

# **WatchDog**

**Database Description v 3.4.7**

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# 1. Overview

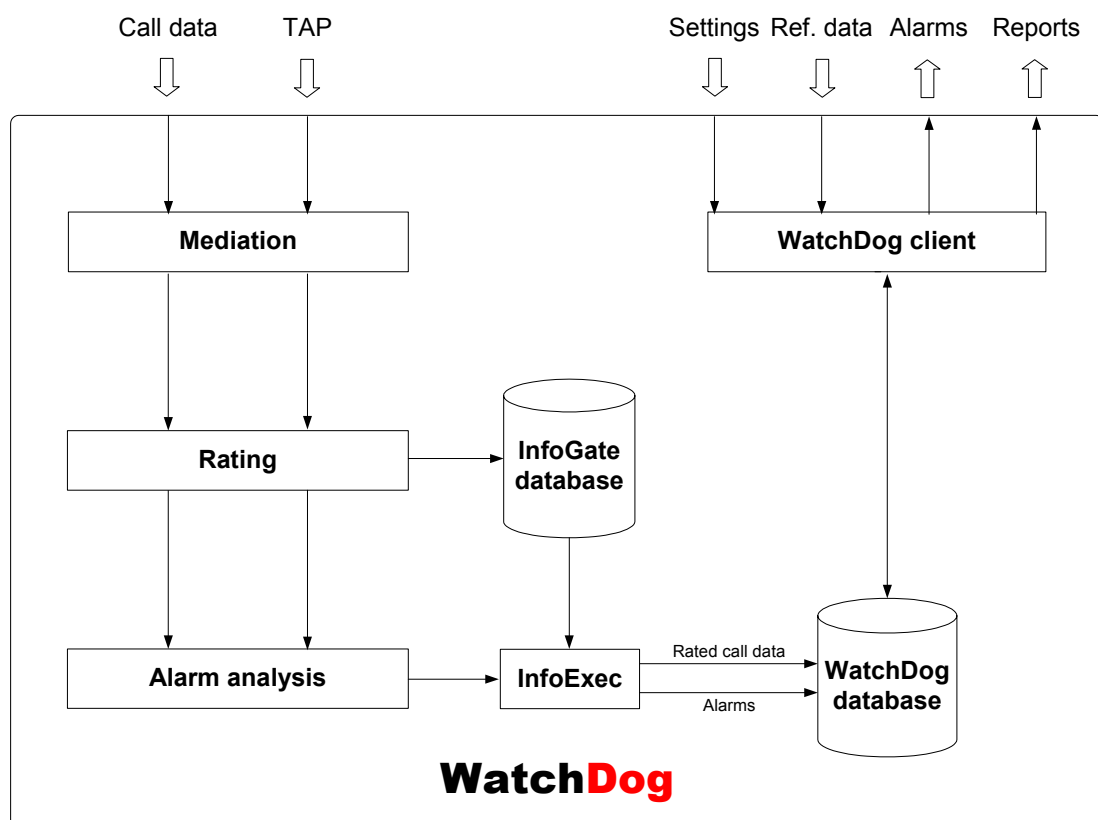
## ABOUT THIS DOCUMENT

This document describes the WatchDog database.

Note! WatchDog is a standard system and the database is designed to meet requirements from different customers. Hence there may be tables that are not in use.

## GENERAL DESCRIPTION OF THE WATCHDOG DATABASE

This picture shows the different applications, the databases, and the information data flow for WatchDog. Please note that this picture is simplified. For a more detailed view, please refer to Appendix A.



## The databases

There are two databases in the system.

Database	Description
<b>InfoGate</b>	Call data for all subscribers. When alarms are generated, the corresponding call data is copied to the WatchDog database.
<b>WatchDog</b>	System settings, alarms, call data that corresponds to existing alarms

## 2. InfoGate database description

This database contains call data for all subscribers. Call data that corresponds to the current alarms is copied to the WatchDog database.

