dialog	✘										✘	✘				

Plant Applications Web Reporting

Product Statistics by Unit	●		●		✘	●	●		●		●		●	●		
Production Distribution Charts by Units	✘	✘	✘	●	✘											
Production Event Alarms by Unit	✘				✘								✘	✘	✘	
Production Event Search by Unit	✘	✘	✘		✘								✘	✘		
Production Statistics by Lines	✘					✘	✘		✘	✘						
Quality Statistics by Variables					✘								✘	✘	✘	

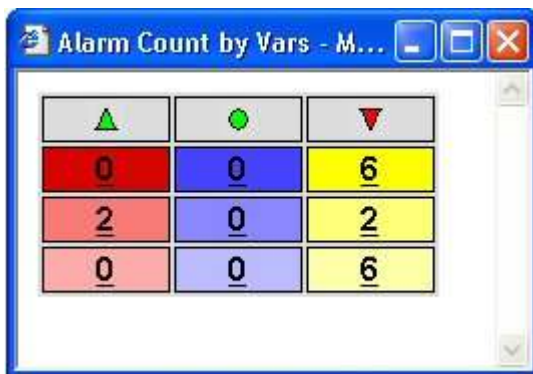
Specification Search by Units					x								x	x		
Specification Search Dialog																
Unit OEE	x		x			x	x		x				x	x	x	
Waste Distribution				●	x		x	●								x
Waste Top N Charts by Units							x									x

Alarm Count by Variables Web Part

The Alarm Count By Variables Web Part graphically displays the number and level of alarms during three user-specified time periods for selected variables. From this Web Part, you can view the Alarm List By Variables Web Part.

In order to use this Web Part, you must first:

- Create your plant model
- Create your products
- Create variables on a production unit
- Add products to the production unit
- Enter specification limits for those variables on the production unit for the selected products
- Configure an Alarm Template
- Configure an Alarm Display



The top row indicates whether the number of alarms is trending up, down, or remaining the same. The alarm count for each category in the first row is compared to the alarm count for each category in the second row. For each alarm level, if the alarm count in the first row exceeds the alarm count in the second row, then a red down-pointing arrow is displayed. If the alarm count in the first row is less than the alarm count in the second row, then a green up-pointing arrow is displayed. If there is no change, then a green circle is displayed.

The red column displays the number of high alarms. The blue column displays the number of medium alarms. The yellow column displays the number of low alarms.

The first row of numbers is the number of alarms, in each category, for the specified Start Time #1. The second row of numbers is the number of alarms, in each category, for the specified Start Time #2. The third row of numbers is the number of alarms, in each category, for the specified Start Time #3.

You can click a number in the grid to open the [Alarm List By Variables](#) web part.

To create an Alarm Count by Variables Web Part

1. Create the web part. How?
2. On the Report Parameters tab, click the Edit Parameter button.
3. On the Variables tab, select the variables you want included on this web part.
4. After you've selected your variables, click the **Start and End Time #1** tab. On this tab, you can specify the most current time period over which you want to count alarms on your selected variables. These alarm counts are displayed in the top row of the web part.

5. Click the **Start and End Time #2** tab. On this tab, you can specify a time period prior to the time period specified on the Start and End Time #1 tab.
6. Click the **Start and End Time #3** tab. On this tab, you can specify a time period prior to the time period specified on the Start and End time #2 tab.
7. Click the Finish tab and click the Finish button to save your changes and to return to the Web Part Administration dialog box.

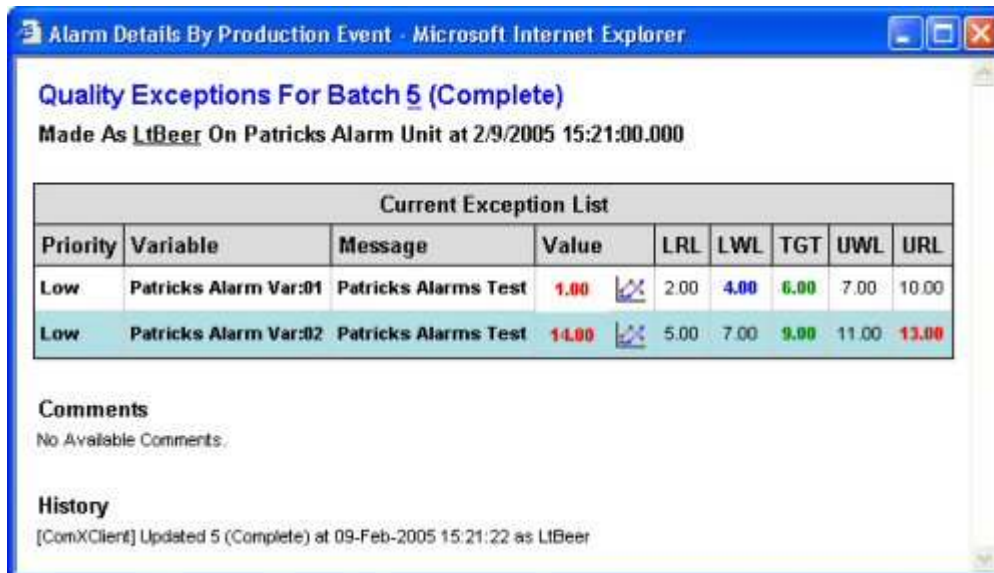
Alarm Details by Production Event Web Part

The Alarm Details by Production Event Web Part displays information about alarms for a specific production event on a production unit. This Web part is for ad hoc reporting only or is available from other Web parts. You can not add this Web part to your list of available Web Parts.

NOTE: You can view this Web Part from the [Production Event Alarms by Unit Web Part](#).

In order to use this Web Part, you must first:

- Create your plant model
- Create your products
- Create variables on a production unit
- Add products to the production unit
- Enter specification limits for those variables on the production unit for the selected products
- Get data into your variables (Autolog, Historian tag, Calculations, etc.)
- Capture production events
- Configure an Alarm Template
- Configure an Alarm Display




Current Exception List								
Priority	Variable	Message	Value	LRL	LWL	TGT	UWL	URL
Low	Patricks Alarm Var:01	Patricks Alarms Test	1.00	2.00	4.00	6.00	7.00	10.00
Low	Patricks Alarm Var:02	Patricks Alarms Test	11.00	5.00	7.00	9.00	11.00	13.00

Comments
No Available Comments.

History
[ComXClient] Updated 5 (Complete) at 09-Feb-2005 15:21:22 as LtBeer

This Web Part provides the following information:

- **Priority:** This is the alarm level and can be **High**, **Medium**, or **Low**. These were determined when you configured the Alarm Template.
- **Variable:** This is the variable that triggered the alarm.

- **Message:** This is the text that was entered when the Alarm Template was created. More information...
- **Value:** This is the value that triggered the alarm. Click the **Interactive Trend Analysis**  icon to view a trend analysis for the variable.
- **LRL:** Lower Reject Limit. If the Value is less than the LRL, both the Value and the LRL will be red.
- **LWL:** Lower Warning Limit. If the Value is less than the LWL, but greater than the LRL, both the Value and the LWL will be blue.
- **TGT:** Target. This is the target value and it is always green.
- **UWL:** Upper Warning Limit. If the Value is greater than the UWL, but less than the URL, both the Value and the UWL will be blue.
- **URL:** Upper Reject Limit. If the Value is greater than the URL, both the Value and the URL will be red.
- **User:** The electronic signature of the person who gave user verification, if electronic signature has been configured.
- **Approver:** The electronic signature of the person who gave approver verification, if electronic signature has been configured.
- **Comments:** This will display any comments associated with the event.
- **History:**


To configure the Alarm Details by Production Event Web Part

If you edit the parameters for this Web Part template, then those values will become the default. If you leave the parameter as is, then the values from the Web Part from which this Web Part was accessed will be passed to this Web Part.

1. Log in to the Web Administrator. How?
2. Click the **Manage WebPart Templates** tab.
3. Select **Alarm Details By Production Event**.
4. Click the **Parameter Defaults** tab.
5. Click the **Edit Parameter** button.
6. On the **Unit** tab, select the production line and then select the production unit.
7. On the **Options** tab, enter the event number, if you want to filter on a specific event number.
8. On the **Finish** tab, click the **Finish** button.

Alarm List By Units Web Part

The Alarm List by Units Web Part displays information about alarms for a specific production unit over a specific period of time.

The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock**  icon.

In order to use this Web Part, you must first:

- Create your plant model
- Create your products
- Create variables on a production unit

- Add products to the production unit
- Enter specification limits for those variables on the production unit for the selected products
- Configure an Alarm Template
- Configure an Alarm Display

Origin	Type	Message	Value	Event	Product	Time	Ack By	Cause
Patrick Alarm_Var01	Limit	Patrick's Alarms Test	12.0	-	DtBeer	2/9/2005 10:48:00 AM	Unacknowledged	Packaging, Availability Rate, Lots of Wabins
Patrick Alarm_Var02	Limit	Patrick's Alarms Test	13.0	-	DtBeer	2/9/2005 10:48:00 AM	ConXClient(1:10)	Unspecified
Patrick Alarm_Var01	Limit	Patrick's Alarms Test	10.0	-	DtBeer	2/9/2005 10:30:00 AM To 2/9/2005 10:35:00 AM	ConXClient(7:40)	Packaging, Field Instrument, Failed Instrume
Patrick Alarm_Var02	Limit	Patrick's Alarms Test	5.0	-	DtBeer	2/9/2005 10:30:00 AM To 2/9/2005 10:35:00 AM	Unacknowledged	Packaging, Availability Rate, Lots of Adjust
Patrick Alarm_Var01	Limit	Patrick's Alarms Test	15.0	-	DtBeer	2/9/2005 10:15:00 AM To 2/9/2005 10:20:00 AM	ConXClient(24:54)	Unspecified
Patrick Alarm_Var02	Limit	Patrick's Alarms Test	13.0	-	DtBeer	2/9/2005 10:15:00 AM To 2/9/2005 10:20:00 AM	ConXClient(0:24)	Unspecified
Patrick Alarm_Var01	Limit	Patrick's Alarms Test	15.0	-	DtBeer	2/9/2005 10:05:00 AM To 2/9/2005 10:10:00 AM	ConXClient(34:50)	Unspecified
Patrick Alarm_Var02	Limit	Patrick's Alarms Test	13.0	-	DtBeer	2/9/2005 10:05:00 AM To 2/9/2005 10:10:00 AM	ConXClient(1:34)	Unspecified
Patrick Alarm_Var01	Limit	Patrick's Alarms Test	10.0	-	DtBeer	2/9/2005 9:50:00 AM To 2/9/2005 10:00:00 AM	ConXClient(49:46)	Unspecified
Patrick Alarm_Var02	Limit	Patrick's Alarms Test	11.0	-	DtBeer	2/9/2005 9:50:00 AM To 2/9/2005 10:00:00 AM	ConXClient(11:38)	Unspecified

This Web Part contains the following information:

- **Origin:** This is the variable that was in an alarm state. Click the variable to view the [Alarm Detail](#) web report.
- **Type:** The possible types are: **Limit**, **SPC**, or **Other**.
- **Message:** This is the text that was entered when the Alarm Template was created. More information...
- **Value:** This is the value that triggered the alarm state.
- **Event:** This is the event that was occurring at the time the alarm was triggered.
- **Product:** This is the product that was being manufactured on the production unit where the alarm occurred.
- **Time:** This is the time that the variable was in an alarm state. If the variable is still in an alarm condition, the time will be in red; otherwise, the time will be in blue.
- **User:** The electronic signature of the person who gave user verification, if electronic signature has been configured.
- **Approver:** The electronic signature of the person who gave approver verification, if electronic signature has been configured.
- **Cause:** This is the reason selected as the cause for the alarm. **Unspecified** indicates that either a Cause Reason wasn't selected or that a Cause Reason Tree wasn't specified in the Alarm Template.
- **Action:** This is the action that was taken to correct the alarm. **Unspecified** indicates that either an Action Reason wasn't selected or that an Action Reason Tree wasn't specified in the Alarm Template.

To configure the Alarm List by Units Web Part

1. Create the Web Part. How?
2. On the Report Parameters tab, click the Edit Parameter button.
3. On the Unit tab, do the following:
4. In the top drop-down list, select the production line.
5. In the next drop-down list, select the production unit. Only variables attached to this production unit will be included on this Web part.

6. On the **Start Time and End Time**_tab, select the period of time for which you want alarm information retrieved.
7. On the PriorityFilter tab, select the alarm level(s) you want on your web part.
8. On the **Columns**_tab, select the columns you want to include on your web part. The available choices are:
 - **Origin**: This is the variable that was in an alarm state.
 - **Type**: The possible types are: Limit, SPC, and Other.
 - **Message**: This is the text that was when the Alarm Template was created. More information...
 - **Value**: This is the value that triggered the alarm state.
 - **Event**: This is the event that was occurring at the time the alarm was triggered.
 - **Product**: This is the product that was being manufactured on the production unit where the alarm occurred.
 - **Time**: This is the time that the variable was in an alarm state. If the variable is still in an alarm condition, the time will be in red; otherwise, the time will be in blue.
 - **Ack By**: This is the user name of the person who acknowledged the alarm. The number in parenthesis is the number of **minutes:seconds** it took for the alarm to be acknowledged.
 - **Cause**: This is the reason selected as the cause for the alarm. **Unspecified** indicates that either a Cause Reason wasn't selected or that a Cause Reason Tree wasn't specified in the Alarm Template.
 - **Action**: This is the action that was taken to correct the alarm. **Unspecified** indicates that either an Action Reason wasn't selected or that an Action Reason Tree wasn't specified in the Alarm Template.
9. On the **Options** tab, select **OpenOnly** to include only variables that are currently in an alarm state.
10. On the **Finish** tab, click the **Finish** button to save your changes and to exit.

