

EDUKtiV User manual

Acronyms, Terms and Definitions

EDUKtiV standard data validation utility	-	Education and Training data exchange
EDUKtiV standard	-	Education and Training data exchange standard that conforms to the PTVETMIS Load Specification
ETQE	-	Education and Training Quality Entity
TVETMIS Training Management Information System	-	Technical and Vocational Education and Training Management Information System
PTVETMIS	-	Public Technical and Vocational Education and Training Management Information System
NLRD	-	National Learner's Records Database
DHET	-	Department of Higher Education and Training
TVET Training Colleges	-	Technical and Vocational Education and Training Colleges
UNC	-	Universal naming convention
[Windows Drive]	-	The Drive on which the Operating system of the computer was installed in. This is usually the C drive

1. Introduction

The EDUktiV data validation utility is a custom designed application, which ensures that data transmitted within the Education and Training sector of South Africa conforms to the education and training data exchange (EDUktiV standard) standard.

The Technical and Vocational Education and Training Management Information System (TVETMIS) is a unit record based information system that stores and maintains unit records of Technical and Vocational Education and Training College (TVET) data related to colleges and their campuses, programmes, subjects, staff, and students. The data content of TVETMIS is primarily maintained and supplied by TVET Colleges. The TVET Colleges create electronic data submission files in standard formats and transmit them to the Department of Higher Education and Training (DHET) to be loaded into TVETMIS.

The purpose of this application is to validate data provided by TVET Colleges against the standard layout, content and business rules for the submission of data to TVETMIS.

All data submissions must be validated using the data validation utility that is distributed to all TVET Colleges by the Department of Higher Education and Training (DHET). The DHET data validation utility will prepare the data submission in a predetermined format as required for loading into the TVETMIS system if the data submission conforms to the minimum data requirements as defined in this document. Thereafter the data validation utility will allow the user to submit the data submission to the TVETMIS.

The DHET will not accept any TVETMIS data submission that have not been validated and transmitted to TVETMIS using the DHET data validation utility.

2. Starting EDUktiV

The EDUktiV data validation utility can be started from the Windows desktop icon or from the EDUktiV Data Validation installation folder.

2.1. Starting EDUktiV from the Windows desktop

After successfully installing EDUktiV, a shortcut is created on the desktop (Figure 2-1). To start EDUktiV from the desktop, double-click on the icon and this will launch the application.

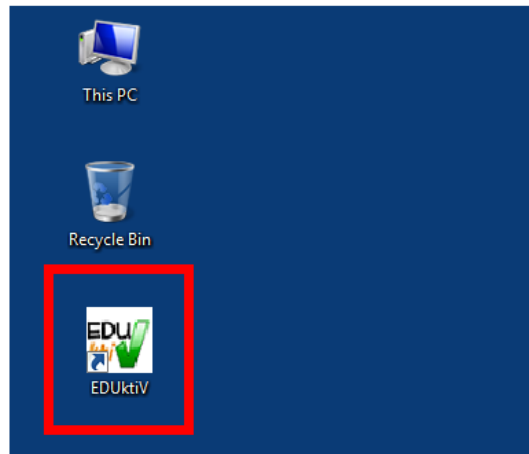


Figure 2-1 EDUktiV shortcut icon

2.2. Starting EDUktiV from the installation folder

By default, EDUktiV would install on [Windows Drive]\EDUktiV. If the default installation folder was changed during installation, browse to the appropriate install folder using the file explorer. Once located, you should see a file structure similar to this what is displayed on Figure 2-2.

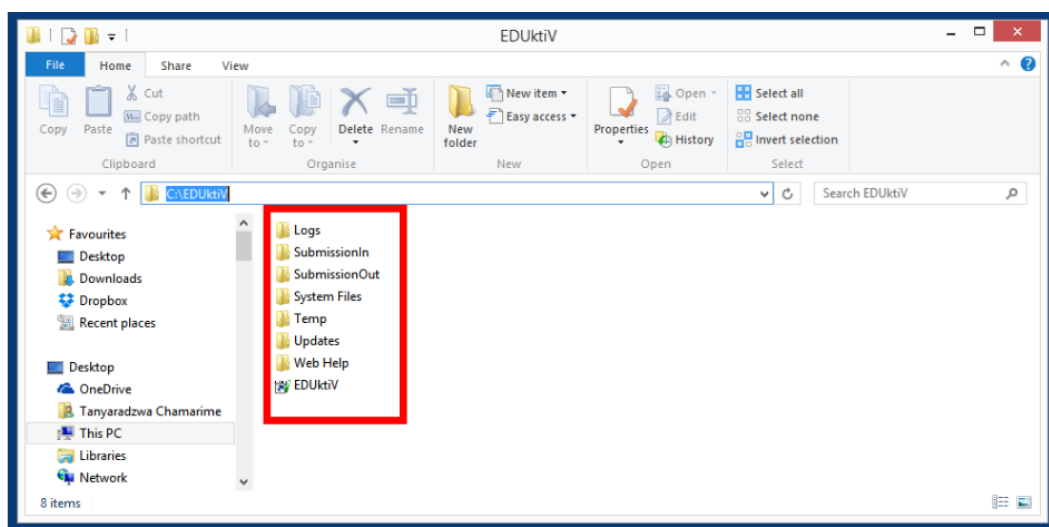


Figure 2-2 File Structure in EDUktiV install directory

In here, double-click the EDUktiV icon (Figure 2-3) to start the application.

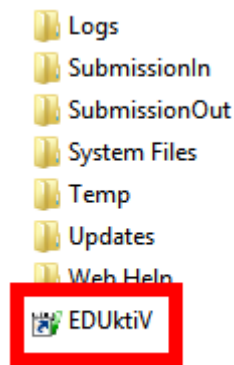


Figure 2-3 EDUktiV icon

3. The EDUktiV login

With the login windows, you should be able to login to EDUktiV

3.1. Database Setup

On starting the EDUktiV for the first time, the application will prompt you for database connection settings (Figure 3-3-1). If you are not sure of the details consult with your database administrator for this information.

Figure 3-3-1 Database connection settings

3.1.1 Authentication

EDUktiV supports 2 types of authentication on the SQL Database server. The application allows connections to the database using either Windows authentication

or SQL Server authentication. Either of these can be selected from the dropdown next to “Authentication” (see Figure 3-2).

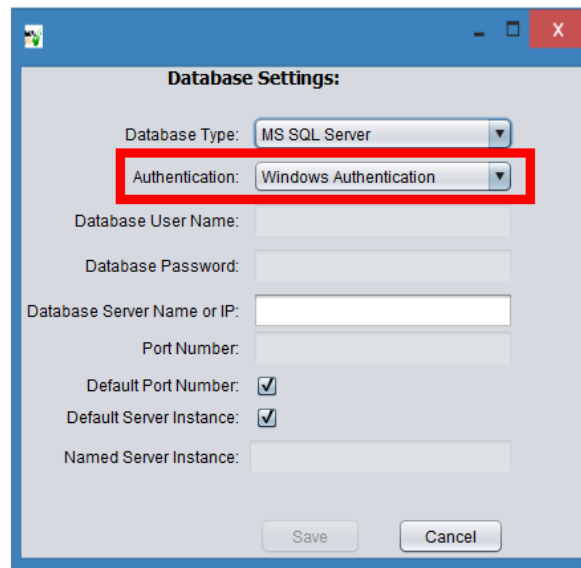


Figure 3-2 EDUktiV database authentication types

The authentication type to be used is based on the authentication type the server was configured to allow during its installation¹.

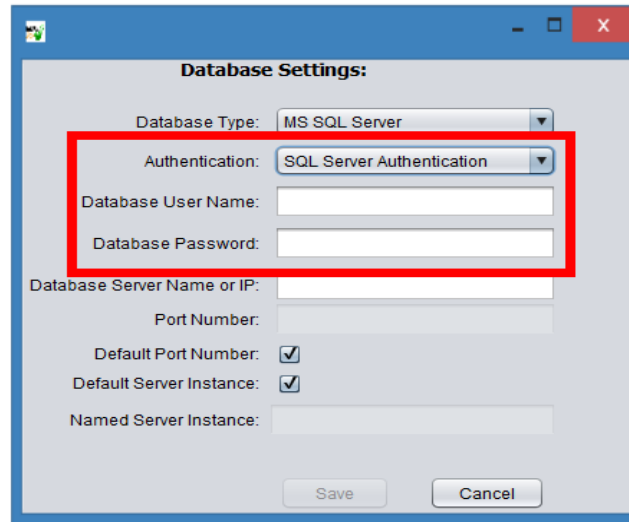
3.1.1.1 Windows Authentication

For windows authentication, the application will use the Logged in Windows user’s information (username and password) to try to connect to the database. With this authentication type, “Database User Name” and “Database Password” fields will appear greyed out as can be seen on Figure 3-2.

3.1.1.2 SQL Server Authentication

For SQL Server authentication, the “Database User Name” and “Database Password” fields will appear active as can be seen on Figure 3-3. You are then required to enter a username and password.

¹ Visit for more info <https://docs.microsoft.com/en-us/sql/relational-databases/security/choose-an-authentication-mode>



The screenshot shows a 'Database Settings' dialog box with the following fields and options:

- Database Type: MS SQL Server (dropdown menu)
- Authentication: SQL Server Authentication (dropdown menu, highlighted with a red box)
- Database User Name: (text input field)
- Database Password: (text input field)
- Database Server Name or IP: (text input field)
- Port Number: (text input field)
- Default Port Number:
- Default Server Instance:
- Named Server Instance: (text input field)
- Buttons: Save, Cancel

Figure 3-3 Database configuration screen for SQL Server authentication

3.1.2 Database Server Name or IP

In this field, you are required to enter the name of the database server to which you are trying to connect to.

For a networked server, enter the name of the host computer/server that is hosting the SQL server you are trying to connect to. Consult your database administrator for this information if you are not sure of this.

If you choose to connect to a database that is installed on the same computer as that which has the EDUktiV application, the server name in this case is the computer name. For computer that registered on a domain, use the "Computer name" as the server name and not "Full computer name".

3.1.3 Port Number and Default Port Number

For EDUktiV to successfully establish a connection with the database, it needs to be configured to connect with a port number similar to what SQL Server was configured to use for the TCP/IP protocols (see section 11.2.1).

The default port number SQL Server uses for TCP/IP connections is 1433. If this is the case for with server you are trying to establish a connection with, leave the "Default Port Number" checkbox checked (see Figure 3-4).

The screenshot shows the 'Database Settings' dialog box. The 'Database Type' is set to 'MS SQL Server' and 'Authentication' is 'SQL Server Authentication'. The 'Default Port Number' checkbox is checked and highlighted with a red box. Other fields like 'Database User Name', 'Database Password', 'Database Server Name or IP', and 'Port Number' are present but empty. The 'Default Server Instance' checkbox is also checked.

Figure 3-4 Using default port number

If you have a port number other than the 1433, uncheck the “Default Port Number” checkbox. Once this is done, the “Port Number” text box will become active (see Figure 3-5). Enter the SQL server TCP/IP port number in the text box.

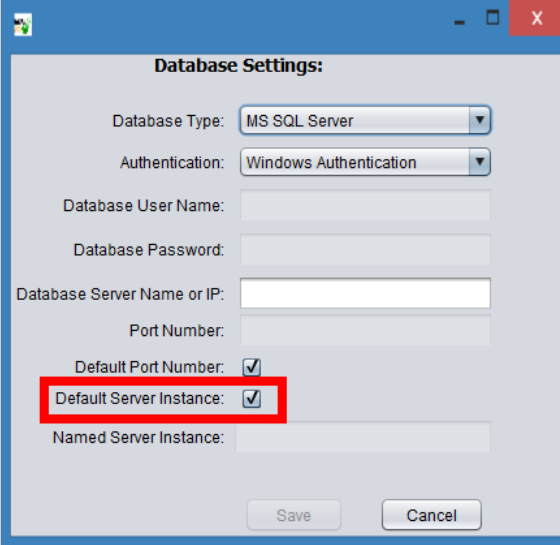
The screenshot shows the 'Database Settings' dialog box. The 'Default Port Number' checkbox is unchecked and highlighted with a red box. The 'Port Number' text box is also highlighted with a red box and is now active. The 'Default Server Instance' checkbox remains checked.

Figure 3-5 Using a custom port number

3.1.4 Default Server Instance and Named Server Instance

One of the required fields for the database setup is the connection instance. Depending on the SQL server configuration, the database could be running either on a default instance or on a named instance. For more information regarding the instance, read section 11.1.1 and section 11.2.2.

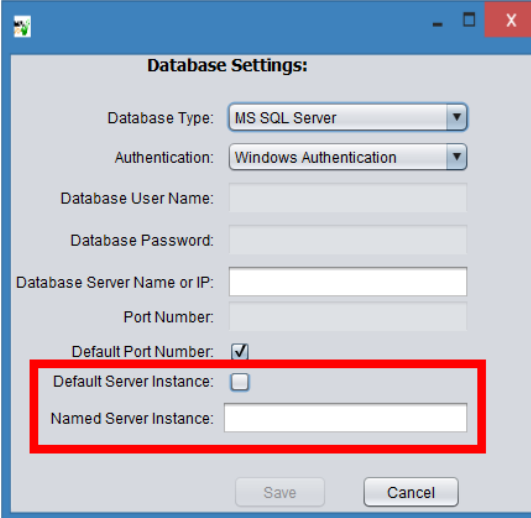
After determining the instance, if you are trying to connect to a default instance (MSSQLSERVER), leave the “Default Server Instance” checkbox checked as highlighted on Figure 3-6.



The screenshot shows a dialog box titled "Database Settings:". The "Database Type" is set to "MS SQL Server" and "Authentication" is set to "Windows Authentication". The "Default Server Instance" checkbox is checked and highlighted with a red box. The "Named Server Instance" text box is disabled. The "Save" and "Cancel" buttons are at the bottom.

Figure 3-6 Settings for the default instance

If you are trying to connect to a named instance, uncheck the "Default Server Instance" checkbox. Once this is done, the "Named Server Instance" text box will become active. Type in the name of the instance you are trying to connect to in the text box as shown on Figure 3-7.



The screenshot shows the same "Database Settings:" dialog box. The "Default Server Instance" checkbox is now unchecked and highlighted with a red box. The "Named Server Instance" text box is now active and contains a text input field. The "Save" and "Cancel" buttons are at the bottom.

Figure 3-7 Settings for a names instance

Conclusion

Once the setup parameters have been entered on the database setup screen (Figure 3-3-1), the "Save" button will become active. Once the "Save" button is clicked, EDUktiV will use the entered parameters to try and establish a connection with the desired server.

If EDUktiV is unable to establish a connection with the given parameters, the windows shown on Figure 3-8 will be displayed to the user.

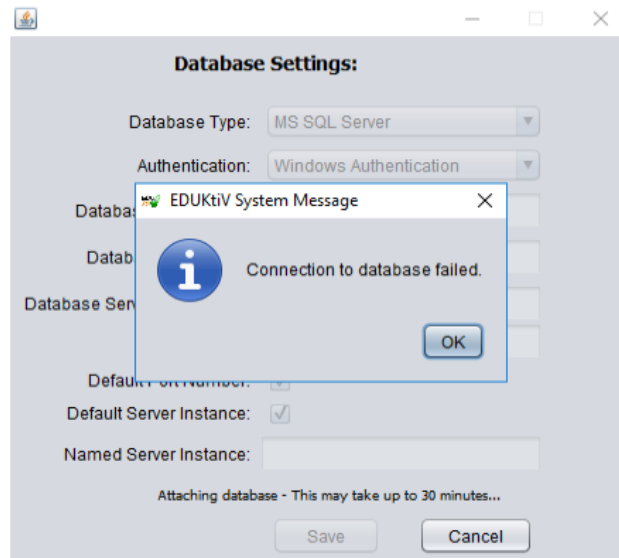


Figure 3-8 Failure notification

If EDUktiV is able to establish a connection, the EDUktiV database setup process is initiated on the target server. On completion, the login screen (Figure 3-9) will be shown to the user.

3.2 Login Screen

After starting the EDUktiV application, you must login (Figure 3-9). This process authenticates you as a user of the system, after which the full functionality of the EDUktiV application is made available to you.

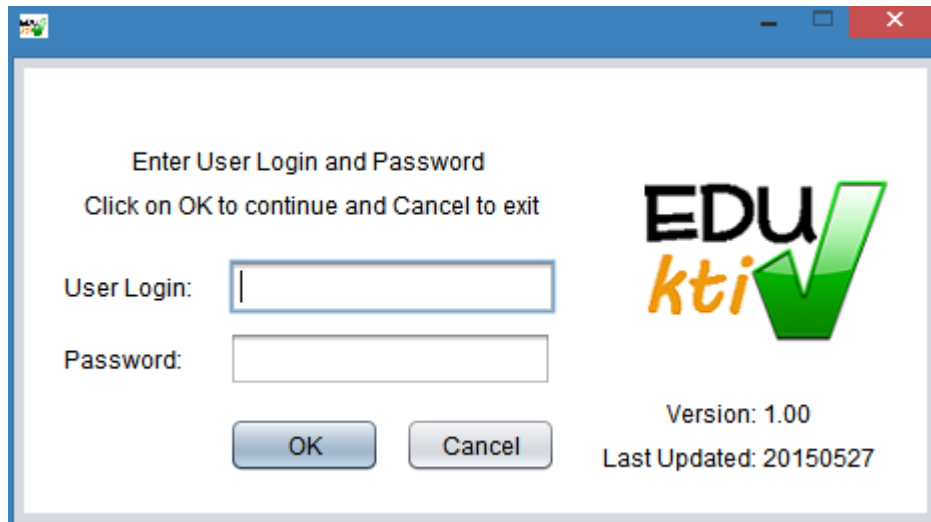


Figure 3-9 Login screen

1. Enter your User Login details (the initial login details will have been supplied to you with the installation set of EDUktiV).
2. Enter your Password and click on OK to proceed.
3. Click on Cancel if you want to close the application.

4 The EDUktiV main menu

After you have successfully logged into the EDUktiV application, the main menu screen will be displayed (Figure 4-1). This screen presents the main menu items.

