



Decode32

The File Handling Platform

User manual

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About this Guide

The Decode32 User Manual is a reference and a training material for Decode32 users.

The user manual provides a detailed overview of the Decode32 application and all functionality related to Decode32.

At the end of the document there is an appendix, including a support fax template used for support issues regarding Decode32.

The chapters in this manual follow the same layout, as described below:

- A screen shot, showing the actual screen, or part of a screen.
- A short description, describing the functionality included and the users advantages having the functionality in Decode32.
- A description of the available settings and buttons included in each screen.
- Step-by-step instructions describing how to make settings and how to use the functionality.

Prerequisite knowledge

Users of Decode32 are expected to have attended a Decode32 training held by Basset Telecom Solutions or by a local trainer that have attended the Decode32 training.

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Chapter **1**

Application Overview

Overview

Introduction

This chapter describes only the parts of the application that are relevant for Decode32. The parts that are not described should not be changed since these changes could affect the functionality of Decode32.

In this chapter

This chapter is organized as follows.

Topic
Decode32 Overview
Features and Functions
The Decode32 Tabs
Running Filters
General Buttons
Other General Functions

Decode32 Overview

Decode32 is a 32-bit multi-filtering tool running on the Windows NT 4.x/2000 operating system. The application filters switch-related data to and from GSM-, analogue- and fixed switches and is intended to act as a transparent interface between switches and data collecting equipment.

Decode32 handles the different input and output format by the use of “filters” developed by Basset Telecom Solutions. A new filter is created for each unique input or output format (different switch brands, different CDR formats, different application specific formats etc.). The different filters are inserted into a list within Decode32, which shows in which order they should be used.

A sequential activation of the filters makes it possible for one filter (one format conversion) to produce data for the following filter/filters. Each filter can also be tied to a time schedule. The schedules make it possible to exactly define at which times the filters shall be run.

The Decode32 Configuration Interface

This section gives an overview of the Decode32 user interface and describes functions that are general for all parts of Decode32, including functionality like menus, starting and stopping the application, etc.

The Decode32 Tabs

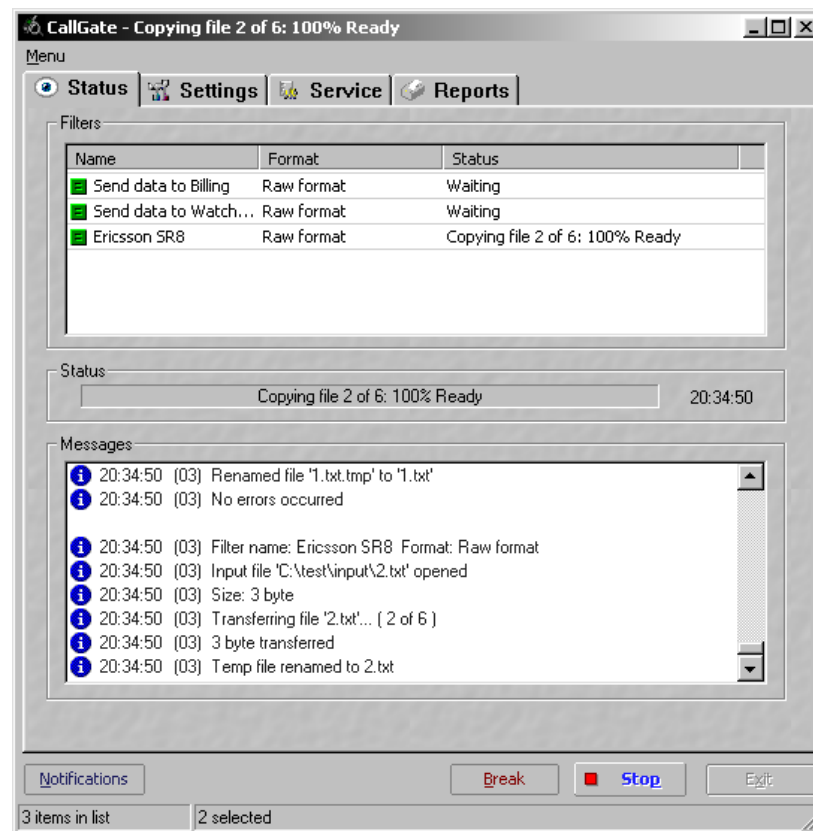
The Decode32 user interface consists of four tabs:

- The Status tab
- The Settings tab
- The Service tab
- The Reports tab.

Each tab is described in detail in the following chapters, however here follows an overview.

The Status tab

The status tab gives an overview of the configured filters and displays the current work progress and a log.

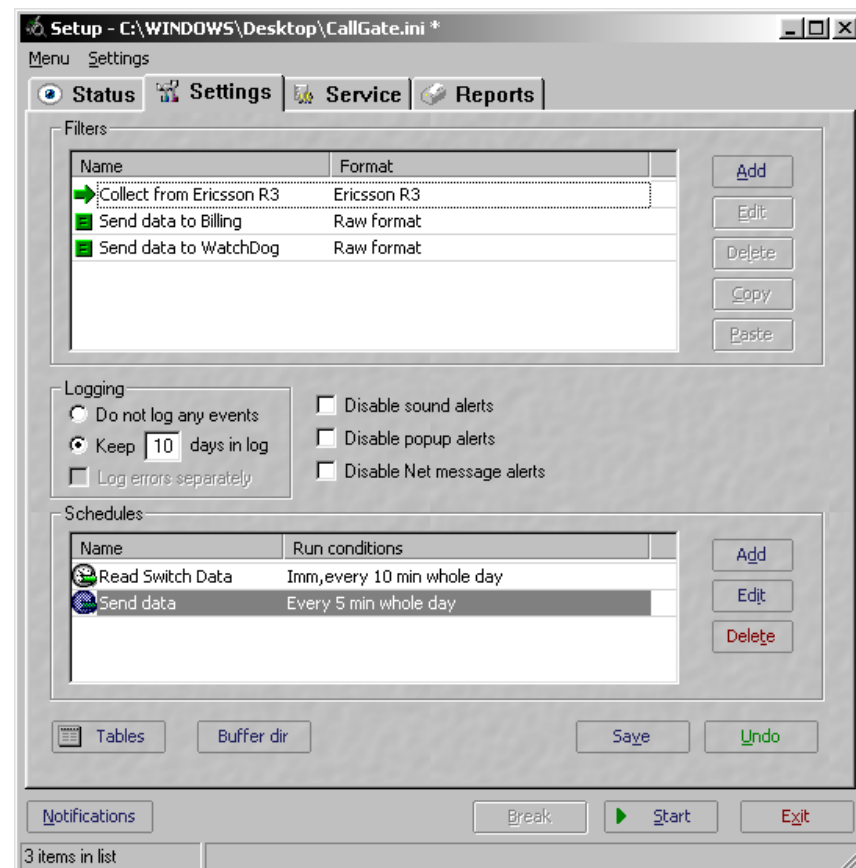


The **Status** tab is divided into three different parts.

- Filters** The Filter area gives a view of the existing filters, the input format for each of them, and the current status of each filter.
- Status** The Status text box shows the progress of the current process and the time.
- Messages** The Messages area contains a log list displaying actions taken by the Decode32 application.

The Settings tab

The **Settings** tab is used for accessing and configuring the Decode32 filters.



The **Settings** tab is divided into four different parts.

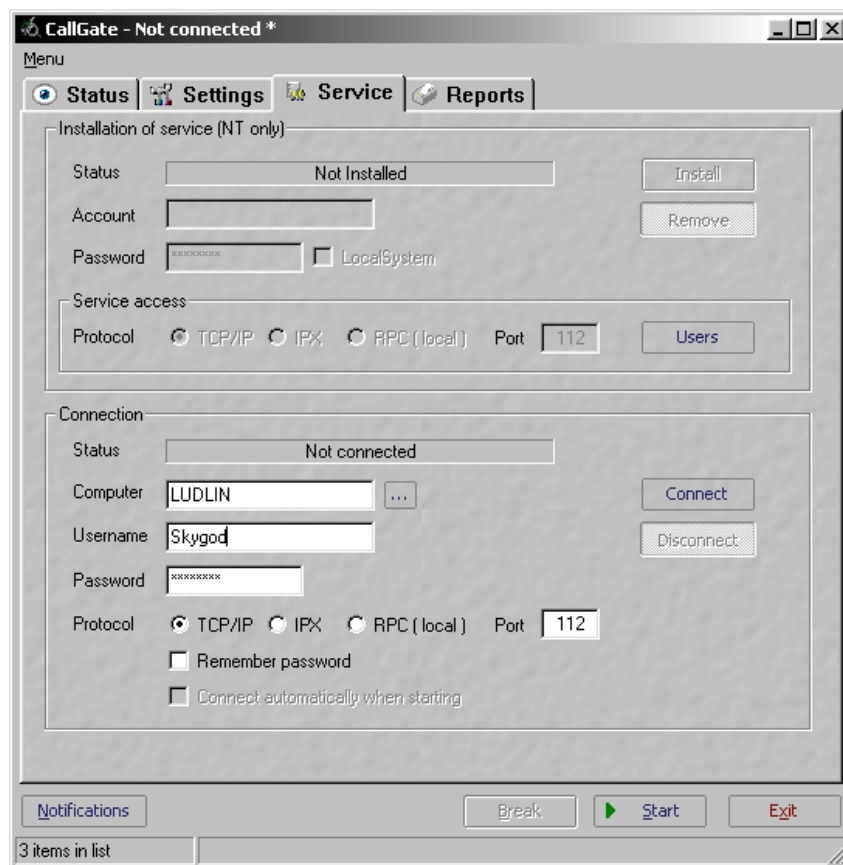
- Filters** The Filter area displays a list of the existing filters and their input formats. It also indicates in which order the filters will be activated if they are run from the same schedule. From here it's possible to add new filters, as well as edit, delete, copy and paste existing filters.
- Logging** The Logging settings give the user a choice to log

Decode32 events.

- Alerts** The Alerts settings give the user a possibility to disable and enable the different kind of messages that are generated when running the filters.
- Schedules** The Decode32 filters are executed via schedules. The Schedules area displays a list of all configured schedules, defining the intervals for running the different filters. From here, schedules can also be added, edited and deleted.

The Service tab

On the **Service** tab you can install Decode32 as a service and connect user accounts to the service.



The **Service** tab is divided into three different parts.

- Installation of service** From here it is possible to install and remove the service. This area also shows the status of the service and which account that is being used to connect to the service.
- Service access** On the Service access area it is possible to define the

protocol to use when connecting to the service.

Connection

Here you define the user account and the computer that the Decode32 service should connect to and how.

The Reports tab

The Decode32 application contains functionality to create reports.

The screenshot shows the 'CallGate' application window with the 'Reports' tab selected. The interface includes a menu bar with 'Status', 'Settings', 'Service', and 'Reports'. The 'Reports' section is divided into three main areas: 'Type of report' with 'Format' set to 'General' and 'Report' set to 'Event Report'; 'Period' with 'From' date '2001-04-19' and 'To' date '2001-04-19', and checkboxes for 'End of day', 'Z days ahead', and 'End of month'; and 'Other criterias' which is a table with columns 'Parameter' and 'Criteria'. Below this table are buttons for 'Modify', 'Clear', and 'Clear all'. At the bottom of the window, there are buttons for 'Notifications', 'Break', 'Start', and 'Exit', and a status bar indicating '29 items in list' and '1 selected'.

The **Reports** tab includes three different parts.

Type of report Here you select the type of the report that should be generated. After selecting a type a list of the reports available for that format is displayed.

Period By specifying period criteria it is possible to generate reports for a specific date range or day.

Criteria Here you can add selection criteria to limit the contents of the report.

Running Filters

On the bottom of the Decode32 window there is a set of buttons used for messages, running filters and for exiting Decode32.



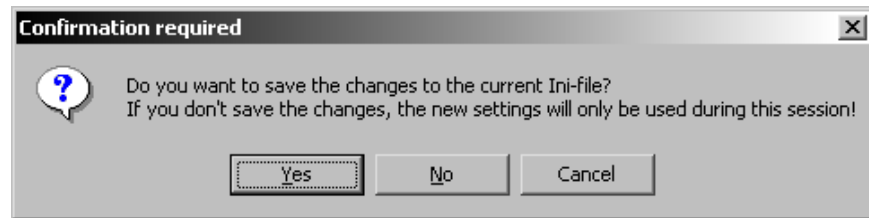
There are two buttons used for running the filters.



Start

Click the **Start** button to start the schedule or schedules that executes the different filters.

Sometimes the following message can appear.



This message appears if changes have been done to the filter settings and the **Start** button was clicked before the changes was saved to the .ini file. In this case, the following alternatives are present:

- Yes** Run the schedule and save the changes.
- No** Run the schedule without saving changes to the .ini file.
- Cancel** Return to Decode32. No action is taken.

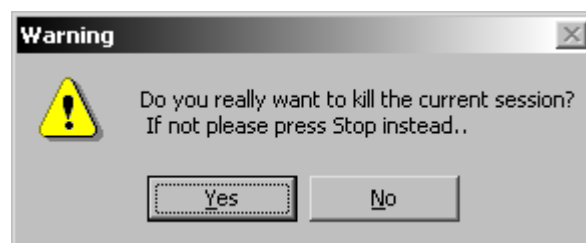
When a schedule is started the **Break** button is highlighted and the **Start** button change to **Stop**.



Break

Click the **Break** button to stop the execution of a schedule immediately. The process is stopped without finishing the file that is currently being processed.

If the break option is used, the following message appears.



Click **Yes** to break the current session or click **No** to cancel the request and return to Decode32.

