UNIT-e

Handbook - Technical
Document version: 6.8
Issue date: June 2025

All Markets

Managing UNIT-e



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4.61 enhancements

The following enhancements have been introduced in this release:

- *Managing Documents in SharePoint* handbook:

  As the *UNIT-e SharePoint Integration* handbook (USPI.pdf) has been retired, references have been updated to point to the *Managing Documents in SharePoint* handbook (MDSP.pdf).



For details on enhancements from previous releases, refer to *Appendix A: Previous enhancements* (see page 212).

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If you are unable to find the information you require, the search facility in Adobe Acrobat enables you to search individual PDFs or the entire UNIT-e documentation catalogue (see page 15).

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Chapter 1:

Introduction

This handbook provides those responsible for the maintenance of your UNIT-e database (such as system managers) with an overview of the technical aspects of UNIT-e. It complements the *Working with UNIT-e* handbook (WWU.pdf), which is written for end users and explains how to use the system on a day-to-day basis. This handbook also directs you to more detailed information provided in application-specific handbooks, where applicable.

The following areas are covered:

- An overview of the database structure and how to maintain it.
- An overview of UNIT-e software, generic functionality and licensing.
- How to manage user access rights. This includes individual and group access and the use of LDAP (Lightweight Directory Access Protocol) to provide access for students or members of staff without the need to create a UNIT-e user account for each person.
- Managing the system settings used to configure applications and functions.
- Managing your reporting options.
- Setting up and maintaining workstations.
- Managing auditing.
- How the UNIT-e system can assist you in complying with the General Data Protection Regulation (GDPR).

This chapter includes the following:

- *Using this handbook* (see page 12)
- *Finding further information* (see page 15)

Using this handbook

- *Navigation* (see below)
- *Symbols* (see page 13)
- *Field help* (see page 14)
- *Enhancements* (see page 14)

Navigation

The handbook is arranged in a logical structure, to systematically take you through the processes required to set up and manage your data. However, you may wish to navigate to specific information within the document. In addition to the table of contents and the index, the following functionality is available to aid navigation:

- Cross-references:

  Cross-references to relevant associated information are provided throughout. As with the index, the page number shown is hyperlinked and may be clicked on to link directly to the section indicated.

- Retracing your viewing path:

  If you've jumped to another section by clicking on a page number or cross-reference, you can jump back to where you were using one of the following methods:

  - Select **View | Go To | Previous View** (or **Next View** to jump forward again).

  - Click on the **Previous Page View** button  (or the **Next Page View** button  to jump forward again). If these buttons don't appear on your toolbar you can add them as follows:

    i. Right-click anywhere on the toolbar and select **More Tools**.

    ii. Scroll down to the **Page Navigation Toolbar** option and make sure that it's selected.

    iii. Scroll down to the **Previous View** and **Next View** options within **Page Navigation Toolbar** and select them both. The **Previous Page View** and **Next Page View** buttons then appear on your toolbar.

  - Hold down the **Alt** key and use the left arrow to jump back to your original position. Similarly, hold down the **Alt** key and use the right arrow to jump forward again.

- Bookmarks:

  All headings in the handbook are bookmarked. A structured list of the bookmarks can be displayed in Adobe Acrobat and used to link directly to the required section, by either:

  - Clicking on the **Bookmarks** button  in the **Navigation Panel**.
  - Selecting **View | Navigation Panels | Bookmarks** from the menu bar.

- Searching:

  The Find facility provided in Adobe Acrobat Reader and Adobe Acrobat may be used to find a specific word or phrase within the handbook, as follows:

  1. Display the Find facility by either:
     - Selecting **Edit | Find** from the menu bar.
     - Pressing **Ctrl + F**.
  2. Enter the required word or phrase in the **Find** field 

 and press the **Enter** key.
  3. The page containing the first occurrence of the search term is displayed. Use the **Find Previous** and **Find Next** buttons  to move through the occurrences.

Symbols

The following symbols are used throughout the handbook, to indicate the type of information:



Accompanies a procedure:

1. Step one, etc.



Note: Accompanies additional points that should be taken into consideration.



More information: Accompanies a cross-reference to further information, either within the handbook itself or a related document.



Tip: Accompanies useful hints and tips that you may wish to act on.



Warning: Accompanies a serious warning that must not be ignored.



Technical: Accompanies technical information aimed at system managers responsible for setting up UNIT-e.



The **New** icon indicates areas of the handbook that have been updated (see page 14).

Field help

The majority of the field level help is compiled in a chapter at the end of the handbook. Each form discussed within the handbook is included, with details on each tab and field it contains.

The use of specific fields may also be documented within a procedure if they are significant for the task.

A list of figures is provided after the Index (see page 253) to enable you to quickly locate images.

Enhancements

An updated version of the handbook may be provided with a platform release, as a result of either enhancements to the software or to the handbook itself. An *Enhancements* section (see page 3) is included at the front of the handbook, highlighting these changes and their location in the handbook.

Enhancements made for previous releases are shown in *Appendix A: Previous enhancements* (see page 212).

Finding further information

The instructions in this handbook assume that you have a basic understanding of the UNIT-e system and its components (e.g. creating a record, performing a search, committing your work and rolling back data etc.). Please read the *Working with UNIT-e* handbook (WWU.pdf) if you need details of these generic processes.

Links to other relevant handbooks are provided throughout this handbook. Click on the hyperlink alongside the handbook name (e.g. (WWU.pdf)) to jump to that handbook.

In addition, all UNIT-e handbooks are supplied in the FHE knowledge base in ServiceNow, the customer Support portal. The current and past platform release notes and data sheets are also provided.

- *Using the FHE knowledge base in ServiceNow* (see below)
- *Searching the knowledge base* (see page 17)
- *Using ServiceNow - points to note* (see page 17)
- *Searching through downloaded PDFs* (see page 18)

Using the FHE knowledge base in ServiceNow

UNIT-e documentation is available from the FHE knowledge base in ServiceNow, the customer support portal.



Documents are provided in PDF format. PDF files can either be launched in Adobe Acrobat Reader (or Adobe Acrobat) or hosted in your web browser. Although they can be viewed satisfactorily in a web browser, the search capabilities are greatly reduced (i.e. it's not possible to search across multiple PDFs).

This behaviour is controlled via the **General Preferences** form within Adobe Acrobat. De-select the **Web Browser Integration** check box to prevent the PDFs being opened within your web browser.



To use the FHE knowledge base in ServiceNow

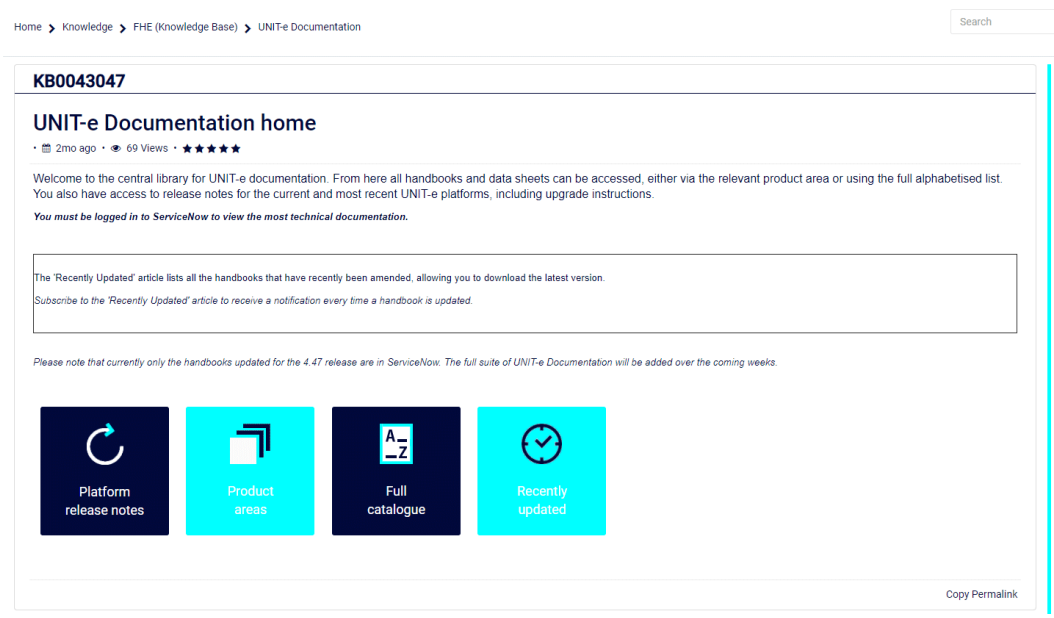


You must be logged in to ServiceNow to view the most technical documentation.

From the **UNIT-e Documentation home** page (Figure 1), you can navigate to the required documentation using the four options provided:

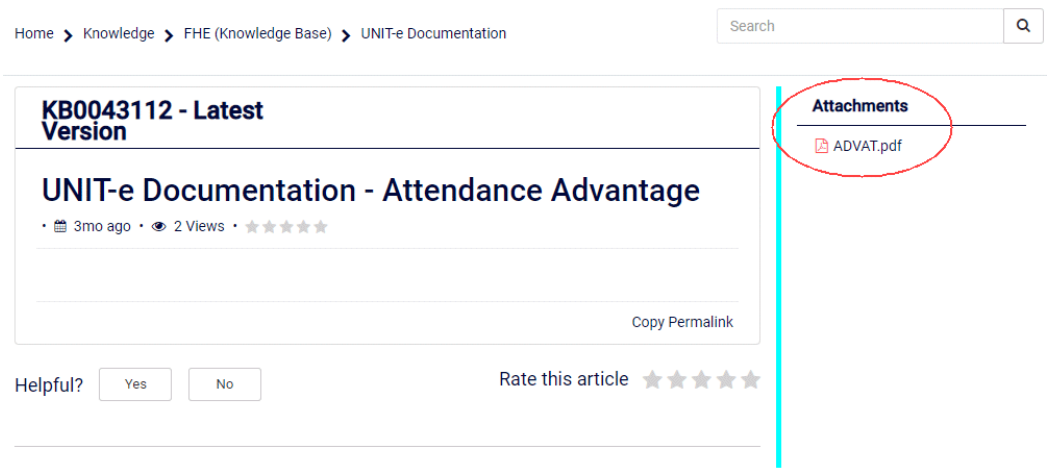
- **Platform release notes**: Takes you to the **UNIT-e Release Download** page, from where the latest platform release notes can be downloaded.
- **Product areas:** Links to the **UNIT-e Documentation - Product areas** page, from where you can navigate to the relevant product area page to view all available documentation relating to that product or market area (e.g. core (general), Finance, HE, Online Services, etc).
- **Full catalogue:** Takes you to a complete alphabetised list of the entire UNIT-e documentation catalogue.
- **Recently updated:** Links to the **UNIT-e Documentation - Recently updated** page, which provides links to download all of the most recently updated documentation, listed by the date on which they were updated. You may wish to subscribe to this article to receive a notification every time an updated handbook is available.

Figure 1: UNIT-e Documentation home page in ServiceNow



If you are navigating to documentation via the pages above, click on a document link to open the page/article for the document. From there, the PDF file can be downloaded using the link in the Attachments list on the right of the article (Figure 2).

Figure 2: Document attachments link

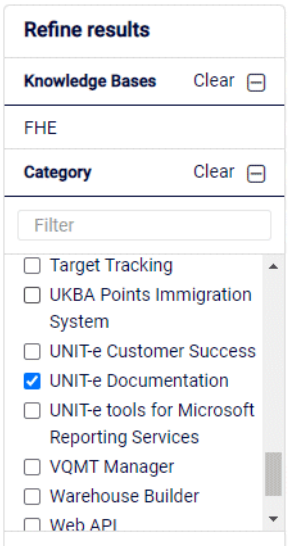


Searching the knowledge base

UNIT-e documentation can be accessed using the search facility in ServiceNow. From the Support portal home page, navigate to the UNIT-e knowledge base (Home page - Knowledge - UNIT-e (FHE)) and enter your search criteria in the **Search** field.

If you wish to refine your results by filtering on **Category** (Figure 3), ensure the **UNIT-e Documentation** category is selected in addition to any product area categories you may wish to select.

Figure 3: ServiceNow search - Refine results



The search facility in the Support portal doesn't include the content of attachments in the search. Key terms should still return the relevant documentation, but if the documentation you require isn't listed it's advisable to navigate to it using the Full catalogue or relevant product area pages (see above).

If you access a document page directly via the search results, the attached PDF is downloaded automatically.

Using ServiceNow - points to note

- You must be logged in to ServiceNow to view the most technical documentation.
- The cross-referencing/more information links in the documentation that link to other UNIT-e documents assume the PDF files are all in the same folder. Therefore, in order to use the links to navigate between documents they must be downloaded to one folder. This also allows you to use the built-in Adobe Acrobat/Acrobat Reader

advanced search facility (**Ctrl + Shift + F**, or **File | Advanced search**) to search across multiple PDFs (**All PDF Documents in** option).

An email address - unit-e.documentation@educationsoftwaresolutions.co.uk - is provided to enable you to pass on any comments about the documentation. This may be found on the reverse of the title page of every handbook.

You can access these in one of two ways:

- Search the entire handbook catalogue for any information you require, simply by entering key search words (see below).
- Browse the full documentation set using the help system (see page 15).

Searching through downloaded PDFs

If you have downloaded handbook PDFs stored in a single folder you can search all of the PDFs for a specified word or phrase.

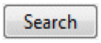
You must be using version 6 of Adobe Acrobat Reader or higher to use this facility. This software is available to download free of charge from the Adobe web site at www.adobe.com.

To carry out a search of all handbooks

1. Open Adobe Acrobat.
2. Open the **Search** form, either by selecting **Edit | Search** from the menu or by using **Shift+Ctrl+F**.
3. Select the **All PDF Documents in** radio button and search for the appropriate directory where your UNIT-e handbooks are stored. To do this:
   i. Expand the list of directories available to search by clicking on the **Documents** arrow key.

   ii. At the bottom of the list of directories is a **Browse for location** option. Click on this to open the **Browser for Folder** screen, where you can browse to the location where your documentation is stored.
4. Enter some appropriate search words in the **What word or phrase would you like to search for?** field and select the appropriate check boxes to indicate how you want to carry out the search (e.g. by searching for Whole words only, by making the search Case-Sensitive etc.).

5. Click on the **Search**  button to start the search. The system then carries out a search and displays all platform documents and handbooks with text that matches your search criteria.

6. You can expand any document to view the matches within that document and then click on an option to view the entry in the handbook.

Chapter 2:

About the UNIT-e database

UNIT-e is an MIS system for educational institutions, providing comprehensive functionality for all market sectors. The majority of the software is intended for back-office use but browser-based applications are also provided, enabling students and members of staff to access and maintain certain information via the Internet. In brief, the following functionality is provided:

- Storage and maintenance of student data and associated information such as enquiries, applications and enrolments, learning support, assessments, VQMT data, placements and UCAS entries. This includes functionality provided to assist you in complying with the General Data Protection Regulation (GDPR).
- Back-office and on-line attendance recording and reporting.
- Exams management.
- Timetable management and reporting.
- The production of FE and HE statutory returns.
- Maintenance and development of curriculum records, including curriculum balancing and rollover.
- Institution management including the maintenance of site and room records and facilities.
- Maintenance of organisational records for third parties such as employers and placement providers.
- Maintenance of staff records including posts and salary scales, contracts, holiday records and staff development.
- Finance management, including invoicing and payments and links to third party software.

- Student funding.
- Central management of user accounts, applications and configurations
- Powerful security, data masking and filtering.
- Reporting environment including data warehousing.
- Central management of email enabled reporting environment.
- Web reporting.

UNIT-e is a highly configurable system, designed to meet a wide range of user requirements. Data for the system is stored in a database, which resides on a central server. The database is accessed from workstations linked to the server by a network. Various applications act as an interface between each workstation and the stored data.

Understanding how data is stored within the UNIT-e system will enable you to easily select and extract the information you require.



You should always maintain a change log so that any additions or amendments to your UNIT-e database are recorded.

This chapter introduces you to the following aspects of the UNIT-e database:

- *Prerequisites for database configuration* (see page 23)
- *The UNIT-e data structure* (see page 27)
- *The UNIT-e data model* (see page 32)
- *System transfers and running scripts* (see page 40)

Prerequisites for database configuration

This section covers the prerequisites for setting up Oracle and SQLServer databases prior to running System Transfer scripts, which will automatically launch the Database Configuration Tool (DMDC) to keep database users, roles and triggers in sync with the UNIT-e system tables.

- *Notes for Oracle users* (see below)
- *Notes for SQL Server users* (see page 25)
- *SQL Server database functions installation* (see page 26)

Notes for Oracle users

The standard implementation of UNIT-e on an Oracle database consists of three separate databases, each containing a single UNIT-e schema (e.g. the live database contains a single live schema). User accounts and user groups are managed within the database.

As an Oracle user you must ensure that each database has a single schema before attempting an upgrade. In addition you must create a full export of the database and set up the underlying Oracle session for UNIT-e before starting an upgrade.

- *Assumptions* (see below)
- *Setting up the underlying Oracle session* (see page 24)

Assumptions

It's assumed that the following are in place. Make sure that the source and destination databases conform to these assumptions:

- The Oracle database is a supported version - check the Support Matrix for details.
- The UNIT-e data tablespace is UNITE_DATA.
- The UNIT-e index tablespace is UNITE_INDEX.
- The UNIT-e archive tablespace is UNITE_ARCHIVE.

- The UNIT-e licence user has CONNECT, RESOURCE and DBA rights to the database.
- There are no public synonyms, roles or triggers other than those supplied.

Setting up the underlying Oracle session

If you have a large number of user groups (i.e. greater than 30), the Oracle initialisation parameter max_enabled_roles must be increased. We recommend that you change this parameter in the ini.ora file to 100.

To set up the underlying Oracle session for UNIT-e

1. Using SQL Plus, log in as the **sys user**, (**sys as sysdba**).

   Don't log in as the system user.

   If you don't know the sys password, carry out the following:

   i. Using SQL Plus, log in as the UNIT-e user, using the user name and password defined in your licence file (Capita.lic).

   If you don't know your user name and password it can be obtained from the Service Desk.

   ii. Execute the following SQL statements, inserting the information inside the {} brackets:

   - alter user sys identified by {new password};
   - commit;
   - connect sys as sysdba
   - enter {new password} at the password prompt

   iii. The system should return with a connected message and an SQL prompt.

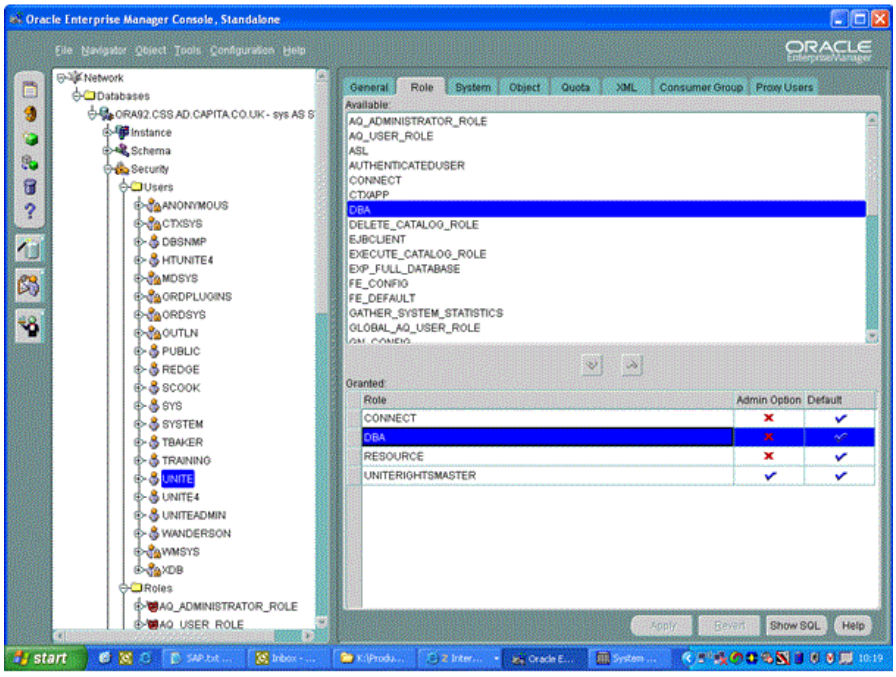
2. When you're connected as the sys user, execute the following statements:

   - Grant select on v_$session to {unite username} with grant option;
   - Create view UNITE_SESSION as select * from V_$session where audsid = userenv('sessionid');
   - Create public synonym unite_session for unite_session;
   - Grant select on UNITE_SESSION to public;
   - Grant select on v_$session to public;

- Commit;
- Exit

The UNIT-e licence user must have DBA rights (Figure 4).

Figure 4: UNIT-e licence user with DBA rights



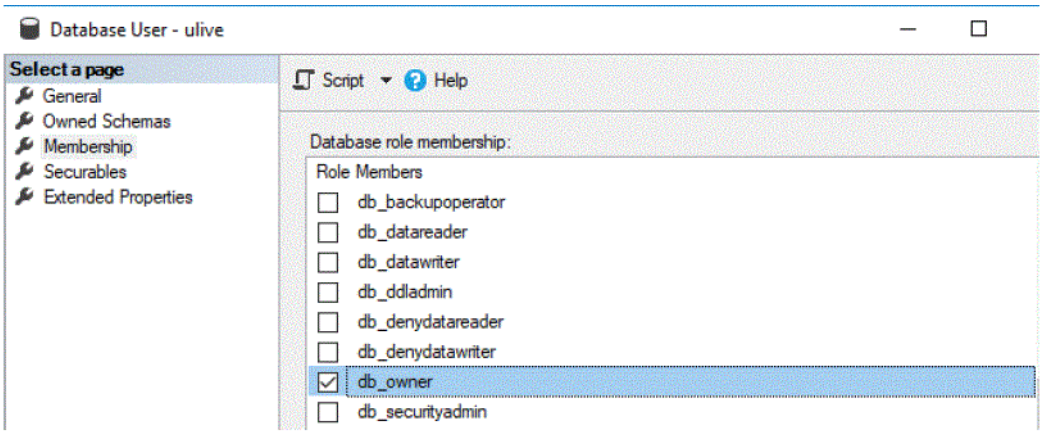
Notes for SQL Server users

It is recommended that you set up the UNIT-e database as a Contained Database.

You can choose to retain the licence user with the existing external login account (security\logins) but should note that only db_owner permissions are required; sysadmin privileges are no longer required.

Alternatively you can set up the licence user (e.g. database ulive\security\user) as a contained user within the UNIT-e database with db_owner permissions (Figure 5).

Figure 5: Licence user contained with the UNIT-e database



There's no option to bypass the strong password policy for contained users so you must request a new Capita.lic file from the Support Team with a new strong password for the licence user.

SQL Server database functions installation

Refer to the *UNIT-e Tools for Reporting Services* handbook (UTORS.pdf) for information about this process.

The UNIT-e data structure

The way in which data is stored in your database is defined by a data dictionary. The combination of a data dictionary and data make up the UNIT-e Core.

The data dictionary defines how the data is stored using property definitions and classes. The data is then stored as defined in the data dictionary, as property values and records.

This method of storing data provides great flexibility, enabling the property definitions to be re-used in many different classes. For example, the Surname property definition is included in various classes such as Student and Staff, because a person can be a student, a member of staff, or potentially both.

- *About properties* (see below)
- *About classes* (see below)
- *About records* (see page 28)
- *About system IDs* (see page 29)

About properties

A property identifies an individual item of data stored in the database (e.g. Surname). Each property is defined by **Name**, **Reference** and **Type** to ensure consistency. When a piece of data is entered in a property it represents a property value. The table below (Table 1) shows two simple examples using Surname and Date of birth.

Table 1: Example properties

Property	Property reference	Property type	Example value
Surname	surname	Text	Smith
Date of birth	dob	Date	01-Jan-1995



Appendix B: Property types (see page 214) lists and defines the data types that can be applied to properties.

About classes

Property definitions can be grouped together to present related information, such as all the information about a person. This is achieved by defining a class, which determines how, where and what information is stored by encompassing a set of property definitions. The table below (Table 2) shows the properties that make up the Person class.

Table 2: Person class properties

Property	Property reference	Property type
Id	id	Id
Reference	reference	Reference
Surname	surname	Text
Forenames	forenames	Text
Title	title	Lookup
Gender	gender	Lookup
Date of birth	dob	Date
Place of birth	pob	Text
Current address	personaddress	Link
Current telephone	persontelephone	Link
Deceased	deceased	Flag
LDAP account required	ldaprequired	Flag
LDAP account exists	ldapexists	Flag



A property can be included in more than one class.

About records

Data values that are stored in the database for a particular class are called records. Records always take the name of their related class. A record is a single instance of a class, therefore the database may contain thousands of records for a single class (e.g. many student records for the Person class).

Whilst the class consists of property definitions, a record contains the property values. For example, a Person record could contain property values for Surname (Smith), Forenames (John) and Date of birth (01-JAN-1972).

About system IDs

Each record that you create is allocated a sequential system ID number. This number doesn't appear on any screens but you can report on it by selecting the ID property associated with every class or base class (as shown in Table 2 on page 28). This number is made up of the database instance and the next available value (padded to 12 characters) as follows:

- **Database instance:** A three character value (e.g. '501').
- **Nextval:** The next number in the sequence (either the nextval sequence from caps_id if Oracle or the nextval+1 value from caps_id if SQL Server). This is padded with zeros to make it 12 characters (e.g. '123456' is padded to '000000123456').

Using the above examples, the ID would be a 15 character value; '501000000123456'.

Dealing with duplicate system ID (SQLServer only)

On SQL Server sites only, there was a fault in an internal .NET method used by a few processes to create a batch of IDs before creating a range a of records. As a result, a number of IDs may be duplicated in your database, usually between two separate classes. This has no effect on UNIT-e processes **except** if one of the records has hotlinks or alerts linked to it. In this situation the hotlinks or alerts would be visible when accessing records in both classes, only one of which would be correct (e.g. when opening an activity you would have access to an unrelated student photograph or alert).



This mainly affects UNIT-e Resource Manager (2) split activities, room and staff utilisation generation, ILR data extract and HESA data extract.



To deal with duplicate system IDs

1. Make sure you have a C:\Capita folder.
2. Log in to QX and run the **Duplicatecheck.sql** script to find if you have any duplicates. This creates a list of duplicates in C:\Capita\duplicates.csv.



This script is available from **Database Setup\SQLServer Duplicate IDs Cleanup\1. Duplicate IDs check.**

3. Click **Yes** when prompted.
4. If the file is 0 bytes there aren't any duplicates. If duplicates are found, check that the following still apply:
   - You have a backup of the database.
   - All users are logged out.

- Windows Services is stopped.
- Warehouse routines and websites are stopped.

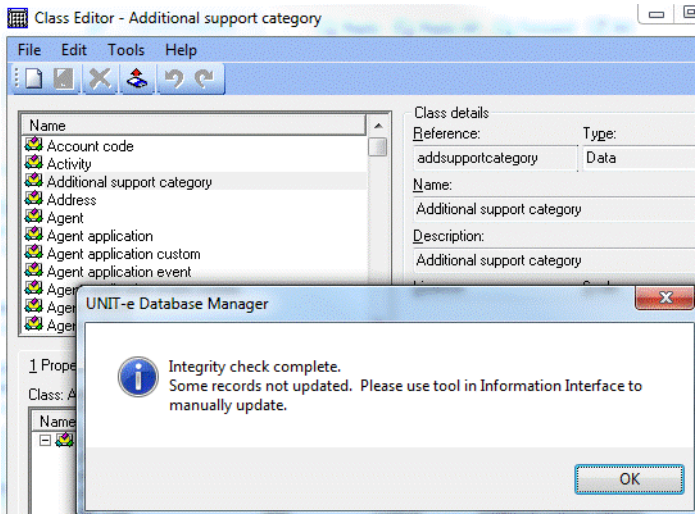
5. Go into UNIT-e Database Manager (Class Editor) [UDMCE.exe] and run the **Enforce integrity** option from the **Tools** menu.



This may take a while to run, depending on the number of duplicates and whether they affect classes that have many links (e.g. Person).

This routine attempts to automatically resolve all conflicts with hotlinks and alerts by checking which classes are already linked to hotlinks or alerts. Any record that can't be automatically resolved will be logged and a form will be available in the **Tools** menu of UNIT-e Information Interface to remap hotlinks and alerts to the correct class. If there are some records to fix manually you will be presented with the message below (Figure 6), otherwise it will say that the process is complete.

Figure 6: Class Editor Integrity check message



6. Log in to UNIT-e Information Interface, go to the **Tools** menu and select the **Check Linked Records** option (Figure 7) to open the **Linked Records** form (Figure 8).

Figure 7: Check Linked Records

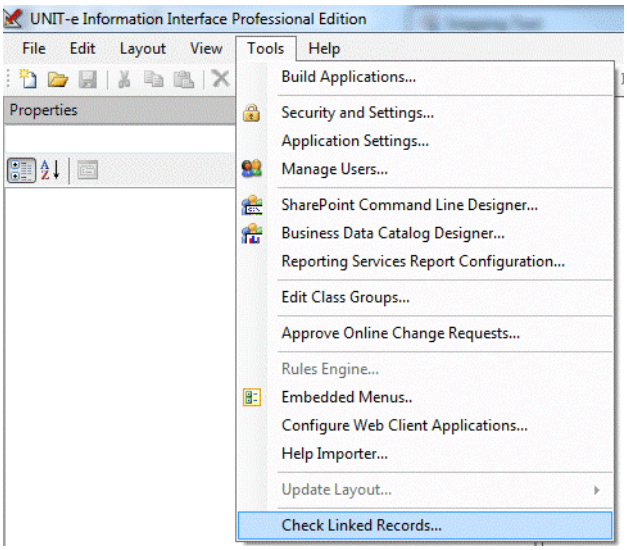
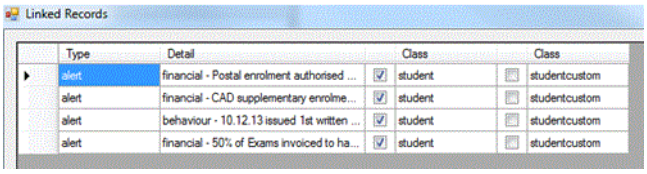


Figure 8:
Linked Records



7. Check the **Detail** field for each line and decide which of the two listed classes the alert or hotlink should be linked to (in the example shown in Figure 8 the two classes are Student or Student Custom).

8. Tick the appropriate class and then click **Update**.

9. The rows disappear and the next time you log into UNIT-e Information Interface you won't see the **Tools** menu item **Check Linked Records**.

The UNIT-e data model

The UNIT-e data model is a term used to describe how the elements of the database (such as classes and lookups) are interrelated to provide a structure that enables you to capture and maintain data. The model encompasses the following concepts:

- *Extended classes* (see below)
- *Linked classes* (see page 34)
- *Custom classes* (see page 34)
- *Events classes* (see page 35)
- *Defaulting values* (see page 36)
- *Lookups* (see page 38)

Extended classes

Classes don't exist in isolation, but are related to each other through the concept of class extension. This means that information common to different classes can be stored in a base class, which can then be extended for each particular class as required.

Base class

A base class is a class definition that doesn't inherit properties from any other classes. It's the most basic class in any particular series of class definitions, as it only contains the fundamental property definitions.

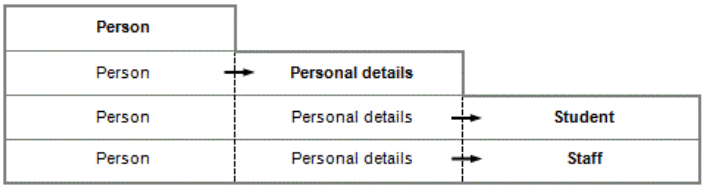
Class extension

A class extension refers to a base class that's extended to contain further properties for a particular purpose. Class extensions define new classes that can be referenced independently, and have their own name. The extended class inherits all the properties of the base class, in addition to the extended properties it defines.

The following diagram (Figure 9) uses the Person class as an example. Within your institution, a person is likely to be referred to as either a student or a member of staff.

Rather than creating two classes which both contain the standard information of Surname, Forename, Date of Birth etc., four classes are defined; the original base class and three class extensions.

Figure 9: Extended classes



The following table (Table 3) shows how the base class is extended to share common data with other classes.

Table 3: Examples of the Person class extended classes

Person	Person Details	Student	Staff
Surname	Surname	Surname	Surname
Forename	Forename	Forename	Forename
Date of birth	Date of birth	Date of birth	Date of birth
Title	Title	Title	Title
Gender	Gender	Gender	Gender
	Disability	Disability	Disability
	NI number	NI number	NI number
	Vehicle	Vehicle	Vehicle
	Vehicle registration	Vehicle registration	Vehicle registration
		Student reference	Staff reference
		First contact	Staff contact
		First enrolment	Staff appointment

Person is the base class contains properties relating to all people.

Personal Details provides an extension of the base class. It inherits the **Person** properties and defines further property definitions relating to people who are likely to a part of your institution.

Student provides a further extension of the **Personal Details** class. It inherits the **Person** and **Personal Details** properties, and defines its own property definitions relating specifically to students.

Staff also provides a further extension of the **Personal Details** class. It too inherits the **Person** and **Personal Details** properties, and defines its own property definitions relating specifically to staff.



This principle can be examined using a tool called the Class Browser, which is available in UNIT-e Report Generator. Refer to the *UNIT-e Report Generator* handbook (URG.pdf) for further details.

Linked classes

Another way of relating classes to each other is to link them. This also reduces the number of required property definitions and the amount of data stored in the database.

Links are created between classes by storing the identifying property value of another record within the class. This defines a relationship between the class containing the linking property and the class whose identifying property is stored. Link properties have a **Type** of 'Link' and can only link to one specific class. An example is the Enrolment class, which is linked to Student via Person Id.



This principle can be examined using a tool called the Class Browser, which is available in UNIT-e Report Generator. Refer to the *UNIT-e Report Generator* handbook (URG.pdf) for further details.

Custom classes

The UNIT-e data model provides pre-defined classes for all areas of functionality. In addition it also provides custom classes, which can be amended to meet the specific requirements of your institution. These classes are provided solely for your own use and won't be changed by upgrades to the database. Examples of custom classes include:

- Enrolment Custom
- Exam Board Custom
- Module Custom
- Module Event Custom

These classes are defined in the data dictionary and contain the following property definitions:

- Four text fields
- Four reference fields
- Four number fields
- Four code fields
- Four date fields

You can re-label properties from these classes to meet your requirements.



When making changes, note that the system always recognises a property by its property name rather than a particular label.

For example, the property name for one of the fields is 'Custom reference 1' but this could be re-labelled to read 'Parking Permit' on a form instead. However, when selecting the property definition for other purposes such as reporting, 'Custom reference 1' is listed rather than 'Parking Permit'.

A lookup property called **Type** is available in all custom classes, enabling you to change labels in certain contexts. Once set up, the labels of custom classes change according to the selected **Type**.



Refer to *Altering labels* (see page 111) for further information.

Events classes

Event classes are provided to record events for a variety of purposes. Examples of events classes include:

- Organisation Event
- Application Event
- Module Event

These classes are defined in the data dictionary and include the following property definitions:

- Name
- Reference
- Start
- End
- Type
- Outcome
- Status
- Notes

Defaulting values

There are two types of defaulting available in UNIT-e.

- *Insert defaulting* (see below)
- *Update defaulting* (see page 37)

Insert defaulting

Insert defaulting occurs when a user creates a new record or links two existing records and the system automatically enters values in certain fields. For example, when you create an Enrolment record, the **Previous School**, **Employer** and **Sponsor** values (among others), are defaulted to the equivalent properties in the Enrolment record.



A full list of defaults is given in the Property Defaulting datasheet.

Adding additional insert defaulting

Although UNIT-e provides a comprehensive set of defaults, it's possible to use system-generated references to apply addition defaulting. This is achieved by specifying a **Template** that doesn't change as the **Value** is increased, so the same value is defaulted into every new record.



To add additional insert defaulting

Access:	UNIT-e Database Manager (Business Rules) [UDMBR.exe]
Screens:	*Business Rules*

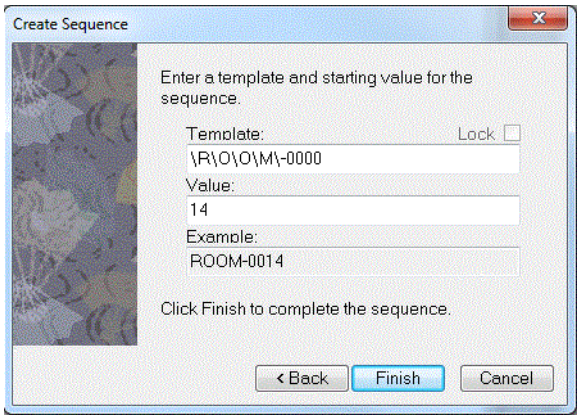
1. Add a new System Reference in the usual way via UNIT-e Database Manager (Business Rules) [UDMBR.exe].



This process is explained in detail in the section on 'Adding sequence rules' in the *UNIT-e Database Manager (Tools)* handbook (UDMTL.pdf).

2. When you get to the second part of the **Create Sequence** form (Figure 10), specify the **Template** as the value to be defaulted inserting a "\" character before each letter. For example, to default the value "ROOM" followed by a number, enter 'R\O\O\M\-0000'.

Figure 10: Create Sequence form



Overriding insert defaulting

In certain circumstances the user has the opportunity to override the defaulting imposed by System defaulting. For example, when creating Block Enrolments the user can specify a Fee Band to use instead of the System default for a particular module.

Update Defaulting always overrides any System Defaulting or User Overrides.

Some examples of user overrides are as follows:

- Overrides on forms
- Block tools such as Block Enrolment
- Overrides in reports
- Block Application to Enrolment tool

Update defaulting

When a record is updated after it has been created, update defaulting is applied. This can be setup in one of the following ways:

- *By Default rule* (see below)
- *By Validate rule* (see page 38)

By Default rule

This is defined using Default business rules which specify a source and a destination property and class. When the source class property is updated by a user, the value is defaulted into the destination class property for all linked records.

An example is where a rule is specified from Module Reference to Enrolment Reference and after enrolling 10 Students the Module Reference is changed. The updated value is defaulted into all 10 Enrolment records when you save the change to the Module.

The source and destination property must adhere to the following:

- Not be from the same class.
- Destination is from child class of the Source property.



As large amounts of data may be copied for default rules, performance of UNIT-e may be affected. You should therefore carefully consider your requirements before creating default rules.



This process is explained in detail in the section on 'Adding default rules' in the *UNIT-e Database Manager (Tools)* handbook (UDMTL.pdf).

By Validate rule

A particular type of Validate business rule can be setup for defaulting data. These default Validate rules, which are set up via UNIT-e Database Manager (Business Rules) [UDMBR.exe], enable you to default a value into a property when another property equals a specified value.

Validate rules are added in the normal way via the **Business Rules** form. Ensure you select the **Enabled** and **Default** check boxes.



This process is explained in detail in the section on 'Adding validate rules' in the *UNIT-e Database Manager (Tools)* handbook (UDMTL.pdf).

Lookups

Lookups are items that are available for selection from a lookup pick-list on a form. A set of lookup values is contained in a lookup list.

Although the lookup list for a specific pick-list is pre-defined (supplied by UNIT-e), you can usually add or edit its values as required. By restricting the values available for selection in this way you can ensure consistency of data entry across your institution.

For example, the 'Module type' lookup list contains items that are used to identify the course type. You can add or delete values within an existing lookup list to match your institution's requirements.

Some lookup lists are provided when your UNIT-e system is first installed, and these may be supplemented by new lookup lists whenever you're licensed to use a new product.



The 'Maintaining lookups' chapter of the *UNIT-e Database Manager (Tools)* handbook (UDMTL.pdf) gives further information about lookups, and the *Working with UNIT-e* handbook (WWU.pdf) explains how to use pick-lists.

Lookup modes

Lookup pick-lists can be displayed in the following modes:

Minimised

Minimised lookup pick-lists display only the most commonly used values. For example, the minimised lookup list for the Person Title pick-list might contain only Miss, Mr, Mrs and Ms.

Maximised

Maximised lookup pick-lists are used to display all available values, including those not commonly used. For example, the maximised lookup list for the Person Title pick-list might contain Miss, Mr, Mrs, Ms, Prof, Dr, Br, Rev and Sir.



Values to be included in minimised lists are flagged in UNIT-e Database Manager (Lookups) [UDMLK.exe]. Users can then choose to maximise or minimise pick-lists on the forms they're using.

Context Filtered

Context Filtered lookup lists are provided to improve data integrity. They aid data entry by preventing the user from selecting lookup values that are invalid for a particular type of record.



