

Metasys® Export Utility Help

MS-EXPORT-0

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Export Utility Help

Welcome to the *Metasys*® Export Utility Help document.

This Help document describes how to use *Metasys* Export Utility to extract historical data for export to several software file formats. This Help system does not contain any information on configuring or working with the Network Automation Engine (NAE), Network Integration Engine (NIE), Network Control Engine (NCE), Application and Data Server/Extended Application and Data Server (ADS/ADX), or Open Data Server (ODS).

Note: Unless otherwise noted, the term *engine* refers to all NAE, NIE, and NCE models. *Server* refers to all ADS, ADX, and ODS models.

Summary of Changes

Supported programs and servers were updated in [Table 2](#).

Export Utility Overview

Export Utility is a Microsoft® Windows® based application that uses Web Services to extract the data from the *Metasys* system. The application runs from an ADS/ADX, ADS-Lite, ODS, or from a stand-alone computer on the same network.

Export Utility extracts historical trend, alarm, and audit data from the NAE/NIE/NCE, ADS/ADX, or ODS. This data is provided in several file formats, such as Microsoft Excel® spreadsheet (.xls) and Access database (.mdb). You can instantly extract the selected data or schedule an extraction at a convenient time or interval.

Concepts

Export Utility Related Documentation

[Table 1](#) lists documentation related to Export Utility.

Table 1: Export Utility Documentation

For Information On	See Document
Metasys System Requirements	<i>Metasys</i> ® System Configuration Guide (LIT-12011832)
Demand Limiting Load Rolling (DLLR)	<i>DLLR Technical Bulletin</i> (LIT-12011288)
ADS/ADX Installation	<i>Metasys</i> ® Server Installation and Upgrade Instructions Wizard (LIT-12012162) ¹
SCT Installation	<i>SCT Installation and Upgrade Instructions</i> (LIT-12012067)
ADS-Lite Installation	<i>Metasys Server Lite Installation and Upgrade Instructions Wizard</i> (LIT-12012258) ¹
Open Data Server System (ODS) Installation	<i>ODS Installation and Upgrade Instructions Wizard</i> (LIT-12011945) ¹
Trends	<i>Trend Extensions</i> section of the <i>Metasys</i> ® SMP Help (LIT-1201793) ²
Alarms	<i>Alarm and Event Management</i> section of the <i>Metasys</i> ® SMP Help (LIT-1201793) ²
Audits	<i>Audit Trail</i> section of the <i>Metasys</i> ® SMP Help (LIT-1201793) ²
Export Utility License Activation	<i>Software License Activator Technical Bulletin</i> (LIT-1201654)
Metasys Advanced Reporting System and Energy Essentials	<i>Metasys</i> ® Advanced Reporting System and Energy Essentials Help (LIT-12011312) ²

¹ Use the wizard to generate instructions specific to your system.

² This LIT number represents a printer-friendly version of the *Help*.

Export Utility System Requirements

All Metasys® system devices from which you are extracting data must be at Release 2.0 or later. See [Export Utility Technical Specifications](#) for details.

Export Utility Technical Specifications

Table 2: Export Utility System Requirements

Product Code	MS-EXPORT-0
Recommended Computer/Server Platform¹	Intel® Core™ 2 Duo E6700 or better (Intel Core 2 Duo E4300 minimum) 20 GB free hard disk space available (600 MB minimum) DVD drive When Export Utility is installed on an Application and Data Server/Extended Application and Data Server (ADS/ADX), follow the requirements for an ADS/ADX. Refer to the <i>Application and Data Server (ADS/ADX) Product Bulletin (LIT-1201525)</i>, the <i>Application and Data Server (ADS) Lite for Europe (E) Product Bulletin (LIT-12011690)</i>, or the <i>Application and Data Server (ADS) Lite for Asia (A) System Product Bulletin (LIT-12011694)</i>. When Export Utility is installed on an Open Data Server (ODS), follow the requirements for an ODS. Refer to the <i>Open Data Server (ODS) Product Bulletin (LIT-12011943)</i>.
Recommended Memory¹	Computer Platforms: 2 GB RAM (1 GB RAM minimum) Server Platforms: 4 GB RAM (2 GB RAM minimum)
Supported Operating Systems	Windows® 10 Pro and Enterprise Editions with Anniversary Update (version 1607) (64-bit) Note: The Windows 10 Anniversary Update (version 1607) is required for any Windows 10 computer that runs Metasys software, including the ADS/ADX/ODS. Verify this update is installed before installing or upgrading Metasys software. From the Start Menu, type Winver in the Windows search bar. Click Winver to open About Windows. If you are upgrading Metasys software before installing this update, you must do the following: 1. uninstall the previous versions of all Metasys software 2. install the Windows 10 Anniversary Update (version 1607) 3. install the latest Metasys software Windows® 8.1 Pro and Enterprise Editions with Update 1 (64-bit) Windows® 7 Professional, Enterprise, and Ultimate Editions with SP1 (64-bit) Windows® 7 Professional, Enterprise, and Ultimate Editions with SP1 (32-bit) Windows® Server® 2016 (64-bit) Windows® Server® 2012 R2 with Update 1 (64-bit) Windows® Server® 2012 (64-bit)

Table 2: Export Utility System Requirements

Additional Software Included on the Product Disks	Microsoft .NET Framework version 3.5 SP1 For steps on installing .NET Framework version 3.5 SP1, refer to the <i>Metasys® Server Installation and Upgrade Instructions Wizard (LIT-12012162)</i>, <i>ADS-Lite Installation and Upgrade Instructions Wizard (LIT-12011688)</i>, or the <i>ODS and SCT Installation and Upgrade Instructions Wizard (LIT-12011945)</i>. Note: Windows 10, Windows 8.1, Windows 7, Windows Server 2016, Windows Server 2012 R2, and Windows Server 2012 include Microsoft .NET Framework version 3.5/3.5.1. These applications are built into the operating system (no separate software installation is necessary). We recommend you also install Microsoft .NET Framework version 4.5 if you are using Windows 8.1, Windows Server 2012 R2, or Windows Server 2012 and Microsoft .NET Framework version 4.6.1 if you are using Windows 10.
Additional Requirements (Order Separately)	Microsoft Office Professional 2013, Microsoft Office Enterprise 365, Microsoft Office Professional 2007, Microsoft Office Professional 2010 software to generate reports Note: • To extract data to Microsoft Excel or Microsoft Access software, you must have the Microsoft software installed on the computer that is running Export Utility. • Export Utility can extract data to 32-bit and 64-bit versions of Microsoft Office. However, the dynamic-link library (DLL) file and example files used to create custom reports are compatible only with the 32-bit version of Microsoft Office.

- 1 Our computer platform and memory recommendations are not meant to imply that older or slower machines are not usable. Refer to the *Network and IT Guidance for the BAS Professional Technical Bulletin (LIT-12011279)* for more information regarding computer or server recommendations.

Export Utility User Interface

The Export Utility UI has a wizard-type format that allows the user to enter definition parameters, schedule information, and provide a means for saving and exporting the definition. Filters allow you to quickly select the data you wish to extract. The user interface allows you to select one or many output file formats.

Many windows contain two tabs: Basic and Advanced. In most cases, the Basic tab contains options to quickly select basic data for extraction, and the Advanced tab provides additional, but not required, filtering options from which you can narrow the data to export.

User view trees only display objects relevant to the type of data you choose to extract.

Export Utility Supported File Formats

Export Utility extracts user-defined data to any of the following file formats:

- Microsoft Excel (.xls)
- Tab-delimited text (.txt)
- Comma-separated value (.csv)
- Microsoft Access (.mdb)
- HTML (.htm)
- XML version 1.0 (.xml)

- Note:**
- If you change the extension on the Advanced tab of the Export Output Selection dialog box, Export Utility only creates output reports using the supported extension types. For example, if you rename a .htm file extension with a .html extension on the Advanced tab, Export Utility creates the file with a .htm extension.
 - Scheduled Export using the Excel format (.xls) is not supported on server-class operating systems. Scheduled Export using Excel format is also not supported on Windows 8.1 when running on a VM. All other export formats are supported. We recommend using .csv format for the Scheduled Export and then manually importing the .csv file into Excel and saving it in Excel format.
 - Windows 10, Windows 8.1, Windows Server 2016, Windows Server 2012 R2, Windows Server 2012 support On Demand Export using Excel format.

Export Utility Authentication

You must have login credentials with the Site Director as well as permissions to view the data to be extracted with Export Utility. You must know the IP address or the host name of the Site Director. Export Utility follows *Metasys* system authentication, using the same user name and password. If login fails, contact your *Metasys* system administrator.

Export Utility Definition File

All of the export selections, such as points, date/time range, and filters, are stored in an Export Utility Definition (EUD) file. You can export data directly using this EUD file at any time or at a predefined schedule interval through the Scheduler service. The Scheduler runs continuously to check for any executable schedules.

Definition files are also required when using the custom programming capabilities of Export Utility.

Note: When creating an EUD file, the user login credentials used to create the EUD file must persist. If the user login credentials are deleted, the EUD file no longer works.

Scheduler

You may schedule data collection at a predefined time (for example, every day at 1:00 A.M.). The Scheduler component maintains a schedule file with the following information: encrypted Web Services authentication details, Export Utility definition file name, date, time, and interval. The Scheduler reads the Export Utility definition file whenever a schedule is defined or an existing schedule is modified.

For scheduling, the computer must remain connected to the network while data is being extracted from the engine or server.

Note: Export Utility does not support writing reports to network drives on Novell® client computers.

Performance Considerations

When extracting audit data from a *Metasys* system that has over 10,000 audits, Export Utility requires more time to parse and extract the data. Also, when you select the **Annotations** export attribute, additional time is necessary. When Export Utility extracts this data, the central processing unit (CPU) use of the server is high, which affects the performance of a server; however, the *Metasys* system continues to run.

Note: These considerations are not an issue for engines because engines typically hold only 500 audit records.

In a lab environment with the following platform, we observed these audit extraction times ([Table 3](#)):

- **Operating System:** Windows® 7 Professional, Enterprise, and Ultimate Editions with SP1 (32-bit)
- **CPU Type:** Pentium® 4 processor, 2 GHz
- **Memory:** 1 GB RAM

Table 3: Audit Extraction Times

Audit Extraction Type	Total Time of Extraction
10,000 audit entries without annotations	22 minutes
10,000 audit entries with annotations	31 minutes

Recommendations

When you extract audit data:

- Use the scheduling service to extract the data at a time when the *Metasys* system is not busy (for example, during off-peak hours when users are not logged in to the system).
- Do not schedule the extraction of data near the engine's ADS Delivery Time because this time is when the engine transfers its information to the server. By default, each engine's ADS Delivery Time is 12:15 A.M.
- Choose the **Annotations** export attribute only when necessary, as this attribute requires additional time to retrieve data.

Custom Report Capabilities

A programming interface to Export Utility is provided so that you can develop programs to create custom reports. To help you get started, easily customized example files are included for billing reports and demand limiting load rolling (DLLR) energy reports.

Export Utility can import data into third-party applications that support the Microsoft .NET Framework. This compatibility allows you to write applications for Microsoft Visual Basic, Excel, or Access to extract *Metasys* system historical data.

Note: Export Utility can extract data to Microsoft Office 32-bit and 64-bit versions. However, the DLL file and example files used to create custom reports are compatible with Microsoft Office 32-bit version only.

See [Creating Custom Reports Using the Component Interface](#).

Billing Example File

The Billing Report Example.xls file is located in:

C:\ProgramData\Johnson Controls\MetasysIII\MEU\DLL Examples

The billing example file provides an example of how the Export Utility DLL component can be used with VBA in Microsoft Excel software to create a billing report.

This report is not intended to be used as is, but rather serves as a template or starting point for less experienced developers and to show them how to use the Export Utility DLL. Use or modify Billing Report Example.xls and its VBA code to meet your specific needs.

See [Creating Custom Reports Using the Component Interface](#).

DLLR Example Files

Note: Microsoft Excel 2010 and Excel 2013 do not support the use of DLLR example files.

The DLLR example files are working examples of how the Export Utility DLL component can be used with Excel software to provide an automated DLLR energy report. The report is based on historical information from the *Metasys* DLLR object using a Demand Limiting Sliding Window algorithm.

The DLLR example files retrieve and display one month of data only. The files can be used easily without modification but still allow you to adjust or modify the file to meet your needs.

The DLLR example files are located in:

C:\ProgramData\Johnson Controls\MetasysIII\MEU\DLL Examples

The sample files are:

- DLLR_Excel 97-2003.xls: for use with Excel 97 through Excel 2003 software
- DLLR_Excel 2007.xlsm: for use with Excel 2007 software

For more information on DLLR, refer to the *DLLR Technical Bulletin (LIT-12011288)*.

See [Creating Custom Reports Using the Component Interface](#) for information on using the example files.

Sheets in the DLLR Example Files

Important: Do not rename these sheets. Changing the names of the sheets breaks the references within the VBA code. The example files do not work properly if these references are broken.

Each DLLR example files contain the following Excel sheets:

Energy Report

This sheet displays the DLLR energy report output in chart form after you run the report.

Daily Data

This sheet contains a numerical representation of the data displayed on the Energy Report sheet in 1-day increments.

Data by Minute

This sheet contains a numerical representation of the data displayed on the Energy Report sheet in 1-minute increments.

Configuration

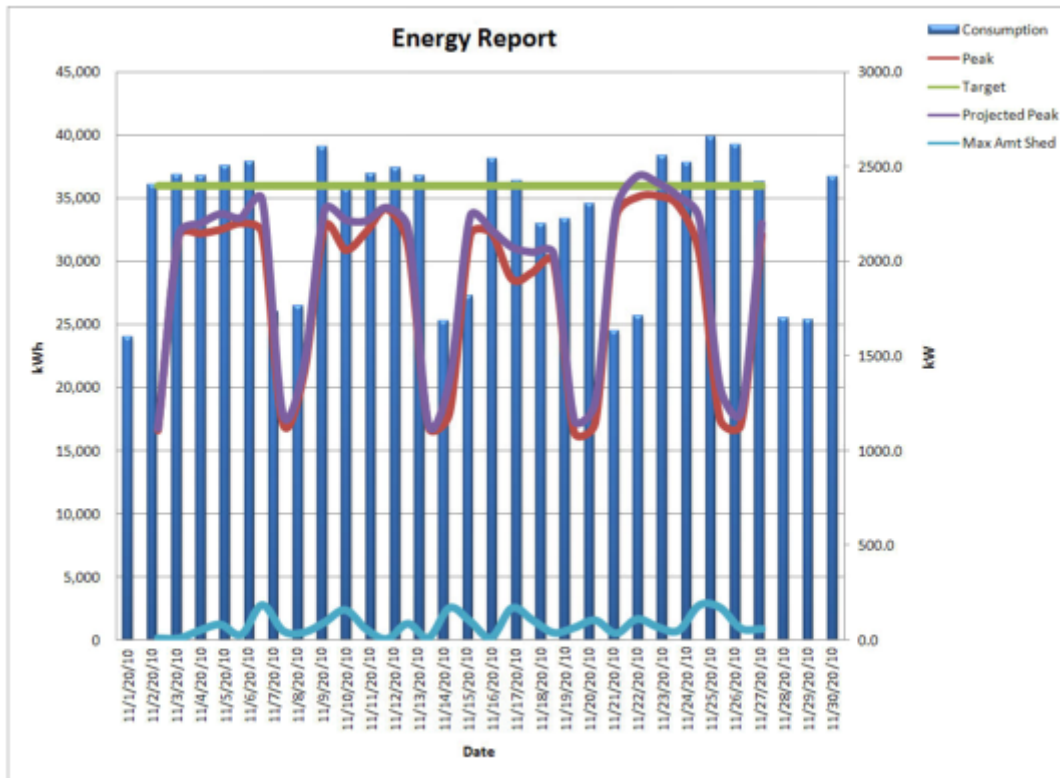
This sheet allows you to configure the DLLR energy report parameters. See [Configuring the DLLR Example Files](#).

Example DLLR Energy Report Output

Note: Microsoft Excel 2010 and Excel 2013 do not support the use of DLLR example files.

The DLLR example files output a DLLR energy report similar to the one shown in [Figure 1](#).

Figure 1: Example DLLR Energy Report Chart



DLLR Energy Report Features

The DLLR energy report offers the following features:

Status Bar Indication

While running the DLLR energy report, the status bar of the Excel file indicates the current actions.

For example, the following status messages may appear:

- Logging into Metasys
- Login to Metasys successful
- Retrieving data
- Export of Data successful

Daily Data Conditional Formatting

The Daily Data sheet provides two types of conditional formatting. In each column, with the exception of the Date column, the cells with the highest value are red.

In each row, if no entry in the Date column exists, the rest of the row is black.

Note: In Excel 97-2003, only the Date column is black, because these Excel software versions do not support multiple conditional formatting.

Configuration Cell Verification

The Report Start and End Dates cells contain validation to warn against entering dates manually ([Figure 2](#)). If dates are entered manually, the formulas that provide automation for custom or non-custom dates are lost.

Note: The DLLR example files use the Microsoft Calendar control (mscal.ocx) that comes with and is registered automatically by the Microsoft Access component of Microsoft Office software. If this control is not installed and registered, the example files yield VBA missing reference errors.

Figure 2: Cell Verification

A	B	C	D
Metasys Login Credentials			
2 Site Director	192.168.1.6		
3 User	MetasysSysAgent		Run Report
4 Password			
Metasys Export Utility EUD file			
7 DLLR Trend Attributes	C:\Program Files\Johnson Controls\Metasys Export Utility\Definitions\DLLR.eud		Browse
Report Attributes			
10 Custom Dates	TRUE		
11 Auto Update Custom Dates	TRUE		
12 Report Start Date	4/3/2007		Pick Start Date
13 Report End Date	5/2/2007		Pick End Date
14 Initial Active Demand Limit	310		
Workbook Open Attributes			
17 Auto Run Report	FALSE		
18 Auto Save Report	FALSE		
19 Auto Print Report	FALSE		
20 Auto Close Report	FALSE		

Warning!!!
Do not manually type in dates. Use buttons!!!

The example files offer visual indication if the DLLR energy report interval you request is more than one month. This invalid report interval is identified by the Report End Date highlighted in red ([Figure 3](#)).

Figure 3: Invalid Report Interval

A	B	C
Metasys Login Credentials		
2 Site Director	192.168.1.6	
3 User	MetasysSysAgent	
4 Password		
Metasys Export Utility EUD file		
7 DLLR Trend Attributes	C:\Program Files\Johnson Controls\Metasys Export Utility\Definitions\DLLR.eud	
Report Attributes		
10 Custom Dates	TRUE	
11 Auto Update Custom Dates	TRUE	
12 Report Start Date	2/10/2007	
13 Report End Date	4/12/2007	
14 Initial Active Demand Limit	310	

System Tray Icon

By using the system tray icon, you can view a schedule and start, stop, and exit the Scheduler service, but you cannot modify or create new schedules or access any Export Utility definition files. The Export Utility system tray icon border is green when the Scheduler service is running; otherwise, it appears red. See the [Using the Scheduler Service from the System Tray](#) section for more information.

Detailed Procedures

Logging in to the Metasys System through Export Utility

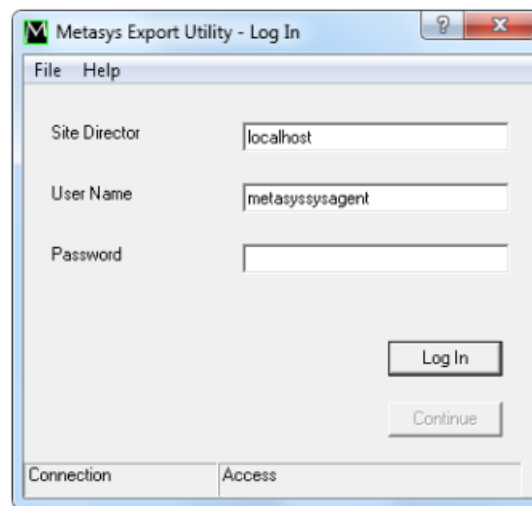
This procedure allows you to open Export Utility and log in to the *Metasys* system to access data.

The Log In window displays two pieces of important information in the bottom bar: the result of the login attempt appears on the left side, and the privileges assigned to the user currently logged in appears on the right side. If a login attempt fails, contact your *Metasys* system administrator. See [Table 4](#) for details.

To log in to the *Metasys* system through Export Utility:

1. On the Windows Start Menu, browse to **Programs > Johnson Controls > Metasys > Metasys Export Utility**. The Log In window appears ([Figure 4](#)).

Figure 4: Log In Window



2. Enter the name or IP address of the Site Director and the *Metasys* system user name and password. (Passwords are case sensitive.)
Note: If your IT department uses a port other than Port 80 (default), enter a colon followed by the port number after the Site Director IP address (for example, 172.17.13.233:8080). If you do not enter a port number, the default port is used (Port 80).
Note: If the time on your computer is out of sync with the server by more than 5 minutes, you cannot log in to Export Utility. Adjust the time to match the server and try again. For information on time synchronization, refer to the *Time Management* section of the *Metasys® SMP Help (LIT-1201793)*.
3. Click **Log In**. When the connection is successful, **Continue** becomes active. For information on the status bar at the bottom of the Log In window, see [Table 4](#).

Table 4: Access - User Privileges

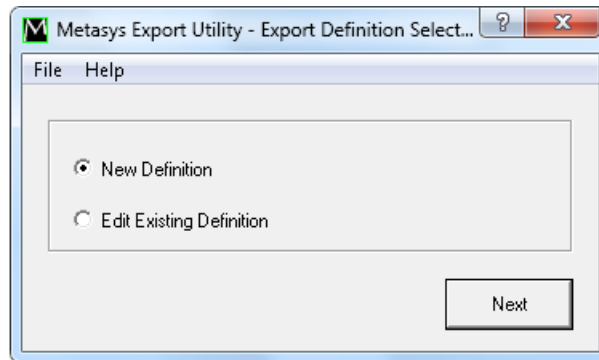
User Privilege	Meaning
Access	You need to enter the Site Director and login information, then click Log In.
Access Denied	Your login attempt fails for a reason other than those listed in this table and the error message Log in to Metasys failed appears.
View Audit Only	You can view audit data only.
Metasys Account Expired	Your Metasys system account is expired and the error message Log in to Metasys failed appears.

Table 4: Access - User Privileges

User Privilege	Meaning
Metasys Account Disabled	Your <i>Metasys</i> system account is disabled and the error message Log in to <i>Metasys</i> failed appears.
Metasys Account Locked	Your <i>Metasys</i> system account is locked and the error message Log in to <i>Metasys</i> failed appears.
View All	You can view all <i>Metasys</i> system information and export all trend, alarm, and audit data.

- Click **Continue**. The Export Definition Selection window appears.

