

Xalert

XALERT

User Manual

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List of changes

Version	Date	Author	Comments
1.0	25.10.2014	Frank Uray	Initial Version

References

Ref.	Document	Version	Date

Questions / open points

Overview

With Xalert you will be able to generate hierarchical alerts of different types and each alert can contain a various number of hierarchical alarms.

Currently there are 3 alert types:

- Common
- JobControl
- Xcontrol

And there are 3 alarm types:

- eMail
- SMS
- FAX

Database

Xalert SQL database is self generating by the Windows service.

The SQL server, database name and also FileGroup and Constraint Settings have to be set in the file "xalert.engine.xml":

```
<appSettings type="string" key="Server" value="SATURN\SQL2012" />
<appSettings type="string" key="Database" value="XalertTest" />
<appSettings type="string" key="FileGroup_DATA" value="PRIMARY" />
<appSettings type="string" key="FileGroup_INDEX" value="PRIMARY" />
<appSettings type="string" key="Constraint_REPLICATION" value="NOT FOR REPLICATION" />
```

The database must exist.

Be careful with the setting: `<appSettings type="int" key="ReCreateDatabase" value="0" />`

When set to 1 all the objects will be deleted and new created !

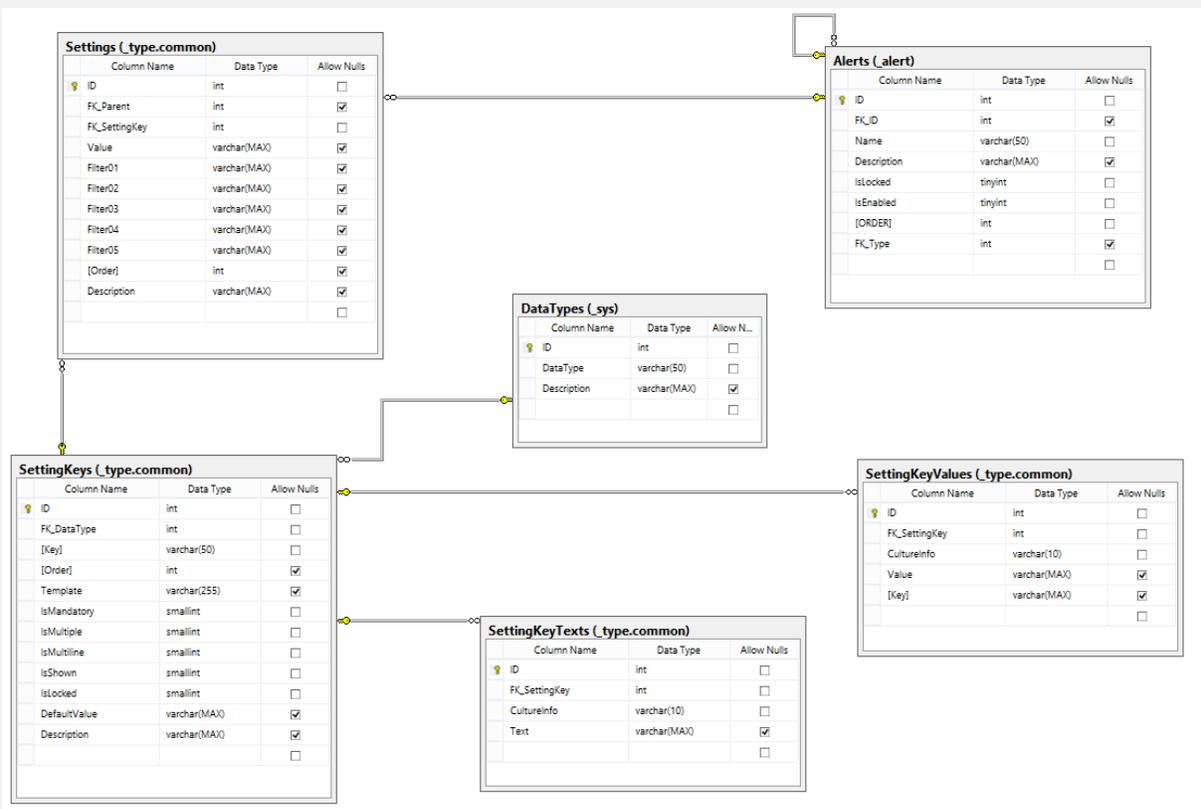
Alerts Diagram



Alarm Diagram



Type(s) Diagram



Windows Service

Xalert.engine has to be installed using Microsoft.NET's Installutil.

After the Xalert.engine Service is installed, you have to set the properties of the Service, basically "Log on as". Use a user that has permission to the database.

Setting "Server" in xalert.engine.xml

Value has to be SQL Server and Instance: "Server\Instance"
If there is no named instance, the value is just the name of the Server.
Value cannot be empty!

Setting "Database" in xalert.engine.xml

Value has to be SQL Database: "Database" or "[Database]"
Value cannot be empty!

Setting "QueryTimeout" in xalert.engine.xml

Value is an integer value. 0 means infinite wait time.
Value cannot be empty!

Setting "SMTPServer" in xalert.engine.xml

Value is the name of a valid SMTP Server
Value cannot be empty if eMail Alarms will be used!

Setting "SMTPServerPort" in xalert.engine.xml

Value is the port of a valid SMTP Server
Value is optional!

Setting "SMTPServerUsername" in xalert.engine.xml

Value is the Username of the SMTP Server. Encrypted value can be generated using a symmetric tool.
Value is optional!

Setting "SMTPServerPassword" in xalert.engine.xml

Value is the Password of the SMTP Server. Encrypted value can be generated using a symmetric tool.
Value is optional!

Setting "currentCulture" in xalert.engine.xml

Value is the language context of the engine. Possible values are:

default Default
de-AT Deutsch (Österreich)
de-CH Deutsch (Schweiz)
de-DE Deutsch (Deutschland)
de-LI Deutsch (Liechtenstein)
en-GB English (England)
en-US English (US)
es-ES Spanisch (Spanien)
fr-CH Französisch (Schweiz)
fr-FR Französisch (Frankreich)
it-CH Italienisch (Schweiz)
it-IT Italienisch (Italien)
nl-NL Dutch (Netherlands)

Value cannot be empty!

Setting "eMailFrom" in xalert.engine.xml

Value is the sender address of the Alarm eMails.