Alarm List By Variables Web Part

The Alarm List by Variables Web Part displays information about alarms for a specific variable or variables over a specific period of time.

In order to use this Web Part, you must first:

- Create your plant model
- Create your products
- Create variables on a production unit
- Add products to the production unit
- Enter specification limits for those variables on the production unit for the selected products
- Configure an Alarm Template
- Configure an Alarm Display

Origin	Type	Message	Value	Event	Product	Time	Ack By	Cause	Action
PatrickAlarm_Var01	Limit	Patrick's Alarms Test	11.0		DiBeer	2/2/2005 4:10:00 PM To 2/2/2005 4:15:00 PM	ConxClient(0 48)	Unspecified	Unspecified
PatrickAlarm_Var01	Limit	Patrick's Alarms	11.0		DiBeer	2/2/2005 4:20:00 PM To 2/2/2005 4:25:00 PM	ConxClient(3 10)	Unspecified	Unspecified
PatrickAlarm_Var01	Limit	Patrick's Alarms	12.0		DiBeer	2/2/2005 3:20:00 PM To 2/2/2005 3:25:00 PM	ConxClient(7 58)	Unspecified	Unspecified
PatrickAlarm_Var01	Limit	Patrick's Alarms	12.9		DiBeer	2/2/2005 3:25:00 PM To 2/2/2005 3:30:00 PM	ConxClient(22 10)	Unspecified	Unspecified
PatrickAlarm_Var01	Limit	Patrick's Alarms	13.0		DiBeer	2/2/2005 2:20:00 PM To 2/2/2005 2:25:00 PM	ConxClient(4 39)	Unspecified	Unspecified
PatrickAlarm_Var01	Limit	Patrick's Alarms	4.0		DiBeer	2/2/2005 2:25:00 PM To 2/2/2005 2:30:00 PM	ConxClient(12 17)	Unspecified	Unspecified
PatrickAlarm_Var01	Limit	Patrick's Alarms	9.5		DiBeer	2/2/2005 1:25:00 PM To 2/2/2005 1:30:00 PM	ConxClient(58 38)	Unspecified	Unspecified
PatrickAlarm_Var01	Limit	Patrick's Alarms	12.0		DiBeer	2/2/2005 12:40:00 PM To 2/2/2005 12:45:00 PM	ConxClient(3 00)	Unspecified	Unspecified
PatrickAlarm_Var01	Limit	Patrick's Alarms	9.5		DiBeer	2/2/2005 12:30:00 PM To 2/2/2005 12:35:00 PM	ConxClient(1 22)	Unspecified	Unspecified
PatrickAlarm_Var01	Limit	Patrick's Alarms	12.0		DiBeer	2/2/2005 12:15:00 PM To 2/2/2005 12:20:00 PM	ConxClient(0 12)	Unspecified	Unspecified
PatrickAlarm_Var01	Limit	Patrick's Alarms	10.0		DiBeer	2/2/2005 11:25:00 AM To 2/2/2005 11:30:00 AM	ConxClient(4 17)	Unspecified	Unspecified
PatrickAlarm_Var01	Limit	Patrick's Alarms	10.0		DiBeer	2/2/2005 11:15:00 AM To 2/2/2005 11:20:00 AM	ConxClient(2 26)	Unspecified	Unspecified

Time: 1/31/2005 8:01:00 AM To 2/7/2005 8:01:00 AM

This Web Part contains the following information:



- **Origin:** This is the variable that was in an alarm state. Click the variable to view the [Alarm Detail web report](#).
- **Type:** The possible types are: Limit, SPC, and Other.
- **Message:** This is the text that was entered when the alarm template was created. More information...
- **Value:** This is the value that triggered the alarm state.
- **Event:** This is the event that was occurring at the time the alarm was triggered.
- **Product:** This is the product that was being manufactured on the production unit where the alarm occurred.
- **Time:** This is the time that the variable was in an alarm state. If the variable is still in an alarm condition, the time will be in red; otherwise, the time will be in blue.
- **User:** The electronic signature of the person who gave user verification.
- **Approver:** The electronic signature of the person who gave approver verification.
- **Cause:** This is the reason selected as the cause for the alarm. **Unspecified** indicates that either a Cause Reason wasn't selected or that a Cause Reason Tree wasn't specified in the Alarm Template.
- **Action:** This is the action that was taken to correct the alarm. **Unspecified** indicates that either an Action Reason wasn't selected or that an Action Reason Tree wasn't specified in the Alarm Template.
- The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock** icon.


To configure the Alarm List by Variables Web Part

1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Variables** tab, select the variables you want to include on this report.
4. On the **Start Time and End Time** tab, select the period of time for which you want alarm information retrieved.
5. On the **PriorityFilter** tab, select the alarm level(s) you want on your web part.
6. On the **Columns** tab, select the columns you want to include on your web part.
7. On the **Options** tab, select **OpenOnly** to include only variables that are currently in an alarm state.

- On the **Finish** tab, click the **Finish** button to save your changes and to exit.

Downtime Distribution Charts by Units Web Part

The Downtime Distribution Charts by Units Web Part displays the amount of downtime for a specific period of time that is attributed to a specific location (unit), fault, reason level, product, and crew. Click the **Table**  icon to display the information in a table format or click the **Graph**  icon to display the information as a bar chart.

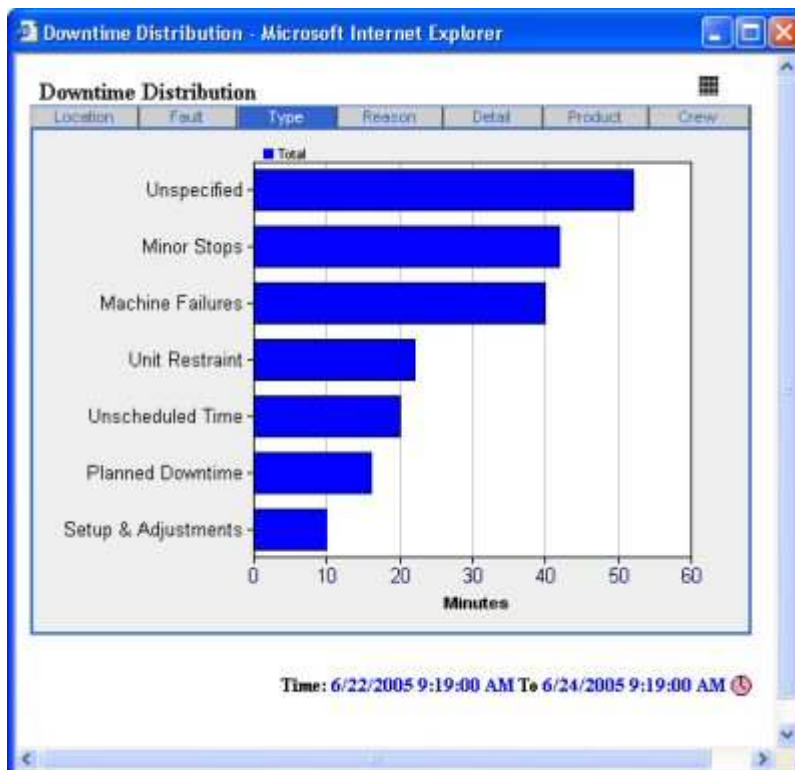
The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock**  icon.

Terms

- MTTR** (Mean Time To Repair): This is the mean time to repair and is calculated by: total downtime minutes / number of downtime events. MTTR provides an indication of the expected time a production unit will be down.
- MTBF** (Mean Time Between Failure): This is the mean time between failures and is calculated by: total uptime minutes / number of uptime events. MTBF provides an indication of the expected time between failures.

To use this Web Part, you must first:

- Configure your plant model. For more information on this topic, click here.
- Capture downtime events. For more information on this topic, click here.
- Attach a reason tree to your downtime events. For more information on this topic, click here.
- Configure products and product changes. For more information on this topic, click here.
- optional: Attach faults to your downtime events. For more information on this topic, click here.
- optional: Include crew/shift schedule information. For more information, click here.



When the Web Part is in **Bar Chart** view, each bar represents the total amount of downtime assigned to a specific attribute, such as a reason. In **Bar Chart** view, you can click one of the bars to get a more granular view of your downtime. For example, on the **Location** tab, you can click one of the bars for a specific location to view only the information specific to that location.



In **Table** view, this Web Part provides the following information:

- **Location tab:**

- **Location:** This is a list of the location (unit) where the downtime event(s) occurred.
- **Total:** This is the total amount of time attributed to downtime for the specific location.
- **MTTR:** This is the total mean time to repair for the specific location. The time format is **HH:MM:SS**.
- **MTBF:** This is the total mean time between failure for the specific location. The time format is **HH:MM:SS**.
- **% Total:** This is the percent total of downtime attributed to the specific location.
- **# Events:** This is the number of downtime events that occurred at the specific location.
- **Totals:** Totals are provided for the amount of downtime for all locations and for the number of events for all locations.

- **Fault tab:**

If no fault has been attached to the downtime event, then the fault will be "Unspecified."

- **Fault:** This is a list of the fault(s) assigned to the downtime events.
- **Total:** This is the total amount of time attributed to downtime for the fault.
- **MTTR:** This is the total mean time to repair for the specific fault. The time format is **HH:MM:SS**.
- **MTBF:** This is the total mean time between failure for the specific fault. The time format is **HH:MM:SS**.
- **% Total:** This is the percent total of downtime attributed to the specific fault.
- **# Events:** This is the number of downtime events that occurred at the specific fault.

- **Totals:** Totals are provided for the amount of downtime for all faults and for the number of events for all faults.

- **Reason Level tab(s):**

There will be a tab for each reason level in the associated reason tree.

- **Reason:** This is a list of the reason(s) assigned to the downtime events.
- **Total:** This is the total amount of time attributed to downtime for the reason.
- **MTTR:** This is the total mean time to repair for the specific reason. The time format is **HH:MM:SS**.
- **MTBF:** This is the total mean time between failure for the specific reason. The time format is **HH:MM:SS**.
- **% Total:** This is the percent total of downtime attributed to the specific reason.
- **# Events:** This is the number of downtime events that occurred at the specific reason.
- **Totals:** Totals are provided for the amount of downtime for all reasons and for the number of events for all reasons.
- **Product tab:**
 - **Product:** This is a list of the product(s) which were being run when the downtime event(s) occurred.
 - **Total:** This is the total amount of time attributed to downtime for the specific product.
 - **MTTR:** This is the total mean time to repair for the specific product. The time format is **HH:MM:SS**.
 - **MTBF:** This is the total mean time between failure for the specific product. The time format is **HH:MM:SS**.
 - **% Fault:** This is the percent of time that the specific product was in a fault condition (downtime).
 - **% Total:** This is the percent total of downtime attributed to the specific product.
 - **# Events:** This is the number of downtime events associated with the specific product.
 - **Totals:** Totals are provided for the amount of downtime for all products, fault percent and number of events.
- **Crew tab:**
 - **Crew:** This is a list of the Crew shifts when the downtime event(s) occurred.
 - **Total:** This is the total amount of time attributed to downtime for the specific Crew.
 - **MTTR:** This is the total mean time to repair for the specific Crew. The time format is **HH:MM:SS**.
 - **MTBF:** This is the total mean time between failure for the specific Crew. The time format is **HH:MM:SS**.
 - **% Total:** This is the percent total of downtime attributed to the specific Crew.
 - **# Events:** This is the number of downtime events that occurred at the specific Crew.
 - **Totals:** Totals are provided for the amount of downtime for all crews and for the number of events for all crews.

To configure the Downtime Distribution Charts by Units

1. Create the web part. How?
2. On the **Report Parameters tab**, click the **Edit Parameter** button.
3. On the **Units tab**, select the production units.
4. On the **Start and End Time tab**, specify the report time.
5. On the **ProductFilter tab**, filter by product, if desired.
6. On the **CrewFilter tab**, filter by specific crew, if desired.

7. On the **LocationFilter tab**, filter by specific production unit, if desired.
8. On the **Downtime Reason tab**, filter by downtime reason, if desired.
9. On the **Options tab**, filter by fault reason, if desired.
10. On the **Finish tab**, click **Finish**.

Downtime Top N Chart by Unit Web Part



The Downtime Top N Chart by Unit Web Part displays the most time-consuming reasons for downtime. When you configure the Web Part, you specify the number of reasons you want included in the Web Part. The default value is 10 reasons.


The **Summary tab** displays the total number of downtime minutes for each reason, the MTTR for each reason, the MTBF for each reason, the percent of total downtime attributed to each reason, and the number of downtime events for each reason. The Summary information is available only in Table view.

The **Total Time tab** displays the total number of minutes of downtime attributed to each reason.

The **MTTR tab** displays the mean time to repair for each reason. In Bar Chart view, each bar represents the total number of MTTR minutes for each reason. In Table view, the total MTTR minutes, minimum MTTR minutes, maximum MTTR minutes, and the MTTR standard deviation are provided for each reason.

The **MTBF tab** displays the mean time between failure for each reason. In Bar Chart view, each bar represents the total number of MTBF minutes for each reason. In Table view, the total MTBF minutes are provided for each reason.

Click the **Table**  icon to display the information in a table format or click the **Graph**  icon to display the information as a bar chart.

The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock**  icon.