Figure 5: Export Definition Selection Window



- Proceed to one of the following sections:

[Creating a New Export Utility Definition](#)

[Modifying an Existing Export Utility Definition](#)

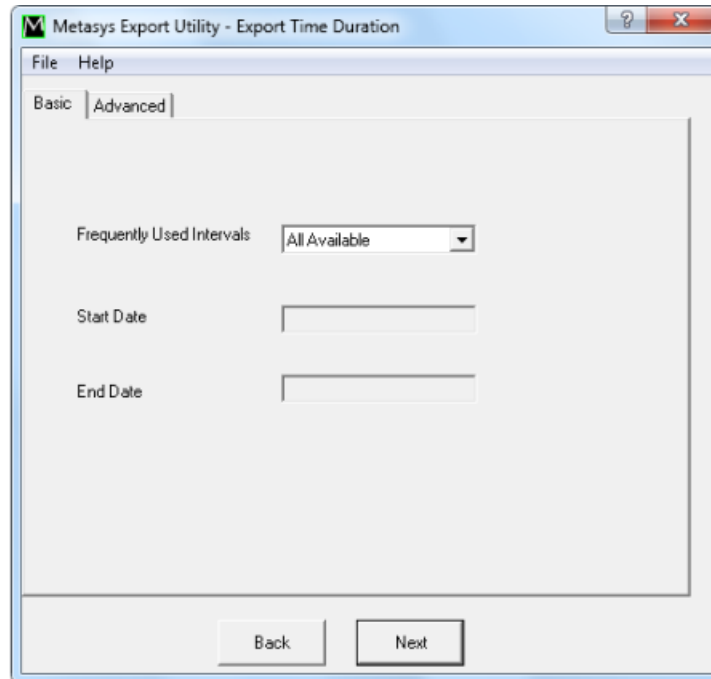
[Creating the Export Utility Definition \(EUD\) File](#) (Step 2)

Creating a New Export Utility Definition

To extract the desired data from the *Metasys* system for export to a file, the first step is to create an Export Utility definition file. This definition file specifies all of the information required to extract the data.

- On the Export Definition Selection window, click **New Definition** ([Figure 5](#)).
- Click **Next**. The Export Time Duration - Basic tab appears ([Figure 6](#)).

Figure 6: Export Time Duration - Basic Tab



3. Select one of the frequently used intervals from the drop-down menu using information in [Table 5](#).

Table 5: Frequently Used Intervals

Interval ¹	Result
Today	Extracts data for the day Export Utility is run.
Yesterday	Extracts data for the calendar day before Export Utility is run.
Last Week	Extracts data for the week before Export Utility is run.
Last Two Weeks	Extracts data for the two weeks before Export Utility is run.
Last Month	Extracts data for the calendar month before Export Utility is run.
Last Quarter	Extracts data for the last quarter before Export Utility is run. Quarters are defined as follows: • 1 = January 1 - March 31 • 2 = April 1 - June 30 • 3 = July 1 - September 30 • 4 = October 1 - December 31
Last Year	Extracts data for the last calendar year before Export Utility is run.
Choose Date	Extracts data for the dates you choose from the pop-up calendar. Click the calendar icon to the right of the Start Date and End Date fields. Note: This interval is the only interval that allows the user to input data into the Start Date and End Date fields.
All Available	Extracts data for the entire history of the device to the current day.

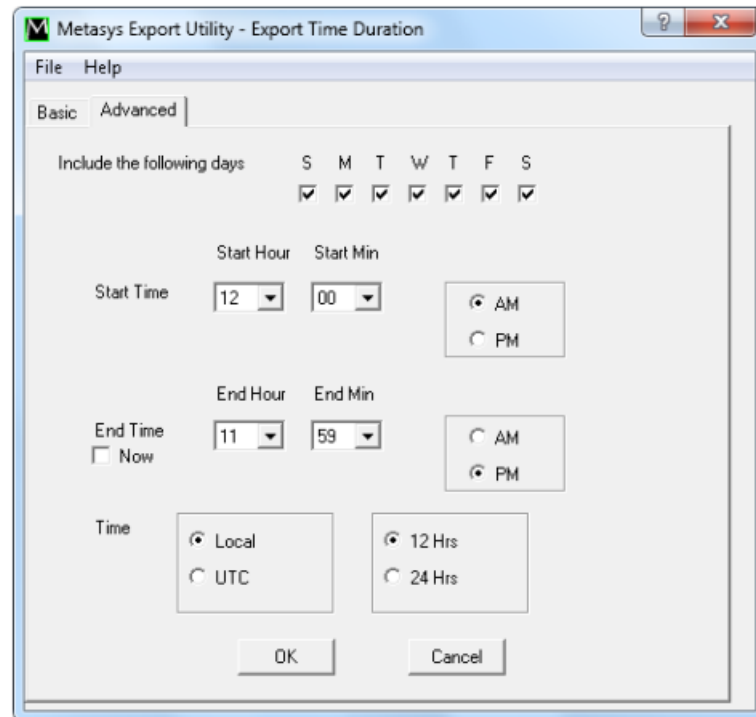
¹ Frequently Used Intervals are relative. For instance, if you choose Last Month, the user interface shows the last month relative to the current month. If scheduled, however, the Scheduler determines Last Month at runtime.

4. Click the Advanced tab ([Figure 7](#)) if you wish to narrow the date/time range chosen on the Basic tab. Select or clear days of the week check boxes for which you wish to extract the data. Narrow the time for which Export Utility extracts data using the drop-down menus for the Start and End Time fields (from 12:00 A.M. to the present

time), as defined by the system clock of the computer running Export Utility. For example, if the computer uses the 24-hour clock (military time), make sure you click the **24 Hrs** field in the Time section of the Advanced tab.

Example: To extract data only for the operating hours of a building, change the Start Time to 8:00 A.M. and the End Time to 5:00 P.M.

Figure 7: Export Time Duration - Advanced Tab (Default Selections)



5. Click **OK** on the Advanced tab to return to the Basic tab.
6. On the Basic tab, click **Next**. The Data Type Selection window appears.
7. Click the option button for the type of data that you wish to export, **Trend** or **Alarm/Audit**, and click **Next**. Trend extracts trend data, and Alarm/Audit extracts alarm and audit data.
8. Proceed to one of the following sections:

[Selecting Trend Data](#)

[Example Expressions](#)

Selecting Trend Data

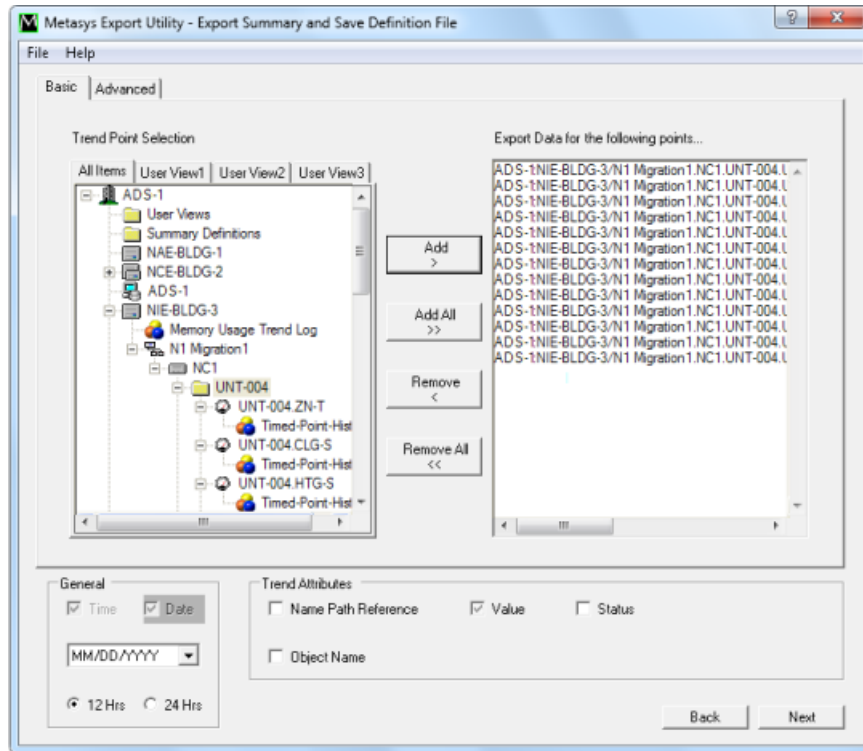
The Select Trend Data window has two tabs: Basic and Advanced. The Basic tab has two panes. The **Trend Point Selection** pane displays the navigation views that are available to you, but they only display objects that have trend extensions associated with them. The **Export Data for the following points** pane lists the trend objects that you select, using either the Trend Point Selection view or the filtering applied from the Advanced tab. Export Utility extracts data from these trend objects.

The Advanced tab provides additional, but not required, filtering options so that the user can narrow the data to export.

Note: If communication cannot be established to a trend object (for example, the engine is offline and you cannot select its temperature trend), create the definition after communication is restored.

1. On the Basic tab of the Export Summary and Save Definition File window, click the devices or points in the left pane for which you wish to have the data exported, and click Add (Figure 8). The selected devices and points appear in the right pane.

Figure 8: Export Summary and Save Definition File Window



2. On the Advanced tab, select a desired attribute filtering option from the drop-down menu. The attributes are based on the *Metasys* system Object Name.
3. Specify the filtering criteria for each reference point for the corresponding Value field.

Note: The value field supports wildcards (*). For example, set up a filter of Field Point = *-T to extract all trends on temperature (-T) points.

4. Add a new filter row by entering a value for the last filter. (Click Remove Filter to remove the current row of filtering.)
5. Add the following relational operators to narrow the filtering criteria in the expression: AND, OR, NOT.

Figure 9 shows filtering to return trend data for all objects on any NIE engine, on the N1 Migration1 trunk, and on the UNT-004 controller that are trended on the Present Value attribute.

Figure 9: Trend Example

The image shows a screenshot of the 'Metasys Export Utility - Export Summary and Save Definition File' dialog box. The window has a title bar with a question mark icon and a close button. Below the title bar is a menu bar with 'File' and 'Help'. The main area has two tabs: 'Basic' and 'Advanced'. The 'Basic' tab is selected. Inside the 'Basic' tab, there is a table with four columns: 'Operator', 'Attribute', 'Comparator', and 'Value'. The table contains five rows of data. The first row is highlighted with a blue background. Below the table, there is a text box with the instruction: 'The asterisk (*) can be used as a wildcard at the beginning or end of a value'. To the right of this text is a 'Remove Filter' button. At the bottom of the dialog, there is a checkbox labeled 'Export Interval'. To its right are two spin boxes for 'Hours' and 'Minutes', both set to '00'. At the bottom right are 'OK' and 'Cancel' buttons.

Operator	Attribute	Comparator	Value
	Supervisory Devi...	=	NIE*
AND	Integration	=	N1 Migration1
AND	Field Device	=	UNT-004
AND	Attribute	=	Present Value*
AND	Supervisory Devi...	=	

The asterisk (*) can be used as a wildcard at the beginning or end of a value

☐ Export Interval Hours: 00 Minutes: 00 OK Cancel

Figure 10: Trend Output File in Excel

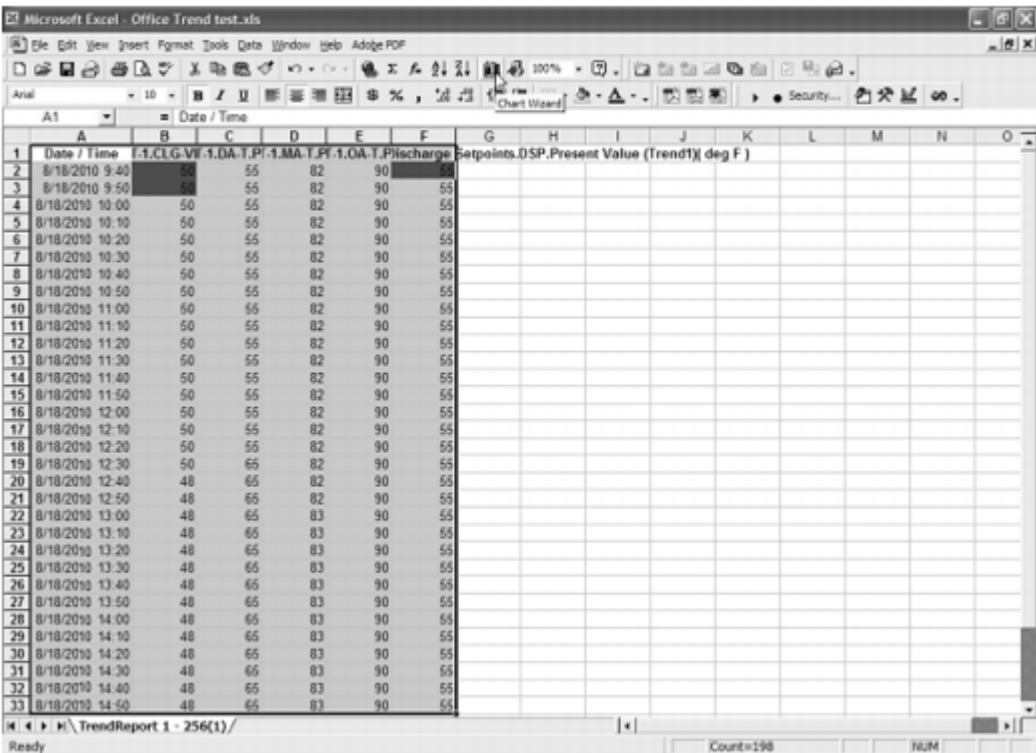
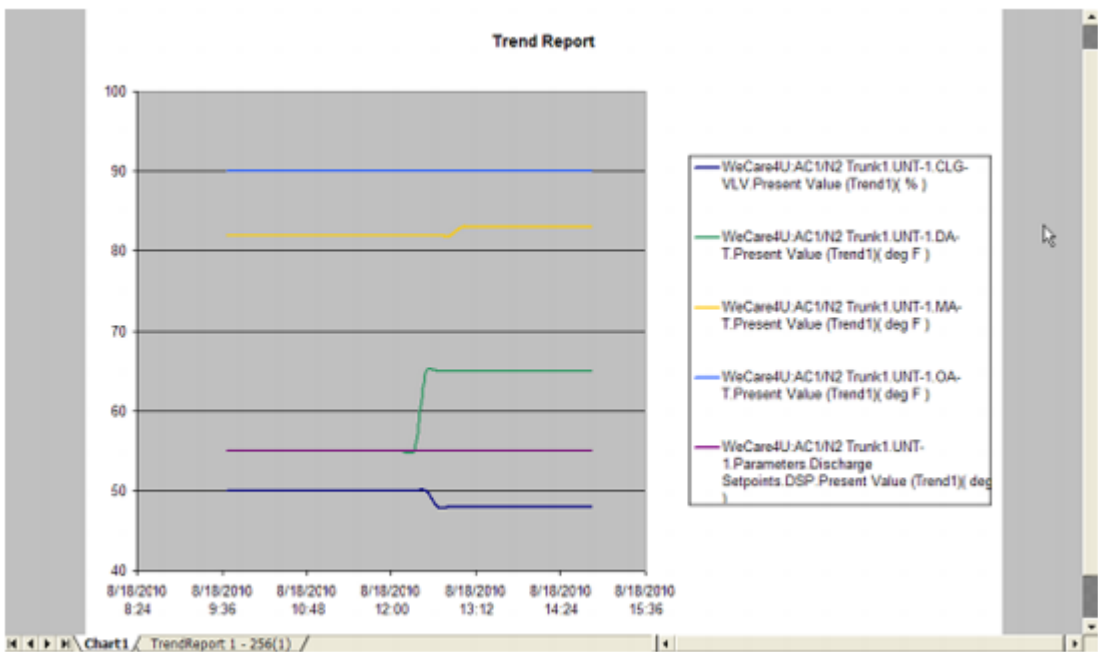


Figure 11: Trend Chart Output File in Excel



Note: The Excel output file for trends is unique. The Date/Time columns are combined, and there is a column for each trend object. The column heading is the Name Path Reference with units in parentheses. Cells with data with a status other than Reliable appear with a red fill. Cells with Reliable status have no fill. Use the Excel Chart wizard to develop trend charts: highlight the appropriate cells, click **Chart Wizard**, and follow the instructions.

- To retrieve less data than what may be stored in the system, select the Export Interval check box to change the sampling interval, and select the desired interval in hours and minutes from the drop-down menus.

For example, if a trend is sampled once a minute in *Metasys* system, but you only need data for every half hour, select the **Export Interval** check box, and choose 30 minutes from the drop-down menu.

- After you complete filters on the Advanced tab, click **OK**. The Basic tab appears with the filter results in the **Export Date for the following points** pane.
- Check the desired General and Trend attributes using [Table 6](#).

Table 6: General and Trend Attributes

Attribute	Meaning
Date ¹	Display together in the first column of the output file.
Time ¹	
MM/DD/YYYY Drop-Down Menu	Allows you to select the date format. For example, August 18, 2010, appears as:
	MM/DD/YYYY 08/18/2010
	MM/DD/YY 08/18/10
	DD/MM/YY 18/08/10
	YY/MM/DD 10/08/18
12 Hrs, 24 Hrs Selection	Displays the time in 12-hour or 24-hour format. Select the same time format that is used on the Site Director computer.
Name Path Reference	Displays the unique reference name for the trend object as a full path of the object based on the <i>Metasys</i> system All Items View. For example: WeCare4U:AC1/N2 Trunk 1.UNT-1.0A-%.Present Value Note: Name Path Reference should not be confused with the <i>Metasys</i> system Fully Qualified Reference.
Object Name	Displays trend object names (for example, OA-T.Present Value [Trend1])
Value ¹	Displays the numeric values of the trend objects.
Status	Displays the status of the trend object at the time the sample is taken (for example, Reliable or ???).

¹ This option is always selected by default.

- Click **Next**. The Export Output Selection window appears. Proceed to [Selecting File Formats for Output](#).

Selecting Alarm and/or Audit Data

See [Performance Considerations](#) for extracting audit data before you begin.

The Alarm/Audit Data Selection window has three main options for extracting data: Alarm, Audit, and Both.

- **Alarm** extracts alarm data only. Audit parameters are hidden. The Basic tab has two subtabs: Point Selection and Alarm Selection.
- **Audit** extracts audit data only. Alarm parameters are hidden. The Basic tab has two subtabs: Audit Selection and User Selection. The point selection device is disabled because audits are device-specific, not point-specific.
- **Both** extracts alarm and audit data. When you choose the Both option, the Basic tab displays all four tabs relating to alarms and audits, Point Selection, Alarm Selection, Audit Selection, and User Selection. All parameters are available, and extracted data appears in a single output file format. For example, if you choose HTML as the output file type, the result is an Alarm report with an Audit report that follows.

Depending on which you select, some tabs disable (including the Advanced tab) because additional filtering is not necessary. The Advanced tab provides additional, but not required, filtering options so that the user can narrow the data to export.

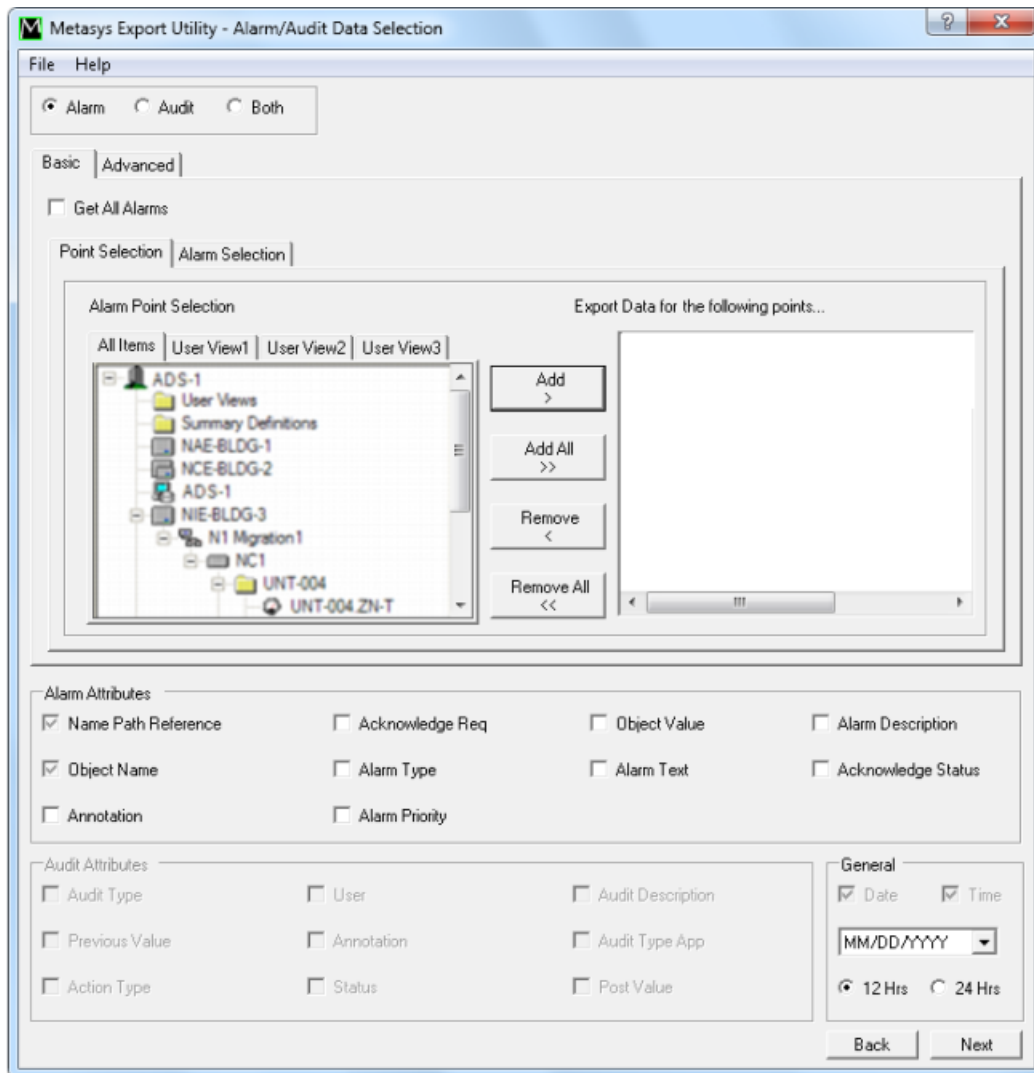
Selecting Both Alarm and Audit Data

When you choose the Both option, the Basic tab displays all four tabs relating to alarms and audits: Point Selection, Alarm Selection, Audit Selection, and User Selection. To select both alarm and audit data, follow these steps:

1. Click **Both**.
2. On the Basic tab, select options on the four tabs using the instructions in the following sections: [Selecting Alarm Data](#) and [Selecting Audit Data](#).
3. Click **Next**. The Output Selection window appears. Proceed to [Selecting File Formats for Output](#).

Selecting Alarm Data

Figure 12: Alarm/Audit Data Selection - Basic and Point Selection Tabs



1. Click **Alarm**.
2. If desired, select the **Get All Alarms** check box to extract data for all available alarms. (This disables all filtering options.)
3. On the Basic tab, click the Point Selection tab. Click the individual devices or points in the Alarm Point Selection pane for which you wish to have the data exported, and click Add. The devices or points that you select appear in the **Export Data for the following points** pane.