Value cannot be empty if eMail Alarms will be used!

Setting "eMailSubject" in xalert.engine.xml

This setting is not used yet

Setting "SMSFrom" in xalert.engine.xml

Value is the sender address of the Alarm SMS's.

Value cannot be empty if SMS Alarms will be used!

Setting "FAXFrom" in xalert.engine.xml

Value is the sender address of the Alarm FAX's.

Value cannot be empty if FAX Alarms will be used!

Setting "Port" in xalert.engine.xml

Value is the TCP port of the engine.

Value can be 0 when broadcast is not used!

Setting "Interval.Alive" in xalert.engine.xml

Value is the alive interval (in milliseconds) of the engine.

Value cannot be empty!

Setting "Interval.PlugIns" in xalert.engine.xml

Value is the check for plugins interval (in milliseconds) of the engine.

Value cannot be empty!

Setting "Interval.Listener" in xalert.engine.xml

Value is the check for alerts and alarms interval (in milliseconds) of the engine.

Value cannot be empty!

Setting "StopExecuting" in xalert.engine.xml

When value is set to 1, no alerts and alarms will be checked or send.

Value cannot be empty! Value can be 0 or 1

Setting "RunMissedDates" in xalert.engine.xml

When value is set to 0, alarms for missed dates will not be send.

Value cannot be empty! Value can be 0 or 1

Setting "WaitforSQLServerService" in xalert.engine.xml

This setting is not used yet

Setting "PlugInDirectory" in xalert.engine.xml

Value is the PlugInDirectory. When set to "local" the directory will be underneath the engine directory called "PlugIns"
Value cannot be empty!

Setting "OutputDirectory" in xalert.engine.xml

Value is the OutputDirectory. When set to "local" the directory will be underneath the engine directory called "Output"
Value cannot be empty!

Setting "VariablesDump" in xalert.engine.xml

This setting is not used yet

Setting "LoadInAppDomain" in xalert.engine.xml

When value is set to 1, threads will be loaded in it's own AppDomain.
Value cannot be empty!

Setting "LogicalProcessorsToUse" in xalert.engine.xml

Value defines all the processors the engine will use. If set to "ALL", all processors are used.
Value cannot be empty!

Setting "WriteDebugInfos" in xalert.engine.xml

This setting is not used yet

Setting "DebugPath" in xalert.engine.xml

Value is the Debug Directory for debug infos. When set to "local" the directory will be underneath the engine directory called "Debug"
Value cannot be empty!

Setting "EventLog" in xalert.engine.xml

Value can override the internal EventLog name. Internally it is set to:
"v1.0 Xalert.engine Log"
Value can be empty!

Setting "ReCreateDatabase" in xalert.engine.xml

When value is set to 1, all database objects will be deleted and new created !
Value cannot be empty!

Setting "FileGroup_DATA" in xalert.engine.xml

DATA FileGroup name – used for database creation.

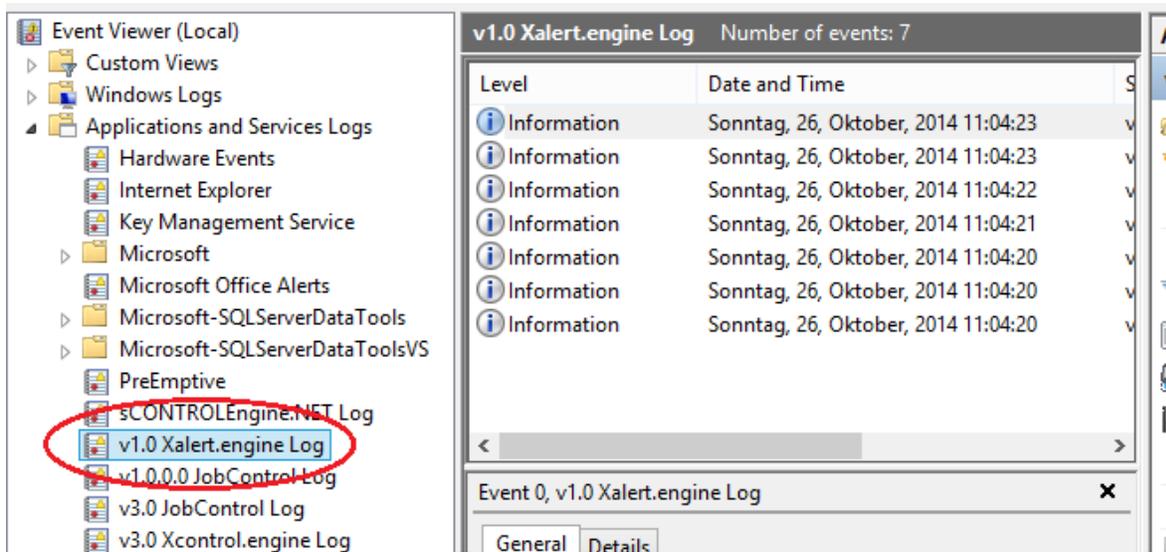
Setting "FileGroup_INDEX" in xalert.engine.xml

INDEX FileGroup name – used for database creation.

Setting "Constraint_REPLICATION" in xalert.engine.xml

Replication setting – used for database creation.

After the service is started, you will have 7 Events in the EventLog:



- xalert.engine.clsBase.ServerStart
- xalert.engine.network.clsNetwork.static_clsServer_GetMessages: The server is running at port :
- xalert.engine.network.clsNetwork.static_clsServer_GetMessages: The local End point is :
- xalert.type.XC.clsStart.Start
- xalert.type.common.clsStart.Start
- xalert.type.JC.clsStart.Start
- xalert.engine.clsBase._clsPlugIns_Initialized

Windows Client

The client is connecting to the Xalert database using standard SQL Server protocol.

Setting "LogoColor" in xalert.xml

This setting is not used yet

Setting "Interval.EngineTick" in xalert.xml

Value is the interval of the Engine Alive Tick:

Engine Version 1.0.5411.24375 on SATURN

Value cannot be empty.

Setting "EngineIP" in xalert.xml

Value is the IP address of the Engine / Server

Value can be empty.

Setting "EnginePort" in xalert.xml

Value is the port of Xalert.engine, as set in xalert.engine.xml.

Value can be empty.