Care should be taken when adding context lookups as this may affect performance.



This process is explained in detail in the section on 'Context filtered' lookup modes in the *UNIT-e Database Manager (Tools)* handbook (UDMTL.pdf).

System transfers and running scripts

The following processes are covered in detail in other handbooks but are included here to give you an overview of system transfers and the use of scripts.

- *Updating your database* (see page 40)
- *Transferring information between databases* (see page 41)
- *Viewing script details* (see page 41)

Updating your database

Scripts provided by UNIT-e are used to add new items to your database (e.g. class definitions and pick-list reports). Two sets of scripts are provided in each UNIT-e release:

- **Scripts-Full** - Maintained to provide a full catalogue of all components produced (that are still supported). Updated for each production release with any changes since the previous production release. Only required on initial implementation and in some support situations.
- **Scripts-Upgrade** - Used in every release to provide only the changes made since the previous production release. Required for every upgrade.

There are two ways of importing system components into your database:

- Using the **Automated Upgrade Wizard**
- Using the **System Transfer** form

The method that you choose depends on the level of control you require. The **Automated Upgrade Wizard** is a fast way of dealing with a number of scripts, whereas the **System Transfer** form enables you to deal with one script at a time, viewing the individual components within each script.



Both of the above methods of updating your database are covered in the *UNIT-e Database Manager (System Transfer)* handbook (UDMST.pdf).



If a new class is imported into the database the **Database Configuration Wizard** runs automatically after the script has been imported (see page 42).

Transferring information between databases

Scripts can also be used to transfer information between a live and training database. Information is transferred between databases using the **Import** and **Export** functions in UNIT-e Database Manager (System Transfer) [UDMST.exe].



Refer to the *UNIT-e Database Manager (System Transfer)* handbook (UDMST.pdf) for further details.

Viewing script details

You can view the contents of a script file by opening it in UNIT-e Database Manager (System Transfer). The elements are colour coded to indicate whether they already exist in the database, as follows:

Blue - The element does not exist in your database.

Black - An identical element exists in your database.

Red - The element exists in your database but is different (it may require updating).

You can untick elements to remove them from the import process if they're not required.

If you import an element that already exists in your database a backup is created to enable you to restore the element as required.



Refer to the *UNIT-e Database Manager (System Transfer)* handbook (UDMST.pdf) for further details.

Database configuration

Access:	UNIT-e Database Manager (Data Configuration) [UDMDC.exe]
Screens:	*Database Configuration Wizard*

UNIT-e Database Manager (Database Configuration) [UDMDC.exe] provides the following functionality:

- It enables you to transfer any auditing business rules set up in UNIT-e Database Manager (Business Rules) [UDMBR.exe] into database triggers. No auditing will take place within UNIT-e unless the Database Configuration wizard has been run.
- It creates the required triggers for real-time transform of Attendance Marks.
- It adds a versionstamp column to all UNIT-e tables. This column is hidden from UNIT-e users and is used exclusively by .NET applications to manage record locking.

In order for the auditing triggers to be created, your UNIT-e users and UNIT-e groups must first be mapped to specific database accounts and roles using UDMDC.

In SQLServer, each database account created will automatically inherit the rights of the licence user.

In Oracle, all database users created are assigned to the UNITERIGHTSMASTER role, which is granted rights to all UNIT-e tables.



Underlying table synonyms and permissions are not re-initialised if they already exist.

The **Database Configuration Wizard** runs automatically when any of the following procedures are carried out:

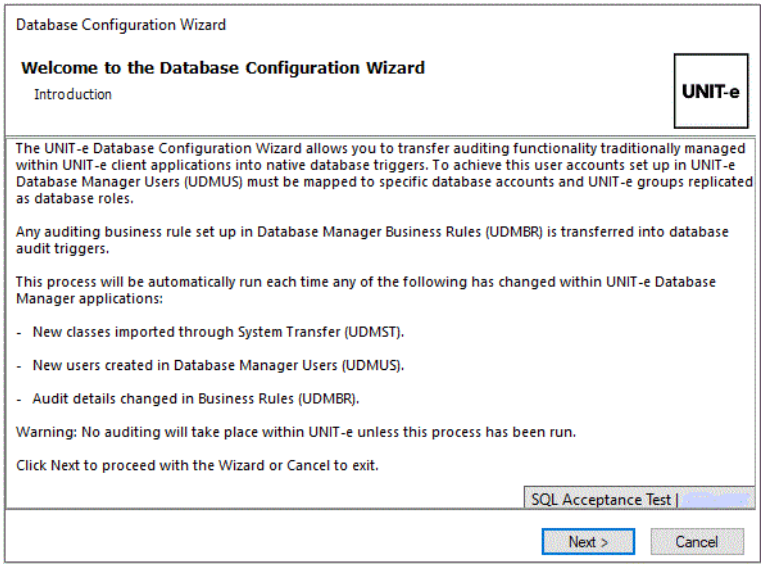
- New classes are imported via UNIT-e Database Manager (System Transfer).
- New Users are created via UNIT-e Database Manager (Users).
- Audit Business Rules are created or edited via UNIT-e Database Manager (Business Rules).
- Masks or Filters are created or edited via UNIT-e Database Manager (Users) [UDMUS.exe].



To use the Database Configuration Wizard

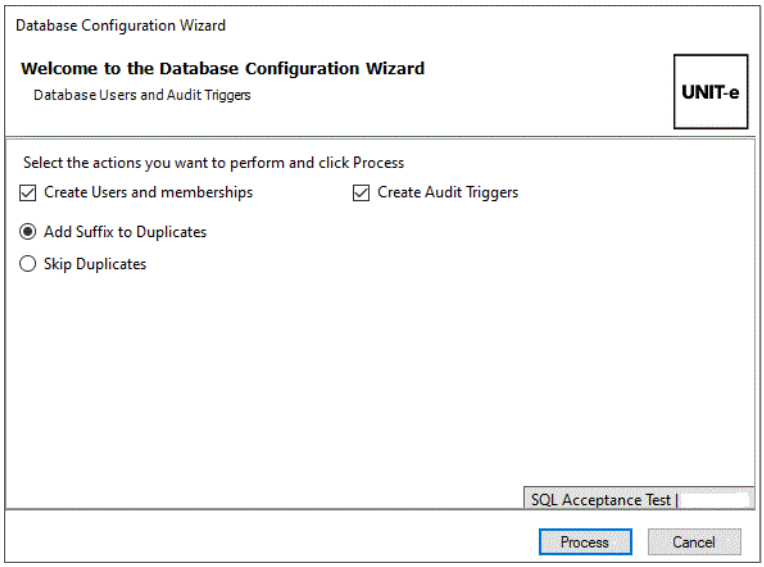
1. Run UNIT-e Database Manager (Database Configuration) [UDMDC.exe] to display the **Introduction** form (Figure 11).

Figure 11: Database Configuration Wizard - Introduction



2. Click **Next** to proceed to the **Database Users and Audit Triggers** form (Figure 12).

Figure 12: Database Configuration Wizard - Database Users



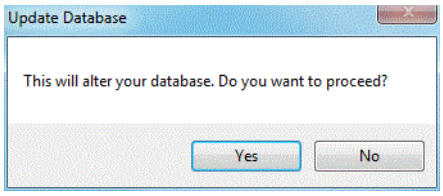
3. Use the check boxes to specify whether you wish to **Create database users and memberships** and/or **Create Audit Triggers**. The **Add Suffix to Duplicates** and **Skip Duplicates** radio buttons control how the process deals with duplicate users. If you skip duplicates it won't create a database user if a matching user already exists. If you add a suffix it will add a counter to the database user. For example, if you have database users 'officeadmin' and 'officeadmin1' in the database already and you have re-initialised the database connection for 'officeadmin', when you run DMDC it will create 'officeadmin2' in the database and connect 'officeadmin' to 'officeadmin2'.

4. Click **Process** to proceed. The system displays a message asking you to confirm that you wish to proceed (Figure 13). Click **Yes** to continue.



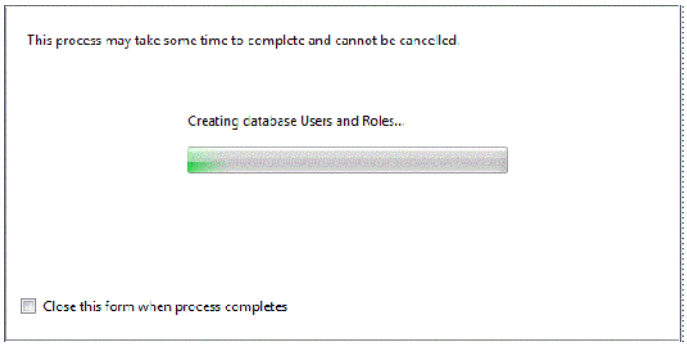
The process may take some time to complete and can't be cancelled.

Figure 13: Proceed message



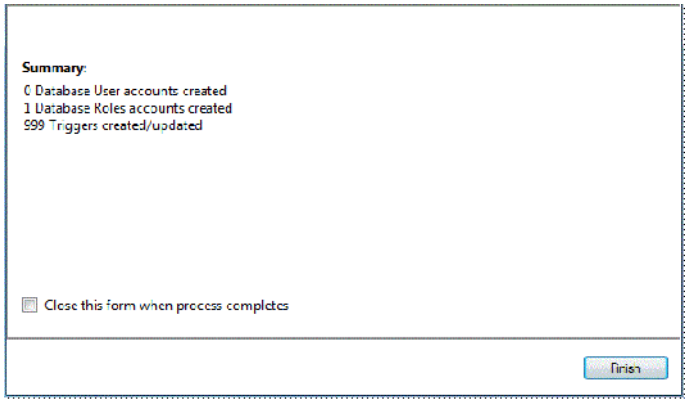
5. The **Database configuration in progress** form is displayed as processing takes place (Figure 14). At any point during the process you can select the **Close this form when process completes** check box, if required.

Figure 14: Database Configuration - in progress



6. If you selected the **Close this form when process completes** check box the application closes when the process is complete. If you didn't select the check box, the **Database Configuration complete** form is displayed (Figure 15), showing the updates made.

Figure 15: Database Configuration complete



7. Click **Finish** to close the **Database Configuration Wizard**.

If you selected the **Create users and memberships** check box and some database user accounts weren't created successfully, the system generates an error log listing the corresponding UNIT-e user accounts. This file can be found in the DM product folder.

Chapter 3:

An overview of UNIT-e software

The UNIT-e system is made up of many different applications. Those available to you depend on the requirements of your institution and whether you're licensed to use the software. Individual applications have their own handbooks where they're explained in detail, but this chapter gives you an overview of common elements and licensing requirements.

This chapter includes the following:

- *About UNIT-e products and applications* (see page 46)
- *UNIT-e licences* (see page 49)
- *The UNIT-e interface* (see page 58)

About UNIT-e products and applications

A typical installation consists of the UNIT-e Core data dictionary and database and various tools and products. This section gives a brief overview of the various products and tools available.

- *System products and tools* (see below)
- *Data entry products* (see page 47)
- *Browser-based applications* (see page 47)
- *Information Interface* (see page 47)
- *Web Client Tools* (see page 48)

System products and tools

System products and tools enable you to configure and manage your UNIT-e system.

- UNIT-e Database Manager - used to set up, administer and configure the system.



Refer to the following handbooks for further details:
UNIT-e Database Manager (Settings) (UDMSE.pdf)
UNIT-e Database Manager (System Transfer) (UDMST.pdf)
UNIT-e Database Manager (Tools) (UDMTL.pdf)
UNIT-e Database Manager (Users) (UDMUS.pdf)

- UNIT-e Office Builder - enables you to present reports created in UNIT-e Report Generator in a more convenient and usable format (e.g. by importing the report into a spreadsheet).



Refer to the *UNIT-e Office Builder* handbook (UOB.pdf) for further information.

- UNIT-e Report Generator - used to extract data from the database for reporting or other purposes.



Refer to the *UNIT-e Report Generator* handbook (URG.pdf) for further information.

- Tools to facilitate the use of third party products:
  - Managing Documents in SharePoint (MDSP.pdf)
  - UNIT-e Tools for Microsoft Reporting Services (UTORS.pdf)
  - UNIT-e XML Exporter and Tools for Office (UXMLTO.pdf)

Data entry products

Various products are available to enable you to enter, maintain and retrieve data. These may be in II (Information Interface), VB or Proforma formats.



Refer to the handbook for each individual product.

Browser-based applications

Various browser-based applications are available. A browser-based equivalent of UNIT-e Workplace is provided by UNIT-e Launch Pad.



Refer to the *Using UNIT-e Launchpad* handbook (ULP.pdf) and handbooks for individual products for further information.

Information Interface

This software enables you to design and create your own bespoke UNIT-e user applications, which then apply your existing system data. UNIT-e Information Interface is available in Standard Edition, Advanced Edition, Professional Edition and Web Edition.



Refer to the *UNIT-e Information Interface* handbook (UII.pdf) for further information.

Web Client Tools

Web Client tools give you access to additional functionality, and are available from a **Tools** menu tab in II applications.

There's a short delay when the tool is opened for the first time in the current session, but this delay isn't experienced by users subsequently opening any Web Client tool in the same session.



Refer to the *Managing UNIT-e Launchpad and II Web Client* handbook (MLP.pdf) for further information about Web Client.

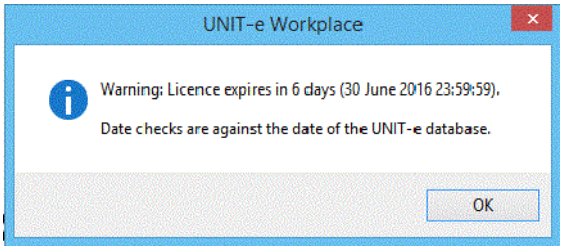
UNIT-e licences

You must have a licence to use each UNIT-e product as your UNIT-e licence file contains connection information required to run the UNIT-e software.

Licences are required for all UNIT-e applications. They are generally available for complete products, allowing individual applications within that product to be used, but in some cases licences may be required for individual applications or even for specific features within an application. Each time an application is run, the Licence class in your database is checked to ensure that a valid licence exists for the functionality that you're attempting to use.

All licences are valid for one year, from 1st September to 31st August. When you're within one month of the expiry date the system displays a warning message whenever you enter an application (Figure 16). This warning counts down the number of days left until your licence expires. If your licence expires before you receive a new one, there is a grace period during which you are still able to use your UNIT-e software, but you should contact the Support Desk as soon as possible if this situation arises, as we aim to provide new licences well within the expiry period.

Figure 16: Licence expiry message



This section includes the following:

- *Storing the licence* (see page 50)
- *Importing new licences* (see page 50)
- *Viewing licences* (see page 52)
- *Editing registry keys* (see page 53)
- *Checking the licence expiry date* (see page 53)
- *Suppressing the licence expiry message* (see page 54)
- *Viewing database connections* (see page 54)
- *Changing database passwords* (see page 55)
- *Setting up UNIT-e licence users* (see page 56)

UNIT-e Licence Viewer is available as a module that can be accessed from UNIT-e Workplace. As with other modules you can restrict user access to this executable.

Storing the licence

When you receive a UNIT-e licence file it must be stored in one of the following locations:

- In the same directory as each UNIT-e application.



You must not store the licence file in the root of any mapped drive.

- In the parent directory above where your applications are stored.
- In a nominated directory, specified in each workstation's registry (refer to *Editing registry keys* (see page 53)).



For standard UNIT-e executables it's recommended that you use the latter method and store the licence file on the network, as this enables you to store just one copy of the licence file. However, this approach is not suitable for the following:

- Windows Services - the licence file must be stored on a local drive of the server on which Windows Services is installed, as Windows Services users can't access mapped network folders.
- Web applications - the licence file must be stored in the WebService folder. For further details refer to the *Managing UNIT-e Online Services - Web Site Installation* handbook (MOSWSI.pdf).

For merged sites, or other institutions that require more than one different version of the Capita.lic file, refer to *Setting up Workplace for different licence files* (see page 65).

Importing new licences

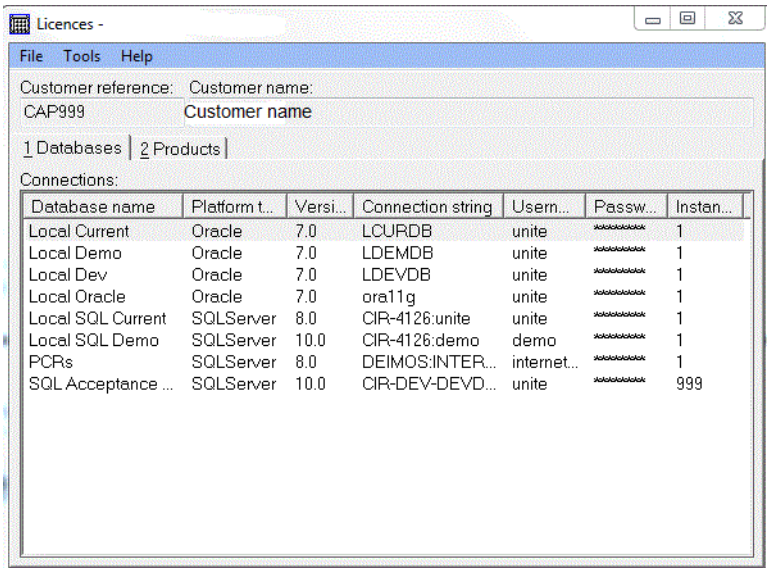
Access:	UNIT-e Licence Viewer [ULIVW.exe]
Screens:	*Licences* (see page 204)



To import a new licence

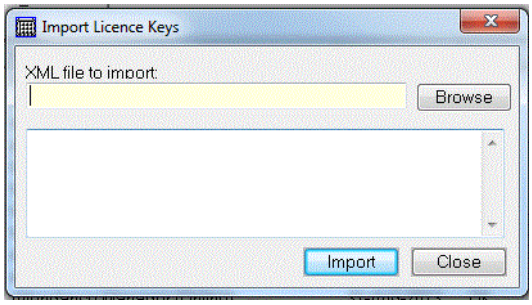
1. Open UNIT-e Licence Viewer [ULIVW.exe] to display the **Licences** form (Figure 17).

Figure 17: Licences



2. Select **Tools | Import Licence Keys** from the menu to display the **Import Licence Keys** form (Figure 18).

Figure 18: Import Licence Keys



3. **Browse** to the location of the supplied Capita.lic file and select the file.

4. Click **Import** to carry out the import.

If you've renewed licences for web sites and they're still not working, carry out the following:

- For UNIT-e Online Services, Attendance Grid and Columbus web sites, run IISRESET to pick up the new licence details, as they may have cached the previous year's date and won't give you access.
- For Advantage products and UNIT-e Launch Pad, **Apply Settings** in the **Configure UNIT-e Information Interface (Web Client)** tool. Refer to the *Managing UNIT-e Launch Pad and II Web Client* handbook (MLP.pdf) for further information about this tool.

Viewing licences

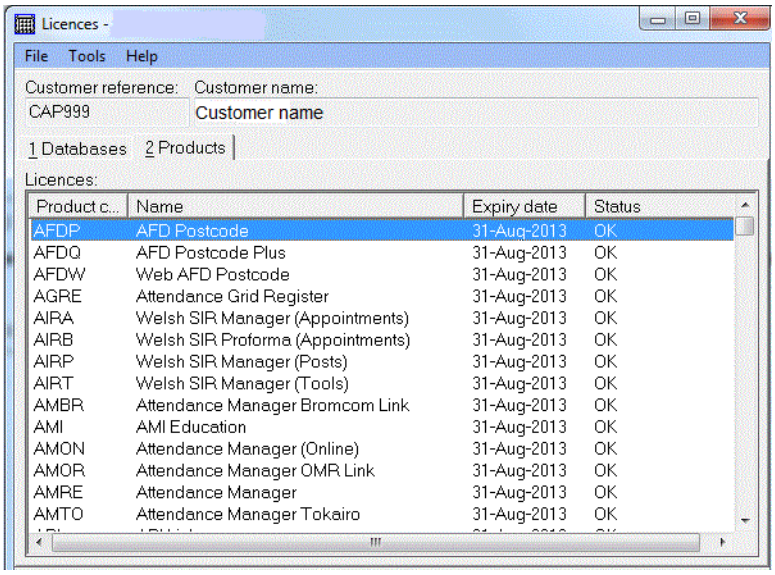
Access:	UNIT-e Licence Viewer [ULIVW.exe]
Screens:	*Licences (see page 204)*

Once you've imported the licence file you can view the details.

To view licence details

1. Open UNIT-e Licence Viewer [ULIVW.exe] to display the **Licences** form and go to the **Products** tab (Figure 19).

Figure 19: Licences - Product



2. All active licences are displayed. To view expired licences as well as current ones, select **Tools | Show Expired Licence Keys** from the menu bar.

The licence details can be printed via the **File | Print** menu option.

Refer to *Appendix C: Licences* (see page 216) for a full list of available licences.

Editing registry keys

A registry key defines the path to your UNIT-e licence. This allows you to store one copy of the licence file, either on the network or on each individual workstation, rather than it being necessary to store a copy in each UNIT-e application folder. You can edit the supplied registry file to point to the correct path for the licence.

If you store the licence file on the network, this removes the need to copy the licence file on to each workstation every time it is updated.

To edit the registry file provided

1. Select the required registry file, Licence.reg (for all operating systems).
2. Open the registry file in a text file editor (e.g Notepad).
3. Amend the path value to the path of your Capita.lic file (e.g. K:\Capita).

Backward slashes in the path must be replaced with two backward slashes in the registry file value.

The file name (Capita.lic) must not be included at the end of the value. Only the path itself should be entered.

4. Save the changes to the registry file.
5. To add the entry to your registry, double-click on the saved registry file in Windows Explorer.

Checking the licence expiry date

Access:	UNIT-e Licence Viewer [ULIVW.exe]
Screens:	*Licences (see page 204)*

To check the expiry date

1. Open UNIT-e Licence Viewer [ULIVW.exe] to display the **Licences** form and go to the **Products** tab (see Figure 19, page 52).
2. The **Expiry date** for each product is displayed.

Suppressing the licence expiry message

Access:	UNIT-e Database Manager (Users) [UDMUS.exe]
Screens:	*Users*

The licence expiry message can be suppressed at user level via UNIT-e Database Manager (Users) [UDMUS.exe].



To suppress the licence expiry message

1. Open UNIT-e Database Manager (Users) [UDMUS.exe] and select the appropriate user or group.
2. Go to the **Menus** tab and select the 'System' menu in the **Menus** list.
3. Open the 'System' menu item in the **Menu items** list.
4. Deselect the check boxes against 'Licence expiry warning' menu item.



Refer to the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) for further details.

Viewing database connections

Access:	UNIT-e Licence Viewer [ULIVW.exe]
Screens:	*Licences (see page 204)*

The licence file provided with your software contains database connection information. Each licence file provides access to a particular collection of databases with certain connection criteria. This regulates the databases that your users can connect to, and must be stored in the correct location so that each UNIT-e application can access it.

To view database connections

1. Open UNIT-e Licence Viewer [ULIVW.EXE] on the appropriate machine. This must be the machine where the licence that you want to view is stored.
2. The **Databases** tab (see page 204) shows the database connections.

The information shown can be printed via the **File | Print** menu option.

Changing database passwords

Access:	UNIT-e Licence Viewer [ULIVW.exe]
Screens:	*Licences (see page 204)*

The **Change Database Password** tool is available via the **Tools** menu in UNIT-e Licence Viewer. The tool enables you to change the password of the UNIT-e database user. The utility then also updates the encrypted password in the Capita.lic licence file, ensuring the two are consistent.

Only those users with access rights to the **Change Database Password** process in the **System** menu in UNIT-e Database Manager (Users) [UDMUS.exe] can change the database password.

The tool updates the password for the database you're currently logged into, NOT the database highlighted on the **Database** tab in UNIT-e Licence Viewer.

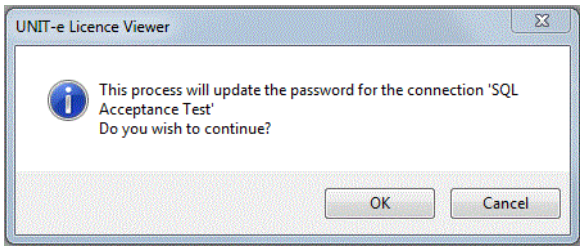
To change a database password

1. Open UNIT-e Licence Viewer [ULIVW.exe] and log on to the database for which you wish to change the password.

The tool updates the password for the database you're currently logged in to, NOT the database highlighted on the **Database** tab in UNIT-e Licence Viewer.

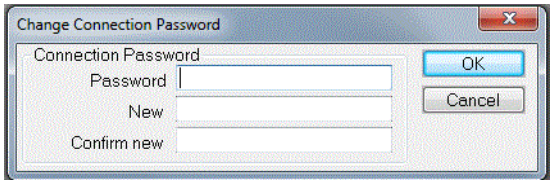
2. Select **Tools | Change Database Password** from the menu bar.
3. The system displays the following message (Figure 20). Click **OK** to continue.

Figure 20: Change Database Password message



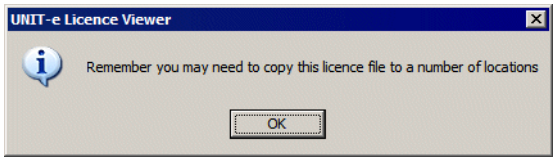
4. The **Change Connection Password** form is displayed (Figure 21). Enter the current database **Password**, the **New** password and **Confirm new** and click **OK**.

Figure 21: Change Database Password



5. A message is displayed (Figure 22) to remind you to replace all copies of the licence file with the updated licence.

Figure 22: Change Database Password reminder message



6. Click **OK** to close the message.

7. Copy the updated licence file over every instance of the Capita.lic file that exists on your servers.

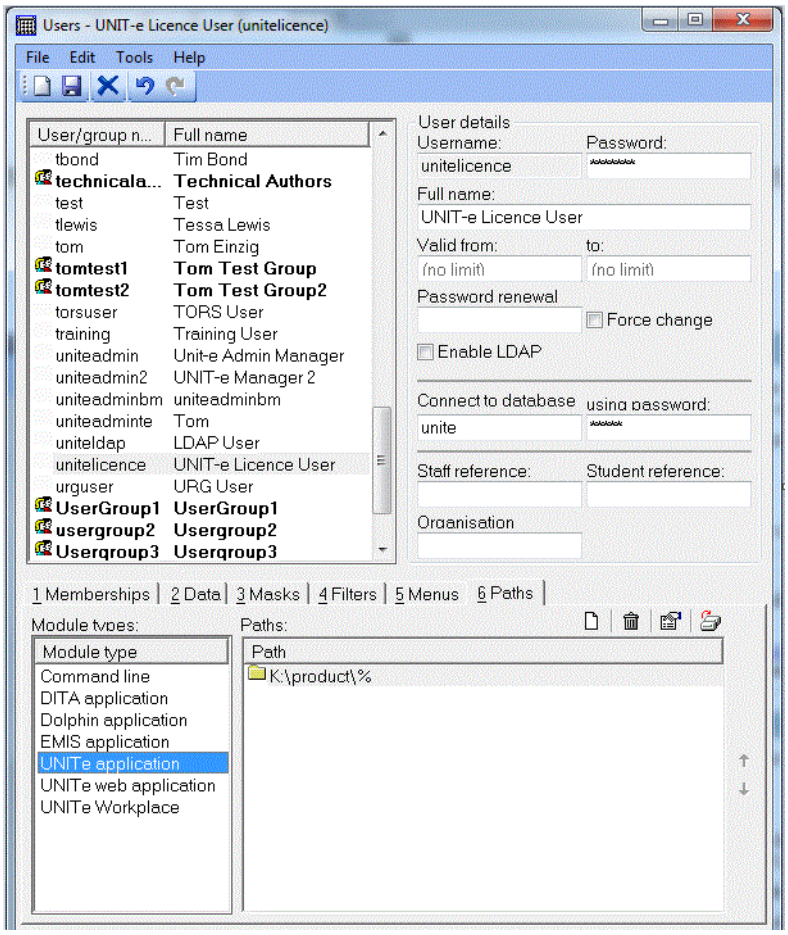
8. Email your Capita.lic file to the Support Team after changing the password of the UNIT-e user, to enable them to provide remote support quickly and efficiently when required to do so.

Setting up UNIT-e licence users

Each UNIT-e user set up in UNIT-e Database Manager (Users) [UDMUS.exe] is automatically mapped to a database account by UNIT-e Database Manager (Database Configuration) [UDMDC.exe] (see page 42).

In addition, a specific UNIT-e Licence user must be created in UDMUS and manually mapped to the database account specified in the licence file (Figure 23).

Figure 23: UNIT-e Licence User in UDMUS



This makes it possible to update the database through the licence connection, which is necessary for the following:

- Updating LDAP properties via UNIT-e Database Manager (Users) and Internet Builder.

Refer to *Setting up Microsoft Entra ID (Azure AD) single sign-on (see page 99)* (see page 87).

- Enforce Integrity option in UNIT-e Database Manager (Class Editor) [UDMCE.exe].

Refer to the *UNIT-e Database Manager (Tools)* handbook (UDMTL.pdf).

- Updating the UNIT-e database directly logged in as the UNIT-e Licence User.

The UNIT-e interface

UNIT-e applications use standard components to ensure that the interface of each application looks and operates in a consistent manner. The various form types, the components of forms and standard functionality are explained in detail in the *Working with UNIT-e* handbook (WWU.pdf).



Refer to the *UNIT-e Information Interface* handbook (UII.pdf) for details about the interface of UNIT-e Information Interface applications and the design components available for your own applications.

The following functionality is available for MIS Managers:

- *Help settings* (see below)
- *The Advanced menu in II applications* (see below)
- *Debug mode* (see page 59)

Help settings

Keys/settings are provided for each II application to map the **Help me** button on the application's **Home** menu to the relevant documentation in the Customer Support Portal.

These are in the format Application\[Application name]\Ribbon\help.

For example, for the Modules Manager application:

- Application\Modules Manager\Ribbon\help

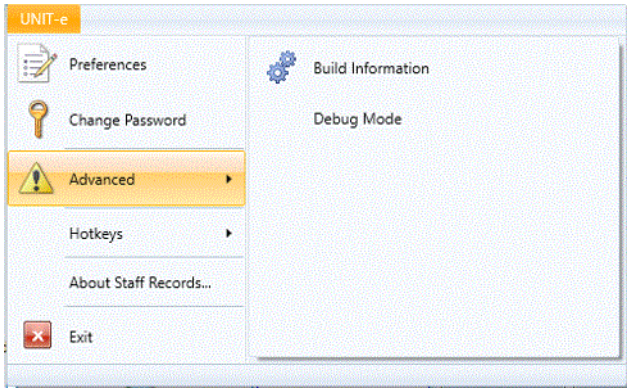
  Default value: https://customer.support-ess.com/csm?id=kb_article_view&sysparm_article=KB0048205

  (the UNIT-e Curriculum Manager handbook (UCM.pdf))

The Advanced menu in II applications

The II **Advanced** menu (Figure 24) is accessed from the **UNIT-e** tab on the ribbon menu.

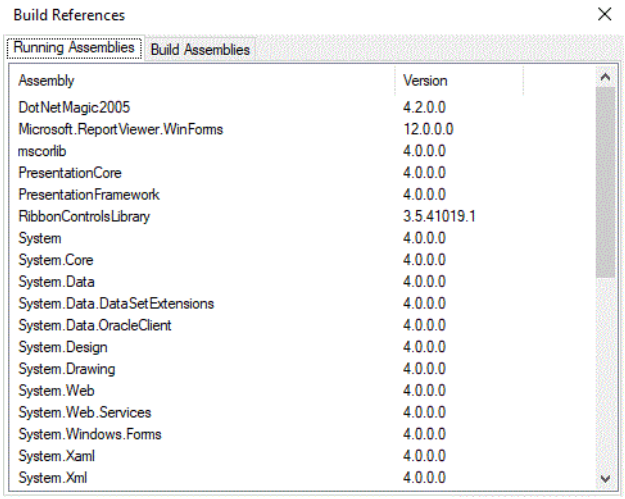
Figure 24: II Advanced menu



This has two options:

- **Build Information** gives you access to the **Build References** form (Figure 25) where you can see build information for the application, including comprehensive details of versions of assemblies for support purposes.

Figure 25: Build References



- **Debug Mode** enables you to switch debug mode on (Figure 26) or off. See below for details.

Figure 26: Debug mode switched on



Debug mode

Debug mode can be switched on in both II and VB applications. When you're operating in debug mode, a SQL debug log is created to maintain a history of all SQL transactions, which may be required when investigating software failures.

If an application with Debug mode switched on is launched via Workplace, the sqldebug.log file is stored alongside UNIT-e Workplace.EXE. If the application is launched directly outside of Workplace, the log file is stored next to the app executable.



The log file is continuously appended to, rather than being overwritten, so it can be useful to delete the file prior to investigating a specific software issue in order to clear it down.

II applications are also issued with a config file alongside them to log exceptions in the Event Viewer. You can edit the config file to log exceptions to a file instead of the Event Viewer. By doing this you only see the exceptions for that particular application.



To switch on Debug mode:

- In an II application:

  From the **UNIT-e** tab on the ribbon menu, select **Advanced | Debug Mode**.

- In a VB application:

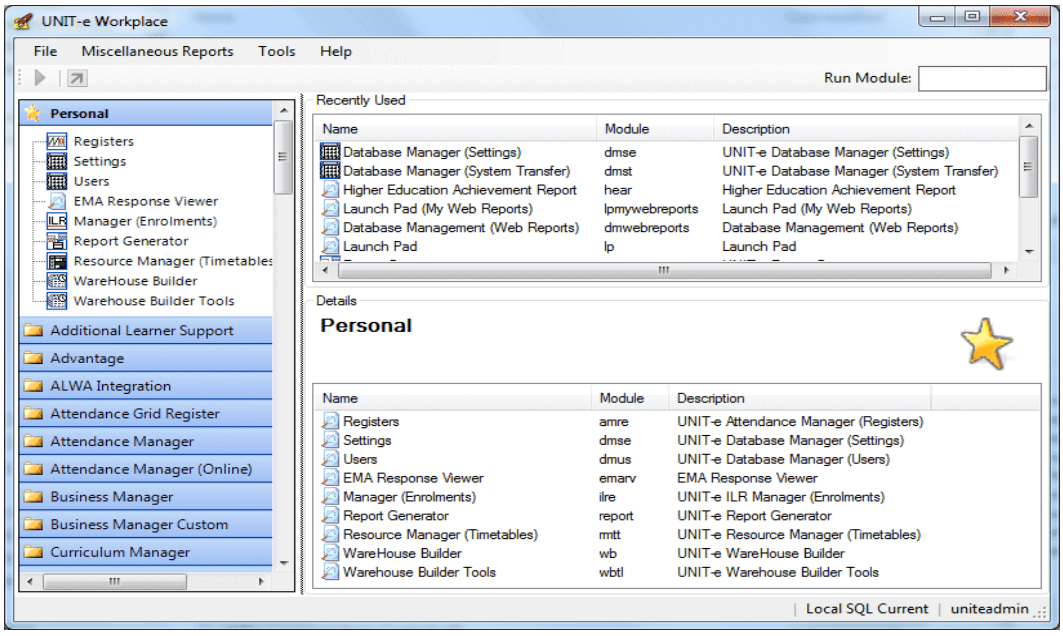
  In the menu bar select **Options | Debug Mode**.

Chapter 4:

Managing UNIT-e Workplace

UNIT-e Workplace (Figure 27) enables you to launch your UNIT-e applications via one login process. Once logged in to Workplace you have immediate access to all the applications that you're licensed to use; there's no requirement to log into individual applications. Depending on how Workplace has been set up in your institution, you may also have access to other (non-UNIT-e) applications and/or web pages.

Figure 27: UNIT-e Workplace



This chapter covers the following:

- *Alternative applications* (see page 63)
- *Setting up UNIT-e Workplace* (see page 65)
- *Menu options available from the Workplace menu* (see page 68)

Alternative applications

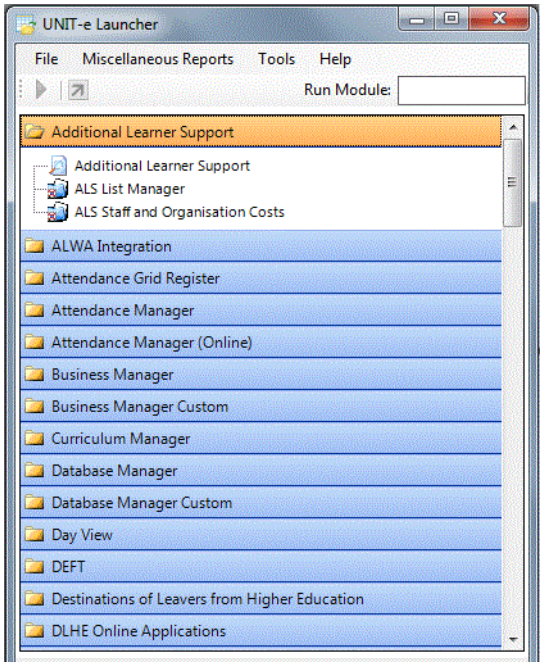
In addition to UNIT-e Workplace, the following applications are provided:

- *UNIT-e Launcher* (see below)
- *UNIT-e Workplace Config Check* (see page 64)

UNIT-e Launcher

UNIT-e Launcher (Figure 28) is an executable provided as part of the Workplace product. This shows only the **Product** pane. MIS managers may choose to use either option when setting up workstations.

Figure 28: UNIT-e Launcher



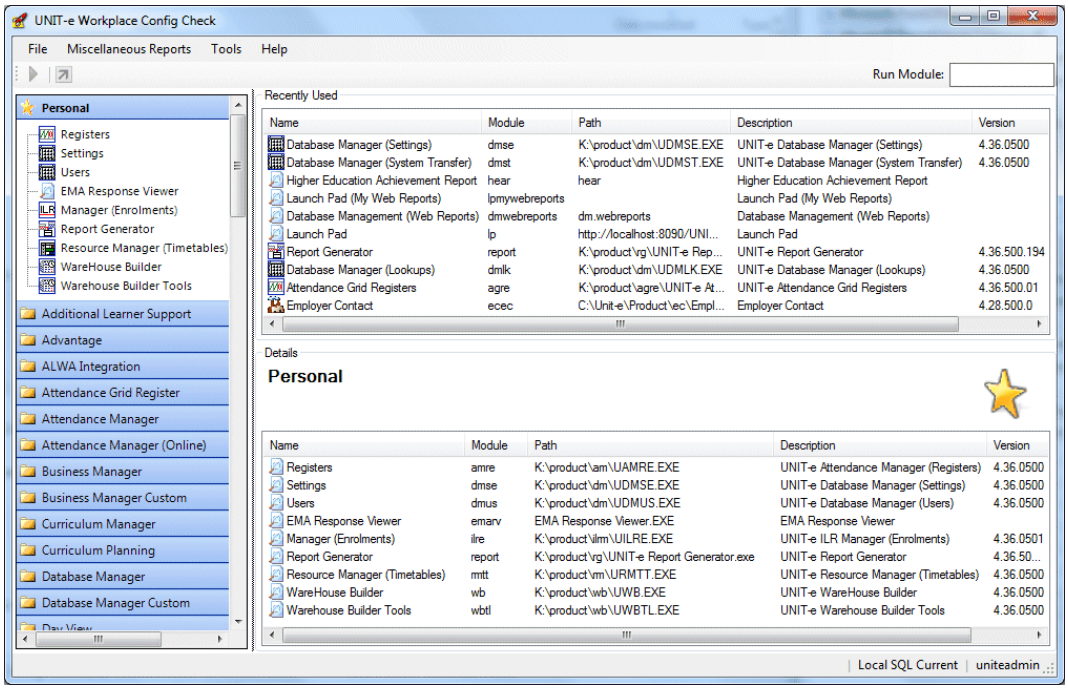
UNIT-e Workplace Config Check

This standalone application is provided as a support environment for checking the versions of executables. It enables you to spot-check executable paths, versions and DMSE configurations mappings.

The application is available in the Workplace product folder.

Due to the information it needs to retrieve, this application may take up to 2 minutes to load.

Figure 29: UNIT-e Workplace Config Check



Setting up UNIT-e Workplace

The day-to-day usage of Workplace and Launcher is covered in the Working with UNIT-e handbook (WWU.pdf). The following technical requirements are covered in this chapter or elsewhere in this handbook:

- Giving users access to applications via Workplace/Launcher



Refer to *Setting up a menu structure for UNIT-e Workplace* (see page 81) and *Setting up paths for UNIT-e Workplace* (see page 83). For LDAP users refer to *Setting up Microsoft Entra ID (Azure AD) single sign-on (see page 99)* (see page 87).