Note: Choose at least one object on the Point Selection tab to ensure that output files contain some data.

4. On the Basic tab, click the Alarm Selection tab. Using [Table 7](#), select one or more types of alarms whose data you wish to export for the devices/points chosen on the Point Selection tab.

Note: Select at least one alarm data type on the Alarm Selection tab to ensure that output files contain some data.

Figure 13: Alarm/Audit Data Selection - Basic and Alarm Selection Tabs

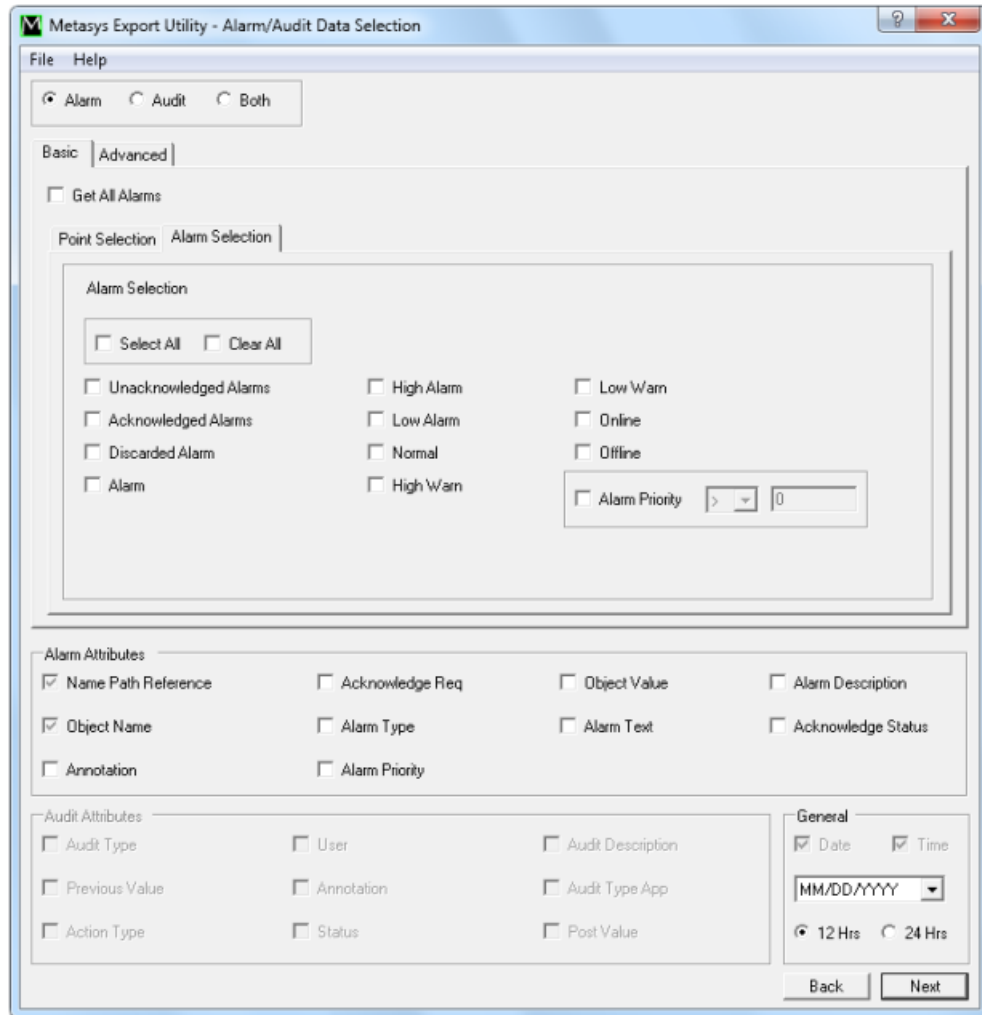


Table 7: Alarm Selection Tab

Item	Effect
Select All	Selects all data types, except the Alarm Priority.
Clear All	Deselects all data types.
Unacknowledged Alarms	Includes all alarms that have not been acknowledged. These entries appear with white fill in the <i>Metasys</i> system Event Viewer.
Acknowledged Alarms	Includes all alarms that have been acknowledged. These entries appear with gray fill in the <i>Metasys</i> system Event Viewer.
Discarded Alarm	Includes all alarms that have been discarded. Entries no longer appear in the <i>Metasys</i> system Event Viewer.
Alarm	Includes all alarms with an alarm type of Alarm.
High Alarm	Includes all alarms with an alarm type of High Alarm.
Low Alarm	Includes all alarms with an alarm type of Low Alarm.
Normal	Includes all alarms with an alarm type of Normal.

Table 7: Alarm Selection Tab

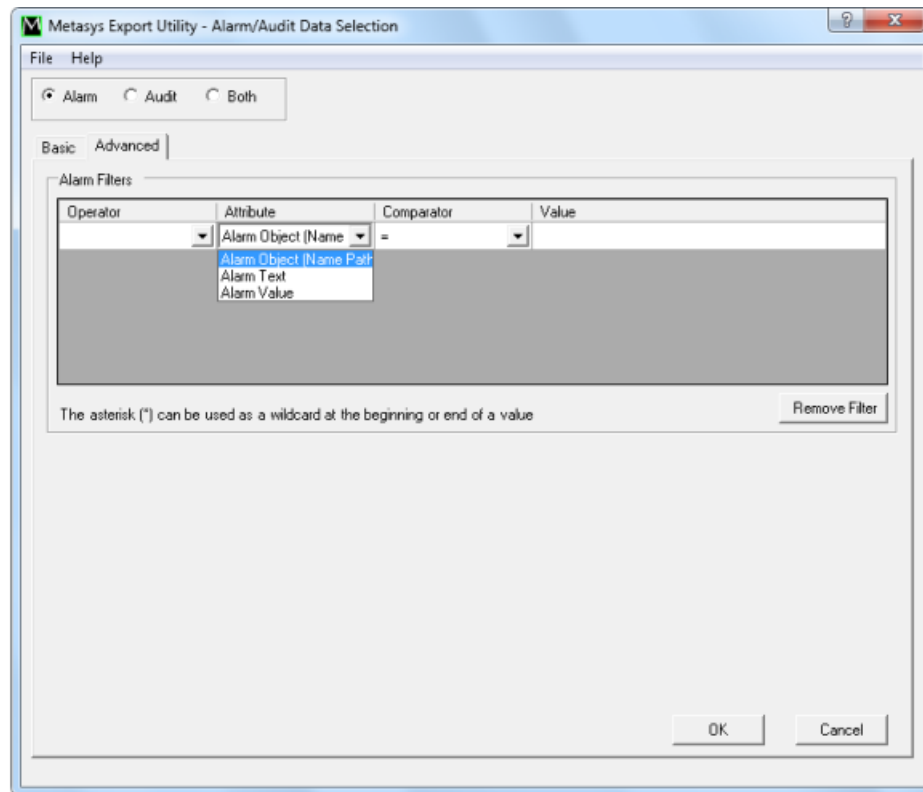
Item	Effect
High Warn	Includes all alarms with an alarm type of High Warning.
Low Warn	Includes all alarms with an alarm type of Low Warning.
Online	Includes all alarms with an alarm type of Online.
Offline	Includes all alarms with an alarm type of Offline.
Alarm Priority	Includes all alarms in the set priority range. Example: To extract alarm data for entries with an alarm priority greater than or equal to 100, choose the >= operator and enter 100 in the value field.

- Click the Advanced tab, and select a desired reference point filtering option from the drop-down menu using [Table 8](#).

Table 8: Alarm Attributes for Filtering

Attribute	Description
Alarm Object	Select this option to filter on the alarm object's name path reference. For example, select Alarm Object and type *ZN-T in the Value field to extract all data on alarm objects that end with ZN-T, or zone temperatures.
Alarm Value	Select this option to filter on the alarm value using the relational operand that becomes enabled. For example, select Alarm Value >= and place 80 in the Value field to extract data on only those alarms greater than or equal to 80.
Alarm Text	Select this option to filter on alarm text as defined in the <i>Metasys</i> system alarm messages. For example, in the <i>Metasys</i> system, place the word critical in the alarm text for your most critical alarms, then select Alarm Text from the drop-down menu and type *critical* in the Value field to extract data with that text in the alarms.

Figure 14: Alarm/Audit Data Selection - Advanced Tab



- Specify the filtering criteria for each reference point for the corresponding value field. See [Example Expressions](#).

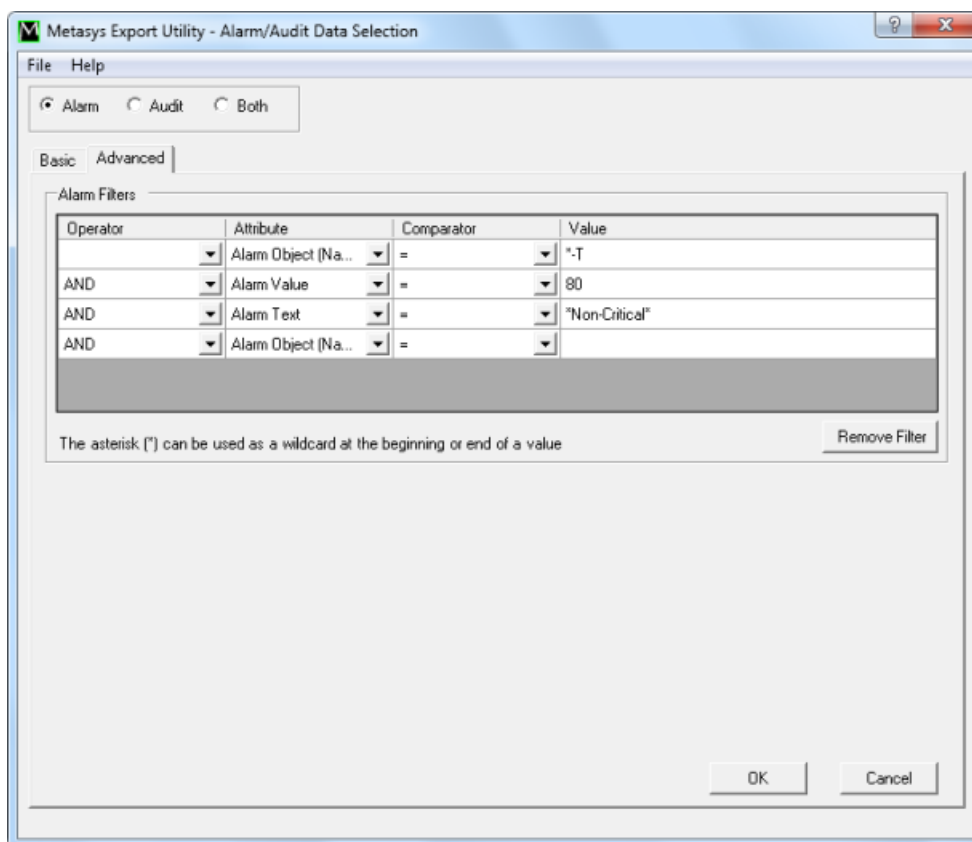
Note: The Value field supports wildcards (*).

- Add a new filter row by entering a value for the last filter. (Click Remove Filter to remove the current row of filtering.)
- Add the following relational operators using [Table 9](#) to narrow the filtering criteria in the expression: AND, OR, NOT. (Relational operators only apply to Alarm Value.)

Table 9: Relational Operators

Relational Operator	Meaning
=	Equal to
!=	Not equal to
>=	Greater than or equal to
<=	Less than or equal to
>	Greater than
<	Less than

Figure 15: Alarm Filter Example



Note: This figure represents an advanced alarm filter that would return data for all alarm objects ending in **-T** (all temperatures) that were in alarm at a value of 80 degrees or higher, but did not include the word **Non-Critical** in its Alarm Text.

9. After you complete filters on the Advanced tab, click **OK**. The Basic tab appears with the filter results in the right pane.
10. Select the desired Alarm Export attributes according to [Table 10](#). These attributes appear as column headings for the output files. The default column headings are Date, Time, and Value.

Table 10: Alarm Export Attributes

Attribute	Meaning
Name Path Reference¹	Displays the unique reference name for the alarm object that is the full path name of the <i>Metasys</i> system All Items View. For example, WeCare4U:AC1/N2 Trunk 1.UNT-1.DA-T.Present Value
Object Name¹	Displays the alarm object names. For example, DA-T.
Acknowledge Req	Displays whether or not the alarms required acknowledgment (True/False).
Acknowledge Status	Displays the status indicating if an alarm was acknowledged (True/False).
Object Value	Displays the alarm object value (for example, 98).
Object Units	Displays the alarm object value units of measure (for example, deg F).

Table 10: Alarm Export Attributes

Attribute	Meaning
Alarm Description	Displays the alarm object description which is the <i>Metasys</i> system Description for the alarm object. For example, instead of choosing an object name column which displays ZN-T, you can select this to display Zone Temperature.
Annotation²	Displays the alarm annotations one after the other in the following format: Date/Time: <user>:<annotation> For example, 8/4/2010 8:37:27 AM : metasysagent : Determined the freezestat was faulty 8/4/2010 8:37:45 AM : metasysagent : Replaced the freezestat Note: Selecting the Annotation option may take up to five times longer to export alarm/event messages with annotations than without annotations.
Alarm Type	Displays the alarm types (for example, Online, Offline, Alarm, High Alarm).
Alarm Priority	Displays the alarm priorities which are numbers defined in the <i>Metasys</i> system.
Alarm Text	Displays the alarm text messages for each alarm that are defined in the <i>Metasys</i> system.

1 This option is always selected by default.

2 For Microsoft Access output files, text entries are limited to 255 characters. If the number of characters is greater than 255, an ellipsis appears at the end of the cell.

11. Click **Next**. The Output Selection window appears. Proceed to [Selecting File Formats for Output](#).

Selecting Audit Data

For Audit selection, the Basic tab has two subtabs: Audit Selection and User Selection.

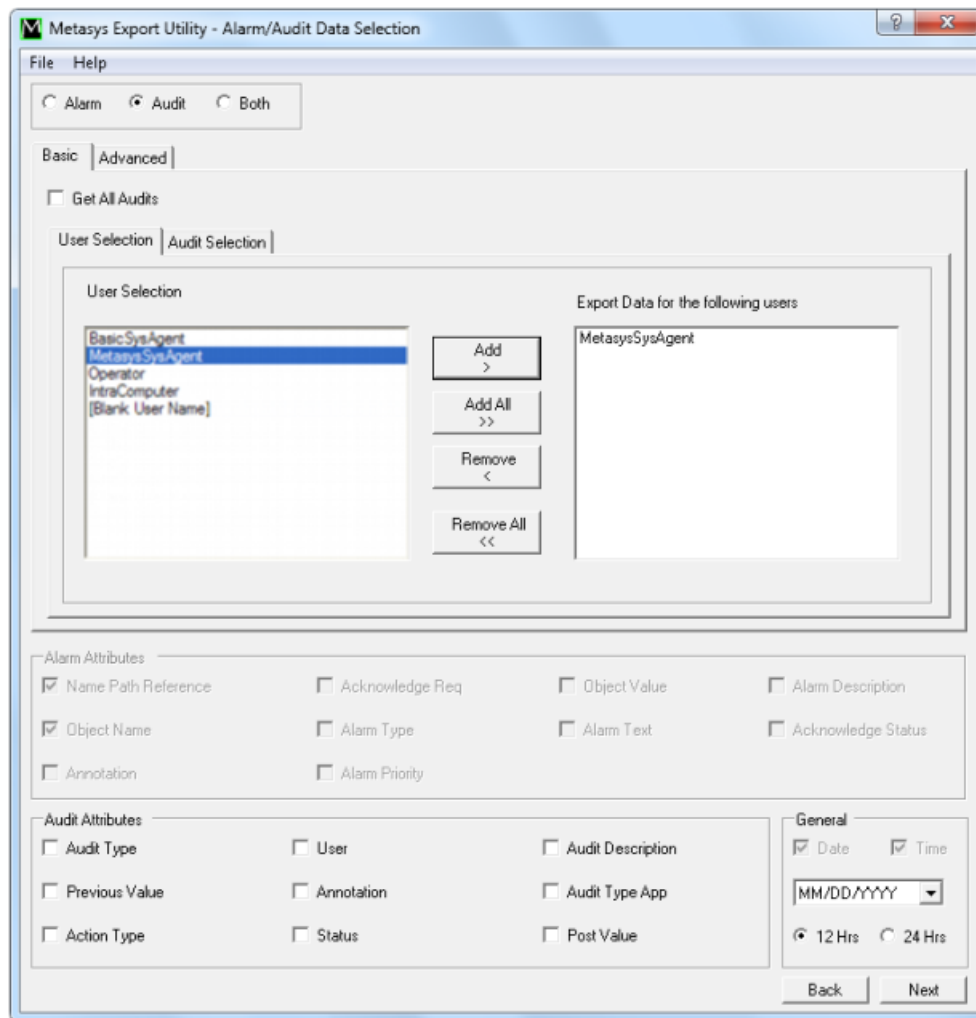
Consider the following when selecting users:

- Make sure that you are logged in to the Site Director (from the Log In window). If you are logged in to another supervisory device, you may not be accessing the correct user list.
- The default *Metasys* system user name is MetasysSysAgent, and this user account cannot be deleted. This account is typically used by a Johnson Controls® representative.
- IntraComputer is the default *Metasys* system user that supervisory devices use to communicate with the Site Director. The most common audit entry for IntraComputer is **User Password Changed** when supervisory devices change their internal passwords for *Metasys* system security. Check the *Metasys* system Audit Viewer for other types of entries and select this user as necessary.
- The [Blank User Name] option can be selected for retrieving audit entries that were associated to no user. For instance, audit entries related to a supervisory device resetting, such as Startup, are entered without a user assigned. Check the *Metasys* system Audit Viewer for other types of these entries, and select this non-user as necessary.

To select audit data:

1. Click **Audit**.
2. Click **Get All Audits** if you wish to extract data for all available audits. (This option disables all filtering options.)
3. Click the User Selection tab ([Figure 16](#)). All users that appear in the User Selection list box are the users defined in the *Metasys* system of the supervisory device that you are logged into.

Figure 16: User Selection Tab



4. Click users in the left pane, and click **Add**. The selected users appear in the **Export Data for the following users** pane.
5. On the Basic tab, click the **Audit Selection** tab ([Figure 17](#)). Using information in [Table 11](#), select one or more of the check boxes to extract the desired audit data.

Note: You must choose at least one action type on the Audit Selection tab ([Figure 17](#)) for output files to contain data.

Figure 17: Audit Selection Tab

Metasys Export Utility - Alarm/Audit Data Selection

File Help

☐ Alarm ☒ Audit ☐ Both

Basic | Advanced

☐ Get All Audits

User Selection | Audit Selection

☒ Select All ☐ Clear All

General

- ☒ Uploads
- ☒ Downloads
- ☒ Archives
- ☒ Created Objects
- ☒ Deleted Objects
- ☒ Commands
- ☒ Overrides
- ☒ Release Overrides
- ☒ Write

System Security

- ☒ Log Ins
- ☒ Log Outs
- ☒ Failed Login Attempts
- ☒ Password Changes

Alarm and Audit

- ☒ Discarded Alarms
- ☒ Discarded Audits
- ☒ Include Detailed Audits

Trend

- ☒ Unable to write to Repository

Device Manager

- ☒ Controller Reset
- ☒ Startup

Critical System Events

- ☒ Critical Events

Alarm Attributes

- ☒ Name Path Reference
- ☐ Acknowledge Req
- ☐ Object Value
- ☐ Alarm Description
- ☒ Object Name
- ☐ Alarm Type
- ☐ Alarm Text
- ☐ Acknowledge Status
- ☐ Annotation
- ☐ Alarm Priority

Audit Attributes

- ☐ Audit Type
- ☐ User
- ☐ Audit Description
- ☐ Previous Value
- ☐ Annotation
- ☐ Audit Type App
- ☐ Action Type
- ☐ Status
- ☐ Post Value

General

- ☒ Date ☒ Time
- MM/DD/YYYY
- ☒ 12 Hrs ☐ 24 Hrs

Back Next

Table 11: Audit Selection

Audit Selection Type	Description
General (Correspond with the <i>Metasys</i> system Audit Viewer, Origin Application, General, and MCE entries.)	
Uploads	Includes all audit entries with an Audit Viewer description of Upload.
Downloads	Includes all audit entries with an Audit Viewer description of Download.
Archives	Includes all audit entries where a supervisory controller has had its Random Access Memory written to its flash memory. For example, when a Logic Connector Tool (LCT) system is saved, an archive audit entry is created.
Created Objects	Includes all audit entries with an Audit Viewer description of Create.
Deleted Objects	Includes all audit entries with an Audit Viewer description of Delete.

Table 11: Audit Selection

Audit Selection Type	Description
Commands	Includes all audit entries with an Audit Viewer description of Command. Commands normally relate to field points. For example, select Commands to include all audit entries where a user commanded a fan Off .
Overrides	Includes all audit entries with an Audit Viewer description of Operator Override.
Release Overrides	Includes all audit entries with an Audit Viewer description of Release Operator Override.
Write	Includes all audit entries with an Audit Viewer description of Write. Write normally relates to object parameters. For example, select Write to include all audit entries where the local Site Director has been changed for a supervisory device.
System Security (Correspond with the <i>Metasys</i> system Audit Viewer Origin Application, System Security entry.)	
Log Ins	Includes all entries when users logged in to the <i>Metasys</i> system where the Audit Viewer description is User Login Successful.
Log Outs	Includes all entries when users logged out of the <i>Metasys</i> system where the Audit Viewer description is User Logout.
Failed Login Attempts	Includes all entries of failed login attempts where the Audit Viewer description is User Login Failed. Note: If the user types in the wrong user name, it is not exported.
Password Changes	Includes all entries of changed user passwords where the Audit Viewer description is User Password Changed.
Alarm and Audit (Correspond with the <i>Metasys</i> system Audit Viewer, Origin Application, Alarm and Event entry.)	
Discarded Alarms	Includes all audit entries in the Audit Viewer that were discarded from the Event Repository.
Discarded Audits	Includes each entry in the Audit Viewer that indicates an audit was discarded from the Audit Repository.
Include Detailed Audits	Includes all audit entries in the Audit Viewer that were discarded from the Audit Repository.
Trend (Correspond with the <i>Metasys</i> system Audit Viewer Origin Application, Trend entry.)	
Unable to write to Repository	Includes all audit entries where supervisory devices cannot transfer trend data to the defined data repository.
Device Manager (Correspond with the <i>Metasys</i> system Audit Viewer Origin Application, Device Manager entry.)	
Controller Reset	Includes all audit entries of a controller reset, defined as the Audit Viewer description of Reset.
Startup	Includes all audit entries of a controller being started, defined as the Audit Viewer description of Startup.
Critical System Events (Correspond with the <i>Metasys</i> system Audit Viewer Origin Application, Critical System Event entry.)	
Critical Events	Includes all audit entries defined as the Critical System Event class level.