Login

Xalert
Version: 1.0.5411.24379
Symmetric GmbH

SQLServer
SATURN/SQL2012

Advanced

Database: XalertTest

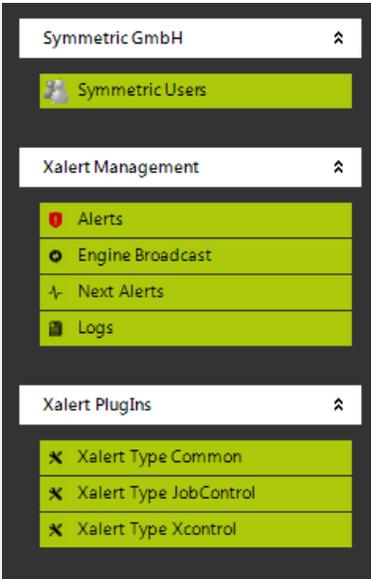
User: []

Password: []

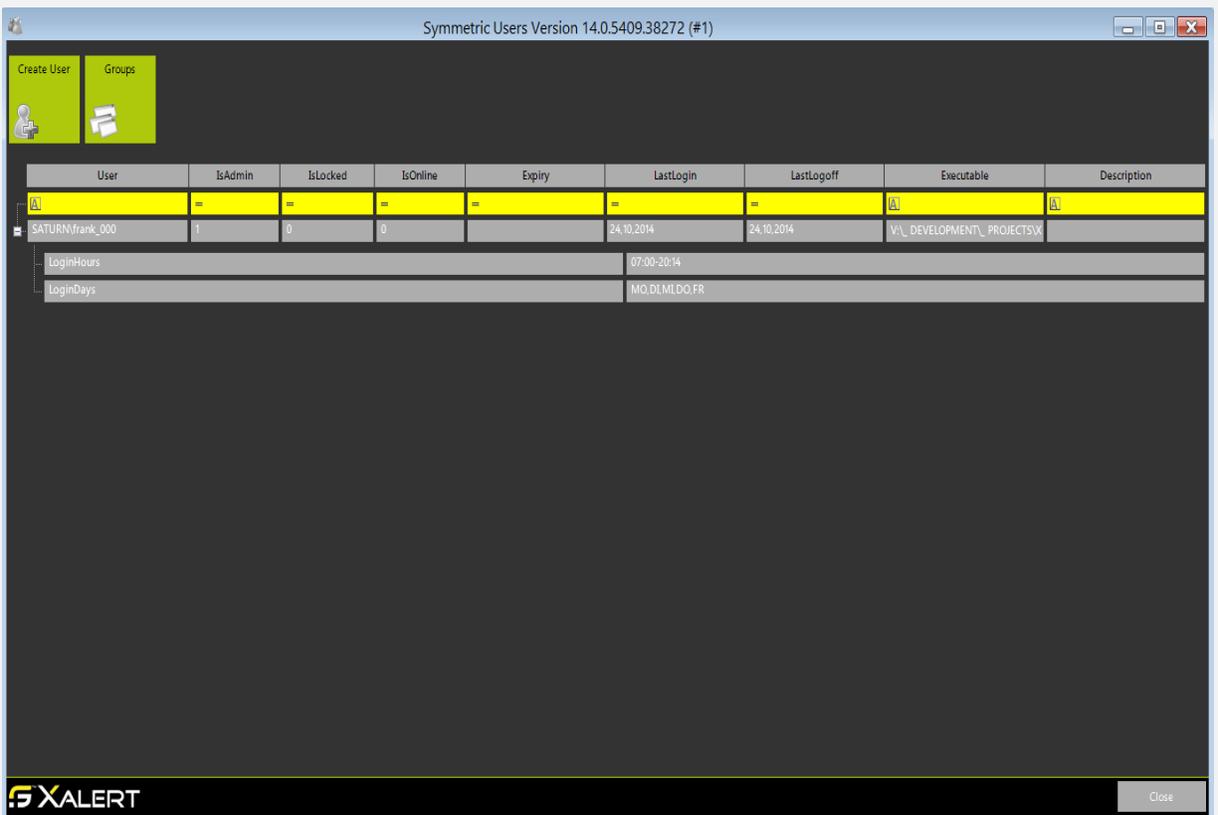
Remember Password

XALERT OK Cancel

Main Menu

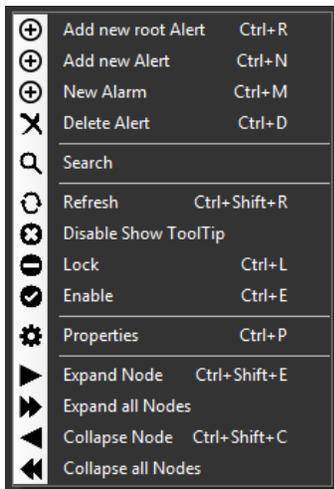
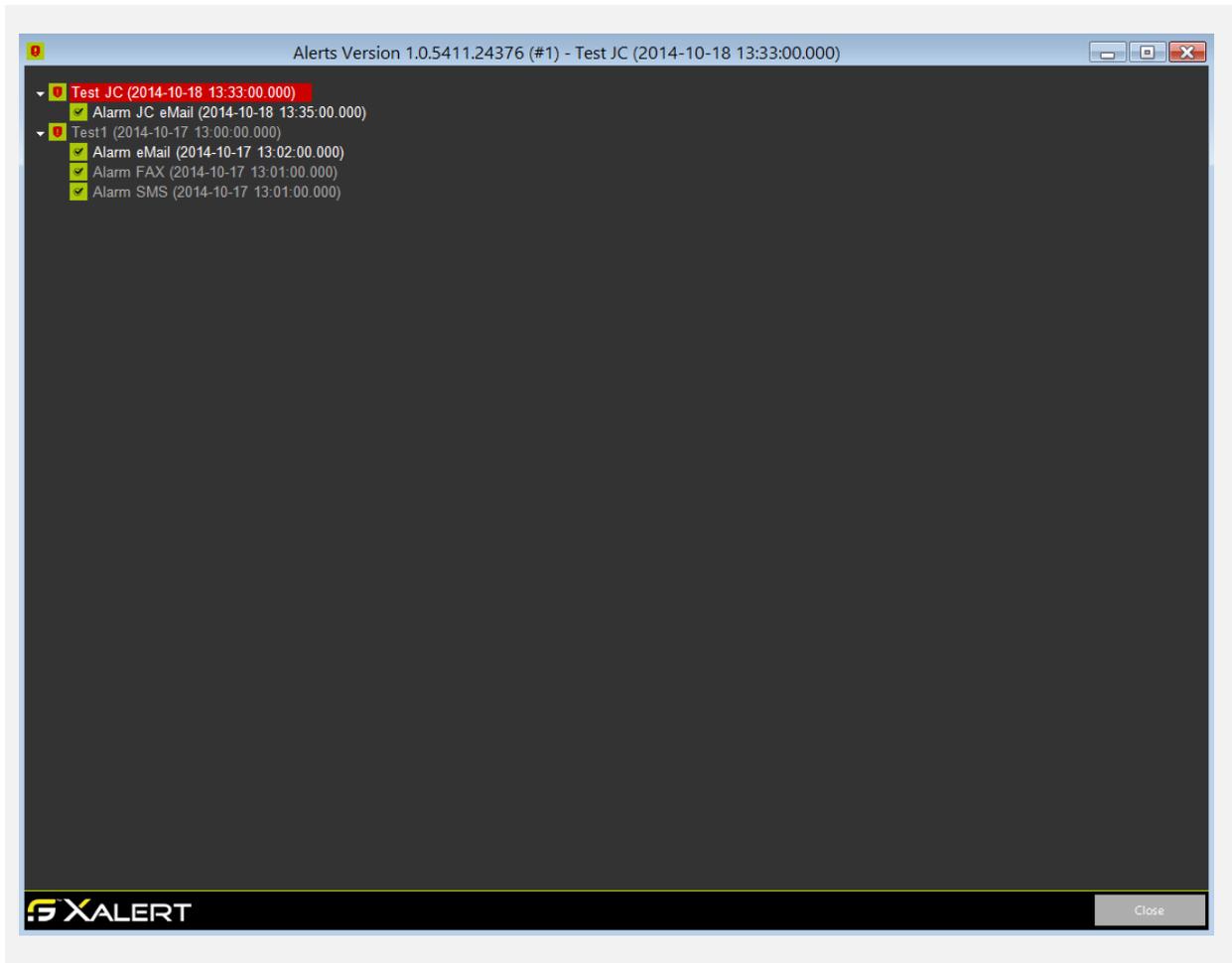


Symmetric Users



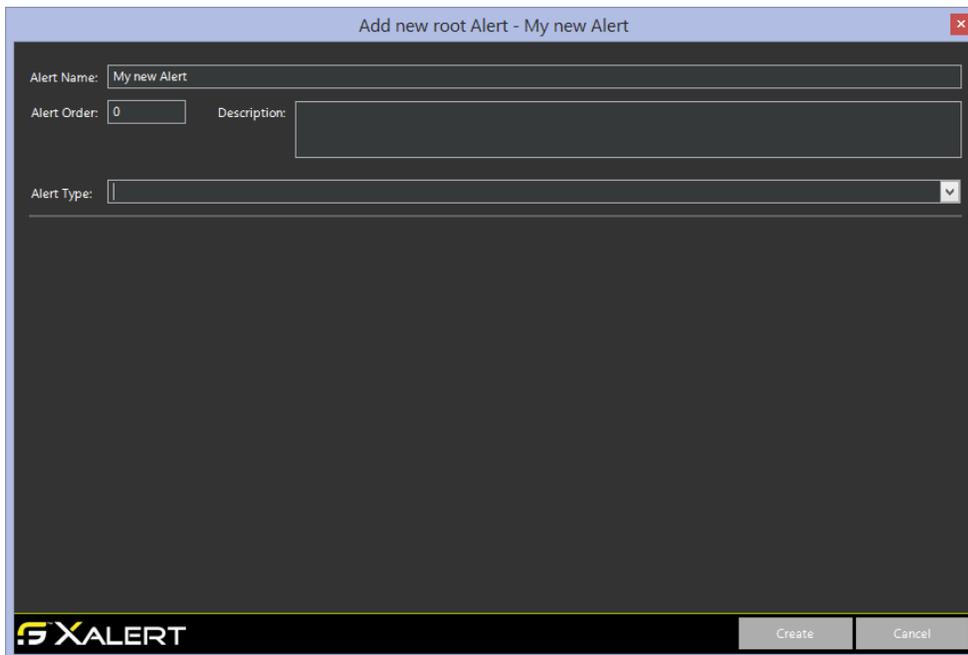
PlugIn for User Administration, see separated Documentation.

Alerts



- "Add new root Alert" to create new root Alert.
- "Add new Alert" underneath the selected Alert
- "New Alarm" underneath selected Alert or Alarm
- "Delete Alert" or "Delete Alarm" to delete it. All entries underneath will be deleted too.