- Setting up Workplace for different licence files (see below)
- Tailoring Workplace by using configurations



Refer to *Database configuration* (see page 42).

- *Menu options available from the Workplace menu* (see page 68)
- *Customising the interface* (see page 66)

Setting up Workplace for different licence files

If your institution requires the use of two or more different Capita.lic files (e.g. merged sites) it is recommended to set up Workplace as follows:

1. Store each version of the Capita.lic file in its required directory (see page 50). For example, Site 1: \server1\unite, Site 2: \server2\unite, etc.
2. Edit user's registry entries to look for the Capita.lic file in K: (see page 53).
3. Deploy the entire Product tree for each licence.



If required, the Product tree may be located at each local site, to assist with network bandwidth issues.

4. For each licence, use the template Workplace_MAP_LAUNCH.BAT, provided in the UNIT-e Config-Full folder, to create a batch file that remaps K: to the appropriate

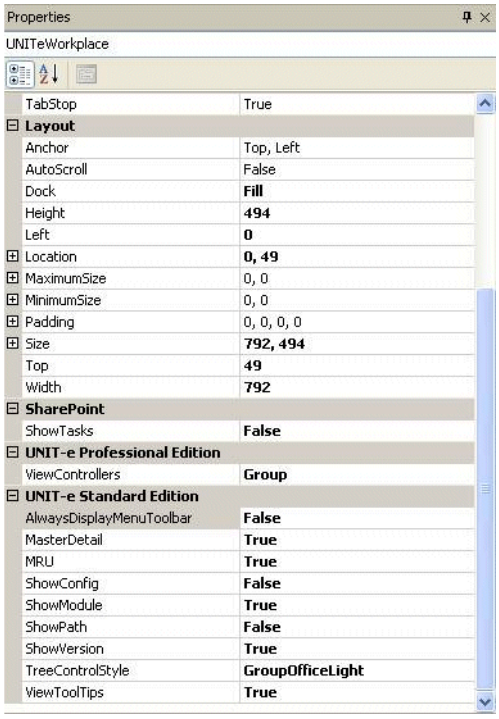
Product tree location where the correct Capita.lic is stored (e.g. to server1, or server2).

Only one active instance of Workplace is supported with this setup, i.e. each user should only have one instance of Workplace open at any one time and any applications opened via Workplace must also be closed upon switching to a new instance.

Customising the interface

You can customise Workplace via the **UNITeWorkplace Properties** pane in UNIT-e Information Interface (Figure 30).

Figure 30: Workplace properties in Information Interface



The following fields are relevant to Workplace:

MasterDetail: This is set to 'True' by default, which indicates that the **Details** pane should be displayed. Re-set this to 'False' to remove the **Details** pane.

MRU: This is set to 'True' by default, which indicates that the **Recently Used** pane should be displayed. Re-set this to 'False' to remove the **Recently Used** pane.

ShowConfig: Set this property to 'True' to display a **Configuration** column in the **Recently Used** and **Details** panes. The default value is 'False' (to exclude this column).

If the **ViewToolTips** option is also switched on the configuration appears in the ToolTip when you hover over an application in the list.

ShowModule: This is set to 'True' by default, which indicates that the **Module** column is displayed in the **Recently Used** and **Details** panes. Re-set this to 'False' to remove the column from both panes.

ShowPath: Set this property to 'True' to display the application paths column in the **Recently Used** and **Details** panes. The default value is 'False' (to exclude this column).



If the **ViewToolTips** option is also switched on the path appears in the ToolTip when you hover over an application in the list.

ShowVersion: This is set to 'True' by default, which indicates that the **Version** column is displayed in the **Recently Used** and **Details** panes. Re-set this to 'False' to remove the column from both panes.

TreeControlStyle: This property defines the format of the application tree view. There are several options, but the default is 'GroupOfficeLight', which gives the display shown in the example Workplace image (see page 61). Select 'Explorer' if you wish to retain the old display format.



The click option to select products and applications works best in GroupOfficeLight view.

If you use the Professional Edition of Information Interface, you can also change the **ViewControllers** property to further refine your display options.

ViewToolTips: This is set to 'True' by default, which indicates that ToolTips are displayed when you hover your cursor over an application. Re-set this to 'False' to remove the ToolTips.



The AlwaysDisplayMenuToolbar property is no longer in use.



Refer to the *UNIT-e Information Interface* handbook (UII.pdf) for further details.

Menu options available from the Workplace menu

The following menu options are available from the **Workplace** menu bar.

- *File* (see below)
- *Miscellaneous reports* (see below)
- *Tools* (see page 69)

File

The standard functionality available from this option is explained in the *Working with UNIT-e* handbook (WWU.pdf).

Miscellaneous reports

Reports listed under this menu have a blank configuration, which isn't recommended and should be investigated. Other report options may be available if you've specified a configuration.

Tools

- *View Runtime Parameters* (see below)
- *Security and Settings* (see below)
- *AFD Postcode Internet Settings* (see below)
- *Manage Users* (see page 72)

View Runtime Parameters

This shows the runtime parameters that you're currently running with (if applicable) - for example, the configuration.

Security and Settings

This gives you access to the **Security and Settings** form (Figure 31). There are various tabs on this form, each dealing with an aspect of user security and access to online applications. Refer to the relevant handbook for further details.

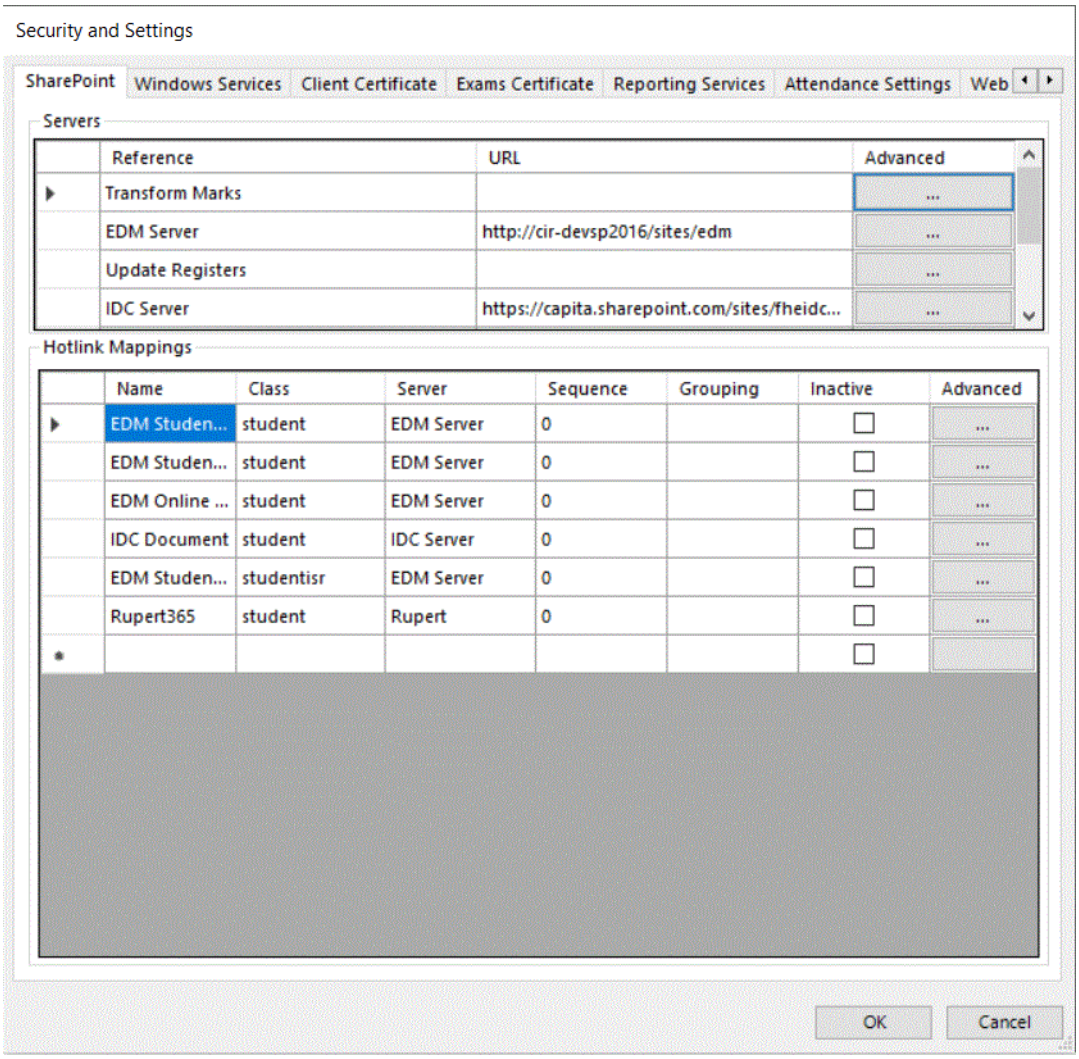
- **SharePoint** tab - Used to map a Windows user that can log into UNIT-e Information Interface Command Line [UIICL.exe] automatically, enabling that user to run warehouse processes.
    - Attendance Manager (UAM.pdf)
    - E-signatures (see page 172)
    - Extended Applications (Admissions in UNIT-e Core)
    - FES/SQA (MFES.pdf)
    - File Upload Service (see page 177)
    - ILR XML (UILRX.pdf)
    - Learner Registration Service (MLRS.pdf)
    - Resource Manager (MRM2.pdf)
    - Online Services (MOSC.pdf)



This includes the Pending Merged Students and Online Stranger Mapping applications.

  - Support Funds (USF.pdf)
  - UIICL Warehouse (UWB.pdf)
  - XML Exporter and Tools for Office (UXMLTO.pdf)
- **Windows Services** tab - Used to define Windows and UNIT-e user accounts for Windows Services authorisation and MAC Address authentication.
  - Messaging (MSMS.pdf)
  - Online Services (MOSWSI.pdf)
  - Skillwise Vocational Qualification Management System Integration (USVQM.pdf)
- **Client Certificate** tab - Used to enter details of third-party certification so that you can access their data.
  - Learner Registration Service (MLRS.pdf)
  - Skillwise Vocational Qualification Management System Integration (USVQM.pdf)
- **Exams Certificate** tab - Used to configure certificates provided by Awarding Organisations that recognise your institution as an exam centre.
  - Exam Manager (UXM2.pdf)
- **Reporting Services** tab - Used to link to Microsoft Reporting Services.
  - Tools for Microsoft Reporting Services (UTORS.pdf)
- **Attendance Settings** tab - Used to generate Command lines arguments used when scheduling attendance processes.
  - Attendance Manager (UAM.pdf)
- **Web API Users** tab - Used to define the user(s) with permission to complete Web API requests in the UNIT-e database.
  - Admissions Management Service (MAMS.pdf)
  - Web API (UWAPI.pdf)
- **Hosted Services** tab - Used to enter the required credentials for hosted services.
  - Admissions Management Service (MAMS.pdf)

Figure 31: Security and Settings



AFD Postcode Internet Settings

This enables you to define the settings for the AFD Postcode Internet hosted service used by II applications and UNIT-e Online Services.

Refer to *Chapter 11: Dealing with AFD postcode lookup functionality* (see page 149) and the *Managing UNIT-e Online Services* handbook (MOSC.pdf) for further details.

Manage Users

This opens the **Manage Users** form (see page 206), which enables you to view, create and update user and group details.



This form is also accessible via the **Tools** menu in UNIT-e Information Interface, and can be added as a tool to UNIT-e Information Interface applications. Refer to the *UNIT-e Information Interface* handbook (UII.pdf) for further details.



To create a new user or group

1. Select **Tools | Manage Users** from the **Workplace** menu to open the **Manage Users** form (see page 206).
2. Click on the **New User** button to open the **Create New User** form (see page 207) or the **New Group** button to open the **Create New Group** form (see page 209).
3. Complete the user or group details. Although the form is in a different format, the fields are the same as those used to create user and group details in UNIT-e Database Manager (Users) [UDMUS.exe].



Refer to the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) for further details.

Chapter 5:

Managing UNIT-e users

A user can log in to UNIT-e software if they have a valid UNIT-e user and password set up, or if they have an LDAP session that has been set up to give access to UNIT-e. A detailed explanation of the creation and maintenance of user accounts is given in the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) but this chapter gives an overview of what's required to create an account. *Chapter 6: Setting up Microsoft Entra ID (Azure AD) single sign-on (see page 99)* (see page 87) explains how to use LDAP to give users access to UNIT-e.



For security reasons it's not possible to use a username of 'uniteadmin'. If you create a Windows or UNIT-e user with the name 'uniteadmin' it's likely that the software won't function correctly.

The process of setting up a UNIT-e user includes the following:

- Checking that database connections are in place (see page 54)
- *Setting passwords* (see page 75)
- *Setting memberships* (see page 77)
- *Setting class rights* (see page 78)
- *Setting up masks* (see page 79)
- *Setting up mandatory filters* (see page 80)
- *Setting up a menu structure for UNIT-e Workplace* (see page 81)
- *Assigning access to processes* (see page 82)
- *Setting up paths for UNIT-e Workplace* (see page 83)

- *Setting up business rules* (see page 84)
- *Assigning Cascade Delete rights* (see page 85)



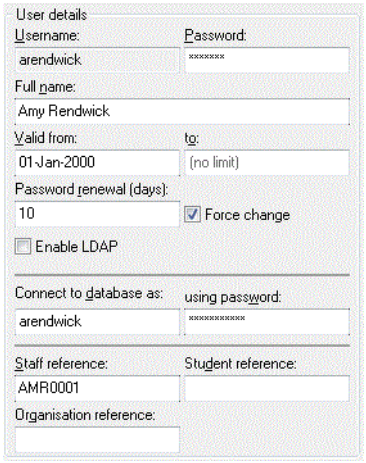
UNIT-e users and groups must be mapped to database user and role accounts. This is achieved via UDMDC, which runs automatically when a new UNIT-e user or group is created. Refer to *Database configuration* (see page 42).

Setting passwords

Access:	UNIT-e Database Manager (Users) [UDMUS.exe]

Each user has a password that enables them to access UNIT-e. When setting up a user in UNIT-e Database Manager (Users) [UDMUS.exe] you can create an initial **Password** and specify the period in which the password must be used by completing the **Password renewal (days)** field in the **User details** frame (Figure 32). Alternatively you force the user to change their password when they next log on by ticking the **Force Change** check box.

Figure 32: User details



Make sure that users who are required to change their passwords have access to UNIT-e Workplace.

Additional points about passwords

- If required, you can use the **Password Validation** form to specify global settings to enforce strong passwords of a certain length and with a greater variety of characters. This form is available from the **File** menu in UNIT-e Database Manager (Users) [UDMUS.exe].

Refer to the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) for further details.

- Non-LDAP users may change their passwords at any time by accessing the **Change Password** form from the File menu in UNIT-e Workplace.



Refer to the *Working with UNIT-e* handbook (WWU.pdf) for further details.

- UNIT-e maintains an audit log of each password change (although not the passwords themselves). This information can be viewed via a UNIT-e Report Generator report.



For security reasons it is not possible to use audit Business Rules to maintain a history of a user's actual passwords.

Setting memberships

Access:	UNIT-e Database Manager (Users) [UDMUS.exe]

User rights can be assigned to individual users or to groups. Users who are made members of a group inherit the user rights assigned to that group. If required, these acquired rights can then be 'fine tuned' for individual users. Users may be made a member of more than one group, in which case they inherit the rights assigned to all of the groups.

It's recommended that groups are used to assign rights in this way, as it reduces the time required to set up each user. It also reduces the time it takes to update multiple users' rights, as the changes can be made once in the relevant group, rather than repeatedly for each individual user.



Any user rights override group rights for the same item.

If a user is made a member of two groups that specify different rights for the same item, the user is assigned the highest level of access rights out of the two.

User and groups are set up via UNIT-e Database Manager (Users). New users can be made a member of a group during the Add User wizard, or you can use the Membership tab for existing users.

Alternatively, a bulkUserCreate IICL method is provided that enables you to create UNIT-e user accounts in bulk, either by scheduling a task in Microsoft Task Scheduler or using the Bulk User Creation app provided in the **dm** product folder. The new users created are added to the specified user group and assigned the password and other values supplied by the chosen report and the Bulk User Creation settings.



Refer to the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) for further details.

Setting class rights

Access:	UNIT-e Database Manager (Users) [UDMUS.exe]

Each user or group can be assigned access rights for each class within UNIT-e. This enables you to tailor the data available to each user to view and/or edit. For example, you may not wish temporary data entry staff to view sensitive personal data.

Class rights can be assigned via the **Data** tab in UNIT-e Database Manager (Users).



Refer to the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) for further details.

Minimum user requirements

In order to be able to use a UNIT-e application, a user must have a minimum of Select class rights for all classes available within that application. In addition, any configured search forms or reports may require the use of further classes, for which the user must also have a minimum of Select rights.

Setting up masks

Access:	UNIT-e Database Manager (Users) [UDMUS.exe]

Masks can be used to prevent specific users or groups from viewing or editing specific properties within applications. They can be set up via the **Masks** tab in UNIT-e Database Manager (Users).



Refer to the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) for further details.

Setting up mandatory filters

Access:	UNIT-e Database Manager (Users) [UDMUS.exe]

Mandatory filters can be set up to restrict access to specific records for a user or group. For example, you could create a mandatory filter on the Type property of the Student events class to prevent access to Student disciplinary records. The filter is automatically applied when the user or group member logs on, and cannot be removed by them.

Mandatory filters are applied to class pick-lists, link pick-lists, data entry screens, all report output screens etc. and operate in the same way as personal or system filters.

Mandatory Filters can be defined via the Filter tab in UNIT-e Database Manager (Users).



Refer to the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) for further details.

Setting up a menu structure for UNIT-e Workplace

Access:	UNIT-e Database Manager (Users) [UDMUS.exe]

Although users can launch individual UNIT-e applications via Windows Explorer or a Windows desktop shortcut, you are advised to provide access to these applications via UNIT-e Workplace. This provides one integrated environment to access all the UNIT-e applications, and removes the need to log on each time you run an application.

Before users can access UNIT-e applications in this way, a menu structure must be set up. This menu structure represents the UNIT-e Workplace Product pane.



It's only necessary to set up your menus once; there's no need to set up menus for each individual user.

A basic menu structure is provided with the software but you can amend it, if required, via UNIT-e Database Manager (Users).

Having defined the menu structure you can then specify the menu rights for each user and/or group. This tailors the UNIT-e Workplace pane to suit each user or group's needs. This is achieved via the **Menus** tab in UNIT-e Database Manager (Users).



Refer to the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) for further details.

Assigning access to processes

Access:	UNIT-e Database Manager (Users) [UDMUS.exe]

In addition to providing access to applications via UNIT-e Workplace, menus can also be used to restrict control to certain aspects of UNIT-e functionality. This is achieved via processes that are associated with particular menu items. These processes are provided, as required, for each release of functionality.



Refer to the **System Processes** datasheet.

You're able to grant rights to each process for each user to provide an additional level of control over access to specific functionality in the UNIT-e software. For example, if you don't grant a user 'cascade delete' rights for a certain menu item, the cascade delete functionality won't be available in that application.



Refer to the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) and *Assigning Cascade Delete rights* (see page 85) for further details.

Setting up paths for UNIT-e Workplace

Access:	UNIT-e Database Manager (Users) [UDMUS.exe]

Paths can be defined for each user and group to specify the location of your UNIT-e executables. UNIT-e Workplace then uses the specified path when launching the software modules for those users and group members.

Paths can be defined via the **Paths** tab in UNIT-e Database Manager (Users).



Refer to the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) for further details.

Typically the application server is mapped to a network drive for all users (e.g. K:\). All UNIT-e users require Read permissions to this network drive, with rights cascading to sub-folders/files.

The folders listed in Table 4 require Write permissions for users.

Table 4: Directory and file Security settings

Folder write permissions required	Cascade to sub-folders/ files?	Who
Any directories where you are required to produce files from UNIT-e (e.g. BACS payment files from SEAP/SFS).	No	UNIT-e users
K:\Config	Yes	UNIT-e users
K:\Product\ilrm	Yes	UNIT-e users
K:\Product\rg **Note:** UNIT-e Report Generator Block Publish Definition produces a log file in this folder with a list of reports that failed to publish.	No	UNIT-e Administrators
K:\Product\Rule Validation Assemblies **Note:** ILR validation setup creates a DLL in this folder which contains the rules activated.	No	UNIT-e Administrators
K:\Product\xm **Note:** This is for BTEC entries.	No	UNIT-e users
User temporary folder (%temp%)	No	UNIT-e users

Setting up business rules

Access:	UNIT-e Database Manager (Business Rules) [UDMBR.exe]

Various types of business rule are applied within the UNIT-e system for a variety of different purposes. They are generally applied by specific UNIT-e applications and are not always directly visible to the user or group member they are applied to. Business rules include rules that can be used to achieve the following:

- Ensure the validity of data
- Automatically update and create certain information, including generating system references
- Determine mandatory fields to prevent blank records being created

As business rules are applied via individual applications they're not necessarily applied in all circumstances. For example, the Import tools available in UNIT-e Report Generator cannot apply business rules.

Similarly, the Grid Edit facility is not able to apply business rules, therefore any properties that normally have business rules applied to them are not made available for Grid Editing. This ensures that the business rules can't be bypassed, preventing invalid data from entering the database.

Some types of business rules can be used as another means of restricting a user or group's access to specific properties. These can be created and edited via UNIT-e Database Manager (Business Rules).

Auditing business rules are can also be created and edited via UNIT-e Database Manager (Business Rules). These rules enable you to track changes to specific properties.



Audit triggers must be created for each audit rule defined. This is achieved via UDMDC, which runs automatically when a new Audit Business Rule is created (see page 42).

Other Business Rules are required by the UNIT-e system and therefore can't be amended.



Refer to the *UNIT-e Database Manager (Tools)* handbook (UDMTL.pdf).

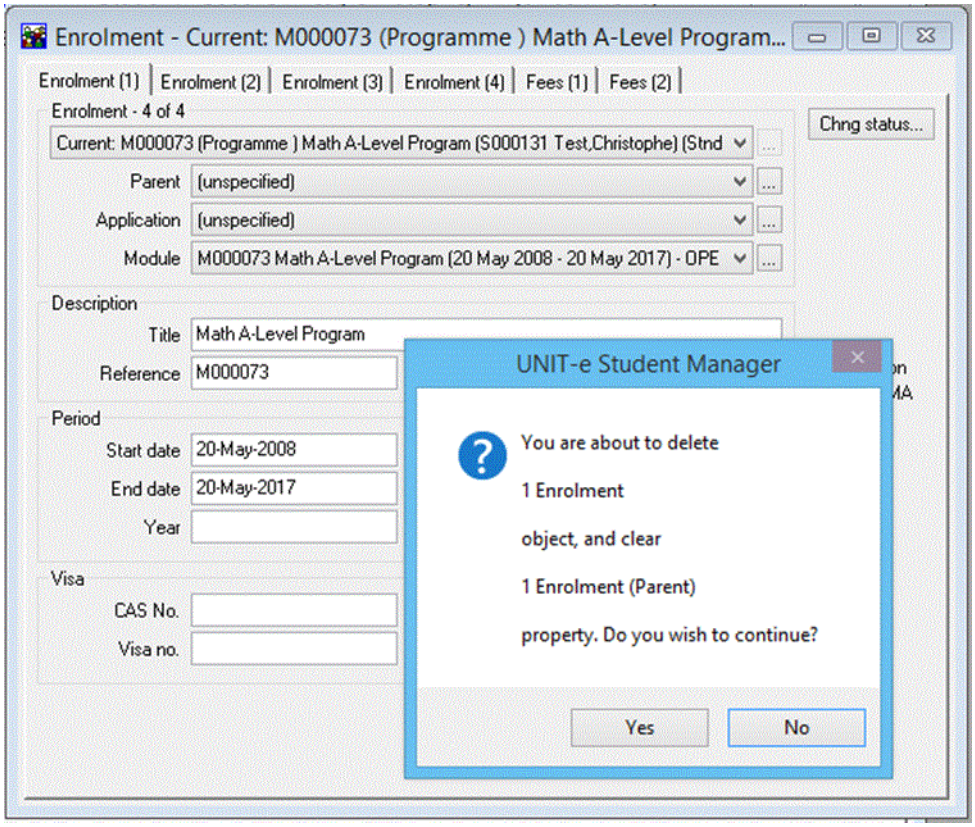
Assigning Cascade Delete rights

Access:	UNIT-e Database Manager (Users) [UDMUS.exe]

Cascade Delete rights enable a user to delete a record and all associated child records **in other classes**, removing the need to delete child records individually before deleting the parent record.

For example, if you delete a top level Enrolment record, the parent links are cleared but not the child enrolments in the same class (Figure 33).

Figure 33: Cascade Delete example



- *Cascade Delete in VB applications* (see below)
- *Cascade Delete in II applications* (see below)

Rights are assigned via the **Menu** tab in UNIT-e Database Manager (Users).

Refer to the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) for further details.

Cascade Delete in VB applications

There are two ways of assigning Cascade Delete rights in VB applications:

- Assign rights at individual application level - the user can cascade delete in that application.
- Assign rights at System level - the user can cascade delete in all applications that they have rights to use, even if Cascade Delete rights aren't assigned at individual application level.

Cascade Delete in II applications

In II applications, Cascade Delete is only available at System level and if granted applies to all applications that the user has rights to use.



In II applications, Cascade Delete won't work if one of the linked records belongs to a class that isn't present in the II form.

Chapter 6:

User login options

This chapter explains the setup of login methods available to your users.

This chapter includes the following:

- *Setting up LDAP* (see page 88)
- *Setting up Microsoft Entra ID (Azure AD) single sign-on* (see page 99)

Setting up LDAP

If you want to provide your students or members of staff with a way of viewing their details without creating a UNIT-e user account for each person, you can provide them with LDAP (Lightweight Directory Access Protocol) accounts. An LDAP account is linked to a generic UNIT-e user account that controls the level of access available to the person logging into the system (for example, enabling a student to view only their own personal details and preventing them from amending those details).

You can also use LDAP to enable students and staff members to login to UNIT-e via an LDAP session.



UNIT-e LDAP integration has been tested with Microsoft Active Directory.

The LDAP login process is shown below (Figure 34). As you can see from the diagram, when a user logs onto UNIT-e with their LDAP session for the first time, the login process is applied to identify their LDAP UNIT-e database. Once they have successfully logged in this database is stored in a setting for subsequent access.

To enable you to manage which databases your users can access with their LDAP session, two parameters have been provided to override the above process:

"/Login=True" - Displays full **UNIT-e Login** form

"/Database=[database name]" e.g. "/Database=livedata"- Logs onto specified database provided this matches licence file entry.

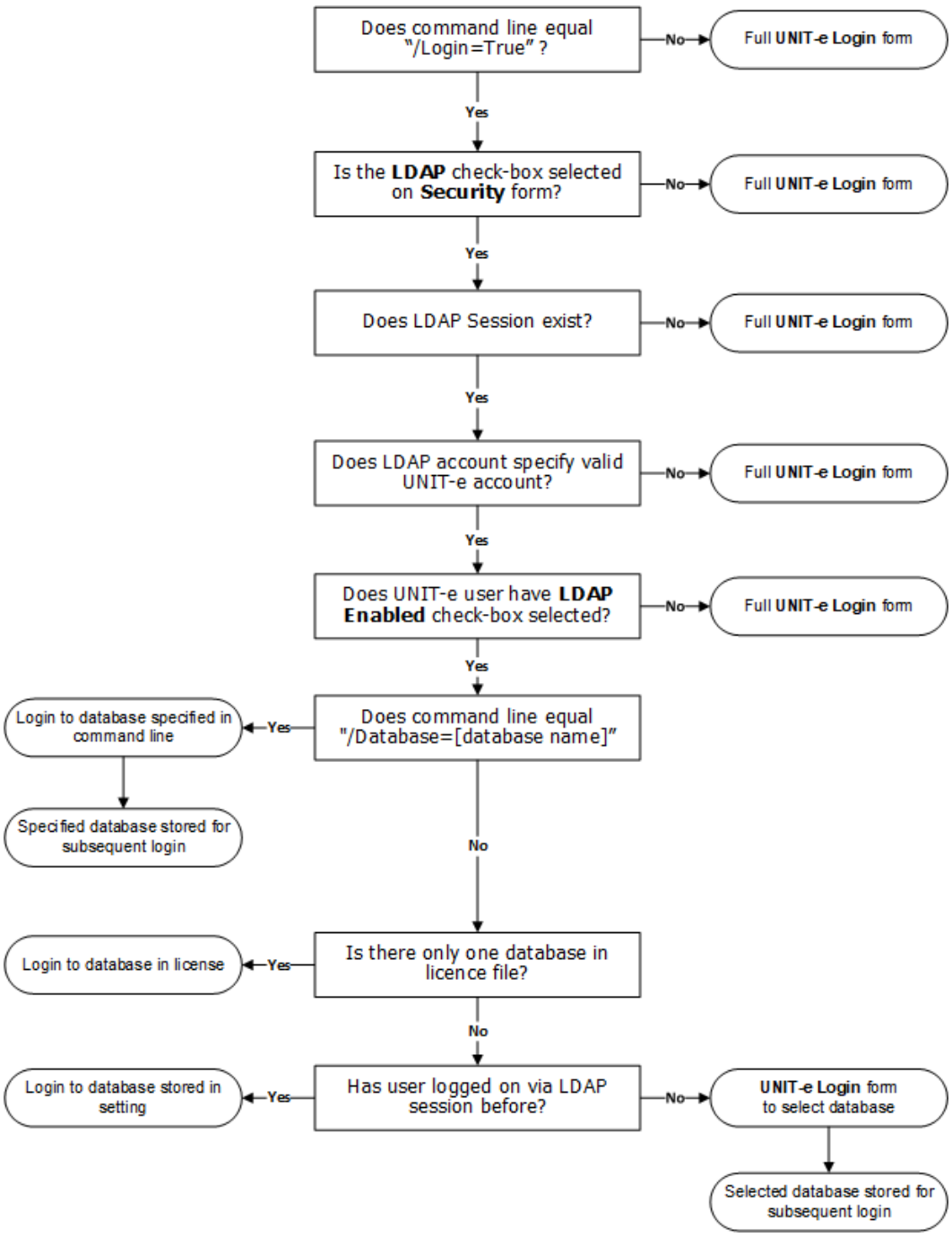
For security reasons, if you use LDAP you are not provided access to the password change functionality and the **Change Password** option in UNIT-e Workplace is disabled.

This section includes the following:

- *The LDAP login process for Workplace* (see page 89)
- *Creating a generic UNIT-e user for LDAP* (see page 90)
- *Setting up LDAP security* (see page 91)
- *Adding UNIT-e LDAP mandatory filters* (see page 93)
- *Internet Builder, Attendance Grid and Launch Pad LDAP setup* (see page 97)

The LDAP login process for Workplace

Figure 34: LDAP login process for Workplace



Creating a generic UNIT-e user for LDAP

Access:	UNIT-e Database Manager (Users) [UDMUS.exe]

To enable users to log in with their LDAP account you must first set up a generic 'UNIT-e user'. One UNIT-e user account can be shared by any number of LDAP users, though it's advisable to set up one account for each type of LDAP user you support (e.g. one for staff and one for students).

These generic users are created in the same way as 'real' users, via UNIT-e Database Manager (Users).

Points to consider

- You must select the **Enable LDAP** check box for the user.
- You can set up a mandatory filter to restrict the users from using certain actions (select, insert, update, delete) on records that don't match the filter criteria. This is useful for your LDAP users as you can pass in the current Student or Staff id from the LDAP account and only let the user perform actions on that record. Refer to *Adding UNIT-e LDAP mandatory filters* (see page 93) for further details.
- You can restrict access to particular classes in the system. For example you may wish to prevent students from deleting their Student record by not granting Delete rights on the Student class (refer to *Setting class rights* (see page 78)).
- It's advisable to control the application that the user uses to log in via LDAP. For example, you may wish to set up a limited Proforma configuration for students to View and Edit only certain details.



When a user is logged in through LDAP authentication, some processes need to update the database through the licence connection. For this to be successful, the UNIT-e licence user must be created in UNIT-e Database Manager (Users) [UDMUS.exe] and mapped to its database account (refer to *Setting up UNIT-e licence users* (see page 56)). This allows processes in UDMUS to update LDAP flags when creating LDAP users and write-back in Internet Builder applications (e.g. Online Attendance) following a session time-out (e.g. opening a register at the beginning of the lesson and hitting 'save' an hour later).



Refer to the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) for further details.

Setting up LDAP security

Access:	UNIT-e Database Manager (Users) [UDMUS.exe]

Before allowing users to use their LDAP sessions to login to UNIT-e you must set up your LDAP security. This defines where key UNIT-e values are stored in LDAP user accounts. These values are used to identify the user when they log in to UNIT-e. Settings can be defined for multiple domains, thereby enabling you to add accounts for each.



To set up LDAP security

1. Open UNIT-e Database Manager (Users) [UDMUS.exe] and go to **File | Security** on the menu bar to open the **Security** form (see page 210).
2. Select an existing domain from the **LDAP domain** pick-list or create a new record.
3. Specify the domain **Name**.
4. In the **Distinguished name** field, specify the domain of your LDAP server using one of the following methods:
   - Click the **New** (torch) symbol alongside the **Distinguished name** field to default in the domain details.
   - Enter the domain using the common name (CN) and domain component (DC) nomenclature in the format CN=[Folder],DC=[domain before first ".”],DC=[domain before second ".”],DC=[domain before third ".”]. For example "CN=Users,DC=fhe,DC=cirencester,DC=com" specifies the *Users* folder on the *fhe.cirencester.com* domain.



To make UNIT-e work with multiple containers, omit the containers from the **Distinguished name** (i.e. instead of using CN=Users,DC=domain,DC=com just use DC=domain,DC=com).

5. Specify the following attributes:
   - **Attribute for staff/student ID:** The LDAP User Attribute you're using to store the user's UNIT-e person record ID property. This is used to identify the user and filter data in UNIT-e.



The "gn.student.ldap", which is used to generate LDAP accounts, must have a column with this heading to return the student ID.

   - **Attribute for UNIT-e user reference:** The LDAP User Attribute you're using to store the reference of the UNIT-e user used when logging in to UNIT-e. If

your Windows logins are exactly the same as your UNIT-e user references, you can set this attribute to 'sAMAccountName'.



The "gn.student.ldap", which is used to generate LDAP accounts, must have a column with this heading that has the value of [reference].

- **Attribute for UNIT-e online membership:** LDAP authentication is available in UNIT-e Online Services. Use this field to specify which active directory attribute holds the online account email address for the user.
- **Attribute for temporary password storage:** The LDAP User Attribute you're using to temporarily store the LDAP Password after the LDAP User Accounts have been generated.



This attribute isn't used to store the password if you add a password column to the generation report, as you can derive it from the formula specified in the report.

Refer to *The password format* (below) for further details.

6. Leave the **Account name field** entry as 'sAMAccountName'.
7. Specify the domain of the **Global catalog** in the format GC://[domain].



Click the **New** (torch) symbol alongside the **Global catalog** field to default in the domain details.

The **Global catalog** is required when setting up multiple domains (staff/student) where one domain doesn't fully trust the other (e.g. students are not allowed to access the staff domain). The **Global Catalog** provides a central set of common attributes that can be accessed from all domains.



The attributes must be synchronised to the **Global catalog**.

The password format

The generated password has the following format:

[Uppercase Character][Lowercase Character][One of ",+-$[]*&^/%{}|'?<>_:"][8 Numbers]

For example "Aa?12345678"

This value is stored to enable you to notify the user of their password (e.g. via email or letter). Once you've notified the user you should blank this field for security reasons.

Using a script to retrieve passwords

You can write a script to retrieve the set of passwords and then overwrite them. For example in VBScript:

```
Set rootDSE = GetObject("LDAP://RootDSE")

sADSPath = rootDSE.Get("defaultNamingContext")

set objCon = CreateObject("ADODB.Connection")

set objCom = CreateObject("ADODB.Command")

objCon.Provider = "ADsDSOObject"

objCon.Open

Set objCom.ActiveConnection = objCon

sText = "Select cn from 'LDAP://" & sADSPath & "' where objectClass='user' and
sAMAccountName = 'test'"

objCom.CommandText = sText

Set objRec = objCom.Execute
```

Adding UNIT-e LDAP mandatory filters

Access:	UNIT-e Database Manager (Users) [UDMUS.exe]

A mandatory filter prevents users from using selected actions (such as select, insert, update, delete) on records that don't match the filter criteria. This is useful for your LDAP users as you can pass in the current Student or Staff id from the LDAP account and only let the user perform actions on that record.

Once you've setup your generic UNIT-e user(s) for LDAP, it's essential to filter that you filter the data the users can access (for example you might limit the students access of logged in via LDAP to their own records only). This is achieved by specifying a tailored mandatory filter.



The creation of mandatory filters is covered in the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf).

To apply UNIT-e LDAP mandatory filters

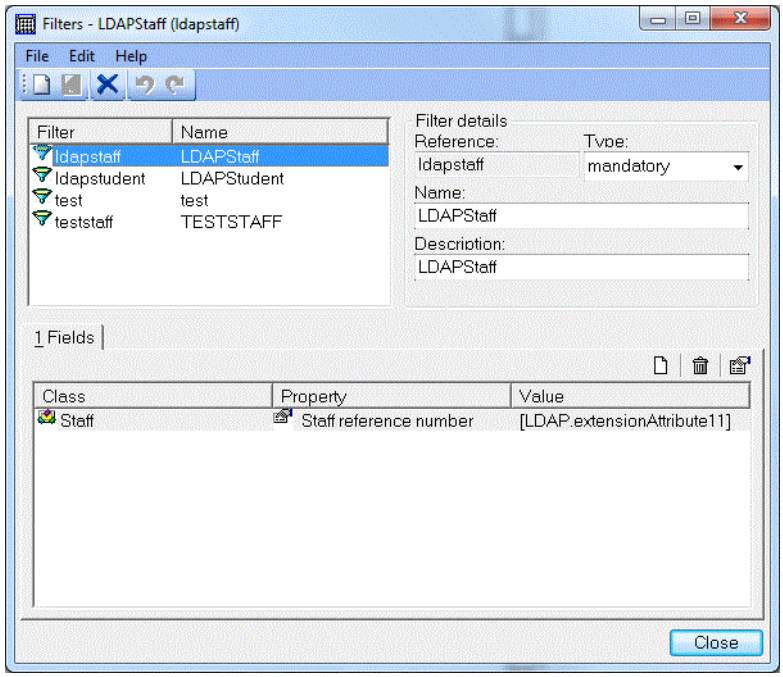
1. Open UNIT-e Database Manager (Users) [UDMUS.exe].
2. Select the appropriate LDAP user in the **User/group name** frame.
3. Go to the **Filters** tab and click the **New** button to open the **Add New User Filter** wizard (Figure 35).

Figure 35: Add New User Filter wizard



4. You can either use an existing filter or create a new one:
   - If the required filter already exists, select it from the list.
   - To create a new filter:
     i. Click the **Configure** button to open the **Filters** form (Figure 36).

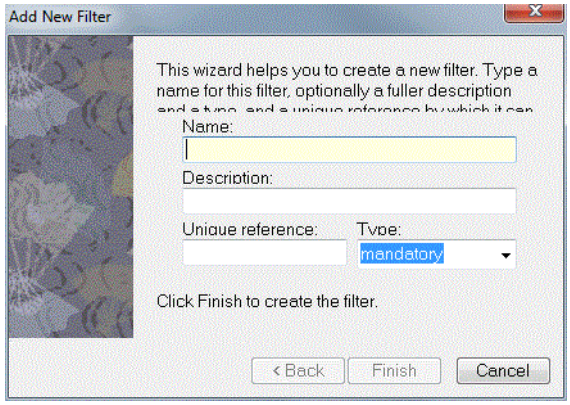
Figure 36: Filters



ii. Click the **New** button to open the **Add New Filter** wizard (Figure 37) and create a new filter, completing the **Name**, **Description** and **Unique Reference** fields.

The only **Type** option is 'Mandatory'.

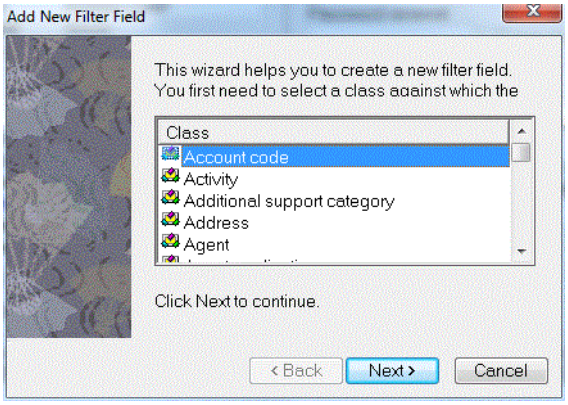
Figure 37: Add New Filter



iii. Click **Finish** to return to the **Filters** form (Figure 36).