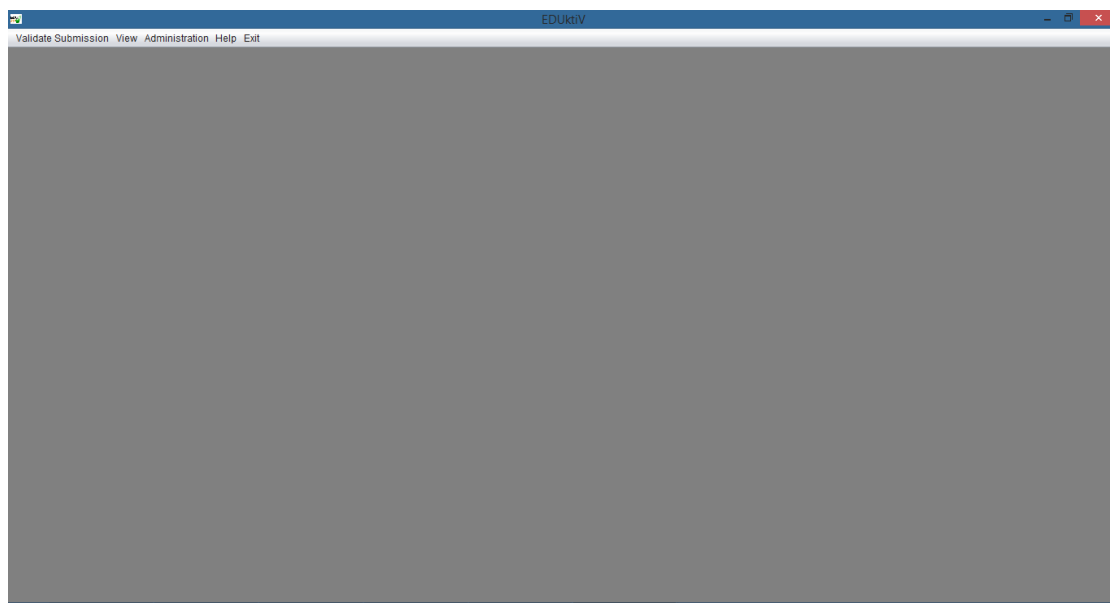


Figure 4-1 Main screen

4.1 Main menu overview

Validate Submission

This menu item contains options that allow you to validate incoming (data has been supplied to you) or outgoing (data that you are supplying to another education and training stakeholder) data submissions. The menu items available in this main menu item are:

Submit

Receive

The sub-menu items available in each of the above-mentioned menu items are activated in accordance with your organization's specific needs.

View

This menu item contains options that allow you to view the results of the most recently completed data validation. The menu items available in this main menu are:

Reports

This option presents you with the following types of reports relating to the last data validation that has been completed:

Files

This menu option presents you with a view of the last data files that have been submitted for validation. The individual sub-menus available for this menu item are dependent on the data files that you submitted for validation.

Administration

This menu item contains options that allow you to administer the EDUktiV application. The individual sub-menus available for this menu item are dependent on the configuration of the EDUktiV application.

Help

This menu item contains options that allow you to access help files in regard the utilization of the EDUktiV application and EDUktiV standard.

Exit

This menu item allows you to exit the EDUktiV application.

Detailed descriptions of each of the main menu items are provided in this user manual.

5 Validate submission menu

This menu item contains options that allow you to receive (data has been supplied to you) or submit (data that you are supplying to another education and training stakeholder) data submissions. The menu items that are available to you from this menu are customized in accordance with your type of organization.

5.1 Submit menu

The Submit menu options (Figure 5-1) that are available in this version of EDUktiV are described below.

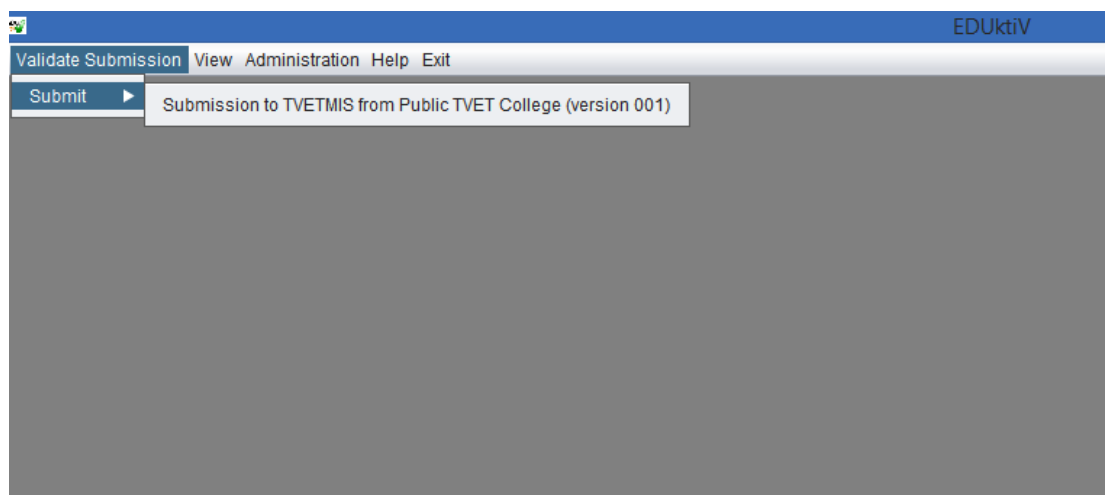


Figure 5-1 Submit menu option

5.1.1 Submission to TVETMIS from Public TVET College (version 001)

This menu item allows you to validate data submissions that your organization would like to submit to TVETMIS.

5.1.1.1 Contact details

The contact detail screen will be displayed on selection of this menu item (Figure 5-2).

A dialog box titled 'Data submission - Contact details' with a close button (X) in the top right corner. The dialog contains the following text: 'This type of submission requires the following details so that the data recipient may contact you in order to provide you with feedback in regard to your submission. Please enter the name and e-mail address of the person that should receive feedback in regard to this submission.' Below this text are two input fields. The first is labeled 'Contact name:' and contains the text 'John Doe'. The second is labeled 'Contact e-mail address:' and contains the text 'johnDoe@test.co.za'. At the bottom of the dialog are two buttons: 'Next' and 'Close'.

Figure 5-2 Contact details

Enter a contact name and email address for an individual in your organization that must receive any feedback in regard to the data submission and click on Next to continue (see Section 7.1) on how to change the default contact name and email values). Click the Close button to cancel the process and return to the main menu.

5.1.1.2 Date selection

The date selection screen will be displayed (Figure 5-3). Click on the calendar button to activate the calendar (Figure 5-4).

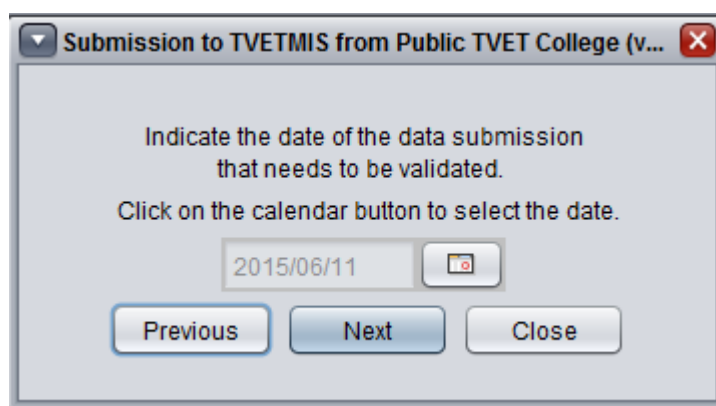


Figure 5-3 Date selection

Select the data submission date on the calendar screen by indicating the data submissions year, month and day. The application will return to the date selection screen once a valid date has been entered. Click on the Next button to continue, click on Close to return to the main menu or click on Previous to return to the previous screen.

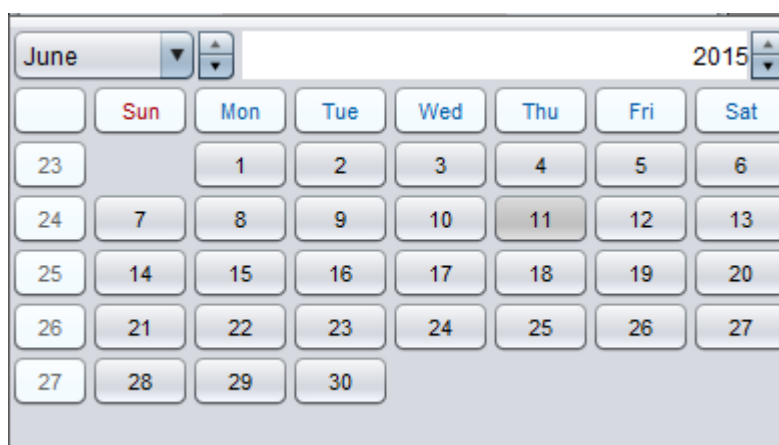


Figure 5-4 Calendar

Note that the EDUktiV application uses this information, in combination with your identifier to identify your data submission file/s.

Ensure that the data submission file names is in the following format:
 [Source]_[Recipient]_[File]_[Version]_[SubmissionDate].dat
 e.g. **804_UMAL_0004_100_v001_20150611.dat**

Source:	Data supplier identifier
Recipient:	Data recipient identifier
File:	The specified file code for the submission file.
Version:	The file version of the submission file
Submission Date:	The submission date of the files

Ensure that the last eight characters of the data submission file names represent the date of submission in the following manner:

File name part:	[SubmissionDate]
Where yyyy	represents the year of the submission (2015).
Where mm	represents the month of the submission (06).
Where dd	indicates the day of the submission (11).

5.1.1.3 Data submission folder selection

The EDUktiV application will display the data submission location screen (Figure 5-5). The screen will have the default import submission folder path loaded (see Section 7.2 on how to change the default import submission folder path). If the data submission is not found in the default import submission folder path then click on the “Search” button and browse to the correct location. Click on the “Next” button to continue, click on the “Previous” button to return to the previous screen or click on the “Close” button to return to the main menu.

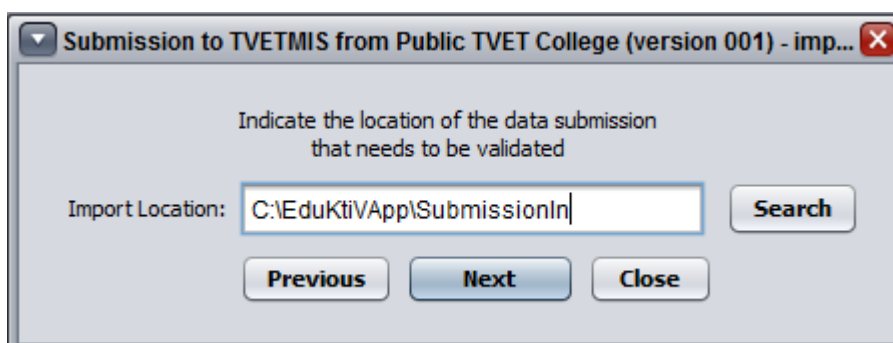


Figure 5-5 Import folder selection

5.1.1.4 File export location

The EDUktiV application will display the export location screen (Figure 5-6). The screen will have the default export submission folder path loaded (see Section 7.3 on how to change the default export submission folder path). If you would like the EDUktiV application to save the validated data submission to a location other than the default export location shown then click on the “Search” button and browse to the correct location. Click on the “Next” button to continue, click on the “Previous” button to return to the previous screen or click on the “Close” button to return to the main menu.

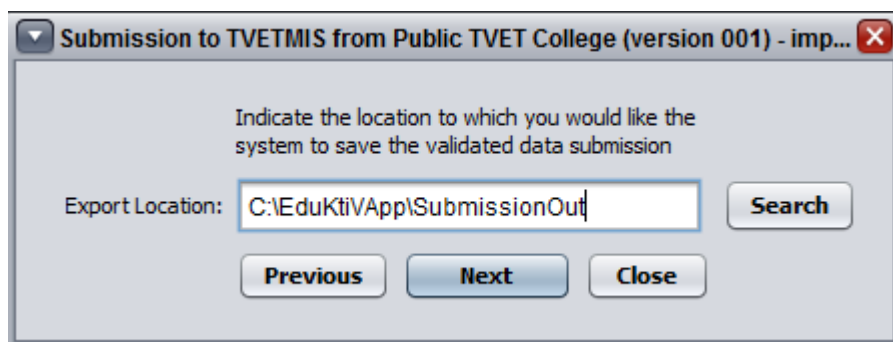


Figure 5-6 Export folder selection

Note that the EDUktiV application expects to find your data submission files with the naming convention specified in the last paragraph of 5.1.1.2 at the location specified in 5.1.1.3. The system will return an error if any of these details or if the remainder of the file name/s is/are incorrect. If the data submission has the correct naming convention and is found in the path indicated then the validate submission screen will be displayed (Figure 5-7).

5.1.1.5 Validation submission screen

The validate submission screen (Figure 5-7) presents a number of information fields to enable you to ensure that the correct data submission will be validated by the system.

The **Data supplier** field displays your identifier

The **Submission date** field indicates the date of your data submission.

The **Data submission** files area indicates which data files have been located by the EDUktiV application. Each data file that is located has a check mark in the data file's respective check box.

The screen provides a customisable processing option:

- **Pilot test (1000 records without relational rules)** performs a pilot test of the data submission limited to 1000 records or less per file. This processing option has been included to allow pre-testing of large data submissions prior to validation of the full submission.
- **Phased validation** performs a step by step validation of a data submission which stops at the end of each type of validation (Load data, File layout validation, Content validation and Business rule validation) if any errors found in the submission.

If neither of these options are selected then the EDUktiV application will validate all aspects of the full submission.

Ensure that the information that this screen is displaying is correct. Click on the "Next" button to start the data validation. Click on the "Previous" button to return to the previous screen or click on the "Close" button to return to the main menu.

Figure 5-7 Validation submission screen

5.1.1.6 Validation completion

The EDUktiV application will complete the required data validation on the data submission. The five progress indicators (Load data, File layout validation, Content validation, Business rule validation and Create submission) will provide you with an indication of the progress.

Validation completion without errors

The system will display the following type of message if the data validation process has been completed successfully (Figure 5-8).

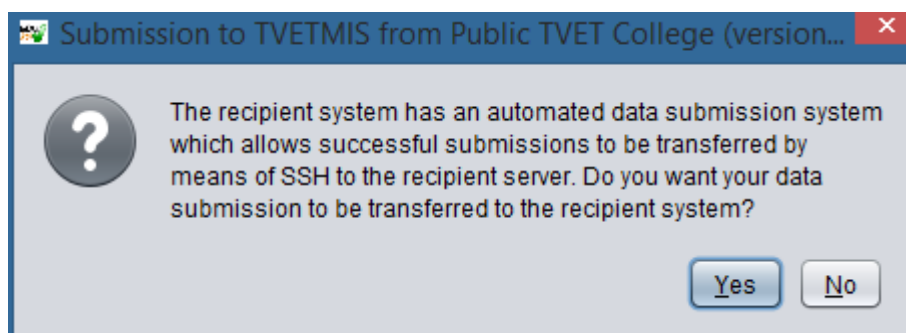


Figure 5-8 Validation completion screen with no errors found

The data submission that you must submit to the Recipient system can be found at the export location that you indicated in section 5.1.1.3. Please note that the data submission found in this location has been prepared in a particular format for the recipient system

- a. The data submission has been compressed for ease of transmission.
- b. The compressed file contains the standard EDUktiV reports that are automatically generated during the data validation process. These reports have been included for Recipient systems proof of the quality of your data submission.
- c. The compressed submission has been encrypted to prevent anyone from tampering with your data submission.
- d. The compressed submission naming convention is:
 Filename: [Source]_[Recipient]_[Version]_[SubmissionDate].zip where

Source:	Data supplier identifier
Recipient:	Data recipient identifier
File:	The specified file code for the submission file.
Version:	The file version of the submission file
Submission Date:	The submission date of the files

Please note that the specially prepared compressed and encrypted submission file must be submitted to the recipient system and **NOT** your original data submission.

Validation completion with errors

The system will display the following message if the data validation process could not be completed successfully (Figure 5-9).

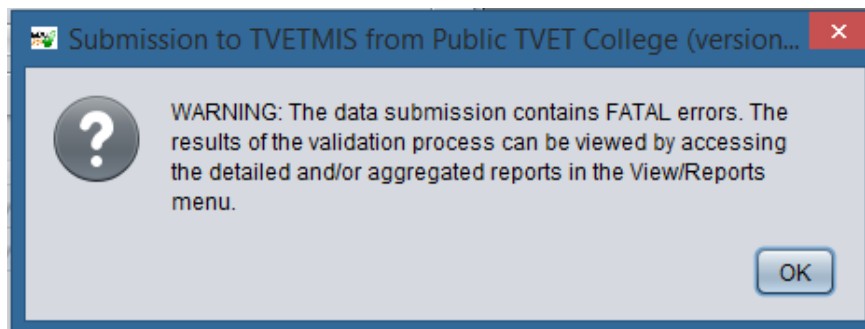


Figure 5-9 Validation completion screen with validation errors

Click on "OK" to return to the data validation screen. The View log button will become active if any of the data fields or records in the data submission generated a warning message (Figure 5-10). The results presented in this report are also available from the View menu (see 6.1).

Click on the View log button to access the validation log. Click on the Close button to return to the main menu.

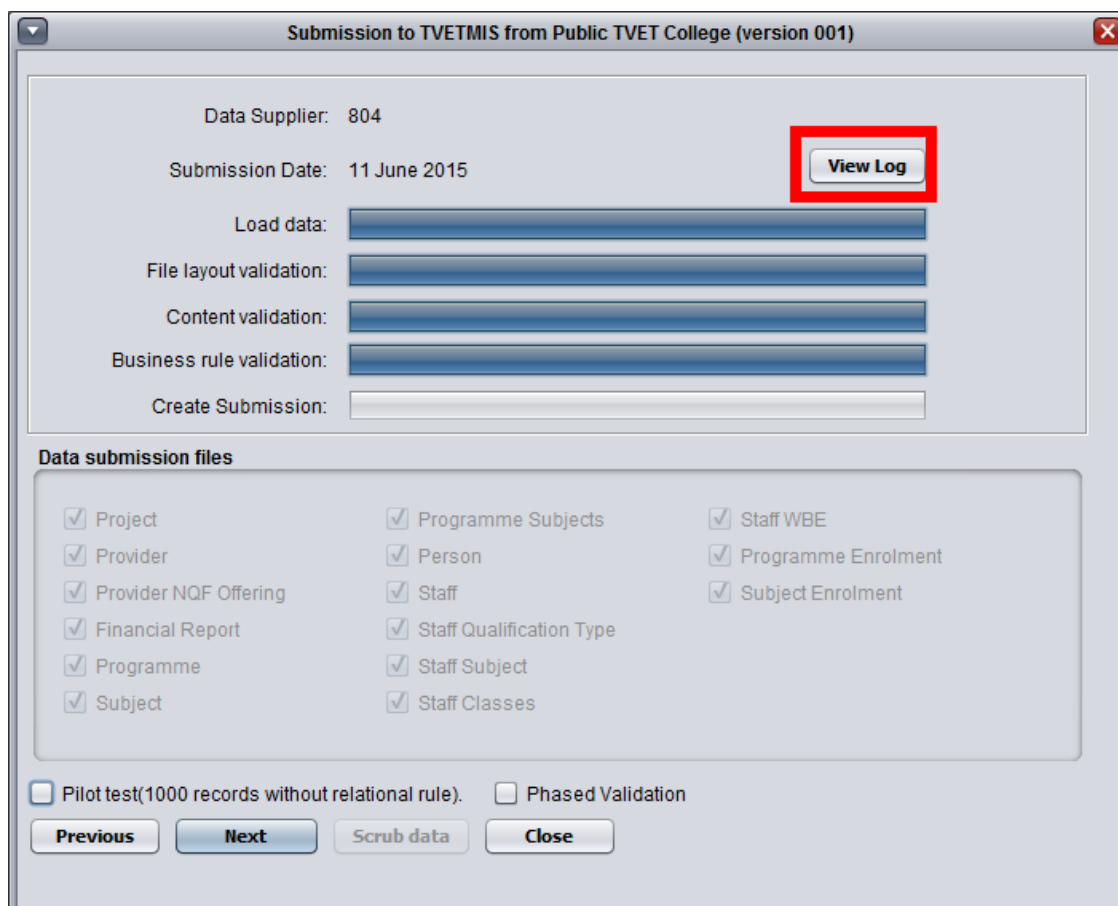


Figure 5-10 Validation submission screen after validation process

If the error log contains more than 15000 records, the following screen prompt will appear (Figure 5-11).

