



IBM Maximo Asset Management
Report Update Utility
Version 7.1.1.x releases

Overview	3
Version 7 Report Types.....	4
Enterprise Reports	4
Ad Hoc (QBR) Reports	5
Page Break Update Utility.....	6
Overview	6
When should Page Break Update Utility be applied?	7
Page Break Update Utility Details	7
Additional Notes on Page Break Update Utility	8
Update Utility Process - Enterprise Reports	9
Existing Report Export Step.....	9
Export Backup Location.....	9
Update Process	10
Enterprise Update Utility Commands.....	11
To Update Enterprise reports.....	11
Enterprise Update Utility Commands Details	12
Saving and reviewing the updated report design files.....	12
Enterprise Reports - If you need to restore the original files from a backup	12
Update Utility Process - QBR Reports.....	13
Update Process	13
QBR Update Utility Commands.....	13
Miscellaneous Information	14
Property Files	14
Logging	14
Reference Materials	15
Notices	16
Trademarks	17

Overview

This document details a report utility that is available to you for the Version 7.1x releases. This utility automates the process of applying updates to report designs, rather than manually editing each report. Therefore, it is known as an update utility, and supplements the existing utilities of importing and exporting report designs.

The specific utility is identified as a Page Break utility, and is used for formatting data within a report. Additionally, with this utility are variations for the two different types of reports in Version 7 - which are Enterprise Reports, and QBR (Query Based Reporting) or Ad Hoc Reports. Details on these report types are in the section below.

You may want to utilize this utility in certain scenarios. Be sure to review the features of the utility, along with the types of reports it applies to, to determine if it is applicable to you or not.

Version 7 Report Types

Enterprise Reports

Enterprise reports are also often referred to as Operational or transactional reports. These reports are primarily composed of the day to day detail reports users require for their daily business tasks. Enterprise reports are developed within the BIRT Report Design tool, and imported into V7 for access by users.

Examples of Delivered Enterprise reports include:

Work Order Details, Asset Details, Work Order Pick, Inventory Transaction Reports

Work Order Details	
1000: Electric Cart Tune-Up	
Asset: 12300	Device: Cart
Location: SHIPPING	Shipping and Receiving Department
CI:	
Sched Start:	
Sched Finish:	
Target Start:	12/31/98
Target Finish:	12/31/98
Actual Start:	
Actual Finish:	
Report Date:	12/31/98
Reported By:	Joe Jones
Task ID	
Task ID	Description
10	Check tires, lights, horn, horn
20	Check windshield wipers and steel

Issues and Returns Transactions						
Storeroom: CENTRAL						
Site: BEDFORD						
Start Date: 1/1/90						
End Date: 1/1/02						
Item: 11453	Description: Seal, Mechanical, Self Aligning- 1 In ID	Transaction Type: IS				
Date	Qty	Condition Code	Asset	Rot Asset	Issue To	WO #
10/20/01	2:29:27 PM	-1	13170		LDU	30038
8/7/01	2:29:27 PM	-1	13170		LDU	30067
6/7/01	2:29:27 PM	-1	13170		LDU	30037
3/18/01	2:29:28 PM	-1	13170		LDU	30048
12/20/00	2:29:28 PM	-1	13170		LDU	30029

Work Order Pick	
WO: 1002 Rebuild Feedwater Pump	
Site: BEDFORD	Storeroom: CENTRAL
Item: 11453 Seal, Mechanical, Self Aligning- 1 In ID	
Qty: 1	
Bin	Lot
A-4-9	A-431
C-5-3	A-431
Item: 117084 Shaft- 1 Inch Dia	
Qty: 1	
Bin	Lot
C-6-2	