Stop

Click the **Stop** button to stop the execution of a schedule. The process is stopped as soon as the file that is being processed is finished.

General Buttons

On the bottom of the Decode32 window there is a set of buttons used for messages, running filters and for exiting Decode32.

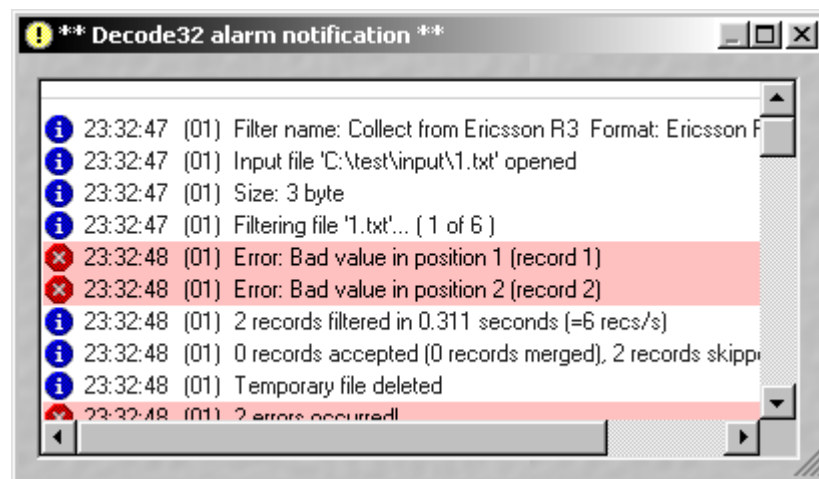


These buttons are described in the following sections.

Notifications



The **Notifications** button opens the **Notifications** window. This window displays a list of error and warning messages generated during file processing. How these messages are presented is set up via the **Settings** tab. See the **Settings** section for further information.



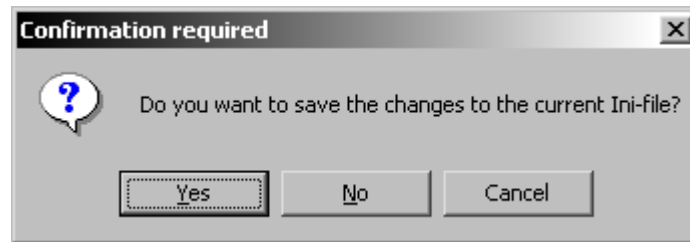
The Exit Button

There are two ways to exit Decode32, either by using the **Exit** button on the bottom of the Decode32 window or by using the menu.

Click **Exit** to close the Decode32 application. The **Exit** button is enabled only when the scheduler is not running.



If the Decode32 application is closed without saving changes to the .ini file the following message appears.



In this case, the following alternatives are present:

- Yes** Exit Decode32 and save the changes.
- No** Exit Decode32 without saving the changes.
- Cancel** Return to Decode32. No action is taken.

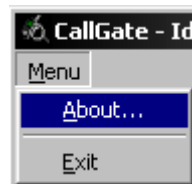
Exiting from the menu is described in the next section.

Other General Functions

Start the Application

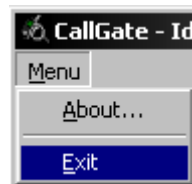
The Decode32 application is started via the Decode32.exe file. The most convenient way to keep the application accessible is to create a shortcut on the desktop using this file.

About Decode32



The **Decode32 About box** menu shows Decode32 version number and release notes for the current and previous versions. To see this information, click **About...** on the **Menu** menu.

Exiting Via the Menu



To exit Decode32 from the menu, click **Exit** on the **Menu** menu. The exit command is disabled when the scheduler is running.

The Decode32 Title Bar



The Decode32 title bar contains different information depending on which tab that has been selected. The following alternatives occur.

- Status** Current status of the scheduler.
- Settings** Location of the Decode32 application .ini file. If a change is made to the Decode32 settings an asterisk ends the information in the taskbar. Settings changes are saved to the .ini file by clicking **Save** on the **Settings** tab.
- Service** Status of the Decode32 service.
- Reports** No information.

The Windows Taskbar



When Decode32 is started an icon appears on the Windows taskbar. When the Decode32 window is minimized, the application can be opened again by clicking this icon.

When the Decode32 window is minimized and the scheduler is not running, the icon on the Windows taskbar is highlighted. When the Decode32 application is minimized, with the scheduler running, the icon on the taskbar is not highlighted.

The Decode32 Status Bar

The Decode32 status bar shows the number of filters that have been defined in the current .ini file. The status bar also shows how many items you have selected when the **Settings** tab is open and the number of selected criteria parameters on the **Reports** tab.



Resizing of Windows

All windows can be resized to fit the screen of each computer. You can maximize a window by clicking the maximize button or dragging the window corner on the bottom right of the status bar.

*Chapter**2*

The Status Tab

Overview

Introduction

The **Status** tab gives an overview of the configured filters, and displays the current work progress and a log. This chapter gives a detailed description of this tab.

In this chapter

This chapter is organized as follows.

Topic

The Status Information Areas

Filters

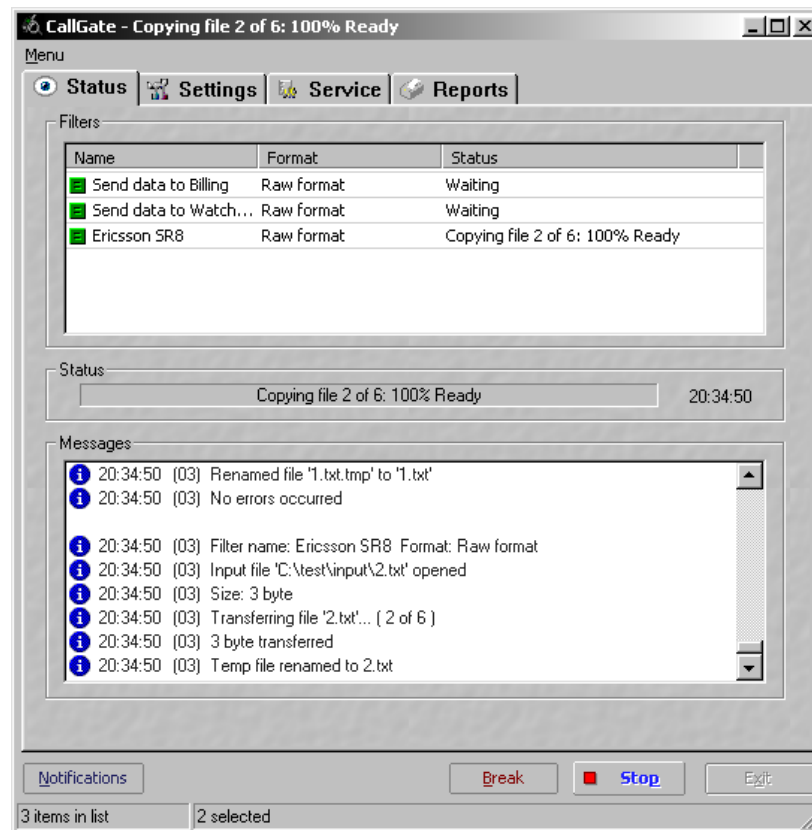
Status

Messages

The Status Information Areas

The **Status** tab gives an overview of the configured filters, and displays the current work progress and a log. The screen is divided into three different parts.

- Filters
- Status
- Messages

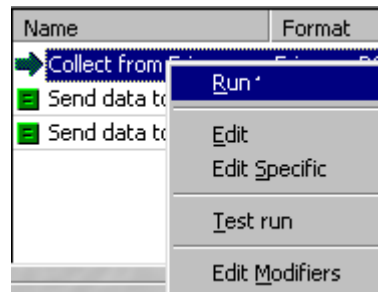


Filters

The **Filters** area provides a view of the existing filters, the input format for each of them, and the current status of each filter.

Filter Action Menu

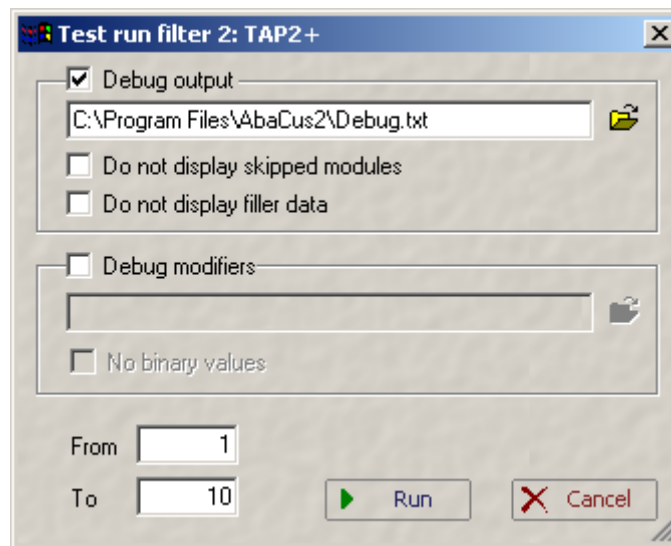
There is a menu used for performing filter actions. Right click a filter item and the following menu appears.



Below is a list of the menu commands.

- | | |
|----------------------|---|
| Run | Run the selected filter. |
| Edit | Edit the settings of the selected filter. |
| Edit specific | Edit the generic settings of the selected filter. |
| Test run | A filter can be run in test mode. In test mode no data is sent and the result is displayed in a test result window. |

When test run is selected this window appears.



The **Debug output** fields specify where the debug information should be stored. The following information should be specified.

Select **Debug output** to enable the debug function.

Enter the path to the file where the debug result should be stored.

If the **Do not display skipped modules** check box is selected, modifiers that haven't been used aren't written to the debug output file.

If the **Do not display filler data** check box is

selected, only actual CDR data will be written to the debug output file. Other switch-related data will not be written.

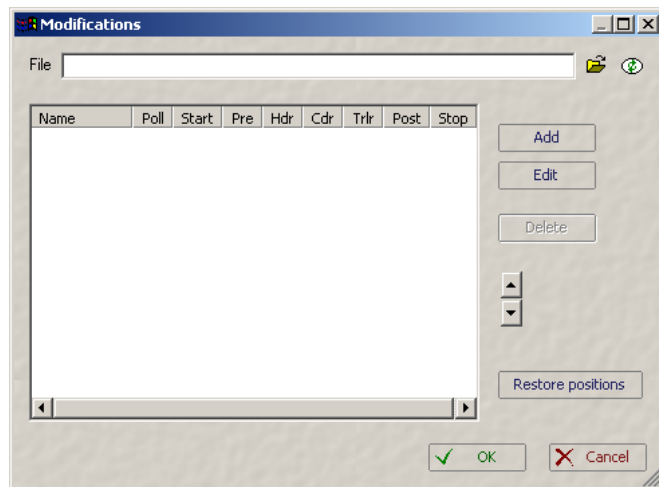
The **Debug modifiers** option has to be selected if all modifier data should be written to a file. If this option is selected, a file path where to write the data has to be specified.

When the **No binary values** option is selected, binary values are written to the file in hex format in order to make the information easier to comprehend.

In the **From** and **To** field you can specify which, and how many, records on the input file that should be processed.

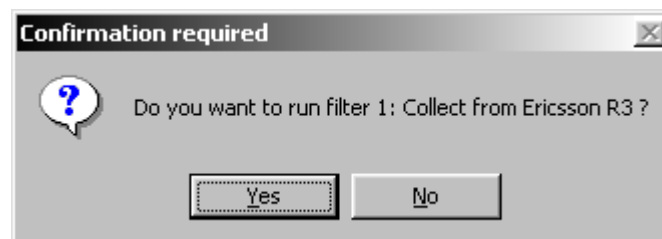
Edit modifiers

Edits the modifiers for the selected filter.



Running A Filter

A filter can be run directly from the **Filter** area. Double-click a filter in the list and the following message appears.



Confirm that you want to run the filter and the filter will be run.

Status

The **Status** area shows the work progress and the current time. Examples of status messages are:

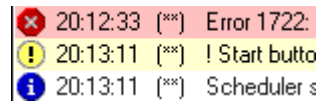
- Scheduler is stopped!
- Scheduler is running
- Copying file 3 of 5: 55% Ready
- Idle

Messages

The **Messages** area displays a log list with information about actions taken by the Decode32 application. This information can also be stored in a log file. Please, see **Settings: Logging** for further information.

Each log item is classified concerning the severity level. The following three levels can occur.