- On the Advanced tab, select optional audit filtering options from the drop-down menu using the information in [Table 12](#).

Table 12: Audit Filtering Options

Attribute	Purpose
Audit Object	Select this option to filter on the audit object's name path reference. For example, select Audit Object and type ADS* in the Value field to extract data on all items that begin with ADS.
User	Select this option to filter on user names. For example, in the <i>Metasys</i> system, define users as N<user name> and D<user name> for night and day operators, respectively. Then, select User, and type N* in the Value field to extract data for all night shift operators.
Audit Description	Select this option to filter on audit descriptions. For example, select Audit Description, and type *acknowledged* in the Value field to extract data for all audit entries that have acknowledged alarms.
Previous Value	Select this option to filter on previous values. The relational operand enables, and you can filter on a numeric previous value. For example, select Previous Value > and type 80 in the Value field to extract audit entries with a previous value greater than 80.
Post Value	Select this option to filter on post values. The relational operand enables, and you can filter on a numeric post value. For example, select Post Value <= and type 10 in the Value field to extract audit entries with a post value of less than or equal to 10.
Status	Select this option to filter on the audit status entry. For example, select Status and type OK in the Value field to extract successful audits.

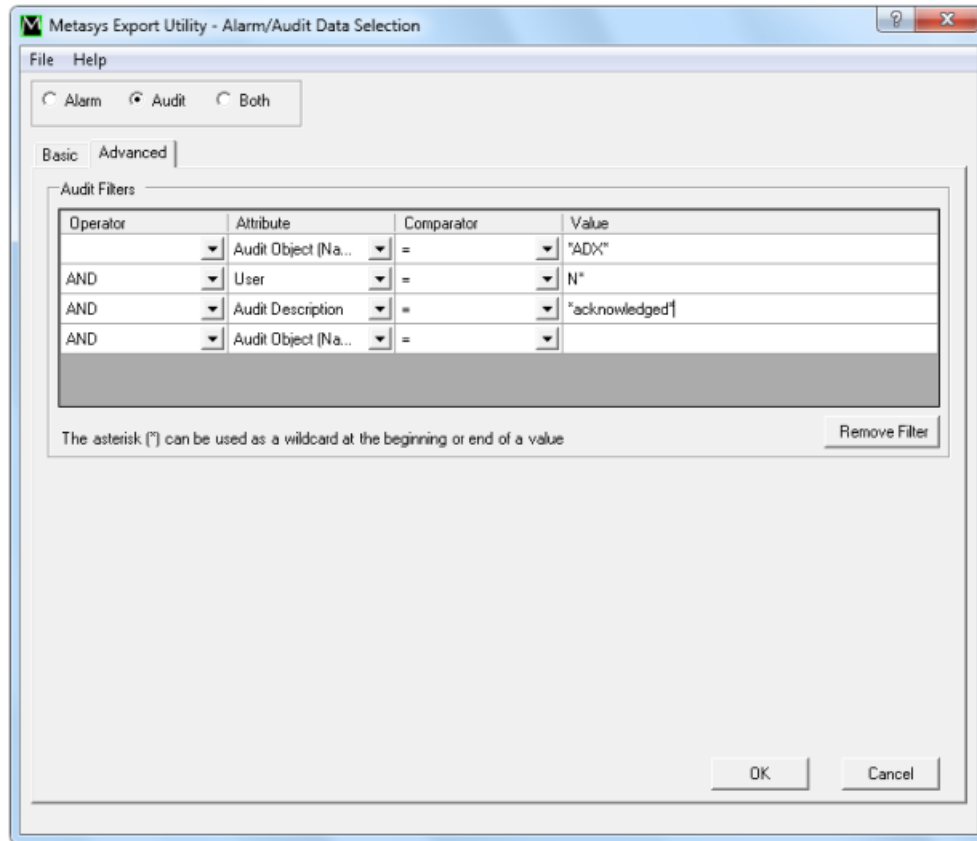
- Specify the filtering criteria for each reference point for the corresponding value field.

Note: The value field supports wildcards (*).

- Add a new filter row by entering a value for the last filter. (Click Remove Filter to remove the current row of filtering.)
- Add the following relational operators to narrow the filtering criteria in the expression: AND, OR, NOT. (Relational operators appear only for Previous and Post Values.)

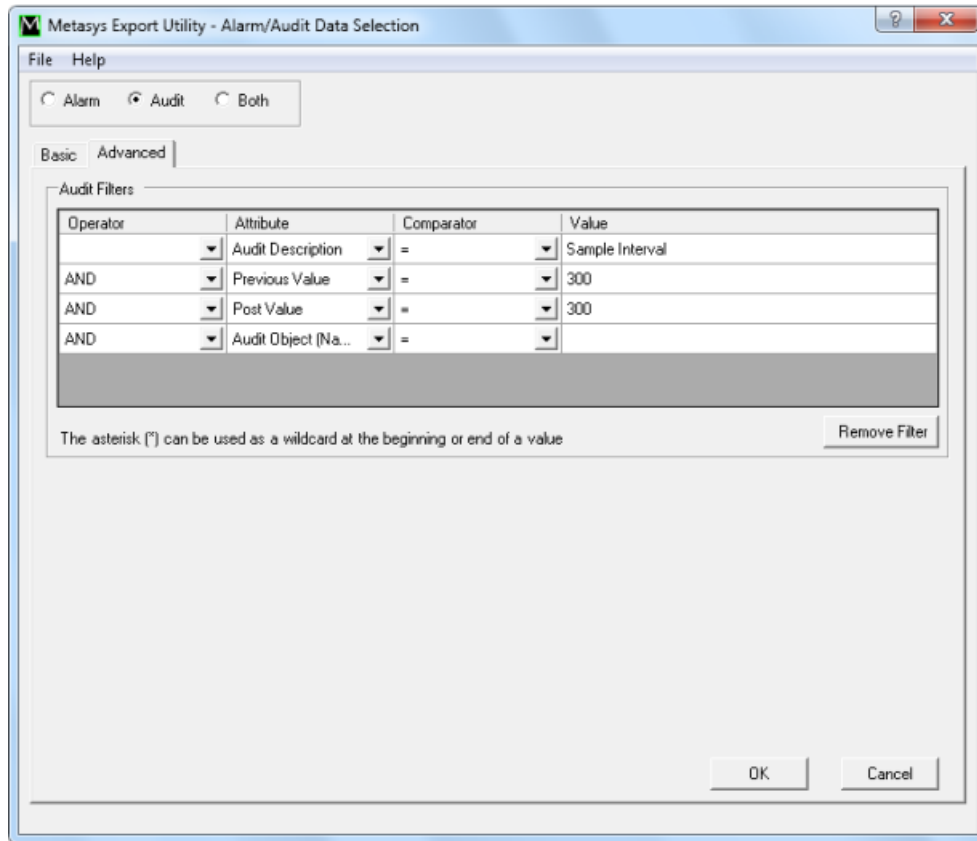
Note: Audit Filter Example 1 represents an advanced audit filter that extracts data for all audit entries from Extended Application and Data Servers (ADXs). For the Audit Filter Example 1, ADX must be part of the Item Name, for all nighttime operators (assuming each nighttime operator's user name began with an **N**), with acknowledged alarms.

Figure 18: Audit Filter Example 1



Note: Audit Filter Example 2 extracts data for all audit entries with an Audit Description of **Sample Interval**, for trends that previously had values less than or equal to 300 seconds, but were changed to a value of less than 300 seconds. You could set up the filter to ensure that employees changed the trend samples to above 5 minutes. If the output file did not extract any data, the employees followed the instructions.

Figure 19: Audit Filter Example 2



10. After you complete filters on the Advanced tab, click **OK**. The Basic tab appears with the filter results in the **Export Data for the following users** pane.
11. Select the desired Audit Export attributes using the information in [Table 13](#). These attributes appear as column headings for the output files. The default column headings are Date, Time, and Value.

Table 13: Audit Export Attributes

Attribute	Meaning
Audit Type	Displays the audit types which correspond with the Class Level column in the <i>Metasys</i> system Audit Viewer. For example, User Action and Critical System Event.
Audit Type App	Displays the audit type application which corresponds with the Origin Application column in the <i>Metasys</i> system Audit Viewer. For example, Device Manager, MCE, and System Security.
User	Displays the <i>Metasys</i> system users.
Action Type	Displays the action types. For example, Command, Write, and Subsystem.
Audit Description	Displays the audit descriptions which are defined by the <i>Metasys</i> system. For example, User Login Successful, Download, and Operator Override.
Status	Displays the audit entry status (for example, OK).
Previous Value	Displays the previous values. For example, if a user changes the name of an engine from NAE to NAE-1, NAE appears in this column.

Table 13: Audit Export Attributes

Attribute	Meaning
Post Value	Displays the post values. For example, if a user changes the name of an engine from NAE to NAE-1, NAE-1 appears in this column.
Annotation ¹	Displays the audit annotations one after the other in the following format: Date/Time: <user>:<annotation> Note: Selecting the Annotation option may take up to five times longer to export audit messages with annotations than without annotations.

1 For Microsoft Access output files, text entries are limited to 255 characters. If the number of characters is greater than 255, an ellipsis (...) appears at the end of the cell. See the [Performance Considerations](#) section.

12. Click **Next**. The Output Selection window appears. Proceed to [Selecting File Formats for Output](#).

Example Expressions

Alarm

The following are example expressions for filtering alarms:

- First row of criteria: Alarm Object (Name Path Reference) and Floor*
Relational operator: NOT

Second row of criteria: Alarm Object (Name Path Reference) and Floor1

Result: All points under devices with names starting with Floor, with the exception of Floor1.

- Alarm Object (Name Path Reference) and Floor*
AND

Alarm Value = 200 in the Value field

Result: All points under devices starting with Floor with an alarm value of 200.

- Alarm Object (Name Path Reference) and Floor*
Alarm Value 200 in the Value field

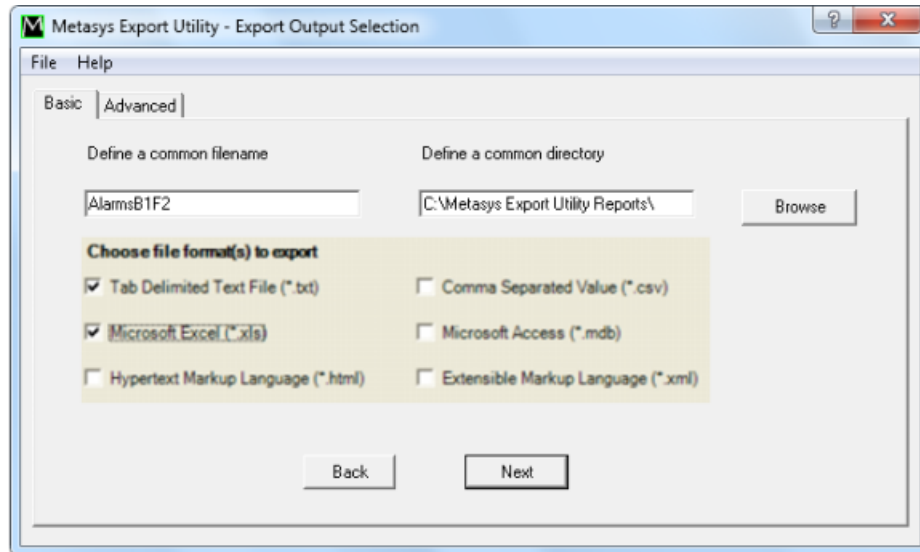
OR

Result: All points under the devices starting with Floor and all points (can be in all devices, not only those starting with Floor) having an alarm value of 200.

Selecting File Formats for Output

- In the Export Output Selection - Basic Tab window ([Figure 20](#)), enter the following:
 - Enter a file name for the output files in the **Define a common filename** field. Only alphanumeric characters and spaces are allowed. By default, all output files have this name.
 - Click Browse to select a valid path in which to create the output files. Shared network drives are supported. By default, all output files are created in this directory.

Figure 20: Export Output Selection - Basic Tab



2. Select all of the desired file format types using the information in [Table 14](#).

Note: If you do not have Microsoft Excel or Microsoft Access software installed, these selections are unavailable and appear dimmed.

Table 14: File Format Output Types

Type	Extension	Description
Tab Delimited Text File	.txt	Data is presented in a text document separated by tabs and carriage returns.
Microsoft Excel¹	.xls	Data is presented in columns and rows.
Hypertext Markup Language	.htm	Data is presented in columns and rows.
Comma Separated Value	.csv	Data is presented in a text document separated by commas and carriage returns. The document can be viewed in Microsoft Excel. If you view the data in Excel, the dates may not appear in the format specified in the Export Utility definition.
Microsoft Access²	.mdb	Data is presented in record sets in a table of a database.
Extensible Markup Language	.xml	Data is presented as separate tags.

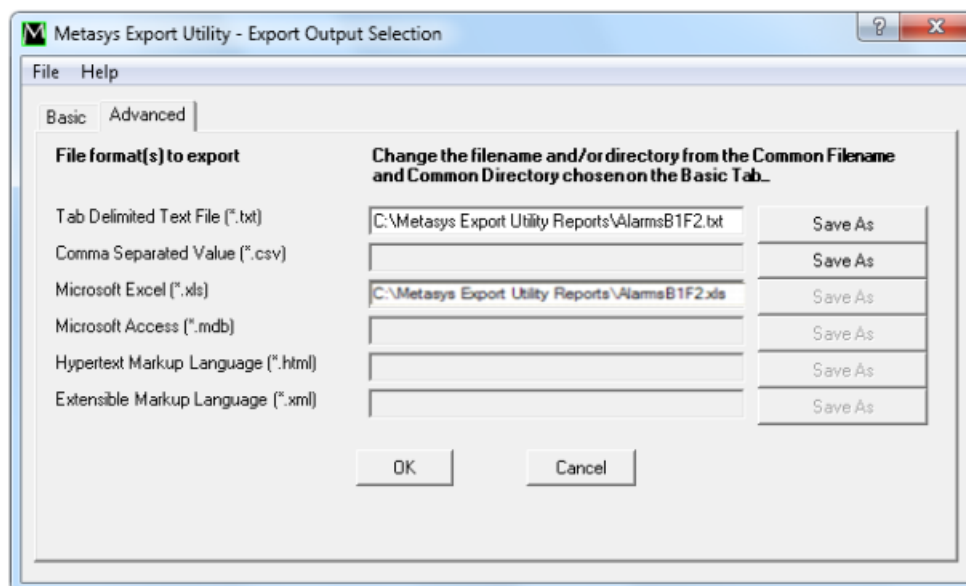
- 1 To avoid errors, make sure that Microsoft Excel is not running while you export data to this file format. Doing so may cause errors. If you do not have Microsoft Excel installed, this selection is unavailable and appears dimmed.
- 2 In Microsoft Access output files, text entries are limited to 255 characters; if text entries are greater than 255 characters, then an ellipsis (...) appears at the end of the cell. See the [Performance Considerations](#) section. If you do not have Microsoft Access installed, this selection is unavailable and appears dimmed.

3. If desired, click the Advanced tab to select different destinations or file names for each selected output file format. Click **OK** to save and return to the Basic tab.

For example, to save all files on the local hard disk, click the corresponding Browse button, and select the desired network drive with the name Trends.html instead of the common file name Monthly Trend Report.

Note: You do not need to change anything on the Advanced tab.

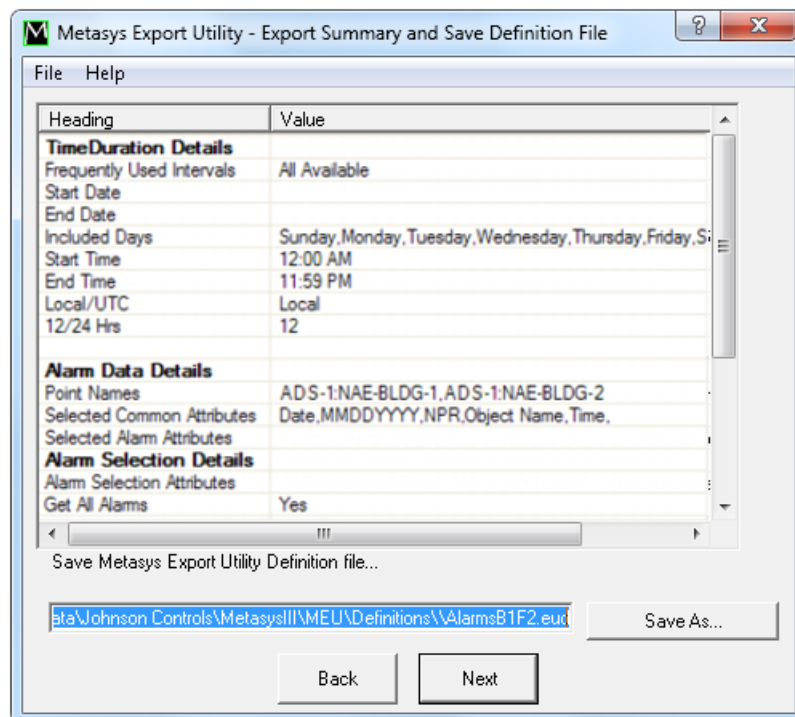
Figure 21: Export Output Selection - Advanced Tab



Note: The directory path, including the file name, is limited to a maximum of 260 characters for an export to be successful. For Microsoft Excel, this path is limited to 218 characters. If the path exceeds these limits, the report does not export.

4. Click **Next**. The Export Summary and Save Definition File window ([Figure 22](#)) appears with all of the selected information for the Export Utility Definition file.

Figure 22: Export Summary and Save Definition File Window



5. Review your selections. (To edit any selections, click **Back**.)

Note: With the Point Names row selected, next to the heading Point Names, place your pointer over the Value field to enable a browse (...) button. Click the browse button to display all point names.

6. If you wish to save the Export Utility Definition file in a different location from the default, click **Save As**.
7. Click **Next**. The Data To Export window appears. (If the definition file already exists, a dialog box appears to ask if you wish to overwrite the existing file.) The Export Utility Definition is defined and saved.

Note: The default name for the definition file is that of the common file name defined in the Export Output Selection window. It also stores the definition in the directory defined during the installation process.

The default location is:

C:\ProgramData\Johnson Controls\MetasysIII\MEU\Definitions

8. Click the appropriate option button to export the data now or to schedule the export at a later date or time, and click **Next**.

Note: If you do not want to create an output file at this time, click the **X** in the upper-right corner to close the application. Your definition file has already been saved.

If you wish to schedule the export, proceed to [Creating a New Schedule](#).

Tip: To ensure that your selections are correct before you schedule an export, click **Export Now** to view the output of an Export Utility definition file. Then modify any selections and schedule the export.

Creating a New Schedule

To ensure the best schedule performance, avoid scheduling extractions at times when the *Metasys* system is busy. For instance, do not schedule an extraction at the same time a supervisory device has a scheduled ADS Delivery Time or when many users are accessing the Site Director simultaneously.

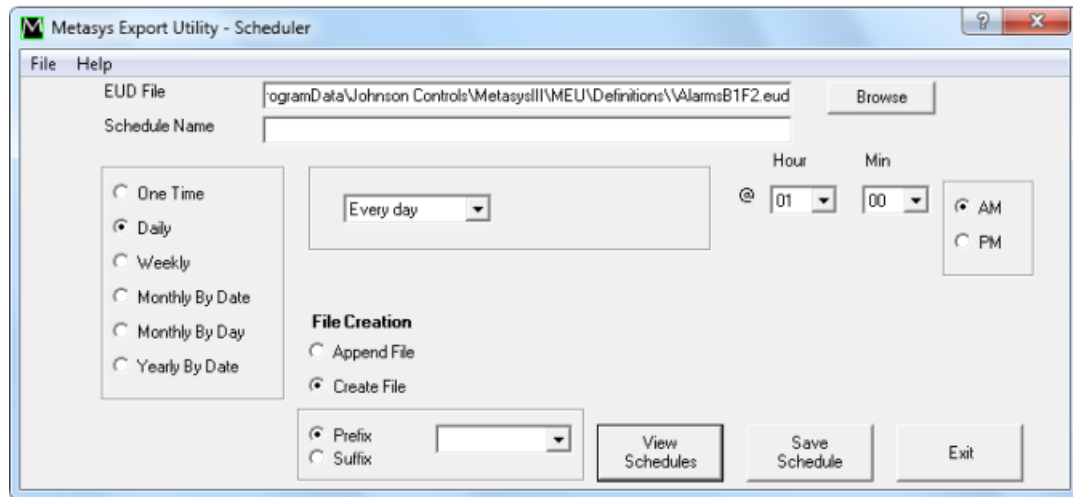
The time the schedule runs is based on the system clock of the computer on which Export Utility is running. This time may not be synchronized with the *Metasys* system. The Export Utility computer does not have to be synchronized with the *Metasys* system, but recommend that you verify that it is extracting the data appropriately.

Export Scheduling Options

To create a new schedule:

1. On the Export Scheduler window, click **Browse** and select the Export Utility definition file to be scheduled. (When you create a definition, this field automatically populates).

Figure 23: Export Scheduler



2. Type a unique Schedule Name to identify this schedule in the Export Utility Scheduler. The Scheduler does not allow two different schedules with the same name or two identical schedules with different names.
3. Select the schedule intervals for how often you wish to have the data exported using the information in [Table 15](#). Select days and times from the drop-down menus for which the schedule runs. Options change in the window depending on the interval you choose.

Table 15: Schedule Intervals

Interval	Description
One Time	Runs only once at the defined time.
Daily	Selections range from every day to every 31st day.
Weekly	Selections range from every week to every 52nd week. You can select the day the schedule runs that week.
Monthly By Date	Selections range from every month to every 12th month. You can select the day the schedule runs from day 1 to day 31 of the month.
Monthly By Day	Selections range from every month to every 12th month. You can select the day the schedule runs from the first day type of the month until the 4th day type of the month. For example, the user can select the schedule to run every month on the 2nd Friday of the month.
Yearly By Date	Selections range from every year to every 12th year. You can select the month and day of the year that the schedule runs.

4. In the File Creation section, click the appropriate option button.
 - Append File continually adds the schedule to the same output file. For example, Excel adds new worksheets, and Access adds new tables.
 - Create File creates a new output file each time the schedule is run.
5. Click **Prefix** or **Suffix**, and select a date format from drop-down menu. The date is appended before or after the common file.

Note: Choose Prefix or Suffix to organize your files. Prefix puts the date in the chosen date format **before** the common file name (for example, 100818Trend Report.xls). Suffix places the date **after** the common file name (for example, Trend Report100818.xls).

6. Click **Save Schedule**.
7. Click **View Schedules**. The Scheduler window appears.

Note: If you click View Schedules before you save the schedule, you return to the Export Scheduling Options window, losing the reference to the definition file, and you must browse to the definition file.