5. Click the **New** button on the **Fields** tab to open the **Add New Filter Field** form (Figure 38).

Figure 38: Add New Filter Field



6. Select the appropriate **Class** and click **Next**.

7. Select a **Property** (Figure 39) and click **Next**.

Figure 39: Add New Filter Field - Property



8. In the **Value** field (Figure 40), specify an LDAP Attribute where the required data is stored (e.g. "employeeid"). This should match the value you entered in the **Attribute for staff/student ID** field on the **Security** form to specify the location of the UNIT-e id property in LDAP (see page 210). This has the format:

   "[LDAP.attribute name]" e.g. "[LDAP.employeeID]"

Figure 40: Add New Filter Field - Value

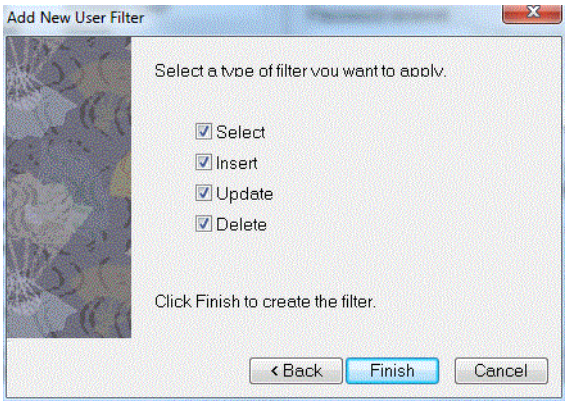


9. Click **Finish** to close the **Add New Filter Field** wizard, then click **Close** on the **Filters** form to return to the **Add New User Filter** form (see page 94).

10. Select the new filter from the list and click **Next**.

11. Select the **Select**, **Insert**, **Update** and **Delete** check-boxes to specify that this user can only access or edit records that match this filter (Figure 41).

Figure 41: Add New User Filter permissions



12. Click **Finish** to close the wizard.

13. Click **Save** on the Users form to save your changes.

If a user has a filter with a value that returns null, they won't be able to login via LDAP.

Internet Builder, Attendance Grid and Launch Pad LDAP setup

The following settings are required to enable LDAP authentication for UNIT-e Web Services applications.



Seamless authentication for external public-facing web sites can only be achieved securely through Microsoft Entra ID or ADFS. We advise against the use of LDAP with external public-facing web sites.

1. **For UNIT-e Attendance Grid only**, LDAP Integration requires the Internal Webserver to be 'Trusted for Delegation' within the Active Directory. Refer to http://support.microsoft.com/kb/326089.

2. Disable anonymous access and enable Integrated Windows authentication for the WebService Web Site.

3. Update the Web.config file of the Web Service with the database login. For example, amend:

   <add key="Database" value="UNITEDATABASE"/>

   to

   <add key="Database" value="Live"/>

4. Depending on the applications that you run, carry out the following:

   Internet Builder:

   - Disable anonymous access and enable Integrated Windows authentication for the InternetBuilder Web Site.

   Attendance Grid:

   - Disable anonymous access and enable Integrated Windows authentication for the AttendanceGrid Web Site.
   - Enable anonymous access specifically for the file "app.settings" in the AttendanceGrid Web Site.



When you're setting up new staff users who are using LDAP & UNIT-e for the first time, if the following registry key is populated with the database name (e.g. Live), the user will be able to log in via LDAP without having to put in the database, username & password.

Registry entry

[HKEY_CURRENT_USER\Software\VB and VBA Program Settings\Capita\UNIT-e\3.0\System\Logon]

"Database"="Live"

Updating authentication settings for Launch Pad



To update authentication settings for LDAP

1. Highlight UNITeIIWebClient in IIS Manager.
2. Drill down to Authentication and set the following statuses:
    - Disable Anonymous Authentication
    - Enable Windows Authentication

Setting up Microsoft Entra ID (Azure AD) single sign-on

The Microsoft Entra ID single sign-on facility may be applied to UNIT-e Workplace and II applications. If implemented, when you log into UNIT-e Workplace or an II application you are automatically signed-in using your Microsoft account.



This is currently only available in SQL.



Further information is available in the Managing UNIT-e single sign-on with Microsoft Entra ID handbook.

Chapter 7:

Database components and configuration

The UNIT-e system is highly configurable and most UNIT-e applications can be set up to suit individual institution and user requirements. This is achieved by configuring the database components, often using settings. The *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf) gives you detailed information about how you can use database components and settings to customise your system; this chapter aims to provide an overview of what you can do.

This chapter covers the following:

- *About database components* (see page 102)
- *Configuring your software* (see page 107)

About database components

You can add the following user-defined components to your UNIT-e database:

- *Proformas* (see below)
- *Search forms* (see page 103)
- *Grids* (see page 103)
- *Filters* (see page 104)
- *Warehouses* (see page 104)
- *Crystal reports* (see page 105)
- *Web pages* (see page 105)
- *Configurations* (see page 106)



Components must be mapped via UNIT-e Database Manager (Settings) [UDMSE.exe] before they become available to users. Refer to *Mapping database components* (see page 107) for further details.

All database components can be made available globally, or only within specific UNIT-e applications.

Proformas

A Proforma is a highly configurable, user-defined form. Proformas can be designed to replicate paper forms, thus facilitating rapid and accurate data entry. They can also be used to restrict specific users' access rights.

In addition to fields, controls and other features, Proformas can contain comments providing instructions for completing the form.

Proformas can be defined and mapped for the required users/groups via UNIT-e Database Manager (Settings).



Proformas must be mapped to the relevant users/groups before they are available for use.



Refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf) for details on defining Proformas, the *Working with UNIT-e* handbook (WWU.pdf) for details on using Proformas and *Mapping database components* (see page 107).

Search forms

Search forms are highly configurable, user-defined forms used throughout the UNIT-e system to return the required data from the database. The following types of search forms can be defined:

- **Context search forms** - Restrict the records that populate a link pick-list.
- **Report search forms** - Restrict the data included in reports.

Search forms can be defined and mapped for the required users/groups via UNIT-e Database Manager (Settings).



Refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf) for details on defining search forms, the *Working with UNIT-e* handbook (WWU.pdf) for details on using search forms and *Mapping database components* (see page 107).

Grids

System Grids are pre-defined sets of properties set up for Grid Editing. They operate in the same way as personal Grids, but can be made available to multiple users. This enables users to quickly select the key fields required for editing, rather than having to define their own Grids first.

These system Grids are defined and mapped for the required users/groups via UNIT-e Database Manager (Settings).



Refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf) for details on defining system Grids, the *Working with UNIT-e* handbook (WWU.pdf) for details on using Grids and *Mapping database components* (see page 107).



Users must have **Select** rights to browse a class and **Select** and **Update** rights to Grid Edit a class.

A user with the **Disable Grid MultiEdit** process set (via menu item System\System in UNIT-e Database Manager (Users) is not able to edit multiple records via Grid tools.

Filters

System Filters can be pre-defined and made available for the required users/groups to apply as and when required. They operate in the same way as personal Filters.

These system Filters are defined and mapped for the required users/groups via UNIT-e Database Manager (Settings).



Refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf) for details on defining System Filters, the *Working with UNIT-e* handbook (WWU.pdf) for details on using System Filters and *Mapping database components* (see page 107).

Warehouses

Warehouses are used to extract data from your UNIT-e database at a specified time, and store it in a specified location. Warehouse Builder Output definitions can be set up via UNIT-e Database Manager (Settings). These definitions identify the following:

- The data to be extracted and stored.
- Where the data will be stored.
- When the data is extracted and stored.

Having created the Warehouse Builder Output definitions and mapped them as required, they can be utilised via UNIT-e Warehouse Builder.



Refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf) for details on defining Warehouses and *Mapping database components* (see page 107).

Crystal reports

Crystal Output definitions are used to import, export, update and freeze data in the UNIT-e database. They can be defined via UNIT-e Database Manager (Settings) and made available within the required applications via a menu item in each application. Once you've created the Warehouse Builder Output definitions and mapped them as required, they can be utilised via UNIT-e Warehouse Builder.



Refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf) for details on creating Crystal Output definitions and *Customising menus* (see page 108).

Web pages

Web pages can be used to return data from your UNIT-e database, via a web browser. This allows your institution to provide information obtained from the database online. UNIT-e Web pages can be added as menu items in any UNIT-e data application.Having created the Warehouse Builder Output definitions and mapped them as required, they can be utilised via UNIT-e Warehouse Builder.



Refer to *Customising menus* (see page 108) for further information.

UNIT-e Database Manager (Webpages) can be used to create and manage your UNIT-e web pages, as follows:

- Define web pages and display multiple classes.
- Use Cascading Style Sheets.
- Add search forms and UNIT-e core reports to web pages.
- Create menus/links in web pages.
- Preview, test and print web pages.
- Publish web pages.Having created the Warehouse Builder Output definitions and mapped them as required, they can be utilised via UNIT-e Warehouse Builder.



Refer to the *UNIT-e Database Manager (Webpages)* handbook (UDMIB.pdf) for details on defining Warehouses and *Mapping database components* (see page 107).

Configurations

Configurations provide an additional method of tailoring UNIT-e applications to meet a user requirements. Settings can be applied to a configuration, providing an alternative way of operating for a specific user/group. For example, a user may require access to two different Proformas within an application. One proforma can be used by default and the other can be mapped into a configuration, which the user can then use when required.



The relevant configuration must be specified when the application is run. This can be achieved by editing the shortcut to the application, including those in UNIT-e Workplace.



Refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf) for details on defining Configurations.

Configuring your software

By configuring the user-definable elements of the database you can effectively tailor the UNIT-e system to meet the exact needs of your institution.

Much of this configuration is controlled by settings that the UNIT-e system references to decide on what action to take in a particular scenario. Many of these settings may be defined by MIS Managers to 'fine tune' the way in which the software works.



Settings are stored in the database, therefore a user has the same settings regardless of the workstation they're using.

This section gives an overview of how the following database elements may be configured:

- *Mapping database components* (see below)
- *Customising menus* (see page 108)
- *Managing menu hotlinks* (see page 108)
- *Using hotkeys* (see page 111)
- *Defining colours* (see page 111)
- *Altering labels* (see page 111)
- *Using class aliases* (see page 112)
- *Context labelling* (see page 113)

Mapping database components

Once you've created the required database components (see page 102) they can be made available to the appropriate users, groups and applications. This is achieved by creating a mapping setting for the component, which links it to the appropriate user/group (and configuration if necessary). By mapping components you provide different components for an application for different users/groups.



Any components mapped in this way are available for use in any UNIT-e data application by any user.



All components are mapped into the system via the **Map Component** wizard in UNIT-e Database Manager (Settings). For more information refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf).

Customising menus

You can set up a **Report** menu for any of the UNIT-e data applications and configure it to provide a variety of functionality. This enables you to provide a set of custom menu items for individual users of a UNIT-e application. Examples of menu items that you can add are:

- Menu hotlinks (see below)
- UNIT-e integrated and update reports
- Crystal reports
- Web pages



Only UNIT-e web pages defined via UNIT-e Database Manager (Settings) can be provided as a menu item. To provide a link to an external web site you must use a menu hotlink (see below).



For details on defining UNIT-e reports, refer to *Managing reports* (see page 115).

For details on defining Crystal reports refer to *Crystal reports* (see page 105).

For details on defining UNIT-e web pages, refer to *Web pages* (see page 105).

Menus can be set up by defining menu settings for the appropriate applications and users. This can be achieved via UNIT-e Database Manager (Settings). For more information refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf).

Managing menu hotlinks

Hotlinks provide users with a way of linking a record to an external file; for example, a user could create a link to another application, a photograph, a document file, a spreadsheet or a web page. There are two types of hotlink:

- **Record hotlinks**, which are linked to individual records and may be created by individual users.



More information about dealing with record hotlinks is available in the *Working with UNIT-e* handbook (WWU.pdf).

- **Menu hotlinks**, which are similar to record hotlinks but can only be created by MIS Managers. The advantage of menu hotlinks is that because they're accessed via the **Report** menu in the relevant UNIT-e data application, they can be associated with a

particular user rather than a particular record. This enables you to ensure that only the required users are able to access the hotlink.



For details on record hotlinks refer to the *Working with UNIT-e* handbook (WWU.pdf).

For further details on menu hotlinks refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf).

This section covers the following:

- *Points to note* (see below)
- *Enabling hotlinks in Proformas* (see page 109)
- *Determining which students have a hotlink* (see page 110)

Points to note

- If your system is set up to use hotlinks in SharePoint, further information is available in the *Managing Documents in SharePoint* handbook (MDSP.pdf).
- If you don't use SharePoint hotlinks, make sure that users don't have access rights to the **System | Information Interface (Command Line)** menu item in UNIT-e Database Manager (Users) [UDMUS.exe], otherwise the system will attempt to open a non-existent web page rather than displaying the **Hotlinks** form.
- It may be useful to set up a specific drive mapping for hotlinked items. This enables you to move the items (if necessary), whilst still retaining the links, as long as the new location is mapped using the same mapping letter.

Enabling hotlinks in Proformas

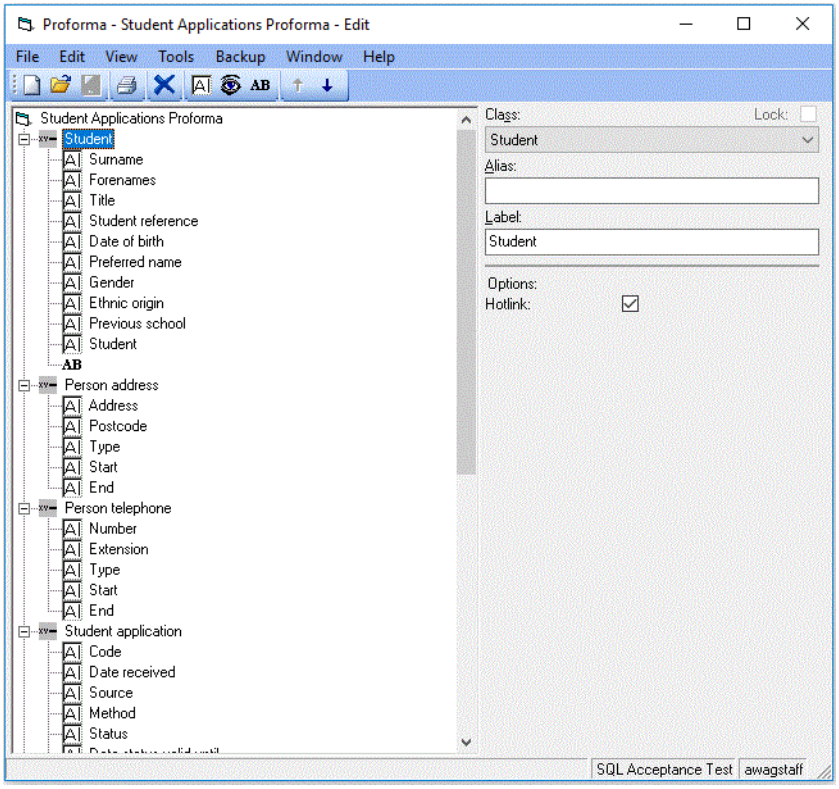
You can add a hotlink facility to any Proforma.



To enable hotlinks in Proformas

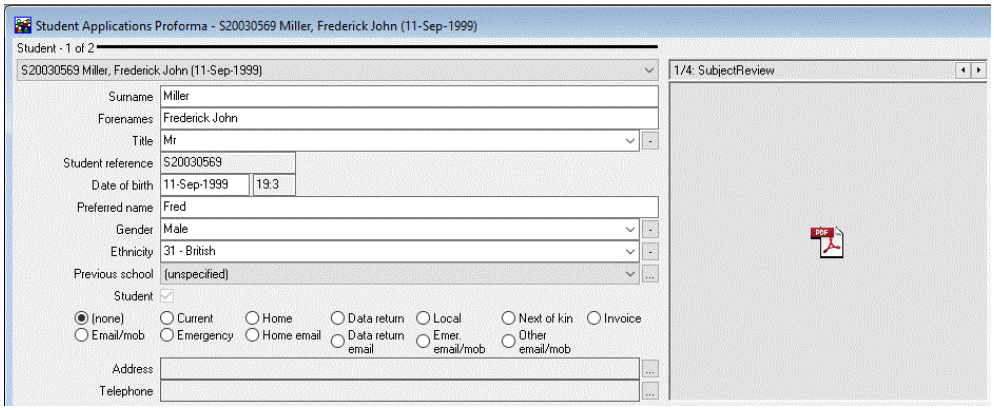
1. Open UNIT-e Database Manager (Settings) [UDMSE.exe].
2. Select **View | Proforma** from the menu bar, click the **Open Proforma**  button and open the appropriate Proforma in the **Proforma** form (Figure 42).

Figure 42: Proforma



3. Select the appropriate class and tick the **Hotlink** check-box. the hotlink frame then appears against the selected class in the Proforma (Figure 43).

Figure 43: Hotlink frame in Proforma



Determining which students have a hotlink

If you want to report on students that have hotlinks, create a report in UNIT-e Report Generator [URG.exe] that uses the 'Student' and 'Hotlink' classes and select the appropriate students. The report shows students with any type of hotlink, including a photo.

Refer to the *UNIT-e Report Generator* handbook (URG.pdf) for further details.

Using hotkeys

A number of keyboard shortcuts or 'hotkeys' exist in the UNIT-e system. A hotkey is a key sequence that performs a particular action or set of actions. Hotkeys are always assigned to a function key and any combination of the Shift, Ctrl or Alt keys.

Hotkeys are supplied in addition to the standard Windows key sequences, enabling you to carry out common operations quickly and easily. You can also create your own hotkeys, which can be set up for specific users, groups or applications, as required.



For details on hotlinks refer to the *Working with UNIT-e* handbook (WWU.pdf).

For further details on defining your own hotlinks refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf).

Defining colours

Colour settings can be created and assigned to lookup values within the UNIT-e system, enabling you to colour-code certain UNIT-e system elements. For example, by assigning colours to your Alert Type lookups you can display alerts in different colours, enabling users to identify the type of alert quickly. Colours are assigned via UNIT-e Database manager (Settings).



For details on alerts refer to the *Working with UNIT-e* handbook (WWU.pdf).

For further details on assigning colours to lookups refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf).

Altering labels

Every class and property within the UNIT-e system has a default label. Class labels appear above pick-lists and property labels appear next to a field on a form. It is possible to alter these labels if required, enabling you to specify more meaningful names for classes and properties, reflecting how they're used within your institution.

Re-labelling is only a cosmetic operation. The classes and properties still retain their original name in the Data Dictionary.



For further details on altering labels refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf).

Using class aliases

Class aliases enable you to re-label properties contained in classes that appear more than once on a form.



This only applies to instances of classes that aren't strictly classes in their own right. For example, the Subject entry event and Paper entry event classes in UNIT-e Exam Manager (Entries) don't exist as separate classes in the UNIT-e database. These events are actually stored as Enrolment event records.

If a class alias isn't used, any properties that are re-labelled appear with the new label for both classes. By attaching a class alias to the property label you can specify which class the new label applies to. No labels for the other class are affected. For example, if you re-label the Type property on an Enrolment event and assign the label an alias of "exsubjectentryevent", the new label is only displayed on the Exam subject entry event form. Without a class alias, the new label is also displayed on the Enrolment event form.



For further details on using class aliases refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf).

Context labelling

You can define labels that are only displayed when the record is set to a specific Type. This functionality can only be applied to properties contained in classes that include a Type property, such as Custom and Event properties. For example, the Value property could be re-labelled to "Grade" for all Student Events that are set to the Type "Entry Exam".



For further details on context labelling refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf).

Chapter 8:

Managing reports

UNIT-e Report Generator is used to manage information for all reporting requirements in UNIT-e. UNIT-e core reports are used throughout the system to extract data from the database, which can then be utilised and formatted in a variety of ways. These reports can be run on an ad-hoc or one-off basis depending on requirements. They produce a column and row format, which can be printed or viewed on screen. Various functions and parameters can be used to restrict and tailor the data retrieved as required.

Details information about the uses of reports is covered by the *UNIT-e Report Generator* handbook (URG.pdf). This chapter aims to give you an overview of the functionality available, and covers the following:

- *Report uses within UNIT-e* (see page 116)
- *Report uses external to UNIT-e* (see page 118)
- *Setting up reporting* (see page 121)
- *Setting up pick-list reports* (see page 124)

Report uses within UNIT-e

Reports are used to provide internal data within the UNIT-e system by supporting the following:

- *Pick-lists* (see below)
- *Exception reporting* (see below)
- *Statutory returns* (see page 117)
- *Global updates* (see page 117)
- *Importing and exporting* (see page 117)

Pick-lists

Reports are used to define the content, order and searchable classes of pick-lists that are used to select records throughout the UNIT-e system.

Exception reporting

Reports provide the primary means of validating data. Reports can be produced to highlight records that don't meet your specific validation requirements and can be embedded into an application and made available to users via a Report menu.

For example, the Audit and Alert classes can be used in reports to identify a user who isn't completing certain fields, for example. You could also have a policy where users generate an Alert if they do not have sufficient information to complete a record, which could be included in a report.

Statutory returns

Reports are used to provide a source of data for the UNIT-e tools applications, which generate statutory returns. This provides a degree of flexibility for the location of data required for these returns.

Global updates

Reports are used to define global updating and global deleting of large amounts of data.

Importing and exporting

Reports are used to define Import and Export routines that enable you to import or export large volumes of data.

Report uses external to UNIT-e

Reports are used to produce data from the UNIT-e system via the following:

- *Integrated reports* (see below)
- *Crystal reports* (see below)
- *UNIT-e SpreadSheet Builder* (see page 119)
- *UNIT-e MailMerge Builder* (see page 119)
- *UNIT-e WareHouse Builder* (see page 120)
- *UNIT-e XML Exporter and Tools for Office* (see page 120)

Integrated reports

Integrated reports are only available with an appropriate UNIT-e ReportView Builder licence. This enables you to configure the **Report** menu in UNIT-e Manager and Proforma applications to provide Crystal Reports and raw data output.

The UNIT-e ReportView Builder application provides an environment where multiple integrated **Report** menus can be configured.

Crystal reports

Your UNIT-e data can be queried and reformatted to produce high quality reports using a third party application called Crystal Reports. Output from Crystal can be added to the integrated **Report** menu of an application, enabling users to run the report on an ad-hoc basis.



Refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf) for details on creating Crystal Output definitions and *Customising menus* (see page 108).

UNIT-e SpreadSheet Builder

If you're licensed to use UNIT-e SpreadSheet Builder you can use it to present data in spreadsheet format. It also gives you access to the powerful data manipulation facilities built into Microsoft Excel.

It may be used to present tabulated data and to perform basic numerical totalling. In addition it can be used more powerfully with the cross-tabulation and "pivot table" functionality of Excel, to provide complex sub-totalling and data aggregation.

UNIT-e Spreadsheet Builder is particularly useful for providing information such as student numbers in a tabulated or graphical format, which can be used by senior managers for planning purposes.

UNIT-e MailMerge Builder

UNIT-e MailMerge Builder (.NET Tools for Office Mailmerge) extends the MailMerge facilities of Microsoft Word in the following ways:

- It allows live data from the UNIT-e system to be mail merged directly from within the Microsoft Word environment.
- It provides simple data aggregation that allows more structured information to be included within the MailMerge document.

The most frequent use of UNIT-e MailMerge Builder is for the production of letters to students. Data aggregation tools allow each letter to include a list of the student's enrolments on a single page without repeating their details, such as name and address.



.NET Tools for Office Mailmerge is explained in more detail in the *UNIT-e XML Exporter & Tools for Office* handbook (UXMLTO.pdf).

UNIT-e WareHouse Builder

UNIT-e WareHouse Builder (if licensed) is generally used to "present" data to external applications. It provides facilities for the unattended execution of reports that export data to a file or external database. Execution is based on a schedule that allows reports to be run at a single, pre-defined time, or on a repeated basis, hourly, daily, weekly or monthly.

A typical use of this is to populate a set of "data warehouse" tables, to provide secure internet access to course detail and place availability information drawn from the UNIT-e system.



For details on defining Warehouses refer to *Warehouses* (see page 104).

Data transfer

UNIT-e Report Generator can be used to export or import data. These functions can be used as a means to transfer data to or from third party software.

UNIT-e XML Exporter and Tools for Office

These products enable you to export data in XML and XSD format from your UNIT-e database. It can then be imported into a Microsoft® product where you can manipulate and add to the data to produce management information in a format useful to your institution. Manipulated and amended data can also be exported from the Microsoft® product and imported into UNIT-e to update your database.



Refer to the *UNIT-e XML Exporter & Tools for Office* handbook (UXMLTO.pdf) for further details.

Setting up reporting

Carry out the following to set up reporting in UNIT-e:

- *Remapping Crystal reports* (see below)
- *About the Microsoft Access version* (see page 123)
- *Converting the Microsoft Access databases* (see page 123)



The above stages are performed once for the system but you must also ensure that you installed the following on each workstation:

UNIT-e Office Builder

Crystal Report Files

Refer to *Managing UNIT-e Workstations* (see page 127) for further details.

Once you've set up reporting you can customise the Crystal reports that your users can access (dependent on your licence). Refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf).

Remapping Crystal reports

Access:	UNIT-e Database Manager (Settings) [UDMSE.exe] **Tools | Map Crystal Reports**
Screens:	*Links* *Map Crystal Reports*

Crystal output components specify a location for the Crystal report files that they use. For supplied Crystal outputs these have been defined as follows:

- **K:\Config\UNIT-e** - UNIT-e reports supplied with the software
- **K:\Config\report** - Customer bespoke reports
- **K:\Config\V1\UNIT-e** - UNIT-e reports supplied with the software for Scottish customers
- **K:\Config\V1\report** - Scottish customer bespoke reports

If you store your Crystal reports in a different location you can use the **Map Crystal Reports** form to specify this new location. This doesn't affect the path stored in your

Crystal Output components; the remapping is applied at run-time when a user attempts to run a report.

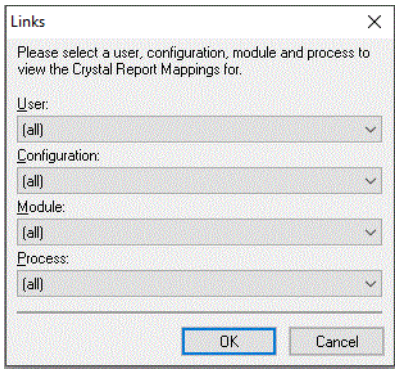
A remap is also applied to any associated Access Database MDB files specified in your Crystal output.

To remap the location of crystal reports

1. Open UNIT-e Database Manager (Settings) [UDMSE.exe].
2. Select **Tools | Map Crystal Reports** from the menu bar.
3. The **Links** form opens (Figure 44). You can use this form to limit the remapping to a particular **User** if required, otherwise leave **Configuration** as "(all)".

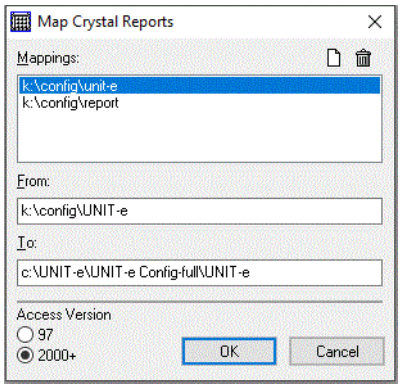
The **Module** and **Process** fields aren't required for this mapping and are therefore read-only.

Figure 44: Links



4. Click **OK** to open the **Map Crystal Reports** form (Figure 45).

Figure 45: Map Crystal Reports



5. Click **New** to create a new mapping for the location of your Crystal reports and complete the fields as follows:
   - Specify the current location to be remapped in the **From** field. This is the path specified in the Crystal Output for the Crystal Report.

- Specify the new location for the remapping in the **To** field. This is the path of the Crystal Reports from your workstation.



In both the **From** and **To** fields, don't include the last backslash of the path. For example, rather than keying 'K:\Config\Report\', key 'K:\Config\Report'.

- Select **97** if you wish to use Access 97 when generating MDB files in UNIT-e or **2000+** if you wish to use Access 2000 to 2003.



Refer to *About the Microsoft Access version* (see page 123) for further information about this option.

6. Click **OK**.

About the Microsoft Access version

As shown above, in addition to controlling the Crystal location, the **Map Crystal Reports** form also enables you to specify which type of Access MDB file is generated by UNIT-e. You must specify **2000+**, which is stored in the setting 'System\Database\access\version'.



MDBs are supplied in Access 2010.

When you update an existing Access Database via UNIT-e the version is maintained, but when you create a new Access Database via UNIT-e the above setting is used to determine the version.

Converting the Microsoft Access databases

Databases accessed directly, rather than via UNIT-e, need to match the version of Access you've selected for UNIT-e and the version of Access you will utilise. As you're using Access **2000+** you need to convert the following MDB file via Microsoft Access:

- curricbalreportpack.mdb

Setting up pick-list reports

Pick-list reports are used to define the content, order and searchable classes of the pick-lists used to select records throughout the UNIT-e system. With care, these reports can be customised to provide more appropriate information in all your UNIT-e application record lists.

Pick-list reports must always consist of the following two columns:

- Id - returns the id of the class that the pick-list report is for.
- Description - returns a concatenation of properties and values that will be displayed in the pick-list.

Pick-lists are often used in more than one place. For example, the class pick-lists are also used for the first column in the **Grid** form. Therefore care must be taken when changing a report that all the appropriate description information is included.

Things to consider when altering pick-lists

- **Adding classes:** Adding additional classes to your reports enables your description to include details from a wider collection of properties. However you must ensure that only one row is returned for each record on the primary class. This is best achieved by applying an outer join to the secondary class (including all records from the primary class) and using the distinct rows option on the Where tab.

  Pick-list reports used for linking properties often have an associated **Search** form which is used to filter records at runtime. The classes in the report determine which class properties can be used in the **Search** form, therefore care should be taken when editing reports that you don't remove classes used in associated search forms.

  Additionally you may wish to add classes to reports to enable you to widen the available properties in the Search form, taking care to outer join any new class and check for duplicate records.

  If you're adding classes to a pick-list report you need to ensure that all UNIT-e users who run applications that use the report have appropriate rights on the new class, otherwise the application won't open.

- **Where clauses:** In general, you should not add where clauses to your reports. This can cause newly created records, that do not meet your where criteria, to disappear from the pick-list making them unavailable in UNIT-e.

- **Pick-list association:** You're not able to change which reports are used for Manager pick-lists, however you can achieve this in Proforma applications. In general, each main pick-list is associated with a report that has the same reference as the class. For example, "student" for the Student class.

- **Test:** When you edit a pick-list it's useful to run the report before editing and note how many records are returned. Repeat this after the report has been altered and compare the number of records. The value should be the same, unless new data has been entered into the system at the same time.

- **Review changes:** It's a good idea to review the contents of any changes in UNIT-e Report Generator before saving the changes.

Chapter 9:

Managing UNIT-e Workstations

This chapter covers the processes that you need to go through to successfully set up a workstation. The process may vary slightly for each software release, therefore you should always check the upgrade notes in your release platform document, as they provide supplementary information to the notes in this chapter.

This chapter includes the following:

- *Workstation technical setup requirements* (see page 128)
- *Client workstation setup* (see page 130)



Refer to *Chapter 15: Trouble shooting* (see page 199) for solutions to common problems when dealing with workstations.

Workstation technical setup requirements

- *General requirements* (see below)
- *Reporting requirements* (see page 129)

General requirements

The workstation needs the following in order to run UNIT-e applications:

- Microsoft .NET Framework 4.8
- UNIT-e Workstation Client (latest version)
- UNIT-e Registry Update for Licence path
- Oracle Client (if required)

User network account permissions are required.



Refer to *Setting up paths for UNIT-e Workplace* (see page 83) for further details.

Reporting requirements

The workstation requires the following:

- UNIT-e Office Builder
- UNIT-e Tools for Office
- UNIT-e SaveText plug-in for Excel (D:\UNIT-e Config-Full\UNIT-e)

Client workstation setup

This section goes through the steps required to set up a workstation:

- *Stage 1 - Installing UNIT-e*
- *Stage 2 - Copying Tills files* (see page 132)
- *Stage 3 - Setting up the licence* (see page 133)
- *Stage 4 - Installing UNIT-e Information Interface* (see page 133)
- *Stage 5 - Installing UNIT-e Office Builder* (see page 134)
- *Stage 6 - Installing UNIT-e Tools for Office* (see page 138)
- *Stage 7 - Installing Crystal reports* (see page 139)
- (see page 139)

Stage 1 - Installing UNIT-e

The first step is to install the UNIT-e System and Windows System files that enable access to UNIT-e from a workstation.



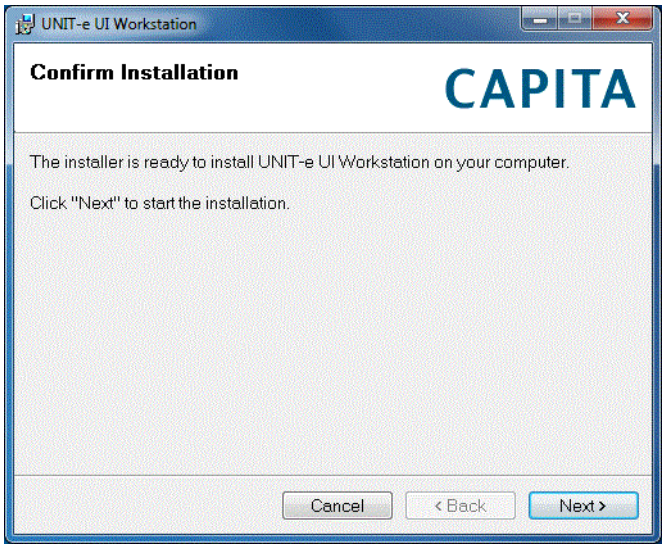
You may wish to make a backup of the DLL files from the Windows System folder before running the set-up program, as the setup program adds new files and changes existing files in this directory.



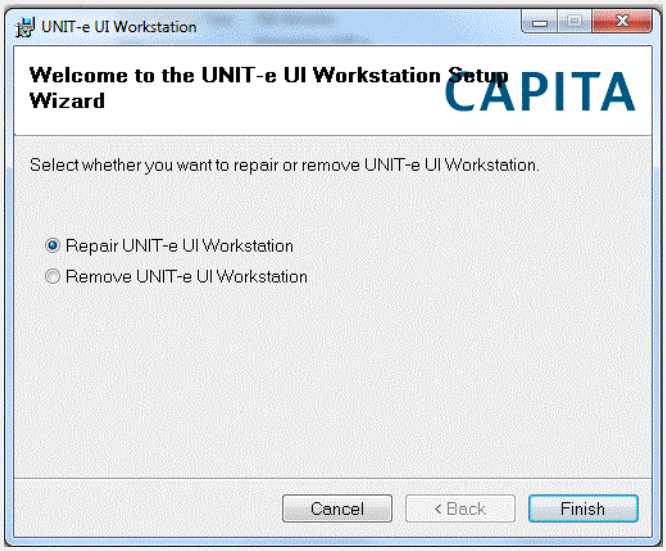
To install UNIT-e

1. Close all applications before starting the setup as it may be necessary to re-start the workstation during the setup process.
2. Make sure that you're logged on to the machine with administrator level access. You also need to ensure that the workstation has a 'temp' folder defined.
3. Locate and run the setup.exe in the Software Setup\Workstation Setup directory of the latest release image to display the **Confirm Installation** step of the wizard (Figure 46).

Figure 46: UNIT-e Workstation Installation Wizard - Confirm Installation



If UNIT-e UI Workstation is already installed on your machine the system displays the following repair/remove option. You can either repair your current installation or remove and re-install it.



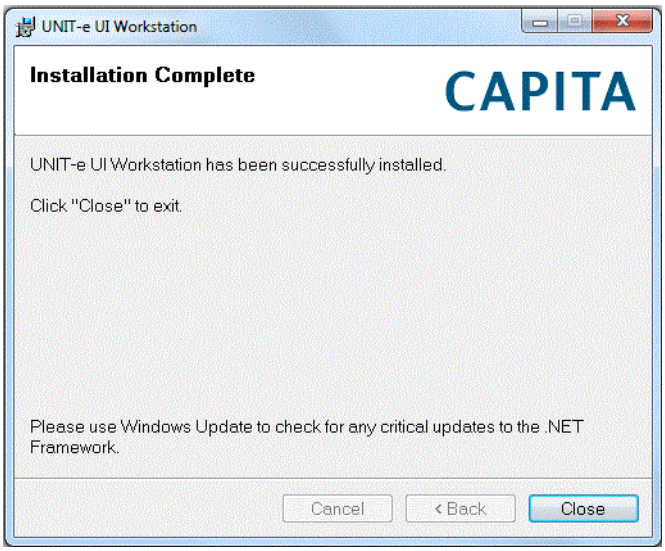
4. Click **Next** to run the set-up process. Progress is displayed as the installation takes place.

5. When the process is complete the system displays the **Installation Complete** form (Figure 47). Click **Finish** to complete the installation.

6. Reboot your workstation before running UNIT-e applications.

The files are installed to the C:\WINDOWS\SYSTEM\ or C:\WINNT\SYSTEM32\ directory.

Figure 47: UNIT-e Workstation Installation Wizard - Installation Complete



Stage 2 - Copying Tills files

Two system files (ufmts.dat and ufmts.dll) are required for the UNIT-e Tills functionality. All workstations requiring this functionality must have the latest version of these files.

You only need to complete this stage if you use UNIT-e Tills functionality.

To copy UNIT-e Tills files

1. Close all applications.
2. Copy the following files to C:\windows\system32, replacing any existing files.
   - Software Setup\Till\ufmts.dat
   - Software Setup\Till\ufmts.dll

Stage 3 - Setting up the licence

The information that enables you to connect to UNIT-e is held in the licence file (Capita.lic), which is provided by the Support Desk and stored in the database. Any UNIT-e database to which your users connect must be specified in the licence file. The databases specified in the licence appear in the **Database** pick-list on the **UNIT-e Login** form.



Refer to *UNIT-e licences* (see page 49) for more detailed information about licences and the *Working with UNIT-e* handbook (WWU.pdf) for login information.

Stage 4 - Installing UNIT-e Information Interface

You only need to carry out the following on workstations where UNIT-e Information Interface will be used in design mode.



Users must have rights to the Report class in order to run an II application.



To install UNIT-e Information Interface

1. Uninstall the previous version of Information Interface.
2. Run the UNIT-e Information Interface installation setup.exe from Software Setup\II Setup.

Stage 5 - Installing UNIT-e Office Builder

The process of installing UNIT-e Office Builder goes through the following steps:

- *Installing the UNIT-e Office Builder installation package* (see page 134)
- *Setting access rights* (see page 136)
- *Including the UNIT-e Spreadsheet Builder add-in* (see page 136)

UNIT-e Office Builder must be installed on each workstation. If multiple users require UNIT-e Office Builder on one workstation, it must be installed for each user in turn.

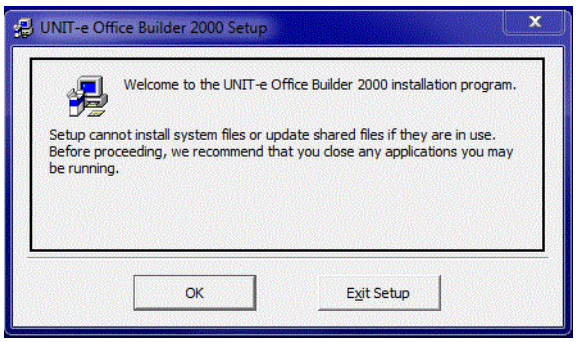
Installing the UNIT-e Office Builder installation package

The 'Visual Basic for Applications' component of Microsoft Office needs to be installed in order to install UNIT-e Office Builder.

To install UNIT-e Office Builder

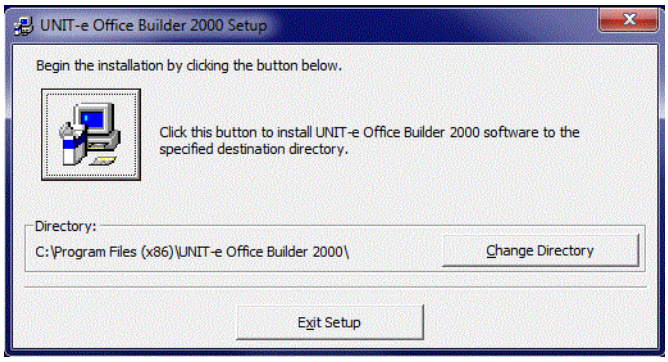
1. Browse to the Product\ob2k\Package directory and run the setup.exe.
2. The **Install** window displays a 'Copying files, please stand by' message as the pre-installation files are copied to your workstation. When this process is complete the **Welcome** screen is displayed (Figure 48).