- Error
- Warning
- Information

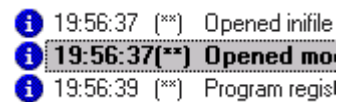


Each log event includes the following information:

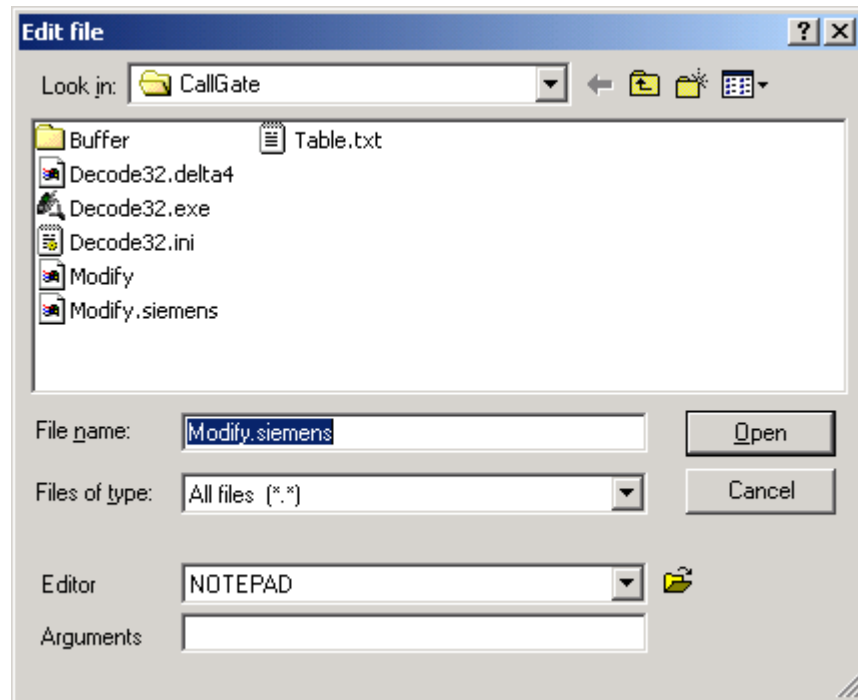
- Severity level
- Time of the event
- If a filter caused the log item, the message contains an index numbers within parentheses. The first filter in the list has index number 1; the second filter in the list has index number 2, etc.
- The log message.

Edit log item

Log items that are related to a file is possible to select from the Message area, by double click on a **Log item** in the Messages list it is possible to open the file in a external editor.

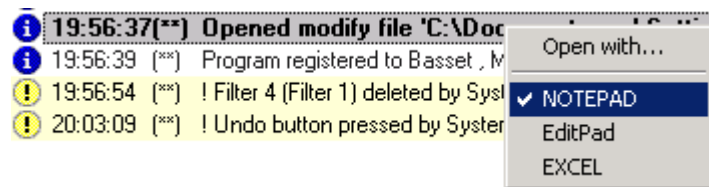


The first time this operation is executed the **Edit File** window is opened from where it is possible to select the external editor.



From the **Edit file** window it is possible to select the editor to use to open the selected file type by click on the **Select Editor** button next to the Editor text box. It is possible to select different types of editors to open different types of files from the Message list. Once a file is associated with an editor it is possible to open the file by double click on it.

To select another Editor for a file in the Message list right click on a log item and select the edit from the menu that appears. The standard editor is marked with a checkbox.



*Chapter**3*

The Settings Tab

Overview

Introduction

This chapter describes the **Settings** tab. This tab is where the filter settings are made.

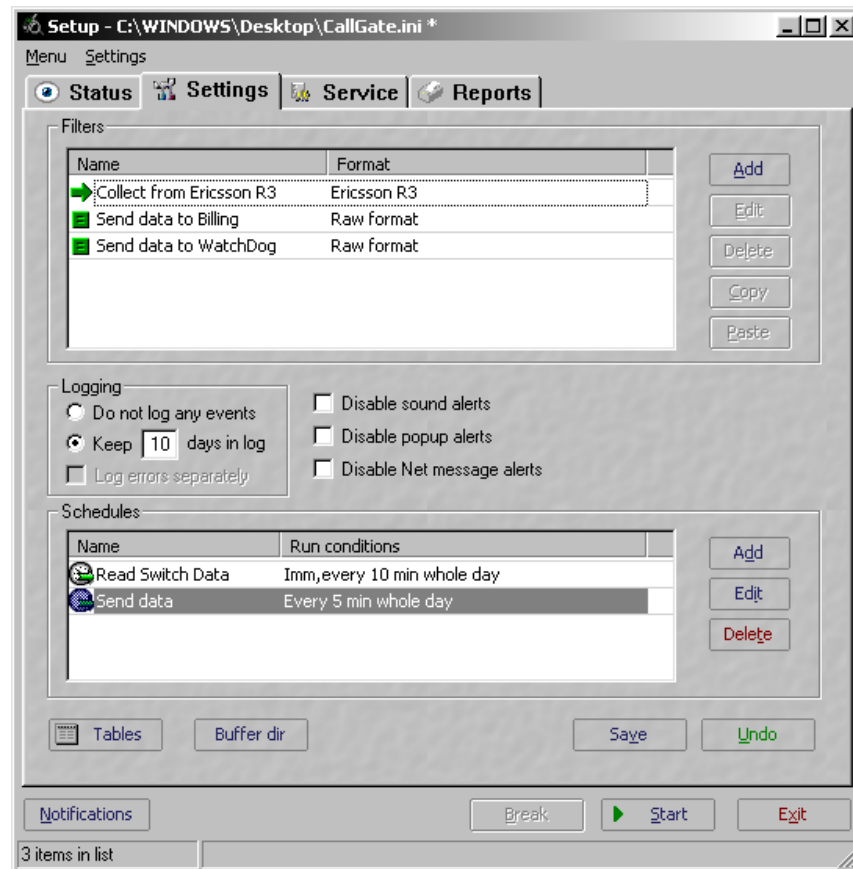
In this chapter

This chapter is organized as follows.

Topic
The Settings Tab Areas
Filters
Logging
Alerts
Schedules
The Edit Filter Window
Adding and Editing Decode32 Filter Settings
Files
Protocols
Filter Notifications
Decompression
Delta Collection
If Tag Is Bad
If Output Exists
Seq Check
On Error
Subdirectories
Input and Output Format
If Input Is Error Free
If Input Contains Errors
Tag Output Size
Date and Time Format
Duplicates
Partials
Modifications

The Settings Tab Areas

All filter settings are made from the **Settings** tab. The tab looks as follows and will be described in detail below.



The **Settings** tab is divided into these different areas.

- Filters
- Logging
- Alerts
- Schedules
- Tables
- Buffer dir
- Save
- Undo

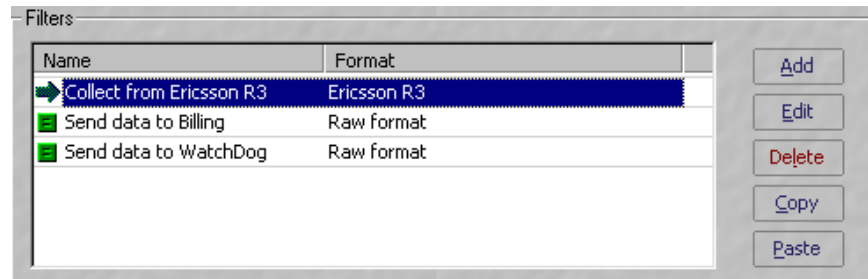
Each part is described in the following sections.

The examples used in this manual are based on a network using an Ericsson R3 switch. Besides the filter for the switch, there are also

two other filters; one for sending data to the billing system and one for sending data to WatchDog - the Fraud Detection System from Basset Telecom Solutions.

Filters

The **Filters** area contains a list of all configured filters and their respective input formats. The list also indicates in which order the filters will be activated if they run under the same schedule.

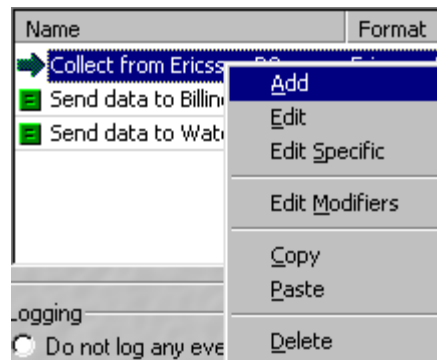


Depending on your network and service setup the contents of the list will vary. However, there should always be one filter for reading information from a switch (or another source in your network such as a mediation device) and one filter for sending data (to a billing system or any other source).

On the **Filters** area it's also possible to perform different actions with filters. Below is a list of these actions. All actions are performed using the buttons to the right of the filter list.

- Add** Add a new filter.
- Edit** Edit a filter selected from the list. A filter can be edited also by double-clicking it. This action opens the **Setup** screen. This screen is described later in this manual.
- Delete** Delete a filter selected from the list. The delete action displays a message that has to be confirmed.
- Copy** Copy a selected filter into the memory.
- Paste** Paste a copied filter to the list of filters.

The actions described above can also be performed via a menu. This menu also includes two additional actions, Edit specific and Edit modifiers. To gain access to the menu, right-click a filter in the list and the following menu appears.

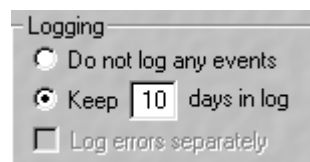


Below is a list of the commands.

Add	Same function as described above.
Edit	Same function as described above.
Edit specific	Edit the specific settings for a filter selected from the list.
Edit modifiers	Edit the modifiers for a filter selected from the list.
Delete	Same function as described above.
Copy	Same function as described above.
Paste	Same function as described above.

Logging

The log function offers the possibility to store the Decode32 event messages in a file. These messages are the same as the ones being displayed on the **Messages** area on the **Status** tab.



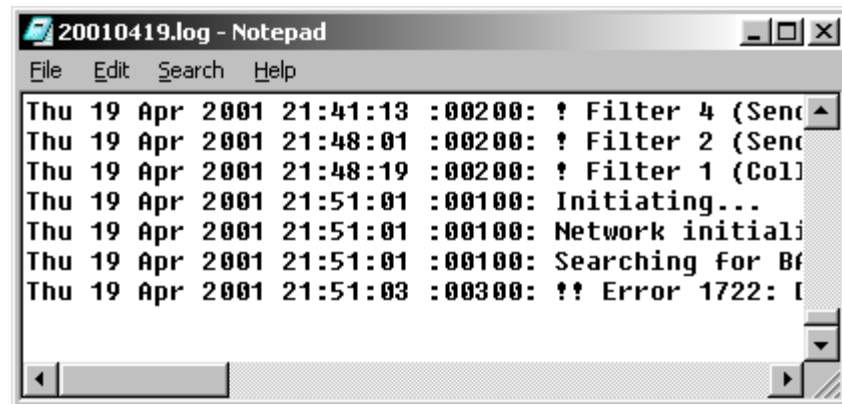
The following parameters should be specified when using the log function.

Do not log any events	If this option is selected, no logging will be done.
Keep days in log	Select this option if logging should be done and enter the number of days the log data should be saved.

Log errors separately

Log files are saved in the ReportData folder, which is located in the same folder as where the Decode32 executable file is located. A new

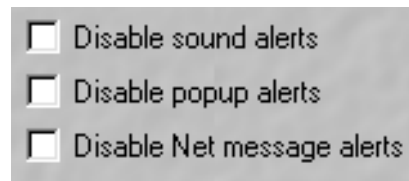
log file is created for each day. The file is named <YYYYMMDD>.log. Below is an example of a log file.



Exclamation points indicate the different severity levels in the log file. Messages with severity level critical status starts with two exclamation points and messages with severity level warning start with one.

Alerts

The **Alert** options allow you to disable unwanted alerts. (The alerts are configured for each filter, please see the **Settings** section for further information.) Select the respective option to disable sound alerts, pop-up alerts and Net messages using the Net.exe application.



Schedules

All filters are run via schedules and the schedules are managed in this area. Schedules define when, and how often, different filters shall be run. The **Schedules** area contains a list of all configured schedules.

By selecting a schedule in the list the filters that is configured to run with the filter is highlighted.

It is possible to perform different actions with schedules.

Add Add a new schedule.

Edit Edit a schedule selected from the list.

Delete Delete a schedule selected from the list. The delete action generates a message that has to be confirmed before an item is deleted.

It is possible to conduct the same actions by right-clicking one of the schedules in the list.

When the Add and Edit commands are selected the **Schedule properties** window is displayed. This window looks as follows.

Schedule properties

Name: ☐ Disable schedule

Weekdays

- ☐ Monday
- ☐ Tuesday
- ☐ Wednesday
- ☒ Thursday
- ☐ Friday
- ☐ Saturday
- ☐ Sunday

Frequency

- ☒ Immediately when pressing start
- ☐ Once at
- ☒ Every ☐ hours ☐ minutes ☒ seconds
 - ☒ whole day
 - ☐ between and
 - ☐ Relatively ☐ Absolutely

Scheduled filters

- ☐ ☒ Collect from Ericsson R3
- ☒ ☒ Send data to Billing
- ☒ ☒ Send data to WatchDog

☒ OK ☐ Cancel

The **Schedule properties** window consists of the following parts.

Name	The Name text box contains the name of the current schedule.
Disable schedule	If this option is selected the current schedule will not be executed.
Weekdays	Select the days of the week the schedule should be valid for. If no days are selected the schedule is valid for all days.
Frequency	<p>The Frequency settings provide a number of interval options regarding when the scheduled tasks should be executed. When Immediately when pressing start option is selected, the tasks connected to the schedule are executed directly when the schedule is started. Otherwise they will be executed when the time span set in the schedule has passed. If the schedule should be run once a day, the Once at option should be selected and a start time entered. By selecting the Every option, a</p>

schedule can be set to run within time intervals during the whole day or between certain times.

Scheduled filters This area lists all the filters. Select the filters that should be valid for the selected schedule.

Tables

The **Tables** functionality is used to connect Decode32 to an external data source. This data source can then be used in the **Modifications** settings. Data can be read from the data source based on different criteria and then e.g. be added to the input or output file. The data source can both be a simple text file or a database. All settings made in this function are saved in file called Decode32.tab.


The **Tables** window consists of the following parts:

- Table names
- File format
- Table type
- Field names
- Field details

Each part is described below.

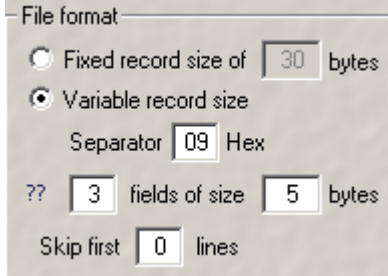
Table names

The **Table names** list includes a list of all defined data sources.

