

Release notes - Version 9.4.0

GLIMS

Content

Version 9.4.0	1
Important modifications	1
Use caching for action scheduling (GLIMS-06548)	1
Messages / questions are no longer displayed / asked during action scheduling (GLIMS_EOS-00130)	2
Order entry	4
Date format in order entry (GLIMS-06529)	4
Specimens	5
Marking a specimen as sampled (GLIMS-06559)	5
Patients	6
Support new values for Patient.Sex (GLIMS-06355)	6
Date range in double patient query (GLIMS-06389)	6
Person search via eID (GLIMS-06416)	7
Reports	9
Issue with report query (GLIMS-05478)	9
Introduction of report approval & responsible (GLIMS-06394)	9
Work lists	11
Deep copy of a work list template (GLIMS-06477)	11
Report builder	12
Report builder - New print options (GLIMS_ARep-00167)	12
Report builder - Optional PCL stripping (GLIMS_ARep-00171)	13
Enhancements for electrophoresis graphs (MATE_RB-00003)	15
Upgrade to JasperReports 5.5.1 (MATE_RB-00015)	16
Introduction of Report builder service (MATE_RB-00024)	16
Preview of reports generated with Report builder (MATE_RB-00025)	23
User interface	25
Redesigned browsers (GLIMS-05873)	25
Show auto-refresh mode in browser title (MATE-03279)	25
Refresh browser after updating record (MATE-03333)	26
Ribbon tab customization tool (MATE-03437)	26
Customized login screen (MATE-03476)	27

Security	29
Alert when developer connects to production system (MATE-03531)	29
Microbiology	30
Isolation and carrier test browsers for actions of type Germ (GLIMS_BAC-01015)	30
Antibiogram issue when same value for different formula type (GLIMS_BAC-01075)	30
Check and replace antibiotic report value via MISPL (GLIMS_BAC-01077)	30
Search isolations for a specific study / study type (GLIMS_BAC-01082)	30
Issue with non-reportable isolations (GLIMS_BAC-01084)	31
Quality control	32
Printing of qualitative QC population (GLIMS-06591)	32
Stock management	33
Deleted items reappear in purchase order entry screen (GLIMS_STCK-00525)	33
Product specifications with special characters (GLIMS_STCK-00531)	33
Show products of substocks (GLIMS_STCK-00533)	33
Only show organizations with customer no for supplier selection (GLIMS_STCK-00534)	34
Billing	35
Financial export in "SEPA" format (BILX_GSEPA-00001)	35
Issue in Kostenträger Stammdatei import (BILX_GKVDI-00042)	38
Issues when printing price list (GLIMS_BILL-02999)	38
MISPL	39
Rounding issue with Truncate MISPL function (MATE_MISPL-00051)	39
Issue with site functions having more than 256 variables (MATE_MISPL-00064)	39
Correction for MISPL function "CurrentSessionHasPrivilege" (MATE-03274)	39
Communication	40
Deprecate -Z parameter for services (MATE_COMHL-00277)	40
System management	41
Introduction of Session devices (MATE-03273)	41
Issue in License browser (MATE-03360)	43
Prevent excessive log file sizes (MATE-03442)	43
Issue in audit overview screen (MATE-03453)	43
Issue with license registration (MATE-03461)	44
Cost-based Oracle optimizer mode (MATE-03467)	44
Miscellaneous	45

Show full Progress version in About box (MATE-03301)45

Selection of browser filter / style (MATE-03309) 45

Issue in Site attribute values browser (MATE-03338)46

Edit correspondent starting from subtype (MATE-03428) 47

Selection of Control service in Start Watchdog screen (MATE-03477)47

Blood bag browser locks general settings (GLIMS_BTМ-00831)48

Version 9.4.0

Important modifications

Use caching for action scheduling (GLIMS-06548)

Introduction

When actions must be scheduled for a new order, GLIMS must get the necessary information:

- which properties can be delivered by which procedures.
- which procedures need which input.
- ...

This configuration data is rather static. It does not change often, except during the configuration phase of a project.

Therefore, this data is now cached in the memory of the GLIMS session. This has a significant positive impact on the execution time of the action scheduling phase.

About configuration updates

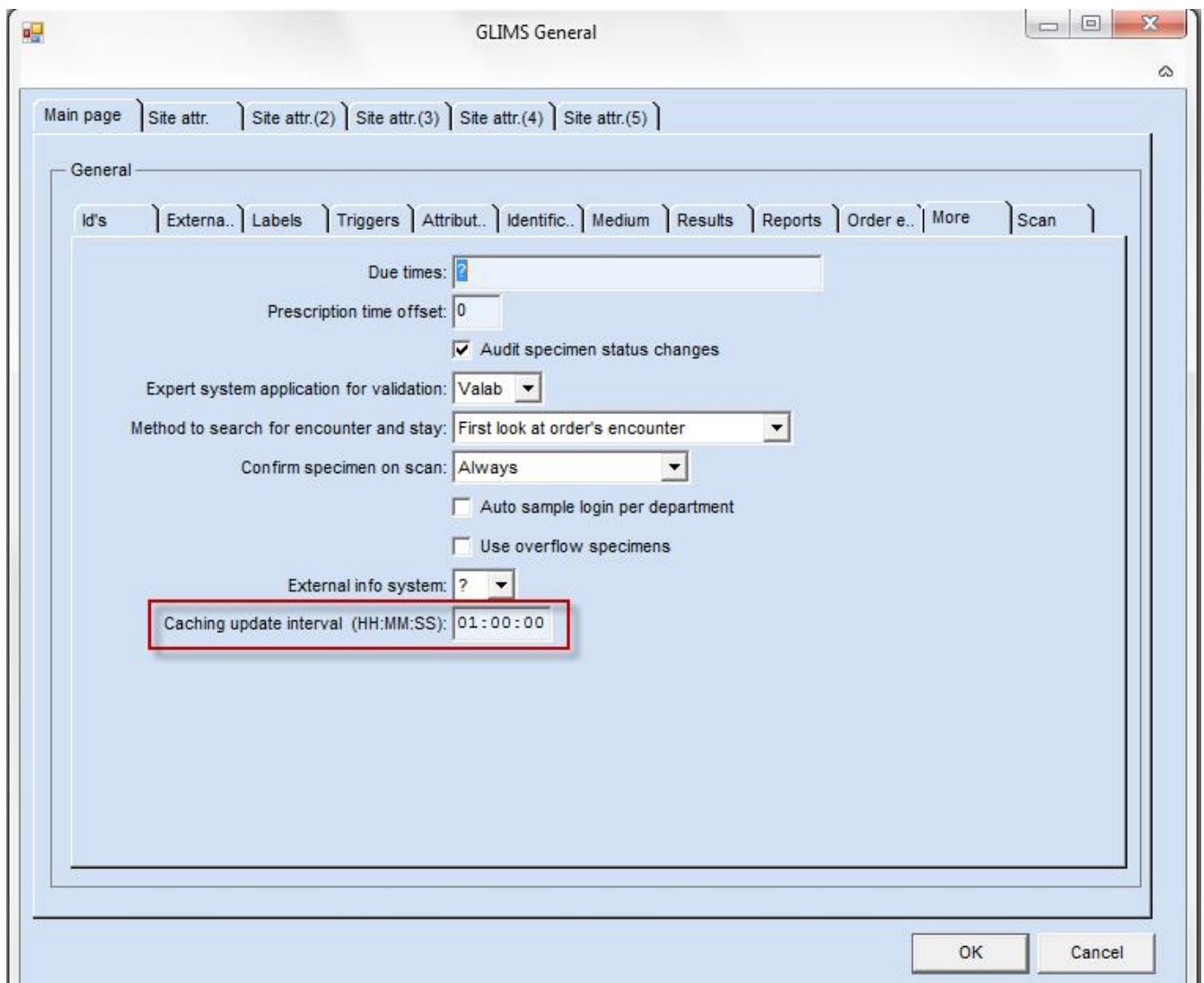
In order to cope with the problem of procedures being changed (e.g. during configuration and testing phase), a special mechanism ensures that all running sessions are immediately informed about the configuration change(s).

Note

Running sessions can be interactive client sessions, but also batch sessions like services for electronic order entry, or AppServer agent sessions used by interactive client sessions.

Each time a running session needs data, it first checks if the configuration was changed. If so, it clears its memory and starts reloading the new data.

The check for configuration changes is not performed when it was done very recently, within a certain period of time. This period of time can be configured in the general settings (**Start -> System Management -> Customize -> GLIMS**, tab page **More**) .



Caching update interval

- For GLIMS systems in routine, this is set by default to 1 hour (longer is better for performance).
- For GLIMS systems in configuration or testing phase, it is advisable to set this to a low value like e.g. 10s.

Messages / questions are no longer displayed / asked during action scheduling (GLIMS_EOS-00130)

Issue

When order post-processing and action scheduling are performed on the AppServer, GLIMS is not able to display messages, ask questions to the user.

This explains why GLIMS:

- doesn't ask for material variables of specimens that were added during scheduling,
- doesn't suggest/ask about reusing results or specimens that were added during scheduling,
- doesn't warn/ask about blocked results added during scheduling.

The above-mentioned messages/questions are displayed / asked for results/specimens that are explicitly requested only.

In previous versions, the same problem also existed when the order entry option Asynchronous action scheduling was enabled (and in progress.ini the environment variable GLIMSRemoteCalls was set to YES).

Solution

In order to obtain a more consistent behaviour of GLIMS, messages or questions will now no longer appear during action scheduling.

1. For **explicitly requested** properties and materials, nothing changes:
 - If a blocking period applies, a question will appear in manual order entry. In electronic order entry, the result is automatically blocked.
 - If a reusable result/specimen exists, a question will appear in manual order entry. In electronic order entry, the result/specimen is automatically reused.
 - If material variables are missing¹ for an explicitly requested specimen (including a microbiology procedure's material), GLIMS will prompt the user for the material variables in manual order entry (in electronic order entry of course, no question is raised).
2. For **implicitly requested** properties and materials, GLIMS will never prompt with a message or a question.
 - If a blocking period applies, the result is automatically blocked.
 - If a reusable result/specimen exists, it is automatically reused.
 - GLIMS will never prompt for material variables of implicitly added specimens.