### TABLES

Table	Description	Update processes
<b>CallsHistoryCDR_&lt;time&gt;_&lt;date&gt;</b>	<p>Information about all calls collected by the system.</p> <p>When alarms are generated, the corresponding calls are copied from these tables to the CallsHistory table in the WatchDog database.</p> <p>In a typical setup a new table is created once a day. They can also be created based on the amount of data, e.g. a new table is created when the amount of records have reached 4 millions.</p>	<p>Rated calls from AbaCus</p> <p>Tables are cleaned as defined in the Schedule settings</p>
<b>CallsHistoryTAP_&lt;time&gt;_&lt;date&gt;</b>	<p>Information about all incoming roaming calls collected by the system (TAP In data).</p> <p>When alarms are generated, the corresponding calls are copied from these tables to the CallsHistory table in the WatchDog database.</p> <p>In a typical setup a new table is created once a day. They can also be created based on the amount of data, e.g. a new table is created when the amount of records have reached 4 millions.</p>	<p>Rated calls from AbaCus</p> <p>Tables are cleaned as defined in the Schedule settings</p>

### 3. WatchDog database description

This section describes the WatchDog database. This database contains all system settings, reference data, alarms and call data that corresponds to the existing alarms.

#### TABLES

Table	Description	Update processes
<b>AlarmComments</b>	This table contains the information that is seen in the Log area in the client. Actions taken to an alarm and alarm comments are stored here	UPDATE User: Set alarm comments, alarm actions, Delete All Alarms command REMOVE Table cleaning job
<b>AlarmDeleteReason</b>	Reference data. Display values for reasons to delete alarms. These values are shown in the Delete Alarm dialog box	Static system table
<b>AlarmKeyMap</b>	Maps permission IDs to common alarm settings ('Setting' table)	Static system table
<b>AlarmsCurrent</b>	All generated alarms that haven't been deleted by a user or by a table cleaning job	UPDATE Alarm generation process REMOVE User: Alarm deletion changes status to 9 (Deleted). Records marked as deleted are removed after 2 days (to ensure correct synchronization with client) Table cleaning job
<b>AlarmsDeleted</b>	All alarms that have been deleted	UPDATE User: Alarm deletion REMOVE Table cleaning job
<b>AlarmStatus</b>	Reference data. Display values for the alarm status ("Open"/"Assigned"/"On hold", etc). These values are shown e.g. in the Status column in the alarms list	Static system table
<b>AlarmsTumblingSubscriptionLog</b>	When tumbling subscription alarms are created, information about which IMEIs that have been used by each IMSI is stored here. This information is used for the tumbling subscription analysis.	UPDATE Alarm generation process REMOVE Table cleaning job
<b>AlarmType</b>	Display values, including the alarm names, for alarm	Static system table

	types. These values are shown e.g. in the Alarm Type column in the alarms list. It also stores settings for the Rating Validation alarm	
<b>AutoMail</b>	Settings for automail creation, such as recipient addresses and rules for when e-mails should be sent	UPDATE User: Automail settings REMOVE User: Automail settings
<b>CallCollision</b>	If Call Collision alarms are generated, details about each alarm are stored here. These values are used for the Call Collision Analysis command	UPDATE Alarm generation process REMOVE Table cleaning job
<b>CallsHistory</b>	Call details for all alarms in the AlarmsCurrent table. These records are used for the All Calls command and several analysis screens	UPDATE Alarm generation process REMOVE Table cleaning job
<b>CallType</b>	Reference data. Display values for call types, such as Local, International, and premium Rate. These values are shown e.g. in the Call Type column in the All Calls list.	Semi-static system table (can be modified by Basset on customer request)
<b>Classification</b>	Reference data. Display values for call classification, such as In, Out, CFW, CW, and SMS. These values are shown e.g. in the Classification column in the All Calls list	Semi-static system table (may be slightly modified by Basset during installation)
<b>Countries</b>	Reference data. Display values for call countries. These values are shown e.g. in the High-risk Country settings and in the Country column in the All Calls list	Semi-static system table (configured by Basset during installation)
<b>CountryNeighbour</b>	Reference data for the International Velocity alarm. This list contains all countries and for each country their neighbours. It is used to exclude these countries in the alarm generation	Static system table
<b>CountryPos</b>	Reference data for the International Velocity alarm. This list contains all countries and for each country its geographical position.	Static system table