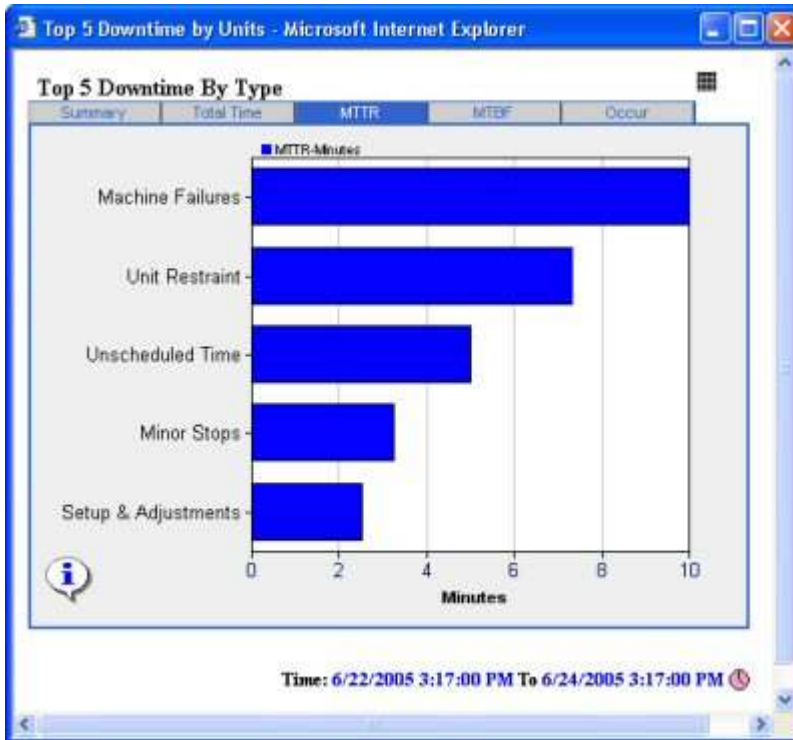
Terms

- **MTTR** (Mean Time To Repair): This is the mean time to repair and is calculated by: total downtime minutes / number of downtime events. MTTR provides an indication of the expected time a production unit will be down.
- **MTBF** (Mean Time Between Failure): This is the mean time between failures and is calculated by: total uptime minutes / number of uptime events. MTBF provides an indication of the expected time between failures.

Together, MTTR and MTBF can be used to determine the availability of a production unit. Availability can be calculated as: $MTBF / (MTTR + MTBF) * 100$.

To use this Web Part, you must first:

- Configure your plant model. For more information on this topic, click [here](#).
- Capture downtime events. For more information on this topic, click [here](#).
- Attach a reason tree to your downtime events. For more information on this topic, click [here](#).



Type	Total	MTTR	MTBF	% Total	# Events
Machine Failures	40.0	00:10:00 hrs	00:34:30 hrs	14.6	4.0
Unit Restraint	22.0	00:07:19 hrs	00:09:19 hrs	8.0	3.0
Unscheduled Time	20.0	00:05:00 hrs	00:25:00 hrs	7.3	4.0
Planned Downtime	16.0	00:16:00 hrs	00:20:00 hrs	5.8	1.0
Setup & Adjustments	10.0	00:02:30 hrs	00:34:30 hrs	3.6	4.0
Totals	108.0			39.3	16.0


To configure the Downtime Top N Chart by Unit Web Part

1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Units** tab, select the production units.
4. On the **Start and End Time** tab, specify the report time.
5. On the **CrewFilter** tab, filter by specific crew, if desired.
6. On the **LocationFilter** tab, filter by a specific location, if desired.

7. On the **Downtime Reason tab**, filter by downtime reason, if desired.
8. On the **Options** tab, filter by product, location, report level, or the number of reasons to include on the report (Top N), if desired.
9. On the **Finish** tab, click **Finish**.

Efficiency Statistics by Unit Web Part

The Efficiency Statistics by Unit Web Part graphically represents the Percent OEE, Performance Rate %, Available Rate %, and Quality Rate % for a specified production unit.

The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock**  icon.

The placement of the arrow is dependant on the specification limits for each value. Different specification limits will cause the graph to have a different scale. You can hover over the graphs to view the specification limits.

You can drill into each graphic to view additional information.

- Click on **Percent OEE** to view the Unit Time Accounting Web report.
- Click on **Performance Rate %** to view the Performance Distribution Web Part.
- Click on **Available Rate %** to view the Operating Downtime Distribution Web Part.
- Click on **Quality Rate %** to view the Waste Distribution Web Part.

Calculations

- **Performance Rate %:** The performance rate of the unit based on the Actual and Ideal Speeds (Actual Speed/Ideal Speed * 100).
- **Quality Rate %:** Percentage of good product (ActualProduction/[ActualProduction + QualityLoss] * 100).
- **Available Rate %:** Actual runtime/loading time, showing the percentage of time the machine is available.

Loading Time: The number of minutes during the reporting period that were consumed in a loading phase. It is the period of the report in minutes (that is, report start time minus report end time), less the TotalUnavailableMinutes, less the TotalOutsideAreaMinutes.

Run Time: The number of minutes that the machine has been running, returned by the spCMN_GetUnitStatistics stored procedure.

- **Percent OEE:** Quality Rate * Performance Rate * Available Rate. By default, OEE cannot exceed 100%. However, if your site allows OEE to exceed 100%, you can edit the OEE Max Limit Override site parameter.

Efficiency Statistics By Unit Web Part



- Blue indicates target limits
- Yellow indicates warning limits
- Red indicates reject limits

To configure the Efficiency Statistics by Unit Web Part

1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Unit** tab, select the production unit.
4. On the **Start and End Time** tab, specify the report time.
5. On the **Finish** tab, click **Finish**.

Inventory Distribution Charts By Units

The Inventory Distribution Charts By Units Web Part shows the amount of product that is in inventory for a particular production line. In the Web Part, the inventory is grouped by:


- Unit
- Status

Production status is determined by how you've configured your production statuses in the **Production Status Editor** dialog box (Global Configuration > Administer Production Statuses). The **Inventory** field must be set to **Yes**.

- Product
- Crew

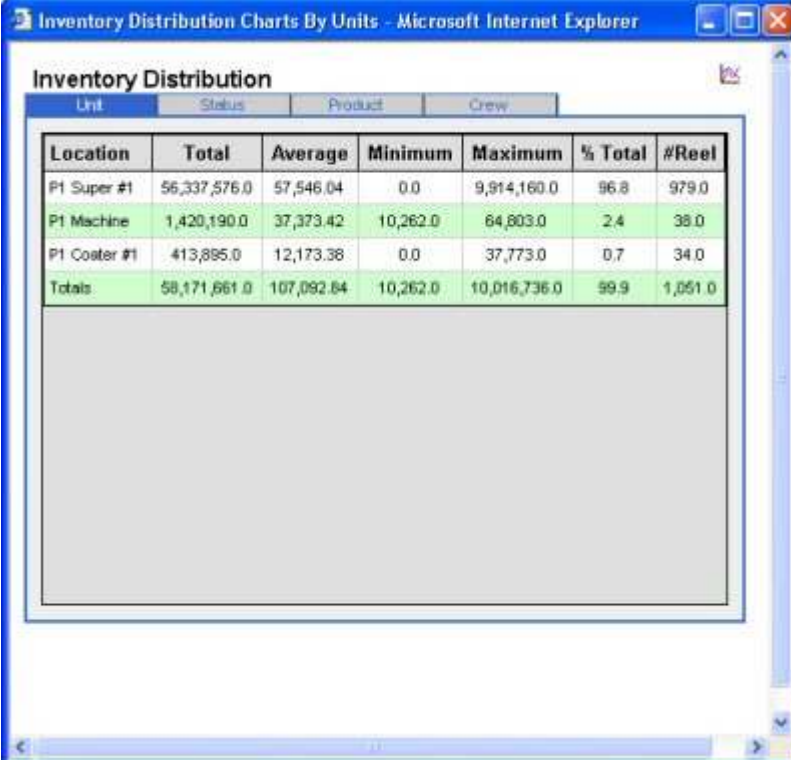
In order to use this Web Part, you must:

- Configure your plant model. For more information on this topic, click here.
- Configure products. For more information on this topic, click here.
- Capture production events with Dimension X information included. For more information on this topic, click here.
- optional: Configure crews.

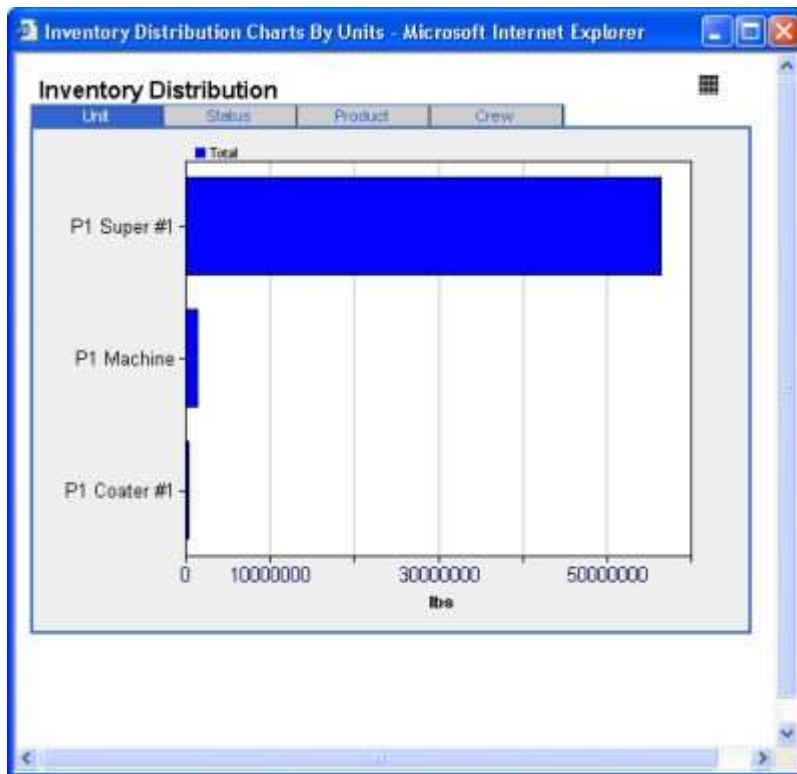
Click the **Graph**  icon to view the information in a Bar Chart.

Click the **Table**  icon to view the information in a table where you can view:

- The Total amount of inventory for each grouping
- The Average amount of inventory for each grouping.
- The Minimum amount of inventory for each grouping.
- The Maximum amount of inventory for each grouping.
- The % Total amount of inventory for each grouping.
- The number of events that produced the total amount of inventory for each grouping.



Unit	Status	Product	Crew			
Location	Total	Average	Minimum	Maximum	% Total	#Reel
P1 Super #1	56,337,576.0	57,546.04	0.0	9,914,160.0	96.8	979.0
P1 Machine	1,420,190.0	37,373.42	10,262.0	64,803.0	2.4	38.0
P1 Coaster #1	413,885.0	12,173.38	0.0	37,773.0	0.7	34.0
Totals	58,171,661.0	107,092.84	10,262.0	10,016,736.0	99.9	1,051.0



To configure the Inventory Distribution Charts By Units Web Part

1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Units** tab, select the production units.
4. On the **UnitFilter** tab, filter by production unit, if desired.
5. On the **StatusFilter** tab, filter by status, if desired.
6. On the **CrewFilter** tab, filter by specific crew, if desired.
7. On the **Options** tab, filter by product, if desired.
8. On the **Finish** tab, click **Finish**.

My Report Search Dialog Web Part

The My Report Search Dialog Web Part provides search functionality for and is accessed from the My Reports Favorites Dialog Web Part. This Web Part lists both configured Web Parts and Web Part templates and cannot be configured.

In the **Search Results** list, Web Part templates are identified with an asterisk (*).

In the **Search** box, you can type part of a Web Part name or use standard SQL wildcard characters, such as %.

Click on a Web Part name to view the Web Part.



My Reports Favorites Dialog Web Part

The My Reports Favorites Dialog Web Part lists Web Parts that you have selected.

Web Part templates are identified with an asterisk (*).

In the **Search** box, you can type part of a Web Part name or use standard SQL wildcards, such as %. When you click **Search**, the **Search Results_Web Part** appears.



Click on a Web Part name to view the Web Part.




To add Web Parts to My Reports Favorites

1. In the Web Administrator dialog box, click the Configure Available WebParts tab.
2. Do one of the following:
 - Create a new My Reports Favorites Web Part.
 - Select your existing My Reports Favorites Web Part.
3. Click the Report Parameters tab.
4. In the Parameter Value section, click Edit Parameter. The My Reports Favorites Dialog ASP page appears.
5. On the Report List tab, select the Web Part(s) you want to include in your list of favorites.
6. On the Finish tab, click Finish.

Operating Downtime Distribution Web Part

The Operating Downtime Distribution Web Part shows the unplanned downtime during a specific period of time that is attributed to a specific location (unit), fault, reason level, product, and crew. Unplanned downtime is any downtime that is not attributed to performance downtime, external downtime, or unavailable downtime. Click the **Table**  icon to display the information in a table format or click the **Graph**  icon to display the information as a bar chart.

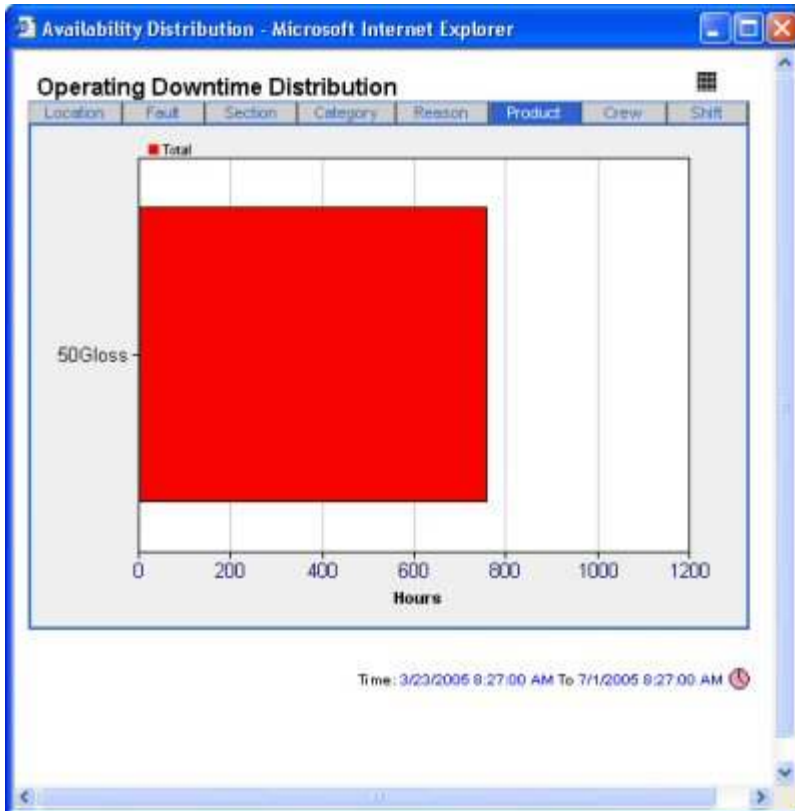
The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock**  icon.