Name	Auto	Type	Format	Fields	Size	Source
ServingBID		Hash	Variable	3	5	C:\r8\tables...

File format

The **File format** section describes the format of the **Table** source. If the **Table** source is of a fixed record size, select the **Fixed records size** option and type the number of bytes each record is using. If the format is of a variable size select the **Variable record size**



File format

☐ Fixed record size of bytes

☒ Variable record size

Separator Hex

?? fields of size bytes

Skip first lines

option and type the separator character in hexadecimal form. If the file is tab-separated type “09”, which is the hexadecimal code for that. Click **Add** to add the table to the **Table names** list.




Click **??** to make Decode32 automatically find the number of fields the record source consists of and the size in bytes. If the first row of the data source includes headers type 1 in the **Skip first n lines** field.

Table type

The **Table type** settings define the type of table that should be used.

Field names

The **Field names** section of the **Table** window is where the fields of the table are defined. By creating each field and adding the size and date format the file format is created.

Name	Use	Type	Field	Pos	Size
 BidMatch	<input checked="" type="checkbox"/>	ASCII	1	1	5
 CellID	<input checked="" type="checkbox"/>	ASCII	2	1	5
 SBidDescription	<input checked="" type="checkbox"/>	ASCII	3	1	15

Click **Read Line** to verify that Decode32 can read the table. For more information on how to use the **Table** settings please refer to the Decode32 – Modifications Manual.

Buffer dir

The **Buffer Dir** functionality is used to secure the file flow when files are sent via FTP. All files are saved in the buffer directory before they are transferred to the FTP server. A file that is 100% sent to the FTP site is then deleted from the buffer directory. If all files are successfully sent to the FTP server the buffer directory is empty, this functionality verifies the functionality of Decode32 even if the network or FTP server is not function properly. By clicking on the Buffer Dir button the following part appears.



Enter the file path in the **Buffer Dir** text box or press the **Browse folder** button to select it. Verify the Buffer directory by click on the **Ok** button or Close the buffer directory by click on **Cancel** button.

Save

The **Save** button is used to save all changes to the ini file. If changes to the Decode32 application has been made the **Save** button is active otherwise it is inactive.



Undo

The **Undo** button is used to cancel any new changes to the Decode32 application that has not been saved to the ini file.

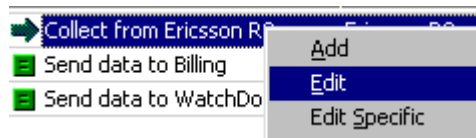


The Edit Filter Window

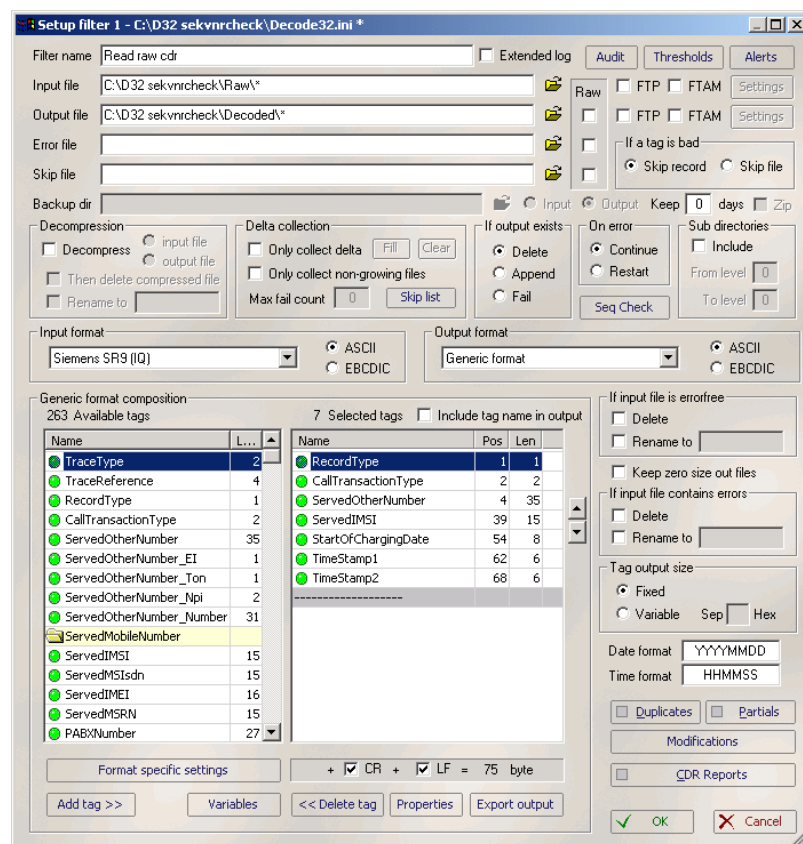
When the **Add** and **Edit** commands are selected for a filter, the **Setup filter** window is displayed. In this section this window is described.

Adding and Editing Decode32 Filter Settings

To edit a Decode32 filter, click the filter to edit in the **Filters** area and click **Edit**. You can also right-click a filter item and then select **Edit** from the menu that appears or double-click the filter. To add a new filter, just click the **Add** button.



When **Add** or **Edit** is selected, the **Setup filter** window is displayed. This window looks as follows.



The **Setup filter** window includes the following different parts.

- Files

- Raw
- Protocols
- Decompression
- Delta collection
- If tag is bad
- If output exists
- Seq check (sequence number check)
- On fatal error
- Sub directories
- Input and Output format
- If input is error free
- If input contains errors
- Tag output size
- Date and Time format

Each part is described below.

Files

Filter name

The **Filter name** is a description of the current filter. This name will appear in the **Filters** area on the **Status** and **Settings** tabs.

A screenshot of a text input field labeled "Filter name" containing the text "Collect from Ericsson R3".

Input file

Input file defines the path to the files that should be collected by Decode32. Type the path in the text box or browse for the path by clicking the browse button to the right of the **Input file** text box.

A screenshot of a text input field labeled "Input file" containing the path "c:\Data\Rated*.bcp". To the right of the text box is a small yellow folder icon representing a browse button.

Decode32 can collect files in three different ways.

- MS compatible interface
- FTP
- FTAM

If the FTP or FTAM protocols should be used, select the respective option to the right of the **Input file** text box. In these cases, it is also

possible to make additional settings by clicking the **Settings** button. This is described in detail below.

Output file

The **Output file** defines the path where the input files should be stored after they have been processed. Type the path in the text box or browse for the path by clicking the browse button to the right of the **Output file** text box.



The output file can be sent in three different ways.

- MS compatible interface
- FTP
- FTAM

If the FTP or FTAM protocols should be used, select the respective option to the right of the **Output file** text box. In these cases, it is also possible to make additional settings by clicking the **Settings** button. This is described in detail below.

When naming files in Decode32 it is possible to use dynamic nametags to create dynamic filenames. It is possible to mix static information and dynamic information, for example: Index<INDEX>.txt that results in a file named for example Index00002.txt if the current index is 2.

The following tags can be used.

<DATE>	Names the file with date format YYYYMMDD.
<TIME>	Names the file with time format HHMMSS.
<YYYY>	Names the file with current year using four digits.
<YY>	Names the file with the current year using the last two digits.
<CENTURY>	Names the file with the first two digits of the current century.
<MM>, <MONTH> and <MON>	Names the file with current month, two digits.
<DD>, <DAY>	Names the file with current day, two digits.
<HH>, <HOUR>	Names the file with current hour, two digits.

<MIN>, <MINUTE>	Names the file with current minute, two digits.
<SS>, <SECOND>	Names the file with current second, two digits.
<INDEX>	Creates an index number with format nnnnn. For example 00003.
<INDEX _n >	If there are several filters using the index parameter they will all be given names using the same set of numbers. Adding a number, n, to each index parameter, makes Decode32 keep track of each index giving each file an unbroken set of numbers.
<DIR>	Names the file with the complete directory path in the file name. If the path to the file is c:\data\cdr\ericsson\ the file name would be data_cdr_ericsson.
<SUBDIR>	Names the file with the file path that is below the path defined in the input file. For example if the file is located in the c:\data\cdr\ericsson\file.txt and the path in the input file is defined as c:\data\ the name of the file would be cdr_ericsson.

Error file

Error file defines the path where Decode32 should put a file if error occurs while processing an input file. Type the path in the text box or browse for the path by clicking the browse button to the right of the **Error file** text box.



Skip file

Skip file defines the path where Decode32 should put a file if an input file is skipped/not processed. Type the path in the text box or browse for the path by clicking the browse button to the right of the **Skip file** text box.



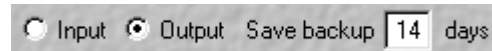
A reason for Decode32 to skip a file is that the tag is bad.

Backup dir

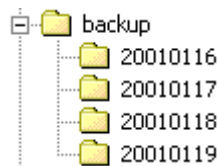
Backup dir defines the backup directory for either input or output files. Type the path in the text box or browse for the path by clicking the browse button to the right of the **Skip file** text box.



Select whether to store the input or output files and enter the number of days the backup should be saved.



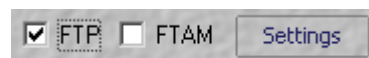
The backup is created as a date file structure where each folder includes the files for a certain date.

**Raw**

By selecting the **Raw** checkbox next to the output file, the format of the **Error file**, **Skip file** and the **Backup file** output format is raw. This option makes it possible to produce both raw and generic format for different outputs.

**Protocols****FTP/FTAM**

The FTP and the FTAM check boxes decide which protocol to use when collecting or sending files.



When these options are selected, it is possible to make additional settings. These settings are described below.

FTP settings

The **FTP settings** window includes all settings required to collect or send FTP files.

FTP settings - Input file

Ftp server: Port:

Proxy:

Username:

Password:

Type: ☒ Binary ☐ ASCII

☐ Compatibility mode

☐ Use temporary naming

☐ No pre-delete

☐ Allow max spaces in file names

☐ Nokia directory file

Below is a description of the **FTP settings** parameters.

FTP server	The name of the FTP server.
Port	The port to use when accessing the FTP server.
Proxy	If a proxy is present, specify the proxy name (IP address) here.
Username	The username to use to connect to the FTP server.
Password	The password to use to connect to the FTP server.
Type – Binary	Specify if the files are in binary format.
Type – ASCII	Specify if the files are in ASCII format.
Compatibility mode	This option should be selected if the client and the server are using different platforms.
Use temporary naming	If temporary naming is used, temporary files will be created during up or download. These files are deleted when the file transfer is complete.
No pre-delete	If the file exists on the destination it tries to delete file.
Allow max n spaces in file names	Specific Basset customer function.
Nokia directory file	Specific setting for Nokia filters.

FTAM settings

The **FTAM settings** window includes all settings required to collect or send FTP files.

The screenshot shows a dialog box titled "FTAM settings - Input file". It contains the following fields and options:

- Partner: [text input]
- Admission: [text input]
- Username: [text input]
- Account: [text input]
- Password: [text input]
- Parameters: [text input]
- ☐ Copy/delete
- ☐ Delete before transfer
- Time out: [0] seconds
- ☐ Nokia directory file
- Buttons: OK (with a green checkmark icon), Cancel (with a red X icon)

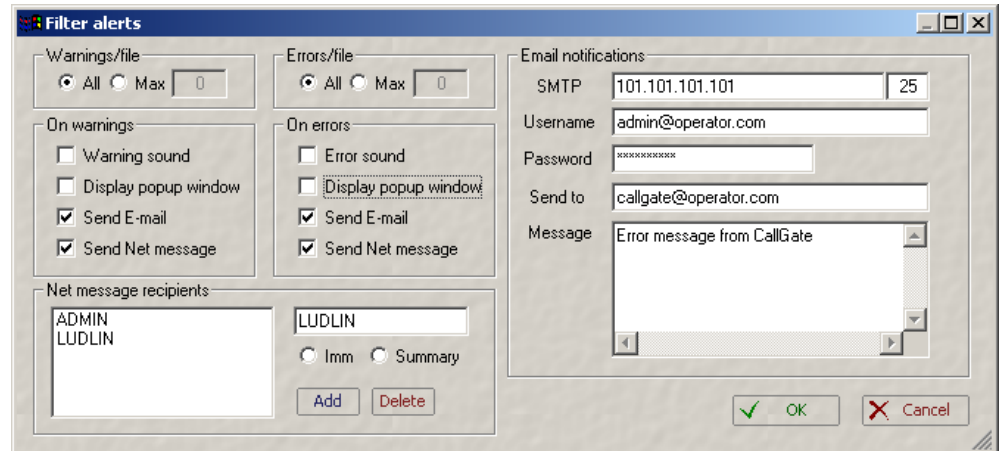
Below is a description of the **FTAM settings** parameters.

Partner	The name of the TNT address.
Admission	Configured together with TNS address.
Username	The username to use when connecting to the FTAM server.
Account	The account to use when connecting to the FTAM server.
Password	The parameters to use when connecting to the FTAM server.
Parameters	Extra parameters for the FTAM connection. Please refer to specific documentation for FTAM.
Copy/Delete	Parameter used with Siemens switches to create cyclic files.
Delete before transfer	If the file exists on the destination an attempt will be made to delete file.
Time out n seconds	File transfer time out setting.
Nokia directory file	Specific setting for Nokia filters.

Filter Alerts

It is possible to configure how warning and error messages should be handled if something goes wrong when a file is processed. This configuration can be made specifically for each filter.

These settings are made on the **Filter Alerts** window. To open the window, click the **Alerts** button. The window looks as follows.



The **Filter Alerts** window includes the following parts.