Asset Details						
11430: Centrifugal Pump 100GPM/60FT HD						
Site: BEDFORD	Type:					
Status: OPERATING	Priority: 2					
Maintain Hierarchy: N	Serial Number: 377-5A					
Parent: 11400	Location: BR430					
Parent Description: Boiler- 50,000 (3/4) Gas Fired Water Tube	Location Desc: Condensate Return Pump- Centrifugal/100GPM/60FTHD					
Purchase Details						
Vendor	Manufacturer	Install Date	Warranty Exp Date	Purchase Price	Replace Cost	Total
DR	DR	4/7/95	1/29/11	18500.00	23000.00	1123
Downtime						
Asset Up T	Total Downtime	Changed By	Changed Date			
1	40.5	WILSON	2/9/05 8:01:37 AM			
Sub Assembly						
Asset	Asset Description	Location	Location Description			
23972	Motor- 10hp/1750rpm/TFPC/254T Frame/440v/3ph/60hz	BR431	Motor- 10hp/1750rpm/TFPC/254T Frame/440v/3ph/60hz			

Ad Hoc (QBR) Reports

Ad Hoc reports are also known as QBRs or Query Based Reporting. These reports enable business users to create their own, individual reports on the fly without the need for technical skills or database knowledge. QBR reports are created within the various applications, by presenting a tabbed window that the user navigates thru to build his report. Within this window, the user selects the fields he wants in his own report, along with defining sorting, grouping and filtering.

QBR reports can be created for very simple summary reports containing only attributes of the main table of the application, or more complex reports. The complex, detail reports can incorporate fields from multiple related tables, and can also utilize multiple one-to-many relationships.

Because QBRs are created by individual Users within the Version 7 applications, they are identified in the database where REPORT.USERID is not null. Additionally, you can quickly find them in the Report Administration by sorting on the 'User ID' field, or by creating a saved query where the userid is not null.

An example of an Ad Hoc Report is shown here below.

Reporting

Page 1 of 7

Tivoli software

IBM.

Asset Specification and Work Order Details

Asset Details

Asset	Description	Location	Parent	Rotating Item	Linear	Site	Asset Tag	Type	Failure Class	Installation Date	Inventory Cost
11450	Centrifugal Pump 100GPM/60FTHD	BR450	11400	PUMP100	N	BEDFORD	6423		PUMPS	5/26/96	9.50

Specifications

Asset	ASSETSPEED	End Base Measure	End Measure	Start Base Measure	Start Unit of Measure	Start Measure	Mandatory?
11450	198						N
11450	199						N
11450	200						N
11450	201						N
11450	202						N
11450	203						N
11450	204						N

Work Orders

Work Order	Work Type	Status	Status Date	Target Start	Target Finish	Scheduled Start	Scheduled Finish
91091	EM	APPR	10/12/01 3:45:43 PM	10/12/01 3:45:43 PM	10/13/01 10:57:43 PM	10/12/01 3:45:43 PM	10/13/01 10:57:43 PM
2155	EM	CLOSE	10/23/98 3:45:35 PM	10/23/98 3:45:35 PM	10/24/98 3:45:35 PM	10/23/98 3:45:36 PM	10/23/98 3:45:36 PM
88111	EM	CLOSE	4/29/98 3:45:49 PM	4/29/98 3:45:49 PM	4/29/98 3:45:49 PM	4/29/98 3:45:49 PM	4/29/98 3:45:49 PM
89041	EM	CLOSE	6/3/99 3:45:47 PM	6/3/99 3:45:47 PM	6/4/99 10:57:47 PM	6/3/99 3:45:47 PM	6/4/99 10:57:47 PM
90061	EM	CLOSE	6/23/00 3:45:39 PM	6/23/00 3:45:39 PM	6/23/00 3:45:39 PM	6/24/00 3:45:39 PM	6/25/00 3:45:39 PM
91061	EM	CLOSE	7/17/01 3:45:38 PM	7/17/01 3:45:38 PM	7/17/01 3:45:38 PM	7/17/01 3:45:38 PM	7/17/01 3:45:38 PM
87091	EM	CLOSE	11/30/98 8:48:09 PM	11/19/98 6:45:02 PM	11/23/98 1:21:45 AM	11/19/98 6:45:02 PM	11/25/98 1:21:45 AM
91051	EM	CLOSE	6/8/01 3:45:41 PM	6/8/01 3:45:41 PM	6/8/01 3:45:41 PM	6/8/01 3:45:41 PM	6/8/01 3:45:41 PM
88051	EM	CLOSE	8/7/98 3:45:46 PM	8/7/98 3:45:46 PM	8/7/98 3:45:46 PM	8/7/98 3:45:46 PM	8/7/98 3:45:46 PM
91071	EM	CLOSE	7/24/01 3:45:42 PM	7/24/01 3:45:42 PM	7/24/01 3:45:42 PM	7/24/01 3:45:42 PM	7/24/01 3:45:42 PM
2430	EM	CLOSE	12/2/99 8:47:58 PM	11/23/99 2:04:46 AM	11/24/99 8:33:34 PM	11/23/99 2:04:46 AM	11/25/99 8:33:34 PM
7492	CP	CLOSE	6/9/96 1:01:00 PM				
4394	EM	CLOSE	10/3/99 3:45:36 PM	10/3/99 3:45:36 PM	10/3/99 3:45:36 PM	10/3/99 3:45:37 PM	10/4/99 3:45:37 PM
90121	EM	CLOSE	1/3/01 3:45:40 PM	1/3/01 3:45:40 PM	1/4/01 3:45:40 PM	1/3/01 3:45:40 PM	1/4/01 3:45:40 PM

Page Break Update Utility

Overview

The page break utility updates report design files to resolve unexpected page break issues when reports are converted to Adobe® PDF format for printing or saving.

The unexpected page break occurs when a report is generated in the report viewer. The report engine automatically inserts page breaks after every 50 rows. This is done for viewing optimization so the user does not need to wait for the entire report to generate before viewing the contents. However, these page breaks are also used when the report is converted to PDF output, which can cause page breaks to occur in the middle of a page.

An example of the unexpected page break is shown below. In this case, a four page report is generated when converted to PDF. However, on page two highlighted by the red arrows, a page break unexpectedly occurs in the middle of the page.

[illegible]

When should Page Break Update Utility be applied?

You may want to apply the page break update utility in these specific cases:

1. If you have Ad Hoc (QBR) reports created before the Maximo Base Services 7.1.1.7 release.
In these cases, you may encounter an unexpected page break issue when the report is exported from the report browser to PDF for printing or saving.
2. If you have any Enterprise Reports, with noticeable page break issues, with the conditions below:
 - a. Delivered list reports that you utilize
 - b. Custom enterprise reports that you created prior to Maximo Base Services 7.1.1.7 release

Page Break Update Utility Details

To resolve the unexpected page break issue when converting a report to Adobe PDF, the following changes are made to each report via the Page Break Upgrade Utility.

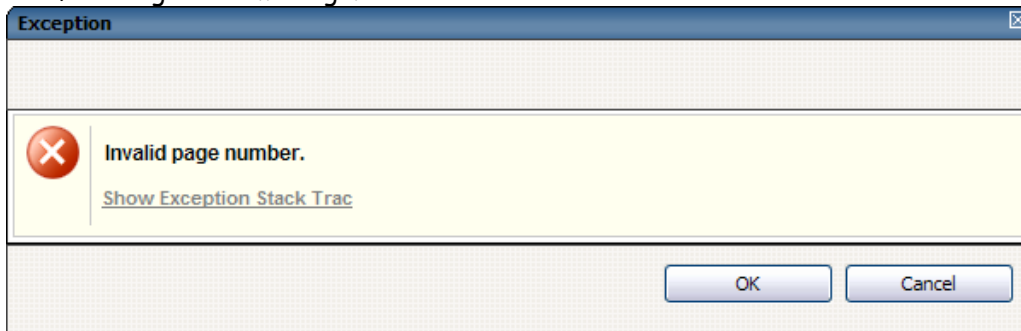
1. A new parameter called "usepagebreaks" is added.
2. The code below is added to the report's beforeFactory method:

```
if ( (reportContext.getParameterValue("usepagebreaks") == "false") ||  
    reportContext.getOutputFormat() == "pdf" ) {  
// Give each table in the report a name, and add the names to the list below,  
// e.g. ["mainTable", "childTable1"]  
var tableListing = ["mainTable"];  
for each(var tableName in tableListing) {  
    var table = reportContext.getReportRunnable().designHandle  
        .getDesignHandle().findElement(tableName)  
    if (table != null) {  
        table.setProperty("pageBreakInterval", 0);  
    }  
}  
}
```

3. A line is added to the report's comments and the comments for each table indicating that this fix has been applied.

Additional Notes on Page Break Update Utility

1. The Page Break Update Utility does not remove all page breaks from PDF output. It only removes the automatic page breaks inserted by default after every 50 records.
2. Page breaks are hardcoded in the report output at runtime. This update requires the report to be re-generated when it is exported to PDF.
 - a. Because of this, when your users select to export the report to PDF for printing or saving, this process may take longer after the update is applied.
 - b. Additionally, when the report is exported to PDF, the report viewer* will no longer be synchronized with the outputted pdf report content. If you try to change pages in the viewer, you may receive the following error message.



When you click OK, the report content will be refreshed with the current pagination.

*The report viewer displays the content of the report in the report browser session.

Note: It is recommended that reports only be printed or exported once viewing is complete.

3. Starting with Version 7.1.1.7 released in June 2010, the page break modifications detailed below are incorporated.

A. The report design templates include the page break changes.

Note: To insure the page breaks are applied properly, when you create a custom report, any tables you add should be given names and added to the beforeFactory script. Likewise, if you modify default table names, you should update the script to reflect the new names.

B. The Version 7 QBR report functionality includes the page break updates in any new Query Based reports you create.

4. This utility is available in the Maximo Base Services 7.1.1.7 Release, and via a Hot Fix in the 7.1.1.6 and 7.1.1.5 Releases.

Update Utility Process - Enterprise Reports

For enterprise reports, when you apply the Page Break update utility, the following process occurs -

Existing Report Export Step

First, the existing reports are exported to a backup directory.

Export Backup Location

1. You can specify the location of the exporting backup directory by setting the value of `maximo.report.birt.outputfolder` in the `reporttools.properties` file. The name of the directory folder is `<outputfolder>-backup-<timestamp>`.

By default, the output folder path is `<V7>\reports\birt`, so the default backup location is `<V7>\reports\birt-backup-<timestamp>`.

```
<V7>\reports\birt-backup-1333469623640
libraries
    asset.properties
reports
    ASSET
        assetprint.rptdesign
        assetprint.rptdesign.xml
```

2. Additionally, you can view the actual location the files are written to either in the console or in the resulting `update.log`. The `update.log` file is available in `<V7>\reports\birt\tools`

Update Process

After the report backup has completed, the update process begins and includes the steps below.

1. The report is evaluated to determine if it needs to be updated. If the report design already includes all available updates, no action is taken on that report and the process moves to the next report.
2. If the report does require updates, the updates are applied and the updated report design is saved to a new folder.
 - a. The location of this folder is the same as the backup directory, which you specify in the `maximo.report.birt.outputfolder` setting of the `reporttools.properties` file. The name of the directory is `<outputfolder>\reports-modified-<timestamp>`.

By default, the output folder path is `<V7>\reports\birt`, so the updated report designs are located in `<V7>\reports\birt\reports-modified-<timestamp>`.

3. If no reports are updated, the `reports-modified` folder is not created.

Enterprise Update Utility Commands

The following variations of the Update Utility for Enterprise reports are available. To execute these commands, access your Version 7 server. Open a command prompt window and navigate to <V7>\reports\birt\tools.

To Update Enterprise reports

updatereports

Updates all reports.

updatereports savechanges

Updates reports and saves the modified reports to the database.

updatereports app [appname]

Updates all reports for the specified app.

updatereports app [appname] savechanges

Updates all reports for the specified app and saves the modified reports to the database.

Enterprise Update Utility Commands Details

Saving and reviewing the updated report design files

You can either specify to save the modifications to your Enterprise reports via the Save Argument in the update utility.

1. If you specify the savechanges argument in your update utility, the modified report designs are saved to the report repository, which is the Version 71x database, in addition to being saved to the report directory.
 - a. This will enable the updates to be available when executing the reports from within the various Version 71x applications.
2. If you do not specify the savechanges argument, the modified report designs are not saved to the database. This means that the updates will not be available when executing the reports from within the various Version 71x applications. The updates are only saved to the modified report directory, and you can view them using the BIRT report designer.
 - a. If you evaluate the updates from within the report designer, and determine that you want to implement them in your system, you can then either
 - Copy the reports from the outputted report folder to the reports source directory. Then, import them using the importreports command
 - Or you could re-execute the updatereports command using the savechanges argument.

Enterprise Reports - If you need to restore the original files from a backup

If you find that you want to rollback the updates, you can perform one of the options listed below

1. If the reports source directory < V7>\reports\birt\reports contains your pre-updated report designs, execute the importreports command to roll back the updates.
2. If the report source does not contain your intended report designs
 - a. Copy the initially exported reports from the backup directory to the reports source directory. The backup directory is what you specified in the previous step called 'Export Backup Location'
 - b. Once the pre-updated reports are copied, you can then execute the importreports command.
3. You can define the directory location for the import process to use via the importfolder setting in the reporttools.properties file. If you define this setting as the backup directory you created in the step 'Export Backup Location', the pre-updated reports will be re-imported into your system.

Update Utility Process - QBR Reports

Note: The update utility for QBRs does not export the QBR reports to a backup directory before performing the update. If you want to first test the QBR update utility, you may want to create your own backup copy of the original QBR reports by exporting them from the V71x database. Information on exporting reports can be found in either the V7 Report Development or V7 Report Feature guides located here: <http://bit.ly/niokIv> or <https://www.ibm.com/developerworks/wikis/display/maximo/Report+Reference+Materials>

Update Process

For QBR reports, the update process includes the steps below -

1. First, the report is evaluated to determine if it needs to be updated. If the report design already includes all available updates, no action is taken on that report and the process moves to the next report.
2. If the report does require updates, the updates are applied. The updated qbr report designs are placed in the report repository, the V7.1x database.

QBR Update Utility Commands

For QBR reports, a single update utility is available. To execute this command, access your Version 7 server. Open a command prompt window and navigate to <V7>\reports\birt\tools.

1. updateqbrs
Updates all QBR report designs

The update QBR utility functions differently than the Enterprise report utility due to the way they are created. With the QBR utility, the source files of QBRs are not backed up. Additionally, the updates are automatically saved. There is no restore option for QBRs.

The QBR command should be run after confirming that the updatereports command successfully modifies report designs.

Miscellaneous Information

Property Files

The property settings in the reporttools.properties file enable the Report Update Utility. This file is located in <Version7.x>\reports\birt\tools. These properties are detailed below:

Output folder used for the update operation

maximo.report.birt.update.outputfolder=../../birt

The setting enables you to change the location of the backup files that are exported prior to the update.

Indicates whether the report updates should be saved to the database

maximo.report.birt.savechanges=false

If you set this value to true, the report updates will always be saved to the database - regardless if you specify the save argument in the update report command utility.

If you leave the default value to false, you must specify the save argument in the update report command utility for the report updates to be saved to the database.

Output folder and file name of the log file for updates

maximo.report.birt.updatelog=./update.log

This setting enables you to specify the location and/or name of the log file.

Logging

As noted in the property section above, you can enable logging to see which reports have been updated.

The logging feature displays results in the console, and to the log file specified to the maximo.report.birt.updatelog property from reporttools.properties. The default file location and value is < V7>\reports\birt\tools\update.log. This log is used by all update utility commands, and the output is appended to the existing file each time the commands are executed.

You can also see the list of files updated by examining the contents of the <PATH>\reports-modified-<timestamp> folder. Report design files that are not updated are not written to this folder.

For additional details on Report Logging, reference the document titled 'Report Logging V7 Release' available from this url: <http://bit.ly/niokIv> or

<https://www.ibm.com/developerworks/wikis/display/maximo/Report+Reference+Materials>

Reference Materials

For additional information on V7 reporting, you can access the Report Wiki page below which lists a wide variety of documentation categorized into report planning, development, customization and integration guides. Details of each guide are provided, along with its current revision level.

V7 Reporting Report Reference Materials

<http://bit.ly/niokIv> or

<https://www.ibm.com/developerworks/wikis/display/maximo/Report+Reference+Materials>

Revision History

Revision 2 - April 2012 - Document reformatted to clarify functionality of utility

Revision 1 - September 2010 - Added section on property settings on page 8

Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

*IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.*

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at "[Copyright and trademark information](http://www.ibm.com/legal/copytrade.shtml)" at www.ibm.com/legal/copytrade.shtml.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both