Terms

- **MTTR** (Mean Time To Repair): This is the mean time to repair and is calculated by: total downtime minutes / number of downtime events. MTTR provides an indication of the expected time a production unit will be down.
- **MTBF** (Mean Time Between Failure): This is the mean time between failures and is calculated by: total uptime minutes / number of uptime events. MTBF provides an indication of the expected time between failures.

To use this Web Part, you must first:

- Configure your plant model. For more information on this topic, click here.
- Capture downtime events. For more information on this topic, click here.
- Attach a reason tree to your downtime events. For more information on this topic, click here.
- Configure products and product changes. For more information on this topic, click here.
- optional: Attach faults to your downtime events. For more information on this topic, click here.
- optional: Include crew/shift schedule information.



When the Web Part is in **Bar Chart** view, each bar represents the total amount of unplanned downtime assigned to a specific attribute, such as a reason. In **Bar Chart** view, you can click one of the bars to get a more granular view of your downtime. For example, on the **Location** tab, you can click one of the bars for a specific location to view only the information specific to that location.

The screenshot shows a table with the following data:

Product	Total	MTTR	MTBF	% Fault	% Total	# Events
50Gloss	759.37	10:24:09 hrs	121:06:16 hrs	7.91	100.0	73.0
Totals	759.37			7.91	100.0	73.0

Time: 3/23/2005 9:27:00 AM To 7/1/2005 9:27:00 AM

In **Table** view, this Web Part provides the following information:

- **Location tab:**

- **Location:** This is a list of the location (unit) where the downtime event(s) occurred.
- **Total:** This is the total amount of time attributed to downtime for the specific location.
- **MTTR:** This is the total mean time to repair for the specific location. The time format is **HH:MM:SS**.
- **MTBF:** This is the total mean time between failure for the specific location. The time format is **HH:MM:SS**.
- **% Total:** This is the percent total of downtime attributed to the specific location.
- **# Events:** This is the number of downtime events that occurred at the specific location.
- **Totals:** Totals are provided for the amount of downtime for all locations and for the number of events for all locations.

- **Fault tab:**

If no fault has been attached to the downtime event, then the fault will be "Unspecified."

- **Fault:** This is a list of the fault(s) assigned to the downtime events.
- **Total:** This is the total amount of time attributed to downtime for the fault.
- **MTTR:** This is the total mean time to repair for the specific fault. The time format is **HH:MM:SS**.
- **MTBF:** This is the total mean time between failure for the specific fault. The time format is **HH:MM:SS**.
- **% Total:** This is the percent total of downtime attributed to the specific fault.
- **# Events:** This is the number of downtime events that occurred at the specific fault.
- **Totals:** Totals are provided for the amount of downtime for all faults and for the number of events for all faults.

- **Reason Level tab(s):**

There will be a tab for each reason level in the associated reason tree.

- **Reason:** This is a list of the reason(s) assigned to the downtime events.
- **Total:** This is the total amount of time attributed to downtime for the reason.
- **MTTR:** This is the total mean time to repair for the specific reason. The time format is **HH:MM:SS**.
- **MTBF:** This is the total mean time between failure for the specific reason. The time format is **HH:MM:SS**.
- **% Total:** This is the percent total of downtime attributed to the specific reason.
- **# Events:** This is the number of downtime events that occurred at the specific reason.
- **Totals:** Totals are provided for the amount of downtime for all reasons and for the number of events for all reasons.

- **Product tab:**

- **Product:** This is a list of the product(s) which were being run when the downtime event(s) occurred.
- **Total:** This is the total amount of time attributed to downtime for the specific product.
- **MTTR:** This is the total mean time to repair for the specific product. The time format is **HH:MM:SS**.
- **MTBF:** This is the total mean time between failure for the specific product. The time format is **HH:MM:SS**.
- **% Fault:** This is the percent of time that the specific product was in a fault condition (downtime).
- **% Total:** This is the percent total of downtime attributed to the specific product.
- **# Events:** This is the number of downtime events associated with the specific product.





- **Totals:** Totals are provided for the amount of downtime for all products, fault percent and number of events.
- **Crew (or Shift) tab:**
 - **Crew (or Shift):** This is a list of the Crew shifts when the downtime event(s) occurred.
 - **Total:** This is the total amount of time attributed to downtime for the specific Crew.
 - **MTTR:** This is the total mean time to repair for the specific Crew. The time format is **HH:MM:SS**.
 - **MTBF:** This is the total mean time between failure for the specific Crew. The time format is **HH:MM:SS**.
 - **% Total:** This is the percent total of downtime attributed to the specific Crew.
 - **# Events:** This is the number of downtime events that occurred at the specific Crew.
 - **Totals:** Totals are provided for the amount of downtime for all crews and for the number of events for all crews.

To configure the Operating Downtime Distribution Web Part


1. Create the web part. How?
2. On the **Report Parameters tab**, click the **Edit Parameter** button.
3. On the **Units tab**, select the production units.
4. On the **Start Time and End Time tab**, specify the time period.
5. On the **CrewFilter tab**, filter by specific crew, if desired.
6. On the **LocationFilter tab**, filter by location, if desired.
7. On the **Downtime Reasons tab**, filter by reason, if desired.
8. On the **Options** tab, filter by product, shift, or fault, if desired.
9. On the **Finish** tab, click **Finish**.


Overview Statistics by Path Web Part

The Overview Statistics by Path Web Part displays important key performance indicators for a production execution path over a specified period of time. The following key performance indicators are displayed:

- Production: The actual production and target production are displayed for the specified production execution path over the specified period of time. Click the  icon to view the Production Distribution Charts By Units Web Part.
- Waste (%): The actual waste percent and the target waste percent are displayed for the specified production execution path over the specified period of time. The actual waste percent is calculated by Waste / Production. Click the  to view the [Waste Distribution Charts By Units Web Part](#).
- Downtime (%): The actual downtime percent and target downtime percent are displayed for the specified production execution path over the specified period of time. The actual downtime percent is calculated by Downtime / Production. Click the  icon to view the [Downtime Distribution By Units Web Part](#).
- Efficiency (%): The actual efficiency percent and target efficiency percent are displayed for the specified production execution path over the specified period of time.
- Current Order: The current process order for the selected execution path. Click the  to view a list of process orders.

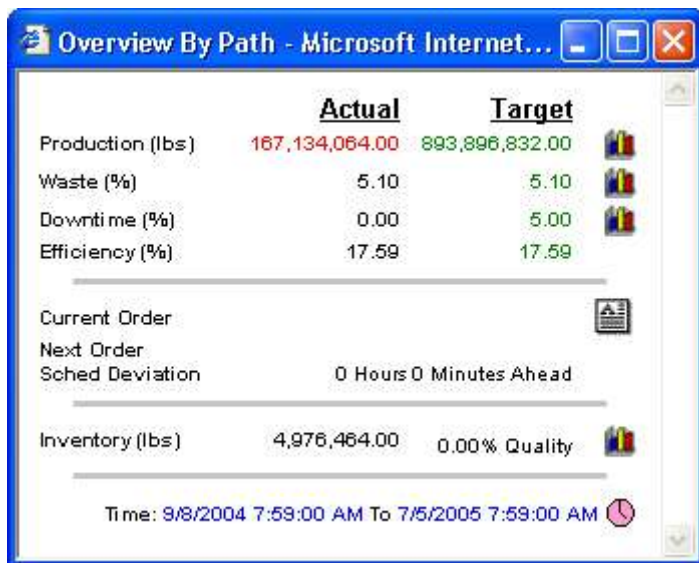
Plant Applications Web Reporting

- Next Order: The next process order for the selected execution path.
- Sched. Deviation: The amount of time the actual end time deviated from the forecast end time.
- Inventory: The amount of inventory on the specified production execution path over the specified period of time. Click the  to view the [Inventory Distribution Charts By Units Web Part](#).

The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock**  icon.

To use this Web Part, you must first:

- Configure your plant model. For more information on this topic, click here.
- Calculate the production metric. For more information on this topic, click here.
- Track waste. For more information on this topic, click here.
- Track downtime. For more information on this topic, click here.
- Configure the efficiency metric. For more information on this topic, click here.
- Configure a production execution path. For more information on this topic, click here.
- Track inventory. For more information on this topic, click here.



To configure the Overview Statistics by Path Web Part

1. Create the web part. How?
2. On the **Report Parameters tab**, click the **Edit Parameter** button.
3. On the **Path tab**, select the production execution path.
4. On the **Finish tab**, click **Finish**.

Performance Distribution Web Part

The Performance Distribution Web Part compares the amount of loss attributed to performance downtime with the amount of loss attributed to the normalized loss for each of the selected production units over the specified period of time. The information is grouped by location (production unit), fault,



and reason levels. There is one tab for each reason level. For each fault and reason level, the information is categorized by:


- MTTR
- MTBF
- % Total
- # Events

Performance downtime is any downtime that is attributed to the category specified as the Performance Downtime Category. These categories are defined in the Reason Tree (Global Configuration), and allow a group of reasons to be specified that define scheduled downtime.

Normalized loss = (target production amount – actual production amount) / target speed

Duration @ Design Speed is the number of hours running at target speed.

Click the **Table**  icon to display the information in a table format or click the **Graph**  icon to display the information as a bar chart.

The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock**  icon.

To configure the Performance Distribution Web Part

1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Units** tab, select the production units.
4. On the **Start and End Time** tab, specify the report time.
5. On the **CrewFilter** tab, filter by specific crew, if desired.
6. On the **LocationFilter** tab, filter by specific production unit, if desired.
7. On the **Downtime Reason** tab, filter by downtime reason, if desired.
8. On the **Options** tab, filter by product, shift, or fault reason, if desired.
9. On the **Finish** tab, click **Finish**.

Process Order (Active) List by Lines Web Part

The Process Order (Active) List By Lines Web Part displays a list of active process orders for the selected production lines, based on the execution path configured on the selected production lines. Only production lines with configured execution paths are considered for this Web Part.

To use this Web Part, you must:

- Capture production events. For more information on this topic, [click here](#).
- Capture process orders. For more information on this topic, [click here](#).
- Configure a production execution path. For more information on this topic, [click here](#).
- Configure a Schedule View display. For more information on this topic, [click here](#).

This Web Part provides the following information:

- **Resource:** The production line and, in parenthesis, the name of the execution path. This is the **path code** that was entered when the execution path was configured. Click the resource to open the [Process Order Search By Paths Web Part](#).

- **Current Order:** The current process order on the production line. Click the process order to view the Process Order Detail Web Report. Click the link to open the Process Order Detail Web report.
- **Planned:** The planned amount of product on the process order.
- **Remaining:** The amount remaining to be produced on the process order. The engineering units are what was entered when the production event was configured on the production unit.
- **Planned Items:** The number of total number of planned repetitions of all sequences attached to the process order. If there are no sequences, this field is blank.
- **Remaining Items:** The planned items less actual items produced.
- **Run Time:** The actual run time, in minutes, of the process order.
- **Sched Dev:** The planned duration less the predicted remaining duration plus the actual duration (run time).
- **Units:** The production units that were identified as production points when the execution path was configured. Click a unit to open the [Unit Time Accounting Web report](#).
- **Next Order:** The process order with a status of "Next." Click the link to open the Process Order Detail Web report.
- **Est Start:** The estimated start time of the next process order.
- **Next Duration:** The planned end time less the planned start time of the next process order.

Resource	Current Order	Planned	Remaining	Planned Items	Remaining Items	Run Time	Sched Dev	Units	Next Order
Paper Line #2 (P2_Schedule)	P2-062705-00258901app	30,000.0	0.0 lbs	-	- Reel	9579.35min	-159:39	P2_Winder#1	P2-062705-0
TOOTHPASTE(UltraWhiteLine)	TP-980305_001(1002568790)	5,000.0	5,400.0 lbs	-	- Batch	42957.3min	-713:57		P2-062705-0

To configure the Process Order (Active) List By Lines Web Part

1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Lines** tab, select the production lines.
4. On the **Columns** tab, select the columns.
5. On the **Finish** tab, click **Finish**.

Process Order Search By Paths Web Part


The Process Order Search By Paths Web Part displays all the process orders on the selected production lines for the specified period of time. You can specify the production lines, the production status(es), and the time period. You can also filter on a specific product or process order. You must have an execution path configured on the selected production lines.


To use this Web Part, you must:


- Capture production events. For more information on this topic, click here.
- Capture process orders. For more information on this topic, click here.
- Configure a production execution path. For more information on this topic, click here.
- Configure a Schedule View display. For more information on this topic, click here.

The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock** icon.