- Warnings/file
- Errors/file
- On warnings
- On errors
- E-mail notifications
- Net message recipients

Each part is described below.

Warnings/file

This option specifies how many warning messages Decode32 shall generate for each file.

All Generate warning messages for all errors.

Max n Stop generating warning messages if a file causes more than n number of warnings.

Errors/file

This option specifies how many error messages Decode32 shall generate for each file.

All Generate error messages for all errors.

Max n Stop generating error messages if a file causes more than n number of errors.

On warnings

Select the warning methods to use.

Warning sound	Decode32 makes a sound if a warning occurs.
Display pop-up window	Decode32 displays a message on the screen if a warning occurs.
Send E-mail	Decode32 generates an e-mail if a warning occurs. See E-mail notifications for further settings.
Send net message	Decode32 sends a net message if a warning occurs. See Net message recipients for further settings.

On errors

Select the error methods to use.

Error sound	Decode32 makes a sound if an error occurs.
Display pop-up window	Decode32 displays a message on the screen if an error occurs.
Send E-mail	Decode32 generates an e-mail if an error occurs. See E-mail notifications for further settings.
Send net message	Decode32 sends a net message if an error occurs. See Net message recipients for further settings.

E-mail notifications

The **E-mail notifications** parameters have to be set if the **Send E-mail** option has been selected in the **On warnings** or **On errors** sections. Below is a description of these parameters.

SMTP	The IP address to the SMTP server to use.
Port	The port to use to access the SMTP server.
Username	The user name to use to connect to the SMTP server.
Password	The password to use to connect to the SMTP server.
Send to	A list of the e-mail addresses you want to receive the messages. If several names are specified they should be separate with semicolons “;”.

Message A header text for the e-mail message.

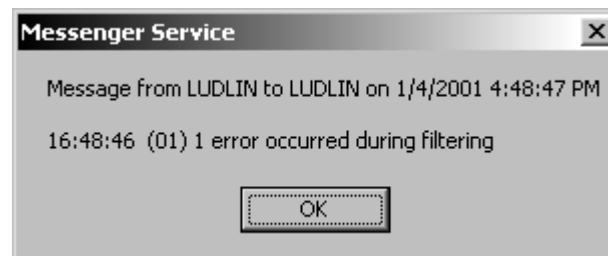
Net message recipients

The **Net message recipients** parameters have to be set if the **Send Net message** option has been selected in the **On warnings** or **On errors** sections. Below is a description of these parameters.

To add a recipient to the list, type the name in the text box and click **Add**. To delete the recipient from the list, select the recipient and click **Delete**.

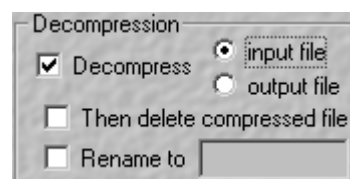
If the **Imm** option is selected, Decode32 will send messages as soon as they are generated. With **Summary** a summarized message will be sent when Decode32 has finished processing the file.

This is an example of a net send message.



Decompression

The decompress options has to be specified if the input files have been compressed using “UNIX compress”.



Decompress If the input files are compressed using “UNIX compress”, the Decompress option has to be selected. Then Decode32 decompresses the files as they are read into the system.

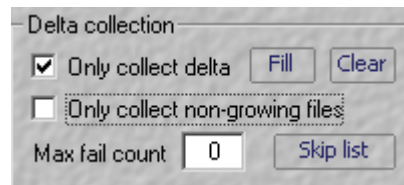
Then delete compressed file Select this option if the compressed file should be deleted after the file has been processed.

Rename to Select this option if the compressed file should be renamed after the file is processed. Specify a new name for the file, for example *.rdy.

Delta Collection

This function is used to prevent files from being collected and processed twice by the system. For the **Delta Collection** to work properly the filter must be configured to run on a schedule. To configure the **Delta Collection** correctly, please follow these steps:

1. Select a filter and enter the **Setup Filter** window.
2. Check the **Delta Collection** checkbox and press the **Fill** button.
3. Set the **Max Fail count** to be larger than 0.
4. Close the **Setup Filter** window and run the filter manually once by right click on the filter and select run from the **Status tab**.
5. Start the scheduling by pressing the **Start** button.



- Only collect delta** If this option is selected, Decode32 will only collect files that are new.
- Fill** The **Delta** function keeps track of which files from the file source location that has already been collected. The **Fill** function allows the user to manipulate with this function. If the **Fill** button is clicked, the system will fill the delta list with all existing files on the file source location. This will prevent all the previously existing files to be read.
- Clear** Click **Clear** to reset the delta functionality and empty the delta list. This enables Decode32 to read all the files from the file source location again.
- Only collect non-growing files** Some of the files at the file source location might have proper names and file extensions, indicating that they should be collected. They can still have information added to them from the source (e.g. a switch). Therefore it is possible to set Decode32 to collect only files that are not growing. If the **Only collect non-growing files** option is selected Decode32 will compare the size of the existing files between each poll. If they have not grown they are considered to be non-growing files, and will

then be read into the system.

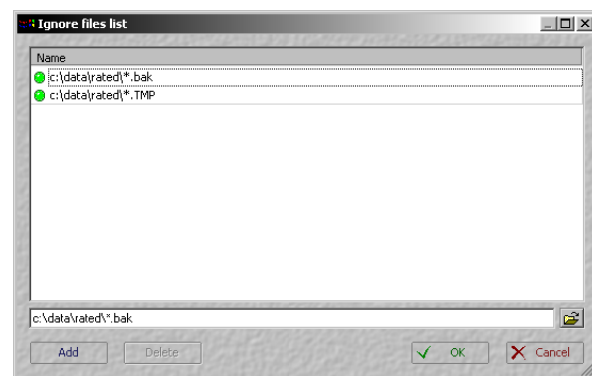
Max fail count

The max fail count settings control how many times Decode32 should try to collect files from a directory if an error occurs while collecting the files, to configure the Delta collection the Max fail count must be larger than 0.

Skip list

If the file source location includes other files then the ones to be collected, it is possible to define a list of file names of the files that Decode32 should not collect.

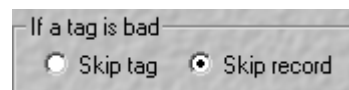
Click **Skip list** and the following screen appears.



Type the file name, or browse for the file by clicking the browse button, to specify the names of the files not to collect. Click **Add** to add the file mask to the list. To delete a file mask, select it from the list and click **Delete**.

If Tag Is Bad

Here you define what to do if a tag is bad or corrupted. A tag is a field in e.g. a CDR record.



There are two options.

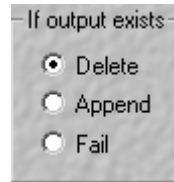
Skip tag The tag is skipped but the other tags are read into the system.

Skip record The entire record is skipped if a tag is bad.

Skipped data is placed in the file that is defined in the **Skip file** field.

If Output Exists

If the output file defined in the **Output file** field already exists when Decode32 tries to create it, there are three different options to handle this.



- | | |
|---------------|---|
| Delete | Delete the previous file. |
| Append | Add the data to the existing file. |
| Fail | Report a failure in the log. In this case, the input file will be left at the source destination unhandled. |

Seq Check (sequence number check)

Decode32 can keep track of the number sequences used for incoming files. Multiple sequences can be handled, such as for files from different switches.

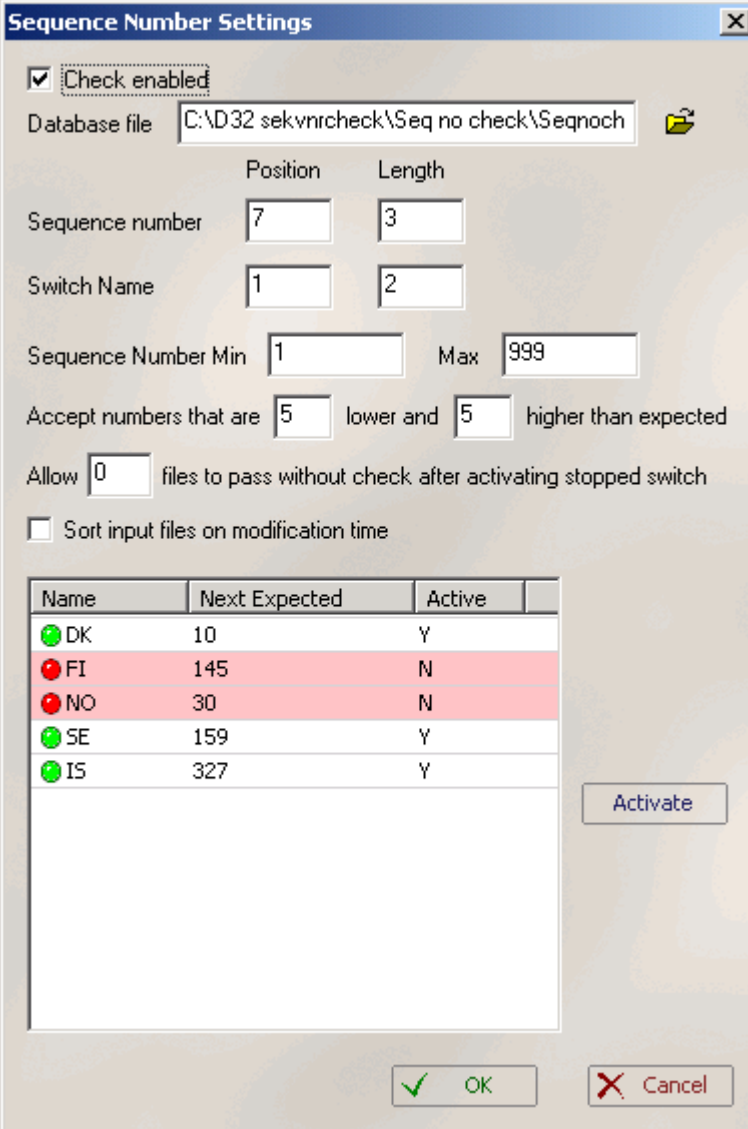
If out-of-sequence files are encountered Decode32 will stop processing files from the switch that delivered these files. This is indicated in the log and in the user interface. The system administrator has to activate the switch again to restart the process. This is described later in this chapter.

The settings

This chapter describes the sequence number check settings.



To access the settings, click the **Seq Check** button and the **Sequence Number Settings** dialog box appears.



Sequence Number Settings

☒ Check enabled

Database file: C:\D32 sekvrcheck\Seq no check\Seqnoch

	Position	Length
Sequence number	7	3
Switch Name	1	2

Sequence Number Min: 1 Max: 999

Accept numbers that are 5 lower and 5 higher than expected

Allow 0 files to pass without check after activating stopped switch

☐ Sort input files on modification time

Name	Next Expected	Active
DK	10	Y
FI	145	N
NO	30	N
SE	159	Y
IS	327	Y

Activate

OK Cancel

The following parameters are available.

Check enabled	Select this check box to activate the sequence number check.
Database file	Information about the existing file sources and the current sequence numbers are stored in a file. This field is used to specify where this file should be kept.
Sequence number	Specify the position in the file name where the sequence number starts and how many positions that are used for it.
Switch name	Specify the position in the file name where the switch name starts and how many positions that are used for it. This value may be any value that identifies different number sequences.

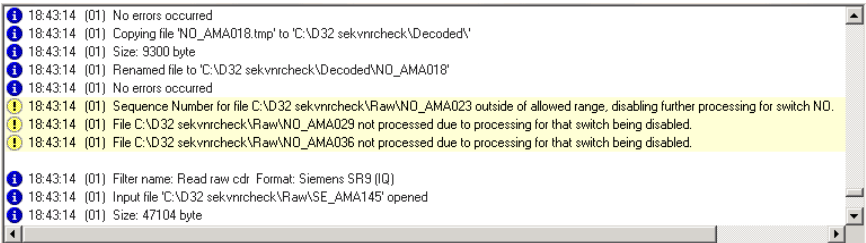
Sequence number min/max	Specify the lowest and highest value that is possible as sequence number. The lowest value is where the sequence numbering starts. The highest value is the number where the sequence number has reached to an end and where the numbering starts from the minimum number again. This value is needed to prevent false out-of-sequence warnings when the number sequence has been reset.
Accept numbers that are lower than expected	This is the threshold for the number sequence check regarding files with lower sequence numbers than expected. Decode32 will calculate the lowest valid sequence number for the following file as follows: <i>Sequence number for current file - 1 - threshold</i> . If the threshold is 4 and we have received file 10, the next sequence number may not be lower than $10 - 1 - 4 = 5$.
Accept numbers that are higher than expected	This is the threshold for the number sequence check regarding files with higher sequence numbers than expected. Decode32 will calculate the highest valid sequence number for the following file as follows: <i>Sequence number for current file + 1 + threshold</i> . If the threshold is 4 and we have received file 10, the next sequence number may not be higher than $10 + 1 + 4 = 15$.
Allow files to pass without check after activating stopped switch	<p>If the process for a switch has been stopped due to an out-of-sequence scenario it is likely that the first file(s) that are waiting to be processed are out of sequence as well in relation to the file that was latest processed. This parameter can be used to prevent that the process is stopped immediately again when the switch has been activated.</p> <p>Example: The value 3 in this field means that the next three files will be processed no matter which sequence numbers they have. After that the check will start again, assuming that the file sequence is in order again.</p>
Sort input files on modification time	<p>Decode32 handles incoming files in the order of the file names. If the sequence numbers are reset after a maximum value, this means that files may be processed in the wrong order. I.e. if files at the end of the number range are sent at the same time as files starting from the reset number, the file with the minimum number will be handled first and may hence cause an out-of-sequence warning.</p> <p>If this check box is selected Decode32 will sort the</p>

files on the file time stamp and hence, when applicable, handle the files in the correct order.