Figure 48: UNIT-e Office Builder Setup Wizard - Welcome



3. Click **OK** to start the installation. The **Begin installation** screen is displayed (Figure 49).

Figure 49: UNIT-e Office Builder Setup Wizard - Begin installation



If you don't proceed with the installation at this stage the system removes the temporary files created in step 2. This doesn't prevent installation at a later date.

4. By default UNIT-e Office Builder is installed in the directory C:\Program Files (x86)\UNIT-e Office Builder 2000 but you can change this directory if required.

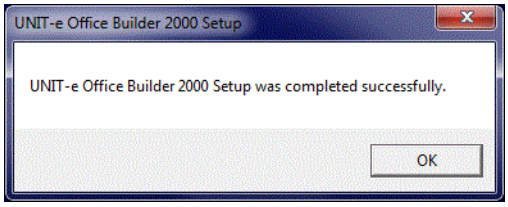
To be able to exchange spreadsheets between workstations you must ensure that UNIT-e Office Builder is installed in the same location on each machine.

5. Click on the Install icon to start the set-up process. Progress is displayed as installation takes place.

If the specified directory doesn't have enough available space the system displays the error message "Error determining allocation unit for drive…". In this situation, select another directory.

6. The following message is displayed when the installation is complete (Figure 50). Click **OK** to close the message and complete the process.

Figure 50: UNIT-e Office Builder Setup Wizard - Installation complete



The log file (ST6unst.log) is copied to the installation directory. Do not edit or delete this file.

Setting access rights

Access rights in UNIT-e Office Builder are controlled in the registry. Registry files are provided with each release to enable changes to the level of access on each workstation.

On start-up, UNIT-e Office Builder checks the registry file of the workstation to determine the running mode. The following modes are supported:

- User - read only access
- Developer - full access

If no previous entries are detected, the mode defaults to User.



To update your workstation registry

1. Locate the Product\ob2k directory in the latest image.
2. Double-click on one of the following files to update the registry:
    - OBWIN2KU.REG - For User mode
    - OBWIN2KD.REG - For Developer mode



For the changes to take effect you must restart Office Builder each time you run a registry script.



These scripts should only be run at the discretion of the System Manager.

Including the UNIT-e Spreadsheet Builder add-in



All **Add-Ins** only work with the 32-bit version of Microsoft Office, not the 64-bit version.

UNIT-e Spreadsheet Builder functionality is provided via the following office add-in:

- USB2K.xla for Microsoft Excel



Add-ins included with UNIT-e Tools for Excel and UNIT-e Tools for Word are set up in a different way. Refer to the *UNIT-e XML Exporter & Tools for Office* handbook (UXMLTO.pdf) for further details.



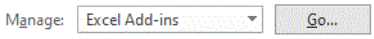
To install the Add-in for Microsoft Excel

1. Open Microsoft® Excel and go to the **File** tab.

2. Click **Options** to open the **Excel Options** form.

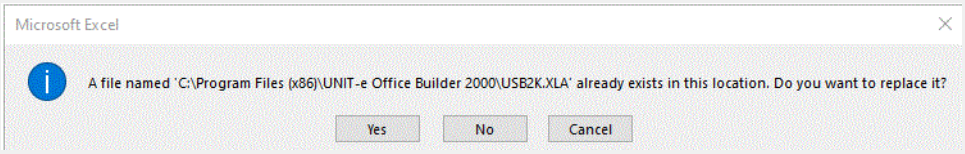
3. Click **Go** at the bottom of the form (Figure 51) to open the **Add-ins** form.

Figure 51: Add-ins



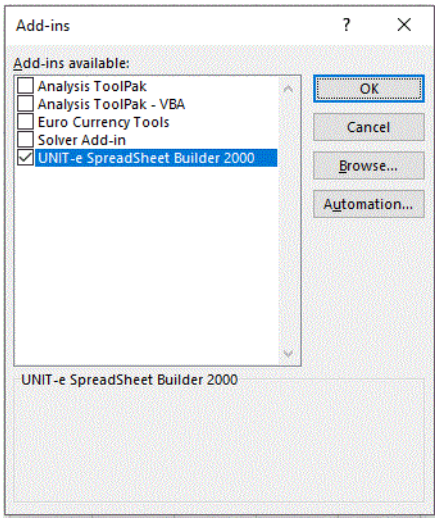
4. Click **Browse** on the **Add-ins** form and browse to and select the **USB2K.XLA** file in the **C:\Program Files (x86)\UNIT-e Office Builder 2000** folder.

Click **Yes** if the software displays the following message.



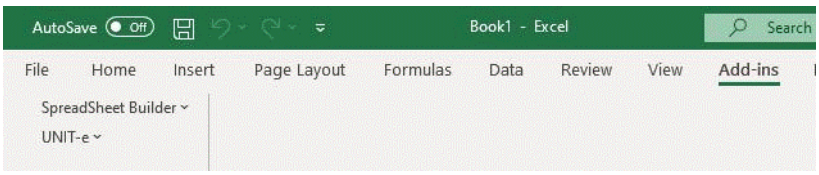
5. You are returned to the **Add-ins** form where 'UNIT-e SpreadSheet Builder 2000' is displayed and selected (Figure 52).

Figure 52: Add-Ins



6. Click **OK**. The SpreadSheet Builder menu now appears on the **Add-Ins** tab in Excel (Figure 53).

Figure 53: SpreadSheet Builder menu in Excel



Stage 6 - Installing UNIT-e Tools for Office

UNIT-e Tools for Office, together with UNIT-e XML Exporter, enable you to export data in XML and XSD format from your UNIT-e database. It can then be imported into a Microsoft® product where you can manipulate and add to the data to produce management information in a format useful to your institution. Manipulated and amended data can also be exported from the Microsoft® product and imported into UNIT-e to update your database

The following Microsoft products are required as prerequisites:

- Office Update: Redistributable Primary Interop Assemblies
- Microsoft® Visual Studio 2010 Tools for Office Runtime wizard



To install UNIT-e Tools for Office

For Office 2010 only

1. Download the update for Redistributable Primary Interop Assemblies (below) and follow the instructions on screen.

   http://www.microsoft.com/en-gb/download/details.aspx?id=3508

2. When prompted, enter a location for the downloaded files. This can be anywhere on the workstation (e.g. C:\).

3. Run the file O2010PIA.MSI for Office 2010.



Microsoft® Visual Studio 2010 Tools for Office Runtime (x86) is required in order to use UNIT-e Tools for Office products (UNIT-e Tools for Excel 2010, UNIT-e Tools for Word 2010 and UNIT-e Tools for Office - Maillerge). It should be installed by the UI Workstation Setup, but if missing it can be installed from the link below.

https://www.microsoft.com/en-us/download/details.aspx?id=48217



Refer to the *UNIT-e XML Exporter & Tools for Office* handbook (UXMLTO.pdf) for further instructions.

Stage 7 - Installing Crystal reports

Consider the following before installing Crystal reports:

- UNIT-e only supports Crystal Reports versions XI or 2008, and the Crystal output from UNIT-e applications is only supported via the Crystal Viewer. You should therefore convert all reports to either Crystal XI or 2008.
- Crystal Viewer MUST be switched on in UNIT-e Database Manager (Settings) [UDMSE.exe]; the Application\CrystalViewer\Enable setting must be set to -1 (enabled).

Crystal Viewer and all reports are Crystal XI, which is also forward compatible with Crystal 2008.



To run reports produced in Crystal XI

1. Manually copy the reports from the UNIT-e Config-Full directory in the latest image to your Crystal reports configuration folder.
2. Manually copy the MDBs from the Access 2002 or Access 2010 folder in the latest image to your Crystal reports configuration folder.



This process doesn't affect bespoke reports created at your institution. There is a separate process to transfer UNIT-e reports to the customisable report menu. Refer to the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf) for further details.

3. If the location of these files differs from the default mapping you must remap the reports. Refer to *Remapping Crystal reports* (see page 121).

Chapter 10:

Managing auditing

The auditing process enables you to monitor activity in your UNIT-e database. The following are characteristics of the process:

- UNIT-e uses four types of tables; External, Archive, Data and System. Data tables and System tables are audited.
- Business rules can be used to disable auditing for specific tables and can be used to specify detailed auditing for individual properties.



Refer to the *UNIT-e Database Manager (Tools)* handbook (UDMTL.pdf) for more information about audit business rules.

- User activity can be monitored (e.g. successful and unsuccessful logins).
- Auditing facilitates the locking of records (such as committed financial transactions). If a record is flagged as frozen in the audit, all UNIT-e applications prevent users from making any changes to that record.
- Auditing monitors the editing of core reports, ensuring that other users are prevented from making changes to a report if it's checked out.



For a full list of actions recorded by the auditing process, refer to *Actions recorded in the Audit Trail* (see page 142).

- Comprehensive information is provided in each audit trail record (see page 142).
- Access to audit information is provided via a pop-up form, which is accessed from the **Home** tab on the ribbon menu in II applications, from an **Audit** button on the **Home** tab of the ribbon menu in II Web applications, or via the **File | Audit Trail** menu option in VB applications (see page 145).
- A Personal Data Erasure tool is provided to enable you to delete audit records (see page 147).

This chapter covers the following:

- *Viewing audit trails* (see page 144)
- *Deleting Audit data* (see page 147)

Actions recorded in the Audit Trail

The following actions are recorded in the **Audit Trail** (Table 5).

Table 5: Audit trail actions

Action	Description
Attempt	Failed log on (or wrong password entered)
Checkin	Report Generator report checked in
Checkout	Report Generator report checked out
Delete	Record deleted
Deleteext	Record extension deleted
Insert	Record created
Insertext	Record extension inserted
Lock	Record frozen
Logoff	Application log off
Logon	Application log on
Update	Record edited

Audit trail records

The following information is recorded as part of an audit trail record (Table 6).

Table 6: Audit trail records

Information	Description
Object	The ID of the UNIT-e object. Every UNIT-e object has a unique ID across the database.
Action	Action reference (Table 5).
User	UNIT-e user reference.
Module	Name of the executable or web process.

Information	Description
Process	The internal UNIT-e process reference.
Start	The date and time that the action was initiated.
End	The date and time that the action was completed.
Details	Additional details provided by the process (if any) - for example, a setting imported.
Class	The UNIT-e class reference.
Audit	The link to individual property audits (audit detail).
Database user	The underlying user logged into the database.
Synchronisation code	The incremental value used by the ETS process when transferring data from Oracle to SQL Server.
Machine name	The name of the physical client machine.
Windows user	The Windows user name.

Audit details

The following information is given as part of the audit details (Table 7).

Table 7: Audit details

Information	Description
Audit	ID generated and linked from the audit trail.
Property	The UNIT-e property reference.
Value	The new value of the property.

Viewing audit trails

Access:	**Audit** button on the ribbon menu (for II applications) or **File | Audit Trail** (for VB applications)
Screens:	*Audit Trail* (see page 145)

The audit trail functionality provides information on what has happened to data stored in the database. For example, you can see who has created or amended data, the date of the change and the UNIT-e application used to make the change.

This functionality will not be available to you if your MIS Manager has set the **Disable audit trail** menu item in your user rights.

The Audit Trail can be used for a variety of purposes depending on the requirements of your institution. For example, you could write reports that include audit trail data. The following Reporting Services (SSRS) reports are provided in UNIT-e Launch Pad via Database Management Web Reports:

- Audit Analysis by Action (dm0002_p)
- Audit Analysis by Class (dm0001_p)

When a record is saved through II, an Audit details entry is recorded for every (audited) property that is changed. However, when a record is saved through the business helpers (Online Services and bespoke IIPE methods) an Audit detail record is recorded for each audited property, regardless of whether it was changed or not. This can cause issues with reporting.

To address this a report, Audit details for selected students (cgn.dm.0028) is provided that only shows the audit details for changed properties, using the View Audit first value (auditfirstvalue) class.

An audit trail can be viewed via the **Audit Trail** form. There's an II version (Figure 54) and a VB version (Figure 55) of this form. The II **Audit Trail** form includes an enhanced **Details** section that provides a more succinct view of the data, improving the clarity of the information displayed and making it easier to follow changes to individual properties.

This must be set up as required and the necessary permissions granted (see page 145).

To view an audit trail

1. Open the application that gives you access to the data you wish to audit.
2. Open the appropriate form and retrieve the required record.

3. Click **Audit** on the ribbon menu if you're in an II application, or select **File | Audit Trail** from the menu bar if you're in a VB application, to open the **Audit Trail** form (see page 145). (Some applications may have a dedicated button.)

4. This form gives basic details of the changes made to the selected record. Click on the **Detail** button to view more detailed information such as specific values that were changed. These are shown in the **Details** frame.

The **Detail** button has an icon in the II version of the form. In addition, users must have the required class rights to view the **Details** frame (see page 145).

This button is disabled if no further information is available. Changes to individual properties are only audited if your MIS Manager has defined Audit business rules for those properties.

5. If required, click on the **Print** button to print the audit trail (VB only). A printed audit trail lists the date and time it was printed.

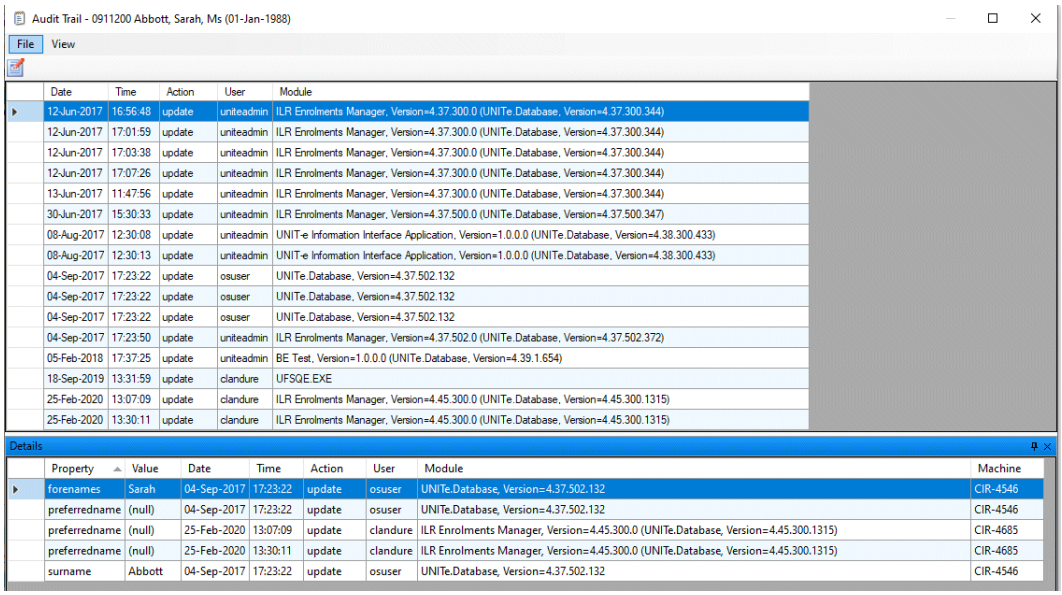
6. Click on the **Close** button to close the form.

Deleted records are not listed in the **Audit Trail** form, as these records no longer exist within the database. It is however, possible to produce a report that lists records that have been deleted, if required. Refer to the *UNIT-e Report Generator* handbook (URG.pdf) for further details.

Audit Trail forms

There's an II version (Figure 54) and a VB version (Figure 55) of this form. The II **Audit Trail** form includes an enhanced **Details** section that provides a more succinct view of the data, improving the clarity of the information displayed and making it easier to follow changes to individual properties.

Figure 54: Audit Trail (II)



Date	Time	Action	User	Module
12-Jun-2017	16:56:48	update	uniteadmin	ILR Enrolments Manager, Version=4.37.300.0 (UNITe.Database, Version=4.37.300.344)
12-Jun-2017	17:01:59	update	uniteadmin	ILR Enrolments Manager, Version=4.37.300.0 (UNITe.Database, Version=4.37.300.344)
12-Jun-2017	17:03:38	update	uniteadmin	ILR Enrolments Manager, Version=4.37.300.0 (UNITe.Database, Version=4.37.300.344)
12-Jun-2017	17:07:26	update	uniteadmin	ILR Enrolments Manager, Version=4.37.300.0 (UNITe.Database, Version=4.37.300.344)
13-Jun-2017	11:47:56	update	uniteadmin	ILR Enrolments Manager, Version=4.37.300.0 (UNITe.Database, Version=4.37.300.344)
30-Jun-2017	15:30:33	update	uniteadmin	ILR Enrolments Manager, Version=4.37.500.0 (UNITe.Database, Version=4.37.500.347)
08-Aug-2017	12:30:08	update	uniteadmin	UNIT-e Information Interface Application, Version=1.0.0.0 (UNITe.Database, Version=4.38.300.433)
08-Aug-2017	12:30:13	update	uniteadmin	UNIT-e Information Interface Application, Version=1.0.0.0 (UNITe.Database, Version=4.38.300.433)
04-Sep-2017	17:23:22	update	osuser	UNITe.Database, Version=4.37.502.132
04-Sep-2017	17:23:22	update	osuser	UNITe.Database, Version=4.37.502.132
04-Sep-2017	17:23:22	update	osuser	UNITe.Database, Version=4.37.502.132
04-Sep-2017	17:23:50	update	uniteadmin	ILR Enrolments Manager, Version=4.37.502.0 (UNITe.Database, Version=4.37.502.372)
05-Feb-2018	17:37:25	update	uniteadmin	BE Test, Version=1.0.0.0 (UNITe.Database, Version=4.39.1.654)
18-Sep-2019	13:31:59	update	clandure	UFSQE.EXE
25-Feb-2020	13:07:09	update	clandure	ILR Enrolments Manager, Version=4.45.300.0 (UNITe.Database, Version=4.45.300.1315)
25-Feb-2020	13:30:11	update	clandure	ILR Enrolments Manager, Version=4.45.300.0 (UNITe.Database, Version=4.45.300.1315)

Property	Value	Date	Time	Action	User	Module	Machine
forenames	Sarah	04-Sep-2017	17:23:22	update	osuser	UNITe.Database, Version=4.37.502.132	CIR-4546
preferredname	(null)	04-Sep-2017	17:23:22	update	osuser	UNITe.Database, Version=4.37.502.132	CIR-4546
preferredname	(null)	25-Feb-2020	13:07:09	update	clandure	ILR Enrolments Manager, Version=4.45.300.0 (UNITe.Database, Version=4.45.300.1315)	CIR-4685
preferredname	(null)	25-Feb-2020	13:30:11	update	clandure	ILR Enrolments Manager, Version=4.45.300.0 (UNITe.Database, Version=4.45.300.1315)	CIR-4685
surname	Abbott	04-Sep-2017	17:23:22	update	osuser	UNITe.Database, Version=4.37.502.132	CIR-4546

A report, gn.ii.auditdetails, is provided that controls the II **Details** view. By default this report displays the columns Property, Value, Date, Time, Action, User, Module. The report also contains an additional column 'Class.Property' that isn't displayed in the grid, but must be present in the report (see below).

Masks are still enforced in the **Details** grid, ensuring users aren't able to view values for any masked properties (values for masked properties are displayed as 'Null'). However, the 'Class.Property' and 'Value' columns must be retained in the report in order for the user masks to be implemented.

A Key and Setting are provided to store the reference of the report used to configure the **Details** grid:

- System\Ribbon\auditdetails - set to 'gn.ii.auditdetails' by default.

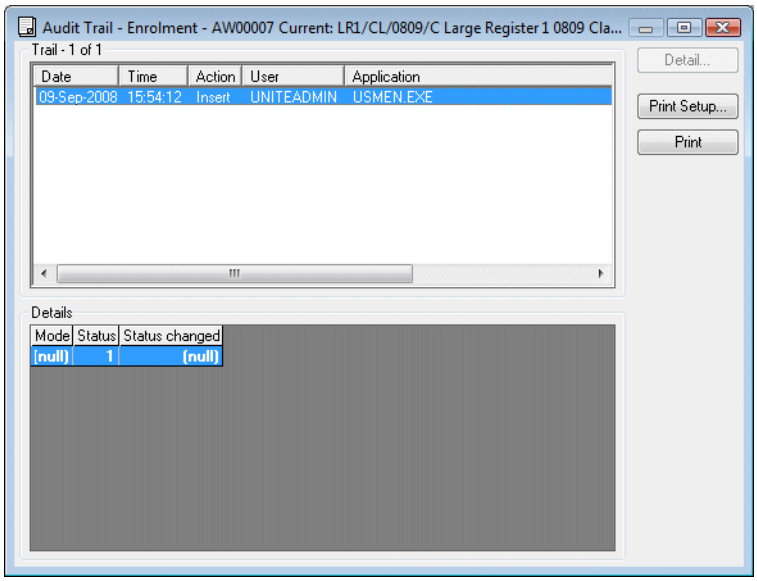
An alternative report may be defined if required and the Setting updated to the new report reference. However, this report must include Class.Property and Value columns for Mask functionality to be implemented.

If the Setting is blank or invalid the gn.ii.auditdetails report is used by default.

User rights to the View Audit first value (auditfirstvalue) class are required in order to view the **Details** section of the II **Audit Trail** form. The following default user groups include rights to this class:

- miscore
- timetabling

Figure 55: Audit Trail (VB)



Deleting Audit data

Audits of activity in your database are continually growing and can become very large over time. This has an affect on your database and can slow down queries. The **Manage Audit** tab in the Personal Data Erasure tool allows you to delete audit records independently of students. You can specify the years and actions for which you wish to delete the archive records.



For details on deleting audit data and system tasks using the Personal Data Erasure tool, refer to the *UNIT-e database setup tools* handbook (UDST.pdf).



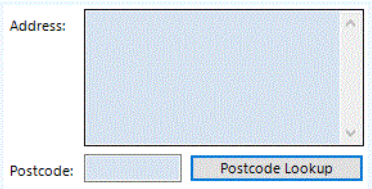
The functionality available in the Personal Data Erasure tool replaced the Manage Audit tool previously available in UNIT-e Workplace, which only allowed you to archive audit data.

Chapter 11:

Dealing with AFD postcode lookup functionality

Postcode lookup functionality is indicated by a **Postcode** or **Postcode lookup** button adjacent to the address fields (Figure 56). This reduces the amount of keying that users need to do when recording new address details, as it enables them to retrieve a full address based on postcode or partial address and postcode combination.

Figure 56: Postcode field with lookup facility



UNIT-e provides several levels of postcode lookup functionality, each of which is licensed separately (see page 151):

- **AFD Postcode:** This provides basic AFD Postcode functionality, enabling you to retrieve an address or list of adjacent addresses from a postcode. If multiple addresses are returned you can select the appropriate address from a list.
- **AFD Postcode Plus:** This enables you to retrieve an address based on its postcode and any additional information entered in the address fields (e.g. a house number or name), making it more likely that you will retrieve the correct address immediately.

- **AFD Postcode Internet:** This functionality enables you to connect your II applications and UNIT-e Online Services to the AFD service over the internet. You may also purchase additional functionality from AFD that stores information from additional datasets (AEB, POLAR and IMD) in the student address record (see page 157).

This chapter covers the following:

- *Prerequisites* (see page 151)
- *Using address search software* (see page 157)

Prerequisites

The following must be in place before you can begin to use AFD address functionality:

- *Licence requirements* (see below)
- *Lookups* (see page 152)
- *Settings* (see page 152)
- *Reports* (see page 153)
- *Installation* (see page 154)



Some of the prerequisites differ for UNIT-e Online Services. Refer to the *Managing UNIT-e Online Services* handbook (MOSC.pdf) for details.

Licence requirements

There are three licensing options:

- **AFDP (AFD Postcode):** This provides basic AFD Postcode functionality, enabling you to retrieve an address or list of adjacent addresses from a postcode.
- **AFDQ (AFD Postcode Plus):** This provides AFD postcode Plus functionality, enabling you to retrieve an address from a postcode and any additional information entered in the address fields (e.g. a house number or name).
- **AFDW (Web AFD Postcode):** This licence provides AFD Postcode Internet functionality, enabling you to connect your II applications and UNIT-e Online Services to the AFD service over the internet. With this licence you may also purchase additional functionality from AFD that stores AEB, POLAR and IMD data in the student address record.

Lookups

Check that the lookups listed in Table 8 are in place.

Table 8: AFD Postcode functionality lookups

Lookup	Notes
Adult education budget area	This lookup is provided for institutions that have purchased AEB data. These values are provided and should not be altered. **Note:** The 'Adult education budget' lookup is not currently used.
Country	To enable the postcode lookup process to deal with addresses from outside the UK, the software references the **CDD 2** field in this lookup. This is populated with a value if the country is non-UK. For UK countries this value is null. These values are provided and should not be altered.
Log type	The AFD Bulk Append Datasets tool (see page 160) writes any errors encountered during the process to the Message log class with the Log type code 'AFDBAD' (AFD Bulk Append Datasets).

Settings

The postcode lookup software includes formatting options that enable you to control how addresses are generated. This ensures that all users generate addresses in the same format. Table 9 shows how the settings are used.

Table 9: AFD Postcode functionality settings

Key	Notes
Application\Postcode\AFD Bulk Append Reports	A comma separated list of the report references for the RG reports available to select in the AFD Bulk Append Datasets tool (see page 160). By default the setting includes the two example core reports provided, cgn.afdbad.allcurrentyear and cgn.afdbad.missingcurrentyear.
Application\Postcode\PopulateFields	Defines the method used to populate the address fields when carrying out a postcode lookup. • **As Now** - populates the 'Address' and 'Postcode' properties (i.e. all address lines apart from the postcode are in one field). • **As Future** - populates individual address lines ('Address Line 1', 'Address Line 2', 'Address Line 3' etc.). • **Both** - populates all properties. **Note:** If you enter an invalid value the system defaults to **As Now** to ensure that the postcode search functionality continues to work.

Key	Notes
Application\Postcode\allupper	Defines whether the addresses should be displayed in mixed or upper case. • -1 = Yes, display in upper case. • 0 = No, display in mixed case.
Application\Postcode\country	Defines whether the 'Country' property should be included in the address. • -1 = Yes, include country. • 0 = No, don't include country.
Application\Postcode\county	Defines whether the 'County' property should be included in the address. • -1 = Yes, include county. • 0 = No, don't include county. **Note:** This key must be set to '-1' to display a **County** field on the **New visitor registration** page in UNIT-e Online Services. Refer to the *Managing UNIT-e Online Services* handbook (MOSC.pdf) for further information.
Application\Postcode\organisation	Defines whether the organisation name should be included in the address when dealing with an organisation address. • -1 = Yes, include organisation name • 0 = No, don't include organisation name
Application\Postcode\separator	Specify a separator for address lines to replace a carriage return (e.g. ", ").
Application\Postcode\townupper	Defines whether the 'Town' property should be displayed in upper case. • -1 = Yes, display the town in upper case. • 0 = No, don't display the town in upper case.

Reports

The following sample reports are provided for the AFD Bulk Append Datasets tool (see page 160):

Table 10: AFD Postcode functionality reports

Reference	Name	Notes
cgn.afdbad.allcurrentyear	AFD Bulk append of datasets – all current year students	Retrieves the details (Student.Id, Address.ID and Postcode) of any students with active enrolments in the current year where their home address has a postcode, regardless of whether the IMD, POLAR and AEB data has previously been updated or not.
cgn.afdbad.missingcurrentyear	AFD Bulk append of datasets – current year students with missing data	Retrieves the details (Student.Id, Address.ID and Postcode) of any students with active enrolments in the current year where their home address has a postcode and the data relating to IMD, POLAR and AEB data is currently blank.

Installation

The underlying technology for AFD Postcode functionality is either installed on internal servers at your institution or hosted by AFD.

Refer to the AfD web site (http://www.afd.co.uk) for further information about your options.

- *Installing AFD Postcode or Postcode Plus* (see page 154)
- *Installing AFD Postcode Internet* (see page 155)

Installing AFD Postcode or Postcode Plus

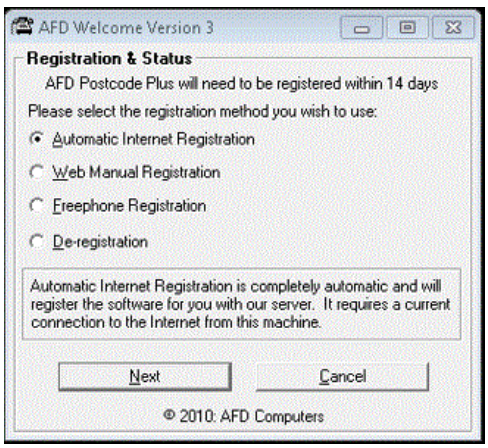
AFD Postcode (standard or Plus), integrated with UNIT-e, is usually licensed for a fixed number of users. The relevant software must be installed on each user's PC, though the associated postcodes database can be located on a central server.

To install AFD Postcode or Postcode Plus

1. Installation instructions are provided by AFD. A local folder is created when you run the installation (usually c:\afd, c:\pcplus or c:\postcode).
2. Each user must run a registration process via the **welcome.exe** in the folder (Figure 57). This requires the user to enter the account code and serial number details provided by AFD. These are checked against AFD's records and updated as appropriate.

The limitation on the number of users doesn't apply if AFD provides an afdpc.lic licence, therefore there is no need for individual users to register, but you should retain a copy of the **welcome.exe** in the local folder for each user.

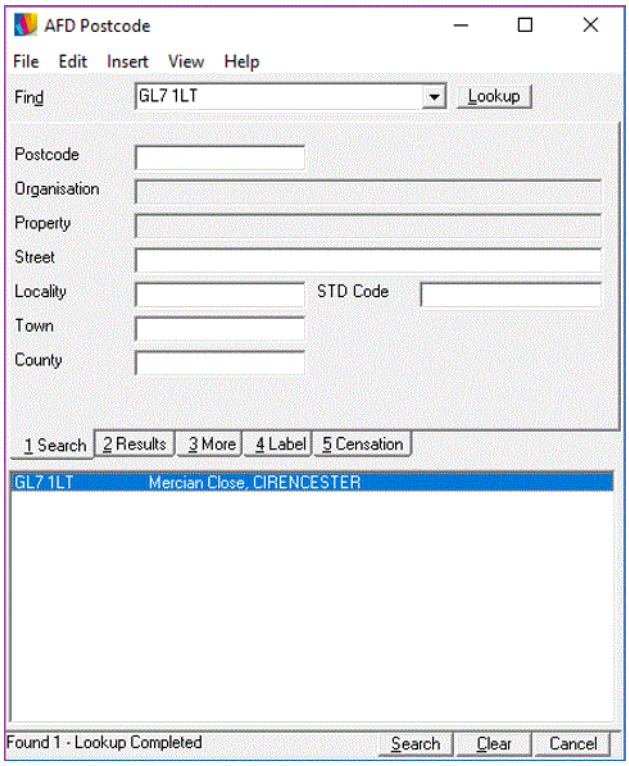
Figure 57: AFD Welcome



3. The local folder contains an application called **pc2000.exe** (Figure 58) that can be used to check the address credentials outside of UNIT-e and confirm licence registration.

You can also open a UNIT-e application that includes address properties and check that the **Postcode/Postcode Lookup** button is now available.

Figure 58: AFD Postcode check



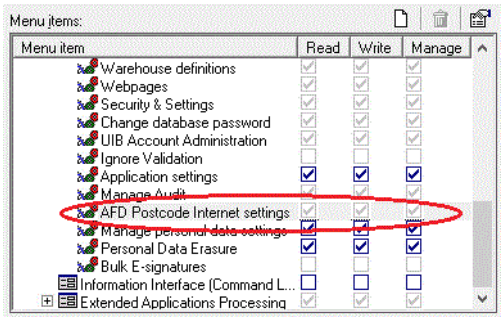
Installing AFD Postcode Internet

II applications and UNIT-e Online Services have an interface to the AFD Postcode Internet hosted service. This online version is usually licensed for a fixed number of calls/requests. To make calls to AFD's remote server you must set the appropriate credentials.

To install AFD Postcode Internet

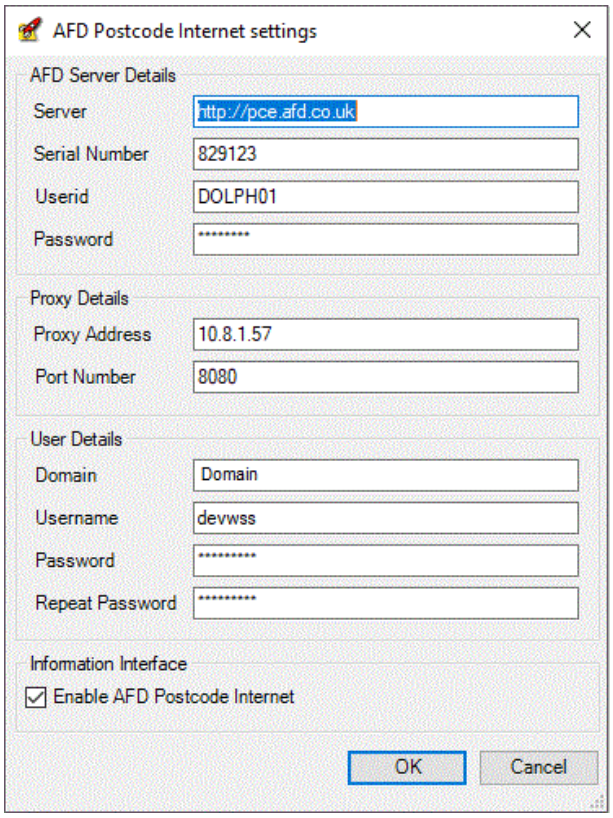
1. Make sure that you have Read, Write and Manage user permissions against the **System** | **System** | **AfD Postcode Internet settings** process on the **Menus** tab in UNIT-e Database Manager (Users) [UDMUS.exe] (Figure 59).

Figure 59: AfD Postcode Internet process



2. Select **Tools | AFD Postcode Internet Settings** from the menu in UNIT-e Workplace to open the **AFD Postcode Internet settings** form (Figure 60).

Figure 60: AFD Postcode internet settings



3. Complete the fields with the information provide by AFD and enter the domain user information in the **User Details**. Make sure that you tick the **Enable AFD Postcode Internet** check-box to enable AFD Postcode Internet for II applications and UNIT-e Online Services.

Make sure that the **Server** field is completed correctly, otherwise any online address search will fail. For example, if the correct entry is **https://pce.afd.co.uk/afddata.pce** and you enter an extra forward slash (**https://pce.afd.co.uk/afddata.pce/**) the search will fail.

Using address search software

By default, ADF Postcode functionality works the same way in II and VB applications, with the search method dependent on the licence you hold.

- *Retrieving addresses in UNIT-e applications* (see below)
- *Retrieving additional datasets* (see page 158)

If you hold an AFDW licence (see page 151) you may additionally connect your II applications to the AFD service over the internet by ticking the **Enable AFD Postcode Internet** check-box on the **AFD Postcode Internet settings** form (see page 156). The benefit of this is that you can use the service from browser-based applications and you don't need to connect AFD software to individual workstations.

Retrieving addresses in UNIT-e applications

The method available to you depends on the licence you hold (see page 151):

- **AFD Postcode:** Enter a postcode in the **Postcode** field and click the **Postcode/ Postcode Lookup** button to retrieve the portion of the address covered by the postcode (e.g. the street). You can then select the house number.
- **AFD Postcode Plus:** Enter a house number in the **Address** field and a postcode in the **Postcode** field and click the **Postcode/Postcode Lookup** button to retrieve the full address.

  or

  Enter a house number and postcode in the **Postcode** field with the number and postcode separated by a comma and space (e.g. '5, GL7 1LT') and click the **Postcode/ Postcode Lookup** button to retrieve the full address.

  or

  Enter as much of the address as you know in the appropriate fields and click the **Postcode/Postcode Lookup** button to retrieve the full address.



If you have an AFD Postcode Plus licence you can use the dollar ($) character as a wildcard.



A warning message is displayed if the software calculates that the search will take a long time. If the search is prolonged, the software displays a messaging indicating that insufficient search information has been entered.

The AFD postcode lookup process may be triggered multiple times for an address due to the postcode changing over time. The following Address properties are therefore also updated by the AFD postcode lookup process, to allow you to identify if and when an address record was last updated:

- Download date (downloaddate):

  A date property set to the current date when the address is updated by the AFD postcode lookup process, i.e. the date of the last import/update.

- Download status (downloadstatus):

  A Lookup property that uses the Address download status lookup list. Set to the code '1 - Downloaded' when the address is updated.

  A second value, '2 - Processed' is also provided and if required can be used to indicate when the address details have subsequently been copied somewhere else, e.g. to the current enrolment, manually or using a Warehouse. In subsequent years the address can then be checked/updated again (when the Download status would get reset to 'Downloaded') and the updated details copied to that year's Enrolment record.

This ensures that for existing addresses that are being updated, the Download date and Download status values can be used to verify that the Address record has been updated again.

Retrieving additional datasets

If you hold an AFDW licence (see page 151) you have the option to purchase additional functionality from AFD that provides additional datasets with the address details.

The AFD Postcode lookup service in both Online Services (i.e. when a student creates/edits their address via the Register page) and II applications includes the ability to capture the following data for individual students at the time of performing a postcode lookup. It can also be captured for multiple students using the AFD Bulk Append Datasets tool and IICL method:

- *Adult Education Budget (AEB) data* (see below)
- *Participation of Local Areas (POLAR) data* (see page 159)
- *Index of Multiple Deprivation (IMD) data* (see page 159)
- *AFD Bulk Append Datasets tool/IICL method* (see page 160)

Adult Education Budget (AEB) data

The AEB (Adult Education Budget) dataset provides details of the funding bodies responsible for funding each postcode in England.

The Person address class has properties for the following AEB data:

- Adult education budget area (aebarea): The devolved budget area into which the postcode falls. Lookup values are provided.
- Adult education budget source (aebsource): The ILR source of funding code for the devolved budget area.

These appear in II applications as **AEB Area** and **AEB Source** fields and are populated when an address is retrieved. They are stored, but not displayed, when an address is retrieved in UNIT-e Online Services.

Participation of Local Areas (POLAR) data

The POLAR (Participation of Local Areas) data are the classification groups/ranking used to show how likely young people are to participate in higher education across the UK by postcode. Given in quintiles (blocks of 20%) 1 - 5, with 1 being the lowest and 5 being the highest rate of participation.

POLAR3 was measured from the 2001 Census Area Statistics (CAS). POLAR4 is the more recent classification, based on participation rates of those who entered HE between the academic years of 2009/10 and 2013/14 if they entered aged 18, or 2010/11 and 2014/15 if they entered aged 19.

The Person address class includes the following reference properties for POLAR data:

- POLAR3 Young (polar3young)
- POLAR3 Adult (polar3adult)
- POLAR4 (polar4)

Fields for these properties appear in HE II applications and are populated when an address is retrieved. They are stored, but not displayed, when an address is retrieved in UNIT-e Online Services.

Index of Multiple Deprivation (IMD) data

The Index of Multiple Deprivation (IMD) provides a different ranking method and is used for Further Education (whereas POLAR is for HE). This classification returns a ranked number based on the postcode (between 1 and 32844) and a number between 1 and 10 (quintiles) where 1 is the most deprived area.

The Person address class includes the following reference properties for POLAR data:

- Deprivation decile (deprivationdecile)
- Deprivation rank (deprivationrank)

Fields for these properties appear in HE II applications and are populated when an address is retrieved. They are stored, but not displayed, when an address is retrieved in UNIT-e Online Services.

AFD Bulk Append Datasets tool/IICL method

Both an AFD Bulk Append Datasets tool and an IICL method are provided to allow you to use either method to 'back-fill' the additional AEB, IMD and/or POLAR data for existing students for whom a postcode is already recorded. In each case, the specified core report is used to identify which students and Address records to include in the update process and the data in the addresses is then populated using the AFD service provided for this purpose.



Only the datasets for which you have a licence are stored.

The process only updates the IMD/AEB/POLAR data, not postal address details.

Any errors encountered during the process are written to the Message log class with the Log type code 'AFDBAD' (AFD Bulk Append Datasets).

Setting up AFD Bulk Append Datasets

- User rights:

  An AFD Bulk Append Datasets process is provided under the System menu/module in UNIT-e Database Manager (Users) to enable you to control access to both the tool and the IICL method.

- Report:

  Specify the report you wish to use, as follows:

  - IICL method:

    The reportreference parameter for the AFDBulkAppendDatasets method allows you to specify which report you want to be used each time the process is run via the scheduled task.