This Web Part provides the following information:

- **Process Order:** A yellow star  indicates that the process order was active during the time specified when you configured the Web Part. You can click a process order to view the Process Order Detail Web Report.
- **Resource:** The production line and, in parenthesis, the name of the execution path. This is the **path code** that was entered when the execution path was configured.
- **Status:** The status of the process order. The possible statuses are: Complete, Pending, Next, Active.
- **Product:** The product that was produced.
- **Quantity:** If the status is **Active**, the amount is the remaining quantity. The amount in parenthesis is the predicted remaining amount. If the status is **Next** or **Pending**, the amount is the forecast amount. If the status is **Complete**, the amount is the actual good quantity and the amount in the parenthesis indicates whether more (+) or less (-) was produced than forecast amount.
- **Start:** If the status is **Active** or **Complete**, this is the actual start time of the process order. If the status is **Next** or **Pending**, this is the forecast start time.
- **End:** If the status is **Next** or **Pending**, this is the forecast end time of the process order. If the status is **Active**, this is the forecast end time. If the status is **Complete**, this is the actual end time. A negative number in parenthesis is the amount of time, in hours and minutes (**HH:MM**), it would take to produce the amount of product that was not produced, but was planned.

Search Results For Process Orders (Resources=P2 Schedule, UltraWhiteLine; Product=All)						
Process Order	Resource	Status	Product	Quantity	Start	End
P2-062705-001	Paper Line #2 (P2 Schedule)	Complete	50Gloss	30,000.0	6/27/2005 1:45:53 AM	6/29/2005 3:20:00 PM (-3:00)
 P2-062705-002	Paper Line #2 (P2 Schedule)	Active	50Gloss	30000.00(-30,000.0)	6/29/2005 3:20:00 AM	6/29/2005 6:20:00 PM (-3:00)
P2-062705-003	Paper Line #2 (P2 Schedule)	Next	50Gloss	30,000.0	6/27/2005 8:44:00 AM	6/27/2005 11:44:00 PM
ULTWHF_051005_001	TOOTHPASTE (UltraWhiteLine)	Complete	1002568790	-3,659.23(-1,140.77)	5/18/2005 7:27:54 AM	5/13/2005 9:15:32 AM (-22:48)
TP_051305_001-C	TOOTHPASTE (UltraWhiteLine)	Complete	1002568790	-952.03(-2,047.97)	5/13/2005 10:39:07 AM	5/18/2005 1:57:41 PM (-266:15)
TP-051305_002-C	TOOTHPASTE (UltraWhiteLine)	Complete	1002568790	3,000.0	5/18/2005 1:57:41 AM	5/18/2005 1:57:49 PM (-2:00)
TP-051805-001	TOOTHPASTE (UltraWhiteLine)	Complete	1002568790	-5,677.98(+2,677.98)	5/18/2005 1:59:26 AM	5/31/2005 3:08:26 PM (+0:00)
TP-053105-001	TOOTHPASTE (UltraWhiteLine)	Complete	1002568790	-3,140.0(+140.0)	5/31/2005 3:08:26 AM	6/6/2005 11:02:05 AM (+0:00)
 TP-060305_001	TOOTHPASTE (UltraWhiteLine)	Active	1002568790	5000.00(+400.0)	6/6/2005 11:02:05 AM	6/6/2005 11:02:05 AM (-6:00)

Time: 3/28/2005 8:55:00 AM To 7/6/2005 8:55:00 AM 

To configure the Process Order Search By Paths Web Part

1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Paths** tab, select the production execution path.
4. On the **Statuses** tab, filter by status if desired.
5. On the **Start and End Time** tab, specify the report time.
6. On the **Finish** tab, click **Finish**.

Process Order Search Dialog Web Part

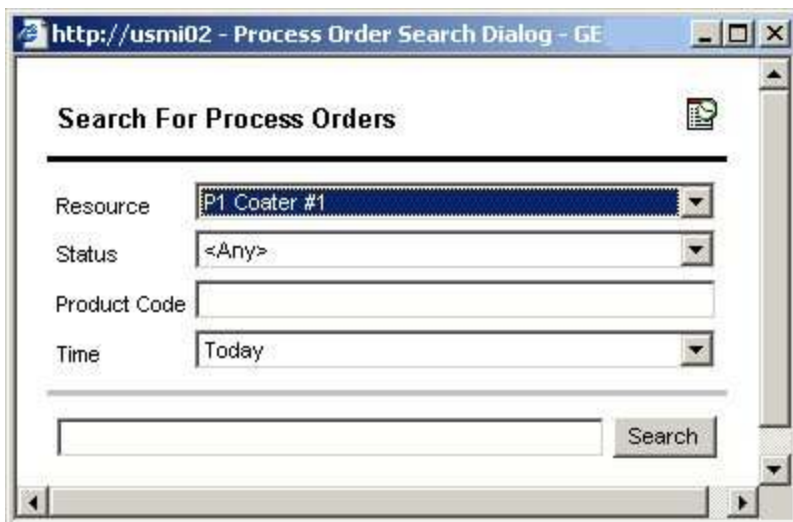
The Process Order Search Dialog Web Part allows you to search for specific process orders on a selected execution path. You can filter on the following criteria:

- **Resource:** The execution paths' path code.
- **Status:** The status of the process order.
- **Product Code:** The product's product code (not the product's name.)
- **Time:** You can select the process orders from:
 - Today
 - Yesterday
 - Last 3 Days
 - Last 7 Days
 - Last 30 Days
 - Last Month
 - This Month
- **Search:** You can type all or part of a process order in the **Search** box. You can use standard SQL wildcards, such as %.

When you click **Search**, the [Process Order Search By Paths Web Part](#) appears.

To use this Web Part, you must:

- Capture production events. For more information on this topic, [click here](#).
- Capture process orders. For more information on this topic, [click here](#).
- Configure a production execution path. For more information on this topic, [click here](#).
- Configure a Schedule View display. For more information on this topic, [click here](#).



Product Statistics By Units Web Part


The Product Statistics By Units Web Part provides statistical information on products that were run on a specific production unit over a specified period of time.

To use this Web Part, you must have:

- Configured products. For more information on this topic, [click here](#).
- Capture production events. For more information on this topic, [click here](#).

- Capture waste events. For more information on this topic, click here.
- Capture downtime events. For more information on this topic, click here.

The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock** icon.


A yellow star  indicates that the product was being produced during the specified time period.

The colored squares  are a visual representation of the particular statistic.

This Web Part provides the following information:

- **Product:** The product (and product code). Click on a product to view the Inventory Listing Web report.
- **#Items:** The number of good production events.
- **Amount:** The total amount produced for all selected units during the specified time period.
- **%Conf:** The number good production events / total number of production events.
- **%Rate:** The (actual production rate / planned production rate) * 100, or:

$$\frac{((\text{actual amount produced, plus actual quality loss and actual yield loss}) / \text{actual run time})}{((\text{planned production, less planned quality loss and planned downtime loss}) / (\text{planned run time, less any planned downtime}))} * 100$$
- **%Downtime:** The (actual run time minutes) / (actual run time minutes + actual downtime minutes) * 100
- **%Waste:** The (actual quality loss) / (actual quality loss + actual production) * 100



Product	#Items	Amount	%Conf	%Rate	Run Time	%DownTime	%Waste
60# Glass (60Glass)	1053	- lbs	0.0%	23.9%	3629:17	0.0%	5.0%
60# Glass (60Glass)	578	47,623,588.0 lbs	0.0%	30.8%	1254:38	0.0%	5.1%
60# Matte (60Matte)	19	679,430.81 lbs	0.0%	132.4%	4:15	-0.8%	4.8%
70# Glass (70Glass)	21	790,467.0 lbs	0.0%	0.7%	921:02	0.0%	9.3%
70# Matte (70Matte)	4	3,850,974.5 lbs	0.0%	80.2%	40:48	-0.1%	6.2%
80# Glass (80Glass)	7	250,190.3 lbs	0.0%	92.5%	2:14	-0.7%	4.9%
90# Matte (90Matte)	6	214,311.91 lbs	100.0%	124.5%	2:08	-1.0%	4.9%



Time: 9/15/2004 5:41:00 AM To 7/12/2005 5:41:00 AM


To configure the Product Statistics By Units Web Part

1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Units** tab, select the production units.
4. On the **Start Time and End Time** tab, specify the time period.
5. On the **OnlyMadeNow** tab, select **True** to include only the products that were being produced during the specified time period.
6. On the **Column** tab, select the columns of information you want to include on the Web Part.
7. On the **Finish** tab, click **Finish**.

Production Distribution Charts By Units Web Part

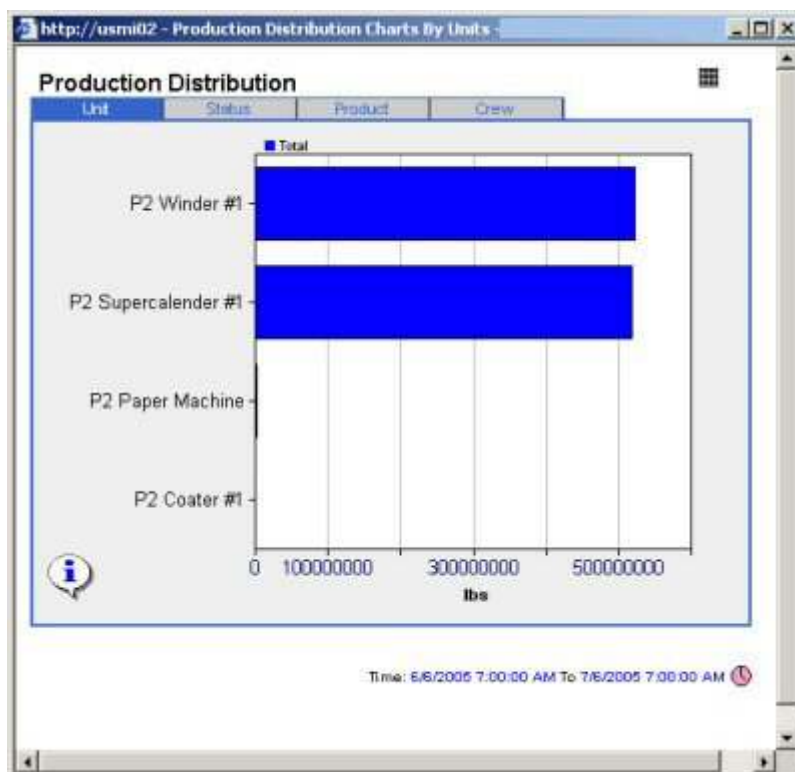
The Production Distribution Charts By Units Web Part displays the amount of production for a specific period of time that is attributed to a specific location (unit), status, product, and crew.

Click the **Table**  icon to display the information in a table format or click the **Graph**  icon to display the information as a bar chart.

The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock**  icon.

For each unit, status, product, and crew, the following statistics are provided:

- **Total:** The total production amount attributed to the production unit, status, product, or crew.
- **Average:** The average production amount attributed to the production unit, status, product, or crew. This is the amount in the Total column divided by the number of production events listed in the # <production event> column.
- **Minimum:** The minimum amount produced for the production events associated with the production unit, status, product, or crew.
- **Maximum:** The maximum amount produced for the production events associated with the production unit, status, product, or crew.
- **% Total:** The percent of the total amount attributed to the production unit, status, product, or crew.
- **# <production event>:** The number of production events attributed to the production unit, status, product, or crew. The actual name of the production event is displayed.



Unit	Status	Product	Crew	Total	Average	Minimum	Maximum	% Total	#Reel
#1				522,957,312.0	704,794.19	0.0	149,987,548.0	50.1	742.0
Vendor #1				518,400,896.0	488,293.47	0.0	60,053,304.0	49.7	1,107.0
Machine				1,744,901.38	1,224.49	0.0	60,490.19	0.2	1,425.0
#1				2,795.12	1.82	0.0	1,422.3	0.0	1,540.0
				1,043,105,904.51	1,174,313.97	0.0	210,102,864.49	100.0	4,814.0

Time: 6/5/2005 7:00:00 AM To 7/6/2005 7:00:00 AM


To configure the Production Distribution Charts By Units Web Part

1. Create the web part. How?
2. On the **Report Parameters tab**, click the **Edit Parameter** button.
3. On the **Units tab**, select the production units.
4. On the **Start and End Time tab**, specify the report time.
5. On the **UnitFilter tab**, filter by production unit, if desired.
6. On the **StatusFilter tab**, filter by production status, if desired.
7. On the **CrewFilter tab**, filter by specific crew, if desired.
8. On the **Options tab**, filter by product or production only, if desired.
9. On the **Finish tab**, click **Finish**.

Production Event Alarms By Unit Web Part

The Production Event Alarms By Unit Web Part lists the number and priority of the alarms for each production event on the selected production unit that occurred during the specified period of time.

The top of the Web Part displays the number of production events that were rejected and the percentage of the total amount of production that was rejected. Rejected production events are highlighted in yellow.

The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock**  icon.

You can click on a production event to view the [Alarm Details By Production Event Web Part](#).

To use this Web Part, you must:

- Configure products. For more information on this topic, click [here](#).
- Configure production events. For more information on this topic, click [here](#).
- Configure alarm templates. For more information on this topic, click [here](#).

9 Rejected Reel. (0.34% Production)			
Reel	#High	#Med	#Low
P14M0642 (Consumed)	1	0	0
P14M0701 (Consumed)	1	0	0
P14M0702 (Consumed)	0	0	0
P14M0703 (Hold)	0	0	0
P14M0704 (Consumed)	0	0	0
P14M0705 (Consumed)	0	0	0
P14M0706 (Consumed)	0	0	0
P14M0707 (Consumed)	0	0	0

Time: 9/9/2004 1:34:00 PM To 12/18/2004 1:34:00 PM

To configure the Production Event Alarms By Unit Web Part

1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Unit** tab, select the production units.
4. On the **Start and End Time** tab, specify the report time.
5. On the **Finish** tab, click **Finish**.