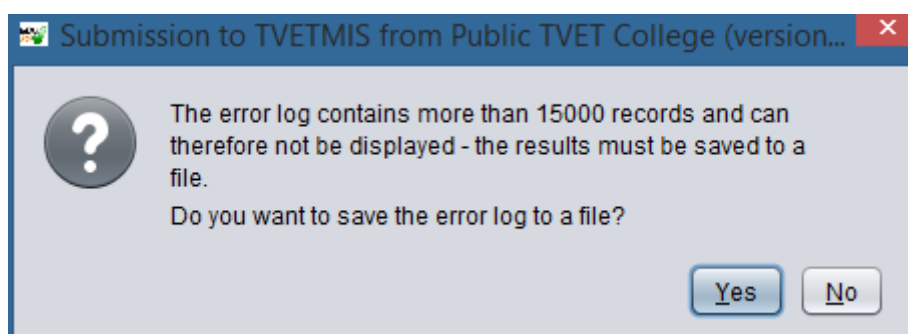


Figure 5-11 Prompt to save log file

Click on **Yes** and choose a location on your computer to save the error log csv file.

The validation log presents you with a detailed report of the specific fields in a data submission that have failed validation. On selecting this menu option the validation log screen will be displayed (see Figure 5-12).

The log provides you with the following information so that you can better understand the factors that contributed to the data submission failing the data validations:

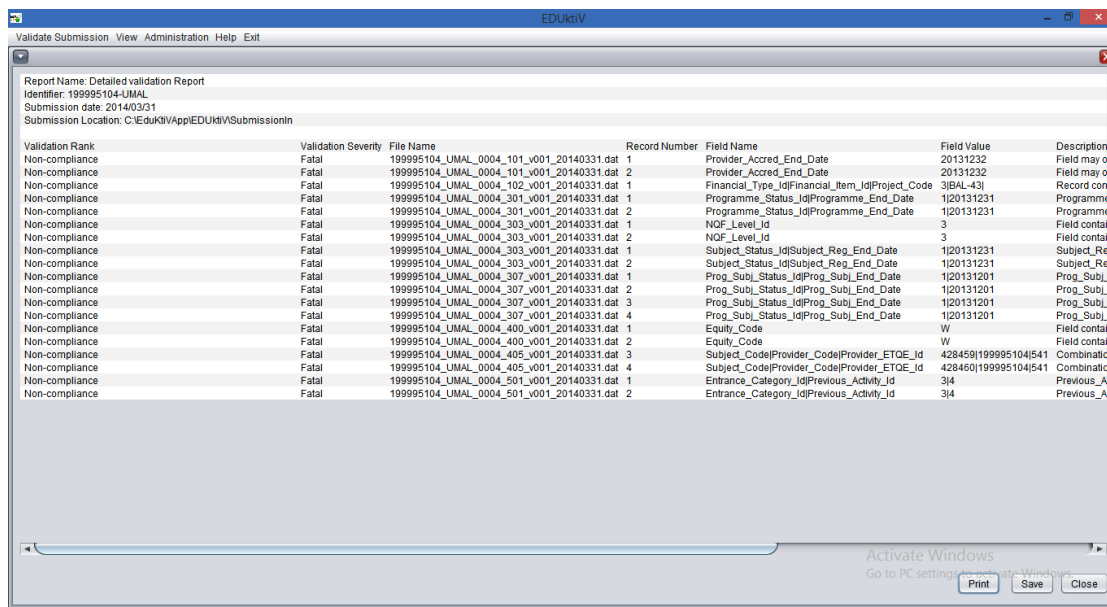


Figure 5-12 Validation log screen

- i. The **Validation rank** column indicates the type of error that was encountered (non-compliance, content, general information and critical information).
- ii. The **Validation severity** column indicates whether the error that was encountered is preventing the successful validation of the data submission (fatal or non-fatal).
- iii. The **File name** column indicates the file in which the error was encountered.
- iv. The **Record number** column indicates the record (line) in the file that holds the invalid value. Note that the record numbering is sequential, starting at the first valid data record found in the file.
- v. The **Field name** column indicates the name of the field that has failed validation.
- vi. The **Field value** column indicates the value found in the field that has failed validation.
- vii. The **Description** column provides you with a description of the factor that caused the field content to fail validation.

Selecting the **Print** button from the Validation log screen allows you to print the log to your default printer. You can also use the printer setup window on Figure 5-13 to configure the printer options.

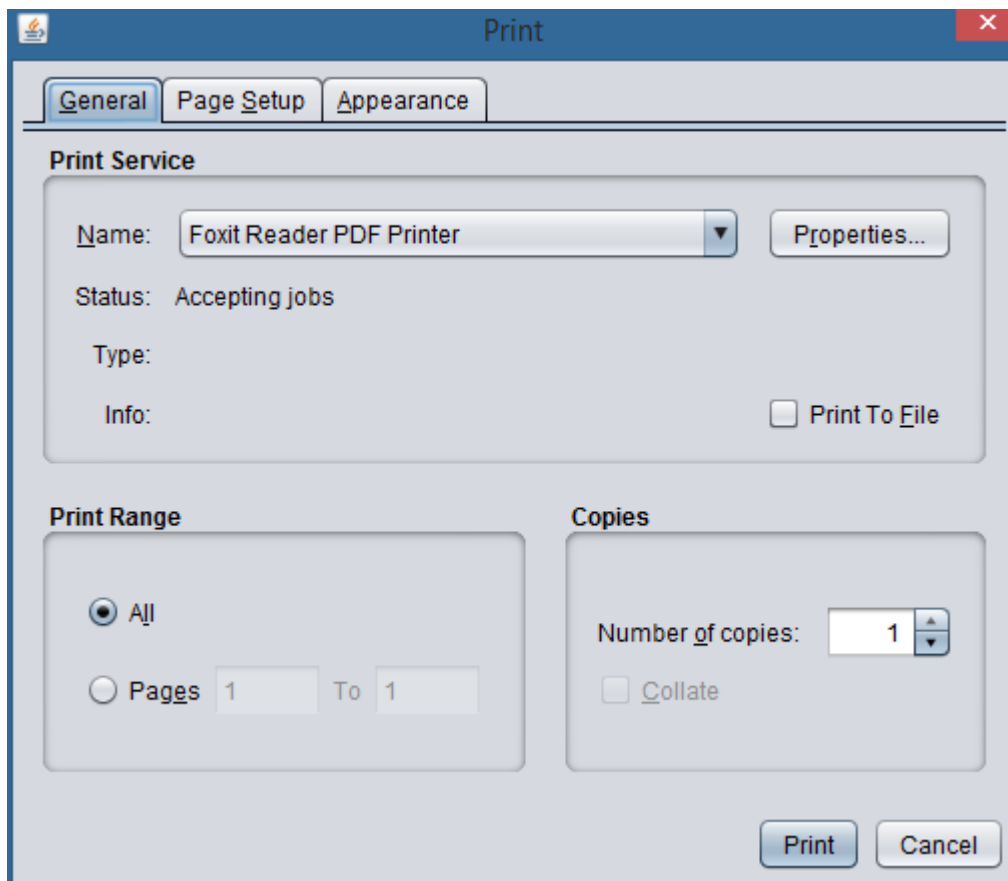


Figure 5-13 Print settings

Selecting the **Save** button from the validation screen allows you to save the report to a comma delimited format (.csv) file that is recognized by most spreadsheet applications (e.g. Microsoft Excel) (see Figure 5-14). Browse to the location to which you would like to save the log. Type the name that you want the log saved to in the **File name** box and click on **Save**.

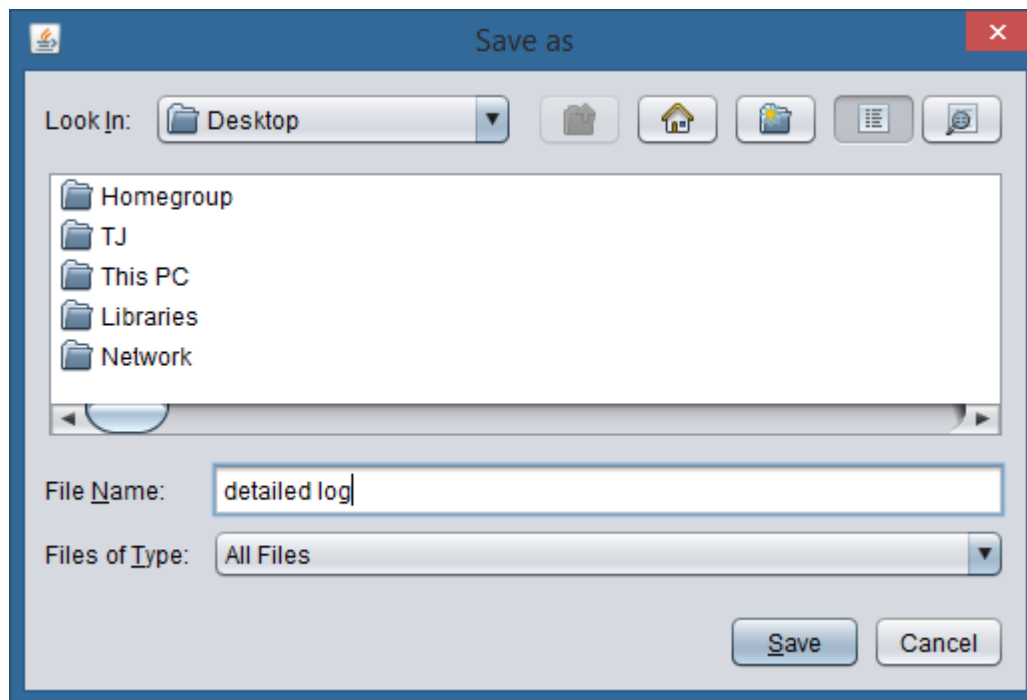


Figure 5-14 Saving the validation log to a csv file

Selecting the **Close** button from the validation screen closes the screen and returns to the main screen.

5.2 Receive menu

All of the menu items in this menu are inactive for training providers, as the organization does not receive any learner registration records from another education and training stakeholder.

6 View menu

The View menu item contains options that allow you to view the results of the most recently completed data validation. The specific menu item is shown in Figure 6-1.

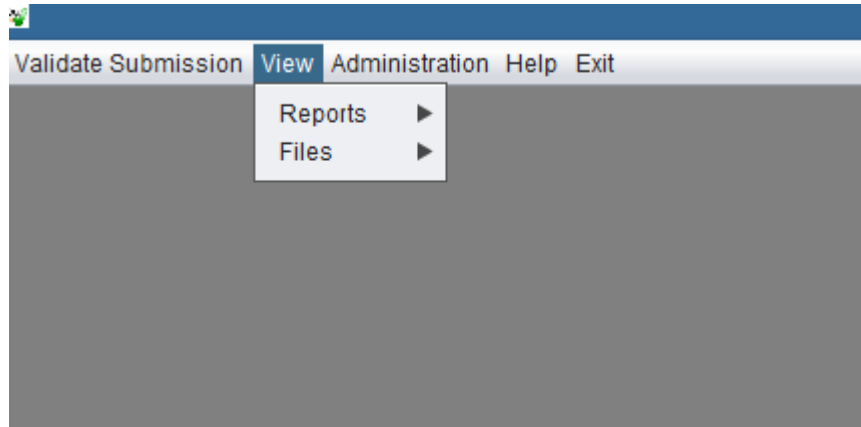


Figure 6-1 View screen

6.1 Reports menu

This menu option allows you to access the reports generated by the EDUktiV application for the most recent data submission that was validated. The application generates two types of reports as described below (Figure 6-2).

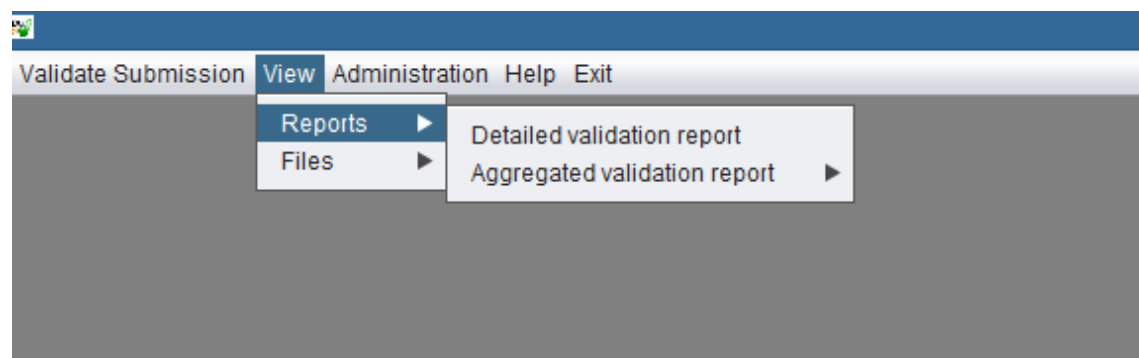


Figure 6-2 Report menu

6.1.1 Detailed validation report menu

This report presents you with a detailed report of the specific fields in a data submission that have failed validation. On selecting this menu option, the detailed validation report screen will be displayed (see Figure 6-3).

Report Name: Detailed validation Report
 Identifier: 199995104-UMAL
 Submission Date: 20140331
 Submission Location: C:\Eduktiv\App\EDUktiv\SubmissionIn

Validation Rank	Validation Severity	File Name	Record Number	Field Name	Field Value	Description
Non-compliance	Fatal	199995104_UMAL_0004_101_v001_20140331.dat	1	Provider_Accred_End_Date	20131232	Field may o
Non-compliance	Fatal	199995104_UMAL_0004_101_v001_20140331.dat	2	Provider_Accred_End_Date	20131232	Field may o
Non-compliance	Fatal	199995104_UMAL_0004_102_v001_20140331.dat	1	Financial_Type_Id Financial_Item_Id Project_Code	3 B L-431	Record con
Non-compliance	Fatal	199995104_UMAL_0004_301_v001_20140331.dat	1	Programme_Status_Id Programme_End_Date	1 20131231	Programm
Non-compliance	Fatal	199995104_UMAL_0004_301_v001_20140331.dat	2	Programme_Status_Id Programme_End_Date	1 20131231	Programm
Non-compliance	Fatal	199995104_UMAL_0004_303_v001_20140331.dat	1	NQF_Level_Id	3	Field contai
Non-compliance	Fatal	199995104_UMAL_0004_303_v001_20140331.dat	2	NQF_Level_Id	3	Field contai
Non-compliance	Fatal	199995104_UMAL_0004_303_v001_20140331.dat	1	Subject_Status_Id Subject_Reg_End_Date	1 20131231	Subject_Re
Non-compliance	Fatal	199995104_UMAL_0004_303_v001_20140331.dat	2	Subject_Status_Id Subject_Reg_End_Date	1 20131231	Subject_Re
Non-compliance	Fatal	199995104_UMAL_0004_307_v001_20140331.dat	1	Prog_Subj_Status_Id Prog_Subj_End_Date	1 20131201	Prog_Subj
Non-compliance	Fatal	199995104_UMAL_0004_307_v001_20140331.dat	2	Prog_Subj_Status_Id Prog_Subj_End_Date	1 20131201	Prog_Subj
Non-compliance	Fatal	199995104_UMAL_0004_307_v001_20140331.dat	3	Prog_Subj_Status_Id Prog_Subj_End_Date	1 20131201	Prog_Subj
Non-compliance	Fatal	199995104_UMAL_0004_307_v001_20140331.dat	4	Prog_Subj_Status_Id Prog_Subj_End_Date	1 20131201	Prog_Subj
Non-compliance	Fatal	199995104_UMAL_0004_400_v001_20140331.dat	1	Equity_Code	W	Field contai
Non-compliance	Fatal	199995104_UMAL_0004_400_v001_20140331.dat	2	Equity_Code	W	Field contai
Non-compliance	Fatal	199995104_UMAL_0004_405_v001_20140331.dat	3	Subject_Code Provider_Code Provider_ETOE_Id	428459 199995104 541	Combinatic
Non-compliance	Fatal	199995104_UMAL_0004_405_v001_20140331.dat	4	Subject_Code Provider_Code Provider_ETOE_Id	428460 199995104 541	Combinatic
Non-compliance	Fatal	199995104_UMAL_0004_501_v001_20140331.dat	1	Entrance_Category_Id Previous_Activity_Id	3 4	Previous_A
Non-compliance	Fatal	199995104_UMAL_0004_501_v001_20140331.dat	2	Entrance_Category_Id Previous_Activity_Id	3 4	Previous_A

Figure 6-3 Detailed validation log screen

The report provides you with the following information so that you can better understand the factors that contributed to the data submission failing the data validations:

- i. The heading area of the report details the submission that was validated.
- ii. The **Validation rank** column indicates the type of error that was encountered (non-compliance, content, general information and critical information).
- iii. The **Validation severity** column indicates whether the error that was encountered is preventing the successful validation of the data submission (fatal or non-fatal).
- iv. The **File name** column indicates the file in which the error was encountered.
- v. The **Record number** column indicates the record (line) in the file that holds the invalid value. Note that the record numbering is sequential, starting at the first valid data record found in the file.
- vi. The **Field name** column indicates the name of the field that has failed validation.
- vii. The **Field value** column indicates the value found in the field that has failed validation.
- viii. The **Description** column provides you with a description of the factor that caused the field content to fail validation.