- "Search" Search for entries
- "Refresh" Reload all entries
- "Disable Show ToolTip" Toggle ToolTip
- "Lock" / "Unlock" When locked, no Alerts or Alarms underneath will be executed.
- "Enable" / "Disable" When disabled, no Alerts or Alarms underneath will be executed.
- "Properties" Depending on the selected entry, properties of Alarm or Alert
- Expand / Collapse Entries

Add new (root) Alert



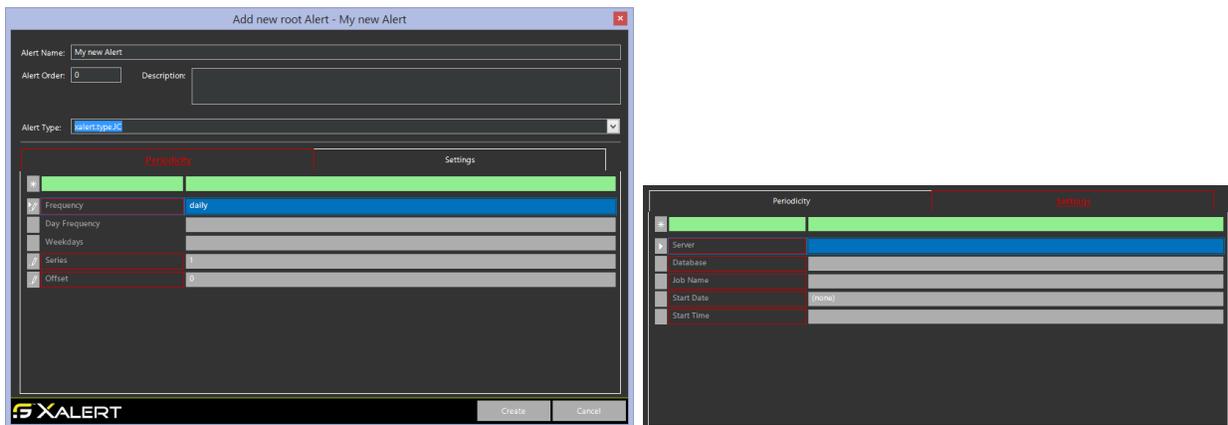
Alert Name: My new Alert

Alert Order: 0 Description:

Alert Type:

CREATE XALERT Create Cancel

When no Alert Type is selected, the Alert has no functionality except for grouping. The name of the Alert has to be unique.