Production Event Search By Unit Web Part

The Production Event Search By Unit Web Part lists all production events on the selected production units that occurred during the specified period of time.

This Web Part requires the following parameters:

- At least one production unit
- Start and end time

You can also filter on:

- Production status
- Event number
- If in process

The Web Part provides the following information:

- **Events:** The production event. Click a production event to view the Event Detail Web report.
- **Unit:** The production unit the event occurred on. Click on a production unit to view the [Unit Time Accounting Web report](#).
- **Product:** The product that was produced.

- **Conformance:** If all variables are within target, then conformance is Good. If one or more variables are in warning, then conformance is Warning. If one or more variables are in reject, then conformance is Reject.
- **Status:** The status of the production event.
- **Dimensions:** The final dimensions of the product.
- **Timestamp:** The production event timestamp. Click on a timestamp to view the Event Time Accounting Web report.

Events	Unit	Product	Conformance	Status	Dimensions
P1ST1803	P1 Coater #1	50Gloss	Good	Consumed	Weight=31,878.0 lbs., Length=67,450.0 LF, Width=300.0 in
P1ST1802	P1 Coater #1	50Gloss	Good	Consumed	Weight=33,237.0 lbs., Length=71,001.0 LF, Width=297.0 in
P1ST1807	P1 Coater #1	50Gloss	Good	Consumed	Weight=37,885.0 lbs., Length=78,067.0 LF, Width=304.0 in
P1ST1806	P1 Coater #1	50Gloss	Good	Consumed	Weight=36,624.0 lbs., Length=78,096.0 LF, Width=297.0 in
P1ST1801	P1 Coater #1	50Gloss	Good	Consumed	Weight=37,628.0 lbs., Length=78,047.0 LF, Width=305.0 in
P1ST1370	P1 Coater #1	50Gloss	Good	Consumed	Weight=36,678.0 lbs., Length=78,063.0 LF, Width=298.0 in
P1ST1805	P1 Coater #1	50Gloss	Good	Consumed	Weight=36,677.0 lbs., Length=78,136.0 LF, Width=298.0 in
P1ST1808	P1 Coater #1	50Gloss	Good	Consumed	Weight=30,080.0 lbs., Length=63,896.0 LF, Width=297.0 in
P1ST1266	P1 Coater #1	50Gloss	Good	Consumed	Weight=37,494.0 lbs., Length=78,040.0 LF, Width=305.0 in
P1ST1386	P1 Coater #1	50Gloss	Good	Consumed	Weight=32,003.0 lbs., Length=67,456.0 LF, Width=300.0 in
P1ST1385	P1 Coater #1	50Gloss	Good	Consumed	Weight=36,705.0 lbs., Length=78,201.0 LF, Width=297.0 in
P1ST1384	P1 Coater #1	50Gloss	Good	Consumed	Weight=23,909.0 lbs., Length=49,717.0 LF, Width=305.0 in
P1ST1267	P1 Coater #1	50Gloss	Good	Consumed	Weight=20,249.0 lbs., Length=42,596.0 LF, Width=301.0 in
P1ST1386	P1 Coater #1	50Gloss	Good	Consumed	Weight=10,144.0 lbs., Length=21,346.0 LF, Width=301.0 in
P1ST1363	P1 Coater #1	50Gloss	Good	Consumed	Weight=36,588.0 lbs., Length=78,105.0 LF, Width=297.0 in
P1ST1362	P1 Coater #1	50Gloss	Good	Consumed	Weight=35,119.0 lbs., Length=74,466.0 LF, Width=289.0 in
P1ST1365	P1 Coater #1	50Gloss	Good	Consumed	Weight=29,978.0 lbs., Length=63,847.0 LF, Width=297.0 in
P1ST1381	P1 Coater #1	50Gloss	Good	Consumed	Weight=27,107.0 lbs., Length=56,815.0 LF, Width=302.0 in
P1ST1367	P1 Coater #1	50Gloss	Good	Consumed	Weight=36,839.0 lbs., Length=78,066.0 LF, Width=299.0 in
P1ST1360	P1 Coater #1	50Gloss	Good	Consumed	Weight=36,857.0 lbs., Length=78,054.0 LF, Width=298.0 in
P1ST1369	P1 Coater #1	50Gloss	Good	Consumed	Weight=28,294.0 lbs., Length=60,366.0 LF, Width=296.0 in
P1ST1363	P1 Coater #1	50Gloss	Good	Consumed	Weight=16,889.0 lbs., Length=35,457.0 LF, Width=299.0 in
P1ST1364	P1 Coater #1	50Gloss	Good	Consumed	Weight=36,735.0 lbs., Length=78,131.0 LF, Width=298.0 in
P1ST1361	P1 Coater #1	50Gloss	Good	Consumed	Weight=36,972.0 lbs., Length=78,056.0 LF, Width=301.0 in
P1ST1366	P1 Coater #1	50Gloss	Good	Consumed	Weight=37,239.0 lbs., Length=78,128.0 LF, Width=302.0 in
P1ST1361	P1 Coater #1	50Gloss	Good	Consumed	Weight=31,413.0 lbs., Length=67,467.0 LF, Width=296.0 in
P1ST1365	P1 Coater #1	40Gloss	Good	Consumed	Weight=9,711.0 lbs., Length=78,111.0 LF, Width=297.0 in

To configure the Production Event Search By Unit Web Part

1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Units** tab, select the production units.
4. On the **Statuses** tab, select the statuses to include on this report.
5. On the **Options** tab, filter by product, event number, or only production events that are currently in process, if desired.
6. On the **Finish** tab, click **Finish**.

Production Event Search Dialog Web Part

The Production Event Search Dialog Web Part allows you to search for production events:

- On a specific production unit
- With a specific production status
- By product code

Plant Applications Web Reporting

- Over a certain period of time. The options are:
 - Today
 - Yesterday
 - Last 3 Days
 - Last 7 Days
 - Last 30 Days
 - Last Month
 - This Month

You can type all or part of a process order in the **Search** box. You can use standard SQL wildcards, such as %. When you click **Search**, the [Production Event Search By Units Web Part](#) appears.



Production Event Status List By Units Web Part

The Production Event Status List By Units Web Part displays the production events that occurred on the selected production units. When you configure this Web Part, you can:

- Select multiple production units across multiple production lines.
- Specify the production status(es) you want to include on this Web Part.
- Select multiple variables.

To use this Web Part, you must configure:

- Products. For more information on this topic, [click here](#).
- Production events. For more information on this topic, [click here](#).
- Specifications. For more information on this topic, [click here](#).
- optional: event dimensions. For more information on this topic, [click here](#).
- optional: alarms. For more information on this topic, [click here](#).

This Web Part provides the following information:

- **Reel:** This column will be named whatever name you used when you configured your production event. It lists each event that matches the criteria you used when you configured the Web Part. You can click on an event to view the Event Detail Web Report.

- **Unit:** The production unit on which the event occurred. Click a unit to view the Unit Time Accounting Web report.
- **Location:** The inventory location. You must configure the production unit as an inventory point when you edit the production unit properties in the Unit Properties Configuration dialog box. The location information is entered on the Inventory Locations tab.
- **Start:** The start time of the production event.
- **End:** The end time of the production event.
- **Age:** The number of hours and minutes from the current time to when the production event ended (current time – end time). The format is **HH:MM**.
- **Product:** The product code of the product that was produced.
- **Status:** The production status of the production event.
- **Time:** The amount of time the production event has been in its current status. The current time less the timestamp that the production event transitioned to its current status.
- **Weight:** The Dimension X of the product that was produced during this production event. The actual title of this column is determined by the information entered when the production event was configured.
- **Length:** The Dimension Y of the product that was produced during this production event. The actual title of this column is determined by the information entered when the production event was configured. This information is from the Production Event Configuration dialog box.
- **Width:** The Dimension Z of the product that was produced during this production event. The actual title of this column is determined by the information entered when the production event was configured. This information is from the Production Event Configuration dialog box.
- **Diameter:** The Dimension A of the product that was produced during this production event. The actual title of this column is determined by the information entered when the production event was configured. This information is from the Production Event Configuration dialog box.
- **% Tested:** The percentage of variables tested during this production event. Click a link to view the Event Detail Web report.
- **% Conf:** If all variables are within target, then conformance is Good. If one or more variables are in warning, then conformance is Warning. If one or more variables are in reject, then conformance is Reject. The number in parentheses () is the percentage of variables that have data. The variable must have Conformance Variable selected in the Variable sheet. Click a link to view the Event Detail Web report.
- **User:** The electronic signature of the person who gave user verification.
- **Approver:** The electronic signature of the person who gave approver verification.
- **Alarms:** The number of high, medium, and low alarms that occurred during the production event. Click a link to view the [Alarm List By Units Web Part](#).
- **Variables:** The variables listed in the variable parameter.


Real	Unit	Location	Start	End	Age	Product	Status	Time	Weight	Length	Width	Diameter	% Tested	% Conf	Signature	Alarms
P101100	P1.Machine	-	7/8/2005 7:40:00 AM	7/8/2005 7:50:00 AM	0:12	500class	Complete	0:10	30,721.0 lbs	61,968.0 LF	304.8 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 7:10:00 AM	7/8/2005 7:30:00 AM	0:34	500class	Complete	0:22	30,724.0 lbs	61,967.0 LF	304.8 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 6:50:00 AM	7/8/2005 7:14:00 AM	0:56	500class	Complete	0:54	27,282.0 lbs	58,798.0 LF	305.0 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 6:34:00 AM	7/8/2005 6:52:00 AM	1:16	500class	Complete	1:16	30,735.0 lbs	61,929.0 LF	305.1 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 6:12:00 AM	7/8/2005 6:30:00 AM	1:40	500class	Complete	1:38	30,800.0 lbs	61,893.0 LF	305.0 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 6:03:00 AM	7/8/2005 6:08:00 AM	2:02	500class	Complete	2:00	25,039.0 lbs	51,227.0 LF	308.2 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 5:24:00 AM	7/8/2005 5:46:00 AM	2:24	500class	Complete	2:19	37,862.0 lbs	78,088.0 LF	305.1 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 5:06:00 AM	7/8/2005 5:24:00 AM	2:46	500class	Complete	2:40	30,741.0 lbs	61,823.0 LF	304.7 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 4:44:00 AM	7/8/2005 5:02:00 AM	3:08	500class	Complete	3:06	30,737.0 lbs	61,855.0 LF	305.0 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 4:18:00 AM	7/8/2005 4:40:00 AM	3:30	500class	Complete	3:26	37,373.0 lbs	78,053.0 LF	305.0 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 4:00:00 AM	7/8/2005 4:18:00 AM	3:52	500class	Complete	3:50	30,883.0 lbs	61,964.0 LF	304.8 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 3:38:00 AM	7/8/2005 3:56:00 AM	4:14	500class	Complete	4:12	30,945.0 lbs	61,873.0 LF	305.0 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 3:17:00 AM	7/8/2005 3:34:00 AM	4:36	500class	Complete	4:34	29,020.0 lbs	60,342.0 LF	305.2 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 2:50:00 AM	7/8/2005 3:12:00 AM	4:58	500class	Complete	4:56	37,708.0 lbs	78,103.0 LF	304.8 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 2:32:00 AM	7/8/2005 2:50:00 AM	5:20	500class	Complete	5:18	30,885.0 lbs	61,852.0 LF	304.8 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 2:10:00 AM	7/8/2005 2:30:00 AM	5:42	500class	Complete	5:40	30,720.0 lbs	61,820.0 LF	305.0 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 1:44:00 AM	7/8/2005 2:06:00 AM	6:04	500class	Complete	6:02	37,888.0 lbs	78,090.0 LF	305.0 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 1:28:00 AM	7/8/2005 1:44:00 AM	6:26	500class	Complete	6:24	35,828.0 lbs	61,961.0 LF	304.8 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 1:04:00 AM	7/8/2005 1:22:00 AM	6:48	500class	Complete	6:46	35,828.0 lbs	61,879.0 LF	305.0 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 12:44:00 AM	7/8/2005 1:10:00 AM	7:10	500class	Complete	7:08	37,386.0 lbs	58,816.0 LF	305.0 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]
P101100	P1.Machine	-	7/8/2005 12:30:00 AM	7/8/2005 12:38:00 AM	7:32	500class	Complete	7:30	30,789.0 lbs	61,919.0 LF	305.0 in	0.0 in	44.2%	Warning	-	[P] [Q] [R]

To configure the Production Event Status List By Units Web Part

1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Units** tab, select the production units.
4. On the **Statuses** tab, select the statuses to include on this report.
5. On the **Variables** tab, select the variables to include on this report.
6. On the **Columns** tab, select the columns of information to include on this report.
7. On the **Finish** tab, click **Finish**.

Production Statistics By Lines Web Part

The Production Statistics By Lines Web Part displays statistics for selected production lines over a specified period of time.

The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock**  icon.

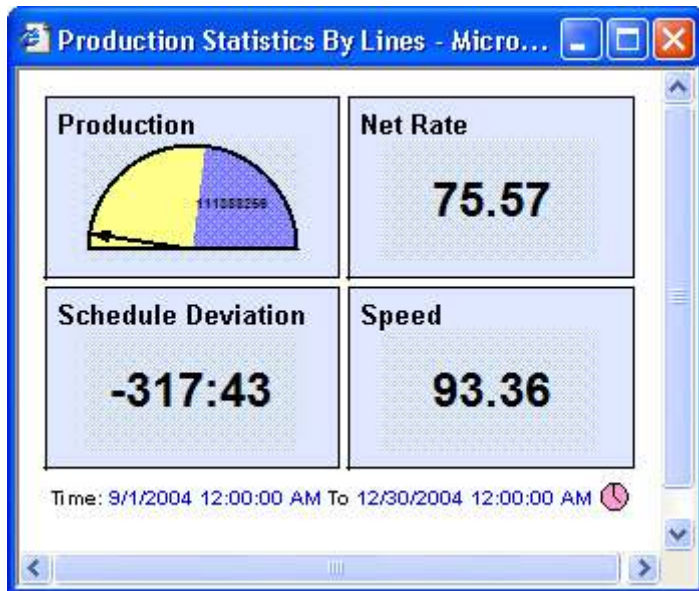
To use this Web Part, you must:

- Capture production events. For more information on this topic, click here.
- Capture downtime events. For more information on this topic, click here.
- Capture waste events. For more information on this topic, click here.
- Configure central specifications. For more information on this topic, click here.

