

Overview, Benefits, Installation, and Configuration

For HP Report Generation Plug-in 3.1



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Overview

HP Report Generation Plug-in 3.1 (RGP) is an application plug-in for HP Web Jetadmin that provides advanced reporting capabilities for printers managed via HP Web Jetadmin. Once installed into HP Web Jetadmin, RGP can easily collect, store, and display peripheral, supplies, and user data to better manage your printing resources and your budget. With RGP 3.1, you can generate reports on printer usage (including number of pages printed, scanned, copied, and faxed), track color or black-and-white usage, track simplex and duplex usage, track media size usage, track supplies usage, track error log histories and trends, and track printer usage by user and application. RGP 3.1 can automatically generate these reports that can then be viewed online or e-mailed to you or saved to disk automatically.

RGP version 3.1 is specifically for HP Web Jetadmin 8.1. It is not supported with any versions of HP Web Jetadmin prior to 8.1.

Additional information and related white papers on HP Report Generation Plug-in can be found at http://www.hp.com/go/wja_reports.

- Streamline the budget process. The wide combination of reports gives you all the information you need to plan and budget for your imaging and printing environment.

New Features

Here are the main new features added for this release of RGP:

- New algorithm for insuring page count accuracy
- New Simplex/Duplex By User reports
- New Supplies Use report
- New Generic Supplies Ordering report
- New Schedule Save to File function
- Ability to modify content of email message for an emailed report
- Ability to display HP Web Jetadmin Custom Fields in a report
- Ability to automatically reconnect to the database if it senses it has been disconnected
- Generates an email to the database administrator if it cannot reconnect to the database
- Support for Microsoft SQL Server 2005
- Improved Usability and Performance

Other features carried over from RGP 3.0 include the ability to track printer usage by job type, by user, and by application. Also available are reports for HP SureSupply Ordering and Generic Supplies Ordering as well as the ability to show Outgoing and Incoming Fax Counts, Engine Page Count, Install Date, and System Uptime. RGP 3.1 continues to support Windows Authentication and Named Instances for Microsoft SQL Server.

Types of Reports Available

HP Report Generation Plug-in 3.1 offers many report types. Media Utilization offers various page-count-related reports. Supply Management offers various consumables-related reports. Inventory offers four types of inventory-related reports. Error Log offers three types of error history-related reports. By-User Tracking offers nine types of reports for capturing by-user and application data.

Media Utilization

- Device Pages : Color/Black and White : By Reporting Period – Shows color and black and white page counts along with Total Page Count
- Color/Black and White : By Device : Time Interval Summary – Summary report for Color, Black and White, and Total Page Counts
- Device Pages : Simplex/Duplex : By Reporting Period – Shows single and double-sided printing usage
- Simplex/Duplex : By Device : Time Interval Summary – Summary report for single and double-sided printing usage