Alert Name: My new Alert

Alert Order: 0 Description:

Alert Type: **AlertType**

Periodicity Settings

Property	Value
Frequency	daily
Day Frequency	
Weekdays	
Series	1
Offset	0

Periodicity Settings

Property	Value
Server	
Database	
Job Name	
Start Date	(None)
Start Time	

CREATE XALERT Create Cancel

When an Alert Type is selected, you get a List of properties to fill. Periodicity is the same of each type, Settings depends on the type you selected. The properties of each type are described below on the types section.

“Frequency”

Basic frequency for the alert. Possible values are:

- every second
- every minute
- hourly
- daily
- weekly
- monthly
- quarterly
- yearly
- custom -> not used yet !

“Day Frequency”

When you select basic frequency “daily”, there is this additional property.

Possible values are:

- daily -> runs every day
- weekdays -> runs only on some weekdays. Property Weekdays has to be filled at least once.
- workdays -> runs only on workdays
- non workdays -> runs only on non workdays

“Weekdays”

Weekdays is a Multiple property, means you can select it more than once:



Possible values are each weekday, select it from the value list.

“OnlyWorkdays”

User when Weekdays entered. For example: When 1 then run each entered weekday, but only when it is a workday.

“Series”

For example: When 1 then run each day, when 2 then run every second day ...

“Offset”

You can define an offset. If this is not set to 0 you have to fill also the Offset Frequency.

“Offset Frequency”

Frequency for the Offset property. Possible values are (depending on the Frequency):

- every second
- every minute
- hourly
- daily
- weekly
- monthly
- quarterly
- yearly
- custom -> not used yet !

Alarms

The screenshot shows the 'Properties' dialog box for an alarm named 'Alarm eMail'. The 'Alarm Name' field contains 'Alarm eMail', 'Alarm Order' is 0, and the 'Description' field is empty. Below these fields is a table with the following properties:

#	
Delay	000200
Alarm Type	eMail
Recipient	frank.uray@symmetric.ch
Subject	Alarm 1 Subject
Message	Alarm 1 Message
Action	{execute}C:\windows\notepad.exe
Action	{sql}INSERT INTO [Xalert].[_log].[Logs] ([FK_Type], [FK_Condition], [Text]) SELECT 1, 1, "After Action - Alarm eMail" {sqlserver}SATURN\SQL2012

At the bottom of the dialog, there are 'Update' and 'Cancel' buttons, and the XALERT logo is visible in the bottom left corner.

“Delay”

The delay of the alarm. Pattern is: HH:MM:SS

“Alarm Type”

What type of the alarm. Possible Values are:

- eMail
- SMS (Server must have access to: <http://www.ecall.ch/ecallwebservice/>)
- FAX (Server must have access to: <http://www.ecall.ch/ecallwebservice/>)

“Recipient”

eMail address, mobile number or fax number, depending on the alarm type. This is a multiple property.

“Subject”

Only used for eMail and fax alarms

“Message”

Alarm message.

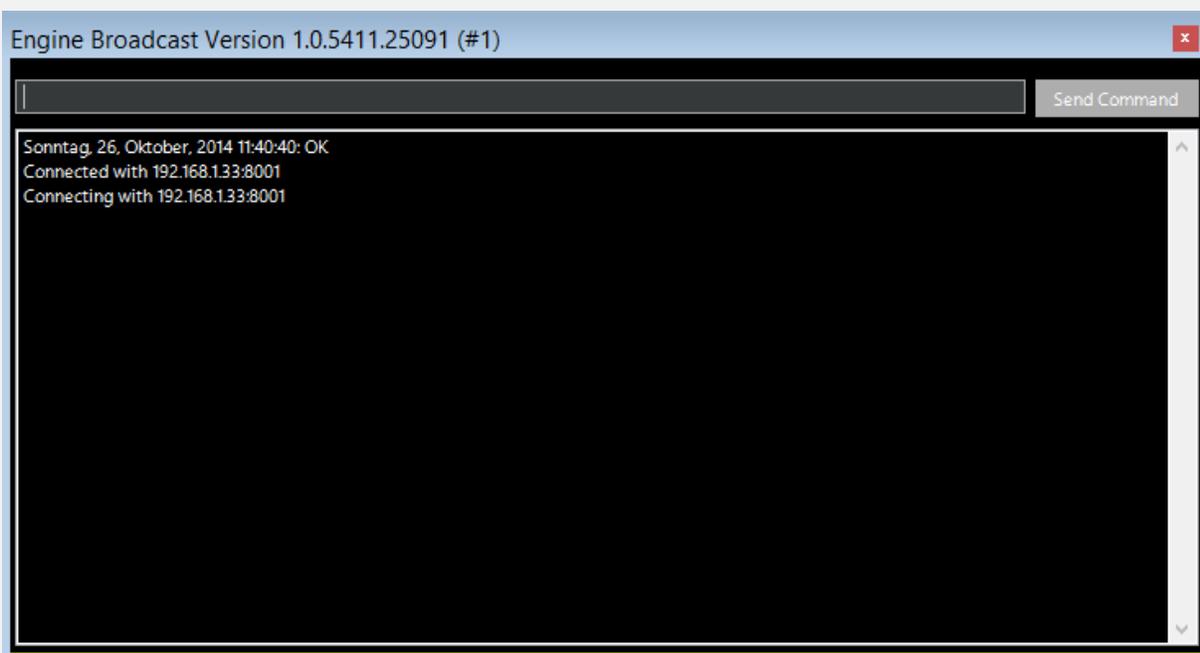
“Action”

Some action after the alarm is send. For example:

```
{execute}C:\windows\notepad.exe  
{sql}INSERT INTO [Xalert].[_log].[Logs] ([FK_Type], [FK_Condition], [Text]) SELECT 1, 1, "After Action - Alarm eMail" {sqlserver}SATURN\SQL2012
```

This is a multiple property

Engine Broadcast



With this plugin you can communicate with the engine over TCP.