<b>EventLog</b>	Logging of all user actions in the client. These values are shown in the Event Log command	UPDATE The client upon general user actions REMOVE Table cleaning job
<b>ExcludeList</b>	This table is for a future function and is hence currently not in use	This table is for a future function and is hence currently not in use
<b>ExcludeListAlarmType</b>	This table is for a future function and is hence currently not in use	This table is for a future function and is hence currently not in use
<b>ExcludeListField</b>	This table is for a future function and is hence currently not in use	This table is for a future function and is hence currently not in use
<b>ExcludeListValue</b>	This table is for a future function and is hence currently not in use	This table is for a future function and is hence currently not in use
<b>FilesRead</b>	Information about all files that have been handled by WatchDog. These values are shown in the Server Status command	UPDATE Server application (InfoExec) REMOVE Table cleaning job
<b>Groups</b>	Reference data. User groups used in the User Manager ("User"/"Admin"/"Guest")	UPDATE System configuration REMOVE System configuration
<b>HighUsageExclude</b>	Settings for exclusion of IMSI numbers from the high usage alarm	UPDATE User: Alarm settings REMOVE User: Alarm settings
<b>HotlistLog</b>	Stores the ID and IMSI for every call that has triggered a hot/black-list alarm. Used in the List analysis screen	UPDATE Server REMOVE Table cleaning Alarm removal
<b>HotlistTypes</b>	Reference data. Display values and system parameters for the list alarms (hot list and black list)	Static system table
<b>&lt;IE tables&gt;</b>	These table are used by the InfoExec application and are not described here	These table are used by the InfoExec application and are not described here
<b>ImeiClone</b>	Settings for exclusion of IMEI numbers from the tumbling handset alarm	UPDATE User: Alarm settings REMOVE

<b>ImsiGroup</b>	Stores configuration for different IMSI ranges for multi-network systems. Also stores the currency sign/abbreviation	User: Alarm settings Semi-static system table, configured by Basset during installation
<b>Multipliers</b>	Multiplier settings for individual subscribers	UPDATE User: Subscriber Information settings REMOVE User: Subscriber Information settings
<b>MultipliersAuto</b>	Multiplier settings for subscriber groups (Subscriber Type ID's)	UPDATE User: Multiplier settings REMOVE User: Multiplier settings
<b>OME</b>	OME records. Shown in EIR Analysis Screen	UPDATE Server application inserts records sent in OME files REMOVE Table cleaning job
<b>OMEListTypes</b>	Reference data. Display values for the OME list types ("Black"/"White"/"Grey")	Static system table
<b>PrepaidVoucher</b>	If prepaid voucher alarms are generated, details about each alarm are stored here. These values are used for the Prepaid Voucher Analysis command	UPDATE Alarm generation process REMOVE Table cleaning job
<b>ProfileKnownPattern</b>	All subscribers that have been deleted as fraud. These values are used for the Known Pattern Profiling Analysis command	UPDATE User: Alarm deletion (when alarms are deleted as fraud and the Known Pattern Profiling analysis is activated) REMOVE Table cleaning job
<b>ProfileKnownPatternItem</b>	Call summaries for all subscribers that have been deleted as fraud. These values are used for the Known Pattern Profiling Analysis command	UPDATE User: When alarms are deleted as fraud and the Known Pattern Profiling analysis is activated records are added REMOVE Table cleaning job
<b>Reminder</b>	Subscribers with alarms put on Reminder	UPDATE User adds records when alarm status is set to Reminder REMOVE



		Table cleaning job
		Reminder alarm activation (at which point a reminder alarm is created in the AlarmsCurrent table)
<b>ReportTableSettingAlarm</b>	This table is not in use and will be removed	This table is not in use and will be removed
<b>ReportTableSettingAlarm Group</b>	This table is not in use and will be removed	This table is not in use and will be removed
<b>RoamingPartners</b>	Roaming partner information. Used for the Roaming alarm and report	UPDATE User: Roaming partner settings REMOVE User: Roaming partner settings
<b>RoamingReport</b>	General information about roaming reports	UPDATE Roaming report job REMOVE
<b>RoamingReportItem</b>	Roaming report details	Table cleaning job UPDATE Alarm generation process REMOVE
<b>RoamingReportQueue</b>	Stores request for resending of roaming reports	Table cleaning job UPDATE User can request a resend from the roaming report screen REMOVE
<b>SameNumber</b>	If Same Called Number alarms are generated, details about each alarm are stored here. These values are used for the Same Called Number Analysis command	Roaming report job UPDATE Alarm generation process REMOVE
<b>Security</b>	Stores permissions configured for users and/or groups from the User Manager	Table cleaning job UPDATE User Manager REMOVE
<b>SecurityGrantMap</b>	Maps WatchDog permissions to required permissions for database objects and/or membership in database or system roles	User Manager Static system table
<b>Setting</b>	General system settings. These values are shown in the General command	UPDATE System administrator: General command REMOVE
<b>SettingGroups</b>	Lists the different levels of	Never Static system tables