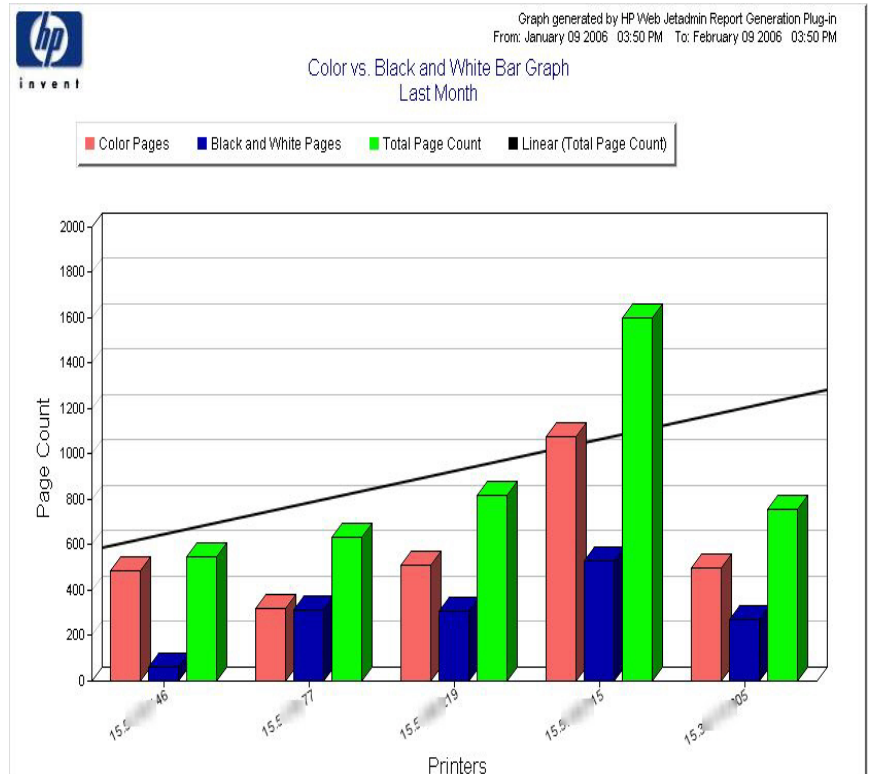


Figure 2. Sample of Color/Black and White Graph

- Device Pages : Media Size : By Reporting Period – Shows media size (Letter, Legal, A4, A3, etc.) usage
- Media Size : By Device : Time Interval Summary – Summary report for media size
- Device Pages : Job Type : By Reporting Period – Shows job type (Copy, Scan, Digital Send, and Fax) usage
- Job Type : By Device : Time Interval Summary – Summary report for job type
- Device Pages : Fax : By Reporting Period – Shows incoming and outgoing fax pages and fax jobs
- Fax : By Device : Time Interval Summary – Summary report for fax usage
- Device Units : Media Usage : By Reporting Period – Shows units of media usage based on a reference of Letter or A4 equaling 1.0 unit, with other media sizes being a factor of the Letter/A4 unit. For example, Legal equals 1.3 units and A3 equals 2.0 units.
- Media Usage : By Device : Time Interval Summary – Summary report for media usage
- Device Pages : Custom Page Count : By Reporting Period – Shows a customized report that includes user-defined content

Supply Management

- Device Detail : Replacement Forecast : By Supply – Shows an Estimated Replacement Date, indicating when a supply will need replacing
- Device Detail : Forecast : By Supply – Shows an Estimated Quantity Forecast, indicating how many supplies of a specific type will be needed in a future time period (based on usage in the same previous time period)
- Forecast : By Supply : Time Interval Summary – Summary report for Estimated Quantity Forecast
- Typical Replacement Rate : By Supply : Time Interval Summary – Summary report showing the replacement rate for specific supplies
- HP SureSupply Ordering : By Supply : Time Interval Summary – Generates an email report that can be used to automatically forward a shopping list of needed supplies to the HP SureSupply ordering system
- Generic Supplies Ordering : By Supply : Time Interval Summary – Generates an email report that can assist in manually entering needed supplies into a generic ordering system.
- Device Detail : Supplies Use : By Supply – Shows a history of how supplies have been used over time.

Inventory

- Device Changes : Asset Tracking : Time Interval Summary – Shows an inventory report indicating whether a printer is still available on the network
- Device Detail : Accessory Changes : By Accessory – Shows a list of accessories specific to a printer, along with status of the accessory
- Device Detail : By Device : Current Status – Shows the status of each device at the time the data was collected including host name, model number, serial number, and installation date.
- Device Detail : By Model : Current Status Summary – Shows an inventory report listing the devices currently available on the network in the reporting group.

Error Log

- Device Detail : Error Log : By Error Type – Shows Error Type, specific Code, Page Count, and date error data was collected
- Device Detail : Error Type : By Reporting Period – Shows Printer Error, Paper Jam, and Service Error counts per printer
- Error Type : By Device : Time Interval Summary – Summary report Error Type

By-User Tracking

- Device Pages : Color/Black and White : By User – Shows each printer with all the various users that have printed to it, capturing Color, Black and White, and Total Page counts for each user
- Device Pages : Simplex/Duplex : By User – Generates a report on the total number of simplex (1 side) or duplex (2 sides) pages processed by a user.

- Device Pages : Media Size : By User – Shows each printer with all the various users that have printed to it, capturing various media size (Letter, Legal, Envelope, A3, and A4) page counts for each user
- Device Pages : Job Type : By User – Shows each printer with all the various users that have printed to it, capturing job type (Print, Copy, Digital Send, and Incoming Fax) page counts for each user
- User Pages : Color/Black and White : By Device – Shows each user with all the various printers they printed to, capturing Color, Black and White, and Total Page counts the user sent to each printer
- User Pages : Simplex/Duplex : By Device – Generates a report on the total number of simplex (1 side) or duplex (2 sides) pages processed by a device.
- User Pages : Media Size : By Device – Shows each user with all the various printers they printed to, capturing various media size (Letter, Legal, Envelope, A3, and A4) page counts the user sent to each printer
- User Pages : Job Type : By Device – Shows each user with all the various printers they printed to, capturing job type (Print, Copy, Digital Send, and Incoming Fax) page counts the user sent to each printer
- Application : By User : Time Interval Summary – Summary report of application names and users, showing the number of pages each user has printed using each application.