  - Tool:

    When running the process via the tool, the required report can be selected in the tool form. A setting **Application\Postcode\AFD Bulk Append Reports** is provided to allow you to make the required report(s) available to select in the tool. Enter any required report references in a comma separated list. By default, the setting includes the two sample reports provided (see below).

  The following two example core reports are provided, as detailed below, but alternative reports can be used if required:

- AFD Bulk append of datasets – all current year students (cgn.afdbad.allcurrentyear):

  Retrieves the details (Student.Id, Address.ID and Postcode) of any students with active enrolments in the current year where their home address has a postcode, regardless of whether the IMD, POLAR and AEB data is already populated or not.

- AFD Bulk append of datasets – current year students with missing data (cgn.afdbad.missingcurrentyear):

  Retrieves the details (Student.Id, Address.ID and Postcode) of any students with active enrolments in the current year where their home address has a postcode and the data relating to IMD, POLAR and AEB data is currently blank.



The sample reports are set up with a reverse link to the Address class, to retrieve and update Addresses flagged as 'home' addresses only.

The sample reports rely on the Academic years view and therefore require the View Academic years class and either the capf_academic_years table value function provided in the SQL Server platform install for SQL Server users, or for Oracle users the gn.ora.academicyears report provided in the All Oracle post-upgrade script.

- Embedded menu:

  The embedded menu gn.afdtools contains the AFD Bulk Append Datasets tool, allowing it to be included in the required II applications. The embedded menu is present in the following supplied applications:

  - FES Enrolment Manager and FES Enrolment Linear
  - ILR Enrolments Manager
  - HESA2 Enrolments Manager and HESA Student
  - LLWR Enrolments Manager

Running AFD Bulk Append Datasets

- Using the IICL method (see below)
- Using the tool (see page 162)



To schedule the AFD Bulk Datasets IICL method:

1. Create a task in Windows Scheduler, ensuring the **Security options** are set up to use the appropriate user account (i.e. a Windows user able to log into UIICL automatically, either via LDAP or by being mapped in the **Advanced Settings** form (accessed in UNIT-e Information Interface via **Tools | Security and Settings** - **SharePoint** tab, **Advanced** button)).

2. Use the **Triggers** tab to define the required schedule.

3. Add a new action via the **Actions** tab and enter the following in the **Add arguments (optional)** field on the **New Action** form:

   - Database = database name, e.g. "ulive"
   - Method = "AFDBulkAppendDatasets"
   - Parameter = reportreference, e.g. "cgn.afdbad.missingcurrentyear"

   For example:

   ```
   UIICL.exe database="ulive" method= "AFDBulkAppendDatasets"
   reportreference="cgn.afdbad.allcurrentyear"
   ```

Refer to the *UNIT-e Warehouse Builder* handbook (UWB.pdf) for details on scheduling tasks.

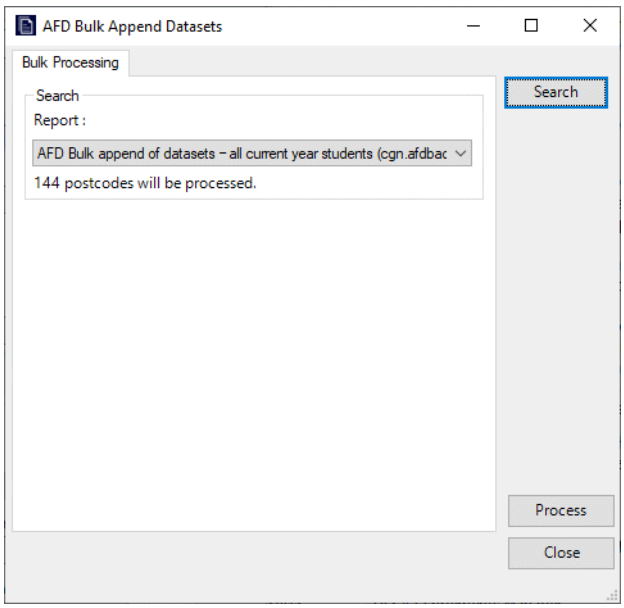
4. Review the Message log (Log type code 'AFDBAD' (AFD Bulk Append Datasets)) for errors.

To run the AFD Bulk Append Datasets tool:

Access:	AFD Bulk Append Datasets menu
Form:	*AFD Bulk Append Datasets tool* (see page 162)

1. Launch the tool via the **AFD Bulk Append Datasets** ribbon menu in the preferred UNIT-e application.
2. Select the required report in the **Report** drop-down list and click on the **Search** button to retrieve the required students.
3. The tool form is updated to display the number of address records/postcodes that were retrieved by the report for updating:

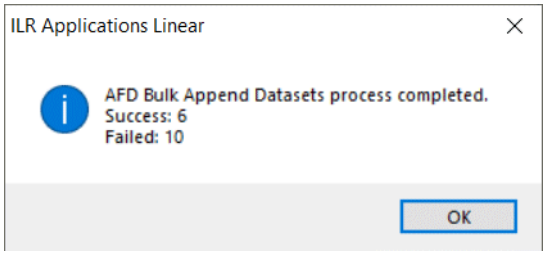
Figure 61: AFD Bulk Append Datasets tool



4. Click on the **Process** button to proceed with the update. The retrieved Address records are updated for the datasets for which you hold a licence. A progress bar is displayed indicating how much of the process has completed.

5. When the process completes a message is displayed indicating how many records were successfully updated and how many failed:

Figure 62: AFD Bulk Append Datasets message



6. Review the Message log (Log type code 'AFDBAD' (AFD Bulk Append Datasets)) for errors.

Chapter 12:

Managing user tools

The day-to-day use of the tools available to users is covered in detail in the *Working with UNIT-e* handbook (WWU.pdf). This chapter explains how these tools may be managed to be of maximum benefit.

- *Validating data* (see page 166)
- *Managing Alerts* (see page 167)
- *Managing error logging* (see page 168)
- *Managing the Document facility* (see page 170)
- *Managing Photo Capture* (see page 171)
- *Managing E-signatures* (see page 172)

Validating data

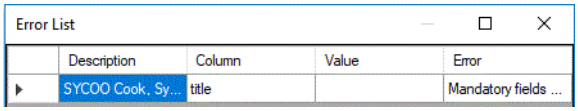
In II applications, fields that contain an error have an exclamation mark icon against them (Figure 63) and the user is prevented from saving the record until the error is corrected.

Figure 63: Validation error



Records with errors are also flagged in the pick-list and an **Error List** is displayed (Figure 64), giving details of the error(s).

Figure 64: Error List



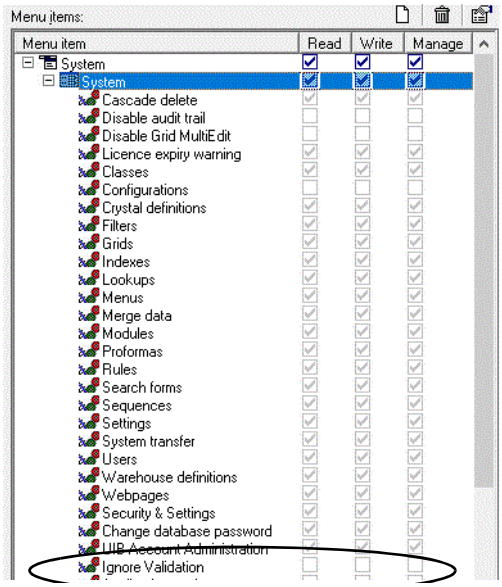
These flags are triggered when a user attempts to save the record but a validation check can be carried out at any time by using the **Validate** tool on the **Home** tab (Figure 65).

Figure 65: Validate tool



As an MIS Manager you may override the validation check by giving a user rights to the **Ignore Validation** process available from the **System | System** menu item in UNIT-e Database Manager (Users) [UDMUS.exe] (Figure 66).

Figure 66: Ignore Validation module



If a user has **Manage** rights to **Ignore Validation** they can save records to the database in a UII application even if validation errors are present.

Managing Alerts

An alert is a form of electronic 'post-it' note that's associated with a record and is automatically displayed when you or another system user opens that record. The following access rights are required to use this functionality:

- Users must have **Alert** rights for each of the classes for which they are creating alerts and must have **Select** and **Insert** rights against the 'Alert' class.
- Users must have **Select** rights against the 'Alert' class to view Alerts.
- Users must have **Select** and **Update** rights against the 'Alert' class to edit Alerts.
- Users must have **Delete** rights against the 'Alert' class to delete Alerts.



More information about using Alerts is available in the *Working with UNIT-e* handbook (WWU.pdf).

Managing error logging

The majority of UNIT-e processes log errors either to the Event Viewer or to their own log file, generated to the location specified in an associated Setting.

However, a Message log class is also provided that is designed to store failure records for errors generated during a UNIT-e process. These records can then be reported against in order to review any errors once a process has completed.

This class will be used increasingly throughout UNIT-e in place of error log files. It has currently been utilised in the following tools:

- *AFD Bulk Append Datasets tool/IICL method* (see page 160)
- *Bulk E-signatures* (see page 174)
- Exam XML Results Loader tool
- One to One Tuition
- SID profile management

A **Message log** tab is included in the Personal Data Erasure tool that enables you to clear down the Message log class for specific years and Log types (see below).



Refer to the *UNIT-e database setup* handbook (UDST.pdf) for details.

The Message log class includes the following properties:

- Date (dategenerated) - used to record the date on which the process was run and the error generated.
- Log type (logtype) - a Lookup property (linked to the Log type lookup) used to identify which process generated the Message log/error record.
- Date1, Date2, Date3, Date4 - Generic date properties used to store date values pertinent to each Log type/process (e.g. DOB).
- Flag1, Flag2, Flag3, Flag4 - Generic flag properties used to store flag values pertinent to each Log type/process.
- Is successful (issuccessful) - Flag property.
- Memo1, Memo2, Memo3, Memo4 - Generic memo properties used to store text values requiring more characters, such as a description of the error.
- Object1, Object2, Object3, Object4 - Generic link properties used to store link values (IDs to link class records) pertinent to each Log type/process (e.g. Student Id).
- Reference1, Reference2, Reference3, Reference4 - Generic reference properties used to store reference values pertinent to each Log type/process (e.g. Student reference).

- Text1, Text2, Text3, Text4 - Generic text fields used to store text values pertinent to each Log type/process (e.g. Email address).
- User (user) - the UNIT-e user who ran the process.
- Windows user (windowsuser) - the Windows user who ran the process (e.g. to enable you to identify issues with Adobe API calls, or Windows Services).

Managing the Document facility

The Document facility provides users with a way of recording any sort of information about a record that can't be recorded on forms. It's particularly useful for large amounts of text - for example a course outline could be recorded against each of the Course records. The following access rights are required to use this functionality:

- Users must have **Select**, **Insert** and **Document** rights against each of the classes for which they are entering documents.
- Users must have **Select** and **Update** rights to edit documents.
- Users must have **Select** rights to view documents.
- Users must have **Delete** rights to delete documents.



More information about using the Document facility is available in the *Working with UNIT-e* handbook (WWU.pdf).

Managing Photo Capture

Photo Capture is used in UNIT-e applications to capture images of students or members of staff so that they can be stored as hotlinks in your UNIT-e database. There are various setup requirements including the definition of setting keys in the 'Application\Photo' setting. These setup requirements are explained in detail in the *UNIT-e Database Manager (Settings)* handbook (UDMSE.pdf).

Student photo hotlinks generation Warehouse template

A Warehouse definition (cgn.dm.0031) and associated export and import reports (cgn.dm.0031 and cgn.dm.0031a) are provided to automatically generate Student photo hotlinks.

The Warehouse runs the report, which exports a list of student photo hotlinks to create into a text file. The Warehouse then imports the generated text file into the database, using the sub-report to generate Hotlink records for the appropriate students.



Hotlinks are only generated for students with no existing hotlinks. If required this condition can be refined within the report cgn.dm.0031 to suit your own requirements.

The location and filename for the hotlink photo files is specified in report cgn.dm.0031 and is set to '\\FILESERVER\UNITe\Student_Photos\',Student.Student reference,'.jpg' by default. The pathway specified must be amended to the location of your files.

The text file is exported to the location specified in the **Directory or database** field in the Warehouse definition. This is set to 'C:\UNIT-e\Warehouses' by default, but can be amended via UDMSE if required.

The Warehouse requires that a Hotlink Lookup code of 'photograph' is in place.

Managing E-signatures

The E-signatures functionality enables users to request E-signatures for documents via UNIT-e software, using the Adobe Sign facility. Hotlinked documents can be selected for upload to Adobe Sign, either individually via the II **Hotlink** form, or in bulk using the Bulk E-signatures tool or IICL method. Once signed, the Windows Service, UNIT-e Electronic Signature service, then downloads the documents and overwrites the hotlinked document with the new signed version.



For details on using the E-signatures functionality, refer to the *Working with UNIT-e* handbook (WWU.pdf).

The following are required to make this functionality available to users and configure it as required:

- *Licence* (see below)
- *User rights* (see page 173)
- *Keys and Settings* (see page 173)
- *Hotlink status lookup* (see page 173)
- *Windows Service* (see page 174)
- *Bulk E-signatures* (see page 174)
- *Error logging* (see page 176)

Licence

An ESIGN licence is required in order to access this functionality.

User rights

The following Process is provided to allow you to control user access to the Bulk E-signatures tool:

- System:
  - Bulk E-signatures

Keys and Settings

The following Keys and Settings are provided to allow you to set up the software:

Table 11: E-signatures Keys and Settings

Key	Default Setting	Notes
Application\E-signatures\ BaseUri	https:// api.eu1.echosign.com:443/ api/rest/v6 baseUris	E-signatures service URL.
Application\E-signatures\ Bulk reports	cgn.sign.learnagreement (the sample report provided, Signatures Bulk Request - Learning Agreements (see page 174))	Enter a comma separated list of the references of the reports you wish to be available to select in the Bulk E-signatures tool. **Note:** For multi-sign, enter the reference of the top level report only (see page 175).
Application\E-signatures\EndpointUri	:443/api/rest/v6/	E-signatures endpoint URL
Application\E-signatures\ Integration key	-	You must add a setting for this Key containing the Adobe Sign Integration key supplied to you with the software.
Application\E-signatures\Log file location		A log file location must be specified here for the IICL Bulk E-signatures method.

Hotlink status lookup

The Hotlink class includes a Status property that is used to record the status of E-signature requests. The status is updated automatically upon requesting a signature and receiving the signed document back.

A Hotlink status lookup is provided, with the following default codes (including corresponding **UNIT-e** values) which must be in place in order for the Status to be updated successfully:

- AWAITSIGN: Awaiting signature - The Status a Hotlink is set to when a signature is requested.
- SIGNED: Signed - The status a Hotlink is set to when the signed document is received back from Adobe Sign.

Windows Service

A Windows Service, UNIT-e Electronic Signature service, is provided that calls the Adobe Sign endpoint at regular intervals to download signed documents as they become available.

The UNIT-e Windows Service.exe.config file has been updated to include the Adobe Sign endpoint URL required for the UNIT-e Electronic Signature service to update the Hotlink Status. **This must be present in your config file for the Windows Service to function.**

The UNIT-e Windows Service.exe.config file also includes an ESignServiceFrequency key that determines how often the UNIT-e Electronic Signature service checks for newly signed documents to download. This is set to '300' seconds by default, but can be amended if required.

Ensure that Windows Service authorisation is set up for the required Windows and UNIT-e user accounts via the **Windows Services** tab of the **Security and Settings** form.

Bulk E-signatures

A Bulk E-signatures tool, that allows users to request signatures for multiple documents, is available to add to the ribbon of any II application. An IICL method, BulkSignatures, is also provided to enable the bulk E-signatures process to be scheduled to run via Microsoft Task Scheduler (see below).

Using either the tool or the IICL method, a cohort of students and the relevant Hotlink records can be selected using a Report Generator report, enabling you to define (via the report) at which level the documents are linked to the student - e.g. student, enrolment, awardapplication, etc. A sample report is provided, Signatures Bulk Request - Learning Agreements (cgn.sign.learnagreement) that includes Student Id, Hotlink Id, Hotlink Command and Email address.

Tool

The references of any reports you wish to be available for use with the tool can be added to the Application\E-signatures\Bulk reports setting provided (see page 173). Any report referenced in the setting is available to select in the drop-down list in the tool.

IICL method

The BulkSignatures IICL method requires a report reference as a parameter, as follows:

- UIICL.exe database="ulive"
- method="BulkSignatures"
- report="reportref"

In addition, the Applications\E-signatures\Log file location setting key must contain the log file location, to enable the number of successes and failures to be logged (see page 176).

Multi-sign

Bulk e-signatures allows for multiple signatures in one document, in a defined sequence. The signed document then becomes available for download by the Windows Service once all of the signatures have been collected.

The additional email addresses for the signees must be included in the selected E-signatures report by adding union statements and ordering the rows in the order in which the signatures are required. Template reports, cgn.sign.multisign with a union to report cgn.sign.multisign2, are provided, which request two signatures per Hotlink. As many union statements/signatures per hotlink may be added, as required.

To use these reports the reference of the top-level report must be added to the Application\E-signatures\Bulk reports setting (see page 173). The report is then available to select in the Report drop-down list in the Bulk E-Signatures tool.



Report references must be added to this setting in a comma separated list.

Error logging

Tool

The Bulk E-signatures tool inserts errors generated during the process into the Message log class (see page 168), rather than writing them to an error log file.

For each error a Message log record is created with the following properties populated with the values shown:

- Date generated - The date on which the Bulk E-signatures process was initiated.
- Log type - Log type lookup where code is 'ESIGNATURE'.
- Memo1 - Error Description.
- Object1 - Student Id.
- Object2 - Hotlink Id.
- Text1 - Hotlink command.
- Text2 - Email address.
- User - UNIT-e user.
- Windows user - Windows user.



These records can be cleared down using the **Message Log** tab in the Personal Data Erasure tool. Refer to the *UNIT-e database setup* handbook (UDST.pdf) for details.

IICL method

The BulkSignatures IICL method uses an error log to record the number of successes and failures each time the process runs.

The Applications\E-signatures\Log file location setting key (see page 173) must contain the log file location in order for the IICL method to run.

Chapter 13:

Using the UNIT-e File Upload Service

The UNIT-e File Upload Service is a Windows Service that enables you to transfer uploaded files (e.g. files that students upload in support of enrolments or funding requests) from a Blob (Binary Large Object) on a web server to a dedicated file server.

This chapter includes the following:

- *File Upload Service prerequisites* (see page 178)
- *Using File Uploader with a Blob to upload documents* (see page 183)

File Upload Service prerequisites

The following prerequisites must be in place before you can begin to use the File Upload service:

- *UNIT-e Windows Services installation* (see below)
- *File Upload Service settings* (see below)
- *File Upload Service user rights* (see page 180)
- *Upload files* (see page 181)

UNIT-e Windows Services installation

The UNIT-e File Upload service MUST be installed on a server where it will have access to the uploaded files and their destination folder(s).

Unless you use the Internal Web Server as your main Windows Services server, this may result in the need to install the Windows Services twice, once on the Application Server to operate email (SMTP), SMS (HTTP/HTTPS Service and SMS Incoming Service) and VQ Manager Services and again on the web server for UNIT-e File Upload Service.



The process of installing Windows Services is covered in the section 'Installing UNIT-e Windows Services' in Chapter 2 of the *Managing UNIT-e Messaging* handbook (MSMS.pdf). You should also refer to the *Upgrading UNIT-e Windows Services* upgrade section of the latest Upgrade procedure document for details of any upgrades.

File Upload Service settings

The settings in Table 12 are provided to allow you to set up File Upload service as required.

Table 12: Web File Uploader tool settings

Setting/key	Notes
Application\FileUploader\BLOB\ StoreFilesInBlob	Indicates whether documents should be uploaded to a Blob. This is the recommended method for Online Services documents. -1 = Use the Blob method 0 or null = Don't use the Blob method

Setting/key	Notes
Application\FileUploader\ FaultEmails\From	The email address to be used as the 'From' address for emails sent reporting file upload space issues (e.g.file.uploader.service@insitution.co.uk).
Application\FileUploader\ FaultEmails\To	The email address for the person who should be notified of space issues encountered by users uploading files (e.g. mis.manager@insitution.co.uk).
Application\FileUploader\ FileSize\File Size Error Msg	Define the message displayed when a student attempts to upload a file in support of a fund application and that file exceeds the size specified against the 'Application\FileUploader\FileSize\Max File Size' setting key (see below). A default value of 'This File is too large, the limit is {0} KB.' is provided but should be amended to suit the requirements of your institution. If the value is blank, a default error message is displayed which shows the maximum file size specified against the 'Application\FileUploader\FileSize\Max File Size' or 'Application\OS\OnlineFunding\Max File Size' setting key, whichever is smaller. **Note:** The maximum upload file size is controlled by two setting keys: • Application\FileUploader\FileSize\Max File Size • Application\OS\OnlineFunding\Max File Size If the two values differ, the lower of the two is used as the maximum file size. The 'OS\OnlineFunding\Max File Size' value should always be the lower value, if there's a difference, but ideally they should contain the same values.
Application\FileUploader\ FileSize\Max File Size	Specify the maximum file size that may be uploaded, in KBs. A default of '1000' is provided. **Note:** The maximum upload file size is controlled by three setting keys: • Application\FileUploader\FileSize\Max File Size • Application\OS\Question Attachments\Max File Size (for Online Services) • Application\OS\OnlineFunding\Max File Size (for Support Funds) If the values differ, the lower value is used as the maximum file size. The 'Application\FileUploader\FileSize\Max File Size' should always be the higher value, if there's a difference, but ideally they should contain the same values.
Application\FileUploader\ FinalFileLocationCategories	This setting enables you to specify the final file location(s) for uploaded files (e.g. \\uniteserver\student\ documents). The setting supports the addition of many keys, enabling you to define one for each Hotlink category and therefore specify a different file location for each, if required. Example keys for Hotlink categories of 'General' and 'AwardAppDoc' are provided.
Application\FileUploader\Hotlink	This setting key is no longer used.
Application\FileUploader\ Service\ MinimumFileDuration	This setting key is no longer used.

Setting/key	Notes
Application\FileUploader\ SupportedFilesFormat	Specify the file formats accepted by the upload process (e.g. pdf,doc,docx,jpg etc.). **Note:** This setting key isn't used by Online Services, which uses the 'Application\OS\Question Attachments\Files format' setting key instead.
Application\FileUploader\ TemporaryFolder\Path	This setting key is no longer used.
Application\OS\Upload Hotlink Type\Type	**Online Services** Specify the 'Hotlink' lookup value to be applied to hotlinks added via Online Services.
Application\OS\Question Attachments\Files format	**Online Services** Defines the file types that may be uploaded in Online Services. A default of 'pdf,doc,docx,jpg,jpeg,PNG' is provided.
Application\OS\Question Attachments\Max File Size	**Online Services** Defines the maximum file size (in KBs) that may be uploaded in Online Services. A default of '5000' is provided. **Note:** If the 'Application\FileUploader\FileSize\Max File Size' value is also specified, the lower of the two values is applied.
Application\OS\OnlineFunding\ Files Format	**Support Funds in Online Services** Defines the file types that may be uploaded in Online Services for award applications. A default of '.png,.docx,.pdf,.jpg' is provided.
Application\OS\OnlineFunding\ Max File Size	**Support Funds in Online Services** Defines the maximum file size (in KBs) that may be uploaded in Online Services for Support Funds. **Note:** If the 'Application\FileUploader\FileSize\Max File Size' value is also specified, the lower of the two values is applied.

File Upload Service user rights

Users must have rights to the following classes:

- Hotlink
- Hotlink upload

In addition, privileges are required on the folder(s) specified in the 'Application\FileUploader\ FinalFileLocationCategories' setting (see page 178).

Upload files

The following file types are supported:

- .doc
- .docx
- .gif
- .jpeg
- .jpg
- .pdf
- .png

The uploaded file names must be unique within the Command values of the existing Hotlink upload records (refer to *Hotlink upload records* (see page 181). To ensure this the following naming system is used:

- Each file has a GUID (Globally Unique File Name) (e.g. **108000004410891_1954809**_2412020_184545**.**pdf).
- The date and time stamp is appended to the end of the GUID (e.g. 108000004410891_1954809_**2412020_184545.**pdf).
- Each uploaded file has a temporary Hotlink upload record associated with it (refer to *Hotlink upload records* (see page 181).

Hotlink upload records

Each uploaded file must have a temporary Hotlink upload record associated with it.

These records must be set up as follows:

- **Id:** the generated unique system Id.
- **Object:** the Id of the associated record that the Hotlink will be linked to, i.e. the Student.
- **Type:** Hotlink type.
- **Start:** Start date.
- **End:** End date.
- **User:** The Id of the user who uploaded the associated file.
- **Name:** The name of the hotlink file.

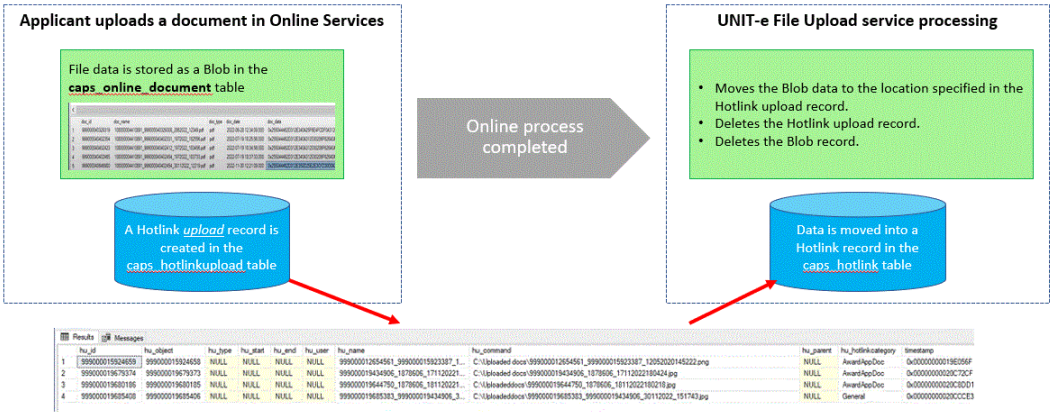
- **Command:** The file location, e.g. '\\webserver\files\upload', with the associated file name (GUID+date+time) appended to the end.
- **Parent:**
- **Hotlink category:** Used to determine which permanent location the associated file is moved to, as specified in the setting for the selected category - refer to *File Upload Service settings* (see page 178).

Using File Uploader with a Blob to upload documents

The IICL Migrate Hotlinks process is no longer the recommended method for dealing with general documents.

The stages of this process are shown in Figure 67.

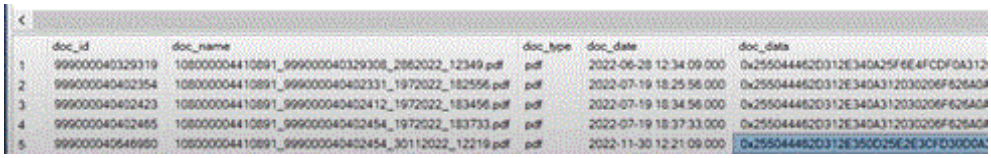
Figure 67: The Online Services Document Upload process



1. At the point when the student uploads their document in Online Services (by clicking **Upload** on the **Additional questions** screen), the website streams that document into the **caps_online_document** table in your database as a Blob, using the **service.UploadDocumentToBlob** web service.

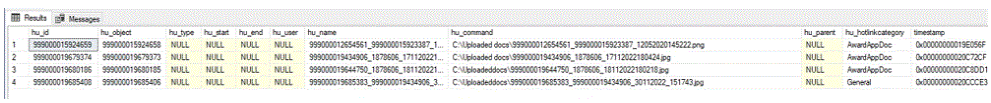
   The **caps_online_document** table contains various information about the document including the generated **doc_name**, which is based on a unique document ID and the upload date and time, and the **doc_data**, which represents the file contents (Figure 68).

Figure 68: caps_online_document table



2. When the applicant confirms their application by clicking **Proceed** on the **Summary** screen, a Hotlink upload record is created in the **caps_hotlinkupload** table (Figure 69).

Figure 69: caps_hotlinkupload table



This has the same properties as the **caps_hotlink** table, including the following:

- The Hotlink category (**hu_hotlinkcategory**), which is 'General' in the example. This category is applied by Online Services and is defined by the 'Application\OS\Upload Hotlink Type\Type' setting key value.

- A command (**hu_command**) that provides the final location for the document, based on the Hotlink category and the 'Application\OS\Question Attachments\Final File Location Category' setting key.



Refer to *File Upload Service settings* (see page 178) for further information about the settings.

3. The **caps_online_document** table and the **caps_hotlinkupload** table now both contain data relating to the uploaded file but there is note yet anything in the **caps_hotlink** table or the file system.

4. When the UNIT-e File Upload service runs, it finds the Blob record in the **caps_online_document** table and the equivalent Hotlink upload record in the **caps_hotlinkupload** table (by matching the **doc_name** and **hu_name**) and saves the content of the file (**doc_data**) to the specified location (**hu_command**).

   At the same time, a Hotlink record is created from the Hotlink upload record details, the Hotlink upload record is deleted from the **caps_hotlinkupload** table and the Blob is deleted from the **caps_online_document** table.



If the applicant uploads a document but doesn't complete the application/enrolment process, the Blob remains in the **caps_online_document** table.

Errors are generated by the following situations:

- No setting is found that matches the file Hotlink category.
- A setting is found but the path specified in the setting is invalid.
- The path specified is valid but there is insufficient space in the destination folder for the file. In this situation the error is reported by email to the address specified against the 'Application\FileUploader\FaultEmails\To' setting key, with a 'From' email address taken from the 'Application\FileUploader\FaultEmails\From' setting key.



Hotlink upload records associated with files that have generated errors remain in the database.

Chapter 14:

General Data Protection Regulation (GDPR) compliance

This chapter discusses the functionality provided to assist you in complying with the General Data Protection Regulation (GDPR) that came into effect in May 2018. These components, in conjunction with future functionality, will ensure that within UNIT-e you have the ability to meet the additional requirements the GDPR places on organisations responsible for data protection.



For details on the GDPR and the requirements for organisations, refer to the Information Commissioners Office website: https://ico.org.uk/for-organisations/data-protection-reform/overview-of-the-gdpr/

This chapter covers the following:

- *Managing personal and sensitive data* (see page 186)
- *Managing user consent* (see page 193)
- *Managing data retention policies* (see page 197)

Managing personal and sensitive data

UNIT-e provides you with the ability to collect the required data from students and to update this data as necessary. Access to this data is managed via user rights (see page 73).

Specific properties are supplied to enable you to manage students' personal and sensitive data and a set of Student Personal Data reports are provided to allow you to handle Subject Access Requests for the data you hold on a student.

Personal and sensitive data properties

The System personal data class (syspersonaldata) allows a record to be created for each property in the UNIT-e dictionary, in which the following flags can be set as required:

- **Personal:** Allows you to flag properties as personal data. This flag should be set for any property that identifies a person uniquely, e.g. Student reference, Date of birth, etc.
- **Sensitive**: Allows you to flag properties as sensitive personal data. This flag is intended to enable you to flag any properties that are a protected characteristic, i.e. any data that could be used in a discriminatory way, such as that relating to ethnic or racial origin, religious beliefs, physical or mental health, etc.



The **Sensitive** flag is currently reserved for future use, but may be useful for reporting purposes.



Refer to the Key Definitions page on the ICO website for details on what constitutes personal and sensitive data: https://ico.org.uk/for-organisations/guide-to-data-protection/key-definitions/

- **System**: Setting this flag ensures values set for the Personal and Sensitive flags for the property in which it is set are preserved by default in UNIT-e releases. It makes the Personal and Sensitive flags read-only for any property in which it is set. A standard set of Personal and Sensitive flag settings are provided and the System flag is set for the properties included in this (see below).

The Personal and Sensitive flags can be set via the Manage Personal and Sensitive Data tool, by either importing the settings or setting them manually. A spreadsheet is provided to enable you to import the standard flag settings provided with the software, and a set of reports are also provided that assist in identifying and flagging the custom Personal and Sensitive properties in your database additional to the imported System properties.

Setting Personal and Sensitive flags

A **Manage Personal and Sensitive Data** tool (Figure 71) is available via the **Tools** menu in UNIT-e Information Interface that allows you to view and edit **Personal** and **Sensitive** flags for the properties in your UNIT-e database. Flag settings can be imported and exported from and to .csv files, and edited manually (for those properties not flagged as System properties).

To provide access to this tool rights must be assigned to the Manage personal data settings process in the System menu item in DMUS.

The tool lists the classes that contain properties flagged as **Personal** or **Sensitive** (ordered by class name) and displays the number of Personal properties and Sensitive properties within the class. The flags for the properties in a class can be viewed and edited (for non System properties) by selecting the required class and clicking on the **Properties** button in the toolbar.

- Flags are stored against the base class only. For example, Surname flags are only available within the Person class. Extension classes only show extended properties, e.g. in the Student class, Person properties are not shown.
- Id and link properties aren't displayed, as these should not be flagged as **Personal** or **Sensitive**.
- The **Edit Personal Data Class Properties** screen includes an **Online Stranger Mapping** column for the Person, Person details, Student, Student FES/SQA, Student HEA, Student HESA, Student ISR and Student WSR classes. This enables you to specify how personal data properties entered by a stranger student in Online Services should take precedence over data already held for the matching student in your UNIT-e database (if at all). Refer to the *Managing UNIT-e Online Services* handbook (MOSC.pdf) for a full explanation of this functionality.

Carry out the following to ensure the required properties are flagged as Personal or Sensitive in your database:

1. *Import the standard flag set* (see below)
2. *Flag custom Personal and Sensitive properties* (see page 188)

Import the standard flag set

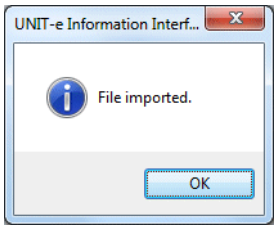
A GDPR Personal and Sensitive flags.csv file is provided that contains the standard set of Personal and Sensitive flag settings supplied with the software. Importing the spreadsheet updates the Personal and Sensitive flags for the included properties and also sets the System flag for them, ensuring that the Personal and Sensitive flags can't be amended for those properties.

The spreadsheet is provided in the folder **Scripts-Upgrade\4. GDPR Personal and Sensitive flags** in each release and should be imported via the Manage Personal and Sensitive Data tool available via the **Tools** menu in UNIT-e Information Interface.

To import the GDPR Personal and Sensitive flags spreadsheet:

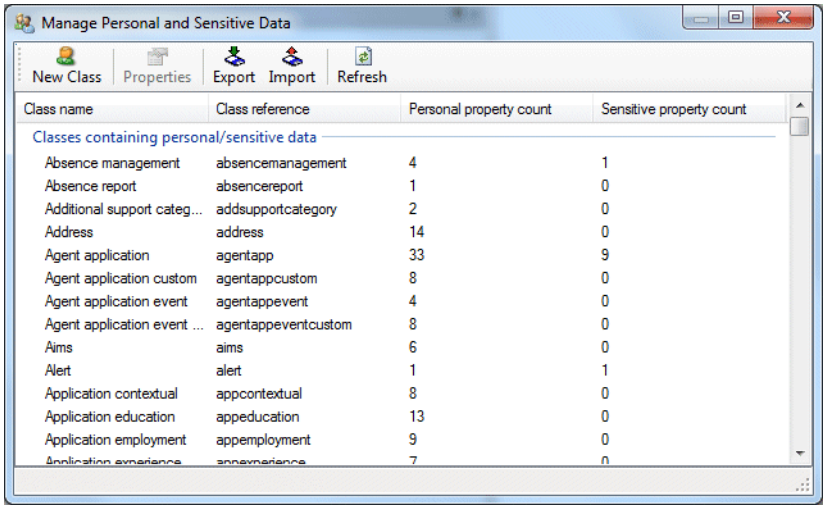
1. In UNIT-e Information Interface, select **Tools | Manage Personal Data** to open the **Manage Personal and Sensitive Data** tool (Figure 71).
2. Click on the **Import** button in the toolbar and browse to the GDPR Personal and Sensitive flags.csv file, located in **Scripts-Upgrade\4. GDPR Personal and Sensitive flags**.
3. Select the file and click on the **Open** button to commence the import.
4. Once complete a message is displayed indicating that the file was imported. Click on the **OK** button:

Figure 70: File Imported dialogue



5. The class list in the **Manage Personal and Sensitive Data** tool is updated to include the imported flags:

Figure 71: Manage Personal and Sensitive Data tool



Flag custom Personal and Sensitive properties

A set of reports are provided to enable you to identify and flag your custom Personal and Sensitive properties, i.e. those not included in the spreadsheet of System flags provided:

- cgn.gdpr.personal1 - GDPR Find Custom Personal data properties step 1 (based on surname, dob or UCAS id):

Identifies Personal properties in classes that include a surname, date of birth or external agency id.

- cgn.gdpr.personal.sub1 - GDPR All Personal data properties (already set up)
- cgn.gdpr.personal2 - GDPR Find Custom Personal data properties step 2 (classes linked):

  Identifies Personal properties in linked classes.
- cgn.gdpr.personal3 - GDPR Find Custom Personal data properties step 3 (class extensions):

  Identifies Personal properties in class extensions.
- cgn.gdpr.personal4 - GDPR Find Custom Personal data properties step 4:

  Identifies Sensitive properties.



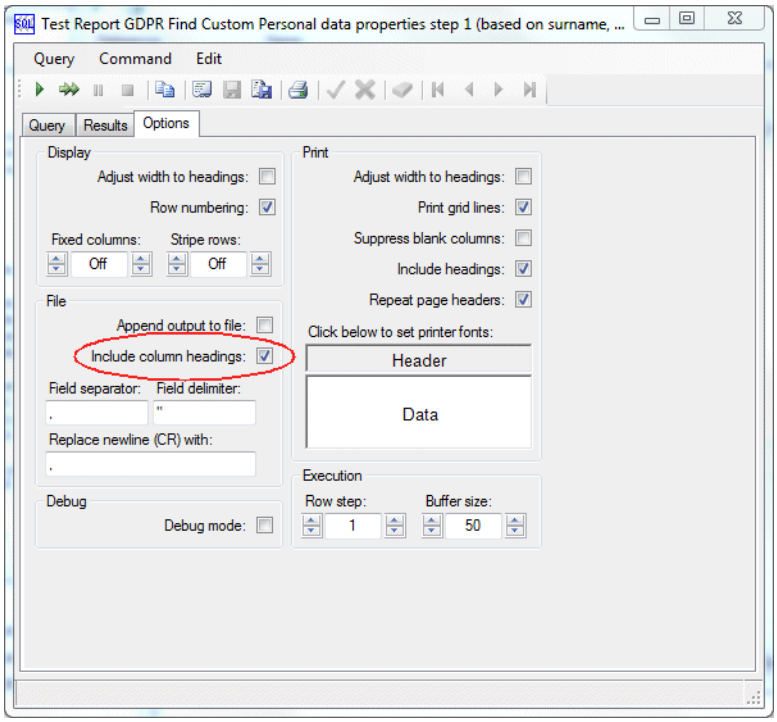
These reports identify and flag institution-specific properties and therefore the System flag is not set for these properties.

Having first imported the standard System flag settings from the GDPR Personal and Sensitive flags spreadsheet provided (see page 187) the reports should then be used to flag the remaining properties required within your database. They must be used in the sequence specified below, to ensure they are able to first identify and flag records based on surname, date of birth, or external agency Id and then work outwards through the levels of linked records.

Prior to running the reports, ensure the following:

- The relevant user has rights to the System personal data class.
- The standard System flag settings have been imported from the GDPR Personal and Sensitive flags spreadsheet provided (see above).
- The **Include column headings** check box is selected on the **Options** tab of the **Test Report** form in UNIT-e Report Generator (Figure 72):

Figure 72: Include column headers



Use the reports as follows:

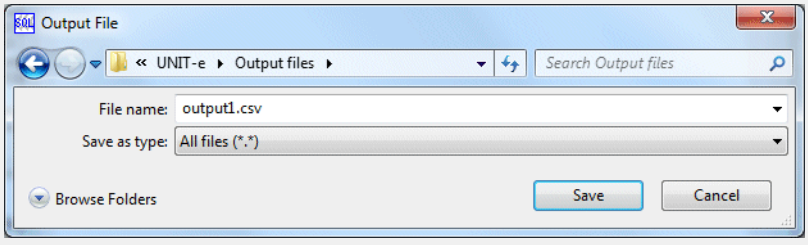
1. Identify and flag Personal properties in classes that include a surname, date of birth or external agency id:

   i. In UNIT-e Report Generator run the report cgn.gdpr.personal1.

   ii. From the **Test Report** form (Figure 72) export the report output to a .csv file, by either:

   - Clicking on the **File** button in the toolbar.
   - Selecting **Command | File** from the menu bar.