Selecting the **“Print”** button from the validation log screen allows you to print the report to your default printer (see Screen Figure 6-4).

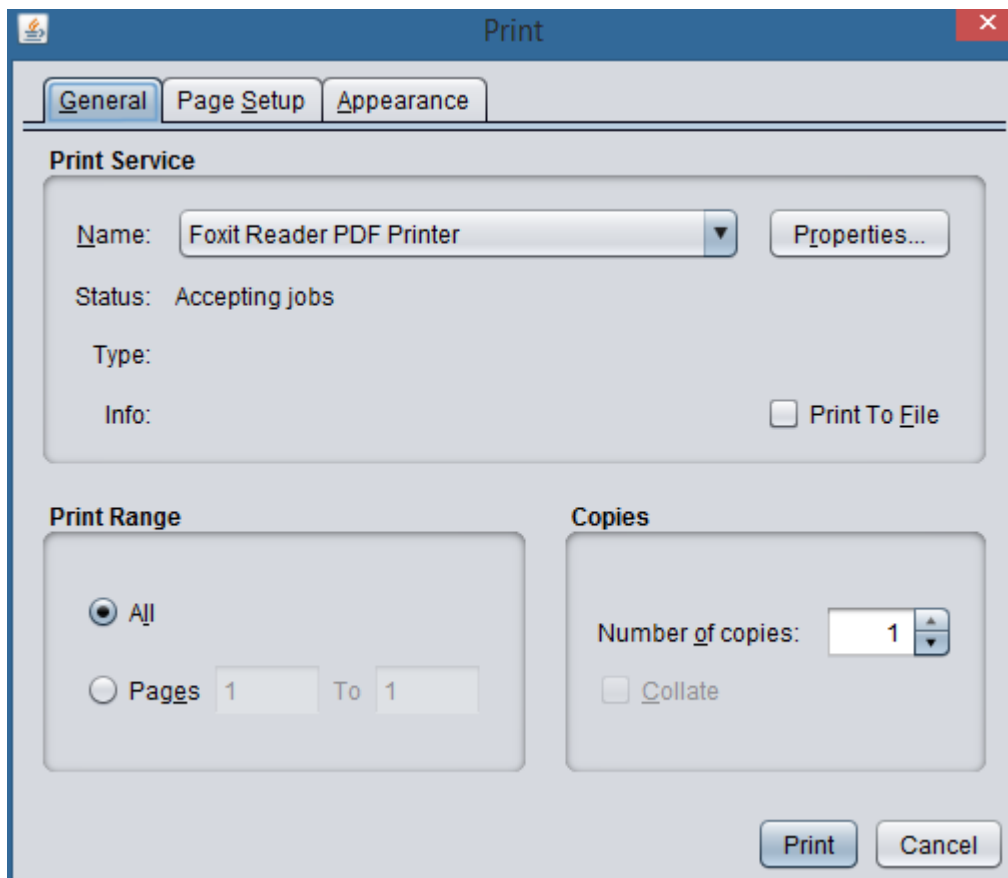


Figure 6-4 Printer setup

Selecting the “Save” button from the validation log screen allows you to save the report to a comma delimited format (.csv) file, which is recognized by most spreadsheet applications (e.g. Microsoft Excel) (see Figure 6-5). Browse to the location to which you would like to save the report. Type the name that you want the report saved to in the **File name** box and click on **Save**.

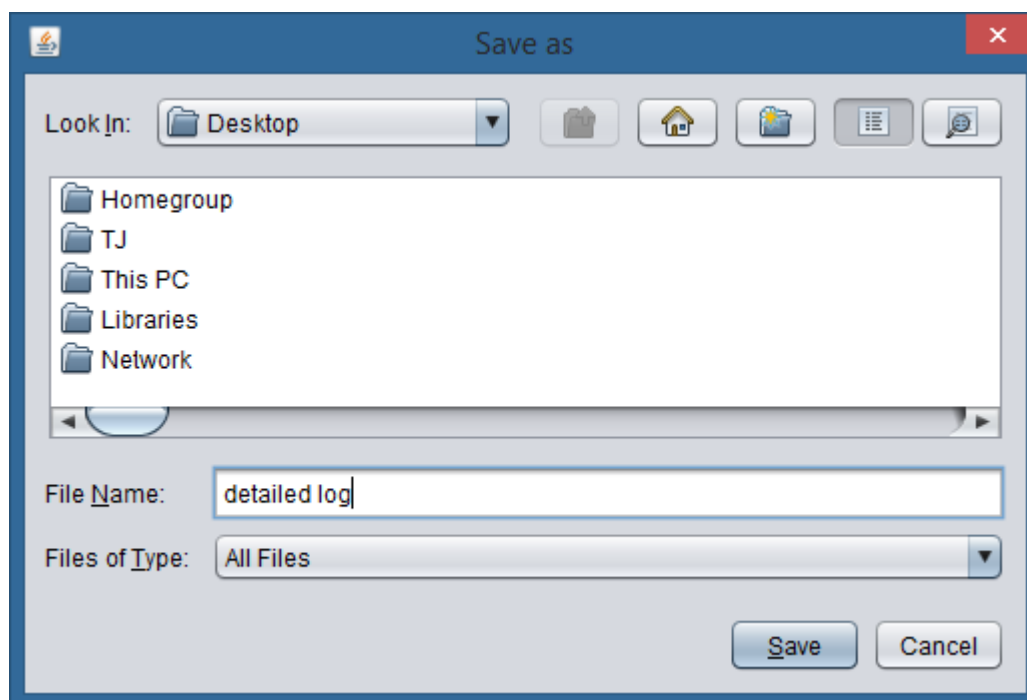


Figure 6-5 Log saving

1. The **Close** button allows you to exit the Detailed validation report screen and return to the main menu.

6.1.2 Aggregated validation report menu

These reports present you with a summary report of the results from the data last completed data validation. More menu options are made available to you once you select this menu item as can be seen on Figure 6-6.

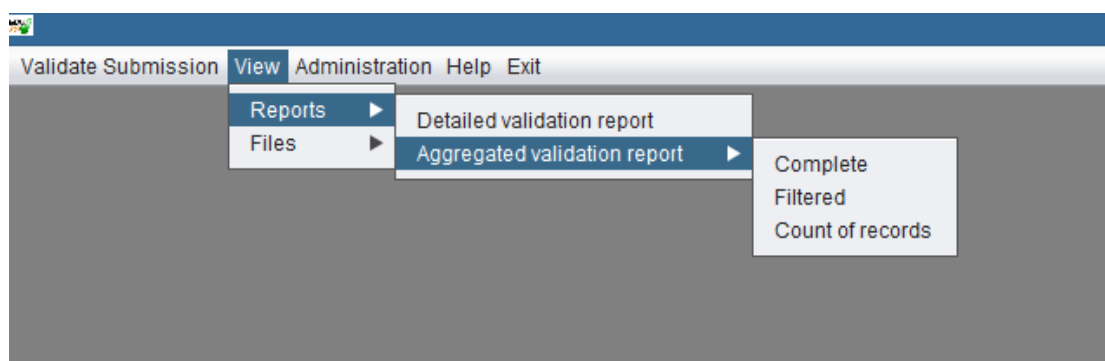


Figure 6-6 Aggregate report sub-menus

6.1.2.1 Complete menu

This report presents you with a summary report of all of the validations completed on a data submission and the results of each validation rule. On selecting this menu option, the aggregated validation report (complete) screen will be displayed (see Figure 6-7).

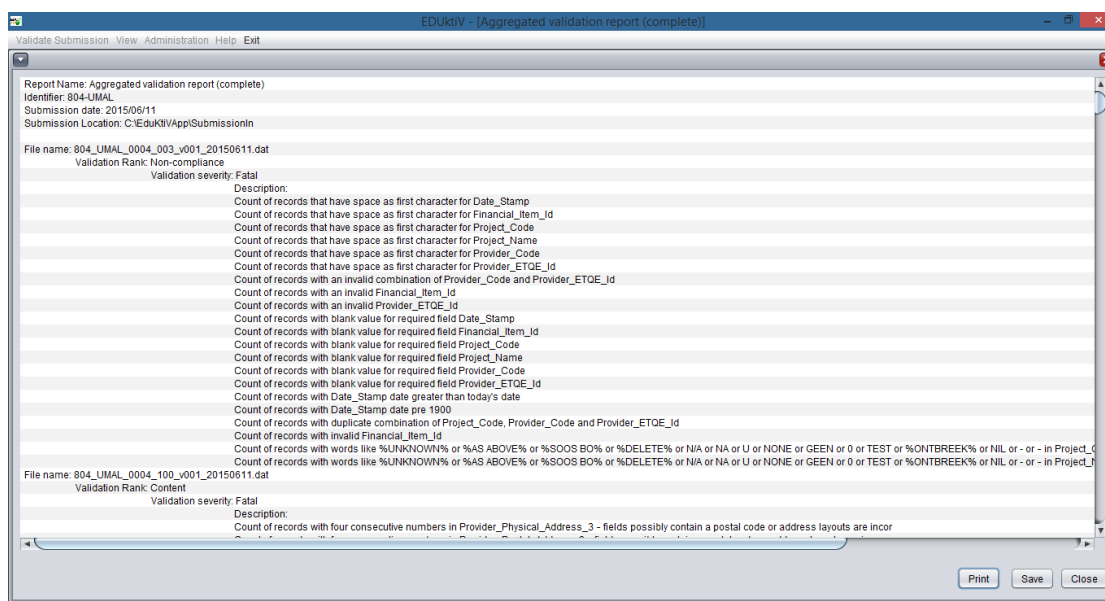


Figure 6-7 Completed reports summary

This report provides you with the information that helps you better understand the submission:

- i. The heading area of the report details the submission that was validated.
- ii. The **File name** heading indicates the file for which the results are displayed.
- iii. The **Validation rank** heading indicates the type of validation reported on (non-compliance, content, general information and critical information).
- iv. The **Validation severity** heading indicates whether the validation would result in the data submission validation from failing (fatal or non-fatal).
- v. The **Description** column provides you with a description of the validation that was completed on the file.
- vi. The **Count** column provides you with the number of records that meet the conditions of the validation.

Selecting **Print** button allows you to print the report to your default printer as shown

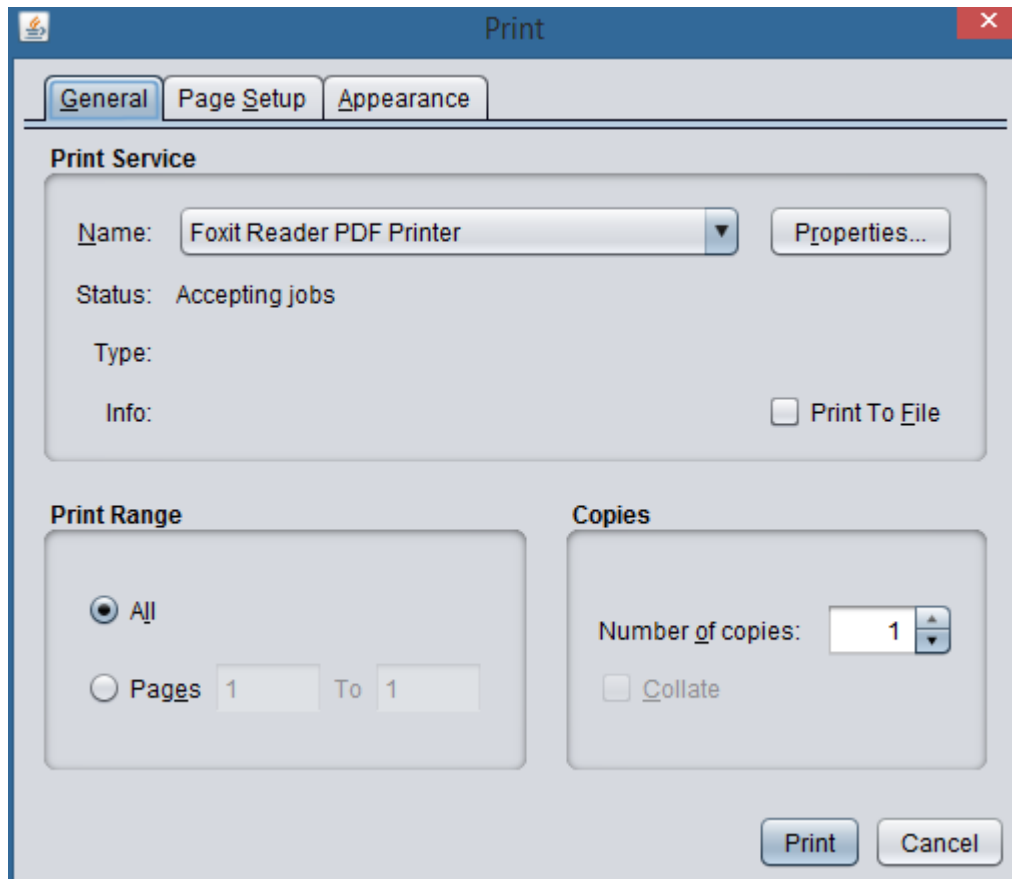


Figure 6-8 Print settings

The **Save** button allows you to save the report to a comma delimited format (.csv) file, which is recognized by Microsoft Excel (Figure 6-9).

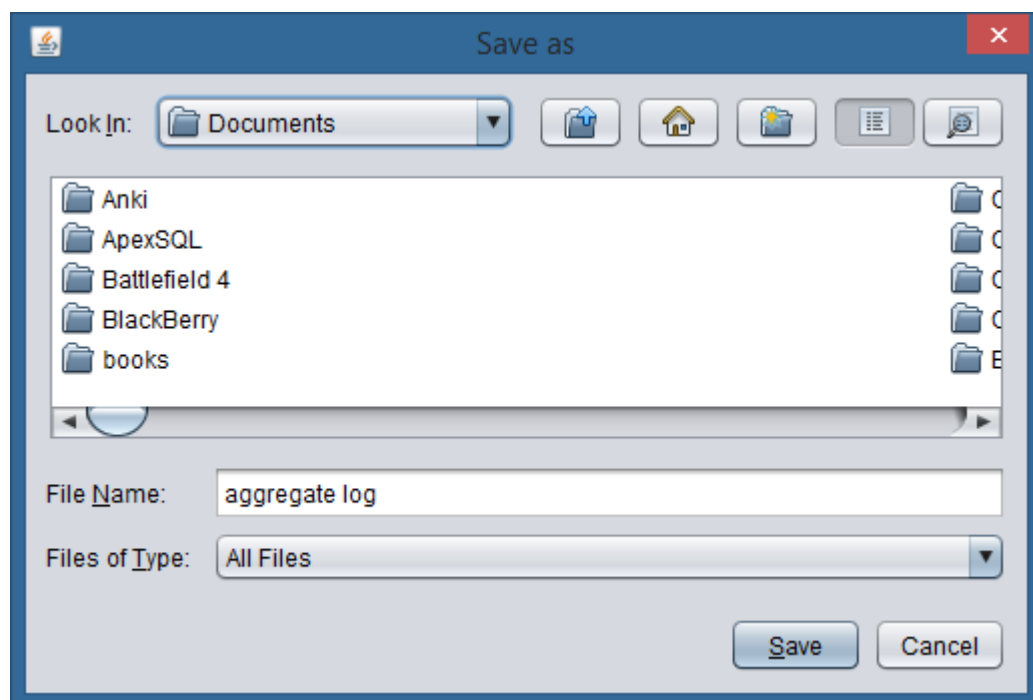


Figure 6-9 Saving a log file

Browse to the location to which you would like to save the report. Type the name that you want the report saved to in the **File name** box and click on **Save**.

The **Close** button allows you to exit the aggregated validation report (complete) screen and return to the main menu.

6.1.2.2 Filtered

This report differs from the complete aggregated report in that this report only displays validations that were met by the data submission (results of validation that failed). On selecting this menu option, the aggregated validation report (filtered) screen will be displayed (Figure 6-10).

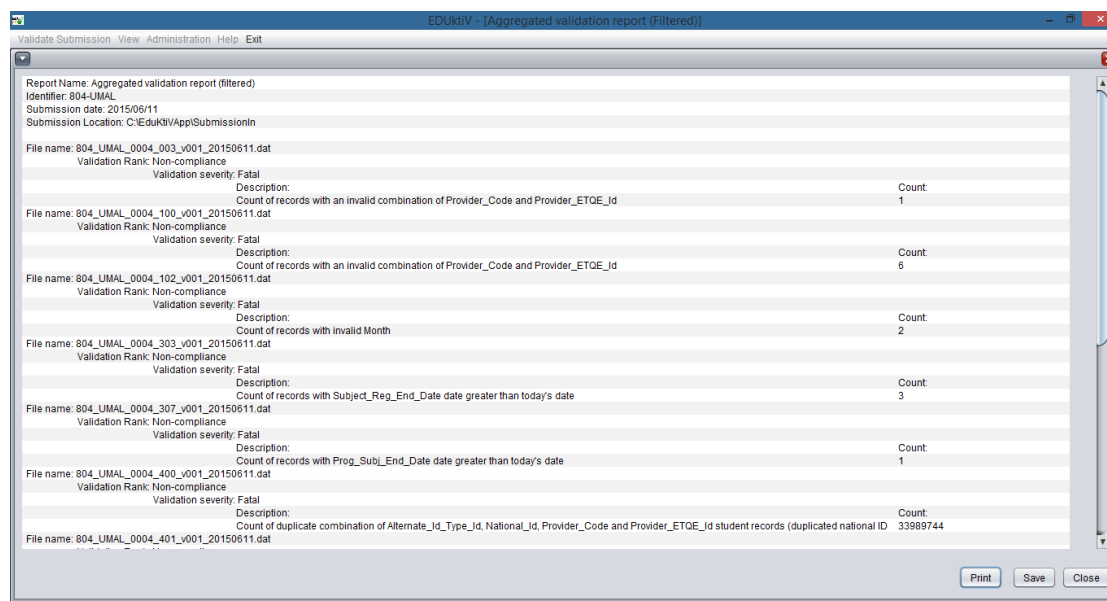


Figure 6-10 Filters log screen

The report provides you with the following information so that you can better understand the data submission:

- i. The heading area of the report details the submission that was validated.
- ii. The **File name** heading indicates the file for which the results are displayed.
- iii. The **Validation rank** heading indicates the type of validation reported on (non-compliance, content, general information and critical information).
- iv. The **Validation severity** heading indicates whether the validation would result in the data submission validation from failing (fatal or non-fatal).
- v. The **Description** column provides you with a description of the validation that was completed on the file.
- vi. The **Count** column provides you with the number of records that meet the conditions of the validation.

Selecting the **Print** button allows you to print the report to your default printer (Figure 6-11).

