



JDBC Integration (Alarm Export)



- LightSpeed PM – A Certified Quest Partner



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JDBC Integration – Out of the box

- JDBC integration is not available as a solution out of the box today. Custom solutions can be created.
 - Custom Event Driven Rule
 - Command Invocation
 - Groovy Scripting
 - Very Little control

JDBC Integration Alarm Export

- Our Custom JDBC Integration Cartridge makes it much easier to export alarms to a database:
 - Customizable fields
 - Direct Insertion to a database
 - Ability to generate SQL files vs Direct Insertion
 - **Remote Administration** of solution across servers
 - Decision engine for total and precise control
 - 20 Levels of granularity
 - Severity Level control

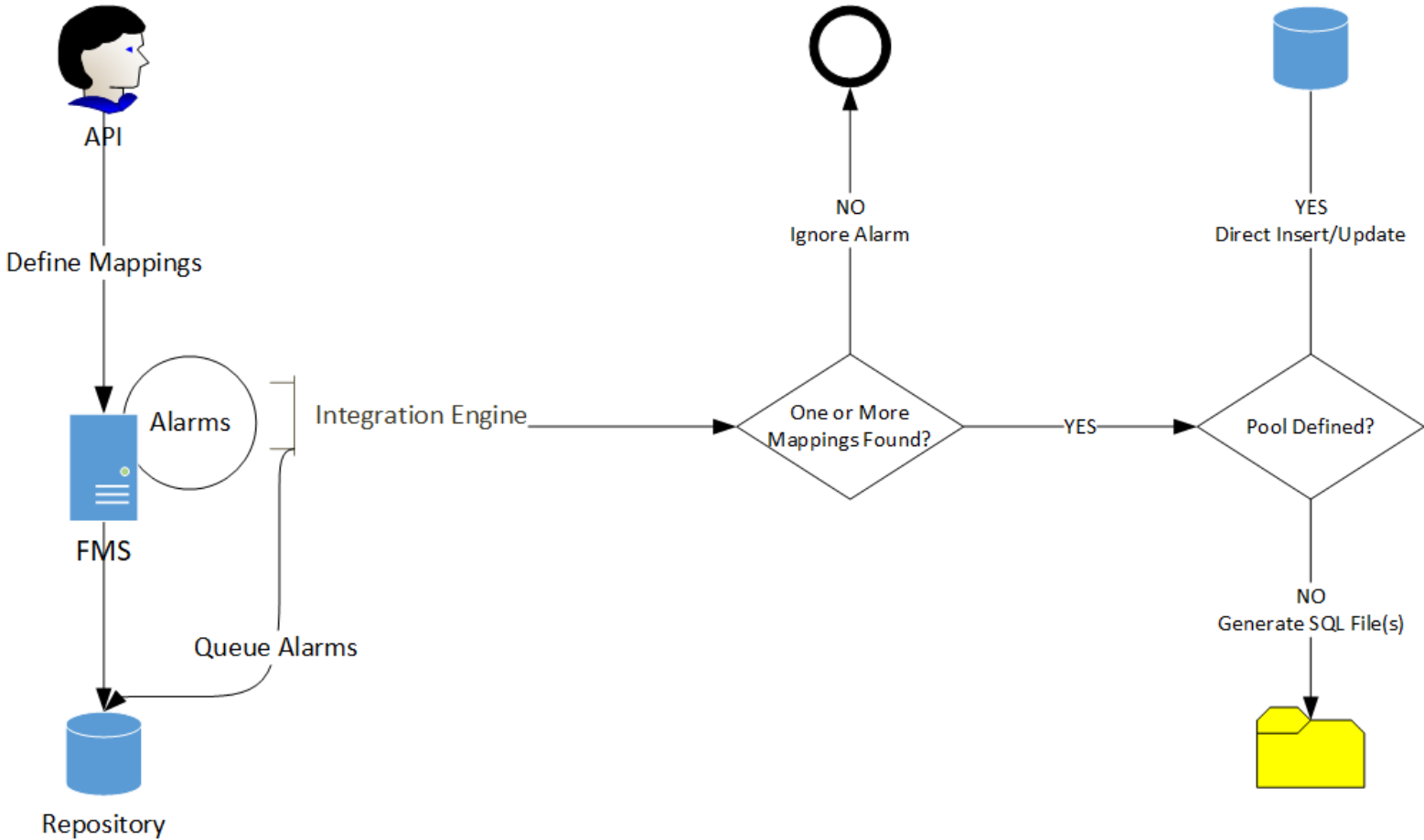
JDBC Integration – Highlights

- Pattern editor to easily access many of the information related to the alarm. (No groovy required)
 - Access to dozens of fields to easily provide values to parameters
 - A dozen common operators available to easily avoid any coding
- Use of groovy scripts for power users
 - Use of groovy scripting with complete injected flow context
 - Ability to reject/delay ticket generation
- Persisted Queue so no events are lost
 - Guaranteed delivery
 - Keep history for rejected, failed and successful operations for total control
 - Pause or delay control
 - Consumer Thread settings/control as to manage concurrency and volume.

JDBC Integration – Highlights

- Alarm Transition Support
 - Can be turned ON or OFF
 - Update tickets when alarm is transitioning from one severity to another.
 - Can be either to higher severity only or any transition
 - Close ticket only when the last alarm in the transition has been cleared
 - All transition information is accessible from the Pattern Editor
- Alarm Flood Prevention
- Auto Acknowledge Alarms

JDBC Integration – Flow



JDBC Integration – Decision Engine

- The decision engine is based on various mappings defined within the solution. A very rich UI is provided to create the mappings.

- Low Priority

	Service	Host	Agent Type	Agent	Topology Object	Rule
0						
1		x				
2			x			
3				x		
4						x
5					x	
6		x				x
7			x			x
8				x		x
9					x	x
10	x					
11	x	x				
12	x		x			
13	x			x		
14	x					x
15	x				x	
16	x	x				x
17	x		x			x
18	x			x		x
19	x				x	x

No Service

With Service

- High Priority

JDBC Integration – Changing Settings

Integration Pack Registry Settings - Local FMS

Save | Undo | Filter

Name	Value	Scoping		
JDBC Integration				
Open Ticket				
PSO.JDBCIntegration.OpenTicket.NoEmptyValue	<input type="checkbox"/> false			If true any tag that returns a null will be replaced by a space. If false null values are simply not outputted.
PSO.JDBCIntegration.OpenTicket.TimeZone	<input type="checkbox"/> GMT			Defines the time zone to use when outputting date and time in the Command.
PSO.JDBCIntegration.OpenTicket.DateTimeFormat	<input type="checkbox"/> dd/MM/yyyy:HH:mm:ss			Defines the format for the date and time to use when outputting date and time in the Command.
Queue				
Ignore				
PSO.JDBCIntegration.Queue.Ignore.Normal	<input type="checkbox"/> true			Should cleared alarms be ignored by the queuing engine? Ignored alarms are not queued thus reducing the overall load on the system.
PSO.JDBCIntegration.Queue.Ignore.Warning	<input type="checkbox"/> false			Should Warning alarms be ignored by the queuing engine? Ignored alarms are not queued thus reducing the overall load on the system.