In the **Output File** form, ensure the output is saved to a .csv rather than a .txt file by selecting 'All files (*.*)' in the **Save as type** field and manually amending the file extension in the **File name** field to '.csv':



   iii. In UNIT-e Information Interface, open the Manage Personal and Sensitive Data tool from the **Tools** menu and click on the **Import** button.

   iv. Browse to the report export file created in step ii and select it.

v. Click on the **Open** button to import the file.

2. Identify and flag Personal properties in linked classes:

   i. In URG run the cgn.gdpr.personal2 report and export the output as above.

   ii. Return to the Manage Personal and Sensitive Data tool in UII and import the export file.

   iii. This report must be run several times to ensure all linked classes are picked up, so repeat these steps until no more items are found by the report.

3. Identify and flag Personal properties in class extensions:

   i. In URG run the cgn.gdpr.personal3 report and export the output as above.

   ii. Import the export file in the Manage Personal and Sensitive Data tool.

   iii. Again, this report must be run several times to ensure all class extensions are picked up, so repeat these steps until no more items are found by the report.

4. Identify and flag Sensitive properties:

   i. In URG run the cgn.gdpr.personal4 report and export the output as above.

   ii. Import the export file in the Manage Personal and Sensitive Data tool.

5. Any additional properties not picked up by the reports may be flagged as required manually (excluding those with the System flag set).

Subject Access Requests

The following SSRS reports are available via the **Student Personal Data** section in the **Students and Funding** menu in Report Catalogue. They allow you to respond to a Subject Access Request from a student and include as much of the data held about the student as possible, including names (legal, 'known as' and 'preferred name') personal details, contact information, employment record, SEN details, qualifications, enrolments, fee and receipts, attendance summary, assessments and achievements, and Tracking Reviews.



The reports provided are sample reports and must be amended to suit your institution's data.

Search forms and **Student Personal Data Consent** forms are also provided for each report. The consent forms can be used to obtain a user's consent to the required terms and conditions before they are able to view any personal data.



The text included on the Consent forms must be amended for your institution's terms and conditions.

Whether or not the Consent forms are displayed is controlled via the new setting Application\Report Catalogue\SPD1. Set this to '-1' to display the forms when a user selects a student in the report search form. If the setting is set to any other value the Consent form isn't displayed.

- Generic report - Student Personal Data (cgn.rc.spd002):
  - Search form: Student Personal Data Search Form (cgn.rc.spd001)
  - Consent form: Student Personal Data Consent Form (cgn.rc.spd008)
- FE market report - Student Personal Data (ILR) (cfe.rc.spd004):
  - Search form: Student Personal Data Search Form (ILR) (cfe.rc.spd003)
  - Consent form: Student Personal Data Consent Form (ILR) (cfe.rc.spd008)
- Scottish market report - Student Personal Data (FES/SQA) (cfes.rc.spd004):
  - Search form: Student Personal Data Search Form (FES) (cfes.rc.spd003)
  - Consent form: Student Personal Data Consent Form (FES) (cfes.rc.spd008)
- HE market report - Student Personal Data (HE) (che.rc.spd004):
  - Search form: Student Personal Data Search Form (HE) (che.rc.spd003)
  - Consent form: Student Personal Data Consent Form (HE) (che.rc.spd008)



For details on these reports, refer to the *UNIT-e Report Catalogue* handbook (UREPC.pdf).

Managing user consent

- *Recording user consent to use of personal data* (see below)
- *Access to Privacy Statements* (see page 195)
- *Managing user agreement to terms and conditions* (see page 196)

Recording user consent to use of personal data

UNIT-e provides the following properties in the Personal details class to enable you to record enquirer/applicant/student consent on collection of personal data:

- College - a flag to record whether or not the student has given consent for your institution to use their contact details.
- Third party - a flag to record whether the student has given consent for your institution to pass their contact details on to third parties.

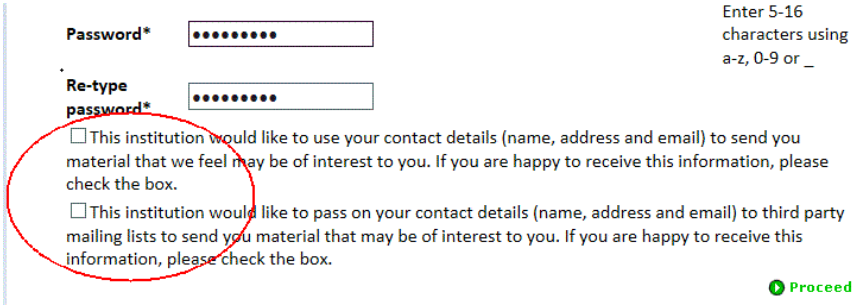
Online Services consent check boxes

Where data is collected online through the Online Services applications, the user is prompted to complete consent questions during their registration (Figure 73) and on submission of the registration data the flag properties above are populated automatically based on the responses.



In order to allow you to comply with GDPR legislation, the labels for the text boxes are worded to make them opt-in selections, rather than opt-out.

Figure 73: UNIT-e Online Services consent check boxes

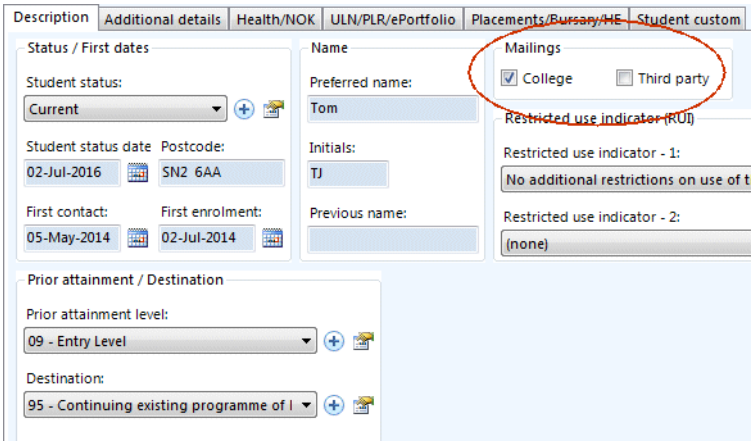


For details refer to the *Managing UNIT-e Online Services* handbook (MOSC.pdf).

Back-office applications mailings check boxes

Where data is collected manually, e.g. from enrolment forms, responses to consent questions can be recorded within UNIT-e via **College** and **Third party** check boxes included in the various student data entry applications (Figure 74). These check boxes can also be used to update a student's response should they remove their consent at any point.

Figure 74: Back-office consent check boxes

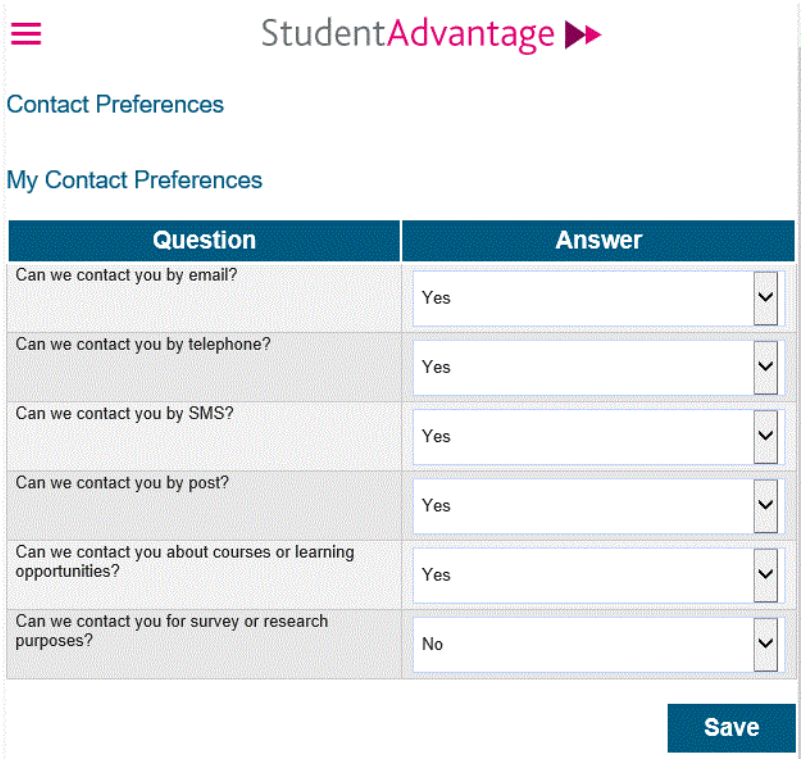


Student Advantage contact preferences

In Student Advantage a **Contact Preferences** page is available (Figure 75) via which a student can define their contact preferences. The responses entered by the student are recorded as Student question answers against the relevant Student question record.

For details on this functionality and how to set it up, refer to the *Student Advantage* handbook (ADVST.pdf).

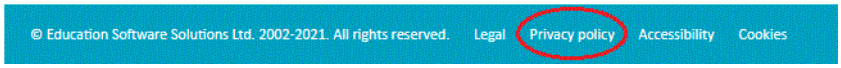
Figure 75: Student Advantage contact preferences



Access to Privacy Statements

UNIT-e provides the ability for an online user to view your institution's privacy statement, via the **Privacy policy** link that appears in the foot of every Online Services page (Figure 76). As Privacy Statements vary both in content and format between institutions the link is intentionally left blank and must be linked to the your institution's statement when setting up Online Services.

Figure 76: UNIT-e Online Services Privacy policy link



For details on configuring Online Services web pages, refer to the *Managing UNIT-e Online Services* handbook (MOSC.pdf).

Managing user agreement to terms and conditions

The following properties are included in the Personal details class to enable you to record whether or not a student has agreed to your institution's terms and conditions and on what date:

- Terms and conditions agreed (tandc) - Lookup

  A Terms and conditions agreed Lookup (tandc) is provided for the Terms and conditions agreed property, enabling you to record 'Yes' or 'No' values.

- Terms and conditions agreed date (tandcdate) - Date

  Recording the Terms and conditions agreed date allows you to ascertain what the current terms and conditions were at the time the student agreed to them and which students need to be asked again when the terms and conditions change.

Managing data retention policies

A UNIT-e Personal Data Erasure tool is available in the **Database Setup** folder that allows you to either delete students' or staff personal data, or anonymise it by replacing any values in properties flagged as Personal (by the Manage Personal Data tool) i.e. any data allowing the identification of the individual, with anonymous data.



For details on Personal properties refer to *Managing personal and sensitive data* (see page 186).

These processes can be carried out for an individual student, or for cohorts of students and/or staff returned by a Report Generator report. This provides you with both a means of addressing individual subject requests for Right to Erasure and Automatic block anonymisation when retention periods have expired.

The Personal Data Erasure tool also includes a **Manage Audit** tab that allows you to delete audit records independently of students. Audit records can be retrieved for specified years and actions and the required records then selected for deletion.



This tab replaces the Manage Audit tool previously available via the **Tools** menu in UNIT-e Workplace, which only allowed you to archive audit data, rather than delete it.



For details on setting up and using the Personal Data Erasure tool, refer to the *UNIT-e database setup tools* handbook (UDST.pdf).

Chapter 15:

Trouble shooting

This chapter covers solutions to problems that may occur when you're using the UNIT-e software.

This chapter includes the following:

- *Dealing with workstations* (see page 200)

Dealing with workstations

- *Error 1001 Source UNITe already exists on the local computer* (see below)
- *UNIT-e Workplace and applications losing connection to UNIT-e server* (see below)
- *Screen rendering issues* (see page 201)

Error 1001 Source UNITe already exists on the local computer

If you encounter the message "Error 1001 Source UNITe already exists on the local computer" when using the Installing UNIT-e UI Workstation wizard, it's likely to be because you've installed something prior to installing the workstation setup.