This Web Part provides the following information:

- **Production:** The total production for all production lines during the specified period of time. Hover over the graphic to view totals for the actual production amount, the target production amount, and the reject production amount.

- **Net Rate:** The actual production / the total time to produce. Hover over the graphic to view detailed information.
- **Schedule Deviation:** The total amount of time that actual production time deviated from the planned production time.
- **Speed:** This is calculated as: (actual production + yield loss + quality loss) / run-time minutes. In other words, it's the desired production / the planned run time.



To configure the Production Statistics By Lines Web Part

1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Lines** tab, select the production units.
4. On the **Start and End Time** tab, specify the report time.
5. On the **Finish** tab, click **Finish**.

Quality Statistics By Variables Web Part

The Quality Statistics By Variables Web Part provides a variety of overall statistics for a single variable over the specified period of time.

This Web Part provides a comparison of the actual (test) variable values against the target values.

The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock** icon.

To use this Web Part, you must:

- Configure products. For more information, click [here](#).
- Capture values in variables. For more information, click [here](#).
- Configure alarms. For more information, click [here](#).
- Configure specifications. For more information, click [here](#).

For Cpk, Ppk, Pp, and Cp, the color values indicate the following:

- **Red** indicates the value is less than 1.

Plant Applications Web Reporting

- **Yellow** indicates the value is between 1 and 1.33.
- **Green** indicates the value is greater than 1.33.

For High, Med, and Low (alarms), the color values indicate the following:

- **Red** is used for the High alarm box to indicate that there is one or more high alarms.
- **Blue** is used for the Med alarm box to indicate that there is one or more medium alarms.
- **Light blue** is used for the Low alarm box to indicate that there is one or more low alarms.
- **Green** is used on all three alarms types to indicate that there are no alarms.

For %Test, %Conf, %Dev, and %Sigma, the color values indicate the following:

- **Red** indicates the value is in reject.
- **Blue** indicates the value is in warning.
- **Green** indicates the value is in target.

This Web Part provides the following information:

- **High:** This is the percentage of variables that had an alarm with a high priority. Click the number to view the [Alarm List By Variables Web Part](#).
- **Med:** This is the percentage of variables that had an alarm with a medium priority. Click the number to view the [Alarm List By Variables Web Part](#).
- **Low:** This is the percentage of variables that had an alarm with a low priority. Click the number to view the [Alarm List By Variables Web Part](#).
- **#Samples:** The number of samples used in the calculations.
- **%Conf:** The percentage of variables that were in conformance, which is calculated as:

$$\frac{\text{sum (number of values in target * number of test values)}}{\text{total number tested}}$$

For example, if Variable A had 3 out of 10 values in target, Variable B had 6 out of 10 values in target, and Variable C had 9 out of 10 values in target, then the % conformance would be 60% (18/30)

- **Cpk:** The process capability index. For detailed information on Cpk, see Variable Property Definitions: Cpk.
- **Ppk:** The process performance index. For detailed information on Ppk, see Variable Property Definitions: Ppk.
- **Cp:** The process capability ratio. For detailed information on Cp, see Variable Property Definitions: Cp.
- **Pp:** The process performance indicator. For detailed information on Pp, see Variable Property Definitions: Pp.
- **%Dev:** This is calculated as follows:

$$\frac{\text{sum (CoefficientVariationTarget * number tested)}}{\text{sum (number tested)}}$$

where

$$\text{CoefficientVariationTarget} = (\text{standard deviation of the Target Deviation} / \text{minimum target value}) * 100.00$$

where

$$\text{Target Deviation} = \text{variable result value} - \text{variable target value}$$

- **%Sigma:** This is calculated as follows:

$(\text{sum}(\text{Standard Deviation} / \text{Average} * 100.00 * \text{number tested})) / \text{sum}(\text{number tested})$
where

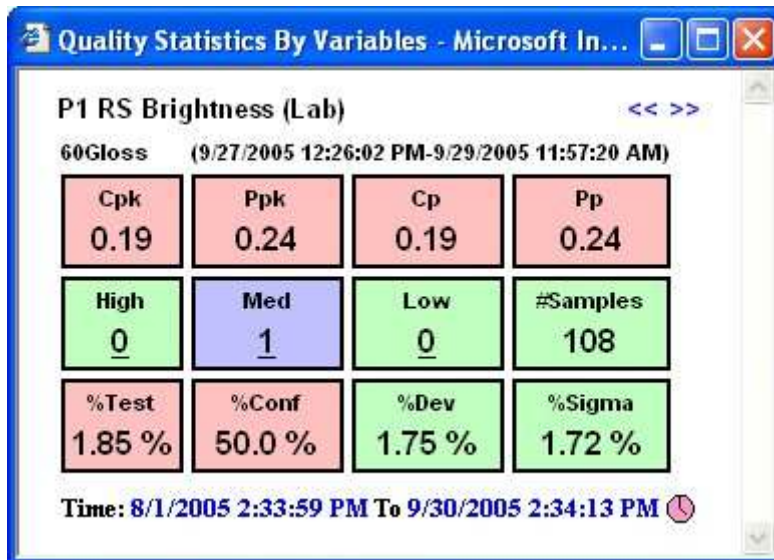
Standard Deviation = standard deviation of the results for each variable

and

Average = average of the results for each variable

- **%Test:** The percentage of variables that had result values, calculated as follows:

$\text{sum}(\text{number of non-null values for each variable}) / \text{sum}(\text{total number of samples})$



To configure the Quality Statistics By Variables Web Part

1. Create the web part. [How?](#)
2. On the Report Parameters tab, click the Edit Parameter button.
3. On the Variable tab, select the unit, then the slave unit (if applicable), and next select the variable.
4. Click Next.
5. On the **Start Time and End Time tab**, select the period of time you want to retrieve information for.
6. Click Next.
7. On the Product Filter tab, select the products you want to retrieve information for.
8. Click Next.
9. On the Cpk Mode tab, select either Cpk Weighted Average or Cpk by Product. If you select Cpk Weighted Average, calculations are made across all products. If you select Cpk by Product, calculations are made per product and the user will be able to scroll through all available products with the arrows in the top right of the web part display.
10. Click Next.
11. On the **Options** tab, select the **Filter Non-Productive Time** check box if you want to exclude non-productive time from the calculations.
12. Click **Next**.
13. On the **Finish** tab, click **Finish**.

Specification Search By Units Web Part

The Specification Search By Units Web Part returns a list of products for the selected production units. When you click a product link, you can view the [Specification By Unit Web report](#), which lists all specifications for the selected product on the date that you specified when you created this Web Part.

The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock** icon.

To use this Web Part, you must have:

- Configured products. For more information on this topic, click [here](#).
- Configured production events. For more information on this topic, click [here](#).
- Configured specifications. For more information on this topic, click [here](#).

This Web Part provides the following information:

- **Product Code:** The product code of the product that was produced on the production unit during the time specified. Click the link to view the [Specification By Unit Web report](#).
- **Description:** The description of the product.
- **Unit:** The production unit on which the product was run.

http://usmi02 - Specification Search By Units -

Search Results For Product Specifications (Product = Any)

Product Code	Description	Unit
50Dup	50GlossDup	-
50Gloss	50# Gloss	-
60Gloss	60# Gloss	-
60Matte	60# Matte	-
70Gloss	70# Gloss	-
70Matte	70# Matte	-
80Gloss	80# Gloss	-

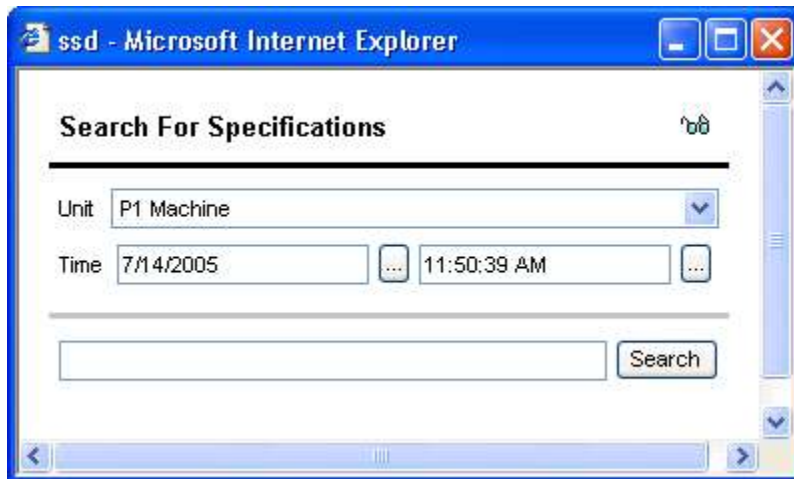
Timestamp: 7/12/2005 10:22:00 AM

To configure the Specification Search By Units Web Part



1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Units** tab, select the production units.
4. On the **Timestamp** tab, specify the timestamp for the report.
5. On the **Options** tab, filter by product code, if desired.
6. On the **Finish** tab, click the **Finish** button to save your changes and to exit.

Specification Search Dialog Web Part

The Specification Search Dialog Web Part is used for searching for specification on a specific production unit at a specific time. When you click **Search**, the [Specification Search By Units Web Part](#) opens.



To use the Specification Search Dialog Web Part

1. From the **Unit** list, select the production unit.
2. In the **Time** box, enter the date and time for which you want to retrieve specifications. Click the  button to view an interactive calendar from which you can select a date. The time is the current time. Clicking the  button next to the time will update the time to the current time.
3. In the **Search** box, you can type all or part of the product code for which you want to search.
4. Click **Search**.

Unit OEE Web Part

The Unit OEE Web Part displays OEE and other statistical information on a unit-by-unit basis. This Web Part is a summary that provides several opportunities to drill down further into your process.

If the report start time or end time falls outside of an event start or end time, then loading time for events partially outside the reporting period are calculated. The production for the event is awarded to the reporting period on the basis of the following proration:

$$(\text{Total Event Production} / \text{Total Event Loading Time}) \times \text{Event Loading Time Within Reporting Period}$$

In cases where the last event in the specified reporting period has not yet ended, the Report End Date for all calculations is actually the end date of the last completed event. That is, all availability and production calculations are based on the end date/time of the last completed event, and not the specified reporting end date.

In order to use this Web Part, you must first:

- Create the plant model

Plant Applications Web Reporting

- Create products (steps to create products and specifications are required only if you will use specification alarms)
- Create variables on a production unit
- Add products to the production unit
- Enter specification limits for those variables on the production unit for the selected products
- Populate variables with data (Autolog, Historian tag, Calculations, etc.)

*Includes Non-productive Time

Unit	Net Production	Actual Speed	Ideal Speed	Performance Rate %	Waste	Quality Rate %	Run Time	Loading Time	Available Rate %	% OEE	Alarms
P1 Coater#1	0.0 lbs	0.00 lbs/min	0.00 lbs/min	0.0%	0.0 lbs	0.0%	1 00:00:00	1 00:00:00	100.0%	0.0%	
P1 Machine	2,335,503.0 lbs	2289.46 lbs/min	2200.00 lbs/min	100.0%	125,671.26 lbs	94.9%	17:55:00	1 00:00:00	74.7%	70.8%	
P1 Super#1	0.0 lbs	0.00 lbs/min	0.00 lbs/min	0.0%	0.0 lbs	0.0%	1 00:00:00	1 00:00:00	100.0%	0.0%	
P1 Winder#1	0.0 lbs	0.00 lbs/min	0.00 lbs/min	0.0%	0.0 lbs	0.0%	1 00:00:00	1 00:00:00	100.0%	0.0%	
Summary	2,335,503.0 Units	456.20 Units/min	550.00 Units/min	82.9%	125,671.26 Units	94.9%	3 17:55:00	4 00:00:00	93.7%	73.7%	-



Time: 1/16/2007 7:00:00 AM To 1/17/2007 7:00:00 AM

The Unit OEE Web Part provides the following information:



- **Unit Name:** The production unit for which the row of data is retrieved and/or calculated. Click the link to view the [Unit Time Accounting](#) report.
- **Net Production:** The amount of production from the unit being reported on. The value is returned in the ActualProduction output variable of the spCMN_GetUnitStatistics stored procedure. Click the link to view the [Product Statistics By Unit](#) report.
- **Actual Speed:** The actual speed at which the machine is operating. (Net Production + Total Waste/Uptime Minutes)
- **Ideal Speed:** The target operating speed of the unit, returned by the spCMN_GetUnitStatistics stored procedure.
- **Performance Rate %:** The performance rate of the unit based on the Actual and Ideal Speeds (Actual Speed/Ideal Speed * 100). Click the link to view the [Performance Distribution](#) report.
- **Waste:** The quality loss from the unit, returned by the spCMN_GetUnitStatistics stored procedure.
- **Quality Rate %:** Percentage of good product (Net Production/[Net Production + Waste] * 100). Click the link to view the Quality Distribution report.
- **Run Time:** The time that the machine has been running, returned by the spCMN_GetUnitStatistics stored procedure. In other words, it is the planned production time less any downtime. Format: DD HH:MM:SS
- **Loading Time:** The time during the reporting period that were consumed in a loading phase. It is the period of the report in minutes (that is, report start time minus report end time), less the TotalUnavailableMinutes, less the TotalOutsideAreaMinutes. In other words, it is the planned production time. Format: DD HH:MM:SS
- **Available Rate %:** The percentage of time the machine is available. Run Time/Loading Time. Click the link to view the [Operating Downtime Distribution](#) report.
- **% OEE:** Quality Rate * Performance Rate * Available Rate. Click the link to view the [OEE Summary](#) report.
- **Alarms:** The number of alarms that have occurred on the unit during the reporting period. Click the links to view the [Alarm List By Units](#) report.
- **Summary:**
 - **Net Production:** The sum of the net production amounts for all units on the report