You can show some informations and you can also manipulate the behavior of the engine.

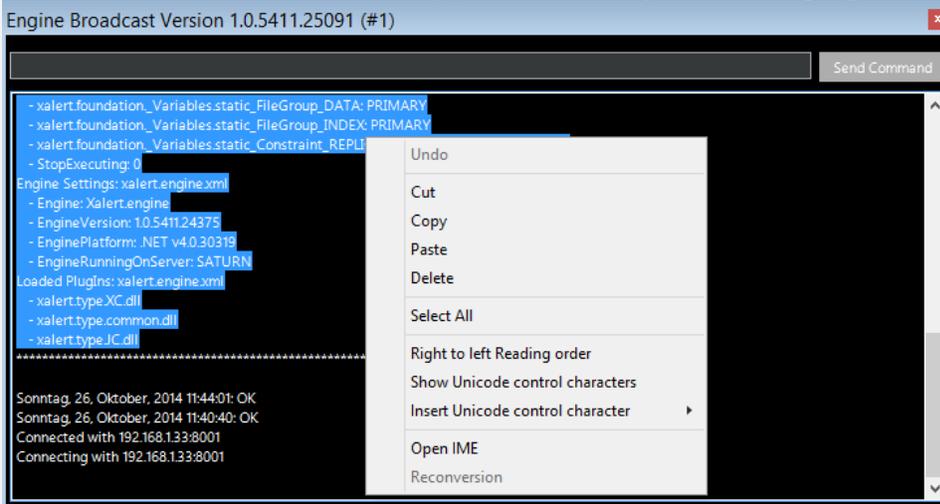
Command "ping"

"ping" just returns an answer indicating the engine is healthy.

Command "show variables" or "dump variables"

Returns a list of runtime variables and their current values.

You can select some text and copy it into the clipboard using right click:



Command "set variable"

With this command you can modify the value of some variables.

The pattern is: "set variable: {name of the variable};{new value of the variable};{data type}"

You can set the following variables right now. There will be more to come:

"xalert.foundation._Variables.static_Interval_Listener"

"xalert.foundation._Variables.static_Interval_Alive"

"xalert.foundation._Variables.static_Interval_PlugIns"

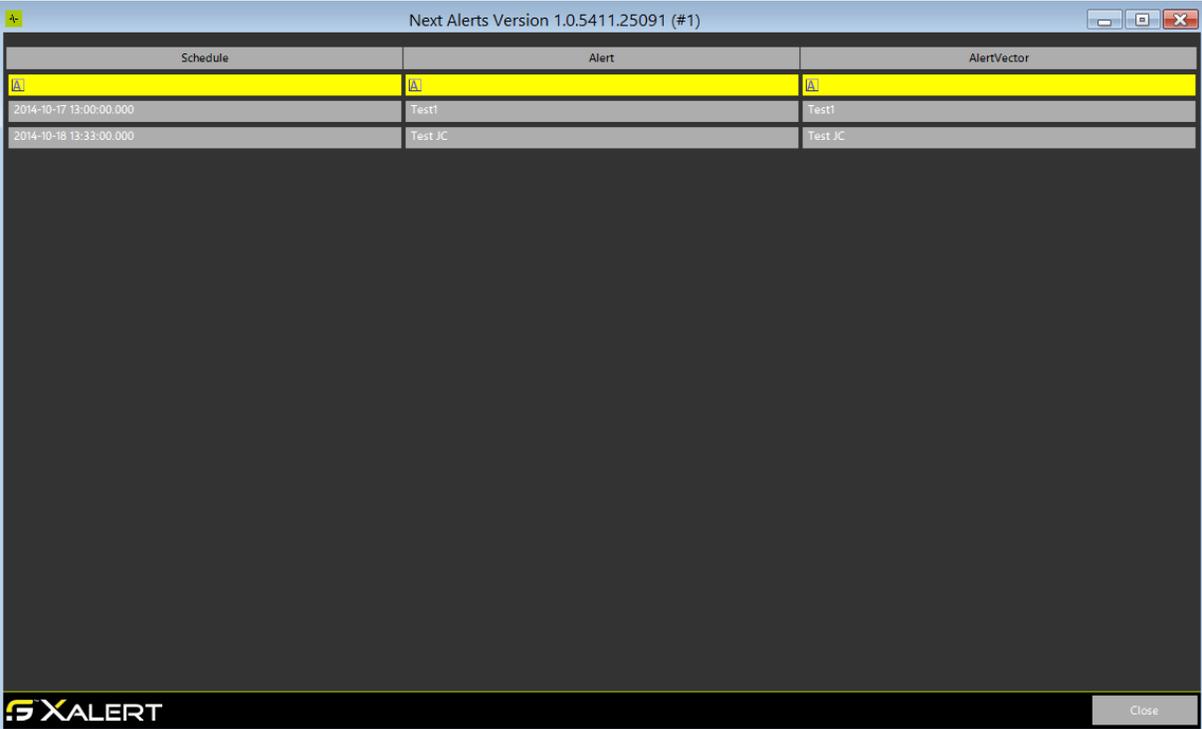
"StopExecuting"

When setting "StopExecuting", this actually modifies the value in the Xalert.engine.xml

Command "shutdown"

Careful, this stops the Xalert.engine service on the server !

Next Alerts



The screenshot shows a window titled "Next Alerts Version 1.0.5411.25091 (#1)". It contains a table with three columns: "Schedule", "Alert", and "AlertVector". The first row is highlighted in yellow. Below the table, there is a large black area and a footer with the "XALERT" logo and a "Close" button.

Schedule	Alert	AlertVector
2014-10-17 13:00:00.000	Test1	Test1
2014-10-18 13:33:00.000	Test JC	Test JC

This plugin shows the next alerts to be executed.