Functional Overview

RGP is a downloadable plug-in for HP Web Jetadmin, providing extensible functionality for creating printer usage reports (as described previously). It is very dependent on HP Web Jetadmin, taking advantage of the devices already discovered by HP Web Jetadmin and using any defined HP Web Jetadmin Device Groups. The basic function of RGP is to periodically capture usage data directly from networked printers, store that data over time in a user-supplied database, and then pull the stored data from the database to generate a specific report over a period of time. The high-level steps required to actually create a report are:

1. Install RGP
2. Configure RGP to use a supported database application
3. Configure a few specific parameters (email server, time format, etc.)
4. Set up a Data Collection schedule to occur on a regular interval for collecting specific printer usage data (page counts, supplies usage, asset inventory, error log info, and/or by-user data)
5. Allow data collection to occur at least a few times before attempting to create a report
6. Create a report (either in a table or graph format) based on the previously collected data

This report can be viewed, printed, emailed, and/or exported. Report parameters can even be set up to allow for a report to be emailed or saved to file on a recurring interval.

These steps are expanded below in detail to help you understand how RGP works, and to show you how easy it is to actually create a report.

Installing RGP

New Installation

RGP is readily available to download and uses HP Web Jetadmin's Product Update feature for installation. Follow these steps to install RGP:

1. Run HP Web Jetadmin 8.1
2. Select Product Update from the Navigation tree (see Figure 3)
3. Under Product Update, select Install

4. Select Report Generation and Database Connector... from the list of Available Updates. You may need to click the Check HP Web Site for New Updates button to refresh the Available Updates list.*
5. Click Install

Wait for the success message to be displayed. This process may take a few minutes to complete.

*: If the HP Web Jetadmin server does not have access to the Internet, HP Web Jetadmin will not be able to display HP Report

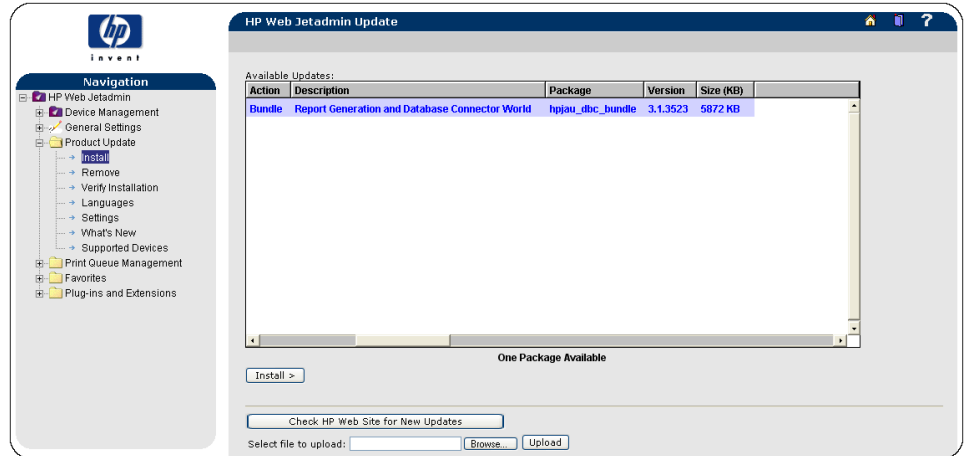


Figure 3. Installation

Generation Plug-in in the Available Updates list nor automatically download it from the web. In this case, you will need to browse to http://www.hp.com/go/wja_components, manually download RGP (be sure to save it as a .fpb file, not as a .txt file), and then under Product Update, browse to and upload the file before clicking Install.

Upgrade

If you are upgrading from a previous version of HP Web Jetadmin to HP Web Jetadmin 8.1, and already have a previous version of RGP installed, the upgrade process will automatically install RGP 3.1. Once installed, RGP will appear at the bottom of the HP Web Jetadmin Navigation tree. This assumes the HP Web Jetadmin server has Internet access. If not, you will have to manually install RGP as described in the previous section.

Preliminary Configuration Steps

Once RGP is installed, it is ready to be configured. To do this, select Report Generation from the HP Web Jetadmin Navigation tree. From here, you can display the Welcome page (for a link to White Papers and other support information) or display the Preferences page (to configure the Time Format and Date Format used in reports and the Email From Address used for reports that are emailed). (See Figures 4 and 5.)