Note: **View Schedules** appears dimmed and is not accessible when the Scheduler service is not running. Start the Scheduler service to activate this button.

Scheduler

To manage schedules:

1. Verify that the fields display the correct information for the new schedule. See explanations of the columns in [Table 16](#).
2. Make any changes and manage the schedules using the functionality described in [Table 17](#).

Figure 24: Scheduler Window

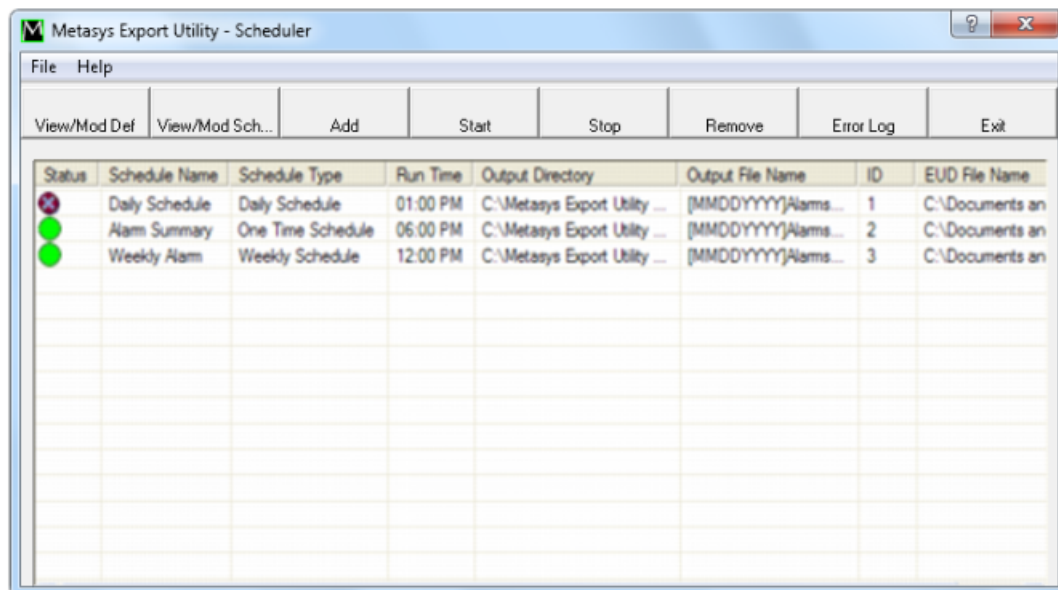


Table 16: Scheduler Columns

Column Heading	Description
Status	Contains one of two icons, a green circle or a red circle with an X through it. The green circle indicates an active or running schedule, and the red indicates an inactive or stopped schedule.
Schedule Name	Displays the schedule name defined in the Export Scheduling Options window.
Schedule Type	Displays the schedule type defined in the Export Scheduling Options window.
Run Time	Displays the time the schedule is set to run defined in the Export Scheduling Options window.
Output Directory	Displays the name of the directory where the file is stored.
Output File Name	Displays the output file names defined by the definition file that the schedule uses.
ID	Displays an incremental number to easily identify the schedules.
EUD File Name	Displays the name and path of the definition file that the schedule uses. This column also indicates if an EUD file is missing or corrupt.

Table 17: Scheduler Functionality

Option	Function
View/Mod Def ¹	Takes you to the Export Time Duration window to view or modify an existing Export Utility definition.
View/Mod Sch... ¹	Takes you to the Scheduler to view or modify an existing schedule.
Add ¹	Takes you to the Export Scheduling Options window so that you can create a new schedule.
Start	Begins or resumes a schedule.
Stop	Stops or inactivates a schedule, but keeps the entry in the Scheduler for future use.
Remove	Deletes the selected schedule.
Error Log	Displays all errors that have occurred with all scheduled data exports.
Exit	If you accessed the Scheduler from taskbar icon, this closes the Scheduler. If you accessed the Scheduler by clicking View Schedules, this option returns you to Export Scheduling Options.

¹ If you access the Scheduler by right-clicking the Export Utility icon in the system tray, you cannot access this functionality. See [Figure 54](#) for the available options.

3. Click **Exit**.

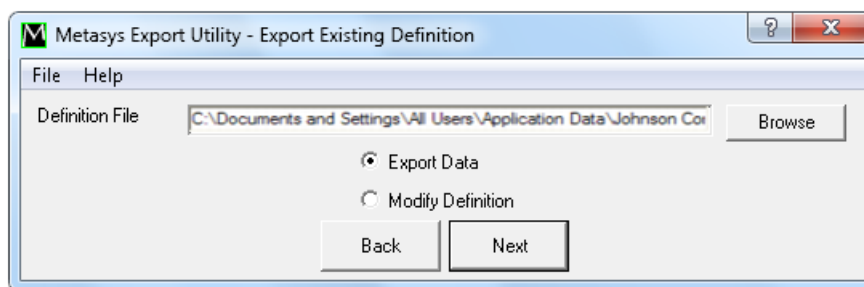
Schedules are saved in the Scheduler queue. See [Modifying an Existing Schedule](#) to make changes to an existing schedule.

Modifying an Existing Export Utility Definition

Use this procedure to modify an Export Utility Definition file (*.eud) that was created previously.

1. Browse to and log in to Export Utility. See [Logging in to the Metasys System through Export Utility](#).
2. In the Export Definition Selection window ([Figure 25](#)), click **Edit Existing Definition** and click **OK**. The second Export Existing Definition window appears.

Figure 25: Export Existing Definition Window



3. Click **Browse** and select the Export Utility definition file. (By default, the location that apperas was chosen for definition files during installation.)
4. Click **Modify Definition** and click **Next**. The Export Time Duration window appears with the existing values.
5. Modify the values according to [Creating a New Export Utility Definition](#).

Note: You cannot change a Trend definition to an Alarm/Audit and vice versa.

Modifying an Existing Schedule

1. Browse to and log in to Export Utility. See [Logging in to the Metasys System through Export Utility](#).
2. On the Export Definition Selection window, click **Edit Existing Definition** and click **OK**. The Export Definition Selection window appears.
3. Click **Browse** and open the Export Utility definition file.
4. Click **Export Data** and click **Next**. The Data to Export window appears.
5. Click the appropriate option button to export the data immediately or click **Schedule Export** to change the existing schedule. Click **Next**. See [Creating a New Schedule](#).

Creating Custom Reports Using the Component Interface

See:

- [Referencing the DLL File from a VBA Project](#) for creating reports from scratch
- [Using the Billing Report Example File](#) for creating billing reports using the billing example file
- [Using the DLLR Example Files](#) for creating custom demand limiting/load rolling (DL/LR) energy reports using the DLLR example files

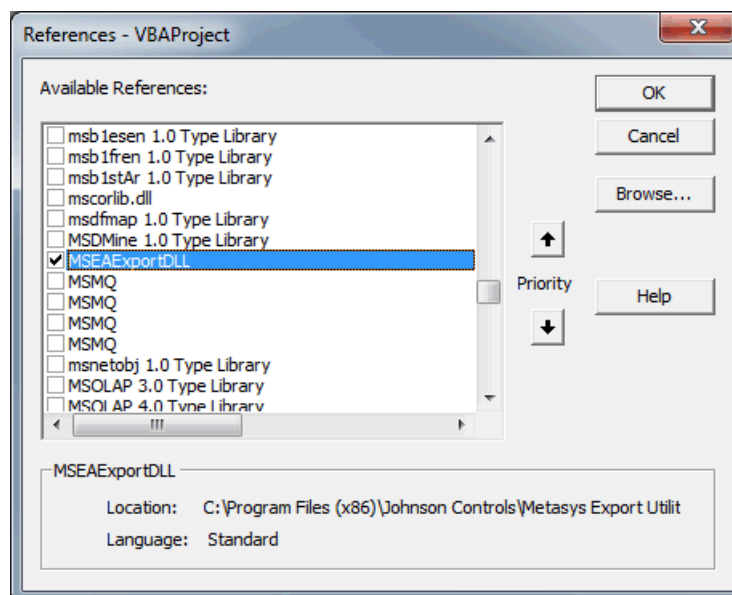
Note: To create custom reports, you must have the 32-bit version of Microsoft Office installed on the computer running Export Utility. The DLL file and example files used to create custom reports are compatible with only the 32-bit version of Microsoft Office. Microsoft Office Excel 2010 and Office Excel 2013 do not support the DLL example files.

Referencing the DLL File from a VBA Project

See [Sample Use of the Export Utility DLL in VBA](#) for how to obtain an example script.

1. In Microsoft Visual Basic, select **References** on the Tools menu. The References dialog box appears ([Figure 26](#)).

Figure 26: References Dialog Box



2. Select the **MSEAExportDLL** reference check box, and click **OK**. The MSEAExportDLL reference now appears in the Object Browser ([Figure 27](#)), and it is available for use. For information on VBA classes, see [Table 18](#).

Note: In the Classes pane, if you click MEUDataExtractor, the items in [Table 19](#) appear in the Members pane to the right.

Figure 27: Object Browser

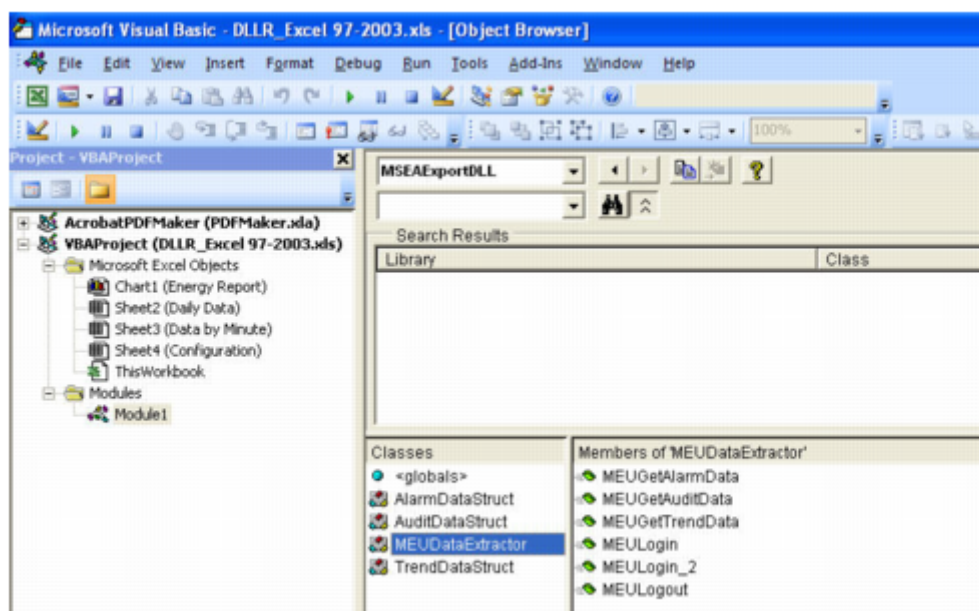


Table 18: VBA Classes Menu Descriptions

Item	Description	Parameters
IDataExtractor	The main interface of the Export Utility DLL.	Examples: - Dim MyExtractor As MSEASExportDLL.IDataExtractor - Set MyExtractor = New MSEASExportDLL.MEUDataExtractor
MEUDataExtractor	The object type that implements the MEUDataExtractor interface.	
TrendDataStruct	This structure holds a trend record. It contains parameters that correspond to the definition file export attributes. See Table 6 for parameter descriptions.	.DateTime .NamePathReference .ObjectName .ObjectValue .ObjectUnits .Status

Table 18: VBA Classes Menu Descriptions

Item	Description	Parameters
AlarmDataStruct	This structure holds an alarm record. It contains parameters that correspond with the definition file export attributes. See Table 10 for parameter descriptions.	• .DateTime • .NamePathReference • .ObjectName • .ObjectValue • .ObjectUnits • .AckRequired • .AckStatus • .AlarmType • .AlarmPriority • .AlarmDescription • .AlarmText • .Annotation • .IsDiscarded
AuditDataStruct	This structure holds an audit record. It contains parameters that correspond with the definition file export attributes. See Table 13 for parameter descriptions.	• .DateTime • .NamePathReference • .ObjectName • .AuditType • .ApplicationType • .UserName • .AuditActionType • .AuditDescription • .Status • .PreviousValue • .PostValue • .Annotation

Table 19: Method Descriptions

Method	Description
MEULogin	This method allows you to log in to the <i>Metasys</i> system. It returns an encrypted xml namespace as a string. <pre>Function MEULogin(hostName As String, userID As String, password As String) As String</pre> • Hostname: enter either the IP address or the name of the <i>Metasys</i> Site Director that you want to log in. • userID: enter the <i>Metasys</i> system user name that you wish to log in as. • password: enter the <i>Metasys</i> system password for the user. Example: <pre>result = MyExtractor.MEULogin("localhost", "MetasysSysAgent", "[default password]")</pre> Note: The MEULogin_2 method is exposed but required for other Export Utility purposes. It should not be used and is not supported.
MEUGetTrendData	This method returns an array of trend records as defined by the following parameters. <pre>Function MEUGetTrendData(eudFileName As String) As TrendDataStruct()</pre> eudFileName: The full path reference of the Export Utility Definition that defines the time duration and trend objects for which you wish to retrieve data. MEUGetTrendData only returns data for the export attributes that are selected in the definition file. For example, if you do not select the Object Name export attribute when defining the definition file, you do not return any data for the Object Name parameter of the TrendDataStruct. Windows 7 Example: <pre>Dim MyTrendData() As TrendDataStruct</pre> <pre>MyTrendData = MyExtractor.MEUGetTrendData ("C:\ProgramData\Johnson Controls\MetasysIII\MEU\Definitions\Last Months OAT.eud")</pre>
MEUGetAlarmData	This method returns an array of alarm records as defined by the following parameters. <pre>Function MEUGetAlarmData(eudFileName As String) As AlarmDataStruct()</pre> eudFileName: The full path reference of the Export Utility Definition that defines the time duration and alarm attributes for which you wish to retrieve data. MEUGetAlarmData returns data for the export attributes that are selected in the definition file. For example, if you do not select the Object Name export attribute when defining the definition file, you do not return any data for the Object Name parameter of the AlarmDataStruct. Windows 7 Example: <pre>Dim MyAlarmData() As AlarmDataStruct</pre> <pre>MyAlarmData = MyExtractor.MEUGetAlarmData ("C:\ProgramData\Johnson Controls\MetasysIII\MEU\Definitions\Yesterdays Alarms.eud")</pre>

Table 19: Method Descriptions

Method	Description
MEUGetAuditData	This method returns an array of audit records as defined by the following parameters: <pre>Function MEUGetAuditData(eudFileName As String) As AuditDataStruct()</pre> eudFileName: The full path reference of the Export Utility Definition that defines the time duration and audit attributes for which you wish to retrieve data. MEUGetAuditData only returns data for the export attributes that are selected in the definition file. For example, if you do not select the Audit Description export attribute when defining the definition file, you do not return any data for the Audit Description parameter of the AuditDataStruct. Windows 7 Example: <pre>Dim MyAuditData() As AuditDataStruct</pre> <pre>MyAuditData = MyExtractor.MEUGetAuditData ("C:\ProgramData\Johnson Controls\MetasysIII\MEU\Definitions\Last Months Audits.eud")</pre>
MEULogout	This method logs you out of the <i>Metasys</i> system. Example: <pre>MyExtractor.MEULogout</pre>

Sample Use of the Export Utility DLL in VBA

Access the sample script from the following location:

C:\Program Files\Johnson Controls\Metasys Export Utility\Help\Module1.bas (32-bit systems)

C:\Program Files (x86)\Johnson Controls\Metasys Export Utility\Help\Module1.bas (64-bit systems)

Copy and paste the sample script text into your program, or import the Module1.bas file into your program.

Using the Billing Report Example File

1. Browse to C:\ProgramData\Johnson Controls\MetasysIII\MEU\DLL Examples and open **Billing Report Example.xls**.
2. Customize the report to meet your needs.

Using the DLLR Example Files

Use the DLLR example files in the following order:

1. Create DLLR trends in your *Metasys* system. See [Creating DLLR Trends](#).
2. Create the Export Utility Definition file. See [Creating the Export Utility Definition \(EUD\) File](#).
3. Configure the DLLR example file. See [Configuring the DLLR Example Files](#).
4. Run the report. See [Running DLLR Reports](#).
5. View the report. See [Viewing DLLR Reports](#).
6. Schedule the reports, if desired. See [Scheduling DLLR Energy Reports in Windows 7](#) or [Scheduling DLLR Energy Reports in Windows 8.1](#).

Creating DLLR Trends

The DLLR example files read and display data from these DLLR object trend extensions.

To create DLLR trends, in the Site Management Portal (SMP) UI, add trend extensions to the following attributes of the DLLR object ([Figure 28](#)):

- **Energy Rate:** the energy rate that DLLR is currently reading. Use 1-minute intervals for the extension.
- **Active Demand Limit:** the current target that DLLR is trying to maintain. Use change of value (COV) for the extension, and the DLLR example files fill in any gaps in the data.
- **Unc Interval Demand:** the uncontrolled demand that shows what the demand would have been had DLLR not shed any loads. Use 1-minute intervals for the extension.
- **Amount Shed:** that current amount of energy that DLLR is shedding. Use 1-minute intervals for the extension.

Figure 28: Trend Extensions on DLLR Object Attributes

Extension Wizard

The item has been created. Now, you may add extensions.

Trend

☐ Energy Rate	1 min
☐ Active Demand Limit	COV
☐ Unc Interval Demand	1 min
☐ Amount Shed	1 min

Delete New >>

Totalization

New >>

Alarm

☐ DLLR Status	
--------------------------------------	--

Delete New >>

Done

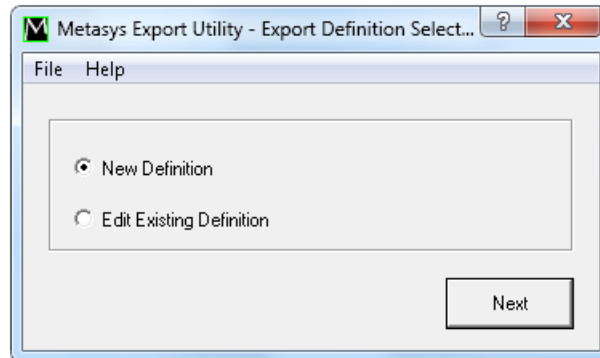
Go to [Creating the Export Utility Definition \(EUD\) File](#).

Creating the Export Utility Definition (EUD) File

The DLLR example files use the Export Utility Definition file to retrieve data from the DLLR object trend extensions.

1. Log in to the Site Management Portal (SMP) UI through Export Utility and create a new definition file ([Figure 29](#)). See [Logging in to the Metasys System through Export Utility](#).

Figure 29: New Definition



2. Click **Next**. The Export Time Duration window appears.
3. On the Export Time Duration Basic tab, in Frequently Used Intervals, select either **Last Month** or **Choose Date** ([Table 20](#)).

Note: Other selections under Frequently Used Intervals are not valid. No edits are required for the Advanced tab.

Table 20: Selections on the Basic Tab - Frequently Used Intervals

Selection	Details
Yesterday	Not supported
Last Week	Not supported
Last Two Weeks	Not supported

Table 20: Selections on the Basic Tab - Frequently Used Intervals

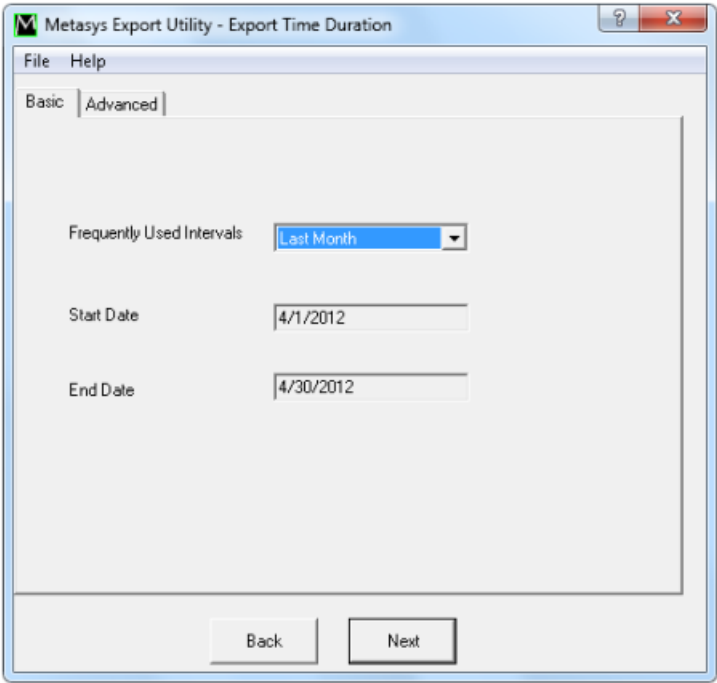
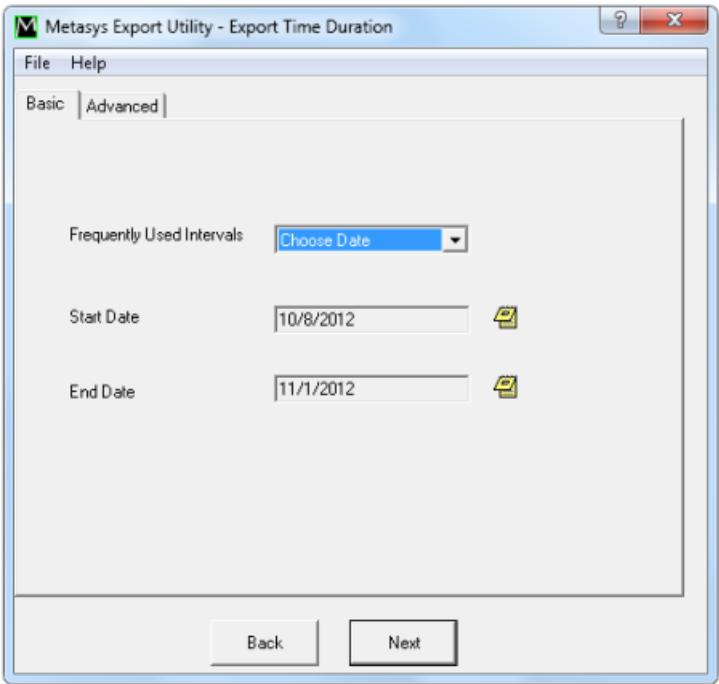
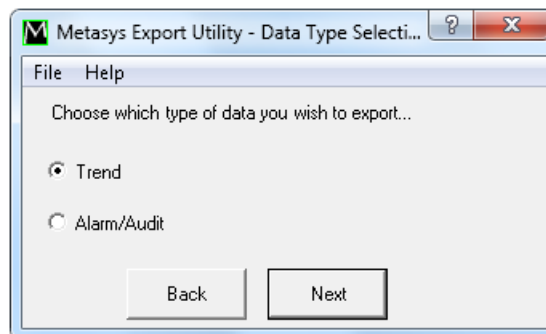
Selection	Details
Last Month	For a monthly DLLR energy report based on Day 1 to Day Last of the previous month, select Last Month (Figure 30). Figure 30: Last Month 
Last Quarter	Not supported
Last Year	Not supported