Logs

Logs Version 1.0.5411.24367 (#1)

Type	Condition	Parent	ParentVector	Schedule	Created	CreatedBy	Text
Alert	DONE	Test JC	Test JC	2014-10-17 13:33:00.000	2014-10-17 13:34:16.753	SATURN/frank_000	xalert.type.JC.dll
Alert	DONE	Test JC	Test JC	2014-10-17 13:33:00.000	2014-10-17 13:34:16.410	SATURN/frank_000	xalert.type.JC.dll
Alert	DONE	Test JC	Test JC	2014-10-17 13:27:00.000	2014-10-17 13:28:09.203	SATURN/frank_000	xalert.type.JC.dll
Alarm	DONE	Alarm JC eMail	Alarm JC eMail	2014-10-17 13:28:00.000	2014-10-17 13:28:08.820	SATURN/frank_000	xalert.type.JC.dll
Common	ALARM SUCCESS				2014-10-17 13:28:08.797	SATURN/frank_000	eMail(s) send to frank.uray@symm
Alarm	DONE	Alarm JC eMail	Alarm JC eMail	2014-10-17 13:11:00.000	2014-10-17 13:11:06.470	SATURN/frank_000	xalert.type.JC.dll
Common	ALARM SUCCESS				2014-10-17 13:11:06.437	SATURN/frank_000	eMail(s) send to frank.uray@symm
Alert	DONE	Test1	Test1	2014-10-17 11:48:00.000	2014-10-17 11:49:07.383	SATURN/frank_000	xalert.type.common.dll
Alarm	DONE	Alarm eMail	Alarm eMail	2014-10-17 11:49:00.000	2014-10-17 11:49:07.373	SATURN/frank_000	xalert.type.common.dll
Common	NONE				2014-10-17 11:49:07.363	SATURN/frank_000	After Action - Alarm eMail
Common	ALARM SUCCESS				2014-10-17 11:49:07.353	SATURN/frank_000	eMail(s) send to frank.uray@symm
Alert	DONE	Test1	Test1	2014-10-17 11:43:00.000	2014-10-17 11:44:05.193	SATURN/frank_000	xalert.type.common.dll
Alarm	DONE	Alarm eMail	Alarm eMail	2014-10-17 11:44:00.000	2014-10-17 11:44:05.180	SATURN/frank_000	xalert.type.common.dll
Common	NONE				2014-10-17 11:44:05.170	SATURN/frank_000	After Action - Alarm eMail
Common	ALARM SUCCESS				2014-10-17 11:44:05.160	SATURN/frank_000	eMail(s) send to frank.uray@symm
Alert	DONE	Test1	Test1	2014-10-17 11:39:00.000	2014-10-17 11:39:03.077	SATURN/frank_000	xalert.type.common.dll
Alarm	DONE	Alarm eMail	Alarm eMail	2014-10-17 11:39:00.000	2014-10-17 11:39:03.010	SATURN/frank_000	xalert.type.common.dll
Common	NONE				2014-10-17 11:39:03.000	SATURN/frank_000	After Action - Alarm eMail
Common	ALARM SUCCESS				2014-10-17 11:39:02.983	SATURN/frank_000	eMail(s) send to frank.uray@symm
Alert	DONE	Test1	Test1	2014-10-16 14:33:00.000	2014-10-17 11:37:20.830	SATURN/frank_000	xalert.type.common.dll
Alarm	DONE	Alarm eMail	Alarm eMail	2014-10-16 14:34:00.000	2014-10-17 11:37:20.790	SATURN/frank_000	xalert.type.common.dll
Common	NONE				2014-10-17 11:37:20.697	SATURN/frank_000	After Action - Alarm eMail
Common	ALARM SUCCESS				2014-10-17 11:37:20.650	SATURN/frank_000	eMail(s) send to frank.uray@symm

XALERT Close

This plugin shows all the log entries.

All the entries with Condition "DONE" are used for the listener. Don't modify this table.

Xalert Type Common

FK_DataType	Key	Order	Template	IsMandatory	IsMultiple	IsMultiline	IsShown	IsLocked	DefaultValue	Description
*										
varchar	Start Date	0	(date)	1	0	0	1	0		
varchar	Start Time	1	(time)	1	0	0	1	0		

CultureInfo	Text
*	
default	Start Date
de-CH	Start Datum
de-DE	Start Datum
de-AT	Start Datum
de-LI	Start Datum
en-US	Start Date
en-GB	Start Date
es-ES	Fecha de inicio

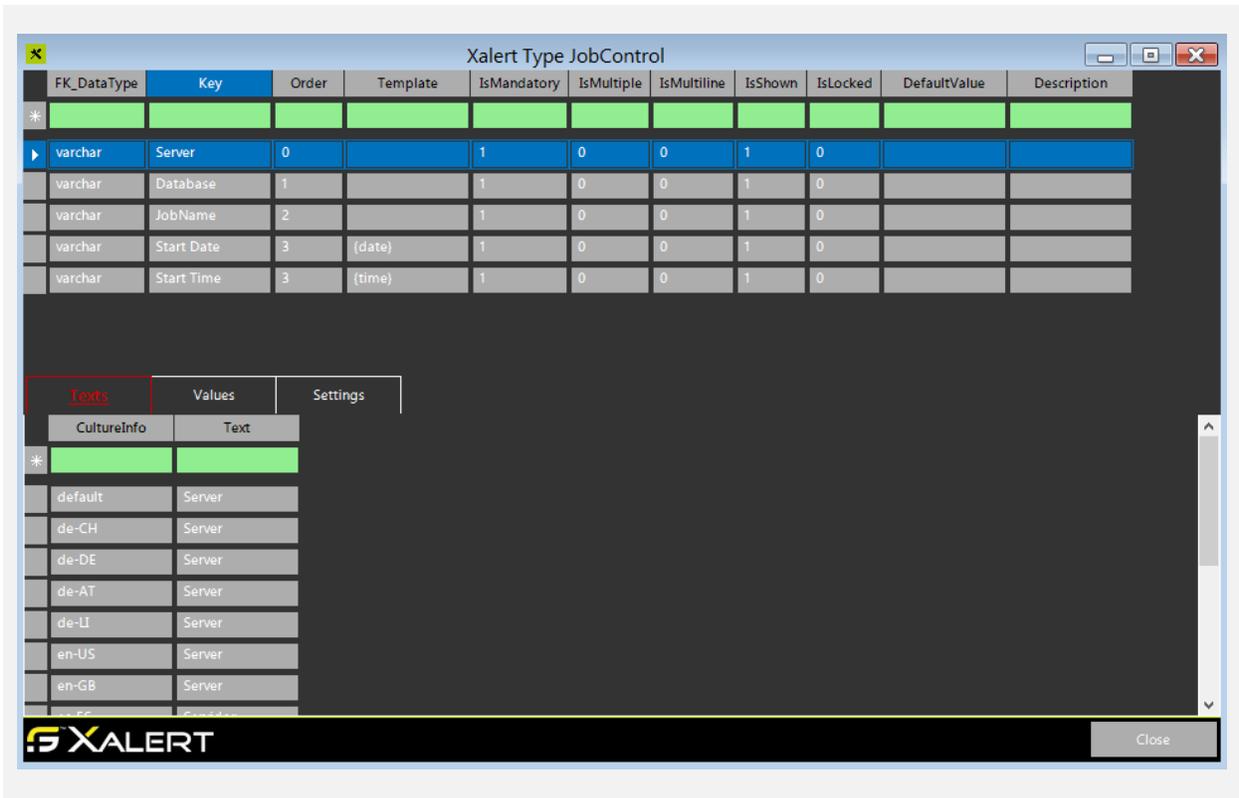
Property "Start Date"