	grouping for the Setting table	
<b>SettingHighUsage</b>	Sub ID's to the high usage alarm	UPDATE System configuration REMOVE System configuration User: Alarm settings for High-risk Country, High-risk Cell Site, High Usage, Hot/blacklist, Extended Services
<b>SettingHighUsageGroup</b>	Groups certain sections of the SettingHighUsage table to a layout corresponding the High Usage setup in WatchDog 3.3	Static system tables
<b>SettingHighUsagePeriod</b>	Reference data. Definitions of the high usage alarm period groups that should be available, such as short, medium, long, and single call	Static system table
<b>SettingHighUsageType</b>	Reference data. Lists the fields available in the High Usage alarm generation process. Entries not marked as cached are only available the first time a CDR is read	Static system table
<b>SettingHighUsageValue</b>	High usage alarm settings parameters	UPDATE User: Alarm settings high usage, high-risk country, high-risk cell site, black list, hot list, extended services REMOVE User: Alarm settings high usage, high-risk country, high-risk cell site, black list, hot list, extended services
<b>SettingPrepaidStatus</b>	Prepaid Status alarm settings	UPDATE User: Prepaid Status alarm settings REMOVE User: Prepaid Status alarm settings
<b>SettingsDeleteData</b>	Table cleaning settings	UPDATE System administrator/User: Table Cleaning... REMOVE System administrator/User: Table Cleaning...
<b>SettingSubscriberLetter</b>	Subscriber letter settings	UPDATE

		User: Subscriber letter REMOVE User: Subscriber letter UPDATE User Manager REMOVE User Manager Static system table
<b>SettingUser</b>	User specific settings	
<b>Severity</b>	Reference data. Display values for the severity levels, these values are shown in the alarm settings and in the alarms list	
<b>SiteList</b>	Information regarding cell sites, such as positions. Used for velocity alarm and for showing cell names in call analysis screens	UPDATE System administrator/User: Site List settings Import job REMOVE System administrator/User: Site List settings
<b>StatusList</b>	Configures the contents of the 'Statistics' list of the Server Status screen.	Semi-static system table (may be modified by Basset during installation)
<b>SubscriberBase</b>	Table showing the minimum required fields to use in the Subscriber table	Static template table
<b>SubscriberConfig</b>	Lists subscriber-specific settings. Presently only used to flag the Zero Usage alarm to never be triggered for a specific subscriber	UPDATE Delete Alarms when user selects the appropriate checkbox REMOVE Table cleaning
<b>SubscriberCopy</b>	This table is not in use	This table is not in use
<b>SubscriberCycle</b>	Bill cycles used for the Credit Limit Alarm settings	UPDATE User: Credit Limit Alarm settings REMOVE User: Credit Limit Alarm settings
<b>SubscriberLayout</b>	Parameters for the appearance of the Subscriber Info window	UPDATE User: Subscriber Layout settings REMOVE User: Subscriber Layout settings
<b>Subscribers</b>	Subscriber details. Imported from external file	UPDATE Server REMOVE Server
<b>SubscriberTariffPlan</b>	Tariff plans used for the Credit Limit Alarm settings	UPDATE User: Credit Limit Alarm settings