Table 20: Selections on the Basic Tab - Frequently Used Intervals

Selection	Details
Choose Date	For a monthly DLLR energy report based on a range such as Month/Day # to Month+1/Day-1, select Choose Date. For dates, select what would have been the last report date range. For example, Start Date = 10/8/2012 and the End Date = 11/1/2012 (Figure 31). Figure 31: Choose Date 
All Available	Not supported

4. Click **Next**.
5. In the Data Type Selection box, select **Trend**.

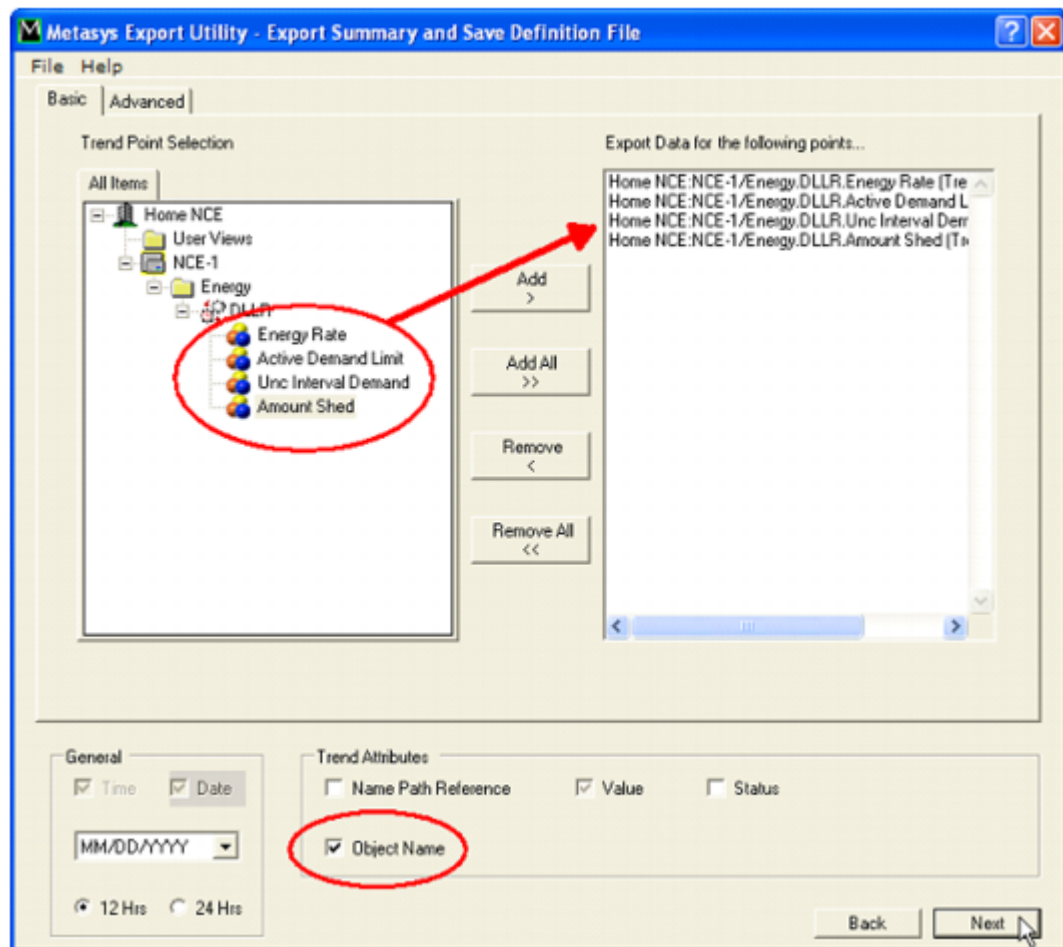
Figure 32: Data Type Selection Box



6. Click **Next**. The Export Summary and Save Definition File window appears.

7. Do the following in the Export Summary and Save Definition File window ([Figure 33](#)):
 - Select the four trend extensions (Energy Rate, Active Demand Limit, Unc. Interval Demand, and Amount Shed), and click **Add** to move them to the **Export Data for the following points** list.
 - Select the **Object Name** check box. The DLLR example files use this setting to display data in the appropriate columns.
 - Leave all other options at their defaults.

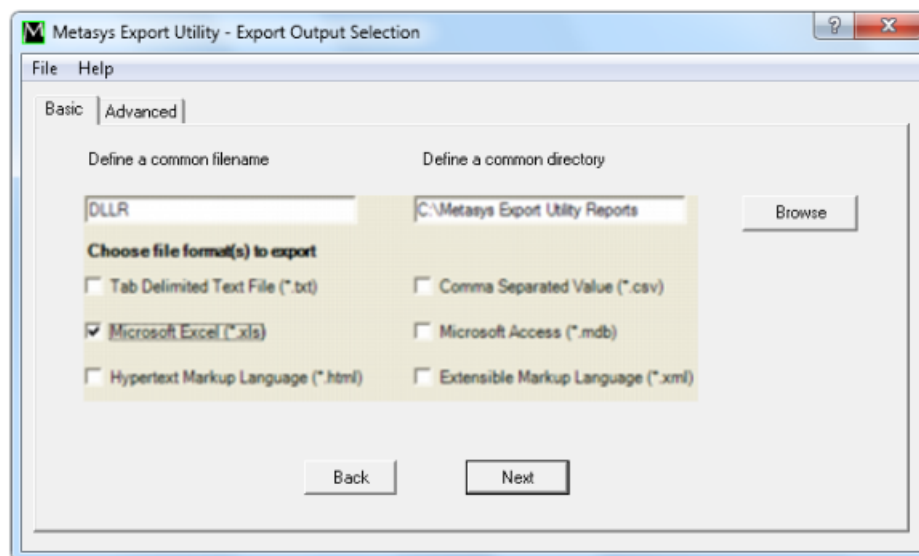
Figure 33: Export Summary and Save Definition File Window



8. Click **Next**. The Export Output Selection window appears.
 9. Enter a common file name in **Define a common filename** and select the Microsoft Excel check box for file format (Export Output Selection).
- Note:** Choosing a common file name, directory, and file format in this step is usually not necessary. It is necessary only for the DLLR example files with regard to the definition file being complete; however, these settings may be useful to make sure you are getting the appropriate data (by using Export Utility to run its report).

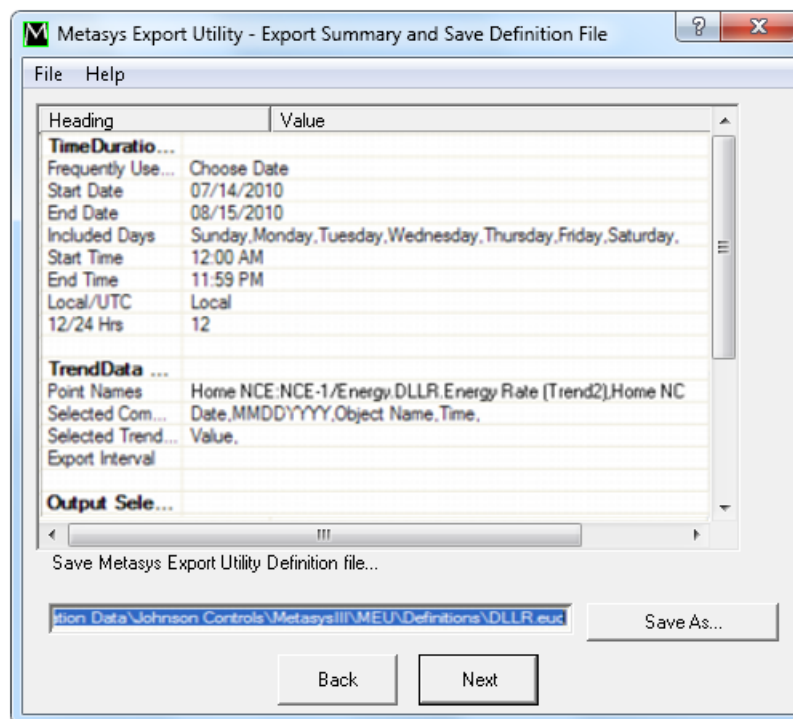
Note: If you do not have Microsoft Excel or Microsoft Access software installed, these choices are unavailable and appear dimmed.

Figure 34: Export Output Selection



10. Click **Next**. The Export Summary and Save Definition File window appears.
11. Review your selections ([Figure 35](#)).

Figure 35: Export Summary and Save Definition File Window



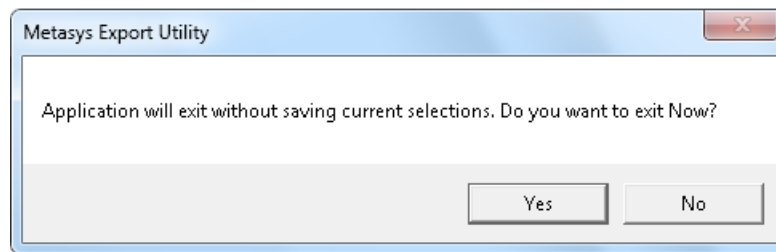
12. Click **Next** to save the definition file. The Data to Export window appears.

13. Choose to **Export Now** (to ensure if you are retrieving the appropriate date) or close the application using the X button.

Note: If you see an out of memory exception, pick a smaller data set or increase RAM.

Note: If you close the application using the **X** button, a message box appears and states **Application will exit without saving current selections**. Because the definition file was already saved when you clicked **Next** in Step 12, click **Yes** to close out the application.

Figure 36: Exit Without Saving Box



14. Go to [Configuring the DLLR Example Files](#).

Configuring the DLLR Example Files

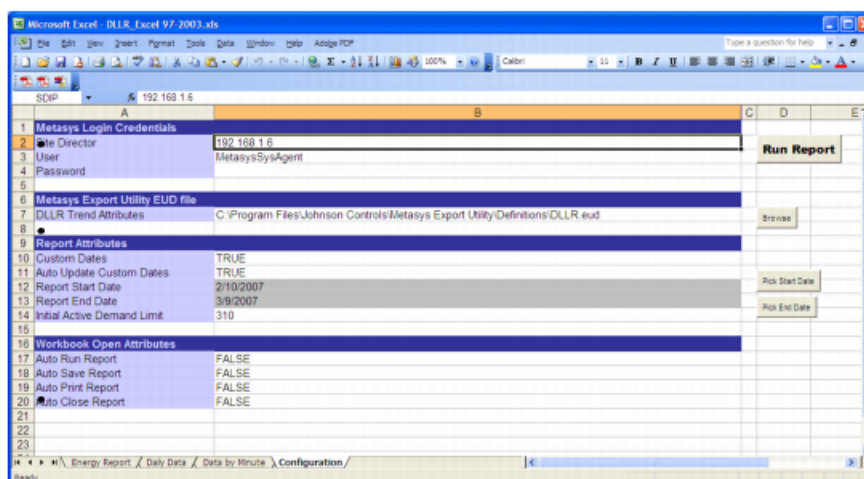
The Configuration sheet of the DLLR example files not only provides you with ways to enter *Metasys* system information for data retrieval but also contains other automation options to have the DLLR energy report run, save, and print by itself.

1. Browse to C:\ProgramData\Johnson Controls\MetasysIII\MEU\DLL Examples.
2. Open either **DLLR_Excel 97-2003.xls** (for Microsoft Excel 97 through Microsoft Excel 2003 software) or **DLLR_Excel 2007.xls** (for Microsoft Excel 2007 software).

Note: Microsoft Excel 2010 and Excel 2013 do not support the use of DLLR example files.

3. Click the Configuration sheet. See [Figure 37](#).

Figure 37: DLLR_Excel 97-2003.xls



4. Enter values for each field:

Metasys Login Credentials

Enter the appropriate *Metasys* system Site Director, User (username), and Password. Export Utility DLL uses these credentials to log in to the Site Management Portal (SMP) UI.

Metasys Export Utility EUD file

Use the Browse button to search for and select the definition file you created in Step 11 of [Creating the Export Utility Definition \(EUD\) File \(Figure 35\)](#).

Note: The example file does not verify this path. If you edit the cell manually, make sure the path you enter is correct.

Report Attributes

Use [Table 21](#) for the Report Attributes section.

Table 21: Report Attributes Section

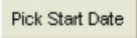
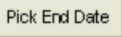
Field	Description ¹
Custom Dates	Select FALSE from the drop-down list if you selected Last Month as your interval. Select TRUE if you selected Choose Date as your interval. Note: The DLLR example files support only the Last Month or Choose Date for Frequently Used Intervals (see Creating the Export Utility Definition (EUD) File). Note: When Custom Dates is set to TRUE and the DLLR energy report is run (either automatically or via the Run Report button), the Export Utility Definition file is modified by the software to reflect the Report Start and End Dates.
Auto Upgrade Custom Dates	If Custom Dates is set to TRUE, you can choose to automatically update the Custom Date ranges (Report Start Date and Report End Date). If Auto Upgrade Custom Dates is set to TRUE, each time the DLLR example files are opened, the Report End Date + 1 month + 1 day is compared to the current date. If the current date is equal to or greater than the Report End Date + 1 month + 1 day, the Report Start and End Dates are increased by the number of month's difference between the Report End Date and the current date. IF (Report End Date + 1 month + 1 day) <= (Today's Date) THEN Report Start Date = Report Start Date + (Today's Month - Report End Date's Month) month(s) Report End Date = Report End Date + (Today's Month - Report End Date's Month) month(s) END IF
Report Start Date ²	When Custom Dates is set to FALSE, the Report Start Date automatically displays the first day of the last month. When Custom Dates is set to TRUE, choose a date using the  button. Note: Do not manually edit this field. A formula handles the automation.

Table 21: Report Attributes Section

Field	Description ¹
Report End Date ²	When Custom Dates is set to FALSE, the Report End Date automatically displays the last day of the last month. When Custom Dates is set to TRUE, choose a date using the  button. Note: Do not manually edit this field. A formula handles the automation.
Initial Active Demand Limit	The value entered here is used to fill any gaps in data resulting from a COV Trend sample rate. For example, if three targets are used throughout the day, On-Peak, Off-Peak, and Semi-Peak, the Initial Active Demand Limit is used to fill in the target from the previous day. On the first day, Initial Active Demand Limit appears for each minute until the first sample was retrieved. This method is only necessary when using a COV trend sample rate for the Active Demand Limit.

- For descriptions that mention drop-down lists, click the cell where you would like to make a selection. The drop-down arrow then appears to the left of the cell.
- The Report Start Date and Report End Date fields use the Microsoft Calendar control. These instructions assume that this control has been installed and registered already when you installed Microsoft Office software.

Workbook Open Attributes

The DLLR example files allow you to use an application such as Windows Scheduled Tasks to run, save, and print the DLLR energy report automatically. The attributes in [Table 22](#) control how the DLLR energy report is handled each time the DLLR example files open.

Table 22: Workbook Open Attributes Section

Field	Description
Auto Run Report	If you set this field to TRUE, each time the DLLR example files open, they do the following: - Read the Configuration sheet parameters. - Log in to the Site Management Portal UI via the Export Utility DLL. - Modify the Export Utility Definition file with the Report Start and End Dates. - Retrieve and write the data into the appropriate sheets. This behavior is the same as when you click Run Report.
Auto Save Report	If you set Auto Run Report to TRUE and Auto Save Report to TRUE, then each time the DLLR example files open, a copy of the file is saved after the run report is complete. The copy of the file is named yymmdd Energy Report.xls(m), where yy = year, mm = month, and dd = day. The file is saved to the same location as the DLLR example file.
Auto Print Report	If you set Auto Run Report to TRUE and Auto Print Report to TRUE, then each time the DLLR example files open, both the Daily Data sheet and the Energy Report chart print to the default Windows printer. Default printer settings should be set to print appropriately.
Auto Close Report	If you set this field to TRUE and at least one of the following is also set to TRUE (Auto Run Report, Auto Save Report, or Auto Print Report), then each time the DLLR example files open, once any or all the above are complete, Microsoft Excel closes. Note: When set to TRUE, if you wish to open the DLLR example files manually, you must press the break key on your keyboard to stop the automation during its progress. Otherwise, it closes the application.

Go to [Running DLLR Reports](#).

Running DLLR Reports

Note: To schedule DLLR energy reports, see [Scheduling DLLR Energy Reports in Windows 7](#) or [Scheduling DLLR Energy Reports in Windows 8.1](#).

1. Configure the DLLR energy report. See [Configuring the DLLR Example Files](#).
2. On the Configuration sheet, click **Run Report**.
3. Go to [Viewing DLLR Reports](#).

Viewing DLLR Reports

To view DLLR energy reports, click the Energy Report sheet.

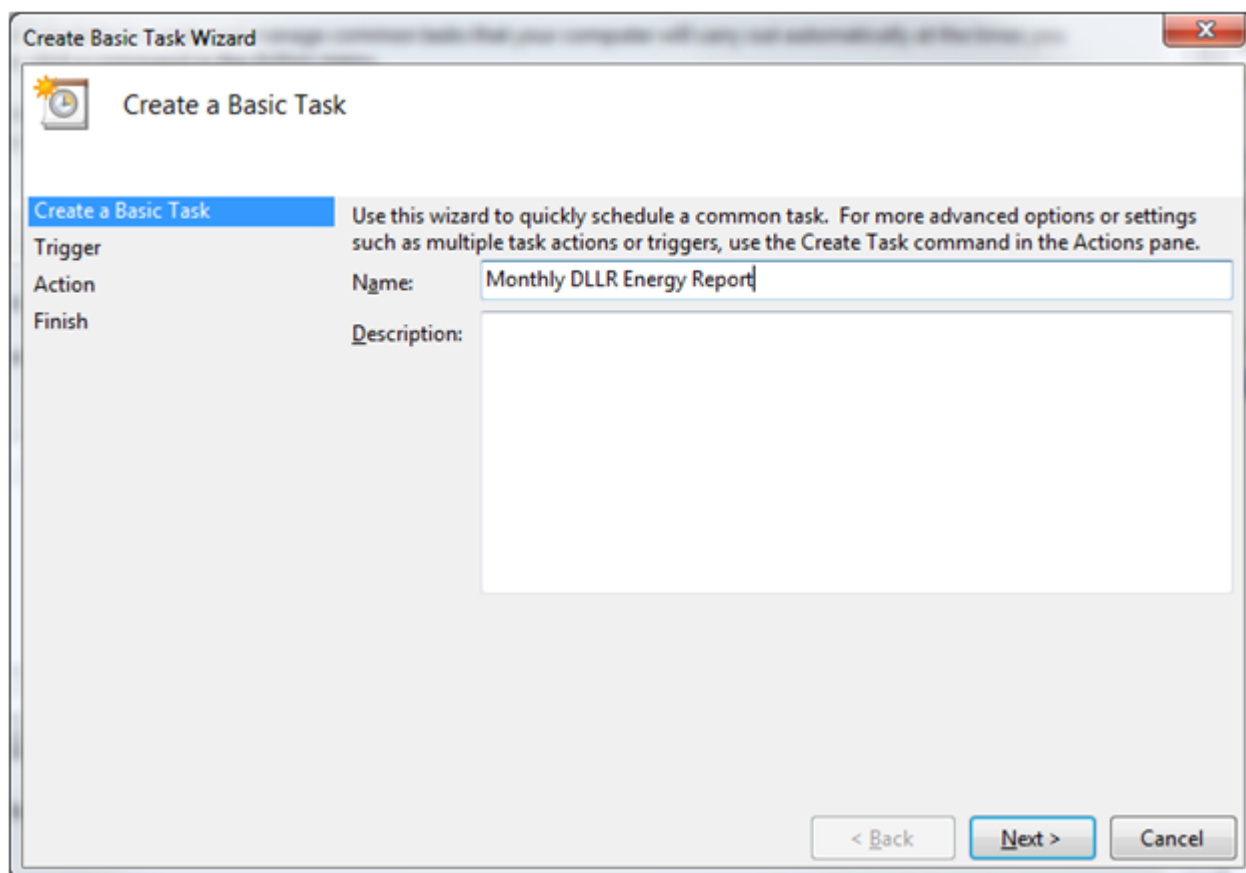
Note: To see numerical representations of the data in the DLLR energy report, click the Daily Data and Data by Minute sheets.

Scheduling DLLR Energy Reports in Windows 7

Note: The steps in this section apply to Windows 7 only. For steps that apply to Windows 10 and Windows 8.1, see [Scheduling DLLR Energy Reports in Windows 8.1](#). If you have a different operating system, consult your Microsoft documentation for information on the Task Scheduler.

1. Open the Windows Task Scheduler window from the Start menu at **All Programs > Accessories > System Tools > Task Scheduler**. The Task Scheduler window appears.
2. Click **Create Basic Task** to start the Create Basic Task Wizard. The Create Basic Task Wizard appears ([Figure 38](#)).
3. Give the task a meaningful name (for example, Monthly DLLR Energy Report). Click **Next**.