Notes

1. The explicit request for a microbiology procedure includes the explicit request for a material, so the material variables will be asked during order entry if required.
2. When an order is activated, GLIMS will behave like in order entry, regarding the explicitly requested properties and materials:
 - If a blocking period applies, a question will appear in interactive activation. In background (batch) activation, the result is automatically blocked.
 - If a reusable result/specimen exists, a question will appear in interactive activation. In background activation, the result/specimen is automatically reused.
 - If material variables are missing for an explicitly requested specimen (including a microbiology procedure's material), GLIMS will prompt the user for the material variables in interactive activation (in background activation of course, no question is raised).

¹ This means that the material variable is configured with **Auto-prompt** or **Mandatory**, and no value is known yet.

Order entry

Date format in order entry (GLIMS-06529)

Issue

In the order entry screen, dates were visualized in DD/MM/YY format, which could cause administration errors. When entering e.g. 09/01/2012, this could result in 09/01/20 instead of 09/01/12.

Solution

In the order entry screen, dates are now visualized using the full year format, i.e. DD/MM/YYYY.

Specimens

Marking a specimen as sampled (GLIMS-06559)

Problem description

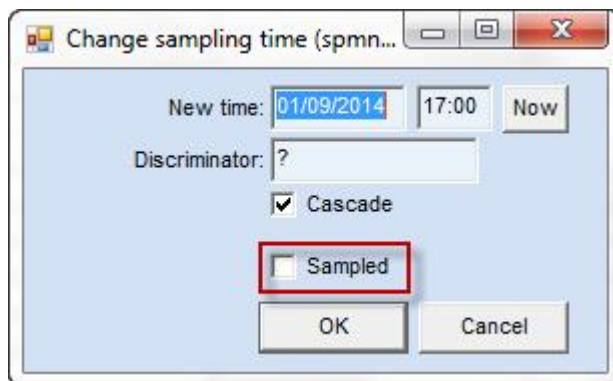
1. A specimen has a **Status** and a **Sampling time**, but this was not sufficient to indicate whether or not the specimen is actually sampled. As long as a specimen is not sampled, its sampling time is considered to be a *Scheduled sampling time*.
2. When scanning a sampled specimen for reception (indicating that it is available in the lab), its sampling time was implicitly modified, which was incorrect.
3. When receiving sampling time information from an external system (e.g. CyberLab Phlebotomy), the specimen was promoted to status **Available** in GLIMS. This was incorrect: if a specimen has been sampled, this does not always imply that it is available in the lab.

New features

To solve the issues above, a new **Specimen** field **Sampled** was introduced to clearly indicate whether a specimen is sampled or not.

The **Sampled** field can be set:

1. By enabling/disabling the **Sampled** option in the **Specimen** function Change sampling time.



2. Through communication with an external system (e.g. CyberLab).

Patients

Support new values for Patient.Sex (GLIMS-06355)

GLIMS now supports the following values for the **Patient** field **Sex**:

Short value	Description
M	Male
F	Female
O	Other
U	Unknown
A	Ambiguous
N	Not applicable

Warning

These new values may not be supported by drivers and/or external software.

Warning

Customers may have site functions with IF ... THEN ... constructs that only check if the value is Male and that consider that the ELSE part is applied to the Female value.

Example:

```
IF Sex = "M" THEN <Male logic>;  
ELSE <Female logic>;  
ENDIF;
```

This should be replaced with:

```
IF Sex = "M" THEN <Male logic>;  
ELSE IF Sex = "F" THEN <Female logic>;  
ELSE <new enumeration logic>;  
ENDIF;
```

Date range in double patient query (GLIMS-06389)

In addition to the **Created since** option, the query screen to select double patients now also has a **Created until** option.

Double patients - query options

Comparison criteria	Check	Soundex	Knock-out
Last name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
First name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Middle name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Spouse last name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Birth date	<input type="checkbox"/>		<input checked="" type="checkbox"/>
Sex	<input type="checkbox"/>		<input checked="" type="checkbox"/>
Address	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Municipality	<input type="checkbox"/>		<input type="checkbox"/>
PIN	<input type="checkbox"/>		<input type="checkbox"/>
Payment agreement	<input type="checkbox"/>		<input type="checkbox"/>
Encounter	<input type="checkbox"/>		<input type="checkbox"/>
Comparator function	<input type="checkbox"/>		<input checked="" type="checkbox"/>

Created since: 2 years ago until:

Allowed differences: 0

Ranking: ?

OK Cancel

Person search via eID (GLIMS-06416)

GLIMS now allows using the Belgian electronic identity card (eID) for patient selection during order entry. For more information, please check the chapter Person search via eID.

Persons

Identification(s)
CyberLab
?

RijksRegister

Person

Last name	First name	Born	Sex	Municipality	Address Line 1	Spouse	Internal id	Keyword
?	?		?					?

Externalization	National no.	Address	Paym. agr.
Huylebroeck, Mariet (F), 28/04/1986		?	

PIN(s): (RijksRegister)
Encounter(s):
Payment agreement(s):

☒ Automatic
☐ Use soundex

Query
Show all
Reset
Cancel

Reports

Issue with report query (GLIMS-05478)

Problem description:

1. Open a report query and specify some criteria.
2. The report browser shows the matching reports.
3. Leave this report browser open.
4. Open another report browser (e.g. Reports of Order).
5. Refresh the first browser.
6. The first browser can now show records that do not meet the query criteria.

This has been corrected.

Introduction of report approval & responsible (GLIMS-06394)

In some countries, regulation stipulates that result reports should be approved before they are sent to the physician or an external application. Additionally, the approved report should mention a responsible .

GLIMS now offers new functionality to approve reports and to determine who is the final responsible for a report. For more information, please check the chapter Report approval & responsible.

Report

Report

Tools

Generate no report items

Main

Generate

Main

Order

Related

View order document

Documents

Release Validate

Reports

Add

Scope: Order

Target: 01001084

Template: StandardME

Usage: Standard

☐ Is copy

☒ Needs checking

Start time: 02/05/2014 10:00:00

End time: 02/05/2014 10:00:00

Main

Settings

Status

More

Site attr.

☒ Active

Last output time: ?

Previous output time: ?

Completeness time: ?

Print version: ?

Error count: ?

Responsible HC provider: DRNO

Approval

User: John

Time: 03/07/2014 11:27:27

Method: Explicit

Comment:

Identification method: login

Status: Done

OK

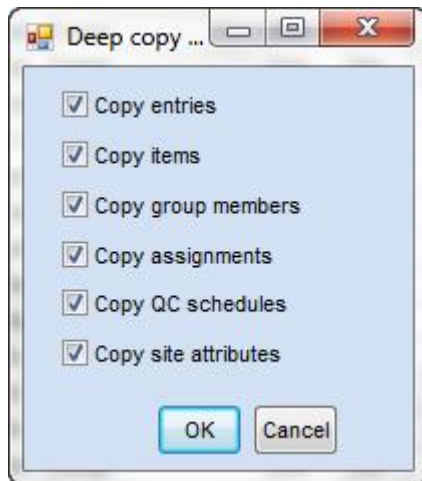
Cancel

Work lists

Deep copy of a work list template (GLIMS-06477)

To reduce configuration efforts, GLIMS now allows to make a deep copy of a work list template.

1. Select a work list template and choose the contextual menu/ribbon item **Deep copy**.
2. Select which related data you want to copy.



Note

The name of the new work list template will be **<name of original template> - Copy**. Any subsequent copies will add a sequence number as suffix.

Report builder

Report builder - New print options (GLIMS_ARep-00167)

Both the **Report template** and **Printer** configuration in GLIMS offer new print options for reports generated with Report builder:

- **Media tray**
- **Print quality**
- **Sheet collate**
- **Chromaticity**

Please check the Report template documentation for a full description of these new options.

Report template

Report template Tools

Reports of Report template Reports

Body First page header Footer Header Result mark Texts

Default reports Attached report Coding system Default printer E-mail body E-mail subject Property classification Report templates Related

Main Layout Report bu.. Texts Columns Rows Electronic Microbiol. Site attr.

Print options

Printer sides: Default

Job sheets: Default

Media tray: Default

Print quality: Default

Sheet collate: Default

Chromaticity: Default

PDF options

Author: ?

Keywords: ?

Subject: ?

Title: ?

PDF/A conformance: None

☐ Compress

XML options

☐ Remove PCL printer codes

OK Cancel

Tip

If the **Report template** option is set to **Default**, the **Printer** option is used. Else, the **Report template** option takes precedence over the **Printer** option.

Report builder - Optional PCL stripping (GLIMS_ARep-00171)

For reasons of backward compatibility with existing property classification data, Report builder strips PCL print codes out of the content while building the XML files. Testing has revealed that this can have a negative impact on performance in those cases where it is not needed.

Therefore, we have added the ability for individual **Report templates** to opt out of PCL code stripping. To achieve this, disable the new Report template option **Remove PCL printer codes**.

The screenshot shows the 'Report template (ge_rtp)' dialog box with the 'Report bu..' tab selected. The dialog is organized into several sections:

- Print options:** Includes dropdown menus for 'Printer sides' (Default), 'Job sheets' (Default), 'Media tray' (Default), 'Print quality' (Default), 'Sheet collate' (Default), and 'Chromaticity' (Default).
- PDF options:** Includes text input fields for 'Author', 'Keywords', 'Subject', and 'Title', each followed by a question mark. It also has a 'PDF/A conformance' dropdown set to 'None' and a 'Compress' checkbox.
- XML options:** Contains a single checkbox labeled 'Remove PCL printer codes', which is currently unchecked and highlighted with a red rectangle.

At the bottom right of the dialog are 'OK' and 'Cancel' buttons.

By default, this setting is turned off when creating a new **Report template**. During the conversion to GLIMS 9.4, this option has been turned on for existing **Report templates**.

Enhancements for electrophoresis graphs (MATE_RB-00003)

Introduction

Report builder has support for the display of electrophoresis graphs on GLIMS result reports since GLIMS 8.5. Enhancement requests were filed by customers to match the 'traditional' look of such electrophoresis charts on their reports.

To this end, we have extended the 'custom properties' to allow better control over the output while preserving backward compatibility.