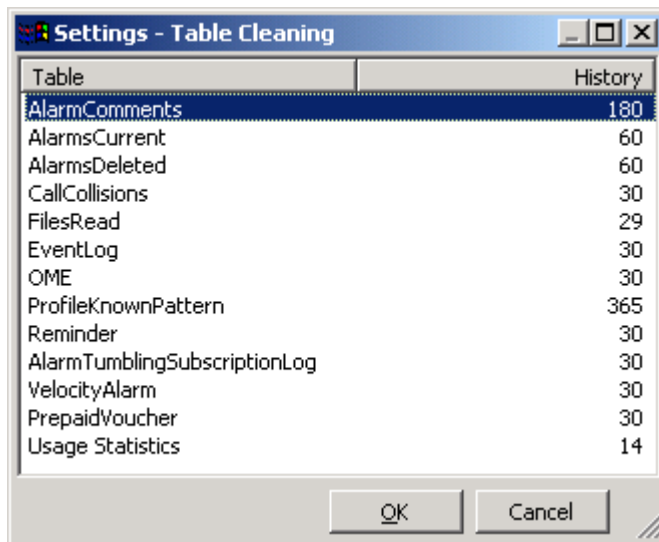
		REMOVE
		User: Credit Limit Alarm settings
<b>SubscriberTypes</b>	Subscriber type ID's used for the subscriber type multiplier settings	UPDATE
		User: Multiplier settings
		REMOVE
		User: Multiplier settings
<b>TmpSubscriber</b>	This table is not in use	This table is not in use
<b>UsageStats</b>	Values for the user statistics functions. These values are used in the Statistics columns in the alarms list	UPDATE
		Alarm generation
		REMOVE
		Table cleaning job
<b>UserFilter</b>	User settings for:	UPDATE
	Alarm filters	User: Alarms list filter settings
	Statistics reports	Statistics settings
	Tabular reports	Report settings
	Profiling External Data Sources	Profiling data source settings
		REMOVE
		User: Alarms list filter settings
		Statistics settings
		Report settings
		Profiling data source settings
<b>UserFilterValue</b>	Configuration details for each entry in UserFilter	UPDATE
		Same as for UserFilter
		REMOVE
		Same as for UserFilter
<b>UserLevels</b>	This table is not in use and will be removed	This table is not in use and will be removed
<b>Users</b>	User details	UPDATE
		System administrator/User: User manager
		REMOVE
		System administrator/User: User manager
<b>VelocityAlarm</b>	If Velocity alarms are generated, details about each alarm are stored here. These values are used for the Velocity Analysis command	UPDATE
		Alarm generation process
		REMOVE
		Table cleaning job
<b>VelocityInterval</b>	Alarm settings for the Velocity alarm, distances and velocities (speeds)	UPDATE
		User: Velocity alarm settings
		REMOVE
		User: Velocity alarm settings

## 4. Automatic cleaning job descriptions

### TABLE CLEANING JOBS

The following cleaning jobs can be configured in the client. To access these settings, point to **System** in the **Admin** menu and click **Table Cleaning**.

Note! These jobs have to be activated in the Schedule settings. Please refer to the “Remove old entries from tables” job.