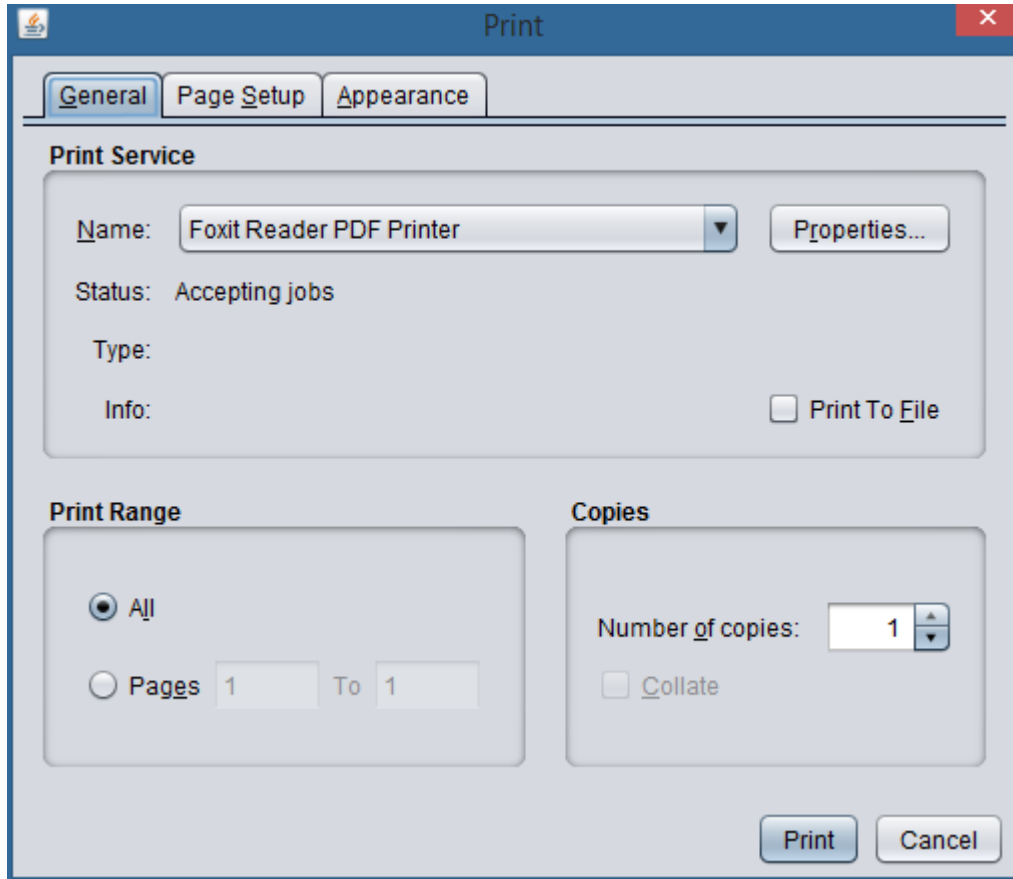


Figure 6-11 Printing settings

The **Save as** button allows you to save the report to a comma delimited format (.csv) file, which is recognized by most spreadsheet applications (e.g. Microsoft Excel) see Figure 6-12).

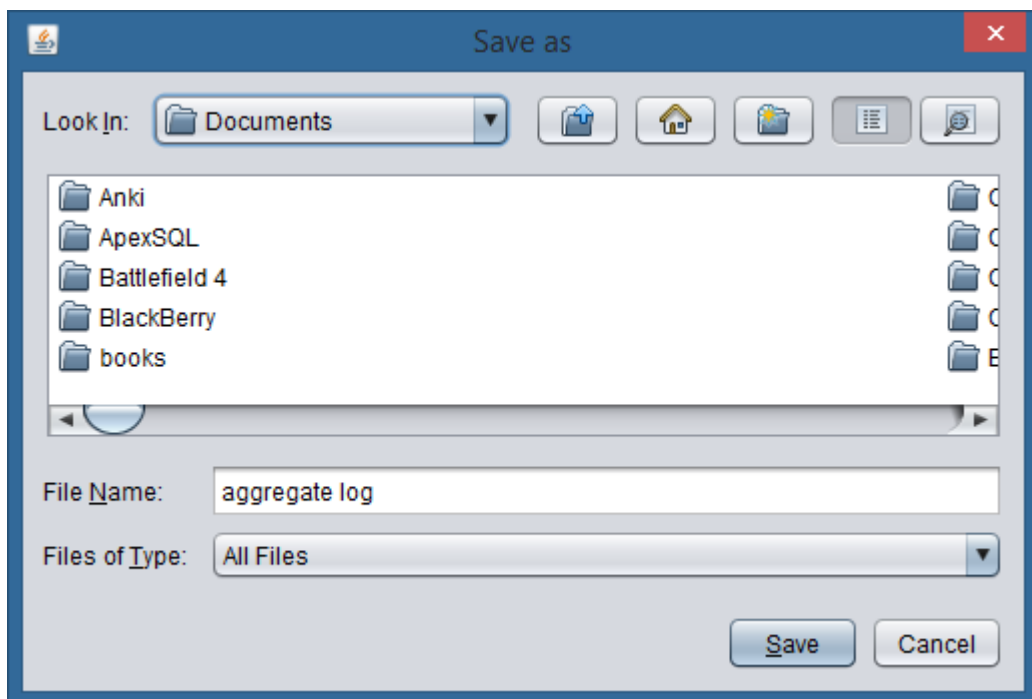


Figure 6-12 Saving a log file

Browse to the location to which you would like to save the report. Type the name that you want the report saved to in the **File name** box and click on **Save**.

The **Close** button allows you to exit the aggregated validation report (filtered) screen and return to the main menu.

6.1.2.3 Count of records

This report presents you with a report of the number of records found in each of the files submitted for validation. On selecting this menu, option the Submission count of records report screen will be displayed (Figure 6-13).

File Name	Count
804_UMAL_0004_003_v001_20150611.dat	Count of records 1
804_UMAL_0004_100_v001_20150611.dat	Count of records 6
804_UMAL_0004_101_v001_20150611.dat	Count of records 109
804_UMAL_0004_102_v001_20150611.dat	Count of records 8
804_UMAL_0004_301_v001_20150611.dat	Count of records 70
804_UMAL_0004_303_v001_20150611.dat	Count of records 69
804_UMAL_0004_307_v001_20150611.dat	Count of records 105
804_UMAL_0004_400_v001_20150611.dat	Count of records 13156
804_UMAL_0004_401_v001_20150611.dat	Count of records 840
804_UMAL_0004_403_v001_20150611.dat	Count of records 1069
804_UMAL_0004_404_v001_20150611.dat	Count of records 1430
804_UMAL_0004_405_v001_20150611.dat	Count of records 13211
804_UMAL_0004_406_v001_20150611.dat	Count of records 1
804_UMAL_0004_501_v001_20150611.dat	Count of records 23101
804_UMAL_0004_503_v001_20150611.dat	Count of records 65710

Figure 6-13 Count records screen

The report provides you with the following information so that you can verify the number of records from the source with the records recognised by the EDUktiV Application:

- i. The heading area of the report details the submission that was validated.
- ii. The **File Name** column indicates the submitted file names.
- iii. The **Count** column indicates the number of rows/records found in the submitted file(s).

Selecting the **Print** button allows you to print the report to your default printer (Figure 6-14).

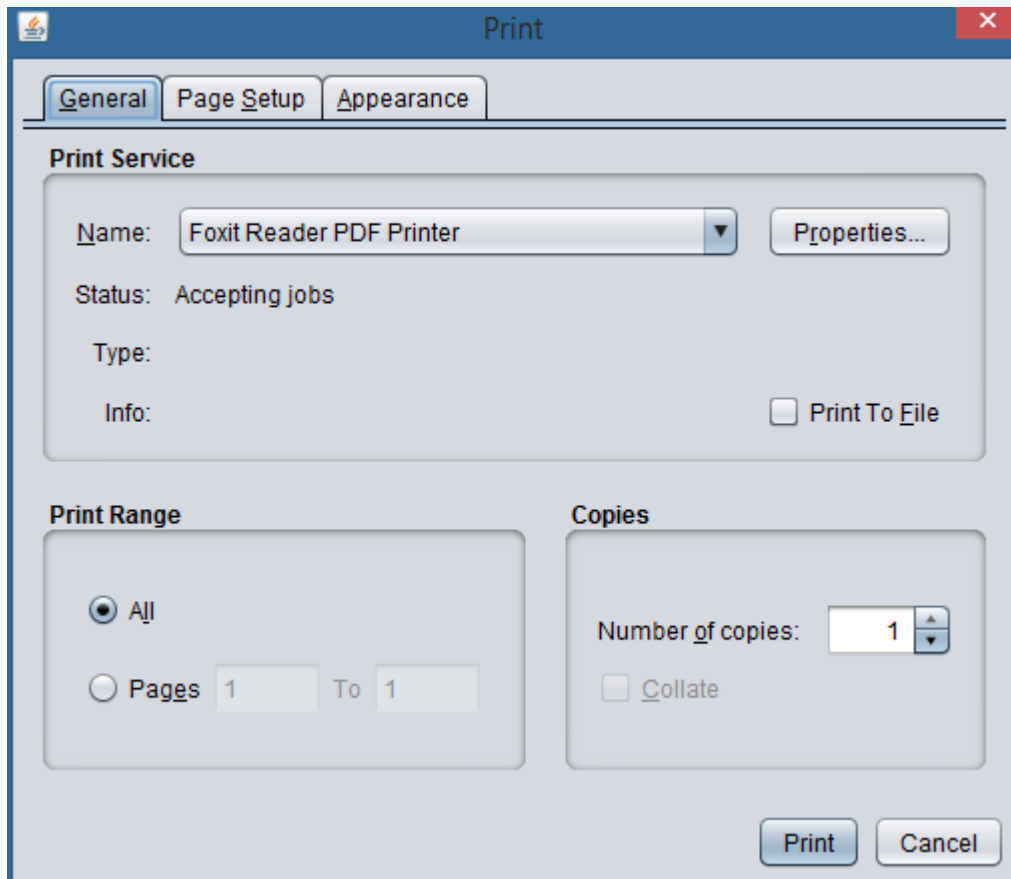


Figure 6-14 Printing settings

The **Save** button allows you to save the report to a comma delimited format (.csv) file which is recognized by most spreadsheet applications (e.g. Microsoft Excel) (Figure 6-15). Browse to the location to which you would like to save the report. Type the name that you want the report saved to in the **File name** box and click on **Save**.

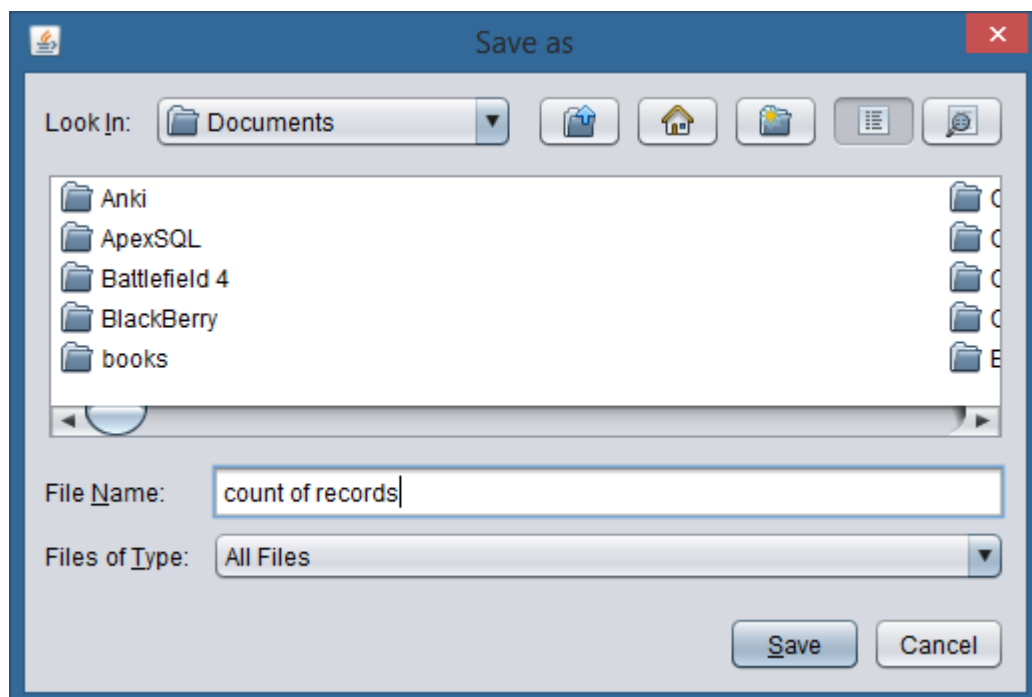


Figure 6-15 Log saving screen

The **Close** button allows you to exit the Submission count records report screen and return to the main menu.

6.2 Files menu

This menu option presents you with a view of the last data files that have been submitted for validation. The individual sub-menus available for this menu item are dependent on the data files that you submitted for validation. Note that Figure 6-16 is an example only – the contents of this menu will vary according to the files that you have submitted.

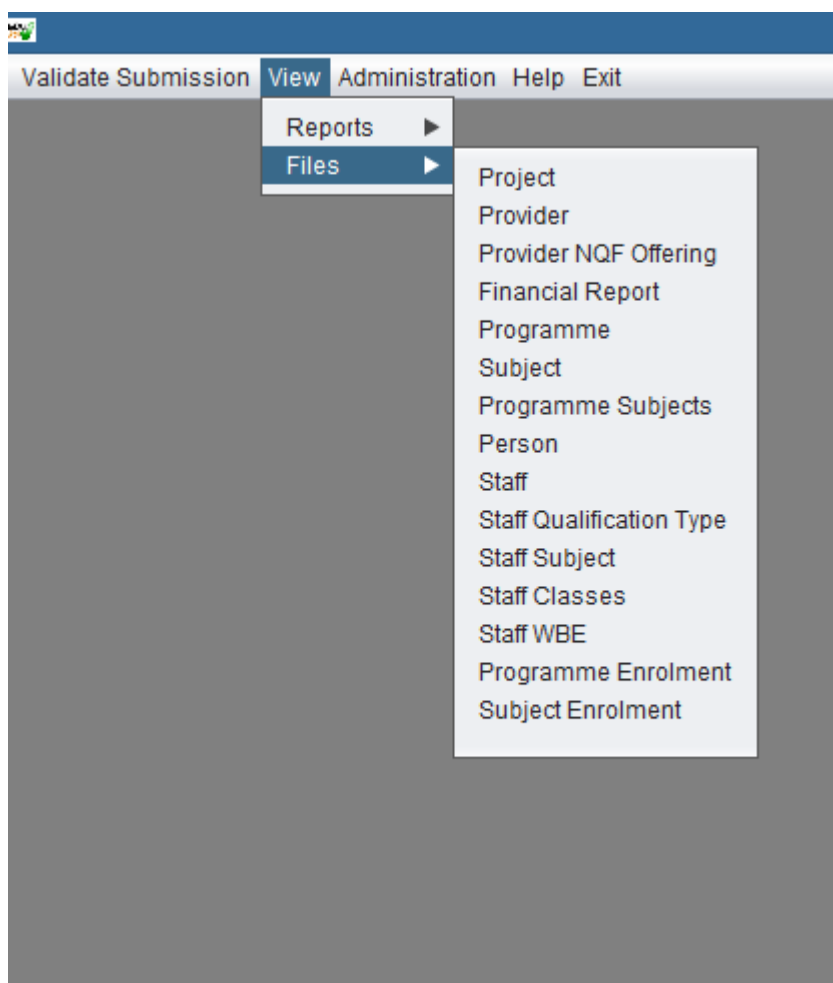


Figure 6-16 File menu options

The rest of this section contains the data of a learner file submission. Note that the functionality described below is generic to any type of data file that has been submitted to the EDUktiV application.

On selecting the sub-menu item, the contents of the file are displayed (Figure 6-17).

RecordId	Provider_Code	Provider_ETQE_Id	Filter01	Provider_Name	Provider_Type_Id	Provider_Postal_Address_1	Provider_Postal_Address_2	Provider_Postal_Address_3	Provider_Postal_A
1	804	541		Ekurhuleni East College (TVET) - Central Office	3	Private Bag X52	CBD	SPRINGS	1500
2	899990826	541		Ekurhuleni East College (TVET) - Kwa-Thema	3	Private Bag X79	CBD	SPRINGS	1500
3	899995836	541		Ekurhuleni East College (TVET) - Springs	3	Private Bag52	CBD	SPRINGS	1500
4	899995806	541		Ekurhuleni East College (TVET) - Brakpan	3	Private Bag X10	CBD	Brakpan	1540
5	899995802	541		Ekurhuleni East College (TVET) - Benoni	3	Private Bag X004	Northmead	Benoni	1500
6	899990812	541		Ekurhuleni East College (TVET) - Daveyton	3	Private Bag X01	CBD	Daveyton	1150

Figure 6-17 File content display screen

The data in the file view screen may be sorted according to any particular column. Select the column you want to sort on by clicking on the column name text (header). Clicking on the column header again will toggle the sort direction to either by Ascending or Descending order.

The data in the file view screen may be filtered according to your own needs. Clicking on the **Filter** button will open the file filter screen (Figure 6-18).

- Select the field/s by which you would like the view filtered by selecting the field name in the drop down list of **Field names**.
- Select the type of filter (equal to, greater or equal to, greater than, less or equal to, less than, like or not equal to) that you would like to apply by selecting the type in the **Filter type** field.
- Enter the filter criteria into the **Filter value** field.
- Indicate the type of join for the filter by selecting the **AND** or **OR** join indicators at the bottom of the screen.
- Click on **Save** to apply the filter or **Close** to return to the file view without applying the filter.