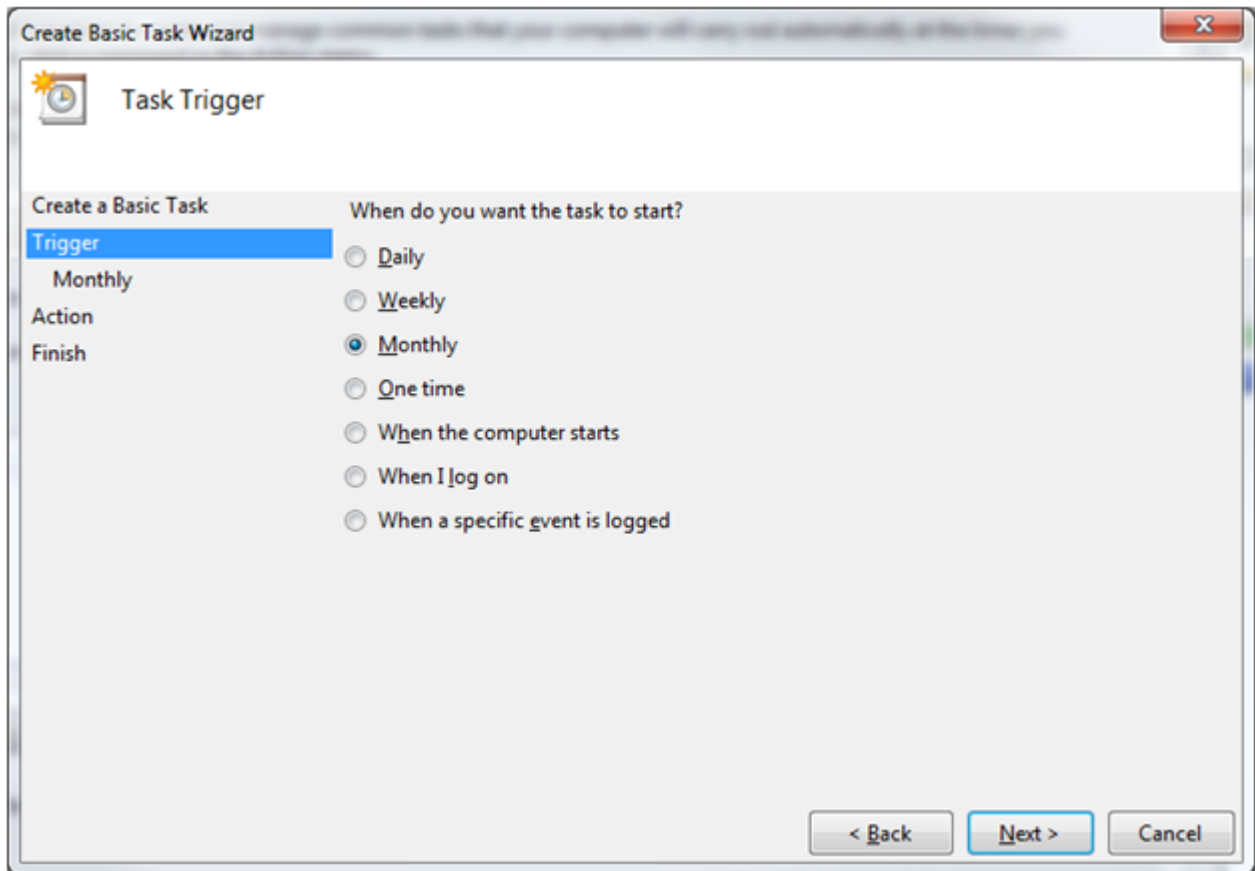
Figure 38: Create a Basic Task Wizard



The image shows a Windows-style dialog box titled "Create Basic Task Wizard". The main title bar also includes a close button (X). Inside the dialog, there is a sub-header "Create a Basic Task" with a clock icon. Below this, a list of steps is shown on the left: "Create a Basic Task" (highlighted in blue), "Trigger", "Action", and "Finish". To the right of this list, a text box contains the instruction: "Use this wizard to quickly schedule a common task. For more advanced options or settings such as multiple task actions or triggers, use the Create Task command in the Actions pane." Below the instruction, there are two input fields: "Name:" with the text "Monthly DLLR Energy Report" and "Description:" with an empty text area. At the bottom right, there are three buttons: "< Back", "Next >" (highlighted with a blue border), and "Cancel".

4. The Trigger window appears ([Figure 39](#)). Select **Monthly** for the trigger. Click **Next**.

Figure 39: Create Basic Task Wizard - Task Trigger Window



5. The Monthly window appears ([Figure 40](#)). Select the time and day information as appropriate. For example, if your DLLR energy report is based on a Custom Date range of mm/09/yy–mm/08/yy, then choose the task to run on Day 9. Click **Next**.

Figure 40: Create Basic Task Wizard - Monthly Window

Create Basic Task Wizard

Monthly

Create a Basic Task

Trigger

Start: 5/14/2012 4:58:57 PM ☐ Synchronize across time zones

Months: January, February, March...

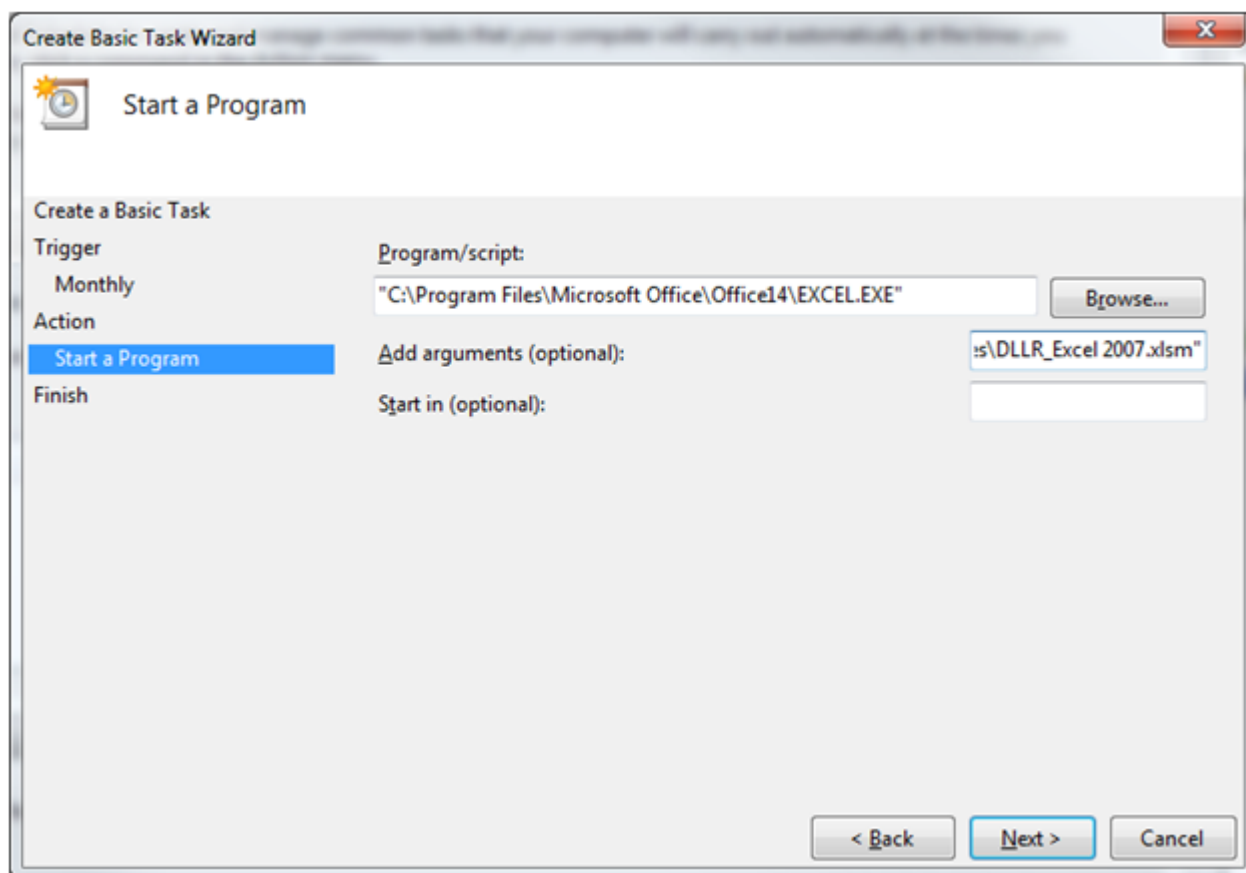
☒ Dgys: 9

☐ Qn:

< Back Next > Cancel

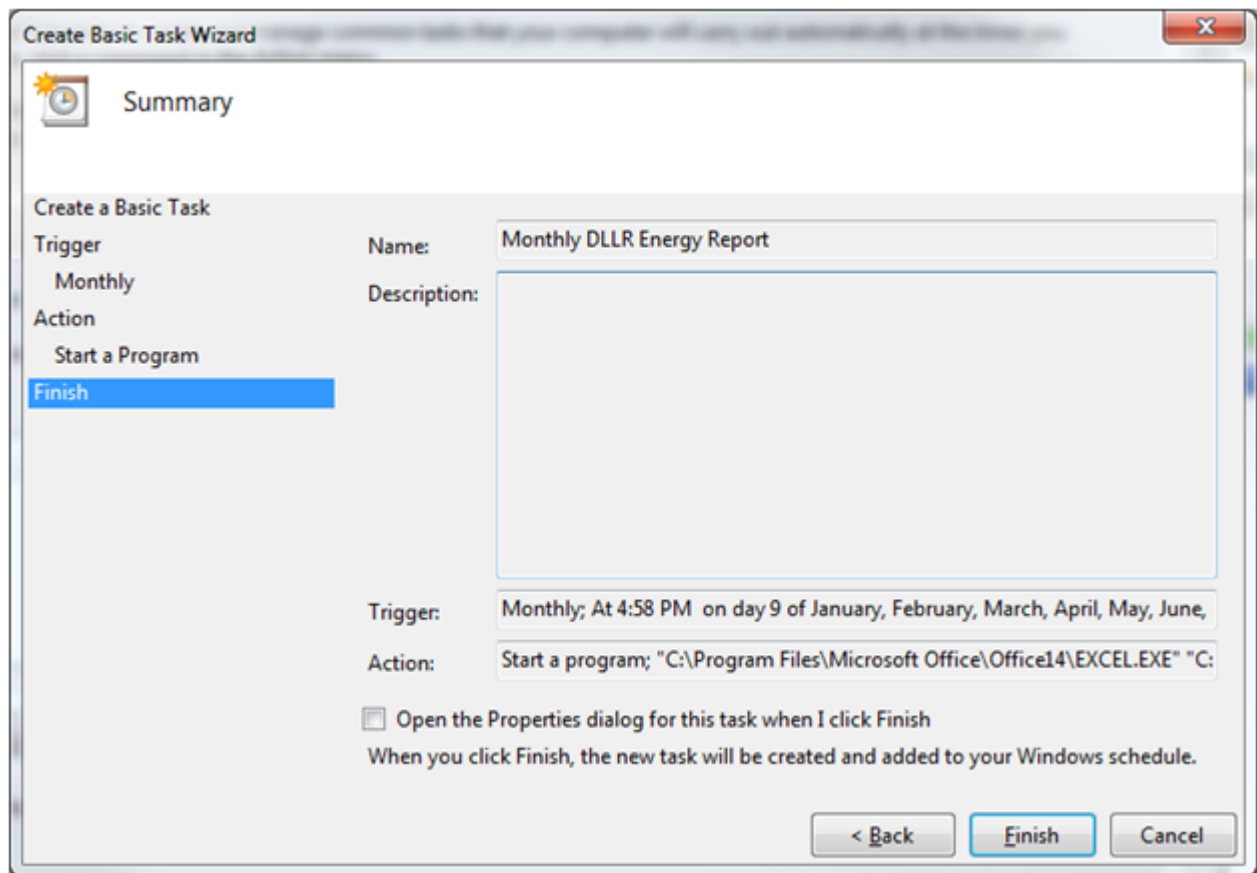
6. The Start a Program window appears ([Figure 41](#)). In the Program/script field, choose the directory path of the appropriate Excel software from the file system. In the Add Arguments field, add the directory path of the DLLR example in quotations. Click **Next**.

Figure 41: Create Basic Task Wizard - Start a Program Window



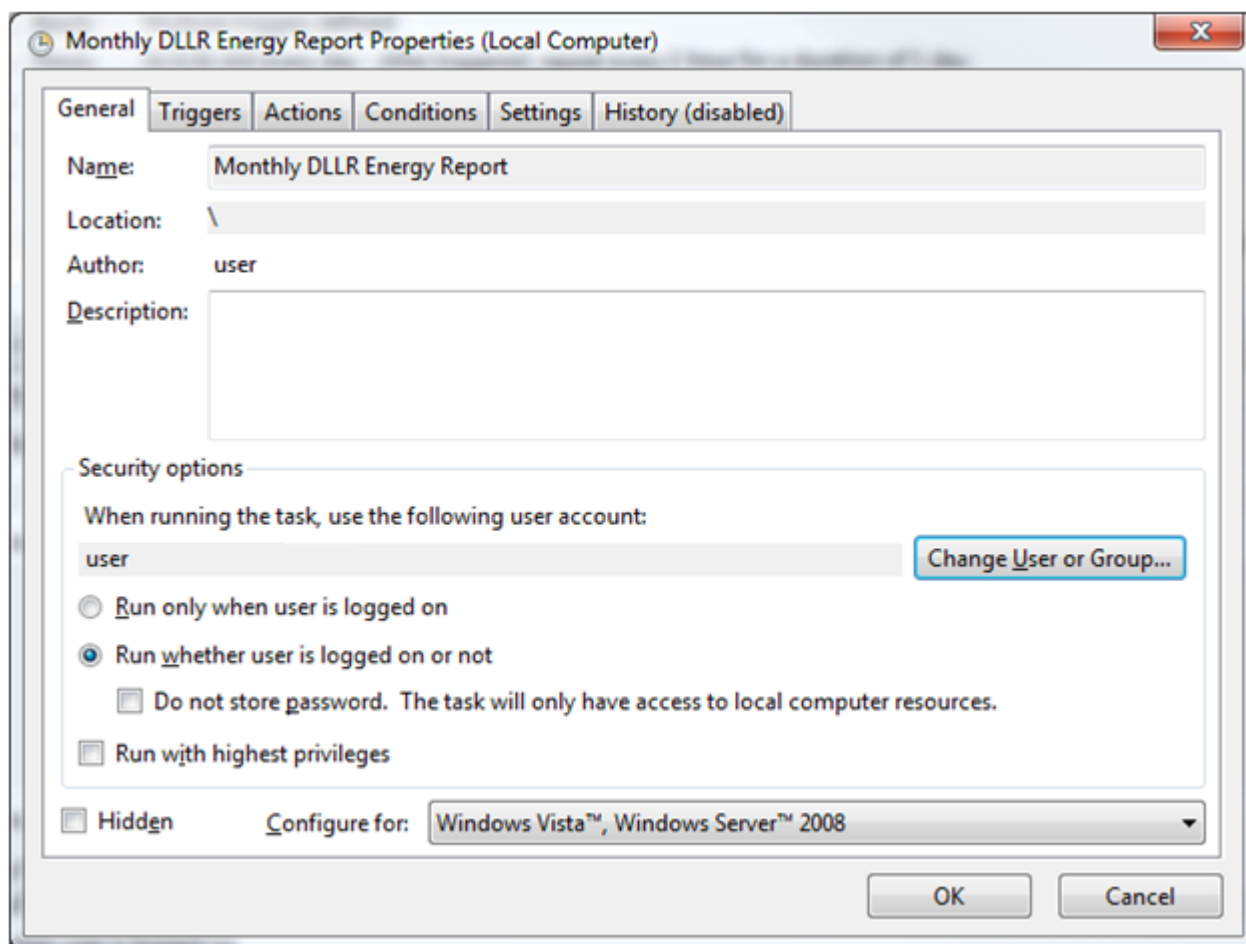
7. The Summary window appears ([Figure 42](#)). Verify the details of the task. Select **Open the Properties dialog for this task when I click Finish**. Click **Finish**. The Properties dialog box appears ([Figure 43](#)).

Figure 42: Create a Basic Task Wizard - Summary Window



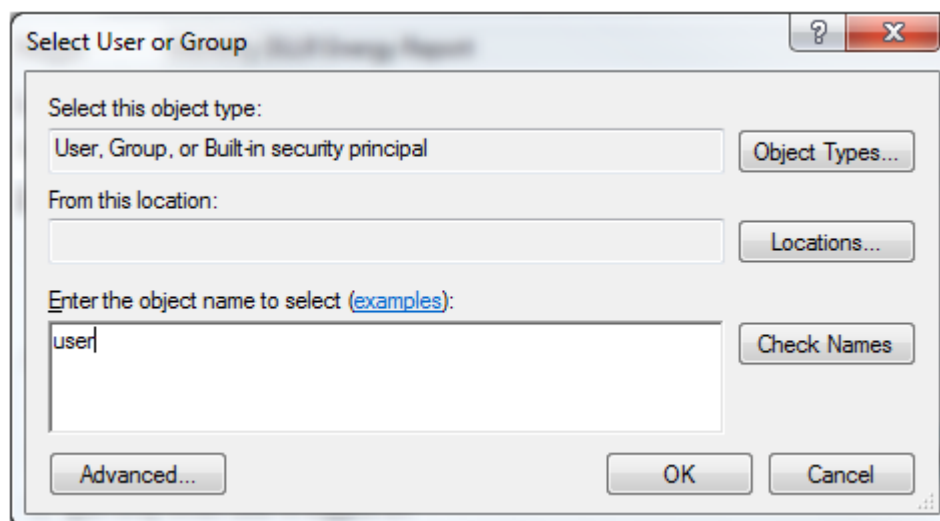
8. In the Properties dialog box, click **Run whether the user is logged on or not**. Click **Change User or Group** if you would like to run the task as a different user.

Figure 43: Properties Dialog Box



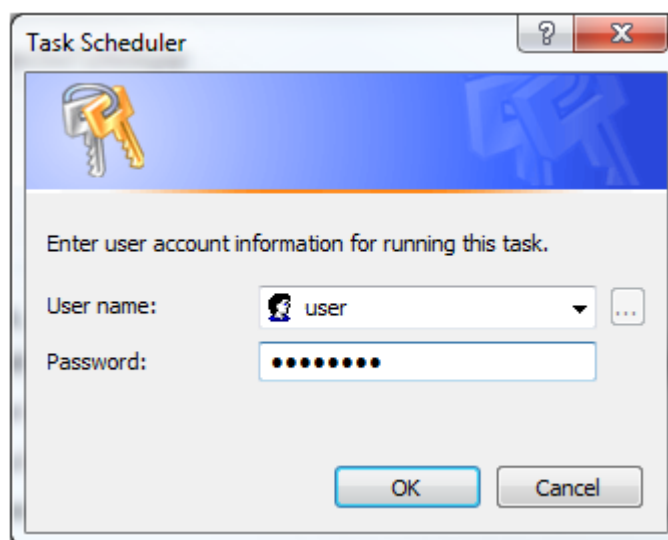
9. Select the user and click **OK**.

Figure 44: Select User or Group Window



10. A credentials window appears and prompts for the user's credentials. Enter your Windows credentials and click **OK**.

Figure 45: Task Scheduler User Credentials Dialog Box



Scheduling DLLR Energy Reports in Windows 8.1

Note: The steps in this section apply to Windows 8.1. For steps that apply to Windows 7, see [Scheduling DLLR Energy Reports in Windows 7](#). If you have a different operating system, consult your Microsoft documentation for information on the Task Scheduler.

1. In Control Panel, go to **System & Security > Administrative Tools > Schedule Tasks**. Alternatively, if you have your Start window configured to show Administrative Tools, click Task Scheduler. The Task Scheduler window appears.
2. Click **Create Basic Task**. The Create Basic Task Wizard appears.

Figure 46: Create Basic Task Wizard

Create a Basic Task Wizard

Create a Basic Task

Use this wizard to quickly schedule a common task. For more advanced options or settings such as multiple task actions or triggers, use the Create Task command in the Actions pane.

Trigger

Action

Finish

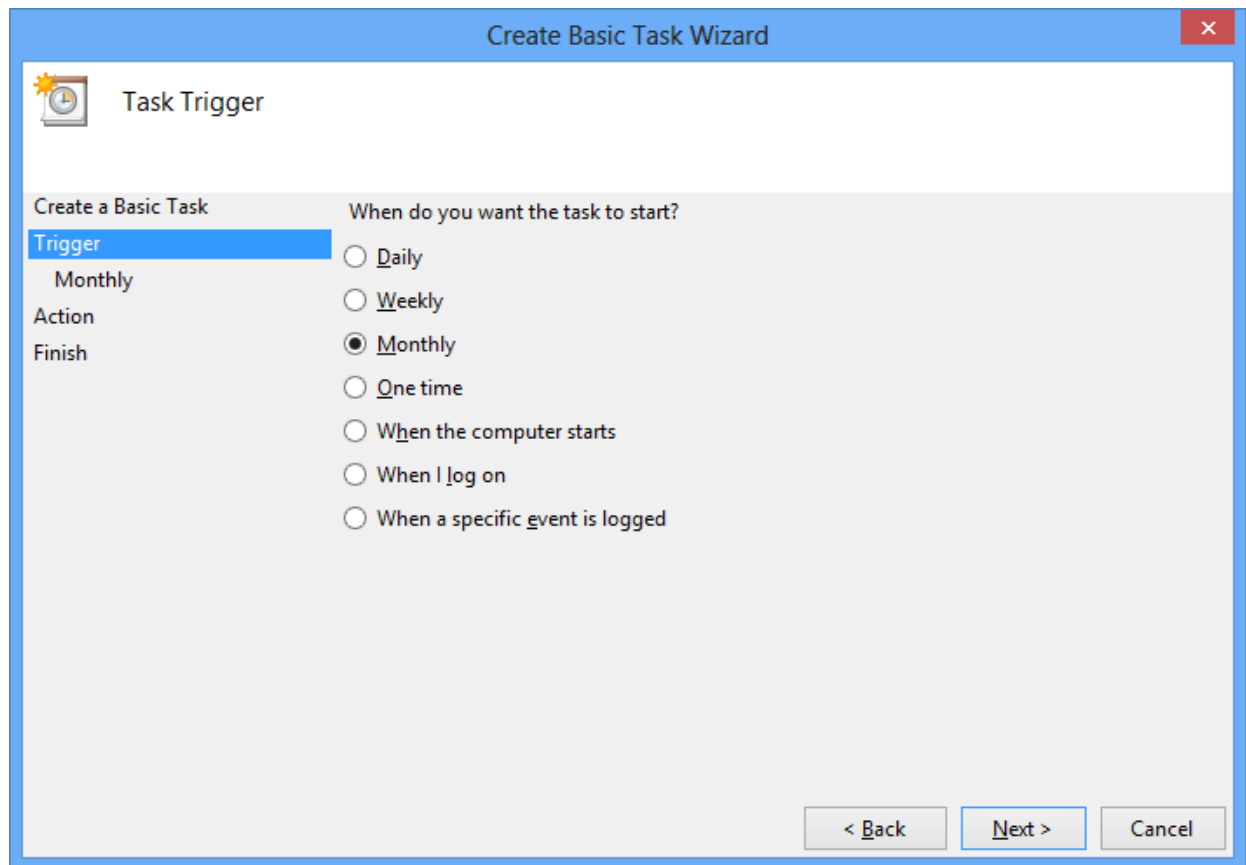
Name: Monthly DLLR Energy Report

Description:

< Back Next > Cancel

3. Enter a meaningful name for the task (for example, Monthly DLLR Energy Report). Click **Next**. The Trigger Window appears.