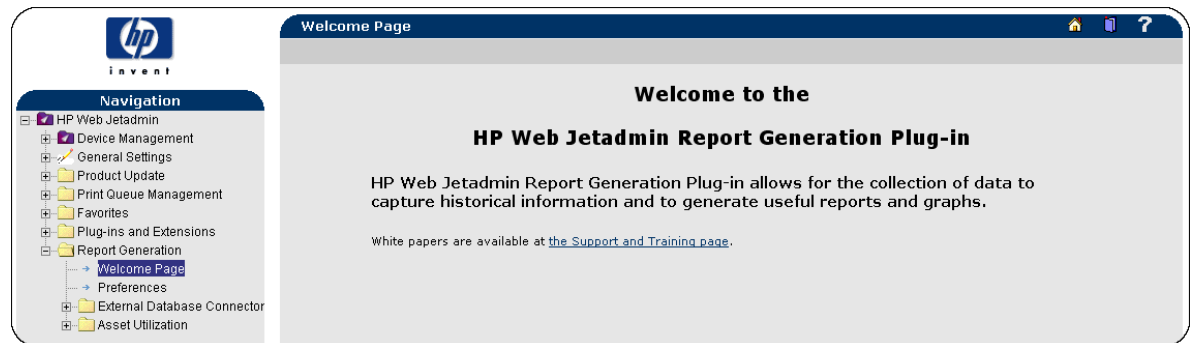


Figure 4. Welcome Page

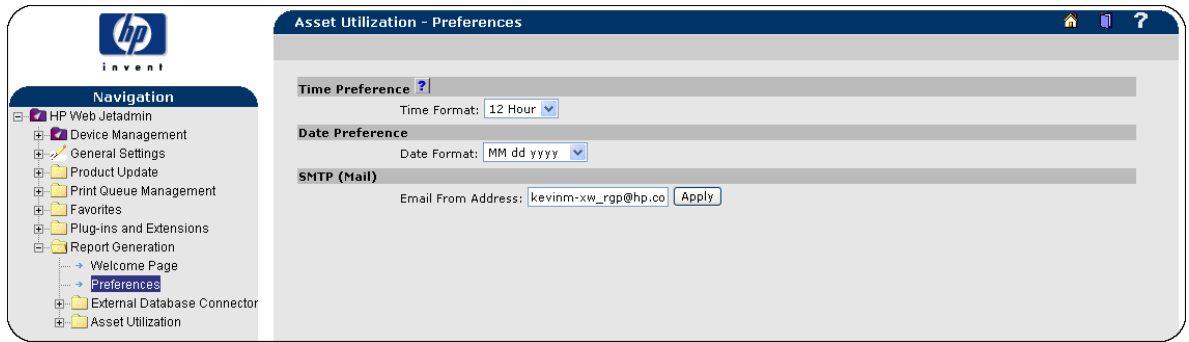


Figure 5. Preferences Page

Database Configuration

After the preliminary configuration steps are complete, the next key element in setting up RGP is to configure a database connection. RGP is dependent on being connected to an external database for storing and retrieving data. As mentioned under Functional Overview, each time RGP collects usage data from a printer, it stores the collected data in an external database. RGP then uses that data to create reports and graphs based on a period of time.

RGP does not use the proprietary file structure (sometimes called a Cache) used by HP Web Jetadmin to gather printer data. HP Web Jetadmin collects data from devices and stores only the most recent data collected in its Cache. No historical data is kept. RGP will perform data collections on a scheduled basis, storing all the data from each data collection, thus providing access to historical data. It does this by storing the data in an external database. Therefore, it is absolutely necessary to establish a connection to one of the RGP-supported database management systems (described below).

To manage the connection to an external database management system, an additional component is installed at the same time RGP is installed. This component, HP Database Connector Plug-in, must be configured to connect to the appropriate database management system before any data collection schedules or reports can be created. The following database management systems are supported by RGP: Microsoft Access, Microsoft SQL Server, Microsoft MSDE, and MySQL Server. The specific versions are listed under System Requirements at the end of this White Paper.

HP Database Connector Plug-in allows you to quickly and easily connect to a database management system. Once connected, RGP will create the necessary data tables specific to its use. For Microsoft Access, RGP will create a specific MDB file, hpjdb.mdb. For Microsoft SQL Server, Microsoft MSDE, and MySQL Server, the RGP data tables will be created and maintained as separate and distinct database structures from any other database structure being managed by that database management system.

To configure and establish the database connection using HP Database Connector Plug-in, follow these steps:

1. From HP Web Jetadmin's Navigation tree, select External Database Connector from under Report Generation.

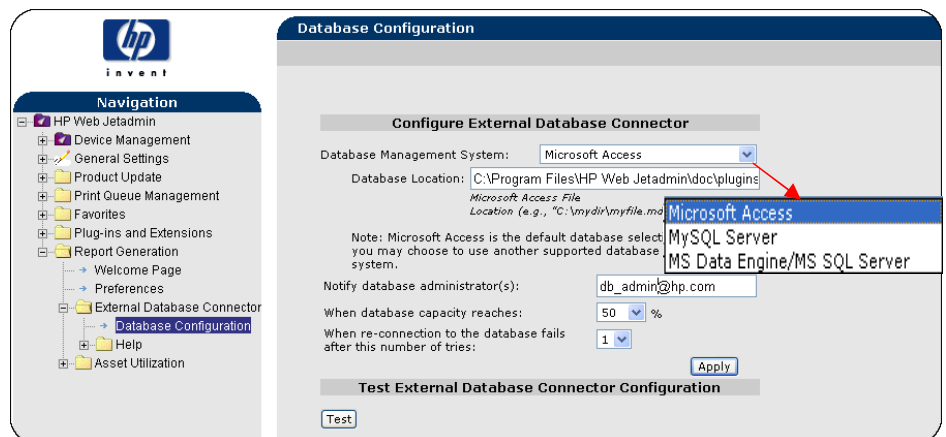


Figure 6. Database Configuration

2. Under External Database Connector, select Database Configuration. This will display the Database Configuration page (see Figure 6).
3. From the Database Management System drop-down list, select the desired database system to use.
4. Depending on the selected database system, you may have additional parameters to define.
5. You may also want to enter the email address of your database administrator, the desired database capacity value for notification, and the number of retries to attempt if the database gets disconnected. Having the database administrator email address defined will allow that person to receive a notification email if the database reaches the defined percent of capacity or if RGP cannot automatically re-connect to the database after sensing a disconnection.
6. Click Apply