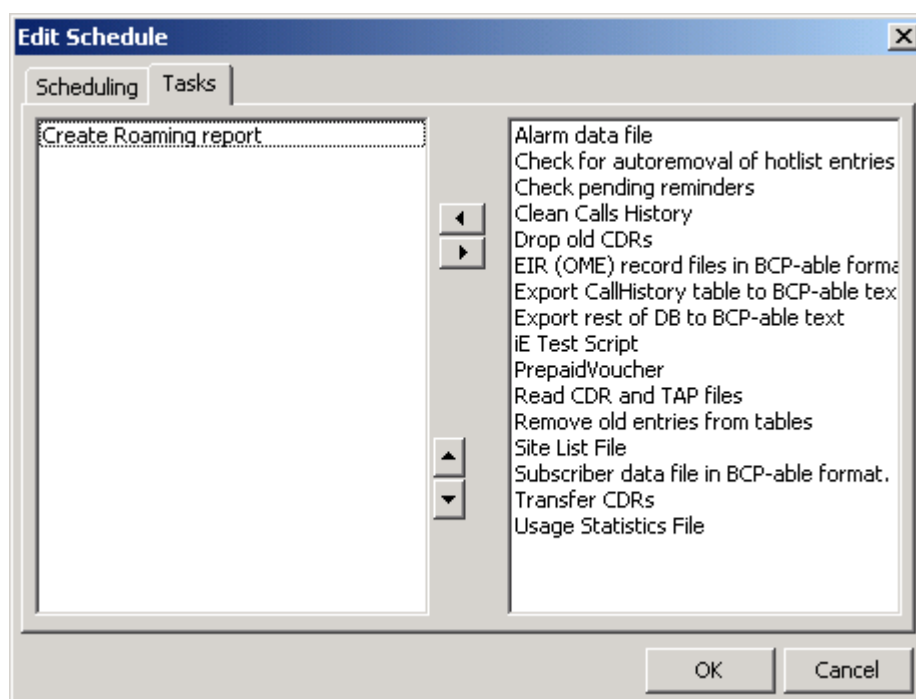


The Table Cleaning settings dialog box.

Cleaning job	Database tables that are affected
<b>AlarmComments</b>	AlarmComments
<b>AlarmsCurrent</b>	AlarmsCurrent
<b>AlarmsDeleted</b>	AlarmsDeleted
<b>CallCollisions</b>	CallCollision
<b>FilesRead</b>	FilesRead
<b>EventLog</b>	EventLog
<b>OME</b>	OME
<b>ProfileKnownPattern</b>	ProfileKnownPattern
<b>Reminder</b>	Reminder
<b>AlarmTumblingSubscriptionLog</b>	AlarmTumblingSubscriptionLog
<b>VelocityAlarm</b>	VelocityAlarm
<b>PrepaidVoucher</b>	PrepaidVoucher
<b>UsageStatistics</b>	UsageStats

### SCHEDULES

The following cleaning jobs can be configured in the client. To access these settings, point to **System** in the **Admin** menu and click **Table Cleaning**.



The Edit Schedule settings dialog box.

Job	Description	Affected database tables
<b>Alarm data file</b>	Collection of files from the alarms generator and update of the WatchDog database	AlarmsCurrent
<b>Check for autoremoval of hotlist entries</b>	Removal of expired hot list and black list entries.	SettingHighUsageValue
<b>Check pending reminders</b>	Alarms set to status "reminder" are changed back to status "assigned" if the reminder time interval has passed.	AlarmsCurrent ("Status" field is updated)
<b>Clean Calls History</b>	Removal of expired call records in the WatchDog database	CallsHistory
<b>Drop old CDRs</b>	Removal of expired call records in the InfoGate database	InfoGate database: CallsHistoryCDR_<time>_<date> CallsHistoryTAP_<time>_<date>
<b>EIR (OME) record files in BCP-able format</b>	Backup of OME records. Reads OME table and creates a text file	OME
<b>Export CallsHistory table to BCP-able text</b>	Backup of call records. Reads CallsHistory table and creates a text file	CallsHistory
<b>IE Test Script</b>	Job for installation test purposes	None
<b>PrepaidVoucher</b>	Reads the files with prepaid voucher information and transfers the records into the PrepaidVoucher table.  These records are used for the Prepaid Voucher Analysis	PrepaidVoucher

	command	
<b>Read CDR and TAP files</b>	Collection of files from the rating module and update of the WatchDog database	CallsHistory
<b>Remove old entries from tables</b>	Schedule for all table cleaning jobs. Please refer to the "Table cleaning jobs" section for more information	
<b>Site List File</b>	Automatic import of cell site list	SiteList
<b>Subscriber data in BCP-able format</b>	Backup of subscriber data. Reads Subscriber table and creates a text file	Subscribers
<b>Transfer CDRs</b>	Checks existing alarms, reads CallsHistory tables in the InfoGate database and transfers the corresponding call data to CallsHistory in the WatchDog database	InfoGate database: CallsHistory WatchDog database: CallsHistory
<b>Usage Statistics File</b>	<p>Reads .stt files and transfers the records into the UsageStats table.</p> <p>The .stt files are created in the alarms generation and contains summarized information about each subscriber's usage, such as total charges and amount of calls. This information is displayed in the alarms list</p>	UsageStats

## 5. Appendix A

## APPLICATIONS, DATABASES AND DATAFLOW

This picture gives a detailed view of the applications, databases and dataflow in WatchDog. Please note that each installation may have slightly different setups due to specific requirements.