Actions

This chapter describes the sequence number check warnings and the actions that need to be taken.

If out-of-sequence files are encountered it is indicated in the Decode32 **Status** list.



The list in the **Sequence Number Settings** dialog box provides further information.

Name	Next Expected	Active
DK	10	Y
FI	145	N
NO	30	N
SE	159	Y
IS	327	Y

Activate

Each switch is listed with the following information.

- Name**
- Name of the switch (or any other entity). This is the value in the positions specified in the **Switch name** settings.
- Next expected**
- This is the sequence number that Decode32 expects to encounter.
- Active**
- This column indicates the state of the switch. There are two possible values.

Y Files are processed for the switch.

N Files are not processed for the switch until the system administrator activates it. In this case the state is also indicated by red colour.

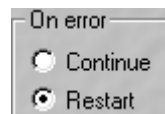
To activate a switch that has been stopped, select the switch in the list and click **Activate**. In the following example the switch “FI” has been activated.

Name	Next Expected	Active
DK	10	Y
FI	Any	Y
NO	24	N
SE	159	Y
IS	327	Y

The next expected file number has now been set to “Any” meaning that the next file will be accepted no matter which sequence number it has.

On Error

If Decode32 experience a fatal error while processing a file, this setting decides how this error should be handled. Examples of fatal errors are incorrect information in a CDR or errors when writing to disk.



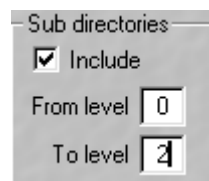
There are two options to handle this situation.

Continue Decode32 tries to ignore the error and continues with the execution of the filter.

Restart Decode32 restarts the filter execution and tries to execute the tasks again.

Subdirectories

The **Subdirectories** setting decides if Decode32 should collect files from the subdirectories to the input file source specified in the **Input file** field.

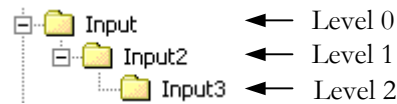


To activate this option, the following parameters have to be set.

Include Select **Include** to activate this function.

From level The highest level where Decode32 should start looking for input data. Level 0 is equal to the file specified in the input file setting.

To level To collect data from the file path specified in the input file setting and two subdirectories down the **From level** setting should be 0 and the **To level** should be 2.



Input and Output Format

Here you define the formats for the input and output files. There are a number of already defined formats that can be selected from the drop-down list boxes.

Either the input or output format should be of Generic format. The Generic format is a format that is manually composed, as opposed to e.g. a predefined switch format. The predefined output format conversions uses the Generic format as input. Therefore incoming files should be converted to Generic format in the first step, and in a second step to the final out format.

Input format



The input format drop-down list contains the most common switch formats available, e.g. different Ericsson, Siemens, Alcatel, and Motorola switch formats. Except for the predefined switch formats it is also possible to choose a Generic format, which is a manually composed format. Basset Telecom Solutions manages the contents of the list that is constantly updated with new formats.

The format chosen can be read as ASCII or as EBCDIC.

Output format

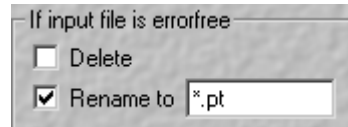


The output format drop-down list contains the most common output formats available, e.g. raw data and TAP2. Except for the predefined formats it is also possible to choose the Generic format, which is a manually composed format.

The format chosen can be written as ASCII or as EBCDIC.

If Input File Is Error Free

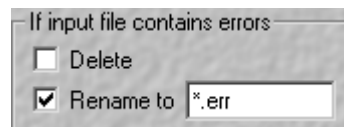
If the input file was processed without errors, it is possible either to delete it or rename it to an arbitrary name. If no option is selected, the input file will be left on the source location as it is.



The dialog box titled "If input file is errorfree" contains two options: "Delete" with an unchecked checkbox and "Rename to" with a checked checkbox. The "Rename to" option has a text input field containing "*.pt".

If Input File Contains Error

If the execution of the input file caused errors, it is possible to either delete it or rename it to an arbitrary name. If no option is selected, the input file will be left on the source location as it is.

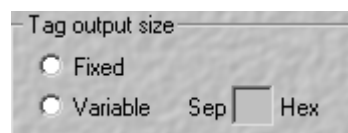


The dialog box titled "If input file contains errors" contains two options: "Delete" with an unchecked checkbox and "Rename to" with a checked checkbox. The "Rename to" option has a text input field containing "*.err".

Tag Output Size

The tag output size can be set to be fixed or variable.

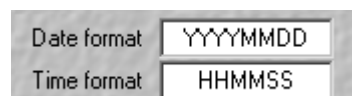
If a variable tag output size is chosen it is possible to define the hexadecimal sign to use as separator between the tags. The most common separator to use is the Tab separator, which is represented by Hex number 09.



The dialog box titled "Tag output size" contains two radio buttons: "Fixed" and "Variable". The "Variable" radio button is selected. To the right of the "Variable" radio button is a label "Sep" followed by a text input field containing "09" and a label "Hex".

Date and Time Format

This functionality makes it possible to change the date and time formats into a BCP compatible format on the output file.



The dialog box contains two text input fields: "Date format" with the value "YYYYMMDD" and "Time format" with the value "HHMMSS".

Duplicates

Switches sometimes deliver several records representing the same call, or the same part of a call. The purpose with the **Duplicates** functionality is to make sure that no duplicate records are read into

the system. To enable this, the fields that make each record unique have to be specified and stored in a file.

Five different fields can be used as key values that identify each call or part of a call. The key fields used for the duplicate check are:

- Call start date
- Call start time
- Call duration
- A-number
- A Misc field which is possible to use for an additional value if needed

Decode32 creates a folder structure with one folder for each day where the key values are stored.

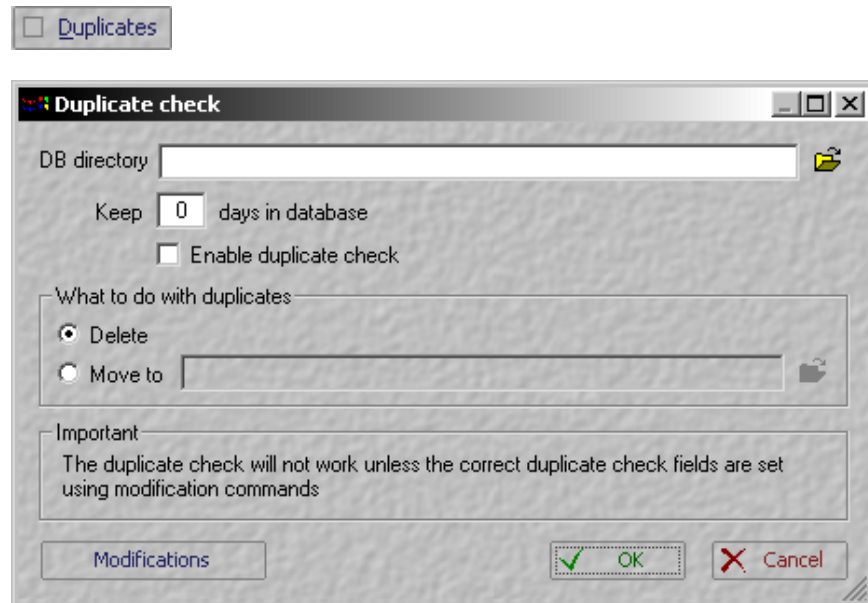
To activate the duplicate check, two different kinds of settings have to be made:

- The duplicate check settings
- Modifications settings

They are described in the following sections.

The duplicate check settings

Click **Duplicates** on the **Setup filter** window and the **Duplicate check** window appears.



The **Duplicate check** window contains the following information.

DB The path to the file where the duplicate check key

directory	values should be stored. Decode32 will match all CDRs to this file.
Keep days in database	Specify for how long the keys should be available for the duplicate check. Please have in mind that unnecessary storage of information will have effect on the performance of the system. Decode32 will automatically remove records after the specified number of days.
Enable duplicate check	Select this option to activate the duplicate check settings.
What to do with duplicates	This parameter specifies how encountered duplicate records should be handled.
Delete	Delete the record.
Move to	Move the record to the file that is specified here.

Modifications settings

The duplicate settings are not sufficient to enable a duplicate check. A modification item also has to be defined that sets the key values. Please refer to the **Modifications** section for further information about this.

Test run

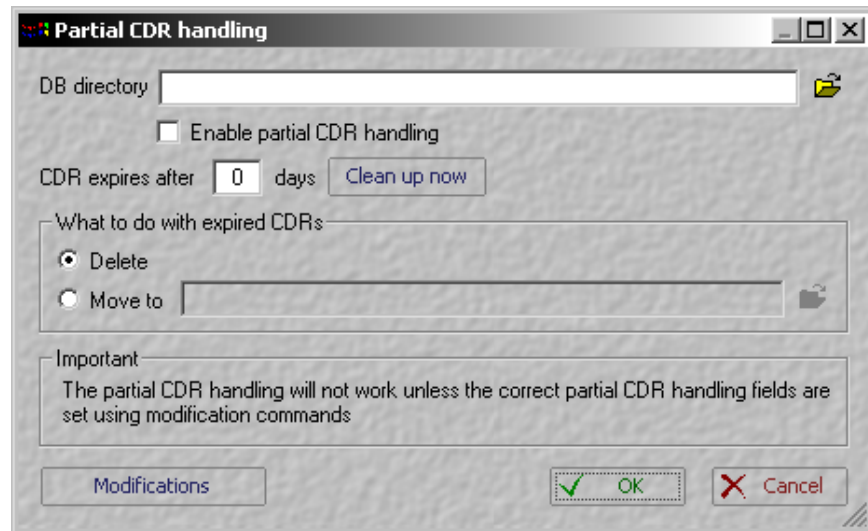
It is recommended to make a test run of a filter that contains a duplicate check. Incorrect settings of the key values may have severe effect on the system performance. An example is incorrect handling of originating and terminating calls, which may mean that a subscribers' telephone number has to be picked from different fields in the CDR when settings the key values. If this isn't done correctly, the key file can be filled with incorrect records.

If **Test run** is selected for a filter on the **Status** tab, Decode32 will display information about the duplicate check in the **Messages** area. The ten most common duplicate check key values will be displayed and their shares in the file that has been handled. If a key represents a large amount of the records in the file, this indicates that the settings are incorrect.

Partials

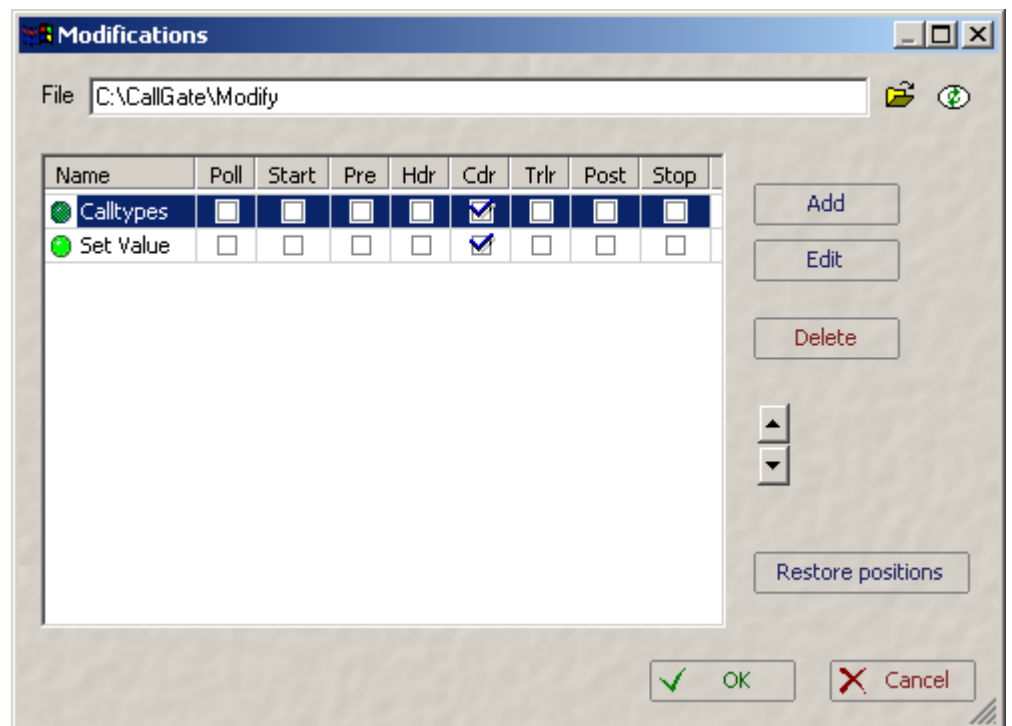
The **Partials** functionality is used to create one CDR from several intermediate/partial CDR's. This functionality is activated on the **Partial CDR handling** and **Modifications** windows.





Modifications

Modifications are used to modify CDR's. The modifier can modify existing data or create new data. Please, refer to Decode32 Modifications – User Manual for details.



CDR Report



A CDR report gives the user full control over what has happened with different CDRs. CDR reports settings and skip reasons are set by Basset according to customer's demands.

Different skip reasons

To minimize the amount of CDRs that are transferred into the next system, different skip reasons can be set, e.g. for different traffic cases or unwanted calls. Here is some examples of the features that are valuable in terms of configuration.