Graph options

MIPS supports the following ElphoChartCustomizer custom properties:

be.mips.reports.chart.ElphoChartCustomizer.fractionstotop (boolean, default: true) [NEW in GLIMS 9.4]

- when this is set to **true**, the fractions are rendered using a vertical line extending to the top of the chart.
- when this is set to **false**, the fractions are rendered as a short vertical line extending slightly above the curve.

be.mips.reports.chart.ElphoChartCustomizer.paint (grayscale|color, default: color) [NEW in GLIMS 9.4]

- when this is set to **grayscale**, the complete chart is rendered as monochrome.
- when this is set to **color**, the curve and any peaks are rendered in blue.

be.mips.reports.chart.ElphoChartCustomizer.peaksasareas (boolean, default: false) [NEW in GLIMS 9.4]

- when this is set to **true**, any peaks are rendered by filling the area underneath the curve with a lighter shade of the curve colour.
- when this is set to **false**, any peaks are rendered by using a rectangular area extending to the top of the chart.

be.mips.reports.chart.ElphoChartCustomizer.smooth (boolean, default: true) [since GLIMS 8.6]

- when this is set to **true**, the curve will be rendered with interpolation between the points to prevent sharp edges.
- when this is set to **false**, the curve will be rendered without interpolation between the points.

be.mips.reports.chart.ElphoChartCustomizer.showlabels (boolean, default: true) [since GLIMS 8.8]

- when this is set to **true**, the fraction and peak labels will be displayed near the top of the chart.
- when this is set to **false**, the fractions and peak labels will not be displayed on the chart.

In practice

To achieve the 'traditional' look, take the following steps:

1. Open JasperSoft Studio and modify report [Result_Graph_Elpho_Chart.jrxml](#)
2. Select the **XY Line Chart** element
3. In the property grid, find the line **Properties expressions** and click on the ... button
4. A dialog box appears with a list of custom properties you can use to influence the look of the chart
5. Apply the following values:
 - `be.mips.reports.chart.ElphoChartCustomizer.fractionstotop = false`
 - `be.mips.reports.chart.ElphoChartCustomizer.paint = grayscale`
 - `be.mips.reports.chart.ElphoChartCustomizer.peaksasareas = true`
 - `be.mips.reports.chart.ElphoChartCustomizer.smooth = true`
 - `be.mips.reports.chart.ElphoChartCustomizer.showlabels = false`
6. Finally, save and recompile the .jrxml file in order to test the report

Upgrade to JasperReports 5.5.1 (MATE_RB-00015)

JasperReports is the underlying technology of the MIPS Report builder implementation. In order to stay current with its latest features and improvements, MIPS has upgraded Report builder to JasperReports 5.5.1.

Warning

As of version 5.5.0, Jaspersoft Studio is the official design client for JasperReports instead of iReport.

Although there still is a version 5.5.1 of iReport, MIPS highly recommends to use [JasperSoft Studio 5.5.1](#) to edit Jasper reports.

Introduction of Report builder service (MATE_RB-00024)

Background information

The Report builder architecture has evolved over the years.

1. It started on Windows as an in-process JavaVM.
2. When adding support for UNIX, we implemented it as a separate MipsJvmDaemon Java process.
3. Eventually, a variant of this daemon approach made its way back to Windows.

This architecture required a rather complex setup while it still had serious limitations:

1. Windows workstations could only delegate print work to a MipsJvmDaemon, and still relied on `mipsjvm.dll` for preview and file report generation.
2. Windows workstations could not delegate work to a UNIX server.
3. A UNIX server could not delegate work to other UNIX servers.
4. System administration hassle of finding and installing printer drivers on multiple machines.

New features

GLIMS 9.4 allows to migrate as much of the work as possible to a central **Report builder service**, tightly integrated in the application.

In smaller sites, there will typically be a single Report builder service running on the same server as the database along with the other application services (translator servers, task schedulers, service controllers).

In more complex deployment scenarios, there will be a need for multiple Report builder services, spread over multiple application servers as needed (with a mix of operating systems). That's why a system manager can specify a default Report builder service at different levels:

1. gp_Site
2. Department
3. Printer

Setting up a Report builder service

The configuration of a **Report builder service** is analogous to the configuration of a **Task Scheduler** or **Service Controller**.

1. Open the **Services** browsers and create a new service.
2. Set the **Type** field to **Report builder**.

The screenshot shows a 'Service' configuration window with a 'Tools' tab. The 'Main' section includes fields for Name (Print_Service), Internal language (XML), Type (Report builder, highlighted with a red box), Seq no, Specific options, Port, Process id, Restart failures, and Service group. The 'Related' section shows 'Translators'. At the bottom, there are tabs for Description, Logging, More, and Site attr, with a large text area for the Description. OK and Cancel buttons are at the bottom right.

Note

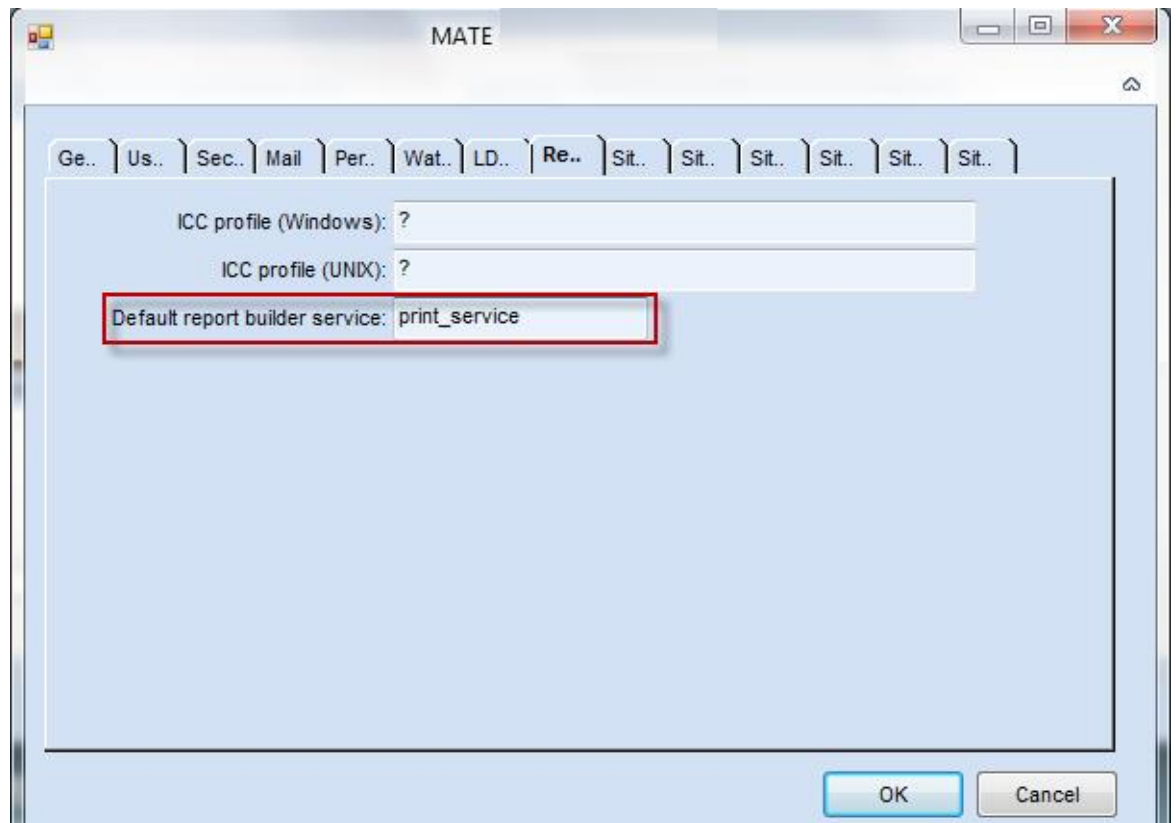
A number of options will be preset and some options can no longer be modified. In particular, Report builder services always use XML as internal language, and always log to file instead of database.

3. The **Report builder services** should also be registered as Windows services (if applicable) and respond to **Check activity** and **Stop** functions just like the other types of services.
4. Once the **Report builder service** is created, you can now indicate at which level it should be used:

gp_Site

This is the default Report builder service that will be used when no department or printer-specific service is applicable.

Click **Start -> System management -> Customize -> MATE**.



Department

Larger and/or multi-site environments may need the ability to set a default **Report builder service** at the **Department** level, in order to cope with network latency, printer locations and general workload for such a service.

When users log into a department, its default Report builder service (if set) overrides the default Report builder service setting at the **gp_Site** level.

Overrides the default Report builder service setting at the **Department** and **gp_Site** level.

The screenshot shows a 'Printer' configuration window. It has two tabs: 'Printer' and 'Tools'. Under the 'Printer' tab, there are two sections: 'Printer assignments' and 'Tools assignments'. The main configuration area is divided into several sections:

- Name:** A text field with a question mark.
- Printer paths:** A section containing two text fields: 'Windows path: ?' and 'UNIX path: ?'.
- Text reporting:** A section containing four text fields: 'Top limit: 0.0', 'Left limit: 0.0', 'Print command:' (with a scrollable area), 'Preamble: ?', and 'Postamble: ?'.
- Report builder:** A section containing six dropdown menus: 'Printer sides: Default', 'Media tray: Default', 'Sheet collate: Default', 'Job sheets: Default', 'Print quality: Default', and 'Chromaticity: Default'. Below these is a text field for 'Report builder service: ?' which is highlighted with a red rectangle.

At the bottom right, there are 'OK' and 'Cancel' buttons.

Limitations

1. There is currently no fail-over mechanism. This limitation also applies to other types of services, and will be investigated in the future.
2. There is currently no support for Report builder services in Watchdog. This will be addressed in future releases.

Example deployment scenarios

Very small site

We can assume that in very small sites, all services are concentrated on a single server. Under these circumstances we can:

1. Create and register a single **Service** of type **Report builder** on the **Main** server.
2. Assign this as the default Report builder service via menu **Start -> System management -> Customize -> MATE**.

MAIN SERVER
Progress or Oracle Database
ApplicationServer
<N> Services of type Translator server and associated Translators
<N> Services of type Task scheduler
1 Service of type Service controller
1 Service of type Report builder

Small site

We can assume that in small sites, most services are concentrated on a single server, and that we wish to execute the report building work on a single separate **Print server**, where all printer queues have been configured. Under these circumstances we could:

1. Install the client application on the **Print server**.
2. Create and register a single **Service** of type **Report builder** on this **Print server**.
3. Assign this service as the default Report builder service via menu **Start -> System management -> Customize -> MATE**.