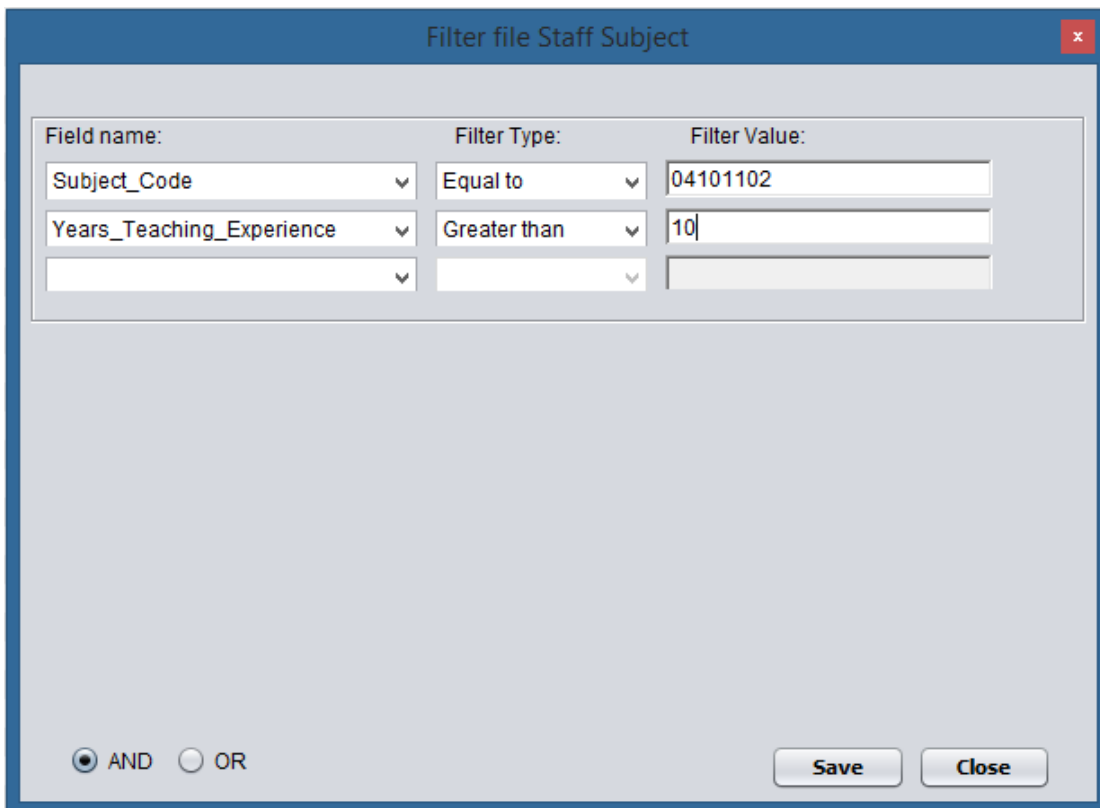


Figure 6-18 Filter screen

The **Save** button allows you to save the file to a comma delimited format (.csv) file which is recognized by most spreadsheet applications (e.g. Microsoft Excel) (Figure 6-19).

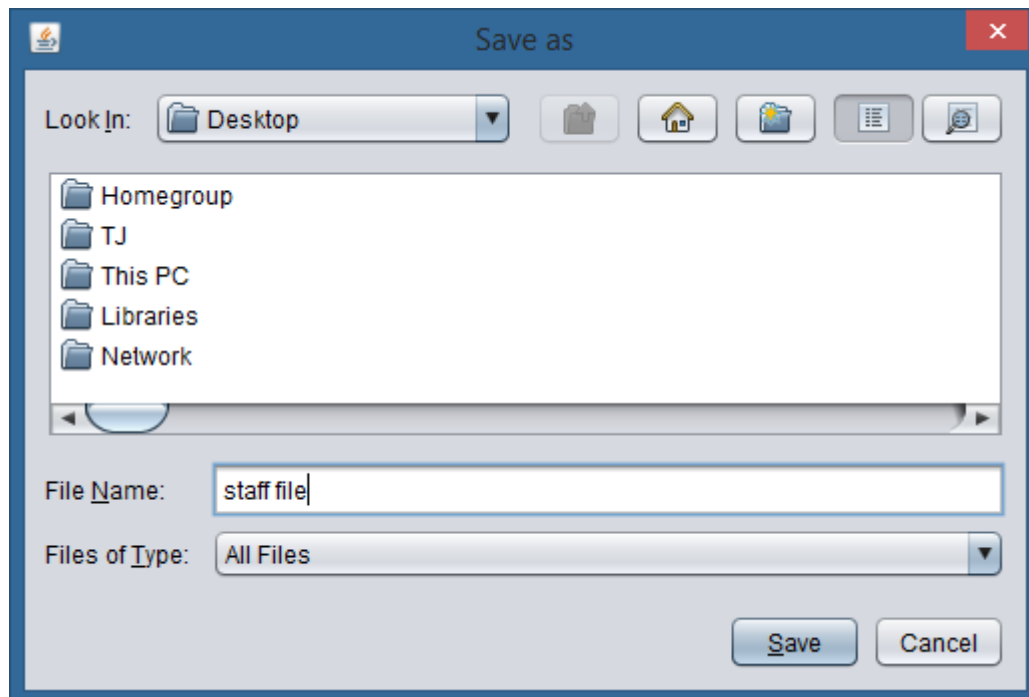


Figure 6-19 Saving log fine

Browse to the location to which you would like to save the file. Type the name that you want the file saved to in the **File name** box and click on **Save**.

The **Close** button allows you to exit the file view screen and return to the main menu.

7 Administration menu

This menu item contains options that allow you to administer the EDUktiV application. The menu items available in this menu are described below (Figure 7-1).

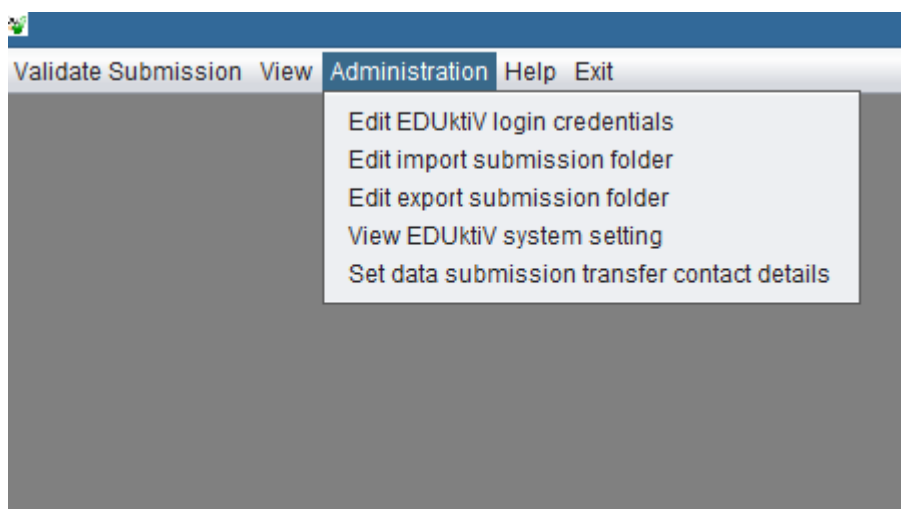


Figure 7-1 Administration menu

7.1 Edit EDUktiV login credentials menu

This menu item allows you to set the EDUktiV application login and password. Selecting this menu item opens the Edit EDUktiV login credentials screen (Figure 7-2).

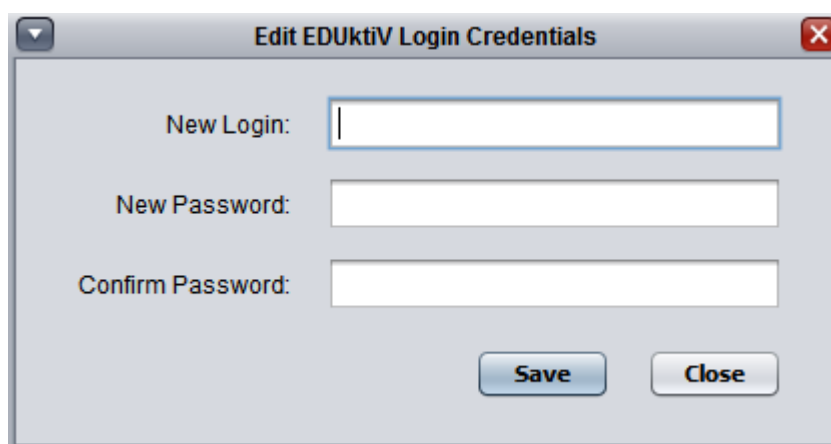
A screenshot of the 'Edit EDUktiV Login Credentials' dialog box. It features three input fields: 'New Login:', 'New Password:', and 'Confirm Password:'. Below the fields are two buttons: 'Save' and 'Close'. The dialog box has a standard window title bar with a close button in the top right corner.

Figure 7-2 Edit login screen

Note that this process overwrites the existing login and password for the EDUktiV application. Changing the EDUktiV login credentials has the following constraints:

- The **new login** may not be empty.
- The **new password** may not be empty.
- The **new password** must exactly match the **confirm password**.

Complete the following steps to change the EDUktiV login and password:

1. Enter a new login.
2. Enter a new password.
3. Confirm the password that you entered.
4. Click on the **Save** button to save the changes.

5. Click on **Close** to cancel and exit the Edit EDUktiV login credentials screen.

7.2 Edit import submission folder menu

This menu option allows you to edit the default location at which the EDUktiV application expects to find a data submission to validate. Selecting the menu item opens the Edit import submission folder screen (Figure 7-3).

You may select a new location by browsing to the folder or by typing in the path (in UNC format). The system will validate that the path exists before saving the changes. Note that the **Import submission folder** field may not be empty.

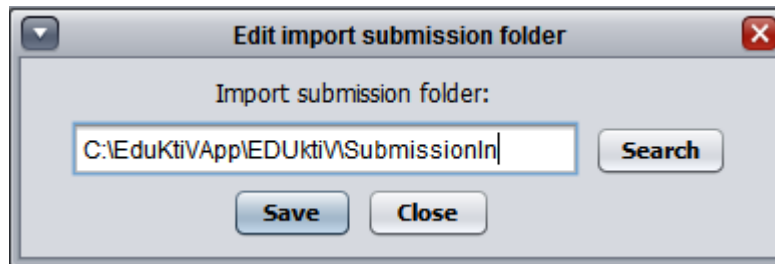


Figure 7-3 Edit import folder

7.3 Edit export submission folder menu

This menu item allows you to edit the default location to which the EDUktiV application saves a data submission that has passed validation and may be submitted to the data submission recipient. Selecting the menu item opens the Edit export submission folder screen (Figure 7-4).

You may select a new location by browsing to the folder or by typing in the path (in UNC format). The system will validate that the path exists before saving the changes. Note that the **Export submission folder** field may not be empty.

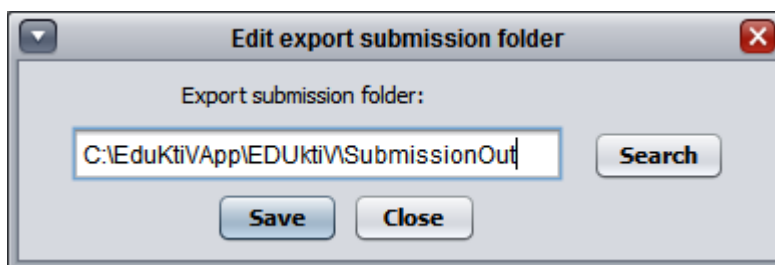


Figure 7-4 Edit export submission folder

7.4 View EDUktiV system setting

This menu item allows you to view the internal parameters of the EDUktiV application. The EDUktiV system displays the system settings screen on selection of this menu item (Figure 7-5).

The screenshot shows a window titled "View EDUktiV system settings" with a close button in the top right corner. The window is divided into four sections:

- General information:** Contains fields for "Version" (1.00), "Submission import location" (C:\EduktiVApp\EDUktiV\SubmissionIn), "Submission export location" (C:\EduktiVApp\EDUktiV\SubmissionOut), and "System update location" (C:\EduktiVApp\EDUktiV\Updates).
- Connectivity information:** Contains fields for "Automatic transfer (SSH)" (Y), "EDUktiV user contact name" (John Doe), and "EDUktiV user contact e-mail" (johnDoe@test.co.za).
- Variable information:** Contains fields for "Level" (4), "Identifier" (199995104-UMAL), and "ETQE Id" (541).
- Update Information:** Contains fields for "Last update" (20150401), "Last database update" (20150401), "Last executable update" (20150527), "System", "Rule Rank", "Rule Report", "Rule Severity", and "Rule Type".

A "Close" button is located at the bottom right of the window.

Figure 7-5 System settings window

7.5 Set data submission transfer contact details

This menu allows you to view and update the EDUktiV submission contact details. The feedback will be sent to the above contact details (Figure 7-6).

The screenshot shows a dialog box titled "Set submission transfer contact details" with a close button in the top right corner. The dialog contains the following text:

This version of EduktiV has been activated for data submission transfers via SSH. The following details are required in order to provide you with feedback in regard to your submission if this facility is used. Please enter the name and e-mail address of the person that should receive feedback that is transmitted via SSH.

Below the text are two input fields:

- Contact name:** John Doe
- Contact e-mail address:** johnDoe@test.co.za

At the bottom of the dialog are two buttons: "Save" and "Close".

Figure 7-6 Data submission contact details

8 Help menu

The help menu allows you to access the EDUktiV online user manual and EDUktiV standard.

The menu items available in this menu are described below (Figure 8-1).

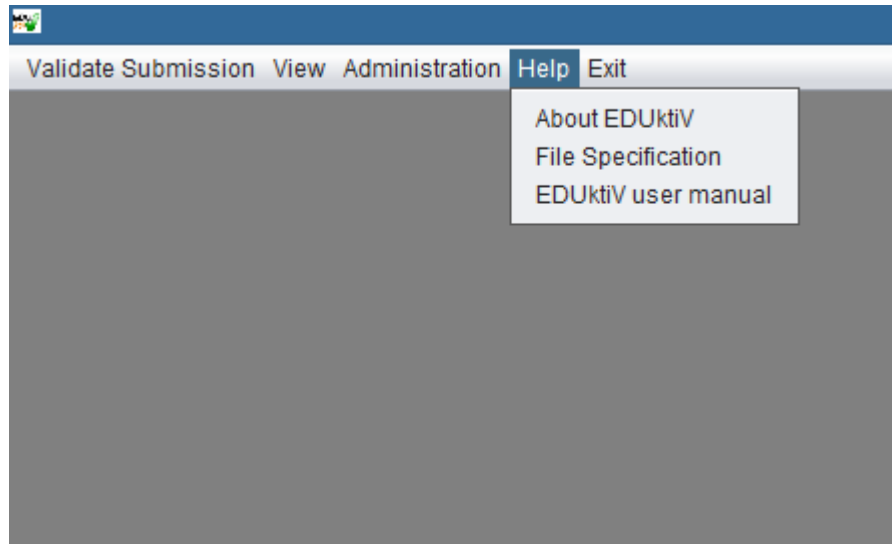


Figure 8-1 Help menu

8.1 About EDUktiV

This menu item provides information about the current version of EDUktiV. This information is contained in the Readme.txt file.

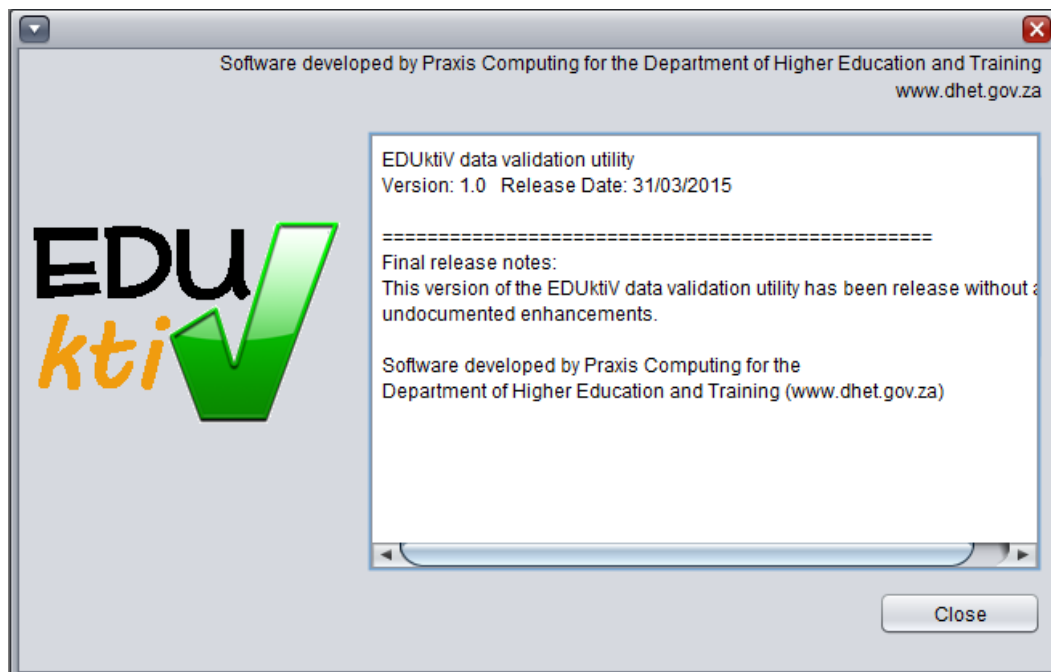


Figure 8-2 About screen

8.2 File specifications

This menu item opens a web link to the file specifications for the current system level. The file specifications will open in a new window of the default internet browser.

8.3 EDUktiV manual

This menu item opens the online help manual for the EDUktiV application.

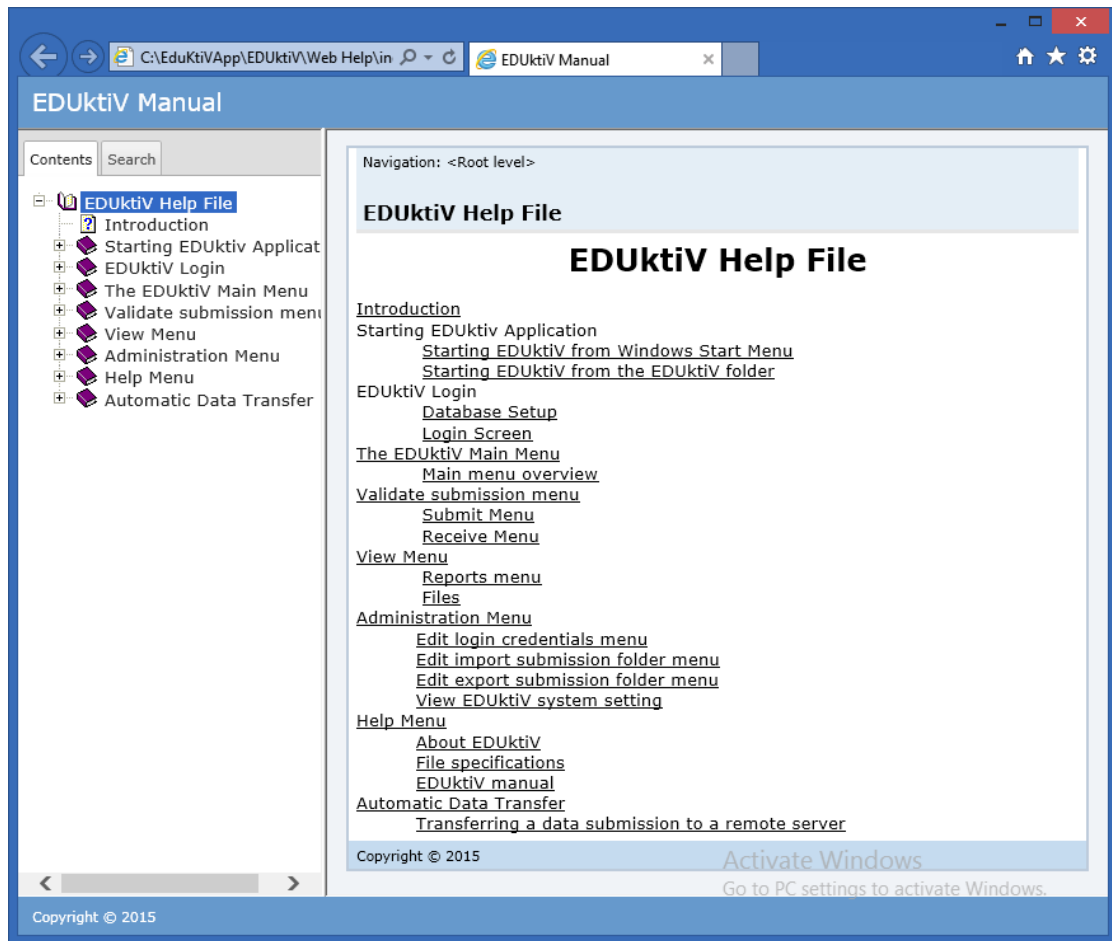


Figure 8-3 EDUktiv help manual

9 Automatic data submission transfer

9.1 Overview

The EDUktiV application has a built in automatic data submission transfer functionality. This functionality is however only available if:

1. Your version of EDUktiV has been configured to transfer data submissions automatically.
2. The recipient that you are submitting data to has made data transfer facilities available for the downloading of EDUktiV validated data submissions.