Select a date when the alert has to run:

Property "Start Time"

Select a time when the alert has to run, with Pattern: HH:MM:SS

Xalert Type JobControl



Property "Server"

Enter the name of the server with pattern: Server\Instance

Property "Database"

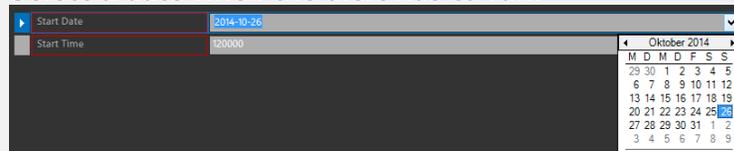
Database name of JobControl

Property "JobName"

Select a Job. Server and Database have to be filled first !

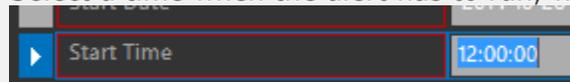
Property "Start Date"

Select a date when the alert has to run:

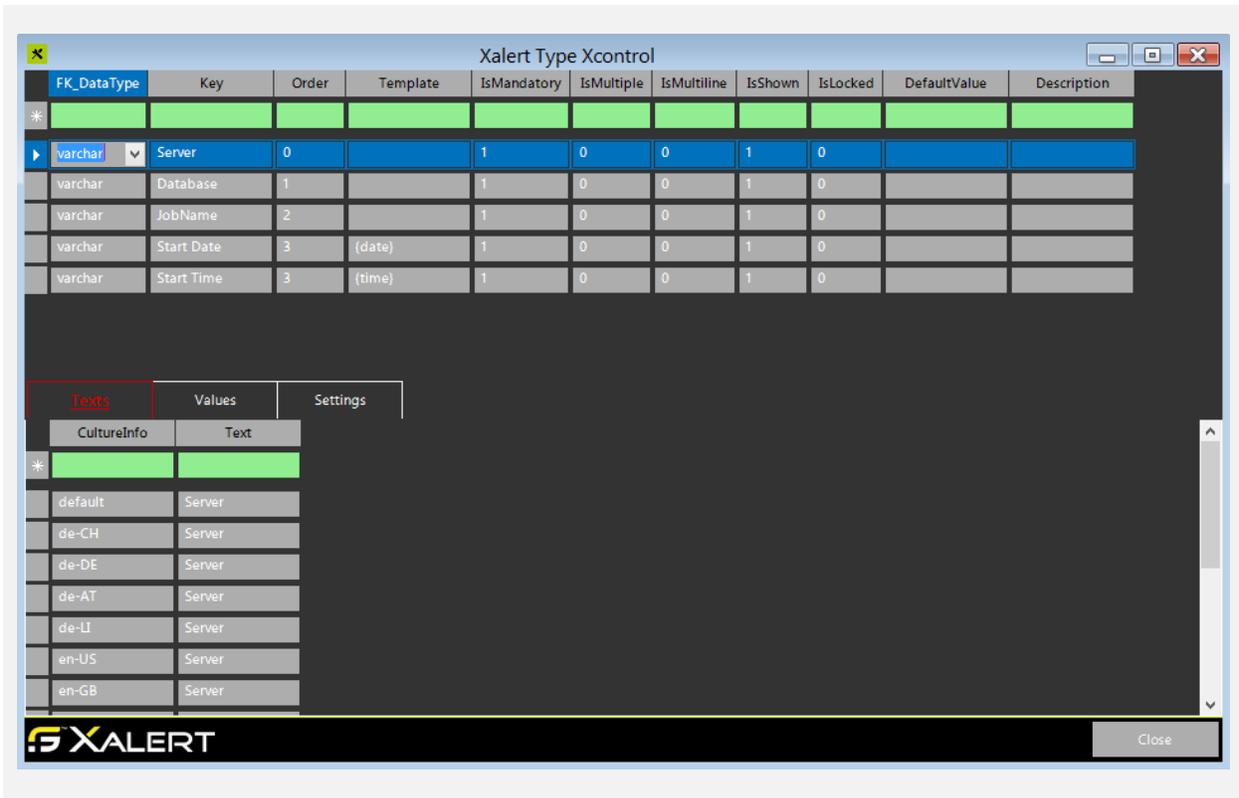


Property "Start Time"

Select a time when the alert has to run, with Pattern: HH:MM:SS



Xalert Type Xcontrol



Property "Server"

Enter the name of the server with pattern: Server\Instance

Property "Database"

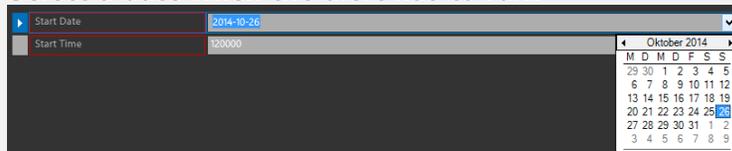
Database name of Xcontrol

Property "JobName"

Select a Job. Server and Database have to be filled first !

Property "Start Date"

Select a date when the alert has to run:



Property "Start Time"

Select a time when the alert has to run, with Pattern: HH:MM:SS



Appendix

Upcoming function on version 1.1: <ul style="list-style-type: none">- Conditional Recipients- Use Processing for Parameters	