MAIN SERVER	PRINT SERVER
Progress or Oracle database	1 Service of type Report builder
ApplicationServer	
<N> Services of type Translator server and associated Translators	
<N> Services of type Task scheduler	
1 Service of type Service controller	

Medium site

We can assume that in medium sites, most services are concentrated on a single server, and that we wish to execute the report printing work on a single separate **Print server**, where all printer queues are configured, but distribute the workload by managing a separate default Service that handles report preview and file generation work on the **Main server**. Under these circumstances we could:

1. Create and register a single **Service** of type **Report builder** on the **Main server**,
2. Assign this service as the default Report builder service via menu **Start -> System management -> Customize -> MATE**.
3. Install the client application on the **Print server**.
4. Create and register a single **Service** of type **Report builder** on this **Print server**.
5. Assign this service as the **Report builder service** on all **Printer** records in the application.

MAIN SERVER	PRINT SERVER
Progress or Oracle database	
ApplicationServer	
1 Service of type Service controller	1 Service of type Service controller
1 Service of type Report Builder (used for preview and file generation)	1 Service of type Report builder (used for all printing tasks)
<N> Services of type Translator server and associated Translators	
<N> Services of type Task scheduler	

Large site

We can assume that in large sites, most services are concentrated on a single server, and that we wish to execute the report printing work on a number of separate **Print servers**, where sets of printer queues are configured, while managing a number of separate default services that handle report preview and file generation work on the **Main server**. Under these circumstances we could:

1. Create and register a single **Service** of type **Report builder** on the **Main server**.
2. Assign this service as the default Report builder service via menu **Start -> System management -> Customize -> MATE**.
3. Create and register a number of **Services** of type **Report builder** on the **Main server**.
4. Assign these services as the default Report builder service for specific **Departments**.
5. Install the client application on the **Print server**.
6. Create and register a single **Service** of type **Report builder** on this **Print server**.
7. Assign this service as the Report builder service on all **Printer** records in the application.

MAIN SERVER	PRINT SERVER 1 .. N
Progress or Oracle database	
ApplicationServer	
1 Service of type Service controller	1 Service of type Service controller
<N> Services of type Report Builder (used for preview and file generation)	1 Service of type Report builder (used for all printing tasks on a set of printers)
<N> Services of type Task scheduler	
<N> Services of type Translator server and associated Translators	

Preview of reports generated with Report builder (MATE_RB-00025)

Until now, on-screen previews of reports created with Report builder technology, were always handled in Java, which had some downsides:

1. They would appear as a separate dialog box, on top of the application, and the content of the application itself was no longer visible.
2. The first preview could take a long time as the application was loading the Java VM

The mechanism has been revised, and the preview will now create a temporary PDF document, and display that using the built-in file viewer mechanism.

1. This alleviates the first downside, as the preview mechanism now follows the rest of the application.


2. The introduction of Report builder services ([see modification MATE_RB-00024](#)) tackles the second downside: if the generation of the PDF file is handled by a remote 'default' report builder service, then the application doesn't need to load the JavaVM.


User interface


















Redesigned browsers (GLIMS-05873)

The following browsers have been re-designed:

- Orders by internal id
- Orders by receipt time
- Orders by short id, receipt time
- Purchase items of Purchase order
- Purchase items of Product specification
- Purchase items of Product lot

Home Orders by internal id 

 Orders by internal id beginning with 201408












		Internal id 	Object	Issuer	Object time
		20140820-00004	DER. LINDEN (?)	FERKET KVM	20/08/2014 11:51:00
		20140820-00003	Overbeeke, Annelies (F)	FERKET KVM	20/08/2014 9:43:00
		20140820-00002	Overbeeke, Annelies (F)	FERKET KVM	20/08/2014 9:42:00
		20140820-00001	Overbeeke, Annelies (F)	FERKET KVM	20/08/2014 9:41:00
		20140819-00003	ZORAR, SAWSAN (F), 30/03/1967	?	19/08/2014 17:12:00
		20140819-00002	Mustermann, Hans (?), 01/01/1966	Van Averbek Joost	19/08/2014 16:57:00
		20140819-00001	Mustermann, Peter (M), 12/04/1978	KEESMAAT eric	19/08/2014 16:45:00
		20140818-00004	Unk-60281 (18/08 16:31)	?	18/08/2014 16:32:00
		20140818-00003	Unk-60280 (18/08 16:30)	?	18/08/2014 16:31:00
		20140818-00002	Unk-60279 (18/08 16:26)	?	18/08/2014 16:26:00
		20140818-00001	Unk-60278 (18/08 16:16)	?	18/08/2014 16:16:00
		20140812-00002	Unk-60277 (12/08 12:50)	?	12/08/2014 12:50:00
		20140812-00001	Unk-60276 (12/08 12:45)	?	12/08/2014 12:45:00
		20140807-00001	tmp-167951, <Automatic> (?)	?	7/08/2014 15:45:00

Note

So-called *Cycle columns* (columns with a cycle icon in the header, to switch between different data) are no longer supported. You can now use the Field chooser to define which data should be shown.

Show auto-refresh mode in browser title (MATE-03279)

When the Auto-refresh functionality is activated for a browser, its title will now clearly indicate so.

Home Tables × Orders by receipt time ×				
 Orders by receipt time (internal id = 201408*) (Auto refresh)				
		Receipt time	Internal id	Object
		27/08/2014 14:25:00	20140827-00005	Test (?)
		27/08/2014 14:20:00	20140827-00004	Test (?)
		27/08/2014 14:15:00	20140827-00003	Test (?)
		27/08/2014 14:08:00	20140827-00002	Test (?)
		27/08/2014 12:44:00	20140827-00001	Test (?)

Refresh browser after updating record (MATE-03333)

Problem description:

1. Open a redesigned (.Net) browser.
2. Select a record and open the detail screen (F6).
3. Change some of the data and close the detail screen.
4. The browser did not always show the updated data.

This has been corrected. Moreover, when the record no longer meets the selection criteria of the browser after the update, it will no longer be shown in the browser.

Ribbon tab customization tool (MATE-03437)

To ease the configuration of a ribbon, a Ribbon tab customization tool is now available. It allows to configure ribbon tabs, ribbon groups and ribbon items from a single screen.

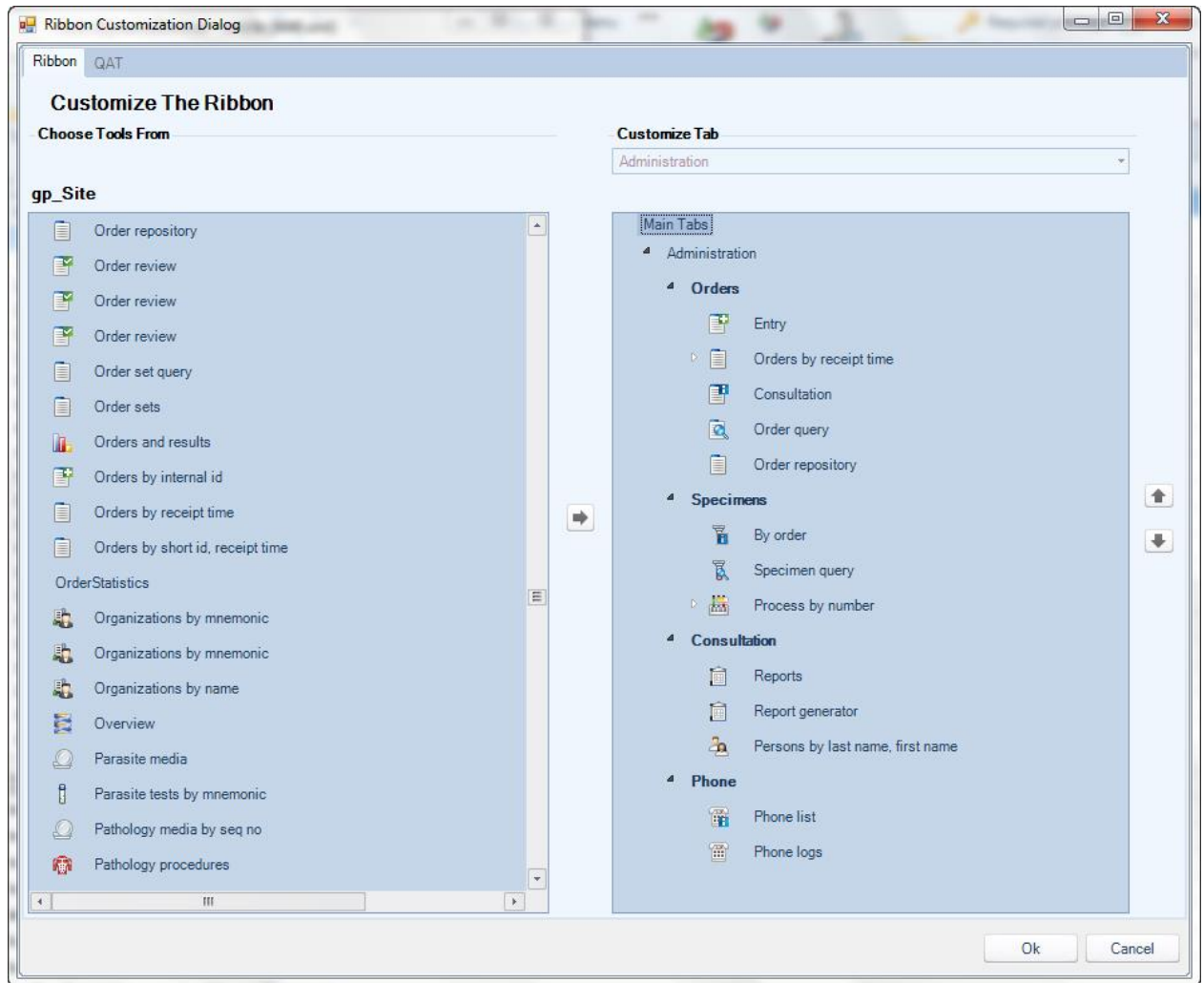
Warning

GLIMS 9.4 offers a pre-release of the ribbon customization tool.

- It is only available to users having a role with User type set to **Developer**.
- We strongly recommend to validate this new tool in a **test environment** and not to use it in production systems !

To start the tool:

1. Select a **Ribbon tab** (starting either from a **Table** or **Ribbon** context).
2. Choose the contextual menu / ribbon item **Ribbon Customization Tool**.



Customized login screen (MATE-03476)

GLIMS now allows to customize the login screen by adding an image in its upper right corner. This can be used to e.g. distinguish between a production and test environment.

1. Create an image of **200x40 pixels** named **GlimsLogin.png**
2. Put it in the GLIMS **Dat** folder
3. It will be shown in the upper right corner of the login screen.