This functionality makes use of the SSH program which provides secure encrypted communications between two un-trusted hosts over an insecure network. Further the copying of data is conducted using the PSCP program which utilises SSH for data transfers.

The PSCP program is automatically installed on your system by the EDUktiV installation program.

9.2 Transferring a data submission to a remote server

1. The data submission transfer is automatically initiated when the EDUktiV application has been set up to transfer data and when the application determines that the recipient as made a server available that accepts EDUktiV data submissions. The data transfer process is initiated when you click the **Yes** button on a message that is displayed as shown on Figure 9-1.

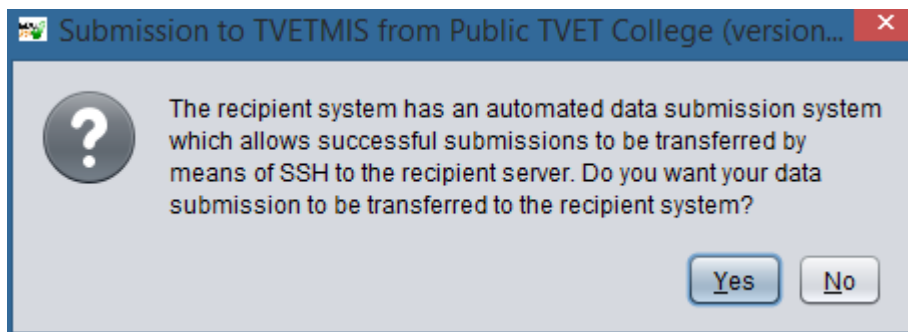


Figure 9-1 Automatic data submission confirmation window

2. The system displays the schedule automatic transfer screen (Figure 9-2). This screen allows you to transfer your data immediately or to schedule the data transfer for a later time or date.

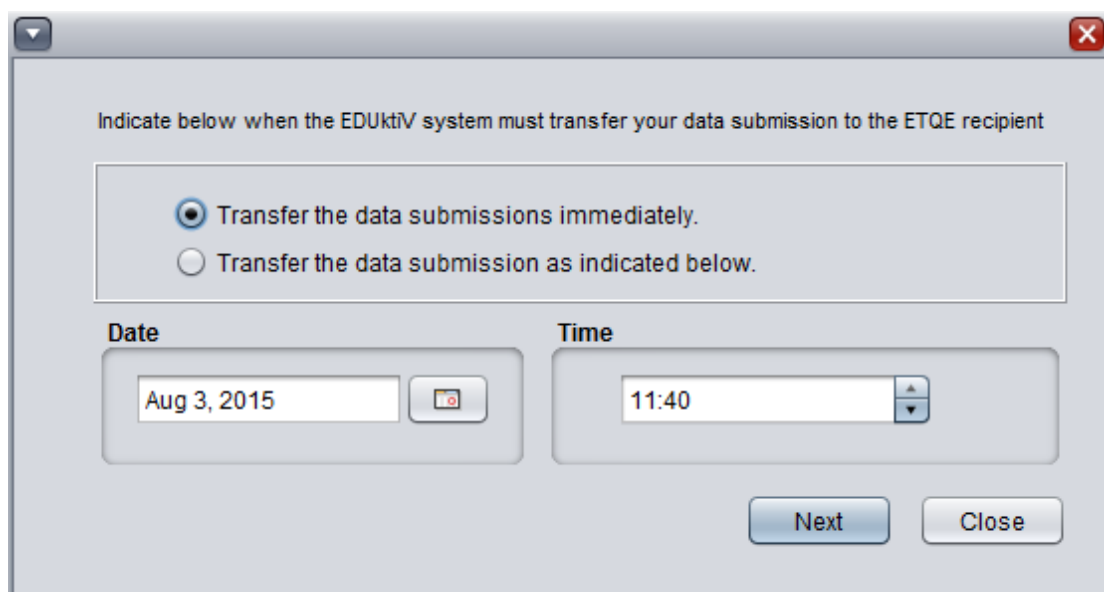


Figure 9-2 Automatic data submission schedule windows

- a. Select the **Transfer the data submission immediately** to start the data transfer.
 - b. Select the **Transfer the data submission as indicated below** option to schedule the data transfer for a later time or date. Also indicate the following:
 - i. The **Date** on which you would like the submission transferred.
 - ii. The **Time** at which you would like the submission transferred.
 - c. Click on **Next** to continue - **Please Note:** The EDUktiV application will at this point in time freeze and become unresponsive if you selected the **Transfer the data submission as indicated below** option until the data transfer has been initiated.
 - d. Click on **Close** to return to the main menu.
3. The system will next display the progress screen (Figure 9-3). This screen will give you feedback with regard to the success of the data transfer to the recipient server.
- a. The **Resubmit** button will take you back to the schedule automatic transfer screen (Figure 9-2).
 - b. The EDUktiV application automatically saves the data transfer log, which contains the feedback presented in Figure 9-3, to the \Logs path of the EDUktiV application folder. The log file is saved in a .csv format and can be accessed using MS Excel. The **Save log** button allows you to save the transfer log to a destination of choice in .csv format.
 - c. Click on **Close** to return to the main menu.

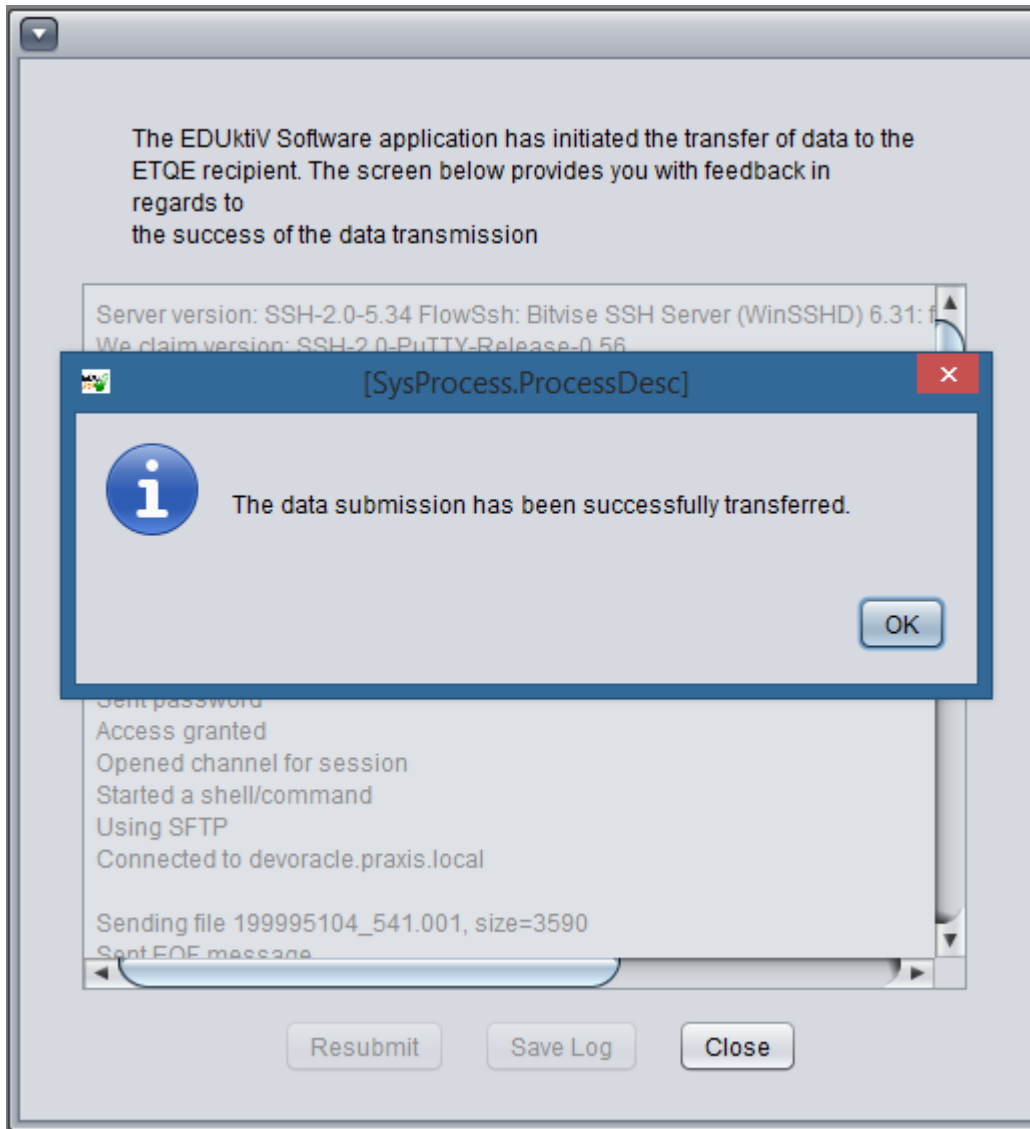


Figure 9-3 Data submission feedback window

10 EDUKtiV system updates

The EDUKtiV application holds a number of values against which data is validated, this includes the Qualifications, Course (or Unit Standards), SDL numbers and ETQEs that may be included in your data submission.

The process of accreditation in regard to qualifications and courses, and the registration of SDL number and ETQEs is dynamic in nature. The EDUKtiV application must therefore be updated on a regular basis to ensure that the application holds required references in accordance with accreditation and registration statuses for your organization.

The automatic download functionality for EDUKtiV can be found on the DHET website.

The update you receive will contain a number of files in an encrypted zip file. The zip file must be copied (without unzipping) into the “[application directory]\Updates” directory (usually found at [Windows Drive]\EDUKtiV\Updates) (Figure 10-1)

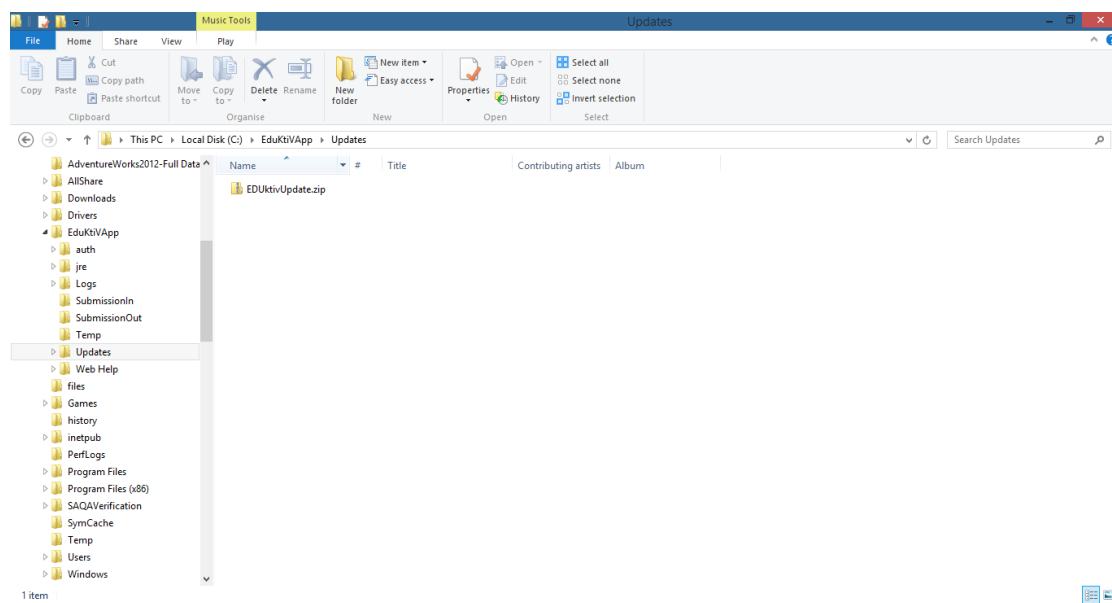


Figure 10-1 EDUKtiV update folder

Once the files are in place restart the EDUKtiV application and login. The following screen will be displayed if the EDUKtiV application has found the update files (Figure 10-2).

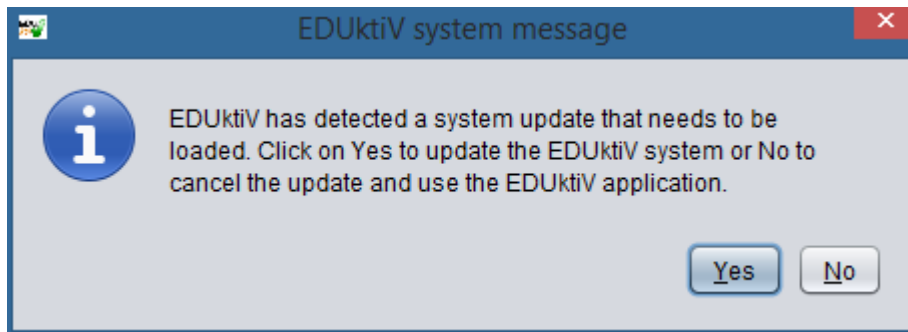


Figure 10-2 EDUktiV update detection windows

Clicking on the No button will cancel the update process and allow you to use the EDUktiV application as per normal (the message will display again the next time you login to the application). Clicking on the Yes button will initiate the update process (Figure 10-3). A message will be displayed once the update has been successfully implemented, after which you may continue using the EDUktiV application as per normal. Please contact the EDUktiV helpdesk immediately if you experience any problems with the update functionality.

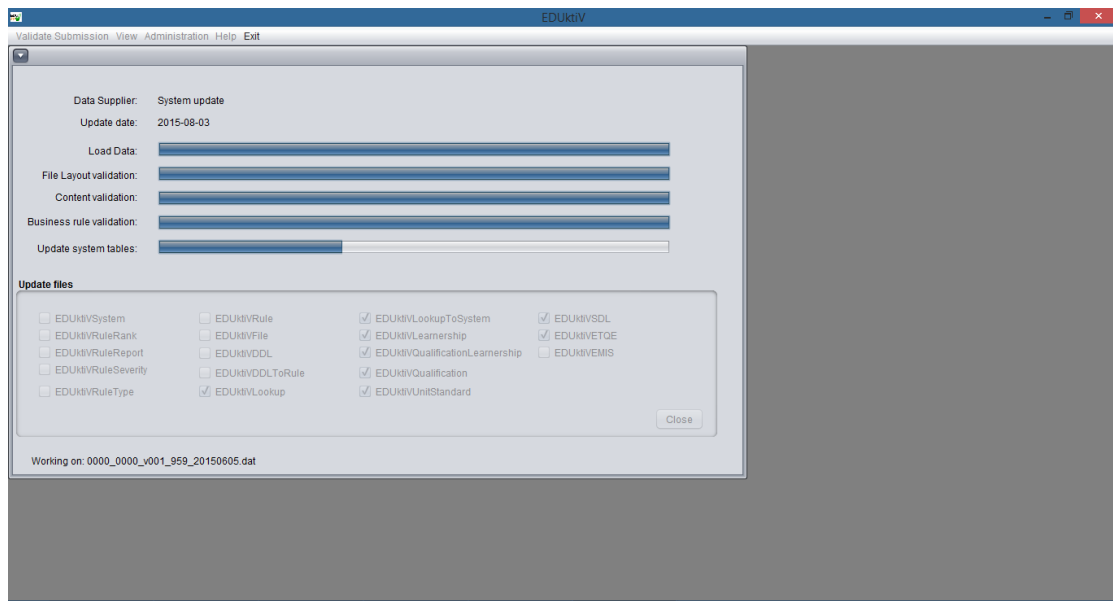


Figure 10-3 EDUktiV update progress window

On completion of the system update, a message is shown below (Figure 10-4)

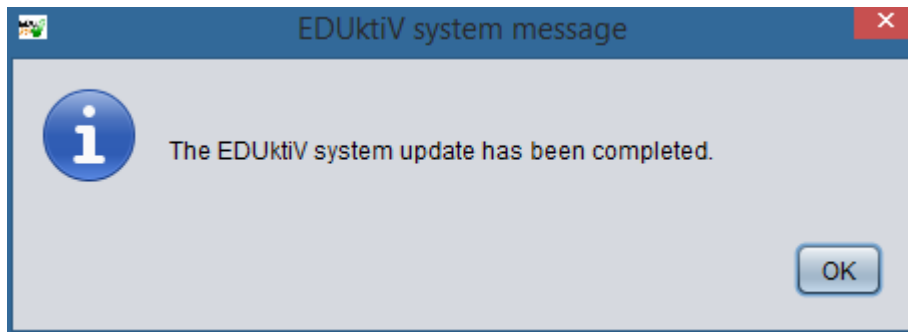


Figure 10-4 EDUktiV update completion notification window

11 SQL Server Setup and Configuration

EDUktiV uses Microsoft SQL Server (MSSQLS) for data storage. For this reason, it is one of the prerequisites for the EDUktiV software. For users who decide to do a local installation of MSSQLS, you are advised to read the next couple of sub-sections in this chapter.

11.1 Recommended settings during MS SQL Server installation

During the installation of MSSQLS on the local computer, we recommend the following configurations for the server.