PSO.JDBCIntegration.Queue.Ignore.Critical	<input type="checkbox"/> false			Should Critical alarms be ignored by the queuing engine? Ignored alarms are not queued thus reducing the overall load on the system.
PSO.JDBCIntegration.Queue.Ignore.Fatal	<input type="checkbox"/> false			Should Fatal alarms be ignored by the queuing engine? Ignored alarms are not queued thus reducing the overall load on the system.
PSO.JDBCIntegration.Queue.Ignore.Rules	<input type="checkbox"/>			A list of comma separated rule names that the queue should ignore. Alarms generated by ignored rules are not queued thus reducing the overall load on the system.
Delay				
PSO.JDBCIntegration.Queue.Alarm.DelayPeriod.Warning	<input type="checkbox"/> 0			Time in minutes a warning alarm should be delayed in the queue before being forwarded to the target system if still active (not cleared).
PSO.JDBCIntegration.Queue.Alarm.DelayPeriod.Critical	<input type="checkbox"/> 0			Time in minutes a critical alarm should be delayed in the queue before being forwarded to the target system if still active (not cleared).
PSO.JDBCIntegration.Queue.Alarm.DelayPeriod.Fatal	<input type="checkbox"/> 0			Time in minutes a fatal alarm should be delayed in the queue before being forwarded to the target system if still active (not cleared).
PSO.JDBCIntegration.Queue.AlarmTransition.Enable	<input type="checkbox"/> false			Should alarm transition be supported. If enabled the integration will update a ticket vs creating a new one when an alarm goes from one state to another.
PSO.JDBCIntegration.Queue.Alarm.AcknowledgeUponSuccess	<input type="checkbox"/> false			Should the alarm be acknowledged when the alarm has been successfully processed.
PSO.JDBCIntegration.Queue.Alarm.EnforceServiceFilter	<input type="checkbox"/> false			When an alarm is being processed enforce the filters applied to the service. If true a service is not considered to be a hit (mapping to a service).
PSO.JDBCIntegration.Queue.PausePeriod	<input type="checkbox"/> 0			Time in minutes no alarms should be forwarded to the target system. This is useful when the target system is unavailable due to network issues.
Export				
PSO.JDBCIntegration.Export.Folder.Fatal	<input type="checkbox"/>			Indicates the folder name under the Home directory where the Fatal SQL files are to be stored. (i.e.: fatal)
PSO.JDBCIntegration.Export.Folder.Critical	<input type="checkbox"/>			Indicates the folder name under the Home directory where the Critical SQL files are to be stored. (i.e.: critical)
PSO.JDBCIntegration.Export.TableName	<input type="checkbox"/>			Indicates the table name to which alarms will be inserted.
PSO.JDBCIntegration.Export.Folder.Warning	<input type="checkbox"/>			Indicates the folder name under the Home directory where the Warning SQL files are to be stored. (i.e.: warning)
PSO.JDBCIntegration.Export.AlarmIDColumnName	<input type="checkbox"/>			Indicates the column name that represents the alarm ID. Used to update the alarm in case of updates.
PSO.JDBCIntegration.Export.Home	<input type="checkbox"/>			Indicates the home directory where the SQL files are to be stored. (i.e.: C:/jdbc-exports)
DB				
PSO.JDBCIntegration.DB.Enable	<input type="checkbox"/> false			If true direct insertion of values will be executed using the defined DB connection. false will cause the SQL files to be generated.