If you get a 'successfully configured' message, RGP is ready for the next step, defining a data collection. If the database connection step fails, you may have a communication issue or a wrong parameter defined to access the database management system.

Note: Microsoft Access is the default database system selected. Because RGP takes advantage of the Microsoft Access components already included in the operating system of the PC, you do not have to actually install Microsoft Access itself for RGP to function. This makes configuring RGP very fast and simple if choosing Microsoft Access. However, Microsoft Access does have a 2GB limitation. It is great for smaller environments or if you just want to quickly perform some RGP tasks to see how it works. If you know you will be collecting data on many devices (greater than 500) or want to store all the collected data indefinitely, it is recommended that you use one of the supported Enterprise-level database management systems: Microsoft SQL Server or MySQL Server.

Define an RGP Data Collection Schedule

Once the External Database Connector is configured, the next step is to configure a Data Collection Schedule. Setting up the Data Collection Schedule is a critical step, allowing RGP to periodically collect and store printer usage data.

There are two different types of data collection that can be enabled in RGP. The first data collection type, Device Data Collection, is used to gather device specific data, including page counts, supply usage, error log data, and inventory data. Collecting this type of data will allow you to create reports in the following categories (as described previously under Types of Reports Available): Media Utilization, Supply Management, Inventory, and Error Log.

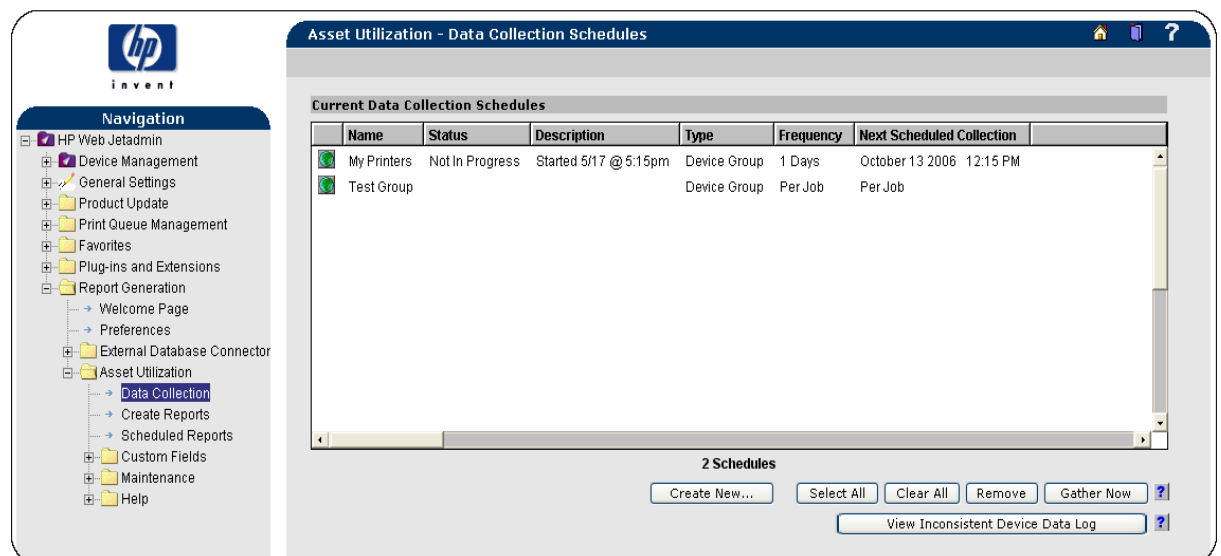


Figure 7. Data Collection

The other type of data collection is called User Data Collection. It is used to capture by-user and by-application data. Collecting this type of data will allow you to create reports in the following category (as described previously under Types of Reports Available): By-User Tracking.

To enable either type of data collection, follow these steps:

1. From HP Web Jetadmin's Navigation tree, double-click Report Generation
2. Under Report Generation, double-click Asset Utilization
3. Under Asset Utilization, click Data Collection. This will display any currently defined Data Collection Schedules and allows you to create new Data Collection Schedules (see Figure 7).
4. Click the Create New button to create a new Data Collection Schedule. This will display the Available Device Groups page, showing All Devices and any previously-defined HP Web Jetadmin Device Groups (see Figure 8).