- CDR reports can be created for each filter that reads individual CDRs. It is possible to follow each filter and eventual loss due to defined reasons.
- CDR report also defines what has happened on each switch. The CDR Report is created per day, based on the CDR time.
- CDR report contains information about total number of CDRs, number of CDRs skipped due to defined reasons such as:

Zero duration

Unwanted Traffic cases

Unknown Traffic cases

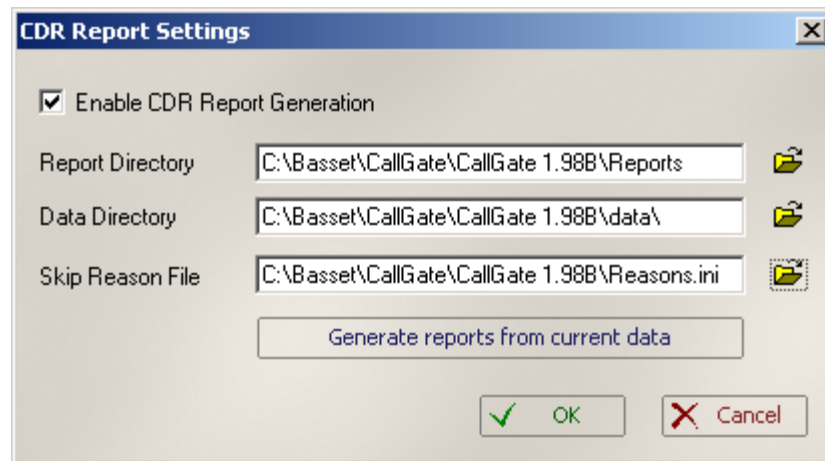
National Inter node transit call

International inter transit call

Broken CDR's, with missing mandatory information

Other defined not billable/wanted calls

Any other case that can be identified.



Report Directory

The **Report Directory** defines the path where the report files should be stored. Type the path in the text box or browse for the path by clicking the browse button to the right of the **Report Directory** text box.

Data Directory

The **Data Directory** defines the path where the data files should be stored. Type the path in the text box or browse for the path by clicking the browse button to the right of the **Data Directory** text box. Data files are internal files in CallGate that are necessary to create a CDR report.

Skip Reason File

The **Skip Reason File** defines the path where the file for different skip reasons is stored. Type the path in the text box or browse for the path by clicking the browse button to the right of the **Skip Reason File** text box. The skip reason file is set up by Basset. The number of skipped CDRs are specified per skip reason in the report.

Generate reports from current data



Generates reports from current data stored in the **Data Directory**.

An example of a CDR report

Report for date: 20040513, last updated: 2004-10-20 13:17:02

Total for day:

=====

Total number of CDRs:	13444
Total duration:	5807403
Total calculated duration:	5807403

Total accepted CDRs:	7884
Total accepted duration:	5148846
Total accepted calculated duration:	5148846

Total skipped CDRs:	5560
Total skipped duration:	658557
Total skipped calculated duration:	658557

Total number of active switches:	1
----------------------------------	---

*** CDRs skipped for reason: Zero duration ***
skipped CDRs: 3754

*** CDRs skipped for reason: Skip to keep normal calls ***
skipped CDRs: 1442
skipped duration: 658503
skipped calculated duration: 658503

*** CDRs skipped for reason: Outgoing route 0 skip ***
skipped CDRs: 364
skipped duration: 54
skipped calculated duration: 54

*Chapter***4**

The Service Tab**Overview****Introduction**

This chapter describes how to configure and install Decode32 as a service.

In this chapter

This chapter is organized as follows.

Topic

The Service Settings

Installation of service

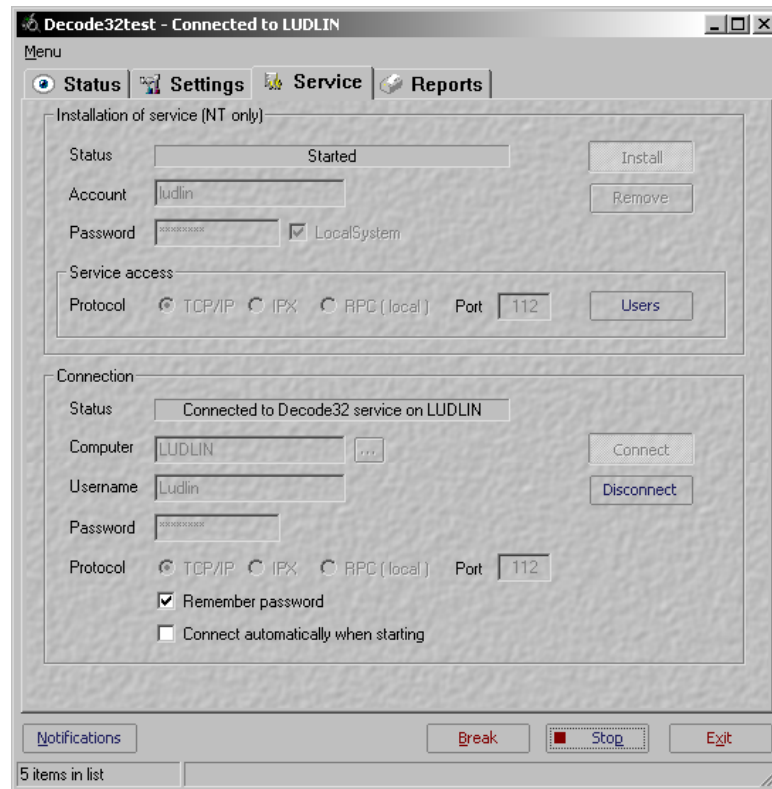
Service access

Users

Connection

The Service Settings

On the **Service** tab Decode32 can be installed as a service. The **Service** tab looks as follows.



Installation of Service

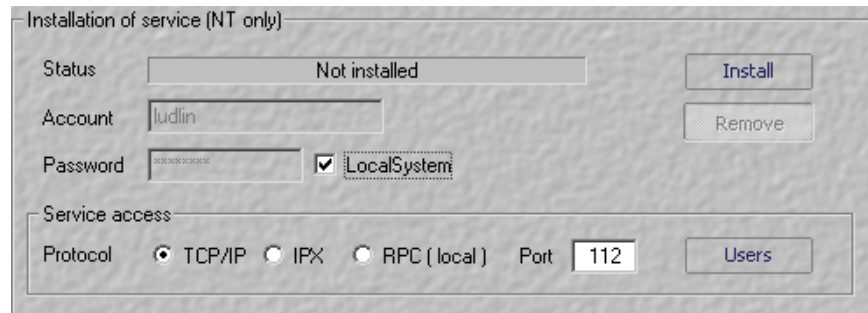
To install the Decode32 applications as a service the following information must be specified.

- Account
- Password

Or

- Local system

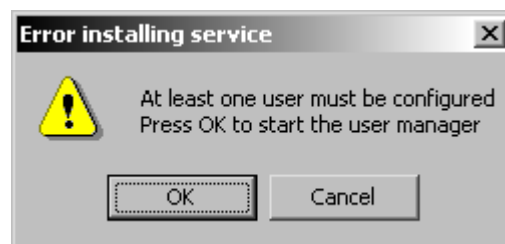
Note! Decode32 can be installed as a service only on a server running Windows NT4 Server or Windows 2000 Server.



To connect to a dedicated account, follow these steps.

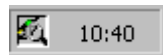
1. Enter the name of the account in the Account text box.
2. Enter the password in the **Password** text box.
3. If Decode32 should be installed with the LocalSystem account, click the **LocalSystem** check box.
4. Click **Install**.

If no user is configured, the following message appears when **Install** is clicked.

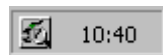


For user configuration, see the **Users** section below.

When Decode32 is installed as a service the icon on the Windows taskbar is not highlighted.



Decode32 installed as a service.

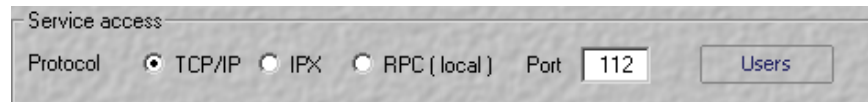


Decode32 not installed as a service.

Service Access

The **Service access** option controls which protocol that is used when connecting to the service. The following options are available.

- TCP/IP
- IPX
- RPC (Local)
- Port. Type the port to use

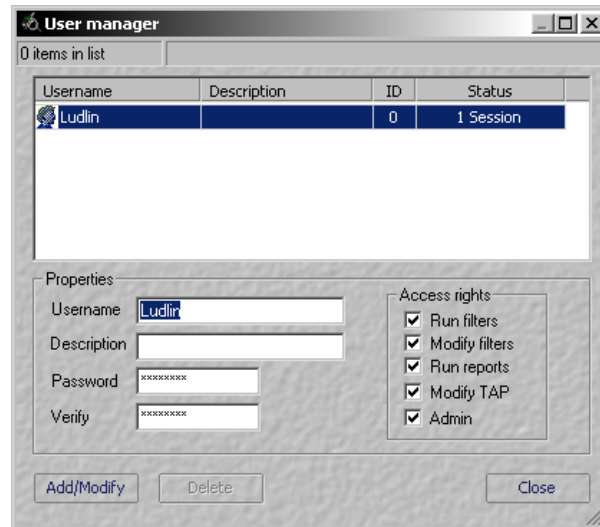


Service access

Protocol ☒ TCP/IP ☐ IPX ☐ RPC (local) Port Users

Users

To allow a user to connect to the service or the client, the following information must be specified. These settings also control what each user can do with the Decode32 application.



User manager

0 items in list

Username	Description	ID	Status
Ludlin		0	1 Session

Properties

Username

Description

Password

Verify

Access rights

- ☒ Run filters
- ☒ Modify filters
- ☒ Run reports
- ☒ Modify TAP
- ☒ Admin

Add/Modify
Delete
Close

The **User manager** window consists of a list of all users that has been defined and a parameter area.

To add a user, enter the appropriate information in the **Properties** area and click **Add/Modify**. To edit a user, select the user from the list, make the changes and click **Add/Modify**. To delete a user, select the user from the list and click **Delete**.

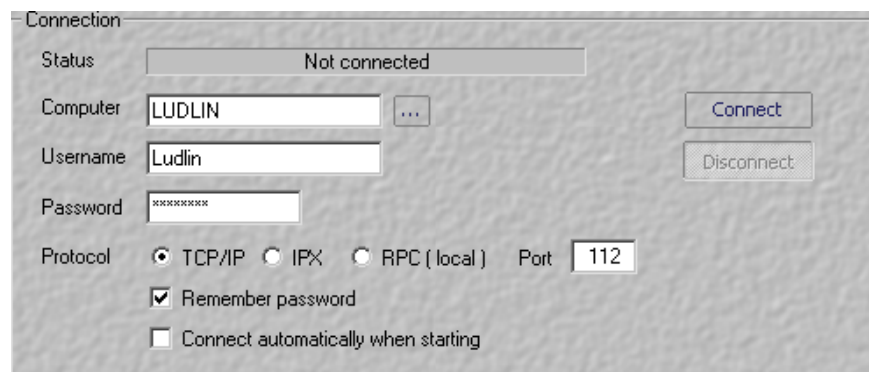
Below is a description of the parameters in the **Properties** area.

Username	The name of the user.
Description	An arbitrary description of the user.
Password	The user's Decode32 password.
Verify	Password verification.
Access rights	Here you specify which rights the user will have in the Decode32 system.
Run filters	The user can run filters from the GUI.
Modify filters	The user can modify filter settings from the GUI.
Run reports	The user can run reports from the GUI.

	the GUI.
Modify TAP	The user can modify the specific TAP settings from the GUI.
Admin	The user will have administrator rights.

Connection

The **Connection** settings control which account that should be used when connecting to the Decode32 service or when using the client GUI.



Below is a description of the **Connection** parameters.

Status	This field displays the status of the connection and can be either Connected or Not connected.
Computer	The name of the server to connect to. Type the name or click the browse button to browse for computers in the network.
Username	Enter the username to use when connecting to the service.
Password	Enter the password to use when connecting to the service.
Protocol	Select the appropriate protocol to use when connecting to the service.
Remember password	<p>If this option is selected the user do not have to enter the password when starting the server application or the client GUI.</p> <p>If not, the following screen will appear for user identification.</p>

**Connect automatically when starting**

If this option is selected Decode32 will automatically connect to the service when the application is started.

Connect

Click this button to connect to the service.

Disconnect

Click this button to disconnect from the service.

*Chapter**5*

The Reports Tab

Overview

Introduction

The Decode32 application contains functionality for creating reports containing information about the filter processing. There are a number of predefined reports. However, only a few of them are relevant to Decode32 and therefore only those reports will be described in detail in this document. All reports can be viewed on screen, printed on paper, and saved as files (Word, Excel, ASCII, etc.).

In this chapter

This chapter is organized as follows.

Topic

General

The Report Parameters

Type of Report

Period

Other Criteria

Generate Reports

Report Descriptions

General Report - Event Report

General Report - Process Report

General

The **Reports** tab looks as follows.

The screenshot shows the 'Reports' tab in the Decode32 application. The interface includes a menu bar with 'Status', 'Settings', 'Service', and 'Reports'. The 'Reports' tab is active, showing a 'Type of report' section with 'Format' set to 'Tap Out' and 'Report' set to 'Billing update'. Below this is a 'Period' section with 'From' and 'To' date and time pickers. The 'From' date is 1998-08-04 00:00 and the 'To' date is 2000-08-09 23:59. There are checkboxes for 'End of day', 'Z days ahead', and 'End of month'. Below the 'Period' section is an 'Other criteria' section with a table listing parameters: Operator, Filter, Cut off date, and Seq Nr. Each parameter has a checkbox and a criteria field. At the bottom of the 'Other criteria' section are buttons for 'Modify', 'Clear', and 'Clear all'. Below the 'Other criteria' section is a 'Delete report data older than' field set to 0 days, with a 'Generate' button. At the very bottom of the window are buttons for 'Notifications', 'Break', 'Start', and 'Exit'. The status bar at the bottom left shows '5 items in list'.