Figure 47: Task Trigger Window



4. Select **Monthly** for the Trigger. The Monthly window appears.

Figure 48: Monthly Window

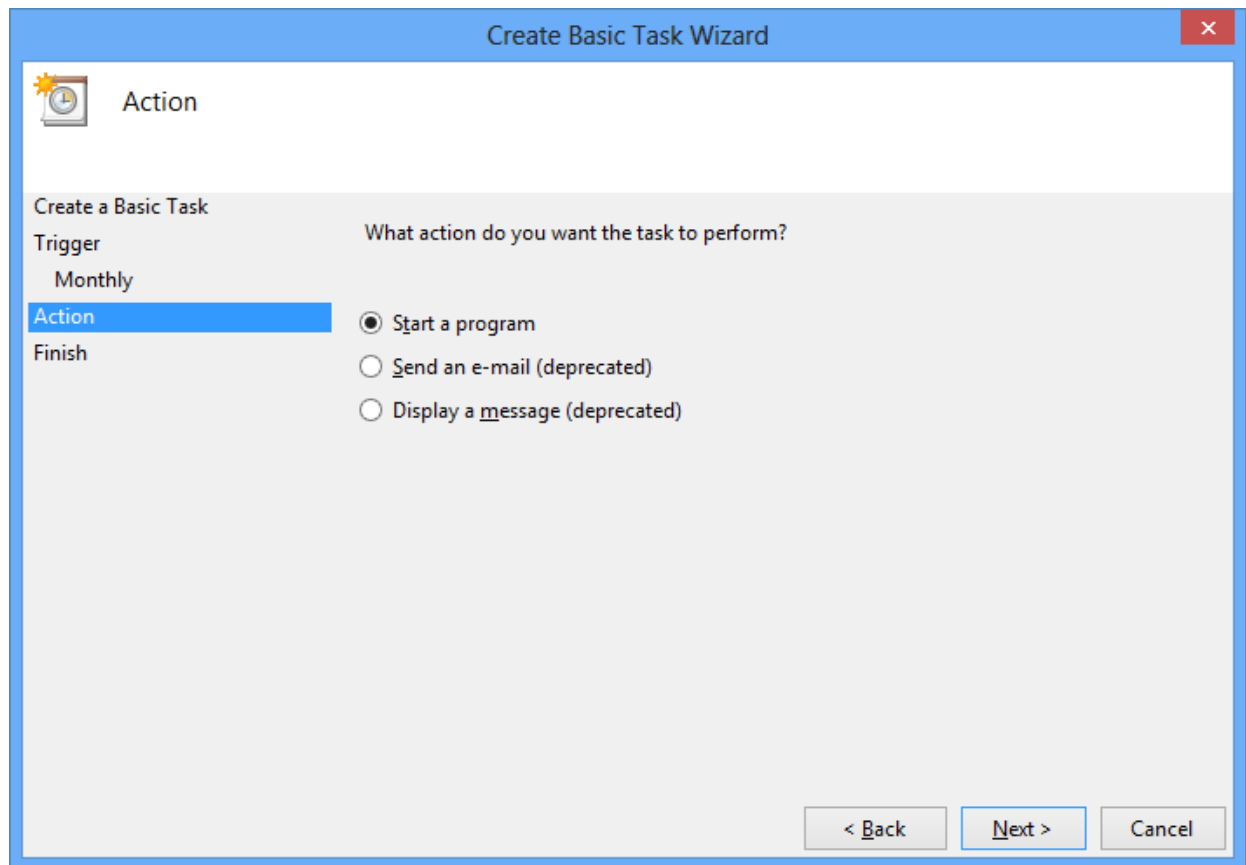
The screenshot shows the 'Create Basic Task Wizard' window with the 'Monthly' trigger selected. The window has a blue title bar and a sidebar on the left with icons for 'Monthly', 'Action', and 'Finish'. The main area contains the following fields:

- Start:** A date field set to '4/25/2013' and a time field set to '12:50:59 PM'. There is a checkbox for 'Synchronize across time zones' which is currently unchecked.
- Months:** A dropdown menu showing 'January, February, March...'.
- Days:** A radio button is selected, followed by a text field containing the number '9'.
- On:** Two empty dropdown menus.

At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

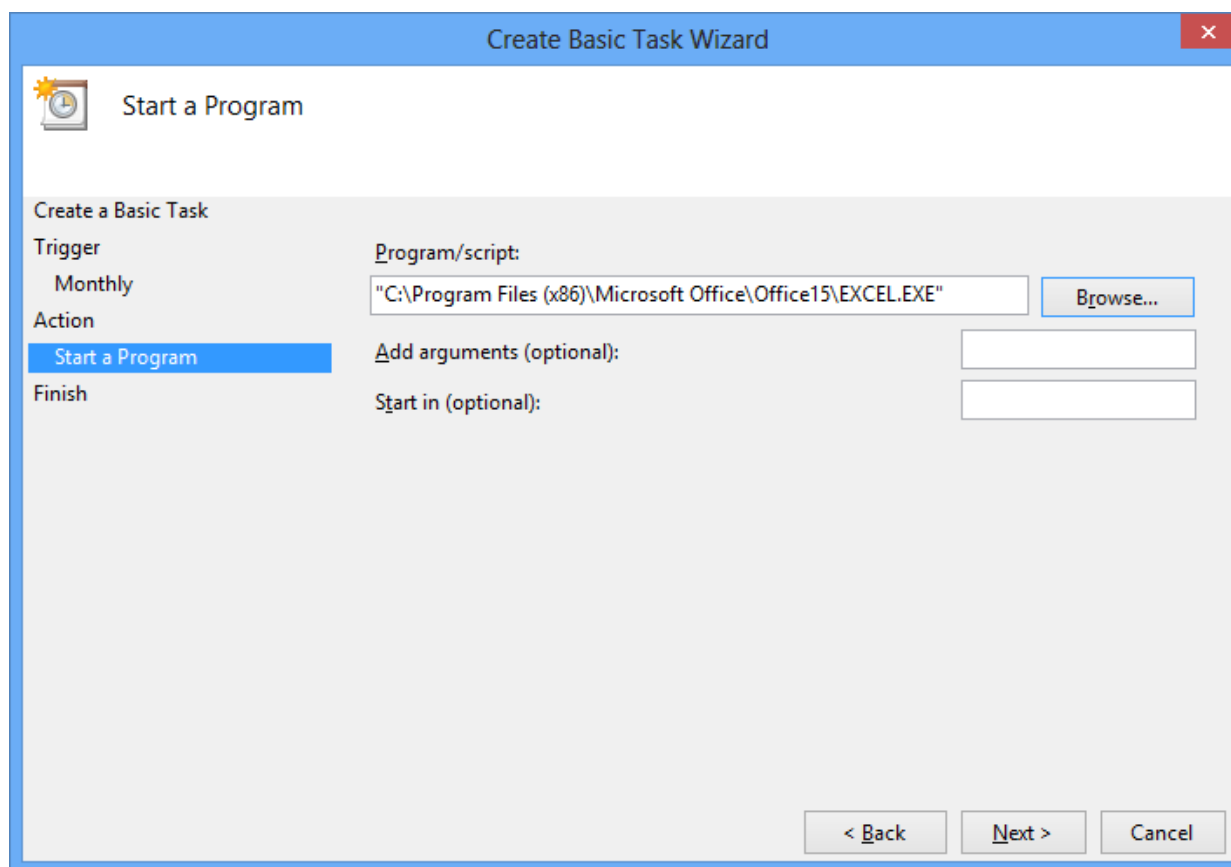
5. Select the time and day. For example, if your DLLR energy report is based on a Custom Date range of mm/09/yy–mm/08/yy, then choose the task to run on Day 9.
6. Click **Next**. The Action Window appears.

Figure 49: Action Window



7. Click **Start a program**.
8. Click **Next**. The Start a Program window appears.

Figure 50: Start a Program



9. Click **Browse** to choose the directory path of the appropriate Excel software from the file system.
10. In the Add arguments field, add the directory path of the DLLR example in quotations.
Note: Microsoft Office 2013 does not support the use of the DLLR example.
11. Click **Next**. The Finish window appears.

Figure 51: Finish Window

The screenshot shows the 'Create Basic Task Wizard' window with the 'Summary' tab selected. The window has a blue title bar with the text 'Create Basic Task Wizard' and a close button. On the left, there is a sidebar with icons for 'Create a Basic Task', 'Trigger', 'Monthly', 'Action', 'Start a Program', and 'Finish' (which is highlighted in blue). The main area displays the task details: 'Name: Monthly DLLR Energy Report', 'Description:' (with a large empty text box), 'Trigger: Monthly; At 12:50 PM on day 9 of January, February, March, April, starting 4/', and 'Action: Start a program; "C:\Program Files (x86)\Microsoft Office\Office15\EXCEL.EX"'. Below these fields, there is a checked checkbox labeled 'Open the Properties dialog for this task when I click Finish' and a note: 'When you click Finish, the new task will be created and added to your Windows schedule.' At the bottom right, there are three buttons: '< Back', 'Finish' (highlighted in blue), and 'Cancel'.

Create Basic Task Wizard

Summary

Create a Basic Task

Trigger

Monthly

Action

Start a Program

Finish

Name: Monthly DLLR Energy Report

Description:

Trigger: Monthly; At 12:50 PM on day 9 of January, February, March, April, starting 4/

Action: Start a program; "C:\Program Files (x86)\Microsoft Office\Office15\EXCEL.EX"

☒ Open the Properties dialog for this task when I click Finish

When you click Finish, the new task will be created and added to your Windows schedule.

< Back Finish Cancel

12. Select the check box for **Open the Properties dialog for this task when I click Finish**.
13. Click **Finish**. The Properties dialog box appears.

Figure 52: Properties Dialog Box

Monthly DLLR Energy Report Properties (Local Computer)

General Triggers Actions Conditions Settings History (disabled)

Name: Monthly DLLR Energy Report

Location: \

Author: Johnson Controls

Description:

Security options

When running the task, use the following user account:

Johnson Controls [Change User or Group...](#)

☐ Run only when user is logged on

☒ Run whether user is logged on or not

☐ Do not store password. The task will only have access to local computer resources.

☐ Run with highest privileges

☐ Hidden

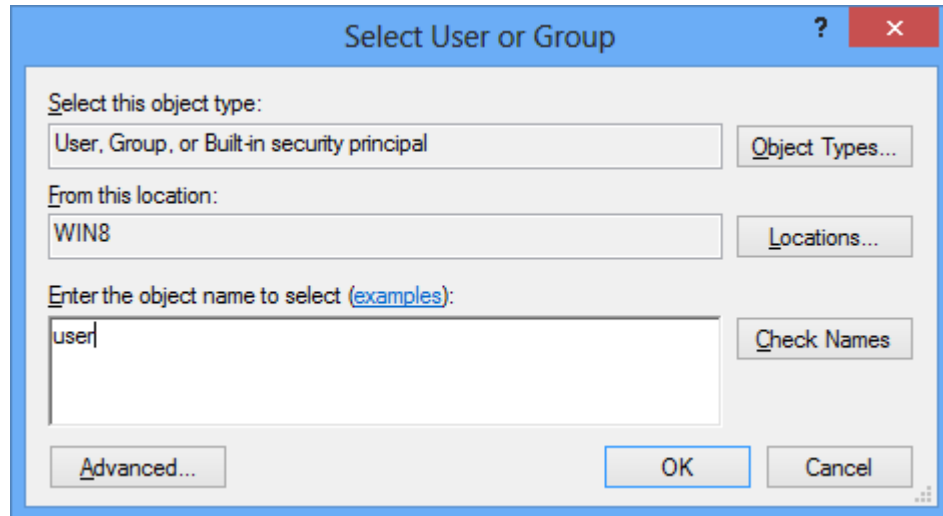
Configure for: Windows Vista™, Windows Server™ 2008

OK Cancel

14. Click **Run** whether user is logged on or not. If you would like to change the user or group, follow these steps:

- a. Click **Change User or Group**. The Select User or Group window appears.

Figure 53: Select User or Group



- b. Select the user or group and click **OK**. A credentials window appears.
 - c. Enter the credentials and click **OK**. The Properties box reappears.
15. Click **OK**. The Task Scheduler closes.

Using the Scheduler Service from the System Tray

1. Right-click the Export Utility icon in the system tray.
2. Select an option using the information in [Table 23](#).
3. Manage schedules using the options in [Table 17](#).

Note: Some functionality is not available in the Scheduler service from the system tray. To access all of the functionality, log in to Export Utility (see [Logging in to the Metasys System through Export Utility](#)).

Note: The Start Scheduler and Stop Scheduler options are dimmed (not available). To enable these options, exit the Scheduler service and restart the Metasys Export Utility Schedule Controller by selecting the Run as Administrator option. If the Scheduler service is currently running, the Stop Scheduler option is available; if the Scheduler service is currently stopped, the Start Scheduler option is available.

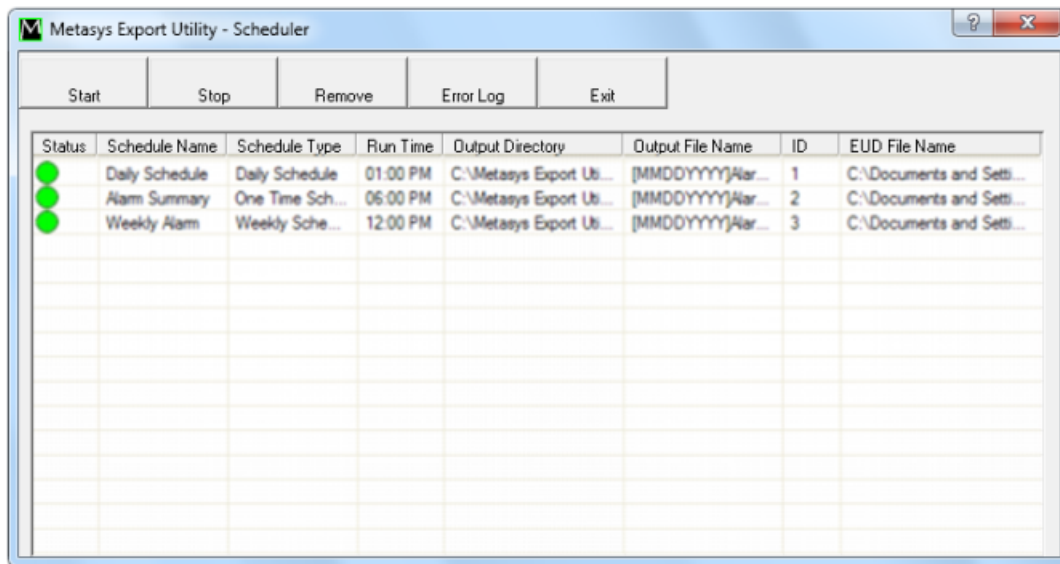
Table 23: Scheduler System Tray Menu

Menu Item	Functionality
Start Scheduler	Starts the Scheduler service. The system tray icon border is green.  Note: This option appears dimmed when the Scheduler service is already running.
Stop Scheduler	Stops the Scheduler service. The system tray icon border is red.  Note: This option appears dimmed and is not accessible when the Scheduler service is not running.

Table 23: Scheduler System Tray Menu

Menu Item	Functionality
View Schedule	Opens the Scheduler service with View Only access. See Figure 54 . Note: This option appears dimmed and is not accessible when the Scheduler service is not running. Start the Scheduler service (Start Scheduler) to activate this menu item.
Exit	Makes the icon disappear from the system tray, and access is no longer available. Before exiting, a dialog box appears asking if you want to exit the Schedule Controller and warns that exiting stops all scheduling. Note: To manually start and stop the Scheduler service, go to Control Panel > Administrative Tools > Services. Right-click MSEASchedulerService and select Start or Stop as needed. Go to Control Panel > System and Maintenance > Administrative Tools > Services or go to Control Panel > System and Security > Administrative Tools > Services .

Figure 54: Scheduler - View Only Access from System Tray Icon



Displaying the Help File, About Window, or Exiting Export Utility

- On the Help menu, select **Help**. The Help file for Export Utility appears. Click the **X** in the upper-right corner of the window to close.
- On the Help menu, select **About**. The About *Metasys* Export Utility window appears. This window shows the version of Export Utility. Click the **X** in the upper-right corner of the window to close.
- On the File menu, select **Exit**. Export Utility closes.

Troubleshooting

Error Messages, Problems, and the Error Log

Error messages either appear as a dialog box when running the **Export Now!** portion of Export Utility or as entries in the Error Log.

Tip: When using the Scheduler, check the Error Log regularly.

Table 24: Error Messages/Problems

Error Message/Problem	Description/Solution
Error in exporting data. Out of memory exception.	Appears when trying to export data. You can get around it by picking a smaller data set or by increasing RAM.
A new schedule has been created. Start the Scheduler to run the schedule.	Appears when the Scheduler service is not running and you add a new schedule. Start the Scheduler service to run the schedule.
Could not establish communication with the Metasys Site Director.	Appears when Export Utility cannot communicate with the <i>Metasys</i> system. Make sure the Site Director and login credentials you specified are correct and that the Site Director is reachable over the network.
Could not locate the definition file, 'eud filename and path'.	Appears when the definition file cannot be found. Make sure the file exists and is in the expected location; if it is not, recreate the definition file.
Could not locate the schedule file, 'schedule filename and path'.	Appears when the schedule file, <code>scheduleinfo.xml</code> , cannot be found. The default location is <code>C:\ProgramData\Johnson Controls\MetasysIII\MEU\xml</code> . If the schedule file is not found and schedules exist, the Scheduler automatically recreates this file. If the file is not copied automatically, copy and paste the <code>scheduleinfo.xml</code> file from the installation product disk.
Could not read the definition file, 'eud filename and path'.	Appears when the definition file becomes corrupt or is being used by another person or program. Close the application that is using the <code>*.eud</code> file or recreate it.
Could not read the schedule file, 'schedule filename and path'.	Appears when the schedule file defined above becomes corrupted or is being used by another person or program. Close the application that is using the <code>scheduleinfo.xml</code> file, or delete it so that the Scheduler can recreate it. If it is not copied automatically, copy and paste the <code>scheduleinfo.xml</code> file from the installation product disk.
Error occurred in retrieving user properties.	Appears when the time difference between the Export Utility computer and the Site Director is more than 5 minutes. Adjust the time accordingly.
Failed to create 'File Type' output file.	Appears whenever Export Utility has failed to create an output file.
Failed to save 'File Type' output file. 'Reason'.	Appears when Export Utility cannot save an output file. Reasons: 1. The Network drive not accessible. The output file cannot be written because the shared network drive cannot be accessed. Check the connection to the shared drive and try again. 2. The Windows user does not have sufficient rights. The Windows user does not have rights to write to the shared drive. Log in to the Windows operating system with the appropriate rights to write to the shared drive.
Log in to Metasys failed.	Appears when your login to the <i>Metasys</i> system has failed. Check that the user name and password are correct and that you are logging in to the correct <i>Metasys</i> system supervisory device.

Table 24: Error Messages/Problems

Error Message/Problem	Description/Solution
Error in exporting data. Incomplete Report. Reason: While retrieving data, at least one web method to the <i>Metasys</i> system failed. The output file is incomplete. You must make sure that all devices within the <i>Metasys</i> system are "Online" and re-run the application to retrieve all data. The following devices could not be reached: <Site Director Name:IP Address>	Appears when one or more <i>Metasys</i> devices that report to the Site Director are not reachable. Make sure each device is online to the Site Director to ensure that you export a complete set of data.
Logon failure: account currently disabled.	Appears when the <i>Metasys</i> system account is disabled.
Logon failure: account logon time restriction violation.	Appears when a restriction on login time is applied.
Logon failure: the specified account password has expired.	Appears when the <i>Metasys</i> system account has expired.
Logon failure: unknown user name or bad password.	Appears when the wrong user name or password is entered.
Please enter valid port number where MSEA service is running.	Appears when you enter an invalid port number after the IP address in the Site Director field of the Log In window. Verify the port number and try again according to the steps in Logging in to the Metasys System through Export Utility .
Retry attempt of web method call to Metasys failed.	Appears when an immediate second attempt is tried to extract data from the <i>Metasys</i> system has failed. You must try later manually.
Scheduler is already running.	Appears when the Scheduler service is running and you attempt to start it again.
Scheduler is not installed. Please install it.	Appears when you log in to Export Utility or launch the Schedule Controller (system tray icon) and the Scheduler service is not installed because you manually uninstalled the Scheduler or did not choose to install it during the installation process.
Scheduler is not running.	Appears when the Scheduler service is stopped and you attempt to stop it again.
The referenced account is currently locked out and may not be logged on to	Appears when the <i>Metasys</i> system account is locked.
Web method call to Metasys failed.	Appears when you are already communicating to the <i>Metasys</i> system and successfully logged in, but cannot retrieve data from the system. The Export Utility pauses and tries again.
Class does not support automation or does not support expected interface.	Appears when you do any of the following: • Install Export Utility on a computer that already has Export Utility installed (as in an upgrade). • Do not take the proper steps as documented in the <i>Export Utility Installation Instructions (LIT-12011527)</i>. • Attempt to load an example file and retrieve data. To resolve this problem, use the <i>Export Utility Installation Instructions (LIT-12011527)</i> to reinstall Export Utility.

Table 24: Error Messages/Problems

Error Message/Problem	Description/Solution
Error in exporting data. Incomplete Report. Reason: While retrieving data, at least one web method to the <i>Metasys</i> system has failed. The output file is incomplete. You must make sure that all devices within the <i>Metasys</i> system are "Online" and re-run the application to retrieve all data.	Appears when: - The Ready Access Portal software is installed on a stand-alone computer, not on an Application and Data Server (ADS)/Extended Application and Data Server (ADX) or ODS. There is no ADS/ADX or ODS in the configuration. - The Site Director NxE is configured to report alarms to the Ready Access Portal computer. - Export Utility is used to browse to the NxE to gather trend data. With this configuration, the NxE attempts to communicate with a nonexistent Ready Access Portal ADS/ADX, or ODS computer. Because there is no ADS/ADX or ODS in this particular scenario, you cannot use Export Utility to gather this report data.
Error in exporting data. Failed to create 'Excel' output file, 'C:\Metasys Export Utility Reports\...'. Reason: Exception from HRESULT: 0x800A03EC	Appears when the directory path, including the file name, exceeds the defined character limit. The path is limited to a maximum of 260 characters for an export to be successful. For Microsoft Excel, this path is limited to 218 characters.
You cannot start or stop the <i>Metasys</i> Export Utility Scheduler from the taskbar icon. The start and stop options appear dimmed.	Occurs if you are logged in as a Windows user who does not have administrative rights. You have two options: (1) exit the Scheduler and restart the <i>Metasys</i> Export Utility Schedule Controller by selecting the Run as Administrator option, or (2) use the Windows Services window to start the MSEASchedulerService.
An error message appears stating that the application failed to create the Excel output file.	In this case, Microsoft Excel cannot open or save any more documents because there is not enough available memory or disk space. This scenario often occurs on a virtual machine setup. To work around this issue, use On Demand Export instead of MSEASchedulerService. You can also free up memory and disk space by doing the following: - To make more memory available, close workbooks or programs you no longer need. - To free disk space, delete files you no longer need from the disk to which you are saving Excel reports.
You cannot find log files for troubleshooting.	Log files can be found in C:\ProgramData\Johnson Controls\MetasysIII\MEU\Log. If they are not there, logging may not be turned on. To configure advanced logging, you must turn on logging by editing the MEUconfig.xml file. Turning on logging gives you the ability to see if there are any exceptions, errors, or important events (such as Excel file created) during normal operation. To enable logging for the <i>Metasys</i> Export Utility: - In the Export Utility directory, open the MEUConfig.xml in an XML editor and find the enableLogging tag (<enableLogging>). - Change the tag value from false to true. (<enableLogging>true</enableLogging>) Note: The location of the MEUConfig.xml file is in C:\ProgramData\Johnson Controls\MetasysIII\MEU. When you are finished troubleshooting, turn off logging again (by changing the enableLogging tag back from true to false). If you do not turn logging back off, the application continues to write and save log files, which uses memory and disk space.

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