5. Select the desired Device Group
6. To create a Device Data Collection Schedule, click the Schedule Device Data Collection button. This will display the Device Data Collection configuration page (see Figure 9), allowing you to create a schedule that will

capture device specific data, including page counts, supply usage, error log data, and inventory data. Enter the desired parameters to define the data collection and click OK.

7. To create a User Data Collection Schedule, click the Enable User Data Collection button (see Figure 8). This will display the User Data Collection configuration page (see Figure 9). Click the box for Enable User Data Collection. By clicking this box, you acknowledge that you will be collecting Personal Identifiable Information (PII). Click OK. This will allow you to capture by-user

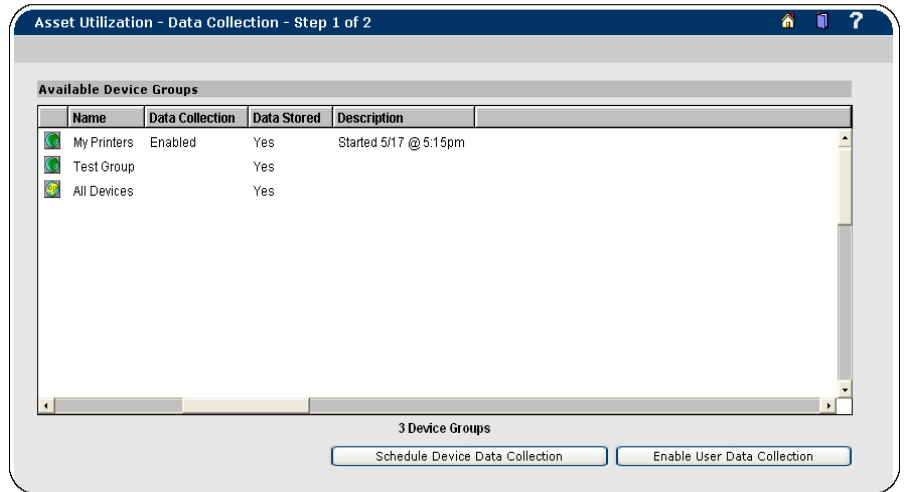


Figure 8. Create a Data Collection Schedule

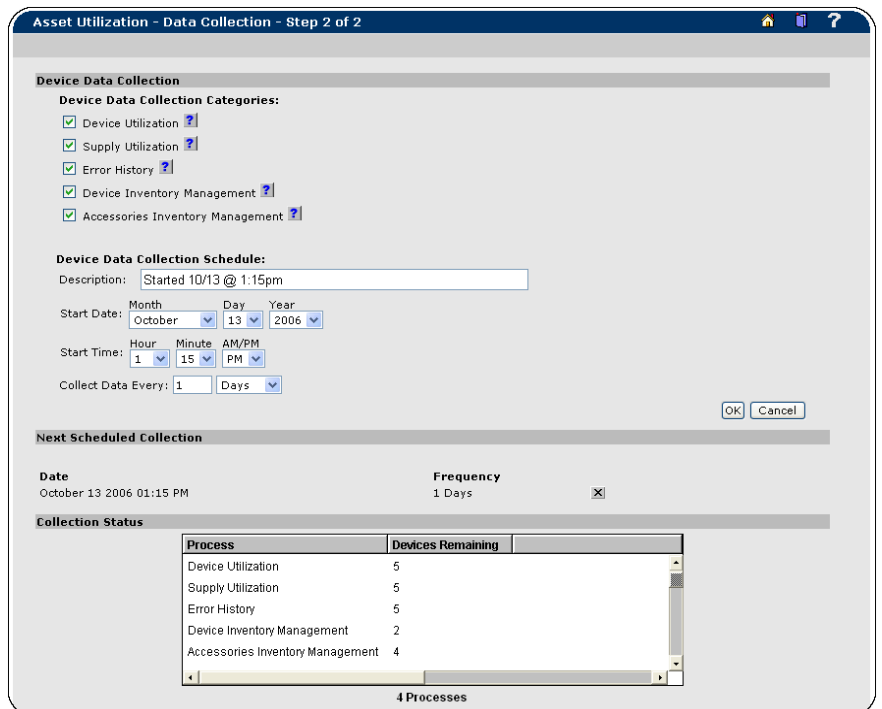


Figure 9. Configure Device Data Collection

data, based on a user's Windows logon credentials (see Figure 10).