JDBC Integration – Connection Pool

JDBC Integration DB Settings

DB Type:

Host Name:

DB Name:

Port:

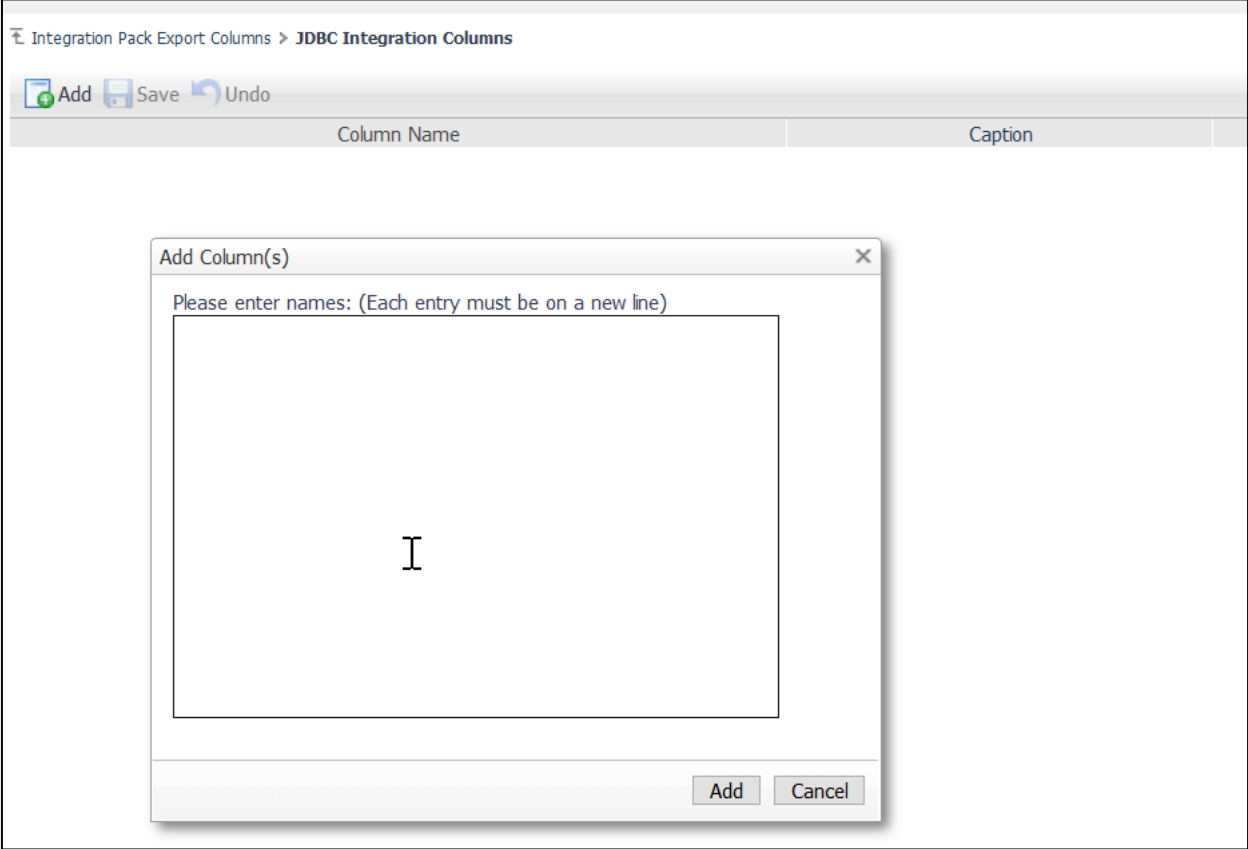
Windows Authentication:

Username:

Password:

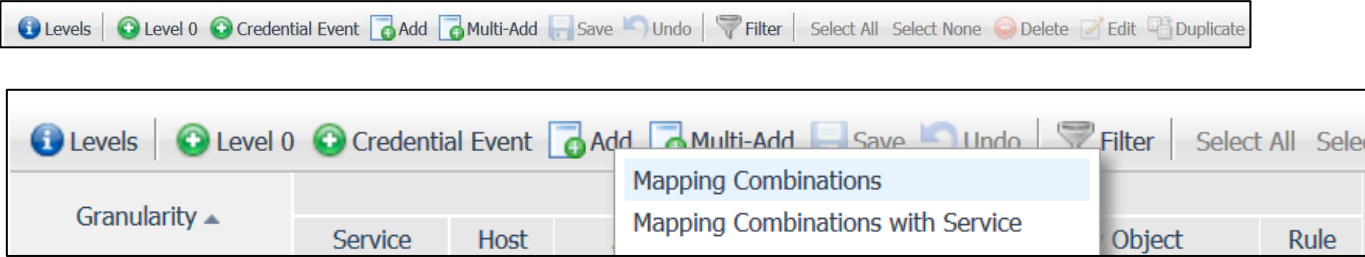
Max Connections:

JDBC Integration – Customizable Columns

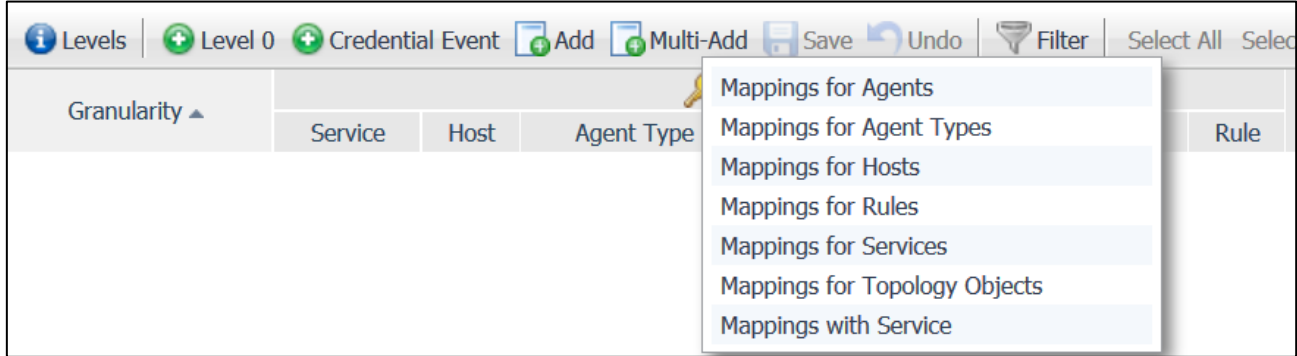


JDBC Integration – Mappings Editor

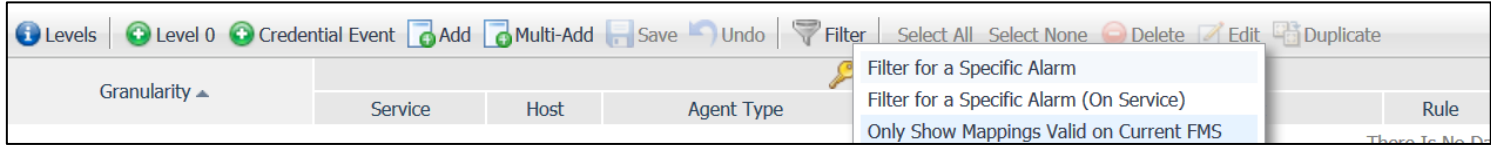
- Combinations



- Multiple Mappings



- Filtering



- . . .

JDBC Integration – Field Editor

Alarm ID	: @ALARM_ID			
Alarm Severity	: @ALARM_SEVERITY			
Alarm Severity Name	: @ALARM_SEVERITY_NAME			
Alarm Created Time	: @ALARM_CREATED_TIME			
Alarm Message	: @ALARM_MESSAGE_CLEAN			
Alarm Link	: @ALARM_LINK			
Alarm Is Acknowledged	: @ALARM_IS_ACKNOWLEDGED			
Alarm Acknowledged Time	: @ALARM_ACKNOWLEDGED_TIME			
Alarm Acknowledged By	: @ALARM_ACKNOWLEDGED_BY			
Alarm Is Cleared	: @ALARM_IS_CLEARED			
Alarm Cleared Time	: @ALARM_CLEARED_TIME			
Alarm Cleared By	: @ALARM_CLEARED_BY			
Rule Name	: @RULE_NAME			
Impacted Global Services	: @IMPACTED_GLOBAL_SERVICES			
Agent UID	: @AGENT_UID			
Hostname	: @HOSTNAME			
Topology Object Name	: @TOP_OBJECT_LONG_NAME			
Topology Object UID	: @TOP_OBJECT_UID			

Update Reset Clear

JDBC Integration – Pattern Editor

The screenshot shows the Pattern Editor interface for "Alarm Severity Name Elements". The top-left pane shows a list of pattern elements with "@ALARM_SEVERITY_NAME" selected. The top-right pane contains a text area with the pattern "@ALARM_SEVERITY_NAME" and a red warning message: "Remember to click Apply if you manually edit the pattern. Spaces are automatically