To overcome this problem you must remove the following key from the registry:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\services\eventlog\Application\UNITe
```

UNIT-e Workplace and applications losing connection to UNIT-e server

If Windows closes UNIT-e Workplace or another UNIT-e application with the following error in the event log:

"Windows cannot access the file for one of the following reasons: there is a problem with the network connection, the disk that the file is stored on, or the storage drivers installed on this computer; or the disk is missing..."

it may be because the mapped drive is dropping out. To address this amend the drive mapping policy to use the fully qualified domain name.

Screen rendering issues

If screen rendering issues arise, apply the following to restore DPI to 100% on machines initially set with a higher resolution:

Windows 7

\Software Setup\Workstation Setup\Windows 7 Registry\UNIT-e Windows 7 Font Fix (VB6).reg

Windows 10

\Software Setup\Workstation Setup\Windows 10 Registry\UseManifestWindows10.reg

or

\Software Setup\Workstation Setup\Windows 10 Registry\ResetDPIScaling.reg

Surface Pro

\Software Setup\Workstation Setup\Windows 10 Registry\UseManifestWindows10.reg

or

\Software Setup\Workstation Setup\Windows 10 Registry\ResetDPIScaling.reg

Chapter 16:

Forms and fields

This chapter provides detailed information about some of the forms referenced in the procedures. The forms are listed in alphabetical order by form name. Tabs within a form are listed in the order in which they appear.



In standard handbooks this section would usually include all forms referenced in the procedures, but due to the technical nature of some procedures, some forms are illustrated in the text.

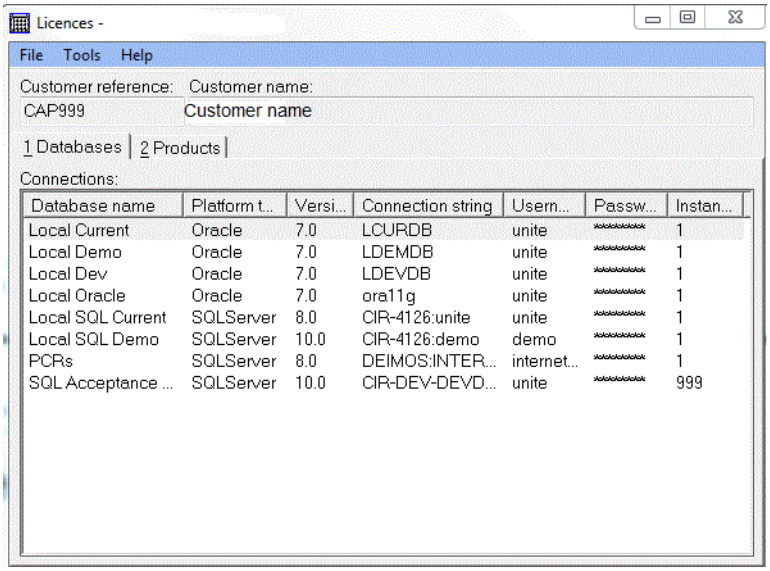
- *Licences* (see page 204)
- *Manage Users* (see page 206)
- *Security* (see page 210)

Licences

Access:	UNIT-e Licence Viewer [ULIVW.exe]

Databases tab

Figure 77: Licences - Databases tab



Customer reference: Your six character reference.

Customer name: Your customer name.

Database name: Column displaying each database name.

This **Database name** specifies what should appear in the **Database** pick-list on the UNIT-e **Login** form.

Platform type: The type of database used for UNIT-e.

Version: The version of the type of database in use.

Connection string: The string to be used to connect to this database.

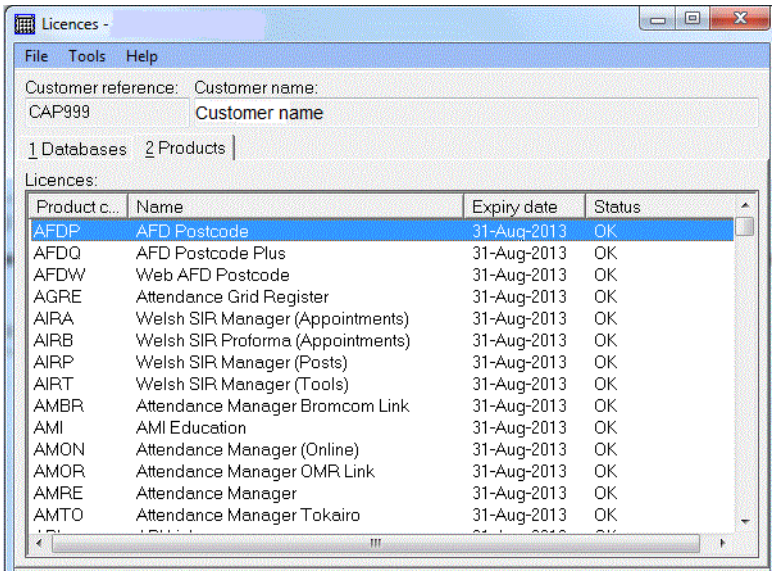
Username: The username used to connect to this database.

Password: The password used to connect to this database.

Instance: The instance specific to the database connection.

Products tab

Figure 78: Licences - Products tab



Product code: This lists each licence key available. Each key can match either UNIT-e applications or functionality.

Name: The licence name.

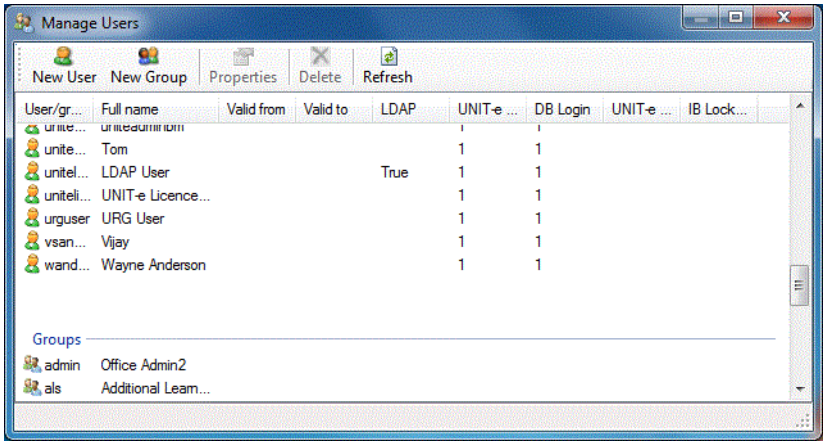
Expiry date: The date that each key is valid until.

Status: The status of the key. This is dependent on the Expiry date.

Manage Users

Access:	UNIT-e Workplace **Tools | Manage Users**
User-specific variables:	This form is also accessible via the **Tools** menu in UNIT-e Information Interface, and can be added as a tool to UNIT-e Information Interface applications. Refer to the *UNIT-e Information Interface* handbook (UII.pdf) for further details.

Figure 79: Manage Users



New User: Click on this button to access the **Create New User** form (see page 207) where you can create a new user account.

New Group: Click on this button to access the **Create New Group** form (see page 209) where you can create a new group account.

The creation of new users is covered in the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf).

Properties: Highlight a user or group and click on this button to open the **Edit User** (see page 209) or **Edit Group** (see page 209) form where you can view and amend the user or group properties.

Delete: Highlight the required user or group and click on this button to delete it.

Refresh: Click on this button to refresh the data displayed. If you have created a new user or group you must refresh the display to view the new details in the list.

User/group name: The login ID of the user or group.

Full name: The name of the user or group.

Valid from/Valid to: The period during which the login is valid (if entered).

LDAP: This field shows 'True' if the user has an LDAP login.

UNIT-e Login: This should show '1'. A '0' (zero) indicates that the user is unable to log into UNIT-e.

DB Login: This should show '1'. A '0' (zero) indicates that the user is unable to log into the database.

UNIT-e Locked: This field shows 'True' if the UNIT-e login is locked. You can unlock it via the **Edit User** form (see page 209).

IB Locked: This field shows 'True' if the user's access to Internet Builder is locked.

Create New User

The fields on this form are the same as those in the **User details** frame in UNIT-e Database Manager (Users) [UDMUS.exe]. Refer to the *UNIT-e Database Manager (Users)* handbook (UDMUS.pdf) for further details.

Figure 80: Create New User

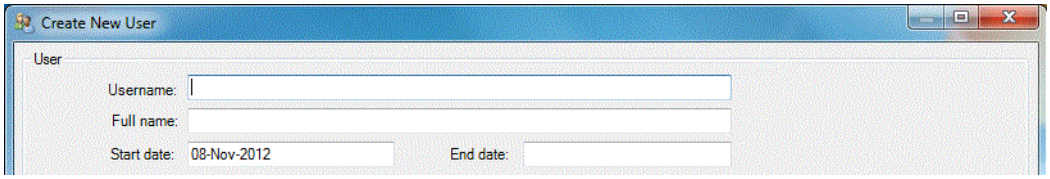


Figure 81: Create New User - Authentication tab

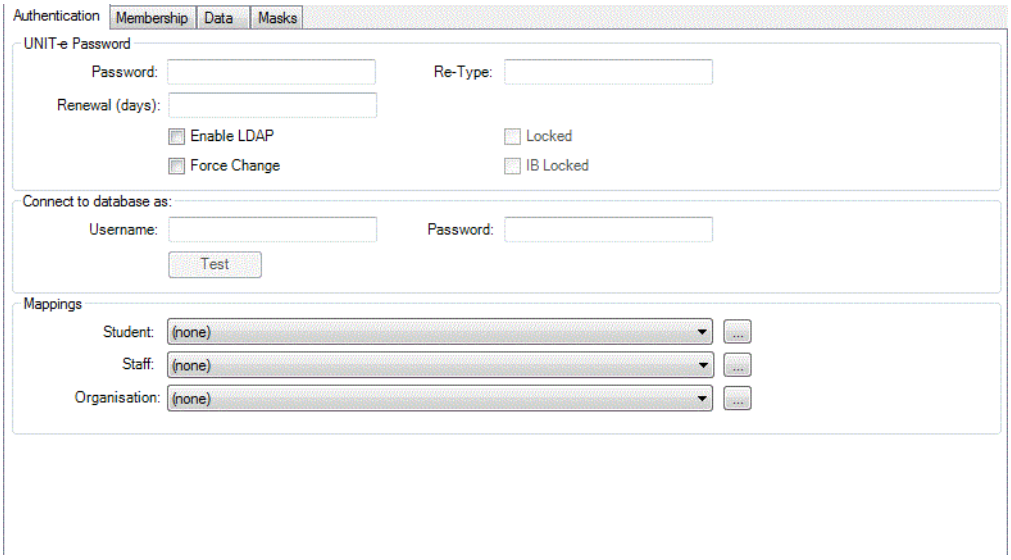


Figure 82: Create New User - Membership tab

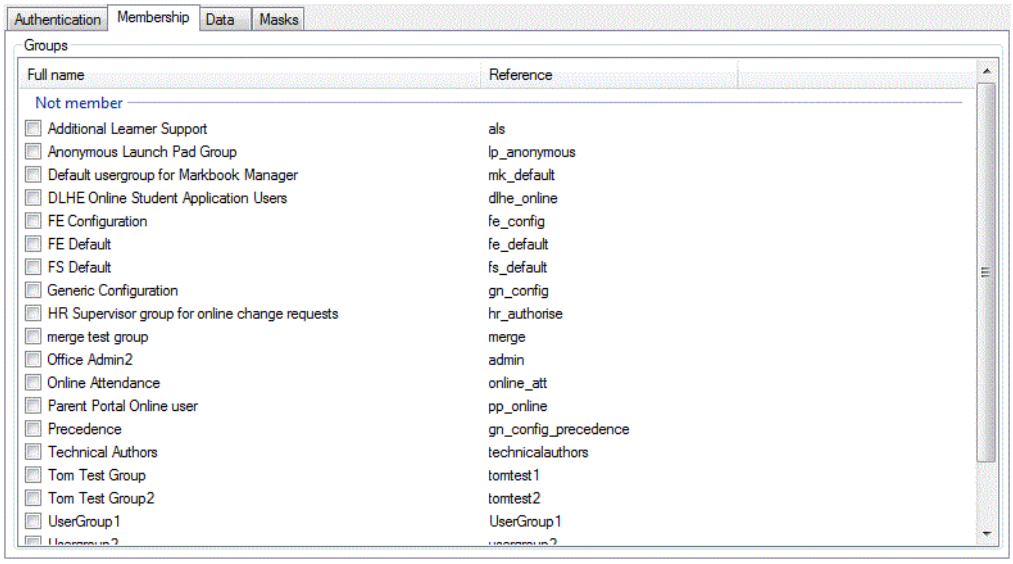


Figure 83: Create New User - Data tab

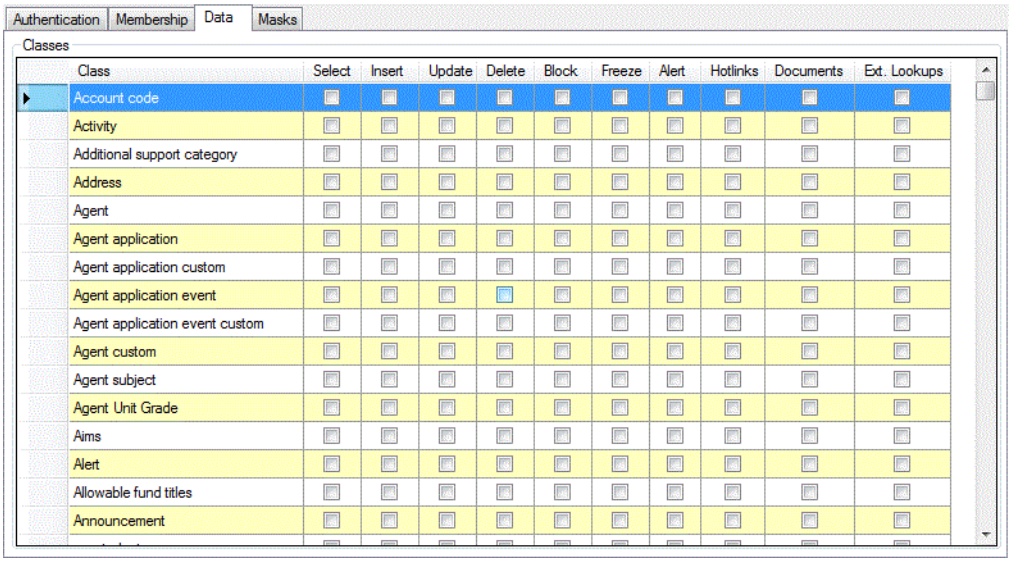
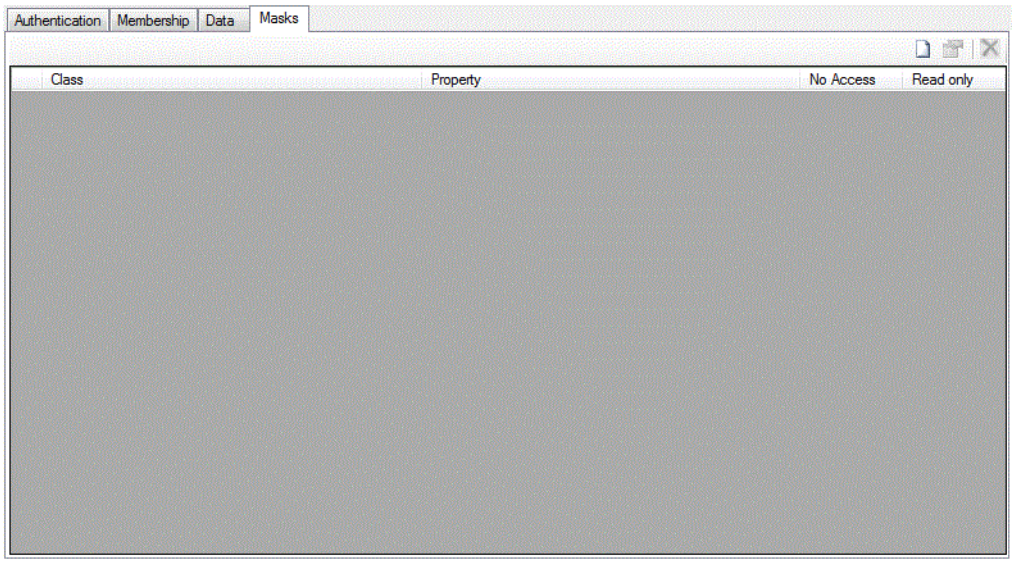


Figure 84: Create New User - Masks tab



Create New Group

This form is in the same format as the **Create New User** form (see page 207) but doesn't have the Authentication and Membership tabs as these are not applicable to groups.

Edit User

This form is in the same format as the **Create New User** form (see page 207).

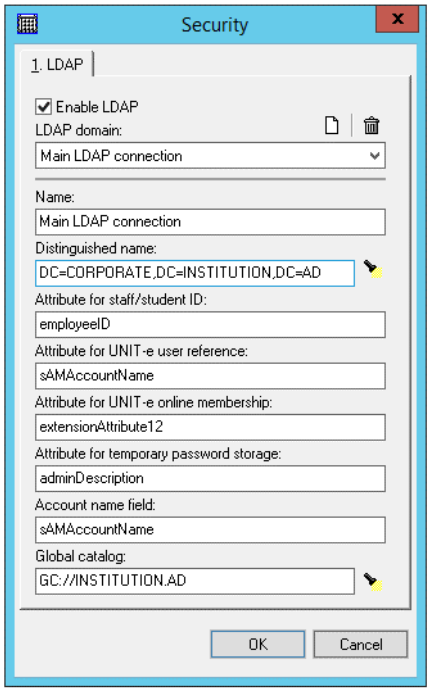
Edit Group

This form is in the same format as the **Create New User** form (see page 207) but doesn't have the Authentication and Membership tabs as these are not applicable to groups.

Security

Access:	UNIT-e Database Manager (Users) [UDMUS.exe] **File | Security**

Figure 85: Security



The fields on this form are covered in the section *Setting up LDAP security* (see page 91).

Appendices

- *Appendix A: Previous enhancements* (see page 212)
- *Appendix B: Property types* (see page 214)
- *Appendix C: Licences* (see page 216)
- *Appendix D: Wildcards (search parameter symbols)* (see page 233)
- *Appendix E: Hotkey keyboard shortcuts* (see page 236)

Appendix A: Previous enhancements

The following enhancements were made for previous releases:

- *4.60 enhancements* (see below)
- *4.59 enhancements* (see page 212)
- *4.57 enhancements* (see page 213)

4.60 enhancements

With the introduction of the UNIT-e Admissions Management Service, the *UNIT-e Extended Applications* handbook (UXAP.pdf) has been retired and replaced by a new Admissions in UNIT-e Core handbook. Cross-references in this handbook have been updated to reflect this change.

4.59 enhancements

- New Microsoft Entra ID single sign-on functionality in Workplace

  The Microsoft Entra ID single sign-on facility that already exists for Advantage, Admissions and CEDAR has been extended to UNIT-e Workplace. If implemented, when you log into UNIT-e Workplace or an II application, you are automatically signed-in using your Microsoft account.



This is currently only available in SQL.



Further information is available in the Managing UNIT-e single sign-on with Microsoft Entra ID handbook.

4.57 enhancements

- Handbook short code change

  - Short code references to the *Managing UNIT-e Online Services* handbook have been amended from UOSC to MOSC to reflect the fact that it is a Manager handbook.

  - Short code references to the *Managing UNIT-e Online Services - Web Site Installation* handbook have been amended from UOSWSI to MOSWSI to reflect the fact that it is a Manager handbook.

- *Installing AFD Postcode Internet* (see page 155)

  References to http://pce.afd.uk have been updated to https://pce.afd.co.uk/afddata.pce.

Appendix B: Property types

The 'types' shown below (Table 13) are applied to properties within classes, ensuring consistency when data is entered.

Table 13: Property types

Type	Definition		Notes
	SQL Server	Oracle	
Id	numeric(16,0)	number(16)	Can't be edited by the user Unique field with a maximum of 16 characters
Code	varchar(10)	varchar2(10)	Used to store lookups Maximum of 10 characters
Reference	varchar(20)	varchar2(20)	Used to store references Maximum of 20 characters
System	varchar(30)	varchar2(30)	Used to store system references (e.g. report references) Maximum of 30 characters
Text	varchar(255)	varchar2(255)	Used to store text Maximum of 255 characters
Memo	varchar(2000)	varchar2(2000)	Used to store free-format text Maximum of 2,000 characters **Note:** When an attached document memo field is populated in a UNIT-e II app and more than 2000 characters are required, the software adds a record for each multiple of 2,000 characters to ensure that sufficient space is allocated.
Flag	numeric(1,0)	number(1)	Used to set a value to true (-1) or false (null or 0) Single digit numeric character **Note:** .NET Business Classes (.NET tools) typically set the value to 0 rather than Null if the flag is removed, whereas generic DataManager sets flags to Null.
Number	numeric(20,8)	number	The maximum number of characters allowed may vary depending on the database concerned
Date	datetime	date	Used to store dates and sometimes times as well
Link	Uses Id to link classes		Refer to *Linked classes* (see page 34) for further information
Bigmemo	varchar(max)	CLOB	Used to store free-format text Maximum of 8000 characters

Appendix C: Licences

The following licences apply to UNIT-e products and functionality.



The licences are sorted by licence key. Any licences marked with an asterisk are no longer in use but may still be listed in UNIT-e Licence Viewer.

Table 14: Licences

Product name	Licence name	Licence key (Product code)
Admissions Advantage	Admissions Advantage	ADVAD
Attendance Advantage	Attendance Advantage	ADVAT
Enrolment Advantage	Enrolment Advantage	ADVEN
Employer Advantage	Employer Advantage	ADVEP
Management Advantage	Management Advantage	ADVMG
Parent Advantage	Parent Advantage	ADVPA
Research Advantage	Research Advantage	ADVRE
Staff Advantage	Staff Advantage	ADVSF
Student Advantage	Student Advantage	ADVST
Advantage Workflow	Advantage Workflow	ADVWF
AFD Postcode	AFD Postcode	AFDP
AFD Postcode Plus	AFD Postcode Plus	AFDQ
	Web AFD Postcode	AFDW
Attendance Grid	Attendance Grid Register	AGRE
Attendance Manager	Attendance Manager Bromcom Link **Note:** De-supported 31/12/2020	AMBR
	AMI Education	AMI
Attendance Manager	Attendance Manager (Online)	AMON
Attendance Manager	Attendance Manager OMR Link **Note:** De-supported 31/12/2020	AMOR
Attendance Manager	Attendance Manager	AMRE
Attendance Manager	Attendance Manager Tokairo Link **Note:** De-supported 31/12/2020	AMTO
API	API Link **Note:** De-supported 31/12/2020	API

Product name	Licence name	Licence key (Product code)
Attendance Manager	API Link (Bromcom link) **Note:** De-supported 31/12/2020	API
Attendance Manager	API Link (OMR link) **Note:** De-supported 31/12/2020	API
Attendance Manager	API Link (Tokairo link) **Note:** De-supported 31/12/2020	API
Aptos Transfer	Aptos Transfer Link	APTS
Additional Learner Support +	Additional Learner Support for FE	ASE
Additional Support Online	Additional Support Online	ASON
Attendance Manager	Attendance Viewer Online	AVON
Balanced Score Card	Balanced Score Card	BMBSC
Business Manager Curriculum Planning	Business Manager Curriculum Planning	BMCP*
Business Manager Curriculum Planning	Business Manager Curriculum Planning for FE	BMCPE*
Business Manager English Analysis Suite	Business Manager English Analysis Suite	BMEAS*
Business Manager Online	Business Manager Online	BMON*
PFR Load and Analysis	PFR Load and Analysis	BMPFR*
Business Manager Performance Monitoring	Business Manager Performance Monitoring	BMPM*
Curriculum Manager	Curriculum Manager	CM
Curriculum Balancing	Curriculum Balancing	CMCB
Course Directory England	Course Directory England	CMCDE
Curriculum Manager	Curriculum Manager (Courses)	CMCO
Curriculum Manager	Curriculum Rollover	CMCR
Curriculum Manager	Curriculum Manager (Enrolments)	CMEN
Curriculum Manager	Curriculum Manager (Tools)	CMTL
Dare Credentials	Digital Academic Records Exchange (DARE) Integration (for UWL only)	DARE
DataView Builder	DataView Builder 2000	DB2K
DataView Builder	DataView Builder 97	DB97
DEFT (UDEFT)	DEFT	DEFT
Workplace	Workplace	DESK
UDLHE	HESA DLHE Manager	DLHE

Product name	Licence name	Licence key (Product code)
Aptos Data Dictionary for Report Generator	Aptos Data Dictionary for Report Generator	DMAP
Database Manager	Database Manager (Business rules)	DMBR
Database Manager	Class Create User Classes	DMCC
Database Manager	Database Manager (Classes)	DMCE
Database Manager	Class Importer - Dictionary Importer	DMCI
Database Manager	Filters	DMFI
Database Manager	Grids	DMGR
Database Manager	Database Manager (Webpages)	DMIB
Database Manager	Database Manager (Webpages)	DMIB
Database Manager	Database Manager (Class editor indexing)	DMIX
Database Manager	Database Manager (Lookups)	DMLK
Database Manager	Database Manager (Merge data)	DMMD
Database Manager	Proformas	DMPF
Database Manager	Outputs	DMRB
Database Manager	Database Manager (Settings)	DMSE
Database Manager	Search forms	DMSF
Database Manager	Database Manager (System transfer)	DMST
Database Manager	Database Manager (Users)	DMUS
Database Manager	Warehouses	DMWB
WareHouse Builder	Warehouses	DMWB
Dream Transfer	Dream Transfer	DREM
Executive Analysis Suite Online	Executive Analysis Suite Online	EAON
Employer Contact	Employer Contacts	ECEC
EDM System	EDM System	EDMS
EMA Authorisation Transfers	EMA Authorisation Transfers	EMAA
EMA Enrolment Transfers	EMA Enrolment Transfers	EMAE
Student Manager Bursaries & Awards	Education Maintenance Allowance Fund	EMAF
FE Loans	FE Loans	FELO
Finance Integration	Finance Integration	FIT
Finance Manager	Finance Manager Link to Agresso	FMAG

Product name	Licence name	Licence key (Product code)
Finance Manager	Finance Manager Block Credits	FMBC
Finance Manager	Finance Manager Bank Finder	FMBF
Finance Manager	Finance Manager Credit Card	FMCC
Finance Manager	Finance Manager Credit Card Instalments	FMCI
Finance Manager	Finance Manager Chip and Pin	FMCP
Finance Manager	Finance Manager Direct Debits	FMDD
Finance Manager	Finance Manager (Enrolments)	FMEN
Finance Manager	Finance Manager Online Payments	FMOP
Online Services	Online Services Refunds	FMOR
Finance Manager	Finance Manager Promotional Discounts	FMPD
Finance Manager	Finance Manager Sales Ledger	FMSL
Online Services	Online Subsequent Payments	FMSP
Finance Manager	Finance Manager Tills Functionality	FMTS
FES/SQA Manager/Proforma	FES/SQA Proforma (Modules)	FSQC
FES/SQA Manager/Proforma	FES/SQA Manager (Enrolments)	FSQE
FES/SQA Manager/Proforma	FES/SQA Manager (Modules)	FSQM
FES/SQA Manager/Proforma	FES/SQA Proforma (Enrolments)	FSQP
FES/SQA Manager/Proforma	FES/SQA Manager (Tools)	FSQT
Local Land and Property Gazetteer Postcode Address	Local Land and Property Gazetteer Postcode Address	GAZET
Student Fund System	General Fund	GENF
Extended Applications	Extended Applications GTTR Agency	GTTR
HEA	Higher Education Authority (Ireland)	HEA
HESA Manager/Proforma	Higher Education Achievement Report	HEAR
Extended Applications	Extended Applications Hercules Link	HERC*
HESA Manager/Proforma	HESA Alternative Providers	HESAP
HESA Manager/Proforma	HESA Proforma (Modules)	HESC
HESA Manager/Proforma	HESA Manager (Enrolments)	HESE
HESA Manager/Proforma	HESA Manager (Modules)	HESM
HESA Manager/Proforma	HESA Proforma (Enrolments)	HESP

Product name	Licence name	Licence key (Product code)
HESA Manager/Proforma	HESS Spreadsheets	HESS
HESA Manager/Proforma	HESA Manager (Tools)	HEST
Human Resources	HR Appraisals Online Services	HRAPOS
Human Resources	HR Person Checking	HRCK
Human Resources	HR Manager	HRCO
Human Resources	HR Staff Details Services	HRCOOS
Human Resources	HR CPD Link	HRCPDL
Human Resources	HR Holidays and Absences	HRHO
Human Resources	HR Holidays and Absences Services	HRHOOS
Human Resources	HR Welfare and Incidents	HRIN
Human Resources	HR Payroll Link	HRPAYL
Human Resources	HR Staff Return FE England	HRRTE
Human Resources	HR Staff Contract Management	HRSC
Human Resources	HR Staff Details Update Services	HRSDOS
Human Resources	HR Staff Development	HRTW
Human Resources	HR Vacancies and Recruitment Services	HRVROS
Attendance Manager	Internet Builder (Online Attendance)	IB
Online Configuration for Generic Columbus	Internet Builder (Online Configuration for Generic Columbus)	IB
Online Configuration for Scottish Columbus	Internet Builder (Online Configuration for Scottish Columbus)	IB
Attendance Manager	Internet Builder Anonymous User	IBAU
Import	Internet Builder Anonymous User	IBAU
UNIT-e User	Internet Builder Anonymous User	IBAU
Columbus	Generic Columbus	IBGC
Import	Internet Builder Import Author	IBIA
Attendance Manager	Internet Builder Imports	IBIM
Import	Internet Builder Imports	IBIM
Scottish Columbus	Scottish Columbus	IBSC
Internet Builder SharePoint	IB Extensions for SharePoint	IBSP
Attendance Manager	Internet Builder UNIT-e User	IBUU
Online Configuration for Generic Columbus	Internet Builder UNIT-e User	IBUU

Product name	Licence name	Licence key (Product code)
Attendance Manager	API Link (Bromcom link) **Note:** De-supported 31/12/2020	API
Attendance Manager	API Link (OMR link) **Note:** De-supported 31/12/2020	API
Attendance Manager	API Link (Tokairo link) **Note:** De-supported 31/12/2020	API
Aptos Transfer	Aptos Transfer Link	APTS
Additional Learner Support +	Additional Learner Support for FE	ASE
Additional Support Online	Additional Support Online	ASON
Attendance Manager	Attendance Viewer Online	AVON
Balanced Score Card	Balanced Score Card	BMBSC
Business Manager Curriculum Planning	Business Manager Curriculum Planning	BMCP*
Business Manager Curriculum Planning	Business Manager Curriculum Planning for FE	BMCPE*
Business Manager English Analysis Suite	Business Manager English Analysis Suite	BMEAS*
Business Manager Online	Business Manager Online	BMON*
PFR Load and Analysis	PFR Load and Analysis	BMPFR*
Business Manager Performance Monitoring	Business Manager Performance Monitoring	BMPM*
Curriculum Manager	Curriculum Manager	CM
Curriculum Balancing	Curriculum Balancing	CMCB
Course Directory England	Course Directory England	CMCDE
Curriculum Manager	Curriculum Manager (Courses)	CMCO
Curriculum Manager	Curriculum Rollover	CMCR
Curriculum Manager	Curriculum Manager (Enrolments)	CMEN
Curriculum Manager	Curriculum Manager (Tools)	CMTL
Dare Credentials	Digital Academic Records Exchange (DARE) Integration (for UWL only)	DARE
DataView Builder	DataView Builder 2000	DB2K
DataView Builder	DataView Builder 97	DB97
DEFT (UDEFT)	DEFT	DEFT
Workplace	Workplace	DESK
UDLHE	HESA DLHE Manager	DLHE

Product name	Licence name	Licence key (Product code)
Aptos Data Dictionary for Report Generator	Aptos Data Dictionary for Report Generator	DMAP
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Database Manager	Class Create User Classes	DMCC
Database Manager	Database Manager (Classes)	DMCE
Database Manager	Class Importer - Dictionary Importer	DMCI
Database Manager	Filters	DMFI
Database Manager	Grids	DMGR
Database Manager	Database Manager (Webpages)	DMIB
Database Manager	Database Manager (Webpages)	DMIB
Database Manager	Database Manager (Class editor indexing)	DMIX
Database Manager	Database Manager (Lookups)	DMLK
Database Manager	Database Manager (Merge data)	DMMD
Database Manager	Proformas	DMPF
Database Manager	Outputs	DMRB
Database Manager	Database Manager (Settings)	DMSE
Database Manager	Search forms	DMSF
Database Manager	Database Manager (System transfer)	DMST
Database Manager	Database Manager (Users)	DMUS
Database Manager	Warehouses	DMWB
WareHouse Builder	Warehouses	DMWB
Dream Transfer	Dream Transfer	DREM
Executive Analysis Suite Online	Executive Analysis Suite Online	EAON
Employer Contact	Employer Contacts	ECEC
EDM System	EDM System	EDMS
EMA Authorisation Transfers	EMA Authorisation Transfers	EMAA
EMA Enrolment Transfers	EMA Enrolment Transfers	EMAE
Student Manager Bursaries & Awards	Education Maintenance Allowance Fund	EMAF
FE Loans	FE Loans	FELO
Finance Integration	Finance Integration	FIT
Finance Manager	Finance Manager Link to Agresso	FMAG

Product name	Licence name	Licence key (Product code)
Finance Manager	Finance Manager Block Credits	FMBC
Finance Manager	Finance Manager Bank Finder	FMBF
Finance Manager	Finance Manager Credit Card	FMCC
Finance Manager	Finance Manager Credit Card Instalments	FMCI
Finance Manager	Finance Manager Chip and Pin	FMCP
Finance Manager	Finance Manager Direct Debits	FMDD
Finance Manager	Finance Manager (Enrolments)	FMEN
Finance Manager	Finance Manager Online Payments	FMOP
Online Services	Online Services Refunds	FMOR
Finance Manager	Finance Manager Promotional Discounts	FMPD
Finance Manager	Finance Manager Sales Ledger	FMSL
Online Services	Online Subsequent Payments	FMSP
Finance Manager	Finance Manager Tills Functionality	FMTS
FES/SQA Manager/Proforma	FES/SQA Proforma (Modules)	FSQC
FES/SQA Manager/Proforma	FES/SQA Manager (Enrolments)	FSQE
FES/SQA Manager/Proforma	FES/SQA Manager (Modules)	FSQM
FES/SQA Manager/Proforma	FES/SQA Proforma (Enrolments)	FSQP
FES/SQA Manager/Proforma	FES/SQA Manager (Tools)	FSQT
Local Land and Property Gazetteer Postcode Address	Local Land and Property Gazetteer Postcode Address	GAZET
Student Fund System	General Fund	GENF
Extended Applications	Extended Applications GTTR Agency	GTTR
HEA	Higher Education Authority (Ireland)	HEA
HESA Manager/Proforma	Higher Education Achievement Report	HEAR
Extended Applications	Extended Applications Hercules Link	HERC*
HESA Manager/Proforma	HESA Alternative Providers	HESAP
HESA Manager/Proforma	HESA Proforma (Modules)	HESC
HESA Manager/Proforma	HESA Manager (Enrolments)	HESE
HESA Manager/Proforma	HESA Manager (Modules)	HESM
HESA Manager/Proforma	HESA Proforma (Enrolments)	HESP

Product name	Licence name	Licence key (Product code)
HESA Manager/Proforma	HESS Spreadsheets	HESS
HESA Manager/Proforma	HESA Manager (Tools)	HEST
Human Resources	HR Appraisals Online Services	HRAPOS
Human Resources	HR Person Checking	HRCK
Human Resources	HR Manager	HRCO
Human Resources	HR Staff Details Services	HRCOOS
Human Resources	HR CPD Link	HRCPDL
Human Resources	HR Holidays and Absences	HRHO
Human Resources	HR Holidays and Absences Services	HRHOOS
Human Resources	HR Welfare and Incidents	HRIN
Human Resources	HR Payroll Link	HRPAYL
Human Resources	HR Staff Return FE England	HRRTE
Human Resources	HR Staff Contract Management	HRSC
Human Resources	HR Staff Details Update Services	HRSDOS
Human Resources	HR Staff Development	HRTW
Human Resources	HR Vacancies and Recruitment Services	HRVROS
Attendance Manager	Internet Builder (Online Attendance)	IB
Online Configuration for Generic Columbus	Internet Builder (Online Configuration for Generic Columbus)	IB
Online Configuration for Scottish Columbus	Internet Builder (Online Configuration for Scottish Columbus)	IB
Attendance Manager	Internet Builder Anonymous User	IBAU
Import	Internet Builder Anonymous User	IBAU
UNIT-e User	Internet Builder Anonymous User	IBAU
Columbus	Generic Columbus	IBGC
Import	Internet Builder Import Author	IBIA
Attendance Manager	Internet Builder Imports	IBIM
Import	Internet Builder Imports	IBIM
Scottish Columbus	Scottish Columbus	IBSC
Internet Builder SharePoint	IB Extensions for SharePoint	IBSP
Attendance Manager	Internet Builder UNIT-e User	IBUU
Online Configuration for Generic Columbus	Internet Builder UNIT-e User	IBUU

Product name	Licence name	Licence key (Product code)
Online Configuration for Scottish Columbus	Internet Builder UNIT-e User	IBUU
UNIT-e User	Internet Builder UNIT-e User	IBUU
XML	Internet Builder XML Export	IBXM
IDXtra Link	IDXtra Link	IDXZ
Information Interface	Information Interface – Advanced Edition	IIAE
Information Interface	Information Interface - Professional Edition	IIPE
Information Interface	Information Interface – Professional Edition for Consultants	IIPS
Information Interface	Information Interface - Standard Edition	IISE
Information Interface	Information Interface – Web Client	IIWC
Information Interface	Information Interface Web Edition	IIWE
Individual Learning Programme Online	Individual Learning Programme Online	ILPO
ILR Manager/Proforma	ILR Proforma (Modules)	ILRC
ILR Manager/Proforma	ILR Manager (Enrolments)	ILRE
ILR Manager/Proforma	ILR Manager (Modules)	ILRM
ILR Manager/Proforma	ILR Manager (OMR)	ILRO
ILR Manager/Proforma	ILR Proforma (Enrolments)	ILRP
ILR Manager/Proforma	ILR Manager (Tools)	ILRT
Institution Manager	Institution Manager	INMA
Key Information Sets	Key Information Sets	KIST
LDAP link	LDAP	LDAP
HESA Staff Manager/Proforma	HESA Staff Manager (Appointments)	LHSA
HESA Staff Manager/Proforma	HESA Staff Proforma (Appointments)	LHSB
HESA Staff Manager/Proforma	HESA Staff Manager (Posts)	LHSP
HESA Staff Manager/Proforma	HESA Staff Manager (Tools)	LHST
Launch Pad	Launch Pad	LP
Learner Risk Management	Learner Risk Management	LRM
Learner Registration Service	Learner Registration Service	LRS
Extended Applications	Extended Applications Marvin Link	MARV*
MailMerge Builder	MailMerge Builder 2000	MB2K

Product name	Licence name	Licence key (Product code)
MailMerge Builder	MailMerge Builder 97	MB97
N/A	More Choices More Chances	MCMC
Markbook Manager	Markbook Manager	MK
Marketing Manager	Marketing Manager Organisation Enquiries	MMOE
Block Events	Marketing Manager Promotion Events	MMPE
Block Events	Marketing Manager - Blocks Events	MMPR
Launch Pad Mobile	Mobile Launch Pad	MPAD
NEDAP Link	NEDAP Link	NEDAP
Extended Applications	Extended Applications NMAS Agency	NMAS
Office Builder	Office Builder 2000	OB2K
Office Builder	Office Builder 97	OB97
Online Services	Online Shop	OLSH
Online Services	Online Services (Applications)	OSAP
Online Services	Online Services Extended Applications	OSEA
Online Services	Online Services (Enrolments)	OSEN
Online Services	Online Services (Enquiries)	OSEQ
Online Services	Online Services Manager Applications	OSMA
Online Services for Organisations	Online Services (Organisations)	OSORG
	Password Changer	PASS
UK Points-based Immigration	Points Based Immigration	PBI
Database Manager	Photo Capture	PC
Personal Learning Support Plan	Personal Learning Support Plan	PLSP
Personnel Manager	Personnel Manager (Appointments)	PMAP
Personnel Manager	Personnel Manager (Cost Centres)	PMCC
Personnel Manager	Personnel Manager (Enq. and Apps)	PMEA
Personnel Manager	Personnel Manager (Locations)	PMLO
Personnel Manager	Personnel Manager (Organisations)	PMOR
Personnel Manager	Personnel Manager (Posts)	PMPO
Personnel Manager	Personnel Manager (Salaries)	PMSA

Product name	Licence name	Licence key (Product code)
Personnel Manager	Personnel Manager (Staff Development)	PMSD
Personnel Manager	Personnel Manager (Structures)	PMST
Parent Portal	UNIT-e Parent Portal	PP
Personnel Proforma	Personnel Proforma (Appointments) **Note:** De-supported 31/12/2020	PPAP
Personnel Proforma	Personnel Proforma (Enq and Apps) **Note:** De-supported 31/12/2020	PPEA
Personnel Proforma	Personnel Proforma (Locations)	PPLO
Quick Address	Quick Address	QASP
Quick Address	Web Quick Address	QASW
Query Executor	Query Executor	QX
ReportView Builder	ReportView Builder	RB
Report Generator	Report Generator	RG
Resource Manager	Resource Manager	RM
Day View	Resource Manager - Day View	RMDV
Day View and Room Booking	Resource Manager - Day View	RMDY
Outlook Export	Resource Manager - Outlook Export	RMOE
Day View and Room Booking	Resource Manager - Resource Booking	RMRB
Resource Manager	Resource Manager - Timetable Grid	RMTG
Resource Manager	Resource Manager (Templates)	RMTP
Resource Manager	Resource Manager (Timetables)	RMTT
Resource Manager	Resource Manager Staff and Room Utilisation	RMUT
Resource Manager	Resource Manager Week Pattern Control	RMWP
Resource Manager	Resource Manager Web Reports	RMWR
Report Web Services	Report Web Services Integration	RWSI
Report Web Services	Report Web Services Writeback	RWSW
Student Awards Agency for Scotland	Student Awards Agency for Scotland Integration	SAAS
SpreadSheet Builder	SpreadSheet Builder 2000	SB2K
SpreadSheet Builder	SpreadSheet Builder 97	SB97

Product name	Licence name	Licence key (Product code)
On-line Scottish Enrolments Loader	On-line Scottish Enrolments Loader	SDKE
Student Manager Bursaries & Awards	Student Education Award Processing Fund	SEAP
Database Manager	Edit Colours for Alerts	SECL
Database Manager	Map Filters	SEFI
Database Manager	Map Grids	SEGR
Database Manager	Create/Edit Hotkeys	SEHK
Database Manager	Re-label objects and properties	SELB
Student Proforma (Bursaries & Awards - EMA)	Scottish EMA	SEMA
Database Manager	Map Proformas	SEPF
Database Manager	Edit Menus	SERB
Database Manager	Search Forms	SESF
Database Manager	User Settings	SEUS
Database Manager	Warehouses	SEWB
WareHouse Builder	Warehouses	SEWB
Support Funds	Support Funds (core)	SFCO
Support Funds	Support Funds Online Services	SFOS
Student Proforma (Bursaries & Awards - SFS)	Student Fund System	SFS
Support Funds	Support Funds Scotland	SFSC
SIR Manager	SIR Manager (Appointments)	SIRA
SIR Manager	SIR Proforma (Appointments)	SIRB
SIR Manager	SIR Manager (Posts)	SIRP
SIR Manager	SIR Manager (Tools)	SIRT
Block Application to Enrolment Function	Student Manager - Block Application to Enrolment Function	SMAE
Student Manager	Student Manager Agents (Extended Applications)	SMAG
Student Manager	Student Manager (Applications)	SMAP
Student Manager	Student Manager Agent Transactions	SMAT*
Student Manager	Student Manager - Brochures	SMBR
Student Manager	Extended Applications Block Update	SMBU
Student Manager	Student Manager (Cost Centres)	SMCC

Product name	Licence name	Licence key (Product code)
Student Manager	Student Manager - Clearing and Extra choice functionality	SMCE
Student Manager	Student Manager (Enquires and Applications)	SMEA
Student Manager	Student Manager (Employers)	SMEM
Student Manager	Student Manager (Employers)	SMEM
Student Manager	Student Manager (Enrolments)	SMEN
Student Manager	Student Manager (Enquiries)	SMEQ
Student Manager	EnrolStudent Manager (Roles)	SMER
Student Manager	Student Manager Locations	SMLA
Student Manager	Student Manager (Locations)	SMLO
Student Manager	Student Manager - Module Application Generation Function	SMMA
Student Manager	Student Manager (Modules)	SMMO
Student Manager	Student Manager (Organisations)	SMOR
Student Manager	Student Manager (Partners)	SMPA
Student Manager	Student Manager (Partners)	SMPA
Student Manager	Student Manager - Professional Placement Management	SMPM
Student Manager	Student Manager (Schools)	SMSC
Student Manager	Student Manager (Schools)	SMSC
Student Manager	Student Manager - Study Editor	SMSE
Student Manager	Student Manager Student Loans	SMSL
Student Manager	Student Manager Standard Offers	SMSO
Student Manager	Student Manager (Sponsors)	SMSP
Student Manager	Student Manager (Structures)	SMST
Student Manager	Student Manager (Tutors)	SMTU
Student Manager	Student Manager (UCAS Link)	SMUL
Student Manager	Extended Student Applications Screens	SMXA
Student Proforma	Student Proforma (Applications) **Note:** De-supported 31/12/2020	SPAP
Student Manager Bursaries and Awards System	Student Proforma (Bursaries & Awards)	SPBA
Student Proforma	Student Proforma (Enrolments)	SPEN

Product name	Licence name	Licence key (Product code)
Student Proforma	Student Proforma (Enquires) **Note:** De-supported 31/12/2020	SPEQ
Student Proforma	Student Proforma (Locations)	SPLO
Student Proforma	Student Proforma (Modules)	SPMO
Student Proforma	Student Proforma (Organisations) (Block Events)	SPOR
Student Proforma	Student Proforma (Organisations)	SPOR
Sun Transfer	Sun Transfer	SUNA
Extended Applications	Extended Applications SWAS Agency	SWAS
Symmetry Transfer	Symmetry Transfer	SYMM
Core Assessments	Core Assessments	TM
Assessments Results Calc	Assessments Results Calc	TMRC
Tools for Office	UNIT-e Tools for Excel	TOEX
Attendance Manager	Attendance Manager Tokairo Link **Note:** De-supported 31/12/2020	TOKZ
Tools for Office	UNIT-e Tools for Reporting Services	TORS
Tools for Office	UNIT-e Tools for SharePoint	TOSP
Tools for Office	UNIT-e Tools for Word	TOWD
Tools for Office	UNIT-e Tools for Workflow Foundation	TOWF
Target Tracking	Target Tracking - Enrolment Review	TTEN
Target Tracking	Target Tracking - Formula Grade	TTFG
Target Tracking	Target Tracking Online	TTON
Extended Applications	Extended Applications UCAS Agency	UCAS
VQ Management & Tracking	VQ Assessor Services	VQAS
VQ Management & Tracking	VQ Employer Services	VQES
VQ Management & Tracking	VQ Learner Services	VQLS
VQ Management & Tracking	VQ Manager	VQMA
VQ Management & Tracking	Skillwise Vocational Qualification Manager Integration	VQMI
WareHouse Builder	Warehouse Builder	WB
Attendance Manager	Warehouse Builder Tools	WBTL
DAP link	Warehouse Builder Tools	WBTL

Product name	Licence name	Licence key (Product code)
Welsh ILR	Welsh LAD Importer	WLAD
Welsh ILR	Welsh ILR Proforma (Modules)	WLRC
Welsh ILR	Welsh ILR Manager (Enrolments)	WLRE
Welsh ILR	Welsh ILR Manager (Modules)	WLRM
Welsh ILR	Welsh ILR Proforma (Enrolments)	WLRP
Welsh ILR	Welsh ILR Manager (Tools)	WLRT
Windows Services		WSEM
Windows Services	Windows Service - Incoming Text Message	WSIM
Windows Services	Windows Service - SMS	WSSM
Exam Manager A2C	Exam Manager A2C compliant	XM2MA
Exam Manager A2C	Exam Manager (Tools) A2C compliant	XM2TL
Exam Manager EDI	Exam Manager (Tools) EDI compliant	XM2TLE
Exam Manager A2C	Exam Manager (Transport Service) A2C compliant	XM2TS
Exam Manager	Exam Manager (Boards)	XMBD
Student Manager	Exam Manager (Boards) (Extended Applications)	XMBD
Diploma Aggregation Service	Diploma Aggregation Service	XMDAS
Exam Manager	Exam Manager (Entries)	XMEN
Exam Manager	Exam Manager (Generic Entries)	XMGE
XML Exporter	XML Exporter	XMLEX
Exam Manager	Exam Manager (Modules)	XMMO
Exam Manager	Exams Seating Plans	XMSP
Exam Manager	Exam Manager (Tools)	XMTL
Exam Manager	Exams Generic Vocational EDI	XMTV
Exam Proforma	Exam Proforma (Entries)	XPEN

Open Box licences/Advanced Configuration Toolkit

The following table shows licences included in the Open Box/Advanced Configuration Toolkit.

Table 15: Open Box/ Advanced Configuration Tookit licences

Product code	Product name	Licence name	ACT/Black box
UDM	Database Manager		Core parts of ACT and Black box
	Business Rules	DMBR	ACT and Black box
	Classes	DMCE	ACT and Black box
	Filters	DMFI	Only ACT
	Grids	DMGR	Only ACT
	Class Editor Indexing	DMIX	ACT and Black box
	Lookups	DMLK	ACT and Black box
	Merge Data	DMMD	ACT and Black box
	Proformas	DMPF	ACT and Black box
	Outputs	DMRB	Only ACT
	Settings	DMSE	Only ACT
	Search Forms	DMSF	Only ACT
	System Transfer	DMST	ACT and Black box
	Upgrade	DMUP*	Only ACT
	Users	DMUS	ACT and Black box
	Warehouses	DMWB	Only ACT
	Edit Colours for Alerts	SECL	Only ACT
	Map Filters	SEFI	Only ACT
	Map Grids	SEGR	Only ACT
	Create/Edit Hotkeys	SEHK	Only ACT
	Re-label Objects and Properties	SELB	ACT and Black box
	Map Proformas	SEPF	Only ACT
	Edit Menus	SERB	Only ACT
	Search Forms	SESF	Only ACT
	User Settings	SEUS	ACT and Black box
	Warehouses	SEWB	Only ACT

Appendix D: Wildcards (search parameter symbols)

This section provides a summary of search parameter symbols (also known as 'wildcards') and gives some examples of how they may be used.

- *Available symbols* (see below)
- *Dealing with Null values* (see page 234)
- *Ranges* (see page 235)

Available symbols

Table 16: Available symbols

Symbol	Definition	Notes
=	Equal to	
%	Wildcard (percent)	Matches against any group of characters See Table 17 on page 234 for examples.
_	Wildcard (underscore)	Matches against any single character. See Table 17 on page 234 for examples.
!	Not equal to	
~	Remove case sensitivity (tilde)	Refer to the section '*About case sensitivity*' in Chapter 4 of the *Working with UNIT-e* handbook (WWU.pdf).
|	Is null (pipe)	Returns fields containing no data and can also be used as a separator to represent 'or' when searching for a list of values. **Note:** There should be no spaces between the search parameters and the pipe symbol.
>	Greater than	
<	Less than	
<>	Not equal to	
>=	Greater than or equal to	
<=	Less than or equal to	

Table 17 gives some examples of how these symbols may be used.

Table 17: Examples using symbols

Field entry	Returns
Smith	Smith
Smit_	'Smit' followed by any single character (e.g. Smith or Smitt).
Smith%	'Smith' followed by any group of characters (e.g. Smithson).
Sm%	Small, Smith, Smedley etc.
Smith|Smyth	Smith or Smyth
~Smith	Smith, SMITH, smith etc.
_mith	Any single character followed by 'mith'.
!_mith	Any value except any single value followed by 'mith'.
!%%son	Any value excluding those ending in 'son'.
!Smith	All surnames, excluding Smith
!Smith_	Any value except 'Smith' followed by a single character.
!Smith%	Any value except 'Smith' followed by any group of characters.
%%ith	Any value ending in 'ith'.
S%th	Any value beginning with 'S' and ending with 'th' (e.g. Smith, Smyth etc.)
SM_th	Smith, Smyth etc.
=2019	2019 only

Dealing with Null values

There are a number of different ways of searching or filtering for Null (empty) or Not-Null (not empty) fields. The Null statement allows you to locate any field that's completely empty. Table 18 shows how to search for Null values.



A space is considered to be data, therefore a field containing a space is Not Null.

Table 18: Examples finding Null values

Field entry	Returns
|	Null values only (i.e. the field is completely empty).
!	Not Null values only (i.e. fields containing ANY data, even a space).
%	Not Null values only (i.e. fields containing ANY data, even a space).

Ranges

Range comparisons can be used to search or filter for values within a range and can be used for both text and number values. The following rules apply when you specify a range:

- Lower case characters are considered greater than upper case.
- All letters are considered greater than numbers.
- Punctuation, mathematical symbols, foreign letters and other characters are ordered according to the character set and language sorting rules of the PC or server.
- With date values, the time element of the date is significant for range comparisons even if the field does not normally accept times as well as dates.



If you're carrying out a date search using the greater than (>) and less than (<) symbols, your search won't return records with no date specified. To carry out a search that includes records with no dates, use the pipe character (|) as follows:

||>=01-Aug-2018 (returns dates greater than 1st August 2018 and blank dates)

Appendix E: Hotkey keyboard shortcuts

Hotkeys are available for use in various situations and in various fields. The following sections list hotkey functionality alphabetically:

- *General functionality* (see below)
- *Hotkeys for Edit mode (with range of records selected)* (see page 238)
- *Hotkeys to move between tabs* (see page 238)
- *Hotkeys for classes* (see page 238)
- *Hotkeys for integrated reporting* (see page 239)
- *Hotkeys for check-boxes* (see page 240)
- *Hotkeys for list boxes* (see page 240)
- *Hotkeys for date & number fields* (see page 240)
- *Hotkeys for pick-lists* (see page 241)
- *Hotkeys for navigation* (see page 242)
- *Function keys (II only)* (see page 242)

General functionality

Table 19: Hotkeys - general functionality

Action	Manager/ Proforma hotkey	UII hotkey
Alerts	N/A	Ctrl+A
Audit trail	N/A	Ctrl+T
Browse mode (switch to)	Ctrl+B	N/A
Clear current form	Ctrl+R	Ctrl+F3
Copy current record	Alt+C	Alt+C
Delete current record	Alt+X	Ctrl+E
Documents	N/A	Ctrl+D

Action	Manager/ Proforma hotkey	UII hotkey
Drill-down search form (open)	Ctrl+L	Ctrl+L
Edit mode (switch to)	Ctrl+E	F3
External Lookup form (open)	Ctrl+K	Ctrl+K
Filter form (open and apply current search parameters)	Ctrl+A	N/A
Filter form (open)	Ctrl+F	Ctrl+F
Grid	N/A	Ctrl+G
Hotlinks	N/A	Ctrl+H
Maximise pick-list	Ctrl+L	Ctrl+L
Minimise pick-list	Ctrl+L	Ctrl+L
New record (for current class)	Alt+N	Ctrl+N
Preferences	N/A	F2
Print (open Print form)	Ctrl+P	Ctrl+P
Reset Layout and Clear (move cursor to default field and clear current record)	Not available	Shift+F3
Rollback changes/Undo	Alt+Z	Ctrl+Z
Save all	N/A	Ctrl+Shift+S
Save changes	Alt+Y	Ctrl+S
Search (start)	Ctrl+Q	F3
Close application	Alt+F4	Alt+F4
Close form	Ctrl+F4	Ctrl+F4
Close form	Escape	Escape
Copy highlighted data	Ctrl+C	Ctrl+C
Cut highlighted data	Ctrl+X	Ctrl+X
Delete highlighted data	Delete	Delete
Next field or control	Tab	Tab
Next form	Ctrl+F6	Ctrl+F6
Paste copied or cut data (works differently across different applications)	Ctrl+V	Ctrl+V
Previous field or control	Shift+Tab	Shift+Tab
Previous form (only available in Edit mode)	Ctrl+Shift+F6	Ctrl+Shift+F6

Hotkeys for Edit mode (with range of records selected)

Table 20: Hotkeys for Edit mode

Action	Manager/ Proforma hotkey	UII hotkey
First record (move to)	N/A	Alt+Up
Last record (move to)	N/A	Alt+Down
Next record (move to)	Alt+Right	Alt+Right
Previous record (move to)	Alt+Left	Alt+Left

Hotkeys to move between tabs



The functionality that takes you to the next or previous tab only works if your cursor is on a tab but not within a field on that tab. To move to the next (or previous) tab when your cursor is within a field, use **Ctrl+Page Up** or **Ctrl+Page Down**.

Table 21: Hotkeys to move between tabs

Action	Manager/ Proforma hotkey	UII hotkey
Next class tab (move to)	Alt+Page Down	N/A
Next tab (move to)	Ctrl+Alt+Page Down	N/A
Previous class tab (move to)	Alt+Page Up	N/A
Previous tab (move to)	Ctrl+Alt+Page Up	N/A

Hotkeys for classes

Table 22: Hotkeys for classes

Action	Manager/ Proforma hotkey	UII hotkey
First editable field of current class (go to)	Alt+End	N/A

Action	Manager/ Proforma hotkey	UII hotkey
First editable field of next class (go to)	Alt+Page Down	N/A
First editable field of previous class (go to)	Alt+Page Up	N/A
Main pick-list of current class (go to)	Alt+Home	N/A
Next tab (go to)	Ctrl+Page Up	N/A
Previous tab (go to)	Ctrl+Page Down	N/A

Hotkeys for integrated reporting

Table 23: Hotkeys for integrated reporting

Action	Manager/ Proforma hotkey	UII hotkey
Bottom of current page	Ctrl+Cursor Down	N/A
Bottom of current page	Ctrl+End	N/A
First page	Ctrl+Home	N/A
Last page	Ctrl+End	N/A
Next page	Ctrl+Page Down	N/A
Previous page	Ctrl+Page Up	N/A
Print	Ctrl+P	N/A
Scroll down	Cursor Down	N/A
Scroll page down	Page Down	N/A
Scroll page up	Page Up	N/A
Scroll up	Cursor Up	N/A
Top of current page	Ctrl+Cursor Up	N/A
Top of current page	Ctrl+Home	N/A
Zoom in	Z	Z
Zoom out	Shift+Z	Shift+Z

Hotkeys for check-boxes

Table 24: Hotkeys for check-boxes

Action	Manager/ Proforma hotkey	UII hotkey
Clear check-box	Space	N/A
Next check-box	Cursor Down	N/A
Next check-box	Cursor Right	N/A
Previous check-box	Cursor Up	N/A
Previous check-box	Cursor Left	N/A
Select check-box	Space	N/A

Hotkeys for list boxes

Table 25: Hotkeys for list boxes

Action	Manager/ Proforma hotkey	UII hotkey
Select all listed items	Ctrl+A	N/A

Hotkeys for date & number fields

Table 26: Hotkeys for date & number fields

Action	Manager/ Proforma hotkey	UII hotkey
End of field **Note:** Ctrl+End again to go to the last class	Ctrl+End	N/A
End of line	End	End
New line	Enter	N/A
Next character	Cursor Right	Cursor Right
Next line (multi line fields)	Cursor Down	Cursor Down

Action	Manager/ Proforma hotkey	UII hotkey
Previous character	Cursor Left	Cursor Left
Previous line (multi line fields)	Cursor Up	Cursor Up
Search	Ctrl+Enter	N/A
Start of field **Note:** Ctrl+Home again to go to the first class	Ctrl+Home	N/A
Start of line	Home	Home

Hotkeys for pick-lists

Table 27: Hotkeys for pick-lists

Action	Manager/ Proforma hotkey	UII hotkey
Bottom of pick-list (without selecting)	Page Down	N/A
Close pick-list	Alt+Cursor Up	Alt+Cursor Up
First item (without selecting)	Home	N/A
Last item (without selecting)	End	N/A
Next pick-list item (without selecting)	Cursor Down	N/A
Open pick-list	Alt+Cursor Down	Alt+Cursor Down
Original item	Esc	N/A
Previous pick-list item (without selecting)	Cursor Up	N/A
Select current item	Return	N/A
Select current item	Enter	N/A
Top of pick-list (without selecting)	Page Up	N/A

Hotkeys for navigation

Table 28: Hotkeys for navigation

Action	Manager/ Proforma hotkey	UII hotkey
First editable field of current class	Alt+End	N/A
First editable field of first class	Ctrl+Home	N/A
First editable field of last class	Ctrl+End	N/A
First editable field of next class	Alt+Page Down	N/A
First editable field of previous class	Alt+Page Up	N/A
Next tab	Ctrl+Page Down	N/A
Pick-list of current class	Alt+Home	N/A
Previous tab	Ctrl+Page Up	N/A

Function keys (II only)

Table 29: Function keys (II only)

Action	UII
Open **Alerts** form	F11
Open **Hotlinks** form	F12
Open **Preferences** form	F2
Save	F4
Open **Record Explorer**	F6
Open **Documents** form	F7
Open **Filter** form	F8
Open **Grid Properties** form	F9
Reset Layout and Clear	Shift+F3

Glossary

Click on the appropriate letter below to jump to definitions beginning with that letter. Only letters shown in italics have entries against them.

A B C D E F G H I J **K** ***L M N*** **O** ***P*** **Q** ***R S T U*** **V** ***W*** **X Y Z**

A

Access rights

See ***User Rights***

Application

An individual program used to perform a specific task or procedure. Several applications can be grouped together to form a ***Product***. For example, the Human Resources product contains multiple applications, one of which is 'Staff Records'. An application may be opened from ***Workplace***, ***Launch Pad*** or by double-clicking on the executable file, which ends with a .exe file extension (e.g. Staff Records.exe).

Alerts

Similar to paper 'Post-it notes', Alerts can be created and configured to appear when a specific class is opened. For example, they can be reminders to perform a certain function, request information or advise when fees are due.

Audit trail

A record of the date and time that a record was changed, the application used to change it and the user who made the alteration.

B

Browse mode

An application mode that allows you to view data but not edit it. Any records already being edited by another user can only be opened in Browse mode. See also ***Edit mode***.

C

Case sensitivity

Refers to the case used when entering and searching for data text. Case sensitivity affects the data that's returned by your search. For example, if an application is case-sensitive and you search for data by entering 'Smith', only 'Smith' will be found, not 'SMITH'.

Check-box

Provided to select any single or collection of options from a given range. An individual check-box can be set as true (ticked) or false (left blank).

Class

Determines what, how and where data is stored. Consists of a list of property definitions together with a name, reference and information on how the class links to any other class defined in the data dictionary. For example, Student, Module, Enrolment.

Class Browser tool

A tool available in UNIT-e Report Generator, used to view details of the class definitions defined in the dictionary.

Configurations

These allow your MIS Manager to configure different areas of the UNIT-e system to better suit the specific requirements of your institution. For example, your MIS Manager can define proformas and search forms, add reports to the report menu, configuring colours for Alerts, configuring Hotkeys, etc. Configurations can be applied to a user, a group of users, an application or globally.

Core report

Any report produced using UNIT-e Report Generator is a Core report that consists of a definition used to extract data from the database.

Custom class

Custom classes are provided by UNIT-e and can be configured by your MIS Manager so that you can store additional data not stored in the generic application.

Custom field

Available within custom classes. These can be re-labelled to meet the requirements of your institution, enabling you to store data not stored in the generic application. It's important to note that the property reference remains the same regardless of the label.

D

Data dictionary

Defines how data is stored in the database and includes class definitions, business rules and system reports.

Date field

Used to record dates or dates and times.

E

Edit mode

An application must be set to edit mode if you wish to edit existing data or add new data. Whether you can use edit mode depends on your individual user access rights and whether anyone else is currently editing the data, in which case you can only view the data. See ***Browse mode*** and ***User Rights***.

Entity Diagram tool

A graphical tool used to express the relationships between classes.

Executable

The name of the file used to run an application (e.g. Staff Records.exe is the executable for UNIT-e Human Resources (Staff Records).

Extended class

A class that inherits the properties of another class and adds properties of its own. For example, within your institution you will have records for people who are students or members of staff. Student and Staff records have many fields in common, so rather than creating two classes that each contain standard 'person' information such as Surname, Forename, Date of Birth etc., a Person class provides all those common properties. Staff and Student extended classes inherit the Person class properties and add role-specific properties for either students or members of staff.

F

Field

An area on a form used to display, edit or enter data.

Filter

A facility to restrict the data available for use. This is achieved by creating a list of search parameters that can be applied as a filter to restrict the records returned. For example, a filter could be applied so that only the current year's Modules are available.

Filtered pick-list

A pick-list, which contains a filtered set of records. Using the previous example, a filtered pick-list would only list this year's Modules.

Frame

An area on a form or proforma, visually encompassed by a frame.

G

Global update

A facility within UNIT-e Report Generator that enables you to simultaneously update volumes of data.

Grid editing

A facility that enables you to update or browse multiple records at the same time, using a form consisting of rows and columns of data.

Group rights

User Rights applied to a pre-defined group of users. Individual user rights override group rights and are appended to any set up for the group.

H

Hotlinks

Enable you to set up one or more 'hyperlinks' against any class stored in the database. These can include links to photographs, documents, web pages, etc.

I

Integrated report

Output from Crystal Reports which have been included in a configuration to appear on the **Report** menu of an application. Integrated reports are therefore available to be run within the application as and when required.

J

Jump field

Read-only fields used to view information stored in records on another tab in a form without having to switch to that tab. The data displayed is determined by the selection of a radio button to the right of the field.

L

Label

The title next to a field on a form or proforma.

Launch Pad

A ‘front-end’ application that gives you access to all of the UNIT-e web-based products you’re licensed to use.

Link pick-list

Pick-lists that are linked to another class containing a summary of records from the linking class.

Lookup

Items that can be made available for selection from a pick-list on a form. For example, Lookups could be set up for a person's title, which could include Mr, Mrs, Miss, Ms, Dr, etc.

M

Main pick-list

Appear at the top of each class tab to list search results and select classes for editing or viewing. Selecting an item in a pick-list, displays the data for the selected class.

Manager form

Pre-defined form available in any UNIT-e Manager series application. Used to view, edit and add data.

Mandatory filters

Filters that can be defined as mandatory and applied to individual users, groups of users or all users through User Rights. The filters restrict the information available and apply to class pick-lists, link pick-lists, data entry screens, etc.

N

Null

Completely empty of data. It is important to note that a blank space inserted using the keyboard spacebar is considered to be data.

Number field

Used to record numeric data. Some fields allow any number to be entered, whilst others only accept a specific format, such as currency.

P

Parameter

Data entered to search for or filter data. Parameters can be text, numbers or certain symbols such as > for greater than,% is a wildcard, etc.



Refer to *Appendix D: Wildcards (search parameter symbols)* (see page 233) for further information.

Pick-list

A drop-down list of items from which to select when entering data. This list can be populated from a ***Lookup*** or from a list linked to another class.

Product

A group of UNIT-e applications used to perform a specific procedure. For example, UNIT-e Human Resources.

Proforma form

A user-defined form used to facilitate data entry (e.g. the design might replicate a paper form).

Proforma features

Default features that can be included in proformas.

Property definition

Defines how and where a single item of data is stored. Property definitions are stored in the data dictionary and are grouped together to form a ***Class***. For example, properties for 'Surname', 'Forename', 'Date of Birth' etc. are within the Person class.

Property value

A single item of data stored in the database that is defined by the property definition. For example, if the property definition is 'Surname', the property value could be 'Jones'.

R

Radio button

Enables a single selection from a set of options. The selected radio button is identified by the presence of a black dot.

Read-only

Data that can be viewed, but not edited. This data usually appears on a field with a grey background.

Record

A row of data in a table stored in the database and defined by a class. For example, the class could define that the record consists of a Surname, Forename and Date of Birth property. The record could then contain 'Brown', 'John' and '01-07-1978'.

Reference field

Alphanumeric data entry field with a maximum of 20 characters, used to give a unique reference to a record.

S

Search

A function used to find a specific item or sub-set of data.

Search form

User-defined forms containing fields into which parameters can be entered. These parameters determine what data is returned.

System reference

System references are references that can be used as counters, such as invoice numbers, student references, etc.

T

Text field

Used to record data consisting of any combination of letters, numbers and symbols, with a maximum length of 255 characters. Some text fields allow multi-line text to be entered (e.g. address and notes fields).

U

User Rights

Rights, which are defined by your MIS Manager, control the software that you can use and the data that you can access. This includes rights to add, edit, delete and view data and rights to define proformas, search forms, Lookups, etc. See also ***Group rights***.

W

Wildcard

A symbol used in searching or filtering to represent any character. Used to identify strings with variable or unknown contents. Currently available symbols are "%" and "_".



Refer to *Appendix D: Wildcards (search parameter symbols)* (see page 233) for further information.

Workplace

A 'front-end' application that gives you access to all of the UNIT-e II and VB products you're licensed to use. See also ***Launch Pad***.

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If you are unable to find the information you require, the search facility in Adobe Acrobat enables you to search individual PDFs or the entire UNIT-e documentation catalogue. Refer to *Finding further information* (see page 15) for details.

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