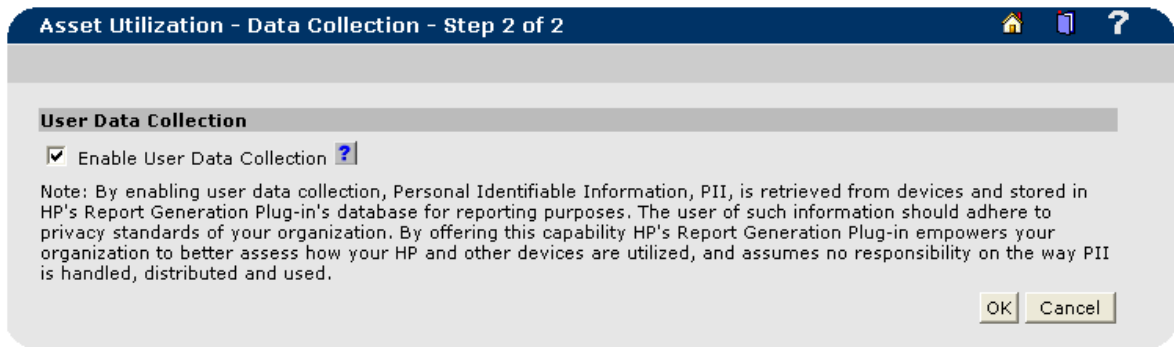


Figure 10. By-User Data Collection

Data collection is now enabled. You will need to allow Device Data Collection to occur at least a few times before attempting to create a report. This is because RGP creates these reports by calculating page count differentials captured in the database over time. In contrast, the User Data Collection happens in real time, with printers sending the by-user information to RGP each time a job is printed.

Create an RGP Report

Now that all the configuration of RGP has taken place, it is important to realize that a few data collections need to occur before a report can be created. For example, if your data collection is scheduled for a daily collection, you will need to wait 2 to 3 days for the data collections to occur before attempting to create a report. RGP needs data in the database from multiple data collections so that it can perform the required calculations in order to generate a report. Once this has happened, you will be able to create a report (either in a table or graph format). To do this, follow these steps:

1. From HP Web Jetadmin's Navigation tree, double-click Report Generation
2. Under Report Generation, double-click Asset Utilization
3. Under Asset Utilization, click Create Reports. This will display the Available Device Groups page, showing All Devices and any Device Groups that have had data collected (see Figure 11).

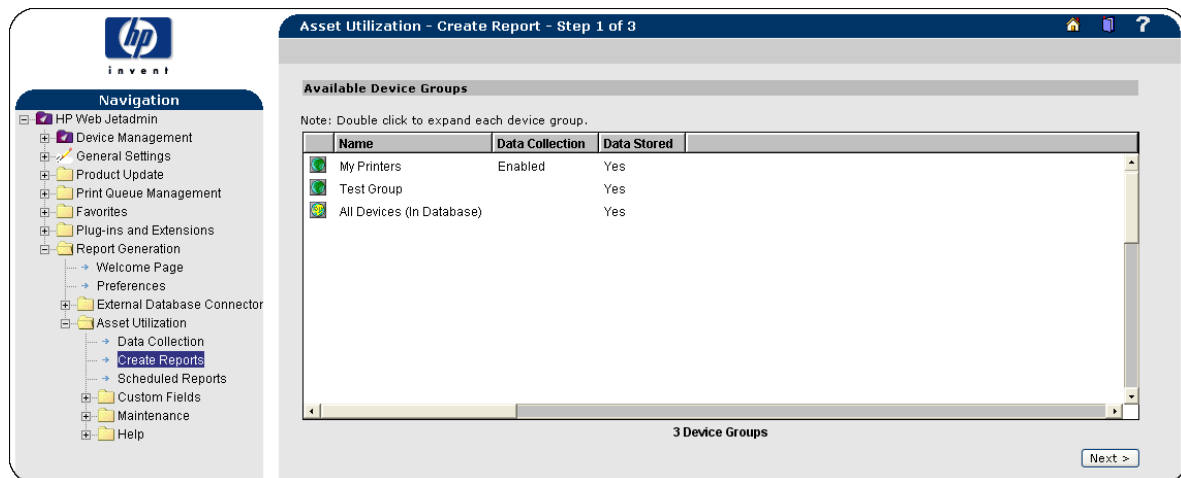


Figure 11. Create Reports

4. Select the desired Device Group and click Next. This will display the report configuration page, where you define the report to be created and any specific parameters for that report (see Figure 12).
5. Select the Report Type, define the Date Range, and then click the View Report/Graph button to create the desired report. Depending on the number of devices selected and the granularity of the Interval for the report, it could take several minutes to generate.