11.1.1 Instance configuration

At the point in the installation where you have to configure the instance, you will be presented with the window shown on Figure 11-1. You can choose to install a “Default instance” or “Named instance”.

Choosing the “Default instance” will create a default instance called MSSQLSERVER as can be seen highlighted on Figure 11-1.

Choosing the “Named instance” will require you to enter an instance name in the textbox next to “Named instance” as shown on Figure 11-2.

For users installing SQL Express, the instance setup defaults to using “Named instance” and the instance name is set to “SQLEXPRESS” by default.

Take note that what you set here is what is required in the database setup stage explained in section 3.1.4.

The screenshot shows the 'Instance Configuration' window for SQL Server. The title bar reads 'Instance Configuration'. Below the title bar, there is a subtitle: 'Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.' On the left side, there is a navigation pane with the following items: 'Setup Support Rules', 'Installation Type', 'Product Key', 'License Terms', 'Setup Role', 'Feature Selection', 'Installation Rules', 'Instance Configuration' (which is highlighted), 'Disk Space Requirements', 'Server Configuration', 'Database Engine Configuration', and 'Error Reporting'. The main area of the window contains the following settings:

- Default instance
- Named instance: MSSQLSERVER
- Instance ID: MSSQLSERVER
- Instance root directory: C:\Program Files\Microsoft SQL Server\
- SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL11.MSSQLSERVER
- Installed instances:

Instance Name	Instance ID	Features	Edition	Version

Figure 11-1 SQL Server instance configuration (Default instance)

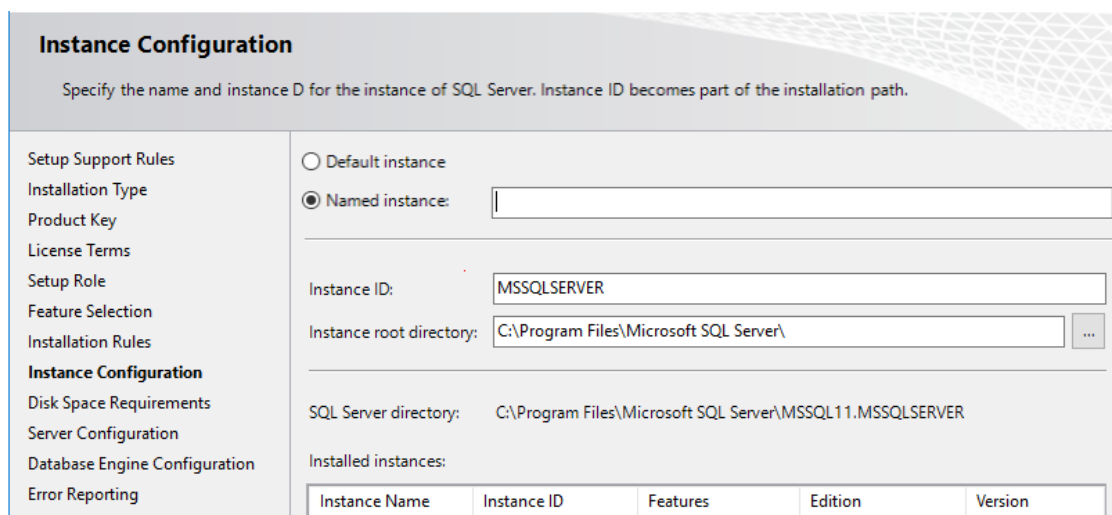


Figure 11-2 SQL Server instance configuration (Named instance)

11.1.2 Database authentication configuration

Another configuration step to take particular note of is the authentication types used to connect to the database. As seen on Figure 11-3, the authentication method can either be “Windows authentication mode” or “Mixed Mode”. By default, “Windows authentication mode” is selected. However, **we do recommend that this be changed to “Mixed Mode”**.

Should you choose to use “Windows authentication mode”, make sure that the current user is among the list of specified SQL Server administrators. If the current user account is not listed there, click on the “Add Current User” button to add the current user. To add other users, click the “Add” button and select the desired user to add to the list.

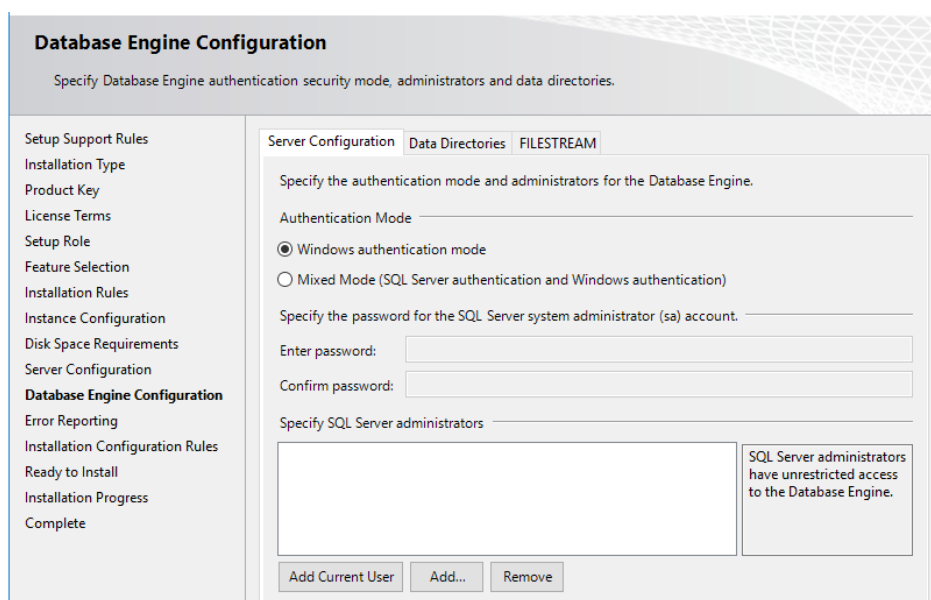


Figure 11-3 Server authentication type configuration (Windows authentication mode)

Choosing the “Mixed Mode” authentication as recommended will enable the password textboxes as seen on Figure 11-4. Take note that the password entered

here is for the “sa” username. Choosing this authentication method allows you to connect to the database using the sa account and the windows account. Ensure that the required windows accounts are listed among the list of server administrators. If not, use the “Add Current User” and or “Add” buttons to add the required users to the list.

The screenshot displays the 'Database Engine Configuration' wizard. The title bar reads 'Database Engine Configuration' with a subtitle 'Specify Database Engine authentication security mode, administrators and data directories.' The left sidebar lists various setup steps, with 'Database Engine Configuration' highlighted. The main area is divided into three tabs: 'Server Configuration', 'Data Directories', and 'FILESTREAM'. The 'Server Configuration' tab is active, showing the following configuration options:

- Authentication Mode: Windows authentication mode, Mixed Mode (SQL Server authentication and Windows authentication)
- Specify the password for the SQL Server system administrator (sa) account. Enter password: [text box], Confirm password: [text box]
- Specify SQL Server administrators: [empty list box]
- Buttons: 'Add Current User', 'Add...', 'Remove'

A note on the right side of the list box states: 'SQL Server administrators have unrestricted access to the Database Engine.'

Figure 11-4 Server authentication type configuration (Mixed mode)

11.2 Post installation configurations on MS SQL Server

After having installed MSSQLS locally, you need to ensure that the required protocols are enabled to allow EDUktiV successfully connect to the desired server. This is done through “SQL Server Configuration Manager” (Figure 11-5).

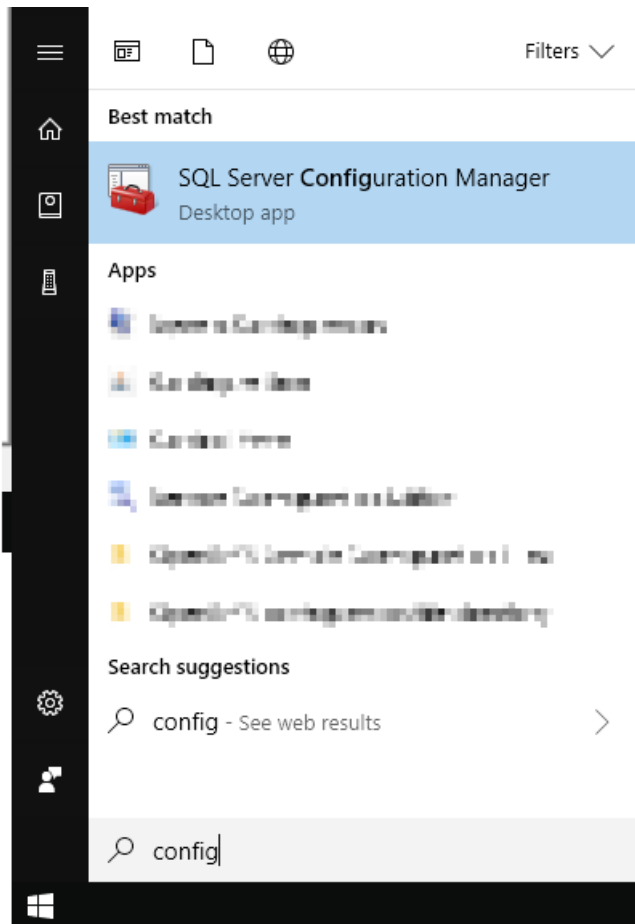


Figure 11-5 SQL Server Configuration Manager from Start menu

Opening this will open the configuration window shown on Figure 11-6. This will list the installed instances on the machine.

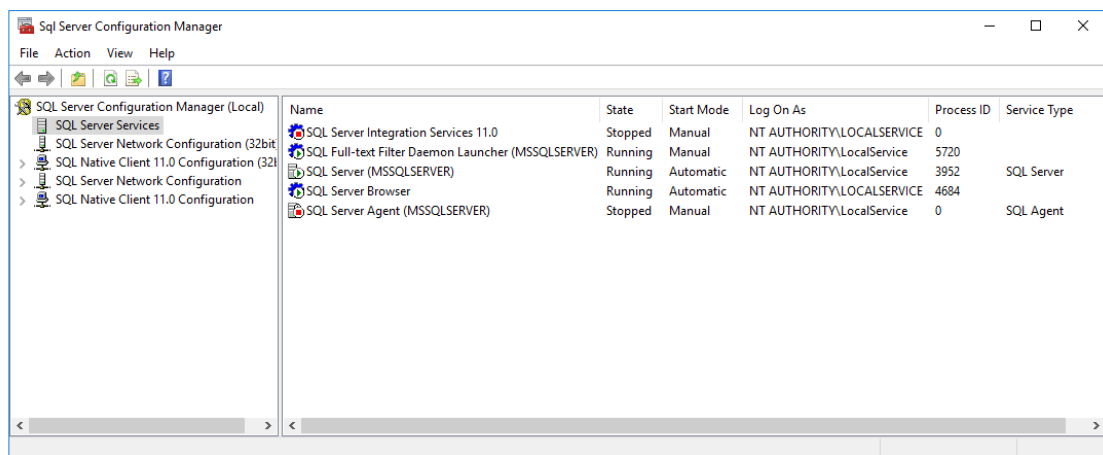


Figure 11-6 SQL Server Configuration Manager

11.2.1 TCP/IP Configuration

To set the TCP/IP protocols, expand “SQL Server Network Configuration” on the list displayed on the left side of the window. Expanding this will show a list of protocols for the installed server instance(s) currently present on the computer. Select the

protocols for the instance you wish to configure and the available protocols will appear on the list on the right as shown on Figure 11-7.

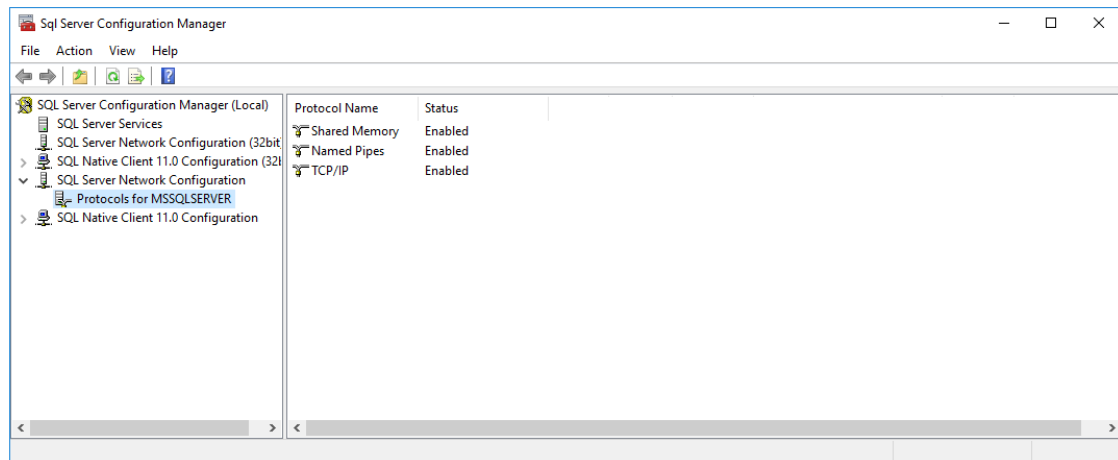


Figure 11-7 Server protocols

Make sure the status on all is set to “Enabled”. For any whose status is not set to “Enabled”, right-click on it and select “Enabled” from the list that appears. Changes the status will prompt a warning message (Figure 11-8)

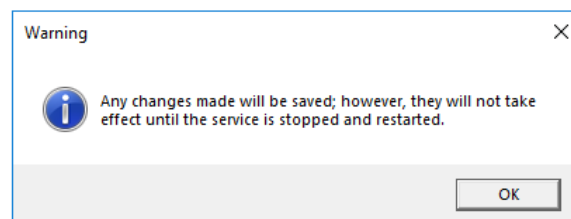


Figure 11-8 Configuration change warning message

Of particular interest is the “TCP/IP” protocol. Right-click on this protocol and select “Properties”. This should open a window as shown on Figure 11-9.

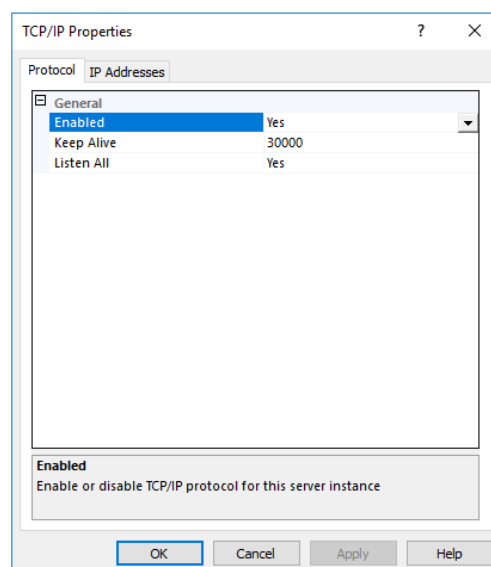


Figure 11-9 TCP/IP protocol properties

Select the “IP Addresses” tab to view the IP addresses and their respective configurations (Figure 11-10). For each of the IP addresses; IP1, IP10, IP12, IP2, IP3,..,IP9, make sure that “Enabled” is set to “Yes” and that “TCP Port” is set to “1433” as highlighted on Figure 11-10.

For the last of the IP on the list, IPAll, only set “TCP Port” to “1433”.

Once this is done, click on the “OK” button to save the changes. As before, you will be prompted with the warning message shown on Figure 11-8.

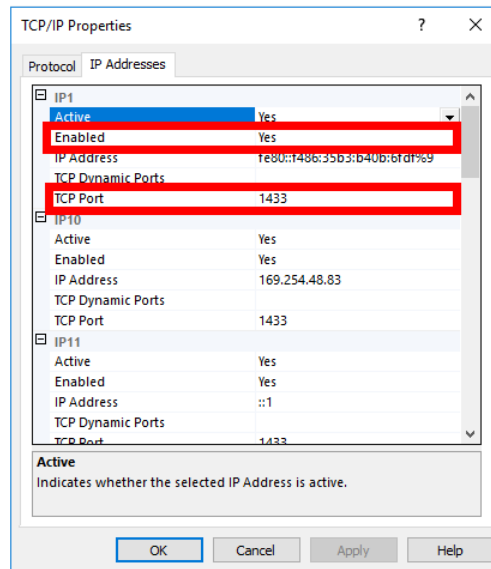


Figure 11-10 IP addresses

11.2.2 Server Instance

From the list shown on Figure 11-6 once can get the name of the installed instance. From the list on the right side of the window, every item named “SQL Server (InstanceName)” has the instance name between the brackets.

If the instance name is identified to be “MSSQLSERVER” as is the case on Figure 11-6, then the default instance is what is being used. Anything other than this implies that a named instance was used.

After getting the warning of changes being made (Figure 11-8) to the protocols, identify the instance on which the change was made, right-click the instance and select the “Restart” option (see Figure 11-11) to restart the server instance and effect the changes made.

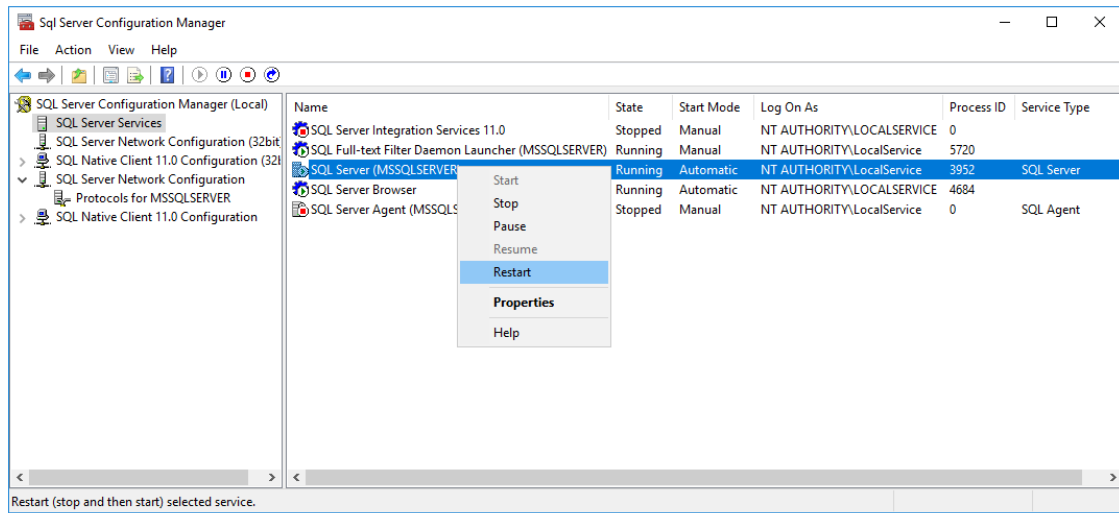


Figure 11-11 Restarting the server instance

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