Example

Login

TEST ENVIRONMENT

Name

Password

Language



Next

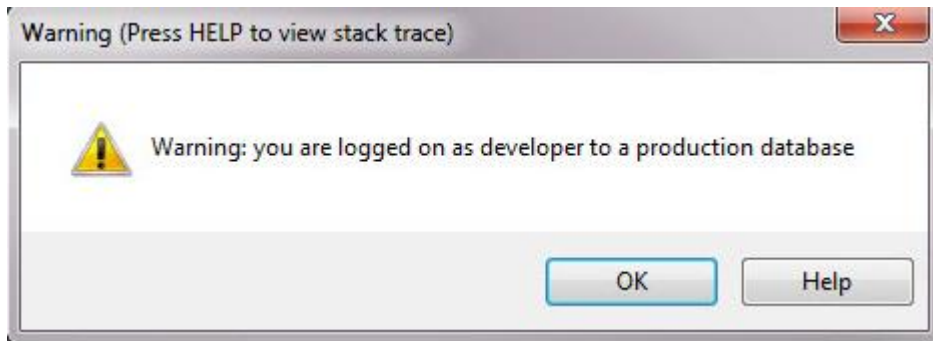
Exit

Please enter your credentials

Security

Alert when developer connects to production system (MATE-03531)

When a user logs into a production system with a **Role** that has **User type** set to **Developer**, a warning message will be displayed to avoid unintended data changes by service engineers.



Note

A production system is identified as such if the general setting **This is a test database** is disabled (**Start -> System management -> Customize -> MATE**).

Microbiology

Isolation and carrier test browsers for actions of type Germ (GLIMS_BAC-01015)

In the microbiology work screen, one can choose to show either the isolation test browser, the carrier test browser or both. However, this was only possible for microbiology actions of type **Virus** and **Parasite**. This is now also possible for microbiology actions of type **Germ**.

Antibiogram issue when same value for different formula type (GLIMS_BAC-01075)

In the antibiogram window of the microbiology screen, when entering the same numeric value for two different formula types (e.g. MIC and E-test), the result was not always correctly saved. This has been corrected.

Check and replace antibiotic report value via MISPL (GLIMS_BAC-01077)

In analogy with the existing Isolation-based MISPL functions **EqualRIS** and **ReplaceRIS** (which are executed against the antibiotic's **Raw value**), two new MISPL functions are now available: **EqualReportedRIS** and **ReplaceReportedRIS** (which are executed against the antibiotic's **Report value**).

Search isolations for a specific study / study type (GLIMS_BAC-01082)

The Isolation query screen (**Start -> Microbiology -> Isolation query**) now allows to select a **Study type** or a specific **study** as search criterion.

The screenshot shows the 'Isolation - query options' window. The 'Study Type' and 'Study' dropdown menus are highlighted with a red rectangle. The window includes various search filters and options for querying isolations.

Isolation - query options

Sampling date from: [?] to: [?]

Doubles: ☐ Don't exclude doubles
☐ Exclude doubles...
☐ Only doubles...

Hosp. acquired: ☐ Yes ☐ No ☒ All

Material: [?] 1st variable: [?]

Type: [?] Organism: [?]

Appraisal: [?] Severity: [?]

Pos/Neg: ☐ Pos ☐ Neg ☒ All Status: All (excl. discontinue) ☐ Only with antibiogram

Department: [?] ☐ Only reportable ☐ Only officially reportable

Modified within: [?] days

Study Type: [?] Study: [?]

Resistance pattern: [?] [?] [?] [?] [?] [?] [?] [?] [?] [?]

Test pattern: [?] [?] [?] [?] [?] [?] [?] [?] [?] [?]

Patient: [?]

Residence type: ☐ H ☐ A ☒ All In ward(s): [?]

Filter: [?]

Storage criteria

Archiving status: [?]

Lab archive: [?]

Archive part: [?] [?]

Rack: [?]

Rack code pattern: [?]

Rack usage pattern: [?]

Storage date from: [?] To: [?]

☐ Expired only

Reason pattern: [?]

Removal reason pattern: [?]

OK Cancel

Tip

The same new options are available in the query screen of the Isolation statistics.

Issue with non-reportable isolations (GLIMS_BAC-01084)

Problem description

1. In the microbiology work screen, an isolation is entered with a positive appraisal.
2. This implies that the microbiology action is now marked as **Positive**.
3. The isolation is then marked as **Not reportable**.
4. If there are no other reportable isolations, GLIMS will now correctly report the **Negative answer**.
5. However, when using Report builder, the exported XML still marks the microbiology action as **Positive**, which suggests that an isolation has been detected (but not reported).

Solution

1. **Not reportable** isolations will no longer influence the decision to mark a microbiology action as **Positive**.

Quality control

Printing of qualitative QC population (GLIMS-06591)

An error occurred when printing a QC population of type **Qualitative**. This has been corrected.

Stock management

Deleted items reappear in purchase order entry screen (GLIMS_STCK-00525)

When deleting and adding items in 1 purchase order entry or product order list session, the deleted items reappeared when the screen is saved. This has been corrected.

Product specifications with special characters (GLIMS_STCK-00531)

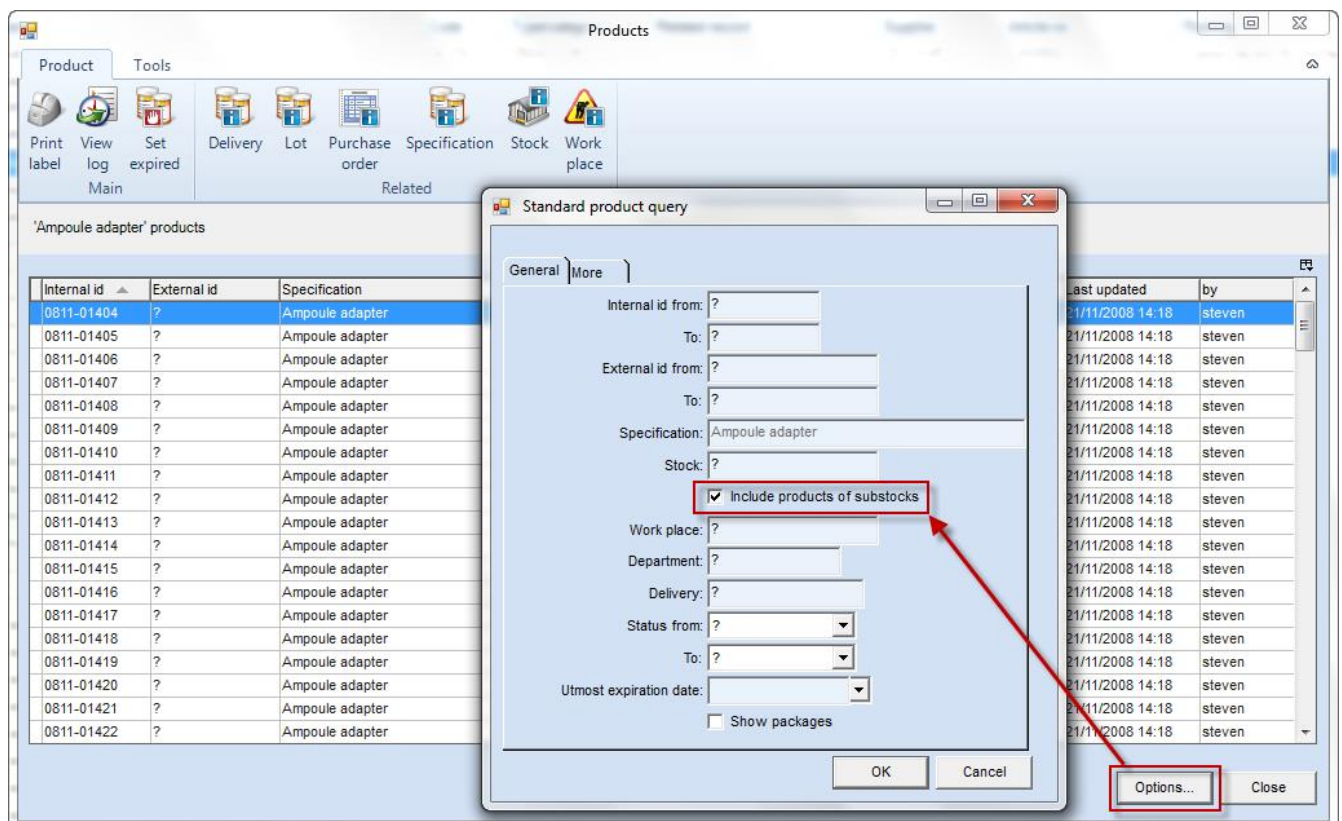
When selecting product specifications with a name that contains a # character in the purchase order entry screen, they did not appear in the embedded product specification browser (in the purchase order entry screen and purchase order list).

This has been corrected.

Show products of substocks (GLIMS_STCK-00533)

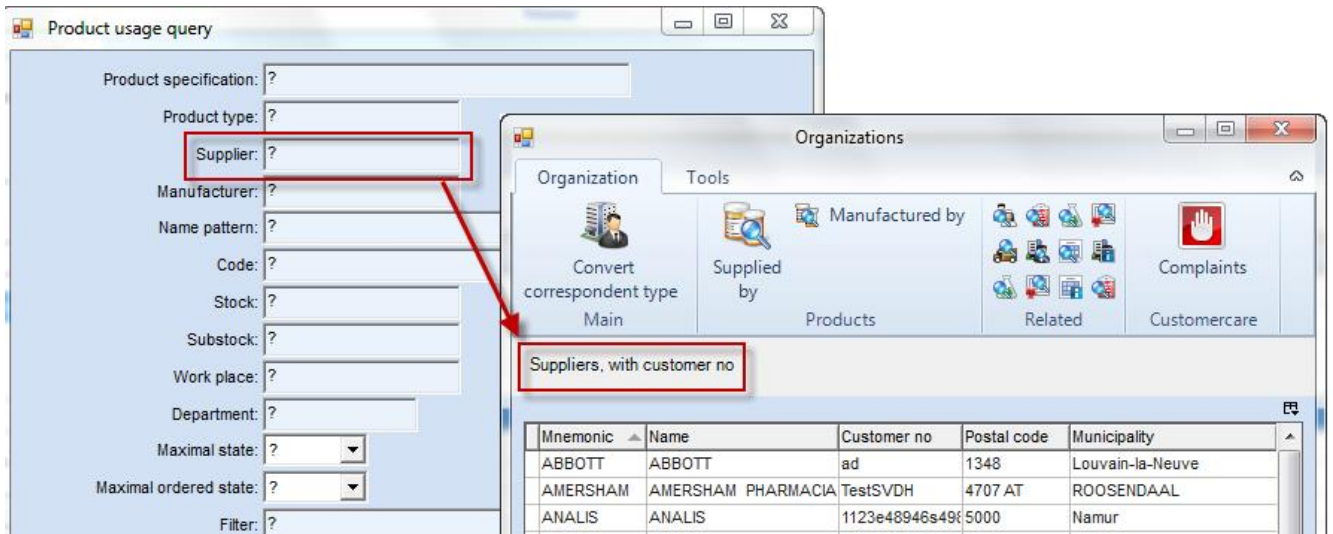
In several browsers (e.g. **Products of Product specification**, **Products of Product usage**), GLIMS will now by default include products of substocks.

If you want to change this behavior, disable the option **Include products of substocks** of the **Product** browser.



Only show organizations with customer no for supplier selection (GLIMS_STCK-00534)

When selecting a **Supplier** in the **Product usage query** (Start -> Stock management -> Product specifications in use), GLIMS will now only show the **Organizations** with a **Customer no** (so the actual suppliers).



Billing

Financial export in "SEPA" format (BILX_GSEPA-00001)

Introduction

GLIMS now allows exporting financial data in the **SEPA** format using the `FinancialShipment.Send` function.

Configuration

The SEPA export requires some additional configuration. A SEPA CDD document is a financial transaction between

- a debtor: the **Correspondent** linked to the **Payer**, and
- a creditor: the **Correspondent** linked to the **Firm** of the **Lab**.

A mandate should be defined between the debtor and the creditor. Mandatory fields for a mandate are

- **Mandate ID**
- **Date of Signature**

A creditor correspondent should have a **Creditor Identifier**.

The extra data which is needed for SEPA, should be specified in the **Correspondent** field **Billing comment** in XML format in a `<SEPA>...</SEPA>` section.

The **Correspondent** linked to the **Firm** of the **Lab** should have a `<CreditorIdentifier>` subnode in its SEPA section in the billing comment.

Example

```
<SEPA>
  <CreditorIdentifier>DE37ZZZ00000155700</CreditorIdentifier>
</SEPA>
```

The mandate of the customer should be defined in a `<Mandate>` subnode.

Example

```
<SEPA>
  <Mandate>
    <MndtId>G192BCDA</MndtId>
    <DtOfSgntr>2013-09-14</DtOfSgntr>
  </Mandate>
</SEPA>
```

The data in the <MndtId> node is the Mandate ID. The <DtOfSgntr> node contains the date of signature. The date format is fixed: YYYY-MM-DD.

It is possible that multiple firms are defined in a multi-lab environment. A customer can have mandates for different labs. It is possible to define multiple <Mandate> nodes in the SEPA section, but then a <CreditorIdentifier> node is required inside the <Mandate> node in order to differentiate between the different mandates. When only one mandate is entered, this one will always be selected. Same principle is used when having two mandates. If the mandate is not found among the candidates, then the first mandate will be selected.

Example

```
<SEPA>
  <Mandate>
    <MndtId>G192BCDA</MndtId>
    <DtOfSgntr>2013-09-14</DtOfSgntr>
    <CreditorIdentifier>DE37ZZZ00000155700</CreditorIdentifier>
  </Mandate>
  <Mandate>
    <MndtId>H203ABCD</MndtId>
    <DtOfSgntr>2013-08-24</DtOfSgntr>
    <CreditorIdentifier>DE37ZZZ00000166888</CreditorIdentifier>
  </Mandate>
</SEPA>
```

It is also possible to specify the **SeqTp** in the SEPA section of the Billing comment of the debtor

Example

```
<SeqTp>RCUR</SeqTp>
```

If the SeqTp is not defined in the billing comment, then we will use FRST as SeqTp (see below)

SEPA Document Structure

Invoice grouping

A financial shipment can contain multiple invoice summaries for different payers.

Each payer can have a different **SeqTp** value in its billing comment. The SeqTp can only be specified once in a Customer Direct Debit document.

This SeqTp value might be important. SeqTp='RCUR' means that the payment must be done in three days. For SeqTp='FRST', the payment has to be done in six days.

Note

The exact value of the SeqTp field is not validated, the correct value must be entered.

GLIMS will group the invoice summaries based on the SeqTp value of the payers.

The SEPA export of a financial shipment will produce a file for each SeqTp value. The file name will have a structure CDD<FinancialShipment_id>_<current_date><SeqTp>.xml.

Fields & Contents

Header

- MsgId: this will be identical to the file name without the xml extension: "<BIC>_<FinancialShipment_id>_<current_date>_CDD"
- CredDtTm: date time of the creation of the document
- NbOfTxS: number of invoice summaries in the document
- CtrlSum: sum of the unbalanced amounts of the invoice summaries in the document
- InitPty/Nm: name of the Firm correspondent of the Financial Shipment

PmtInf

- PmtInfId: same as the MsgId (see above). We will only have one PmtInf node in a CDD document.
- PmtMtd: DD (fixed)
- BtchBookg: true (fixed)
- NbOfTxS: number of invoice summaries
- CtrlSum: Sum of the unbalanced amounts of the invoice summaries in the document
- PmtTpInf/SvcLvl/CD: SEPA (fixed)
- PmtTpInf/LclInstrm/CD: CORE (fixed)
- PmtTpInf/SeqTp: SeqTp or FRST when not defined.
- ReqdColltnDt: Requested CollectionDate.
 - If the SeqTp = FRST, then this is the current date + 6 working days.
 - If the SeqTp = RCUR, then this is the current date + 3 working days.
 - If the SeqTp is not FRST or RCUR, then this is the External date of the financial shipment. If the latter is not specified, then it will be the current date + 8 working days.
- Cdtr/Nm : Firm.Correspondent.Name
- CdtrAcct/Id/IBAN: Firm.Correspondent.BankAccount.IBAN
- CdtrAgt/FinInstnId/BIC: Firm.Correspondent.BankAccount.BIC
- ChrgBr: SLEV (Fixed)

DrctDbtTxInf

For each invoice summary, there will be a DrctDbtTxInf node under the PmtInf node.

- PmtId/EndToEndId: InvoiceSummary ID
- InstdAmt (Ccy attribute fixed on EUR for the time being): InvoiceSummary unbalanced Amount
- DrctDbtTx/ MndtRItdInf MndtId: Mandate ID

- DrctDbtTx/ MndtRltdInf/DtOfSgntr: Mandate Date of Signature
- DrctDbtTx/ MndtRltdInf/ AmdmntInd: false (fixed)
- CdtrSchmeld/Id/PrvtId/Othr/Id: Creditor Identifier
- CdtrSchmeld/Id/PrvtId/Othr/SchmeNm/Prtry: SEPA (fixed)
- DbtrAgt/ FinInstnId/BIC: Payer.BankAccount.BIC
- Dbtr/Nm: Payer.Name
- DbtrAcct/Id/IBAN: Payer.BankAccount.IBAN
- RmtInf/Ustrd: will have the structure <InvoiceSummary.DocNr>, <date invoice summary>, <payer name>

Note

Only a limited set of characters is allowed in a SEPA document: "a-z", "A-Z", "0-9", ":", "-", "(+.) / ". Fields with free text will be formatted to ensure a valid SEPA document.

Issue in Kostenträger Stammdatei import (BILX_GKVDT-00042)

The KBV Kostenträger Stammdatei import (German billing) did not set the KTAB end date. This has been corrected.

Issues when printing price list (GLIMS_BILL-02999)

When printing a price list, the following issues could occur.

1. Tariffs belonging to both the base price list and the extension price list were printed twice.
2. Discounts were applied although the **Price list** option **Discountable** was disabled.

This has been corrected.

MISPL

Rounding issue with Truncate MISPL function (MATE_MISPL-00051)

A rounding issue was detected which affected the built-in Truncate MISPL function. This has been corrected.

Issue with site functions having more than 256 variables (MATE_MISPL-00064)

An issue was detected with site functions in which more than 256 variables were defined. This has been corrected.

Correction for MISPL function "CurrentSessionHasPrivilege" (MATE-03274)

Users logged in with a **Role** in which **User type** is set to **System manager** have access to all fields, functions and tables except those protected by the **_SysAdm_NoPriv1** and **_SysAdm_NoPriv2** privileges if these privileges are not explicitly assigned to them.

However, the MISPL function `gp_Site.CurrentSessionHasPrivilege` returned **Yes** for ALL functions, even those protected by the **_SysAdm_NoPriv1** and **_SysAdm_NoPriv2** privileges.

This has been corrected. From now on, this MISPL function will verify functions protected by these special privileges and will return **No** if the logged in user does not have all required privileges.

Communication

Deprecate -Z parameter for services (MATE_COMHL-00277)

In the **Specific options** of a Service, the **-Z** parameter allows the configuration of services with an XML protocol.

However, as services can set their **Internal language** to either **URL** or **XML**, this parameter is no longer required, and can even cause problems when checking the activity of the service or attempting to stop the service, if there is a mismatch between the **Internal language** and the **-Z** option.

Hence it was decided to deprecate the **-Z** parameter altogether. Existing services which still use the **-Z** parameter are automatically converted.

System management

Introduction of Session devices (MATE-03273)

GLIMS already kept track of all login sessions.

From now on, GLIMS also keeps track of all machines where the application is being run on. Each **Login session** record now refers to a **Session device** record via its **Hosting device** field, identifying the host machine where the session runs .

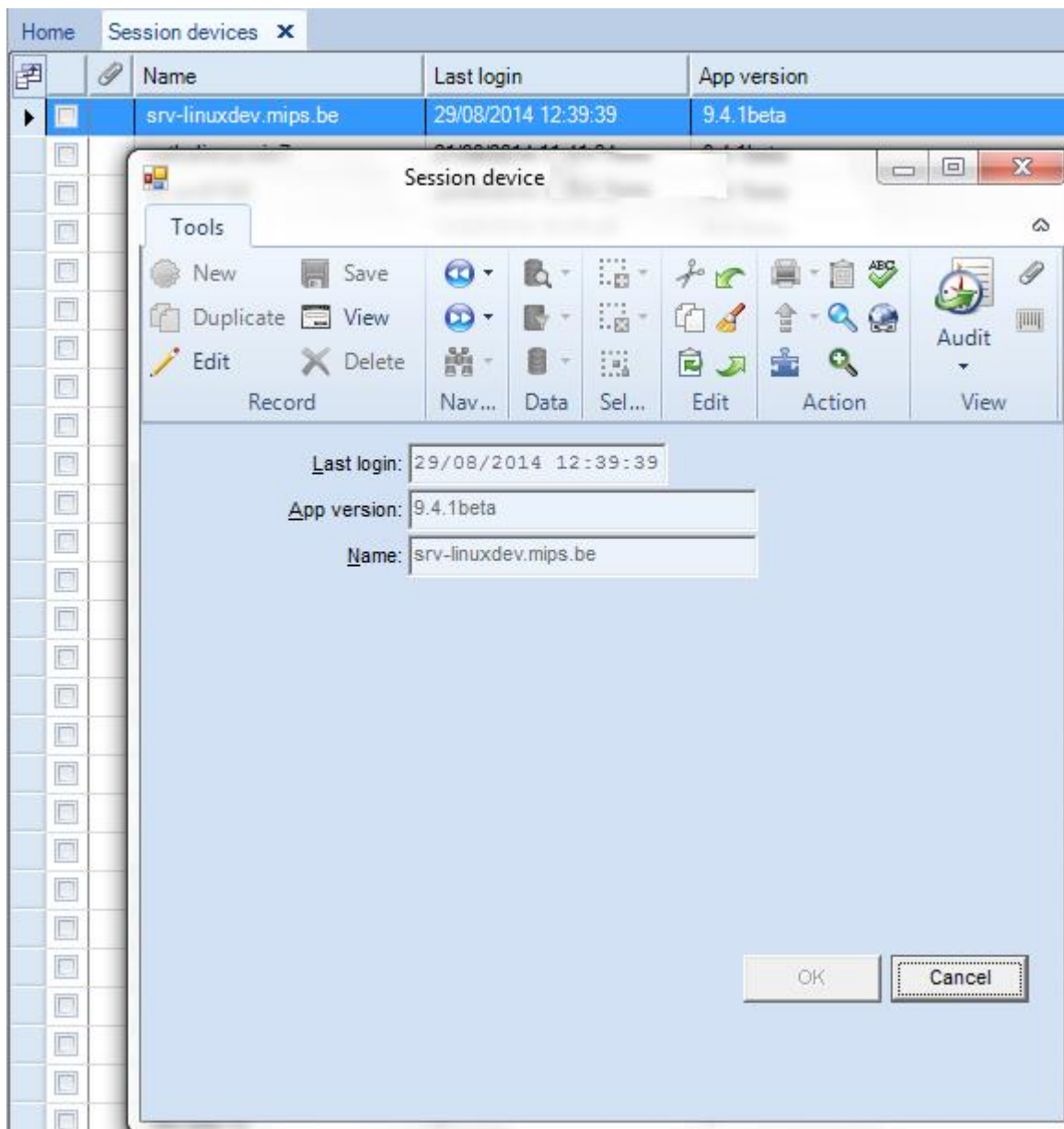
The screenshot displays the GLIMS 9.4.1beta application interface. The background shows a table of login sessions. The foreground features a 'Logon session' dialog box with the following details:

Start date	Start time	User	End date	End time	Login from	Host
29/08/2014	11:26:30	John	?	?	<AppServer>	thala
29/08/2014	11:26:27	John	?	?	<AppServer>	thala
29/08/2014	11:26:27	John	?	?	<AppServer>	thala

Logon session Details:

- User:** John
- Start date:** 29/08/2014
- Start time:** 11:26:27
- End date:**
- End time:** ?
- Login from:** <AppServer>
- Hosting device:** thalamus
- Db user num:** 82
- Version info:** GLIMS 9.4.1beta

The full list of session devices can be accessed from the main menu via **Start -> System management -> Activity -> Session devices**.



Name

Name of the device.

Last login

Most recent login through this device.

App version

Version identification of the application.

Tip

Since we require Appserver and clients connecting to Appserver to run the exact same version of the application, it is important to be able to quickly query all hosting machines and their associated application version.

This list provides a quick way to get an overview of the machines that need to be upgraded.

Issue in License browser (MATE-03360)

In case of licenses with a very high **Use limit**, the following error could be displayed in the license browser and editor:

Value 99999999 cannot be displayed using >999.

This has been corrected.

Prevent excessive log file sizes (MATE-03442)

When services are configured to refresh their log file when the maximum file size is reached, the refresh did not work correctly when the log directory was on an NTFS partition on a recent Windows system.

This has been corrected.

Issue in audit overview screen (MATE-03453)

An error could occur when enabling the **Group by record** option in the **Audit overview** screen (**Start -> System management -> Logging -> Audit overview**).

This has been corrected.

Audit overview

Log entries with From '01/08/2014', To '01/09/2014', Table 'Order'

Creation time	S	Login	Table name	Name
29/08/2014 11:58:14	I	batch	Order	Post-processing timing
29/08/2014 11:58:14	E	batch	Order	Order processing
29/08/2014 11:58:14	I	batch	Order	Action scheduling timing
29/08/2014 11:58:14	E	batch	Order	Requested code processing
29/08/2014 11:58:14	E	batch	Order	Requested code processing
29/08/2014 11:58:14	E	batch	Order	Requested code processing
29/08/2014 11:58:14	E	batch	Order	Requested code processing
29/08/2014 11:58:14	E	batch	Order	Requested code processing
29/08/2014 11:58:14	E	batch	Order	Requested code processing
29/08/2014 11:58:14	E	batch	Order	Requested code processing
29/08/2014 11:58:14	E	batch	Order	Requested code processing
29/08/2014 11:58:14	E	batch	Order	Requested code processing
29/08/2014 11:58:14	E	batch	Order	Requested code processing
29/08/2014 11:58:14	E	batch	Order	Requested code processing

Description: 0.22s Total (srv-linuxdev)
0.16s Report scheduling
0.03s Order set determination
0.02s Specimen size calculation

User: batch (batch, ?)

Log type

Name: Post-processing timing ☒ Enabled

Log process

Name: 01/08/2014 ☐ Final

Creation time: 07/08/2014 15:45:47

Expire date:

☐ Limit to selected record

☐ Group by record

Show subject record Export to browser Options Close

Issue with license registration (MATE-03461)

When connected to the database in single user mode, it was not possible to activate licenses or import a license file.

This has been corrected.

Cost-based Oracle optimizer mode (MATE-03467)

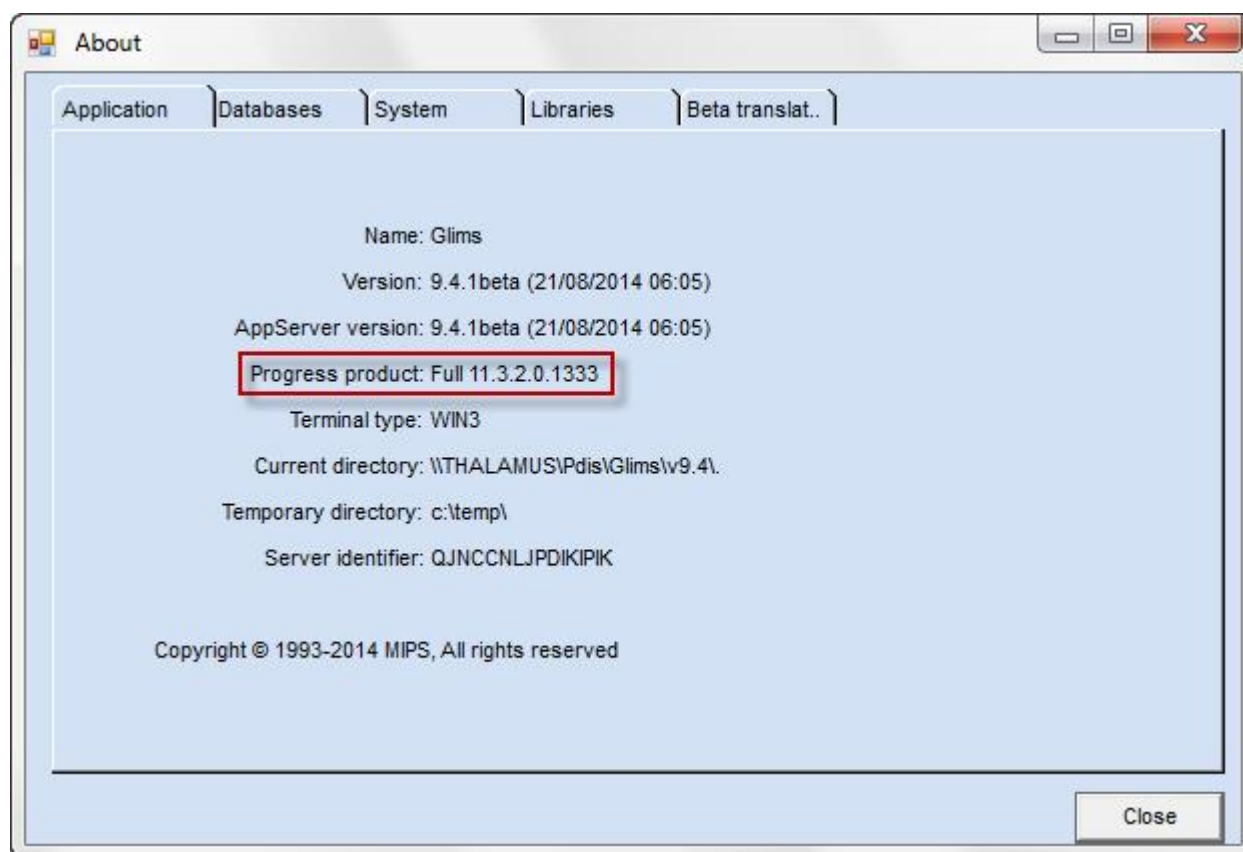
When installing GLIMS 9.4 or upgrading to GLIMS 9.4, the **Oracle optimizer mode** (Start -> System management -> Customize -> MATE) will be set to **ALL_ROWS**, which is the cost-based optimizer mode for best throughput.

In future versions, this configurable option will be removed and **ALL_ROWS** will become the fixed optimizer mode of the application.

Miscellaneous

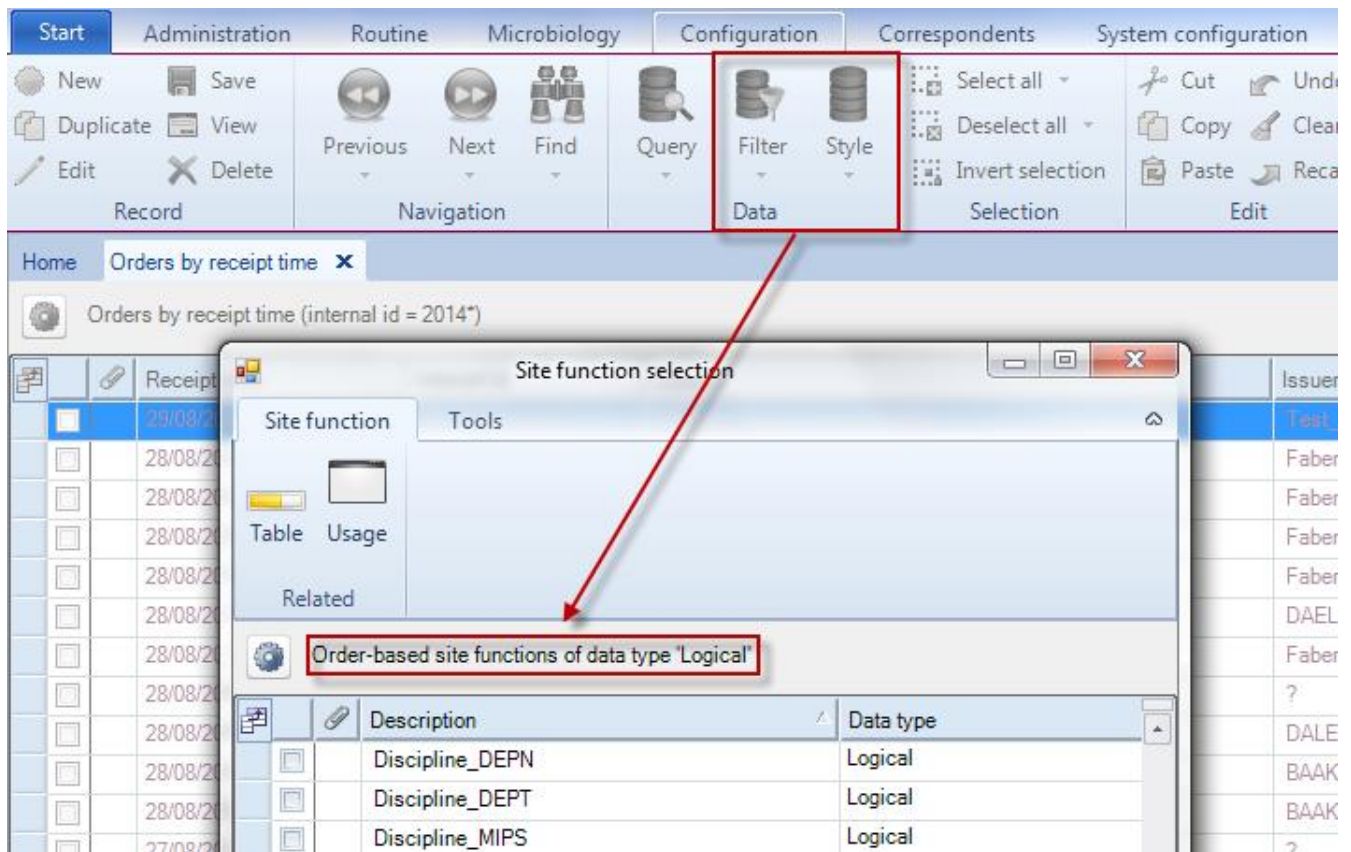
Show full Progress version in About box (MATE-03301)

The GLIMS **About** box now shows the full Progress version instead of only the major and minor release number.



Selection of browser filter / style (MATE-03309)

When selecting a browser **Filter** or **Style** from the contextual Tools ribbon, GLIMS will now limit the displayed site functions to those with the appropriate base table.



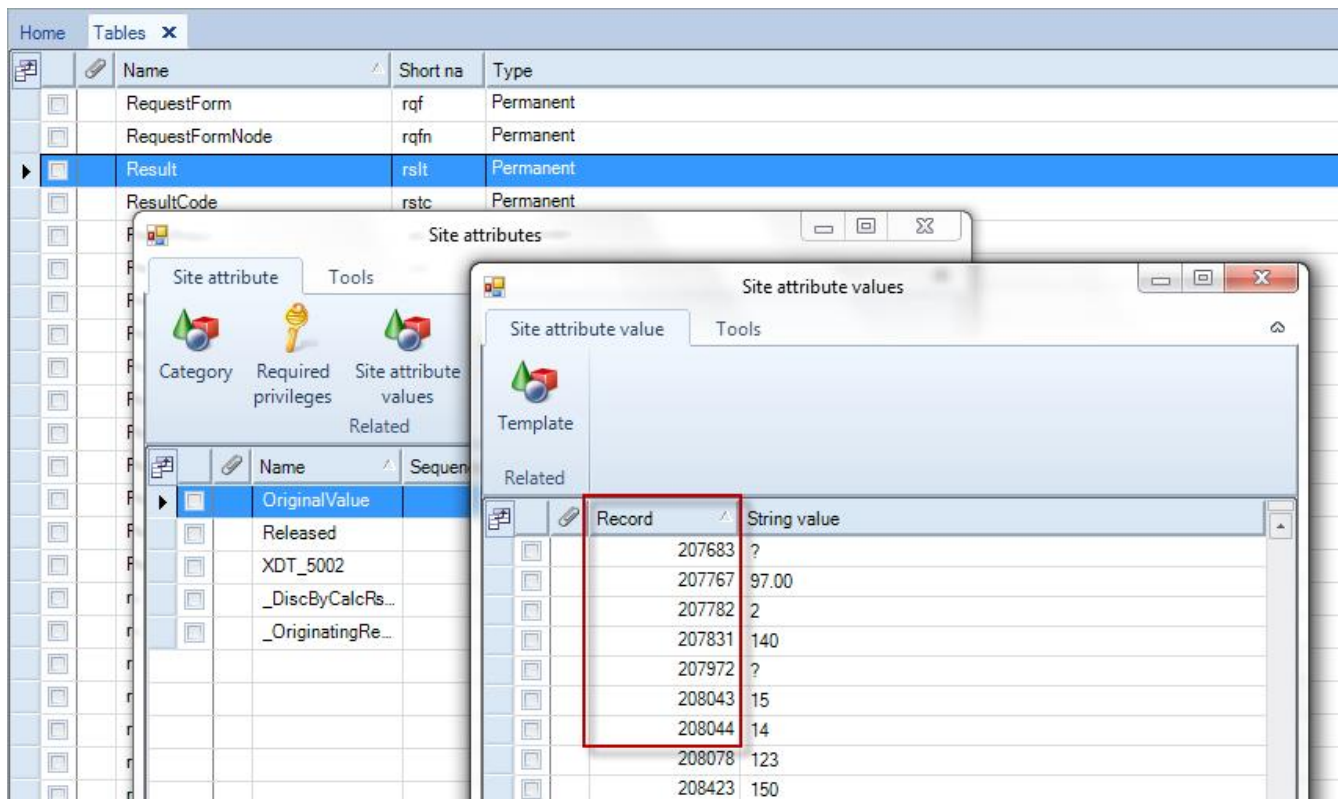
Example: when opening an **Order** browser, only Order-based site functions are available when selecting a **Filter** or **Style**.

Issue in Site attribute values browser (MATE-03338)

Problem description:

1. From the main menu, choose **Start -> System management -> Scheme -> Tables**.
2. Select a table with site attributes and choose the contextual menu / ribbon item **Site attributes**.
3. Select a site attribute and choose the contextual menu / ribbon item **Site attribute values**.
4. An error could occur when the **Record id** was too large to display.

This has been corrected.



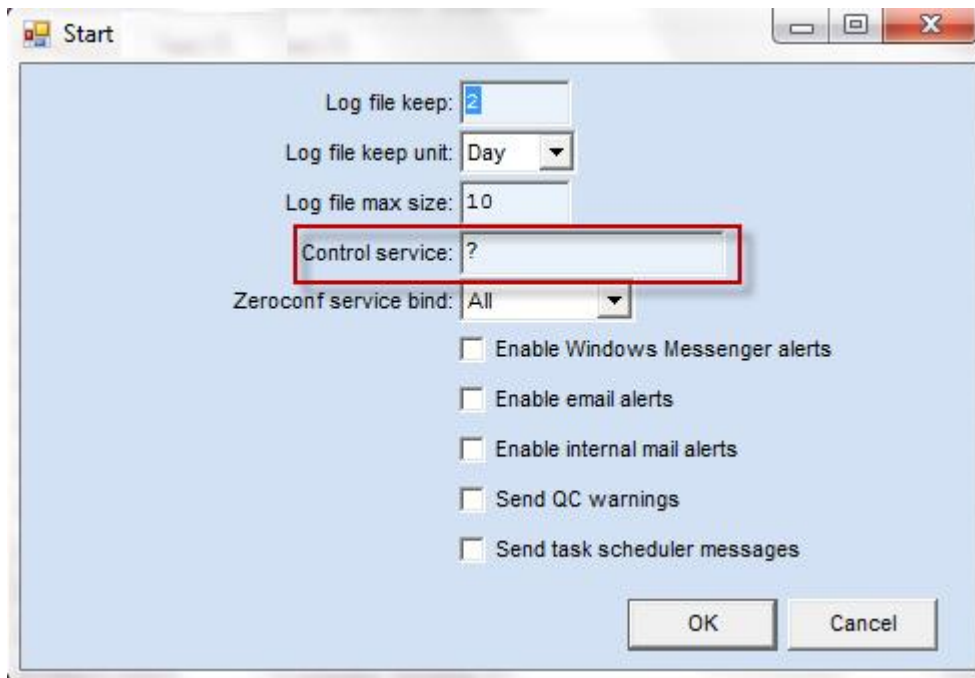
Edit correspondent starting from subtype (MATE-03428)

In previous versions, GLIMS offered a contextual menu item **Correspondent -> Edit** starting from a correspondent subtype such as e.g. **HC Provider**. This functionality was no longer available in GLIMS version 9.

These functions have been re-introduced, so users can now add them to a ribbon or menu. The inverse function is also available: e.g. **AsHCProvider** and **AsOrganization** starting from a **Correspondent**.

Selection of Control service in Start Watchdog screen (MATE-03477)

To prevent configuration errors, the selection of a **Control service** in the **Start Watchdog** screen is now limited to **Services** of type **Service controller**.



Blood bag browser locks general settings (GLIMS_BTM-00831)

When a blood bag browser was open, it could happen that the general settings (**Start -> System management -> Customize -> GLIMS**) were locked.

This has been corrected.