- **Actual Speed:** $(\Sigma \text{Net Production} + \Sigma \text{Total Waste}) / \Sigma \text{Uptime Minutes}$
- **Ideal Speed:** $\Sigma \text{Ideal Production} / \Sigma \text{Loading Time}$
- **Performance Rate %:** $\Sigma \text{Actual Speed} / \Sigma \text{Ideal Speed}$
- **Waste:** The sum of the waste amounts for all units on the report
- **Quality Rate %:** $(\Sigma \text{Net Production} / [\Sigma \text{Net Production} + \Sigma \text{Waste}] * 100)$
- **Run Time:** The sum of the run times for all units on the report
- **Loading Time:** The sum of the loading times for all units on the report
- **Available Rate %:** $\Sigma \text{Run Time} / \Sigma \text{Loading Time}$
- **% OEE:** $\Sigma \text{Quality Rate} * \Sigma \text{Performance Rate} * \Sigma \text{Available Rate}$

To configure the Unit OEE Web Part

1. Log in to the Web Part Administrator. How?
2. Click the **Manage Web Part Templates** tab.
3. On the **Configure Available Web Parts** tab, select **Unit OEE**.
4. In the lower part of the dialog box, click the **Report Parameters** tab.
5. In **Parameters**, select a parameter. Corresponding values appear in **Parameter Value**.
6. If you wish to edit a value, click **Edit Parameter** to open the appropriate dialog box.
7. Click WebPart Properties to configure the appearance and behavior of the Web Part in a browser.
8. Click the Report Schedule tab to choose scheduling options.
9. When you are finished, close the Web Part Administrator.

Waste Distribution Charts by Units Web Part

The Waste Distribution Charts by Units Web Part displays the amount of waste for a specific period of time that is attributed to a specific location (unit), fault, reason level, product, and crew. Click the **Table** icon  to display the information in a table format or click the **Graph** icon  to display the information as a bar chart.

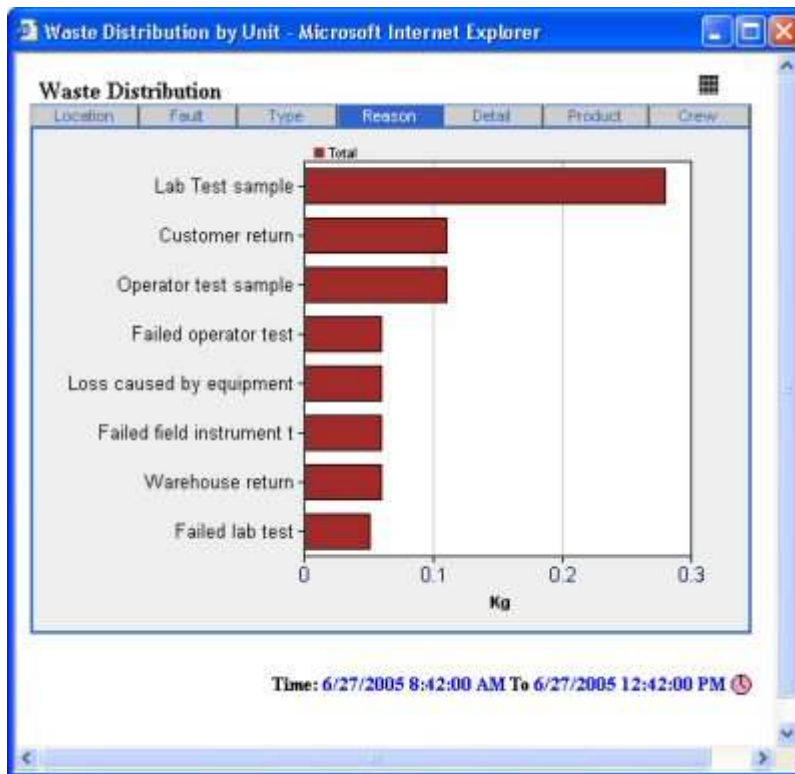
The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock** icon .

Terms

- **MAPE** (Mean Amount Per Event): total waste amount/ number of waste events
- **MABE** (Mean Amount Between Events): This is the mean amount that was produced between waste events.

To use this Web Part, you must first:

- Configure your plant model. For more information on this topic, click here.
- Capture waste events. For more information on this topic, click here.
- Attach a reason tree to your waste events. For more information on this topic, click here.
- Configure products and product changes. For more information on this topic, click here.
- optional: Attach faults to your waste events. For more information on this topic, click here.
- optional: Include crew/shift schedule information.



When the Web Part is in **Bar Chart** view, each bar represents the total amount of waste assigned to a specific attribute, such as a reason. In **Bar Chart** view, you can click one of the bars to get a more granular view of your waste. For example, on the **Location** tab, you can click one of the bars for a specific location to view only the information specific to that location.

Reason	Total	MATR	MABF	% Total	# Events
Lab Test sample	0.28	0.07	-0.07	19.3	4.0
Customer return	0.11	0.11	-0.11	7.7	1.0
Operator test sample	0.11	0.11	-0.11	7.7	1.0
Failed operator test	0.06	0.06	-0.06	3.9	1.0
Loss caused by equipment	0.06	0.06	-0.06	3.8	1.0
Failed field instrument test	0.06	0.06	-0.06	3.8	1.0
Warehouse return	0.06	0.06	-0.06	3.8	1.0
Failed lab test	0.05	0.05	-0.05	3.8	1.0
Totals	0.79	0.58	-0.58	53.8	11.0

In **Table** view, this Web Part provides the following information:

- **Location tab:**

- **Location:** This is a list of the location (unit) where the waste event(s) occurred.
- **Total:** This is the total amount of waste for the specific location.
- **MAPE:** This is the mean amount of waste for the specific location.
- **MABE:** This is the mean amount that was produced between waste events for the specific location.
- **% Total:** This is the percent total of waste attributed to the specific location.
- **# Events:** This is the number of waste events that occurred at the specific location.
- **Totals:** Totals are provided for the amount of waste for all locations and for the number of events for all locations.

- **Fault tab:**

If no fault has been attached to the waste event, then the fault will be "Unspecified."

- **Fault:** This is a list of the fault(s) assigned to the waste events.
- **Total:** This is the total amount waste for the fault.
- **MAPE:** This is the mean amount of waste for the specific fault.
- **MABE:** This is the mean amount that was produced between waste events for the specific fault.
- **% Total:** This is the percent total of waste attributed to the specific fault.
- **# Events:** This is the number of waste events that occurred at the specific fault.
- **Totals:** Totals are provided for the amount of waste for all faults and for the number of events for all faults.

- **Reason Level tab(s):**

There will be a tab for each reason level in the associated reason tree.

- **Reason:** This is a list of the reason(s) assigned to the waste events.
- **Total:** This is the total amount of time attributed to waste for the reason.
- **MAPE:** This is the total mean amount of waste for the specific reason.
- **MABE:** This is the mean amount that was produced between waste events for the specific reason.
- **% Total:** This is the percent total of waste attributed to the specific reason.
- **# Events:** This is the number of waste events that occurred at the specific reason.
- **Totals:** Totals are provided for the amount of waste for all reasons and for the number of events for all reasons.

- **Product tab:**

- **Product:** This is a list of the product(s) which were being run when the waste event(s) occurred.
- **Total:** This is the total amount of waste for the specific product.
- **MAPE:** This is the total mean amount of waste for the specific product.
- **MABE:** This is the mean amount that was produced between waste events for the specific product.
- **% Production:** This is the percent of total production that was waste.
- **% Total:** This is the percent total of waste attributed to the specific product.
- **# Events:** This is the number of waste events associated with the specific product.
- **Totals:** Totals are provided for the amount of waste for all products, fault percent and number of events.

- **Crew tab:**

- **Crew:** This is a list of the Crew shifts when the waste event(s) occurred.
- **Total:** This is the total amount of time attributed to waste for the specific Crew.
- **MAPE:** This is the total mean amount of waste for the specific Crew.

- **MABE:** This is the mean amount that was produced between waste events for the specific Crew.
- **% Total:** This is the percent total of waste attributed to the specific Crew.
- **# Events:** This is the number of waste events that occurred at the specific Crew.
- **Totals:** Totals are provided for the amount of waste for all crews and for the number of events for all crews.

To configure the Waste Distribution Charts by Units Web Part

1. Create the web part. [How?](#)
2. On the **Report Parameters tab**, click the **Edit Parameter** button.
3. On the **Units** tab, select the units you want to include on this report.
4. On the **Start Time and End Time** tab, select the period of time for which you want waste information retrieved.
5. On the **Options** tab, select one or more of the following:
 - ProductFilter: Enter a product description or code to filter on that product.
 -
6. On the **Finish** tab, click the **Finish** button to save your changes and to exit.

Waste Top N Charts by Units Web Part



The Waste Top N Charts by Units Web Part displays the most time-consuming level 1 reasons for waste. When you configure the Web Part, you specify the number of reasons you want included in the Web Part. The default value is 10 reasons.


The **Summary tab** displays the total amount of waste for each reason, the MATR for each reason, the MABF for each reason, the percent of total waste attributed to each reason, and the number of waste events for each reason. The Summary information is available only in Table view.

The **Total Amount tab** displays the total amount of waste attributed to each reason.

The **MATR tab** displays the mean amount of waste for each reason. In Bar Chart view, each bar represents the total amount of MATR waste for each reason. In Table view, the total MATR waste, minimum MATR waste, maximum MATR waste, and the MATR standard deviation are provided for each reason.

The **MABF tab** displays the mean waste amount between failure for each reason. In Bar Chart view, each bar represents the total amount of MABF waste for each reason. In Table view, the total MABF waste amount is provided for each reason.

Click the **Table** icon  to display the information in a table format or click the **Graph** icon  to display the information as a bar chart.

The reporting time period is displayed at the bottom of the Web Part. To adjust the reporting period, click the **Clock** icon .

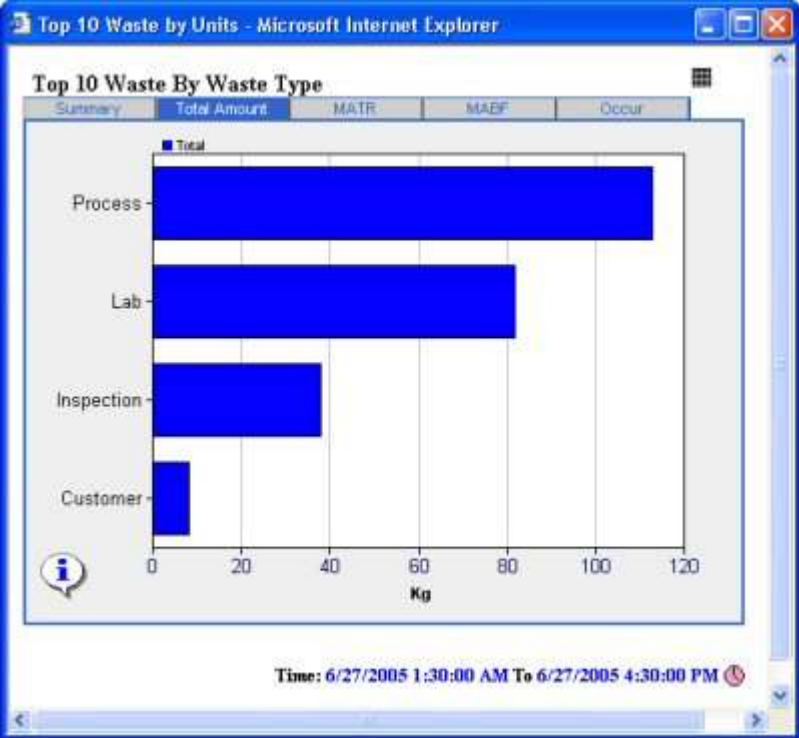
Terms

- **MATR** (Mean Amount To Repair): total waste amount/ number of waste events
- **MABF** (Mean Amount Between Failure): This is the mean amount that was produced in between waste events.

To use this Web Part, you must first:

- Configure your plant model. For more information on this topic, click here.

- Capture waste events. For more information on this topic, click here.
- Attach a reason tree to your waste events. For more information on this topic, click here.



Waste Type	Total	MATR	MTTR	% Total	# Events
Process	112.87	8.08	-8.06	48.9	14.0
Lab	81.73	8.17	-8.17	34.0	10.0
Inspection	37.79	7.56	-7.56	15.7	5.0
Customer	8.12	8.12	-8.12	3.4	1.0
Totals	240.51	31.91	-31.91	100.0	30.0

To configure the Waste Top N Charts by Units Web Part

1. Create the web part. How?
2. On the **Report Parameters** tab, click the **Edit Parameter** button.
3. On the **Units** tab, select the production units.

Plant Applications Web Reporting

4. On the **Start and End Time tab**, specify the report time.
5. On the **CrewFilter tab**, filter by specific crew, if desired.
6. On the **LocationFilter tab**, filter by a specific fault, if desired.
7. On the **Waste Reason tab**, filter by downtime reason, if desired.
8. On the **Options** tab, filter by product, fault, report level, the number of reasons to include on the report (Top N), and whether to filter out non-productive time, if desired.
9. On the **Finish** tab, click **Finish**.