trimmed, please use Edit Complete to insert spaces and have them preserved." Below the text area is an "Apply" button. The bottom-left pane is a "TAGS" table with columns "Tag" and "Caption". The bottom-right pane is an "OPERATORS" table with columns "Operator" and "Short Description".

Alarm Severity Name Elements

Add Insert Edit Complete Save Undo

Pattern Element

- @ALARM_SEVERITY_NAME

Remember to click Apply if you manually edit the pattern.
Spaces are automatically trimmed, please use Edit Complete to insert spaces and have them preserved.

@ALARM_SEVERITY_NAME

Apply

TAGS

Tag	Caption
AGENT_TYPE	Agent Type
AGENT_UID	Agent UID
ALARM_ACKNOWLEDGED_BY	Alarm Acknowledged By
ALARM_ACKNOWLEDGED_TIME	Alarm Acknowledged Time
ALARM_CLEARED_BY	Alarm Cleared By
ALARM_CLEARED_TIME	Alarm Cleared Time
ALARM_CREATED_TIME	Alarm Created Time
ALARM_ID	Alarm ID
ALARM_IS_ACKNOWLEDGED	Is Alarm Acknowledged
ALARM_IS_CLEARED	Is Alarm Cleared
ALARM_LINK	Alarm Link

OPERATORS

Operator	Short Description
?[]	If tag has a value.
[]	If tag does not have a value.
?[]:[]	If tag has a value else.
^{}{}	Replace string with another.
=0	Equality
=0?[]:[]	If equal else
![[]]	Groovy Script
^U	Uppercase
^L	Lowercase
^T	Trim
^N	New Line Output
^R	Return

JDBC Integration – System Requirements

- **Minimum required FMS version**

5.9.3

- **Supported Databases**

Microsoft SQL

Oracle

MySQL

PostgreSQL

Minimum Version

2008 (version 10.0.1600 or later)

9i R2

5.1.45

9.4.0