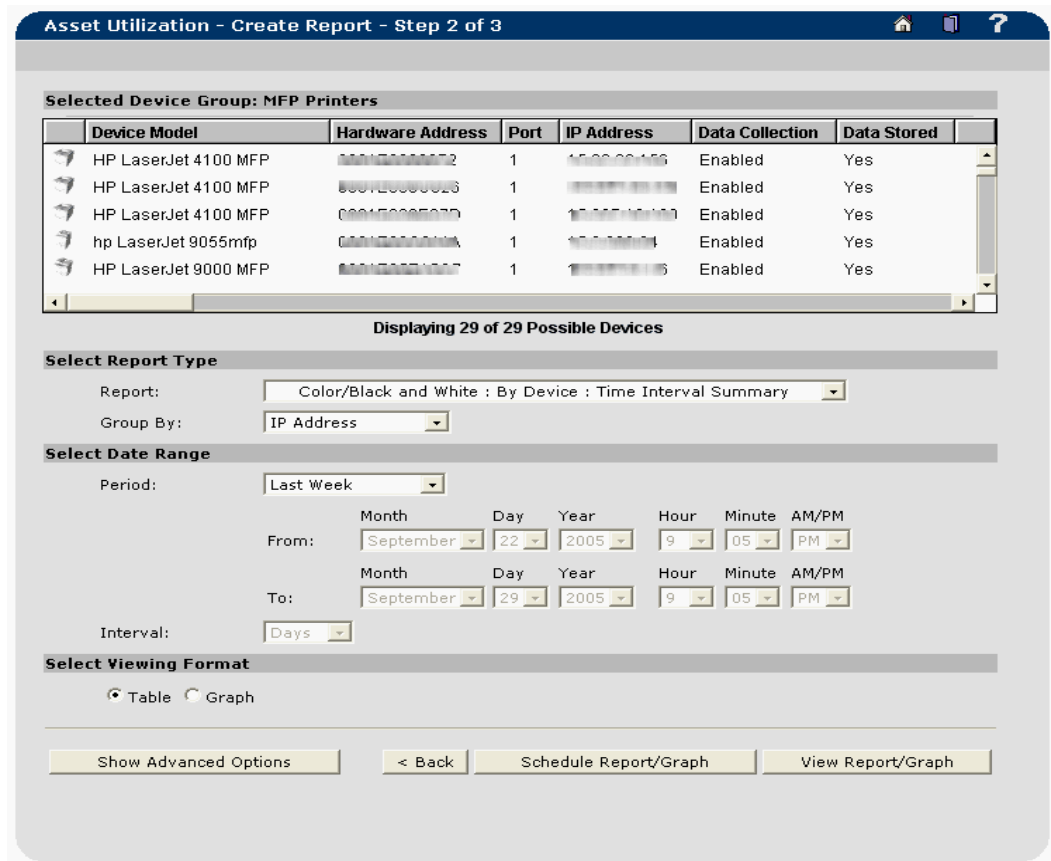


Figure 12. Configure a Report

6. Without having to create the report, you can choose to have it scheduled so that it will be either emailed or saved to file (or both) on a recurring interval by clicking the Schedule Report/Graph button.
7. Once a report is created, you can email it, export it (in HTML or CSV formats), or print it.

This covers just the basics for generating a report. There are many other options available by clicking the Show Advanced Options button (see Figure 12).

Summary

The information contained in this White Paper is really just a brief overview of the functionality available in RGP. As described earlier, there are many reports (and features) available to you. Additional features and functionality will be covered in other RGP White Papers. However, spending some time configuring and creating the various reports in RGP will definitely help you understand and realize the many benefits of RGP.

RGP offers powerful insight into your printing environment by providing a variety of reports, tracking everything from who uses color and how often they use it, to which printers are used most heavily, which tend to sit idle, and which have the highest uptime. It can e-mail reports listing the highest volume color users and predict when supplies will need to be replaced, so you can order supplies before running out. RGP even integrates into HP SureSupply for simplifying the consumables ordering process.

Knowing everything that's going on in your printing and imaging environment gives you the power to improve it. HP Report Generation Plug-in is truly an asset toward this goal, by maximizing your printer investment while reducing your total cost of ownership.

System Requirements for HP Report Generation Plug-in

RGP 3.1 requires HP Web Jetadmin 8.1 to be installed.

Recommended hardware requirements for all supported operating system platforms:

- PC with 2.4 GHz or greater processor (minimum processor of 1.0 GHz required)
- 512 MB RAM
- 100 MB available disk space - installer requirement

Supported Operating Systems

RGP 3.1 is supported with HP Web Jetadmin 8.1 installed on the following OS platforms:

- Windows Server 2003 – R2
- Windows XP Professional – Service Pack 2
- Windows 2000 Professional, Server, or Advanced Server – Service Pack 4

NOTE: RGP is not supported with HP Web Jetadmin installed on a Linux server.

Supported Browser

Only Microsoft Internet Explorer 6.0 is supported

Supported Devices

All networked HP and non-HP printers connected through HP Jetdirect print servers and standard MIB-compliant third-party network-connected printers are supported.

Supported Databases

- Microsoft Access 2003
- MySQL Server 5.0
- Microsoft SQL Server 2000 and 2005
- Microsoft MSDE 2000

Supported Languages

RGP supports English plus the following nine languages: French, Italian, German, Spanish, Portuguese, Japanese, Korean, Simplified Chinese, and Traditional Chinese.