The **Reports** tab includes two parts. The first part defines the type of report to create and the second part defines the time period during which the report shall be created.

To create a report, follow these steps.

1. Select the appropriate format from the **Format** drop-down list.
2. Enter the time period that the report shall be based on in the **Period** area.
3. Click **Generate** to generate the report.

In the following sections, the settings will be described in detail.

The Report Parameters

Type of Report

When Decode32 creates a report it has to know the format of the source data. The report format can be selected from the **Format** list box. The following formats are available.

- General
- Tap IN (not applicable for Decode32)
- Tap OUT (not applicable for Decode32)

The screenshot shows a dialog box titled "Type of report". It contains two dropdown menus. The first, labeled "Format", has "General" selected. The second, labeled "Report", has a list box open showing "Event Report" and "Process Report". To the right of these dropdowns are three buttons: "Modify", "Add", and "Delete".

When the General format is selected, the following reports are available.

- Event report
- Process report

Each type is described later in this chapter.

Period

The period parameters are used as selection criteria for the reports.

The screenshot shows a dialog box titled "Period". It has two main sections: "From" and "To". Each section contains a "Date" field with year, month, and day spinners, and a "Time" field with hour and minute spinners. Next to each time field is a "Today" button. To the right of the "To" section are three checkboxes: "End of day", "Z days ahead", and "End of month".

The parameters are described below.

From

The date interval restricts the reports to contain events only having occurred within the specified time interval.

Click **Today** to insert today's date in the **From date** and **From time** text boxes.

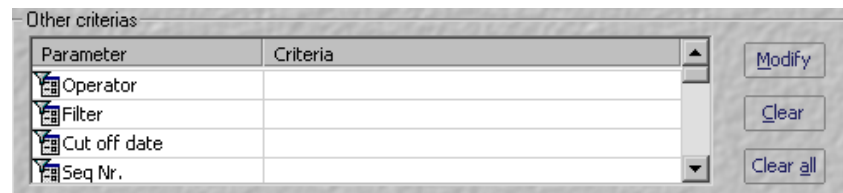
To

Click **Today** to insert today's date in the **To date** and **To time** text boxes.

End of day	If this option is selected the time is set to 23:59 for the current day.
7 days ahead	If this option is selected the date is set seven days ahead of the From date .
End of the month	If this option is selected the date is set to the last day of the current month specified in the From date text box.

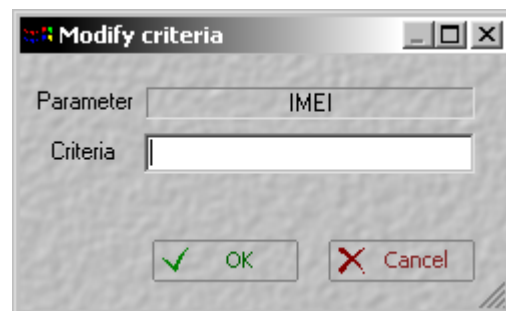
Other Criteria

It is possible to filter the reports by setting field criteria.



The fields available for setting criteria vary depending on the report type.

To set a criterion, click **Modify** or double-click a parameter in the **Parameter** list box and the **Modify criteria** screen is displayed.



Enter the criteria and click **OK** to save the criteria.

The syntax for entering criteria is described below.

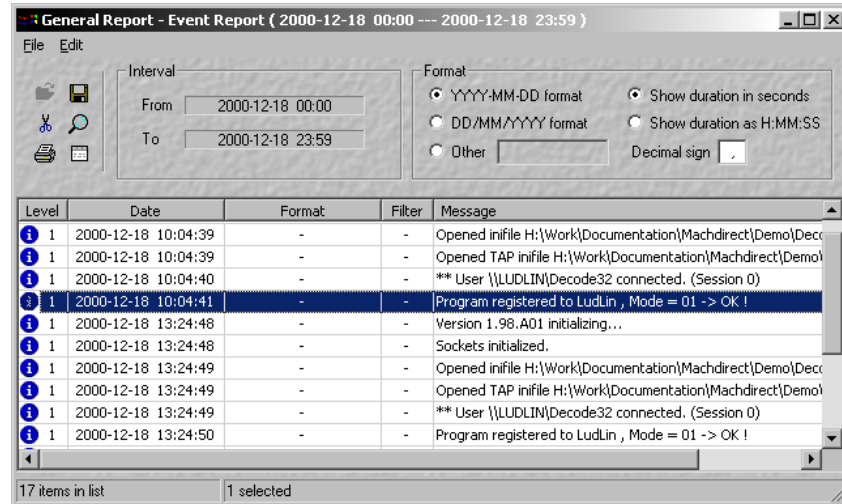
Operator	Description
=	Equal
<>	Not equal
!	Not equal
?	Single unknown character
*	Wildcard - several unknown characters

Use a comma to specify several criteria with an OR relationship.

To delete a criterion, select it and click **Clear**. To delete all criteria, click **Clear All**.

Generate Reports

To create a report, click **Generate** on the bottom of the **Reports** tab.
When the report is generated the **Report** window is displayed.



The **Report** window includes two menus.

- File
- Edit

These menus are described below.

The File menu

The file menu includes the following commands.

- Open** Open an existing report.
- Save** Save the current report to a file.
- Print** Print the current report.
- Exit** Close the report screen and return to Decode32.

The Edit menu

The edit menu includes the following commands.

- Delete** Delete the selected row or rows from the report. Select the rows by clicking, using CTRL or SHIFT.
- Columns** Select which columns to view and in which order.

After a report has been generated, it is possible to modify the appearance in several ways.

Sorting on any column

To sort the contents of a report, click a report column header in the **Report** window.

Partially select fields

It is possible to mark one or several rows in a report. After selecting the rows it is possible to print, cut, check details or save the selected rows as described below.

Open a report file

To open an old report, click the open file symbol or select **Open** on the **File** menu.

Save current report

To save a report, click the Save current report symbol or select **Save file** on the **File** menu.

Delete selected items

To delete one or several rows, select the rows and click the Delete selected items symbol or select **Delete** on the **Edit** menu.

Details

The **Details** function shows details for the selected rows. Select a row, click the Details symbol, and a new window is displayed. In this window all CDR's for the current file is shown with its corresponding details. The availability for this function is depending on the number of days the CDR's are saved in the system.

Print current report

It is possible to print selected rows or the entire report. To print selected rows, select the **Print/Save selected items only** option. Print the report by clicking the print symbol, or by selecting **Print** from the **File** menu.

Select Fields To Show

The **Select fields to show** functionality makes it possible to select certain fields to a report. Click the Select fields to show symbol, and the **Select fields to show** window is displayed.



By default all fields are included in the reports, hence all fields are listed in the **Show these fields in this order** area the first time this window is opened for a report. The available fields, not used, are then listed in the **Available fields** area. To move a field, double-click it or select it by clicking it and use the arrows.

Report Toolbar

The **Report Toolbar** consists of six tools.

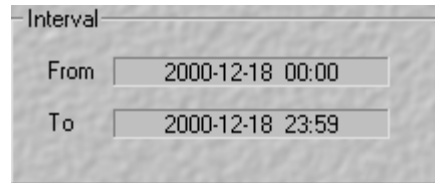


The tools are described below.

Open	Open an existing report.
Save	Save the current report.
Delete	Delete the selected row or rows from the list.
View	See details of a selected row.
Print	Print the current report.
Columns	Select the columns to view and set the order.

Interval

The **Interval** fields show the from and to date, as set on the **Reports** tab. This information is also presented on the printed report.

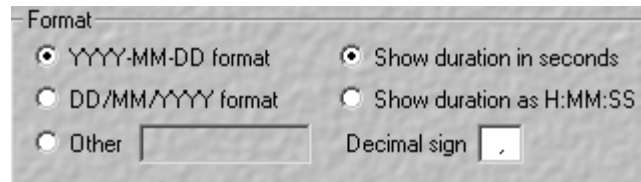


Interval

From 2000-12-18 00:00

To 2000-12-18 23:59

Format



Format

☒ YYYY-MM-DD format ☒ Show duration in seconds

☐ DD/MM/YYYY format ☐ Show duration as H:MM:SS

☐ Other Decimal sign

The **Format** options make it possible to define how date and duration should be presented on the reports.

The date format has two predefined date formats: **YYYY-MM-DD format** and **DD/MM/YYYY format**. It is also possible to define your own format in the **Other** text box using the following syntax.

YYYY Year (4 digits)

YY Year (2 digits)

MM Month

DD Day

The **Show duration** fields apply only to TAP files.

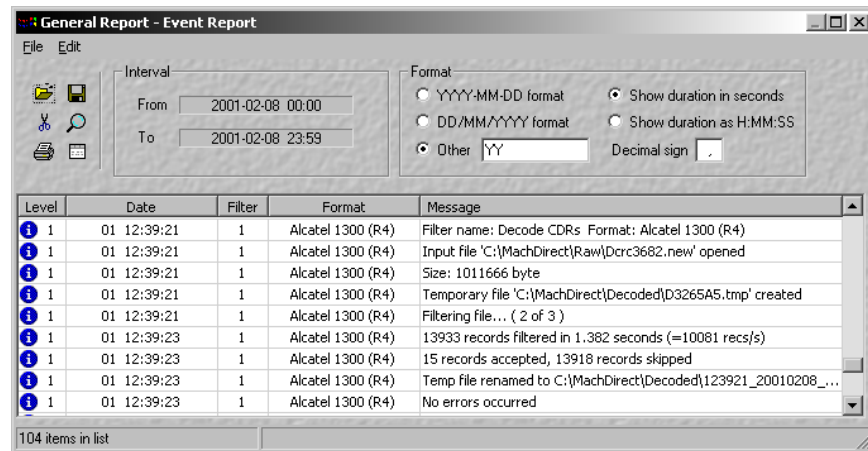
Report Descriptions

General Report - Event Report

Description

The **Event Report** presents information about the different events in Decode32, the same type of information that is shown in the **Messages** area on the **Status** tab.

The event report can include system information, events that Mach Direct has generated, warnings, errors etc.



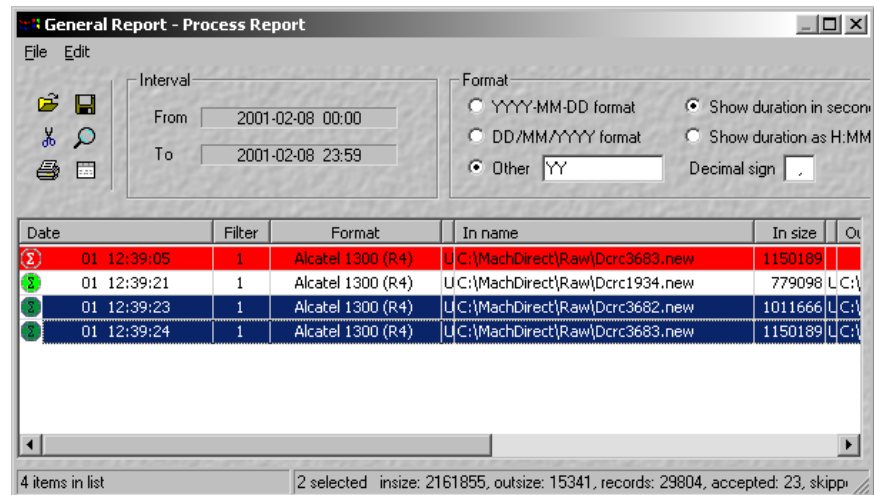
The event report includes the following fields.

- Level** Level shows the severity level of an event. The following alternatives can occur, each represented by a symbol and a number:
1. Information
 2. Warning
 3. Error
- Date** The date the event was created.
- Filter** An index number indicating which filter that generated the event.
- Format** Shows which filter format that was used when the event occurred.
- Message** The message that has been generated for the event.

General Report - Process Report

Description

The **Process Report** presents information about the processed files. This information includes size, accepted and skipped records, warnings, errors etc.



The report includes the following fields.

Date	The date the file was processed.
Filter	An index number indicating which filter that has processed the file.
Format	The format the filter has used to process the file.
In host	The type of protocol used when collecting the file. Possible values: FTP, FTAM and UNC.
In name	The name of the file when it was collected.
In size	The size of the file when it was collected.
Out host	The type of protocol used when sending the file to the output destination. Possible values: FTP, FTAM and UNC.
Out name	The name and path of the input file after it was processed.
Out size	The size of the input file after it was processed.
Records	The number of records in the input file.
Accepted	The number of records that have been accepted.
Merged	The number of records that have been merged.
Skipped	The number of records that have been skipped.

Duplicates	The number of duplicate records.
Warnings	The number of records having caused warnings.
Errors	The number of records having caused errors.

Appendix – Support fax

Decode32

The File Handling Platform

To: Basset Telecom Solutions
Fax no: +46 8 28 62 31

Customer information:

Customer:
Country:
Contact Person:
Opened date:
Problem description:
.....
.....
.....
.....
.....

Severity level:

Customer: ① ② ③
SC: ① ② ③
CCB: ① ② ③

Basset information:

PR #:
Assigned to:
Action decided:
Related PRs:
Linked to CR:
Initiated date:
Tested date:
Release date:
Closed date: