



## Retain Wallchart Technical Implementation Guide

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## 1 Introduction

### 1.1 Introduction



## Retain Wallchart Technical Implementation Guide

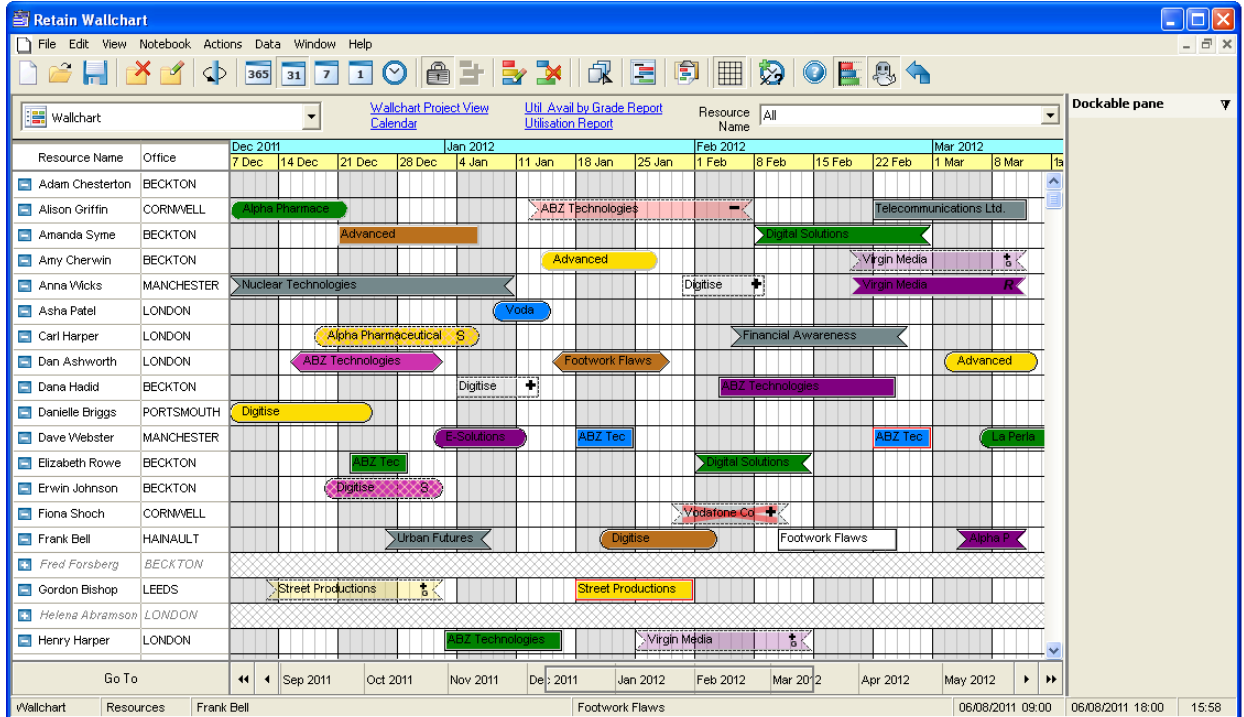
Enterprise Edition

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## 1.2 About Retain

Retain Wallchart is a flexible planning tool for viewing and managing staff and job allocations through a user friendly graphical interface. It has been designed to resemble the manual 'wallchart' booking system but it is much more versatile than any manual booking system:



Retain Wallchart provides a wide range of functionality relating to resource planning. See Retain Wallchart User Guide for more information.

In a typical client/server setup, the database software runs on the server computer and a program that can access the database runs on client computers. Retain Wallchart uses an extra server component, specifically written for Retain, called Retain Server. All the client applications talk to Retain Server which in turn interacts with the database software. This architecture allows the client software to be fully independent from the database and requires minimal setup on the client computer.

The client program, called the front-end (Retain Wallchart), allows users to access information stored within the database through an easy to use Windows-style interface. The database server, called the back-end, handles the database side of the application. Retain Server is located between these two, acting as interpreter and adding additional functionality to the database system. The front-end program requests services of the back-end by querying Retain Server. These queries are then passed to the back-end in the form of SQL statements. The back-end processes SQL statements and returns the results to the front-end program, again via Retain Server. The use of a client/server back-end enables larger scale databases plus access over a wide area network or dial-up.

Retain Wallchart looks similar and operates similarly to other editions of Retain. However, there are additional client programs that provide further functionality (such as Booking Requests and Enterprise Reports) that can be setup on selected client machines after Retain Server is installed.

### 1.3 About this guide

This document is a technical guide to assist people who are implementing Retain in their organisation. The guidelines provided here should be followed together with your organisation's specific user guides for installing, configuring and distributing the software.

The guide assumes that your organisation has the necessary technical resources to support your database platform, therefore it only addresses those areas of each platform that are relevant to setting up Retain Wallchart and Retain Server.

The term Retain refers to the whole Retain Resource Planning System which includes the client applications (Retain Wallchart, Retain Security) and the server application (Retain Server).

**Note** that this implementation guide is not intended for the end-users of Retain Wallchart. For information on how to use the software please refer to Retain Wallchart User Guide.

### 1.4 Where to get support

If you have any issues with Retain which you are unable to resolve using this user guide or through your local support contacts, please contact your [Support Service Provider](#).

## 2 Installing Retain

### 2.1 Installation overview

Before installing Retain, you should ensure that your system has sufficient processor speed, disk space and RAM to run this application.

Detailed system requirements for the database platform, server machine and client machines are outlined in the following sections:

[Database platform requirements](#)

[Server machine requirements](#)

[Client machine requirements](#)

If your client operating system is an earlier version than Windows 2000 (e.g. Windows 95), you need to ensure that the TCP/IP network drivers are set up. Your network administrator should be able to do this.

Retain installation can be divided into the following stages:

- Install Retain software by running the *RetainEnterprise5Setup.exe* which is available from your vendor. from the 'Wallchart' folder. Follow the on-screen instructions to complete the installation.

If installing Retain for the first time, select the 'Server and Client Setup' option as the installation type. To set up the client application on each additional machine, select the 'Client only Setup'.

- Create an empty [database](#) or convert an existing one. Populate it with one of the provided scripts ([Oracle](#) or [SQL](#)) to create the required tables.

**Note** that if you are using an Oracle database, the Oracle client files will have to be installed on the [machine hosting Retain Server](#).

- Configure Retain Server to ensure it can connect to the database. Configure the [SvrCnfg.ini](#) file, found in the 'Server' sub-folder.
- Run Retain Server by going to 'Start-> Programs-> RetainEnterprise\_v5-> Retain Server'.
- Run Retain Wallchart by going to 'Start-> Programs-> RetainEnterprise\_v5-> Retain'.
- Once you have established a connection between your test client and your database, use the Retain Security Manager application to configure your security settings such as access roles, colour schemes, charge rates and so on. See the [Initial set-up after installation](#) section as well as Retain Security Manager User Guide for more information.
- Distribute the client application to all client machines.

For a list of all Retain components that come with your installation see the [Retain components](#) section.

The installation process will set up:

- Retain database on your database platform,
- Retain Server on your chosen server machine, and
- client software on client machines

**Related Topics:**

[Setting up a database for Retain](#)  
[Installing Retain Client software](#)

## 2.2 Installation files

Whether you have downloaded Retain installation files from [Retain's website](#) or have been provided with an installation CD, you will find *RetainEnterprise5Setup.exe* and other setup executables in the install.

You may also find a licence file (licence.ein) in the install. Alternatively, it will be provided separately if you already have a trial or demo version of Retain.

Before installing Retain, you should put the licence file in the same folder as *RetainEnterprise5Setup.exe*, so that the setup can detect which components to install.

**Note** that if it is a trial or demo version you are installing, you would not need a separate licence file.

To install Retain you need to copy *RetainEnterprise5Setup.exe*, the setup executables of appropriate component(s) and possibly the licence file to a local temporary location. Once you have done that, run the *RetainEnterprise5Setup.exe* which will start the installation on your destination machine.

## 2.3 Setting up a database for Retain

### Database overview

All Retain data is stored in a database. All Retain applications connect to the database via Retain Server. The supported database platforms are Oracle 8i, 9i and 10g; Microsoft SQL Server 2005 with full text indexing. See the [Database platform requirements](#) section for more information.

To set up a Retain database, an empty database needs to be created, after which it must be populated by running the scripts provided in the installation to create the default Retain tables.

The procedure of creating the database for [Oracle](#) is different from that for [Microsoft SQL Server](#) but the table structure is the same for both. To tailor the table structure to suit your organisation's needs, see the [Database customisation](#) chapter to find out what modifications you can perform on Retain database tables.

### Database platform requirements

Retain supports various database platforms. The installation varies depending on which database platform you use.

#### Supported database platforms:

- Microsoft SQL Server 2005
- Oracle 8i, 9i, 10g

Hardware/Software platforms supported by the above database platforms:

Microsoft SQL Server supports Windows Server 2003 and Windows Server 2008.

Oracle supports most of the known platforms including Windows-based platforms, Linux Intel, Sun Solaris and so on.



The hardware specification for the database will vary depending on the expected number of users and the level of concurrency.

The notes below provide some approximate guidance but you should consult Retain for the most appropriate hardware specification for your organisation.

### Database disk space:

Allow for 500 MB per 1,000 staff being planned.

Typical Intel specification for a database server machine for supporting 1,000 staff:

- 2 GB free disk space
- 2 GB RAM
- 2.4GHz Xeon processor

Typical Intel specification for a database server machine for supporting 10,000 staff:

- 10 GB free disk space
- 4 GB RAM
- Quad 2.4GHz Xeon processors

### Microsoft SQL Server 2005 setup

To create a database in Microsoft SQL Server the following steps are required:

1. Microsoft SQL Server and SQL Server FullText Search should be installed and running as a service.
2. Run Microsoft SQL Server Management Studio and connect to the SQL Server machine which will be hosting the Retain database.
3. Right-click on Databases and select 'New Database...' from the context menu. In the 'New database' dialog, we recommend entering 'Retain' as the database name (if it is the first Retain database setup). Ensure you tick the 'Use full-text indexing' checkbox and click on 'OK' to create the database.
4. Set up access rights for the Retain Server.

The Retain Server will normally be run under a user account which requires access to the Retain database. You can either choose to use SQL Server security which requires a separate user name and password (the SQL Server instance needs to be configured with mixed mode security), or integrated security where the relevant Windows user account is given access to the database.

- Expand 'Security' (below 'Databases'), right-click on 'Logins' and select 'New Login...' to add a new user. In the 'New Login' dialog you can either choose to use *Windows integrated security* (so that you will log into SQL Server using your Windows login) or *SQL Server Authentication* (which allows you to set up a separate username and password for your database).

- When using integrated security, tick the 'Windows authentication' checkbox and find the relevant user by clicking on the 'Search' button.

- When using SQL Server Authentication, tick the 'SQL Server authentication' checkbox and enter the appropriate log in name in the 'Login name' box. Enter your chosen password in the 'Password' box.

**Note:** The password you enter here is the same one you should use for the connection string described in the [SvrCnfg.ini](#) section. However, the password will appear to be longer due to encryption. Some versions of Microsoft Windows do not support security mechanisms such as password expiry, therefore if you get an error message about this, uncheck the 'Enforce password policy' checkbox.

- Set the created Retain database as the 'Default database' for this login, and select '<default>' as

the 'Default language'.

- No entries are required in the 'Server Roles' section.
  - In the 'User Mapping' section, select the Retain database and tick 'db\_owner' checkbox to set the user as the Database Owner.
5. Run Command Prompt (cmd) and navigate to the 'DatabaseScripts-> SQLServer' folder. Run the SetupSQL.bat with the following syntax:

```
SetupSQL <Sql server name> <database name> <Login id> <Password>
```

For example: SetupSQL MyServer Retain sa mypassword

Alternatively, each script can be run in the SQL Server query window against the Retain database in the following order:

1. RWPBaseModelSQL.SQL
2. RWPAdditionalFunctionsSQL.SQL
3. RWPAddsSQL.SQL
4. SoundexFNSQL.SQL
5. PopRSESQ.SQL
6. PrepErrsSQL.SQL
7. PopErrsSQL.SQL
8. InstallFTSSQL.SQL

**Note:** In the SetupLog.txt file you may see a warning message related to the 'AVB' table. This is a default SQL Server warning message and can be ignored. Check the 'Log' folder for errors.

6. [Configure the Retain Server](#) to connect to the database. After successfully running the Retain Server, you will need to stop the Retain Server and run UpdateSQL.bat from the Command Prompt:

```
UpdateSQL <Sql server name> <database name> <Login id> <Password>
```

For example: UpdateSQL MyServer Retain sa mypassword

Alternatively, you can run the RecurringSQL.sql script against the Retain database from the 'DatabaseScripts-> SQLServer-> RecurringScripts' folder. Either the UpdateSQL.bat or RecurringSQL.sql script should be configured to run on a nightly basis. This script populates tables to improve reporting performance.

You can customise the database tables, if necessary. See the [Database customisation](#) chapter for more information.

## Oracle setup

To create a database in Oracle you will need at least 500 MB of disk space. Because the interfaces of the Oracle platform vary among organisations, only basic instructions for creating a new Oracle database for Retain are provided below:

1. In Oracle Enterprise Manager Console create a new Oracle user for Retain to connect to.
2. Run the following database script (found in the 'DatabaseScripts-> Oracle' folder) against the empty database schema to create the Retain table structures:

```
SetupORA.sql
```

Alternatively, you can run the scripts from the 'DatabaseScripts-> Oracle-> Setup' folder in the following order:

1. RWPBaseModelORA.SQL
2. RWPAdditionalFunctionsORA.SQL

3. RWPAddsORA.SQL
4. SoundexFNORA.SQL
5. PopRSEORA.SQL
6. PrepErrsORA.SQL
7. PopErrsORA.SQL

Check the 'Log' folder for any errors.

3. [Configure the Retain Server](#) to connect to the schema. After successfully running the Retain Server, you will need to stop the Retain Server and run UpdateORA.sql script against the schema from the 'DatabaseScripts-> Oracle' folder. The UpdateORA.sql script should be configured to run on a nightly basis. This script populates tables to improve reporting performance.

### Case Insensitive Sort Order for Oracle

By default Oracle uses case sensitive sorts which does not result in intuitive results. This can be changed by using a French or German sort order. In addition, a trigger can be used to ensure that all users are operating with this sort order.

An example procedure for this purpose would be:

```
create or replace trigger CaseInsensitiveSort
after logon on Retain.schema
declare
begin
execute immediate
'alter session set NLS_SORT = French ';
end;
```

### Database customisation

#### Database customisation overview

The Retain database is flexible for storing customised data and easy to maintain.

The following section describes how to customise a database for your data. Tailor the existing scripts to customise the database before you run them. Alternatively, create new scripts to add tables or fields and run it after creating the Retain database. See the [Tailoring the scripts](#) section for more information.

Once a Retain database is set up, changes to the database tables are performed using the platform specific tools such as Microsoft SQL Server Management Studio.

See the [Customising an SQL Server database](#) and [Customising an Oracle database](#) sections for more information.

#### Tailoring the scripts

The batch files that need to be run for setting up the SQL Server database are:

1. SetupSQL.bat
2. UpdateSQL.bat

**Note:** In the SetupLog.txt file you may see a warning message related to the 'AVB' table. This is a default SQL Server warning message and can be ignored.

The scripts that need to be run to set up the Oracle database are:

1. SetupORA.sql
2. UpdateORA.sql

**Note:** The batch files should be run in the order specified above, with the setup one being first and update the second.

The SetupSQL.bat and SetupORA.sql will generate the main tables (such as RES, JOB and BKG) that store the end-user data as well as additional tables that store the operational data.

The UpdateSQL.bat and UpdateORA.sql will update indexes to improve the reporting performance.

### Changes to the Main Tables

The main tables are:

RES (Resources)  
 JOB (Jobs)  
 BKG (Bookings)  
 CLT (Clients)  
 JAS (Assignments)

With regards to changes in the main tables, you need to ensure that the fields are long enough to accommodate the data that your organisation wishes to store in Retain.

Any changes made to the fields in the BKG table also need to be duplicated in the BKG\_LOG and BKG\_CFET tables.

See the [Supported data types](#) section for information on supported data types.

If you have more than one database connecting to your Retain Server, you need to edit the name of the server ('cde\_value') in the last insert statement ('Insert into CDE'). This defines the alias name of the database(s) used for caching, which should be a unique name. This is necessary to avoid any issues that may be caused by multiple databases using one cache folder.

Any other changes made to the default tables, such as field name aliases, should be performed using Retain Security Manager, rather than directly editing the scripts.

See Appendix A for examples on how to customise [SQL](#) and [Oracle](#) databases.

**Note:** The scripts should not be modified in any way other than those described above unless you have specific requirements. In that case, you should consult with your [Support Service Provider](#).

### Supported data types

#### Microsoft SQL Server data types:

**Supported:** bit, char, varchar, datetime, small, datetime, int, smallint, float

Unsupported: binary, nvarchar, bigint

#### Oracle data types:

**Supported:** number, char, varchar2, date

Unsupported: nchar, nvarchar2, clob, nclob, long, binary datatypes

## 2.4 Installing Retain Server software

### Retain Server Installation overview

Retain Server will run on a Windows NT, 2000 Server or Server 2003 machine with a static IP address or a static DNS name. The client machines do not need to access any of the files on the server machine. Retain Server can be installed on the same machine as the database server for fast communication. However, it is a trade-off between the condition of the server machine and the speed of the network connection.

In very high load environments the database and Retain Server may be run on separate machines; in such case they should be placed in close proximity to each other to ensure a high bandwidth connection between Retain Server and database server. Ideally, they should be sitting on a local area network running at least 100 Mb/sec. Each Retain client application will connect to the server as the application starts up and will perform all of its interactions with the database via Retain Server.

**Note** that Retain Server is a Windows executable which normally runs as a service. You may set up Windows service(s) that can automatically stop and restart Retain Server(s) on a nightly basis.

### To install Retain Server you will need to:

- Check the server machine specifications. See the [Server machine requirements](#) section for more information.
- In order to install Retain Server you will only need the following files: *RetainEnterprise5Setup.exe* and *licence.ein* (licence file). However, it is recommended that you also install all the client software on the server machine at the same time, in order to test the connection.
- Run *RetainEnterprise5Setup.exe* and follow the on-screen instructions to install Retain software. See the [Essential Retain Server files](#) section for more information.
- Configure [SvrCnfg.ini](#).
- Start Retain Server manually or using the service to test its connection to the database. See the [Server configuration tools](#) section for more information.
- If the database server is automatically restarted (because the database backup procedure shutdown and restarted the database, for example), then Retain Server will need to be restarted as well. See the [Synchronisation with the database](#) section for more information.

### Server machine requirements

If Retain Server is running on the same machine as the database, the hardware specifications listed in the [Database platform requirements](#) section will be applicable.

The software itself takes up a small amount of disk space (allow for up to 100 MB), stores no data itself, has a relatively small memory footprint (allow for 2MB plus 200K per concurrent client connection) and uses processor time similar to the database.

If the Server software is being run on a separate machine than the database, a suitable specification for most scenarios would be the following:

- Intel Xeon or Pentium Class processor 2.4 GHz
- Microsoft Windows Server 2003
- At least 2 GB of RAM
- 100 MB Disk space
- TCP/IP network protocol

- Static IP address (or a static DNS name)

For larger environments where a large number of staff are being supported (e.g. 5,000), it is advisable to consider multi-processor hardware and more than one Retain Server machine to spread the load and to provide some safety if one of the machines fails.

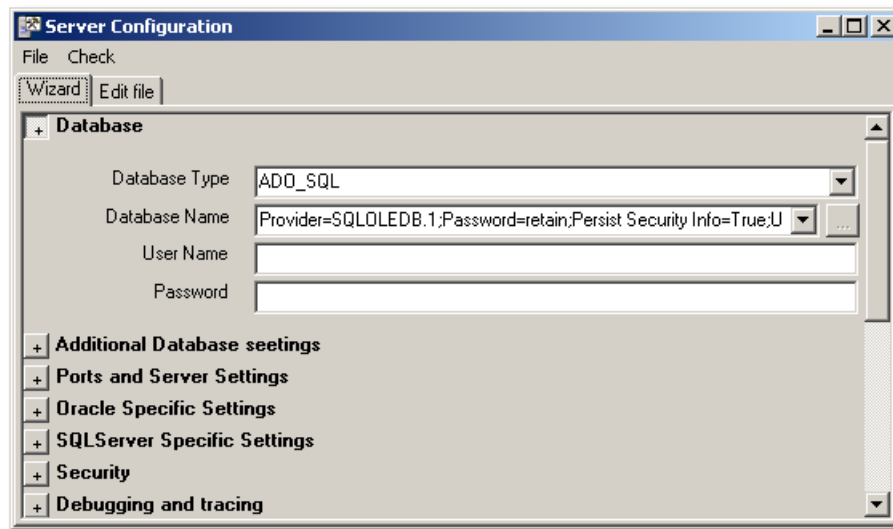
## Configuring Retain Server

### Retain Server configuration tools

#### ServerCnfg.exe

You may find this tool as Server Configuration Manager (ServerCnfg.exe) under Utilities from Retain Enterprise group in Start Menu. It provides you with an interface to specify the settings discussed in the [SvrCnfg.ini](#) file.

Expand the 'Database' section and you will be able to change the Database Driver and Name:

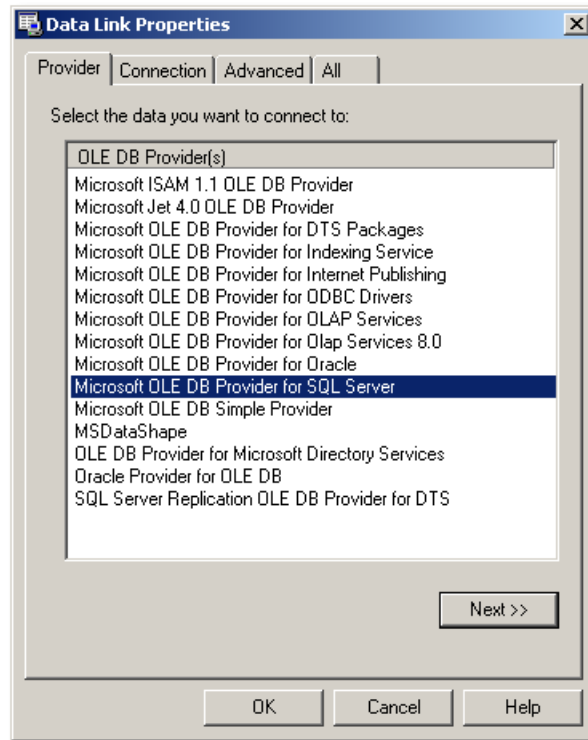


**Note** that you always need to select a Database Type to activate the Database Name look up button.

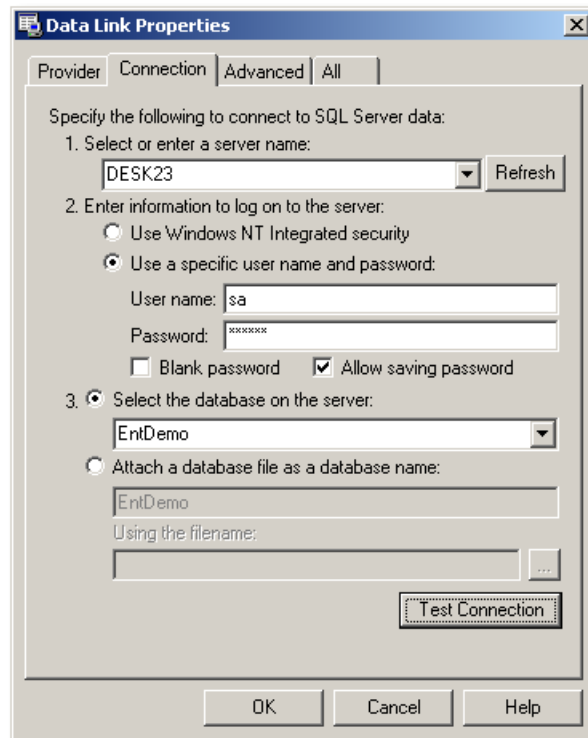
#### SQL Server Connection

To set up a database connection for an SQL Server database follow the instructions below.

1. Click on the look up button for the Database Name field. The 'Data Link Properties' dialog will open, allowing you to generate a connection string:



2. Select a database type (for a SQL database, select 'Microsoft OLE DB Provider for SQL Server') and click on the 'Next >>' button.
3. In the 'Connection' tab specify the database server machine, the type of security and select the database created in earlier steps from the drop down list:



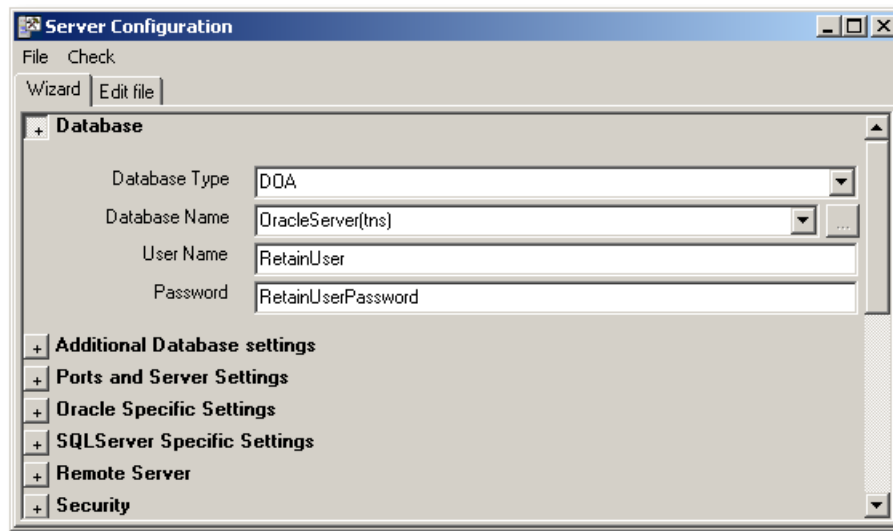
4. Test the connection by clicking on the 'Test Connection' button.

**Note:** The type of security depends on what you have chosen to use when you set up your database security in [Microsoft SQL Server setup](#). If you used SQL Server security ensure that the 'Allow saving password' checkbox is ticked, as shown above.

5. Click on 'OK' and you should see the connection string displayed in the Database Name field (in the 'Server Configuration' dialog).
6. The User Name and Password fields should be blank.
7. Click on the 'Edit file' tab and set UseDBCFields = 1.

## Oracle Connection

To set up a connection to the Retain schema in Oracle, run ServerCnfg.exe and enter the connection settings as follows:



Database Type: DOA  
 Database Name: TNS Name  
 User Name: Oracle User  
 Password: User Password

## Test database connection

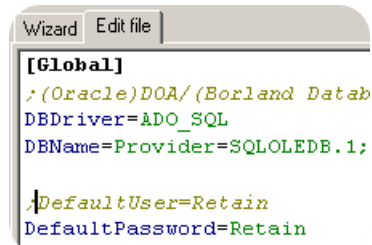
Select 'Check-> Check Database connection' from the menu. If the connection is successful, you should get the following message: 'DB Opened successfully'. Alternatively, if you will get a failed login error message, check that your connection string is correctly set up.

To further test that your Retain Server can connect to your database, you need to save the changes in the ServerCnfg.exe and run Retain Server manually. You should see the port number in the title bar of the Retain Server window. If you can not then there is a problem in the connection. In this case you need to check the port settings in the [SvrCnfg.ini](#) file.

If your Retain Server connects to the database, i.e. the port number was shown, you should try to open a client application such as Retain Security Manager, to see if it can open (assuming you already installed one when running Setup.exe). If the client application runs, the connection has been established successfully. Alternatively, check your connection string again.

The 'Edit file' tab in the 'Server Configuration' dialog simply shows you the contents of the [SvrCnfg.ini](#) file. You can manually modify the settings using this tab. For example, if you are connecting to a Microsoft SQL Server and you want to comment out the Default Username and Default Password fields for setting up the connection, you can do it using this tab:





```

[Global]
;(Oracle)DOA/(Borland Datab
DBDriver=ADO_SQL
DBName=Provider=SQLOLEDB.1;

;DefaultUser=Retain
DefaultPassword=Retain

```

## SvrCnfg.ini

### Basic settings

For the first installation of Retain server you will only need to adjust the [Global] settings in *SvrCnfg.ini*. The following example shows an Oracle database setting:

### [Global]

```

DBDriver=DOA
DBName=Retain.World
DefaultUser=Retain
DefaultPassword=Retain

```

#### DBDriver

This will be the driver used for your database system. The Microsoft SQL Server driver is ADO\_SQL and the Oracle driver is DOA.

#### DBName

This will be one of the following:

- If you are using Oracle, this can be the name set up in the TNSNAMES.ORA file, e.g. Retain.World.
- If you are using SQL Server, this can be the name of the server machine. It can be the string produced by server configuration tools which eliminate the need to specify the user and database (you can then comment out the *DefaultUser* and *DefaultPassword* settings). Otherwise, the *DefaultUser* and *DefaultPassword* are used.

#### DefaultUser

The user name assigned to database, e.g. Retain. If you are using SQL Server and ADOConnectionString.exe/ServerCnfg.exe does not include the connection information, then this user must have the Retain database set up as its default database.

#### DefaultPassword

The password assigned to the database, e.g. Retain.

**Note:** The *DefaultUser* and *DefaultPassword* entries *must* be commented out if you have used integrated security in setting up your login to the database.

You should now be able to run Retain server and to test the connection to the database.

### Further settings

- LogClientConnection=1  
This setting records the user connections in the ULG table when set to 1.
- MaxStackTraceLength=0

Represents the stack trace level in the log table: 0 = No stack trace; 10 = 10 Lines; -1 = Unlimited.

- UpdateDiarySum

It is false by default. If false, does not populate the table and instead the user would probably want to run the Update scripts. If true, the DGD\_SUM table is populated by the Retain Server whenever a diary changes, and also on start up. In larger deployments with multiple servers, it is recommended that this setting is applied to a server that is used by administrators who could potentially change the diaries.

- UpdateDiaryDetail

It is false by default. If true, populates the DGD table when Retain Server is first started.

- MaxUsers

The maximum number of users allowed on to the database through Retain server at any one time.

- MaxClientSendAccepted=5000000

The limit (in bytes) that the server will accept in any single communication from a client application. The above is the default value.

- ThreadPoolCount

Maximum number of threads that Retain server will use to process concurrent requests. The default is 32 which will almost certainly be more than enough.

- ServerPort

The port number of the database server. The server will only run on the designated port and will not automatically try the next port. It will fail to run if there is a server already running on the port. **Note** this information should be available from your database administrator and should not require alteration after the initial set-up.

- BypassClientCalcPresence=1

By default, Retain performs a check for certain calculated fields before start up (the value is 0). You can bypass this check by setting the value to 1, although it is recommended to leave it unchanged.

- ShowErrorMessage=0

The default value is 0 and it means that errors will only be written to the log file. If set to '1', they will also appear in a dialog.

- USEPWHTABLE=1

This setting encrypts passwords (which are then stored in the PWH table).

- FFASTRING=1=1

If set to 1=1, this setting grants full functional access to the users (within licencing restrictions), regardless the set up in Security Manager. If set to 1=0, the users will be limited to the settings defined in Security Manager. You can also specify certain IP addresses that will be allowed full functional access. For example: FFASTRING=IPADDRESS='127.0.0.1'.

- AcceptDifferentCP

If set to 1, Retain does not perform a check whether Retain Wallchart has a different codepage to Retain Server. The default value is 1.

## [Compression]

Compression allows large amounts of data to be compacted before being sent across a network connection, therefore reducing latency times.

- Threshold=10000

Sets the minimum threshold in bytes above which data packets are compressed. Compression does involve extra server processing so there is a trade off between performance and bandwidth usage

- Level=1

To alter the compression level, change the number to the desired setting (1 being the minimum amount of compression and 9 being the maximum). This setting can vastly affect the speed of Retain and should be left

on its default of 1.

### [BookingRequest]

- AppendNoteWhenRejecting

If set to 1, allows users to add comments to the existing booking request note when rejecting that booking request.

### Additional settings

### [DBConnect]

- MaxTries=5

This setting specifies the number of times Retain server will try to connect to the database (for Oracle only). Five is the default value.

- RetryAfter=3000

This setting determines the time delay in minutes between the connections. The default is 3000.

### [DATABASE]

- ForceRetrieveAll=1

This setting is for SQL Server database connections only. It reduces the SQL Server lock conflicts.

**Note** that Retain server can also be run with command line parameters which will override any settings in the *ini* file.

- PORT

Specify the port that Retain server will run on.

- CONFIG

The full path of the configuration file (default is *SvrCnfg.ini*).

- ORACLEHOME

Oracle home directory, only required for multiple Oracle installations.

- OCIDLL

Oracle OCI dll. It defines the interface dll and should not be required in normal circumstances.

### [Views]

- ShowAll=0

ShowAll will accept all views as tables. The default value is 0 (i.e. the setting is off). If ShowAll=0 then you need to list all views you want the server to treat as tables. For example, RES=View

### [Security]

- AcceptUserLogon=0

Determines whether you can accept a user name different to the network logon or not. The default is 0 (can not accept). You would normally only enable this (by setting to 1) where passwords are implemented.

### [Locale]

- SizeToNumCharsDivider=4

Defines how many bytes a character can represent for Retain Server. In this case, it will be four bytes.

## Advanced settings

The settings below should not be changed without consulting with your Retain support provider.

Each Retain server reserves IDs for each table in blocks of 500 (by default) and uses them sequentially. You can change this default (to 50 for example) but also override this default for specific tables, e.g. BKG:

### [TableReserveBatch]

Default=50  
BKG=100

**Note** that Retain *does not* recommend setting the default to 1.

### [ScenarioClrSchMappings]

- Default=DefaultScenario

This setting changes the currently selected colour scheme but only if it corresponds to the name in the mapping (e.g. 'Default'). If another colour scheme is selected, the setting will not be used. On the left hand-side of the equation is the colour scheme used when scenario bookings are hidden and on the right-hand side is the scheme that is used when scenario bookings are visible.

### [ORACLE\_SESSION]

- NLS\_SORT=BINARY\_CI

This setting is not enabled by default. If used, allows 'Alter session' commands to be sent to Oracle on initialisation.

## Running Retain Server as a service

### Retain Server service overview

Retain Server can be run either manually or as a Windows service using RetainServersService.exe.

A service can be set up for one or more servers. Each Retain service monitors all the Retain Servers it is responsible for. If a Retain Server crashes or is no longer responding, the service will start a new Retain Server to ensure a minimal down time in the event of a failure.

Retain service will ensure that Retain Server is running, either as a desktop application or in the background (as long as the server machine is on).

### Related Topics:

[Configuring the service](#)

[Installing the service](#)

[Starting the service](#)

[Stopping the service](#)

[Uninstalling the service](#)

[Synchronisation with the database](#)

## Configuring the service

RetainServersService.exe is configured using *RetainServersService.ini* which is found in the 'Server' sub-folder. This ini file contains three sections: [Settings], [Programs] and [Dependencies]. For example:

```
[Settings]
DisplayName=RetainServersService

[Programs]
p1=c:\Program Files\Retain Enterprise\Server\RetainServer.exe Port=11372
p2=c:\Program Files\Retain Enterprise\Server\RetainServer.exe Port=11374

[Dependencies]
d1=OracleServiceORCL
```

The [Settings] section defines the display name of the Retain service. The default name is RetainServersService. If you rename the default name you will need to update the StartService.bat and StopService.bat to reflect this change.

The [Programs] section lists all the Retain Servers that you may want to run. When migrating or upgrading Retain Server, you will have to change the path to point to the new Retain Server. You will only need to specify the port number if the service is running on more than one server.

The [Dependencies] section defines any dependent services. If Retain Server is running on the same machine as the database server then it can be setup to be dependent on the database service, such that when the database service is stopped and started, the Retain Server(s) is/are stopped and started at the same time.

See the [Synchronisation with the database](#) section for more information.

A single instance of Retain service can manage a number of Retain Servers. This will reduce administrative hassle.

However, Retain service can be renamed. This allows for a number of Retain services on one machine with each of them independently managing a different Retain Server. This is recommended if servers are operating against different environments, for example one of them is a test system where changes are being experimented with. It gives flexibility where starting/stopping individual servers is required. To have multiple services on one machine you will need separate directories containing the RetainServersService.exe and RetainServersService.ini because each service will have different configuration.

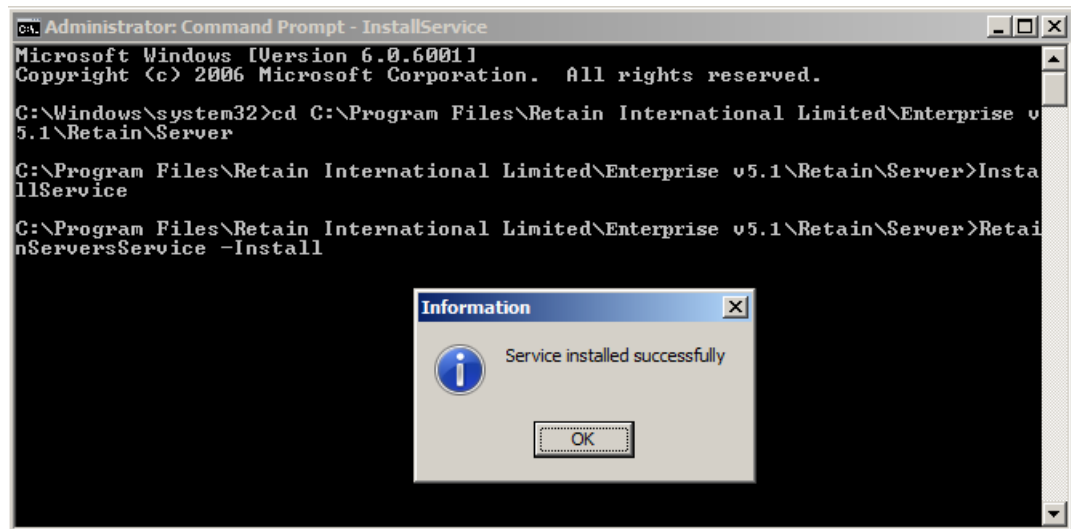
### Notes:

- Any changes to the *RetainServersService.ini* file require the service to be either stopped and restarted or the computer to be restarted.
- The suggested port numbers are of the form 11xxx where 11xxx is an even number. For example, Retain Server might use port number 11372. By choosing an even number, the notification port will be an odd number as it defaults to 1+ Port Number.
- By default, Retain Server runs under the Local System account but if run under Integrated Security you need to choose the alternative.

## Installing the service

Once you have configured Retain service, it can be installed by running InstallService.bat from the 'Server' sub-folder.

For Windows Vista and Windows Server 2008, you need to run the batch through the Command Prompt as the Administrator:



By default, when the service is installed, it is set to automatically start when the computer starts up. This is the best setting if you are restarting the computer frequently.

## Starting the service

To start Retain service:

1. Go to Control Panel-> Administrative Tools-> Services. Right-click on RetainServersService-> Start.
2. Run StartService.bat from the 'Server' sub-folder. It contains the following command: net start RetainServersService

**Note:** If the display name of Retain service changes, you will need to update this command as well.

The default is for the service not to interact with the desktop so that the service will be stopped by a user logging out. You can change the setting by going to Control Panel-> Administrative Tools-> Services, right-clicking on RetainServersService and selecting Properties-> Log On. Tick the 'Allow service to interact with desktop' checkbox. However, you will need to manually stop the Retain Server when the interaction is on.

### Notes:

- If you access the machine that runs Retain Server through an application such as PCAnywhere and you have set it to interact with the desktop, closing the PCAnywhere session will stop Retain Server.
- RetainServersService monitors all the Retain Servers it is responsible for. If a Retain Server dies or is no longer responding, the service will restart a new Retain Server to ensure a minimal down-time in the event of a failure.

## Stopping the service

To stop Retain service:

1. Go to Control Panel-> Administrative Tools-> Services. Right-click on RetainServersService-> Stop.
2. Run StopService.bat from the 'Server' sub-folder. It contains the following command: net stop RetainServersService.

**Note:** If the display name of Retain service changes, you will need to update this command as well.

## Uninstalling the service

After you have stopped the service, run UninstallService.bat from the 'Server' sub-folder to uninstall the service.

Click on 'OK' to confirm that you wish to uninstall the service.

## Synchronisation with the database

Retain Server software should be started after the database server and stopped before the database software is stopped.

## Servers on one machine

If Retain Server is on the same machine as the database server, you can link the two services together using *RetainServersService.ini* file, as described in the [Configuring the service](#) section. After setting up dependencies between the services, you can:

- Stop both services using the following command: net stop RetainServersService /y
- Start both services using the following command: net start RetainServersService

## Servers on separate machines

You can use the Windows scheduler to stop Retain Server before the database server is shut down and start it after the database server has been restarted.

A typical scenario would be to restart Retain Server after the nightly database backup. Here is an example of using command lines to stop and restart Retain service using the Windows scheduler at 1am and 6am, respectively:

```
at 1:00 /every:M,T,W,Th,F,S,Su c:\Program Files\Retain Enterprise v5\Server\StopService.bat  
at 6:00 /every:M,T,W,Th,F,S,Su c:\Program Files\Retain Enterprise v5\Server\StartService.bat
```

## Log and tid files

### .log files

When Retain Server is run, it automatically creates two additional files. These are named according to the database, port and IP address, to ensure uniqueness if multiple servers are running on the same machine.

For example, the files may appear as:

```
LogID131083427_11372_10-20-30-23.log
```

```
LogID131083427_11372_10-20-30-23.tid
```

The log file contains details of when the server is stopped and started as well as details of any errors that occur while the server is running. It can be deleted safely.

### .tid files

The .tid file is an ID control file. It stores the range of IDs that the server has reserved against various tables and will use when creating new rows. It ensures that when Retain Server is stopped and started, it will use the IDs sequentially.

**Note:** If you rebuild the database or import data without updating the IDC table, the .tid file should be deleted before restarting Retain Server.

## 2.5 Installing Retain Client software

### Retain Client installation overview

Once Retain Server has been installed and you have confirmed that it can connect to the database, you can start installing the client software. It is advisable to set up all the necessary client software on the server machine or a test machine before distributing to users.

If you have not already installed the client software while installing the Server, run *RetainEnterprise5Setup.exe* and follow the on-screen instructions.

After installing the client software on the test machine, you should:

1. Configure [Servers.ini](#) and [ClntCnfg.ini](#). See the [Configuring Retain Client](#) section for more information.
2. Run RetainSecurity.exe to set up user names and access rights. See the [Initial set-up after installation](#) section as well as Retain Security Manager User Guide for more information.
3. Run Retain Wallchart and confirm that you can connect to Retain Server. Create a new Retain Notebook that displays the data from the database. See Retain Wallchart User Guide for more information.
4. Distribute the client software to other client machines. See the [Distributing to users](#) chapter for more information.



## Client machine requirements

We recommend the following specification for your client machines:

- Intel Pentium III-Class processor, 450 MHz or better
- Microsoft Windows 2000, XP Professional, Vista
- At least 256 MB of RAM
- 50 MB free hard disk space
- XGA (1,024 x 768) or higher resolution monitor
- Mouse or other Windows pointing device
- TCP/IP network protocol (Bequeath should not be used)

For Windows 95 machines it may be necessary to run 50comupd.exe which is a Microsoft update for the common controls. It resolves bugs relating to the date time picking control and those that can cause application errors.

Retain Wallchart has been developed to provide good performance in a high latency environment. Although latencies of less than 50 milliseconds (ms) is desirable, latencies of less than 400 ms would not impact on performance so as to make the client applications unusable. You would however see a slowdown when processing a large amount of data. In a high latency environment, we would suggest changing the threshold at which packets are compressed.

Network bandwidth usage is low. Typical rates for a database with 100 resources, 500 jobs and 16000 bookings:

- User connection to Retain Server (and database) peaks at 12KB
- Navigating the Wallchart 2KB
- Updating all resource records 4KB
- Running a booking level report 16KB

To update personal calendars using Retain Calendar Link or send e-mails (with schedules attached) using Retain Notifier, users would require Microsoft Outlook or Lotus Notes.

**Note:** If Lotus Notes is being used as the email software, the application folder which contains 'nnotes.dll' must be in the path. Otherwise, Booking Requests and the email notification applications will not run (you would get an error indicating that 'vim32.dll' or 'nnotes.dll' cannot be loaded).

## Configuring Retain Client

### Retain Client configuration overview

All client software will normally be installed into the same application directory. All applications share common configuration files which also sit in the application directory.

The configuration files for the client applications are:

<a href="#">Servers.ini</a>	Defines the location of Retain Servers.
<a href="#">ClntCnfg.ini</a>	Defines general client settings.
<a href="#">Retaine.ini</a>	Defines application specific settings.
<a href="#">bkqDialog.ini</a>	Defines the 'Booking' dialog settings.

FieldMapping.ini	Configuration file used for upgrading. Should not be changed without consulting your Retain service provider.
RetainSecurity.tdf	Retain Security Manager configuration file.
VCLTranslations.sil	Retain Wallchart data file. Should not be changed without consulting your Retain service provider.

These will normally be configured on a test machine initially and then subsequently distributed to all client machines as part of the standard configuration.

Retain notebooks and report files may also be distributed as part of the standard installation. Alternatively, they can be stored in a shared directory on the file server.

### **Servers.ini**

This configuration file resides on the client machines. It contains information required by the Retain client to connect to one or more Retain Servers. The syntax for this file is as follows:

#### **[SERVER\_ALIAS]**

```
London=Server  
Paris=Server
```

This section contains the list of servers that will be visible in the drop down list when users connect to the database through any Retain client application.

For each server listed above, the connection information is provided. Each entry can have several servers linked to it:

```
[London_1]  
;Main server  
Server1 = 10.20.30.8:8880
```

```
[London_2]  
;Backup server  
Server1 = 10.44.236.184:8760
```

```
[Paris_1]  
;Multiple servers selected at random to spread the load  
Server1 = 54.263.156.98:8880  
Server2 = 10.144.36.14:8960  
Server3 = 246.23.164.87:8900
```

Each group requires a minimum of one server and one port number. There are two different ways of defining multiple alternative servers for a particular site.

In the example above, the London site has a main server and a backup server that should be used in the order displayed. The order is defined by numbering the groups using the above syntax. In other words, 10.20.30.8:8880 will always be tried first but if it fails, the client will try 10.44.236.184:8760 next.

If more than one server is specified on a given number for a given site, Retain will randomly select one of the servers to connect to and if unsuccessful, try the subsequent ones. This random selection balances the load if there are multiple Windows NT servers pointing to the same database.

## **ClntCnfg.ini**

This configuration file resides on the client machines.

### **[CACHE]**

- **TABLENAME=CACHE SIZE (number of records)**

The cache settings are normally not used (the cache is unlimited), although might be set for the BKG table only.

### **[CONNECT]**

- **ProgressBar**

When set to 1, Retain shows a progress bar while it is connecting.

### **[SECURITY]**

- **CONFIRMCHANGES**

If set to 1, the user will be asked if he/she wants to save the changes made using Retain Security. If set to 0, the changes will be saved automatically. The default value is 0.

### **[log]**

- **writelog**

If set to 2, provides useful debugging information when Retain is not working or is running particularly slowly.

### **[ScenarioManager]**

- **AlwaysShowFilterArrow**

When set to 1, the filter arrow next to column names in the Scenario Manager is always shown. When set to 0, the filter arrow is shown only when you move the cursor over the column name.

- **ShowBkgFiltering**

When set to 1, the filtering for scenario bookings in the Scenario Manager is enabled.

- **BookingsViewSyncMode**

When set to 1, the same filtering and settings are shown for all of the scenario bookings within the Scenario Manager. When set to 0, each set of scenario bookings has a separate filtering and settings.

- **UnselectAllAtStart**

When set to 1, all the scenarios in the Scenario Manager are deselected by default.

- **ShowCustomFiltering**

When set to 1, shows the custom filters in the Scenario Manager. The default value is 1.

### **[DropDown]**

- **VisibleCompareMechanisms**

This setting defines which linked field operators are enabled. The default value is 'Like,LikeCaseSensitive'.

To enable multiple operators, separate them by a comma. The possible values are:

- Like

- LikeCaseSensitive

- Equals
- NotEquals
- GreaterThan
- LessThan
- GreaterEquals
- LessEquals

## [Wallchart]

- **DisableDefaultNotebook**

When set to 1, disables the Default notebook feature within Wallchart. The default value is 0, that is the 'Save As Default Notebook' option is enabled.

## [SUPPORT]

- **EMAIL=alternativesupportemail@domain.com**

This setting allows you to specify an e-mail address that will be used by Retain Error Submitter to send the error logs.

### **Retaine.ini**

*Retaine.ini* file defines the various settings for Retain applications.

If it does not exist, gets created automatically within the same folder as your Retain executables.

## [Attributes]

- **Main=Achieved**

The value of this setting should match the name of the attribute level used within the deployment (see the ATB table). The default value is 'Achieved' which corresponds to 'Achieved/Wanted' attribute levels. You can also use the 'User' value which corresponds to 'User/Goal' levels.

### **The following Retain Wallchart settings require manual set-up**

- [Overallocation]

DoTest=1  
Threshold=100

This setting enables the over-allocation test. A warning will be displayed when moving or resizing a booking in such a way that the total loading increases above the specified threshold. In this example, a warning will be displayed if loading equals to more than 100%. **Note** that when making a new booking, this threshold will not be applied.

## [Language]

- **Codepage=1**

If set to 1, the font scripts are used according to your regional settings.

## [Security\_Maintables]

This section allows you to define the tables which will be grouped as 'Main' within Retain Security Manager.

The syntax is: [table name]=1. For example:

```
RES=1
JOB=1
BKG=1
CMP=1
JAS=1
```

To display these tables in the 'Main' group in Security Manager, right-click on the Tables node and select 'Group by-> Common Tables'.

## [SecurityOutline]

This section of the file defines settings for Retain Security.

## [Wallchart]

This section defines general Wallchart settings.

- OldStyleHistoryControl  
If set to 1, this setting allows the user to see all the history values when not in edit mode. When set to 0, presents the user with only the current value when not in edit mode.
- BypassDialogConCheck  
If set to 1, bypasses the connection check done by the 'Edit/View Record' dialog when the user clicks on 'OK'.

### Wallchart report settings

You can use the special features of fields to control how numeric fields are totalled in Retain Wallchart reporting.

By default, Retain will sum all numeric fields:

- [RETAIN TABLENAME (e.g. Booking, Resource, Job, Assignment or Client)]  
FIELDNAME\_Special=Value

The possible values are:

```
256 - Do not total
512 - Average total
```

For example:

```
To not total booking IDs:
[Booking]
BKG_ID_Special=256
```

```
To show average IQ values:
[Resource]
RES_IQ_Special=512
```

### View selections

You can enter view selections which will restrict the view of the data seen by the user. Care should be taken when setting up these selections. They also affect the booking request interface, and will restrict the booking requests displayed in the admin queue to those containing resources in the view selection.

The booking request interface can have its own specific views set up which override the default view

selections.

For example:

Booking Request view selection overrides the main view selection, if present:

```
[Resource]
ViewSelection=RES_OFFICE='Local'
BRViewSelection=RES_SECURITY='A'
DDViewSelection=RES_SECURITY='A' or RES_SECURITY='B'
```

Limits view to jobs table:

```
[Job]
ViewSelection=JOB_COUNTRY='UK'
BRViewSelection=JOB_SECURITY='A'
```

[Booking]

```
ViewSelection=BKG_BT_Y_ID=1
```

ViewSelection relates to the selection used by Retain and Booking Requests.

This can be overwritten by 2 additional items:

BRViewSelection relates to the items available in Booking Requests.

DDViewSelection relates to the drop down lists in Retain Wallchart. This is particularly relevant to the 'Booking' dialog, where you may want to book against a job which has yet to appear elsewhere in Retain. You may need to set the condition to 1=1 if you want the drop downs to list all items, where the ViewSelection is set to be more restrictive.

- [BookingRequests]
  - resDDCalc=DGAvalTme
  - resDDCalcTitle=Avail Selection

This setting allows you to add additional Booking Request search fields. In this case, an additional column which allows you to search by availability when adding resources to a job based request will be added.

**Note** that the additional column only appears when a date range is defined.

### Table Alias

Under the section for the relevant table, e.g [Resource], put

- tablename=individual

This will alias the RES table to be displayed as 'individual' (rather than the default 'resource') within Retain Wallchart.

### bkgDialog.ini

Using the *bkgDialog.ini* you can configure the 'Booking' dialog. You can:

- add/remove tabs;
- reorganise and add/remove fields;
- define controls for fields (e.g. checkboxes, drop down lists, etc.);
- add data dependent fields;

- rename field aliases and much more.

*bkgDialog.ini* can be found in the same folder as your Retain Wallchart executable. This file has to be present in order to see and use the 'Booking' dialog (a warning message will appear if a *bkgDialog.ini* is missing on start-up).

## [General]

- DefaultWidth=440  
DefaultHeight=400

These settings define the default size of the 'Booking' dialog when it is opened for the first time. The width and height is defined in pixels. If these settings are not applied, the dimensions of the dialog will be 800x600 pixels.

- NTABS=2

This setting determines the number of tabs in the 'Booking' dialog. In this case, two tabs will be present.

- SwitchWidth=400

This setting reorganises the layout of the 'Booking' dialog when the dialog is reduced to to a certain width (in this case 400 pixels). If the user reduces the width below this threshold, the labels will appear above their respective components rather than to their left. This is especially useful when the dialog is 'docked'.

- MinWidth=700

This setting defines the minimal width of the 'Booking' dialog. In this case, the minimum width of the dialog will be restricted to 700 pixels. However, if you 'dock' the 'Booking' dialog and then remove it from the dockable pane, you will be able to resize the dialog beyond this threshold.

- MinHeight=500

This setting defines the minimal height of the 'Booking' dialog. In this case, the minimum height of the dialog will be restricted to 500 pixels. However, if you 'dock' the 'Booking' dialog and then remove it from the dockable pane, you will be able to resize the dialog beyond this threshold.

- UseColorScheme=1

If set to 1, this setting will colour the background of each value in the relative drop down list depending on the currently selected colour scheme. For example, if the current colour scheme is based on booking type and you have a 'Booking Type' field in the 'Booking' dialog, the backgrounds for the values of that field will be coloured accordingly. The default value is 1 (the setting is applied).

- AskRefreshRepository=0

This setting defines whether a confirmation dialog appears or not when you edit a booking graphically. If set to 0 or the setting does not exist in the *bkgDialog.ini*, the dialog is not shown. If the value is set to 1, the confirmation dialog will be displayed.

- UseOldBkgDialog=1

If set to 1, allows you to revert to the old style 'Booking' dialog.

- AlwaysOpenUndocked=0

If set to 1, the 'Booking' dialog will always be opened undocked, regardless of whether it was docked or not before closing.

- UseSeparateCloseBtn=0

If set to 1, adds an additional 'Close' button to the 'Booking' dialog.

- FeedbackMinHeight=120

This setting defines the minimal size of the feedback window in the 'Booking' dialog.

## [Tab1]

You can have a number of tabs within the 'Booking' dialog (see the *NTABS* setting above). The settings for each tab should be defined within the appropriate sections: the settings for the first tab should be within [Tab1] section, the second under [Tab2] section and so on.

- Name=Main

This setting defines the name of the tab as it will be displayed within the 'Booking' dialog. In this case, the tab will be called 'Main'.

- HelpId=301

This setting points to the relevant section within the user help file and should not be changed.

- NFields=6

This setting defines the number of fields within the tab (in this case six).

- NCols=1

This setting defines the number of columns within the tab (in this case one).

- NRows=7

This setting defines the number of rows within the tab (in this case seven).

- Row1Resizable=1

If set to 1, this setting makes that row (in this case row 1) resizable, allowing you to expand and contract it. Normally, this functionality will be disabled (value set to 0) for most rows.

- Column1Resizable=1

If set to 1, this setting makes that column (in this case column 1) resizable, allowing you to expand and contract it. Normally, this functionality will be disabled (value set to 0) for most columns.

- MarginSize=5

This setting defines the size of the margin between the rows and columns within the tab. In this case, it will be 5 pixels.

- CaptionColHeight=30

This setting defines the height of the caption for the field label. In this case, it will be 30 pixels.

- CaptionColSize=80

This setting defines the width of the caption for the field label. In this case, it will be 80 pixels.

- Row1SizeType=ssPercent

Row1SizeValue=15

These two settings define the size of the row when the dialog is resized. You need to define both the size type and value.

If the row size type is set to 'ssPercent', the size of the row will be calculated as a percentage. In this example, the size of the row will remain 15% when the 'Booking' dialog is resized. You can also set the row size type to 'ssAbsolute' if you wish the size of the row to be calculated in pixels and remain of fixed size when the dialog is resized.

**Note** that the first row within the tab is called 'Row1', the second 'Row2' and so on.

### Field Properties

For each field within the tab (Field1, Field2, etc.), define the following settings:

- Field1=BKG\_RES\_ID

This setting defines the field which the control will represent and allow to change. In this case, the first field within the tab will be based on the BKG\_RES\_ID.

**Note:** If the user does not have appropriate security rights to view a certain field (E.g. BKG\_JAS\_ID), that field will not be visible to them in the 'Booking' dialog, regardless of this setting.

- Field1NRows=1



The number of rows within the cell you are working in. In this case, the first field will have one row.

- Field1NCols=1

The number of columns within the cell you are working in. In this case, the first field will have one column.

- Field1Row1SizeType=ssPercent  
Field1Row1SizeValue=100

These two settings define the width of the field with regards to the size of a row. You need to define both the size type and value.

If the row size type is set to 'ssPercent', the width of the field will be calculated as a percentage. In this case, the first field will take up 100% of the first row's width. You can also set the row size type to 'ssAbsolute' if you wish the width of the field to be calculated in pixels instead.

- Field1Col1SizeType=ssPercent  
Field1Col1SizeValue=100

These two settings define the height of the field with regards to the size of a column. You need to define both the size type and value.

If the column size type is set to 'ssPercent', the height of the field will be calculated as a percentage. In this case, the first field will take up 100% of the first row's height. You can also set the column size type to 'ssAbsolute' if you wish the height of the field to be calculated in pixels instead.

- Field1LabelLayout=tlTop

This setting defines the position of the field label. The possible values are: 'tlCenter' (places the label at the center of the field); 'tlTop' (the top of the field); 'tlBottom' (the bottom of the field). **Note:** This setting can only have one value.

- Field1HideLabel=0

This setting defines the visibility of the field label within the 'Booking' dialog. If set to 0, the label is shown and if set to 1, the label is hidden.

- Field1Border=Left,Right,Top,Bottom

This setting allows you to add a border to the field. You can define the position of the border with these four values: 'Left', 'Right', 'Top' and 'Bottom'. Use all four values to visually frame the field.

- Field1MinSize=100,20

This setting allows you to define the minimum size of each field. The first value is the width and the second is the height in pixels.

## Field Control Types

- Field1Control1=

This setting defines which type of control will be displayed to the user for that field.

The possible values are:

- Checkbox

Adds a checkbox for the field.

- CustomRates

Adds the Revenue and Cost charge rates and ability to edit them.

- DateTime

Adds the following booking date and time controls: 'Start', 'End', 'Loading' and 'Time'.

- DropDownControl

Lists the database values for the field in a drop-down list. This control is used with linked fields.

- GridControl

Lists all the values for that field in a list display.


- TEXT

Adds an editable text box for the field.

- Blank

Adds a blank space instead of a control. Should normally be used with the *Field1NControls* setting only.

- FILELINK

Adds a control that allows storing a file path to the database (but not the file itself). The file can be opened if the file path is valid and you click on the  button. **Note:** You will need to set the field's 'Link Type' to 'File' within Retain Security Manager.

- STANDARDDROPDOWN

Lists the default values for the field in a drop-down list. The default values need to be specified in Retain Security Manager.


- DATECONTROL

Adds a date picker control for the field.

- Field1Control1ListAll=1

This setting is applied to fields with the *DropDownControl* only. If set to 1, it displays all the values for the field when the drop-down list is open. The setting should only be applied to fields with less than 5,000 values. The default value is 0, i.e. the setting is not applied.

- Field1Control1AddButton=1

If set to 1, the 'Add'  button which allows you to add a new entity (e.g. resource, job, component - depending on the *Field1* value) is added for the field. In this case, the first field will have an add button which will allow you to create a new resource and then select it when making a booking. If you do not wish to have the 'Add' button for the field, set the value to 0.

- Field1NControls=2

This setting allows you to define the number of controls for a field. You would normally only use this setting with one of the controls having the *Blank* value:

Field1Control1=Blank (and the other control being of any other type). If you define two controls but only specify one of them, the *TEXT* value will be used for the undefined control.

## Field Control Properties

- Field1Control1Properties=

This setting defines the properties of the controls for the field. A number of possible values can be assigned to this setting.

For example, Field1Control1Properties=MultiLines,HorizontalScrollBar,VerticalScrollBar will allow multiple lines as well as horizontal and vertical scroll bars for the second field. You can apply such values for a 'Notes' field, for instance.

**Note:** When using several values for the same field control you need to separate them with commas (',').

The possible values are:

- MultiLines

If present, allows the field to span multiple text lines.

- HorizontalScrollBar

If present, adds a horizontal scroll bar for the field.

- VerticalScrollBar

If present, adds a vertical scroll bar for the field.

-ShowAmPm

If present, adds the 'Book Partial Day' menu but only if the *ShowTimeActionMenu* value is also present. **Note:** This menu appears only when the selected booking starts and ends on the same day.

- ShowSeparateDateTimeControls

If present, adds two different controls for date and time. If not present, only one control is used.

**-ShowAlwaysTime**

This value should be used only when the *ShowSeparateDateTimeControls* is not present.

Allows the time to always be displayed in the 'Start' and 'End' date controls. If this value is not used, the time will be shown and editable only when the 'Book partial day' checkbox is ticked.

**- ShowNonWork**

If present, adds the 'Include non-working days' checkbox.

**- ShowNonDiary**

If present, adds the 'Book partial day' checkbox.

**- ShowTimeActionMenu**

If present, adds the 'Move and Change' menu.

For the *DateTime* field controls you can define the alias for the fields using the following syntax:

Alias|BKG\_FIELD\_NAME|NEW\_ALIAS. For example:

Field1Control1Properties=ShowNonWork,Alias|BKG\_NON\_WORK|Include~non-working~days. **Note:** Use ~ to display a space between words within the alias.

**- applyWallchartSelection**

If present, reflects the selection currently applied to Wallchart to resources and jobs. Only applicable to *DropDownControl* and *GridControl* types of control for the BKG\_RES\_ID and BKG\_JOB\_ID fields.

**- IncSearchColor**

When using *GridControl* field controls, the matching text is highlighted as you type it in. This setting defines the background colour of the highlighted text through the following syntax:

IncSearchColor|#Red#|#Green#|#Blue# where #Red#, #Green# and #Blue# are replaced by the required values. For example, to set the background colour to yellow, use Red=255, Green=255, Blue=0:

Field1Control1Properties=IncSearchColor|255|255|0.

**- WordWrap**

If present, enables word wrapping for the *TEXT* field controls. **Note:** the horizontal scroll bar is not shown when this value is used.

**Attachments tab**

To enable attachments functionality within the 'Booking' dialog, follow these steps:

1. Increase the tab number by one:

```
[General]
NTABS
```

For example, if you have two tabs in the 'Booking' dialog, change NTABS=2 to NTABS=3.

2. Change the [TabN] setting by replacing 'N' with the appropriate number, depending on the setting above.

For example, if you have two tabs, change [TabN] to [Tab3].

3. Save the changes. If you have Wallchart running, you do not need to restart it, simply right-click within the 'Booking' dialog and choose 'Reset Dimensions'.

**Data Dependency**

Data dependency can be added among the controls of the 'Booking' dialog using the *bkgDialog.ini*.

The following three settings are required in order to set up the data dependency:

FieldXControlYDDControl=[The type of data dependent field control]

FieldXControlYDDID=[The parent field ID]  
 FieldXControlYDDLINK=[The link field]

Where X and Y are the field and control number, respectively.

For example, if you wish the values for the assignment field to be dependant on the value selected for the job field, the following should be set:

```
Field1=BKG_JAS_ID
Field1NRows=1
Field1NCols=1
Field1Row1SizeType=ssPercent
Field1Row1SizeValue=100
Field1Col1SizeType=ssPercent
Field1Col1SizeValue=100
Field1Control1=DropDownControl
Field1Control1DDControl=DropDownControl
Field1Control1DDID=BKG_JOB_ID
Field1Control1DDLINK=JAS_JOB_ID
```

The values in a drop down list based on the BKG\_JAS\_ID will depend on the values in the parent field BKG\_JOB\_ID, linked with the JAS\_JOB\_ID field.

**Note:** Data dependency works for both, drop downs and list controls (see *Field1Control1* setting).

### Initial set-up after installation

After installing the client software you can configure the initial settings using Retain Security Manager.

One of the most important uses of Retain Security Manager is to set up roles allowing various levels of access to Retain functionalities and assign these roles to users so that they can access various Retain modules such as Booking Requests, Enterprise Reports, etc.

#### 1. Set up user security.

If you are opening Retain Security Manager for the first time, you should find a Default User under the 'Users' section. The Default User allows you to access Retain Security Manager and Retain Wallchart with limited rights (such as Read Only or Edit Own Line) when there are no other users set up. Once you have assigned a security role to a particular user (i.e. given them access rights for Retain Security Manager), you should un-assign the security role assigned to the Default User. This ensures a minimum user access to the Security Manager module.

However, if you accidentally delete the user who has the access to Retain Security Manager, you can always run it on the same machine as Retain Server.

**Note:** Although there is an option for passwords in User Details, it is not recommended that it be used since network names are already used for security purposes.

#### 2. Configure Retain database settings:

- Manage field properties
- Define colour and shape schemes
- Set up initial charge rates and charge periods
- Define standard working diaries
- Define standard grades
- List various database servers that Retain Sever might be connecting to

**Note:** You can amend these settings later if needed but it is strongly recommended that these are set up before making any bookings. See the Retain Security Manager User Guide for more information.

## Distributing to users

### Distribution overview

There are two approaches to distributing Retain software:

- You can copy Retain Enterprise installation files to your local machine then configure the setup files prior to installing into the desired network location and client machines.
- Alternatively, you can setup a client on a test machine, perform the initial setup and confirm it operates as expected then copy the required client software to client machines on the network. See the [Distributing tested installation](#) section for more information

### Distributing tested installation

All client machines should have TCP/IP enabled and should be able to 'Ping' the server machine, i.e. test the network connection to the server machine.

For example, in the command prompt on a client machine type in 'ping *server IP address* <enter>' to test the connection. Once it is confirmed that all the client machines can connect to Retain Server and client applications can run successfully on the test machine, you are ready to distribute the installation to users.

Since Retain Client software does not use any specific system dlls or registry settings, the directory structure of a successful installation can simply be copied to other machines. The possible approaches to do this are described below.

#### Distribution by manual copying

1. Create a destination folder called Retain Enterprise on the client machine.
2. Selectively copy the required client files from the main installation directory on the server or test machine to the destination folder on the client machines.

For example, for general users you should copy the following files:

```
RetainWallchart.exe
RetainEnt.exe
rrpErr.exe
rigc.dll
rrpExcel.dll
s2email.dll
Servers.ini
ClntCnfg.ini
Retaine.ini
bkgDialog.ini
rtlog.ini
VCLTranslations.sil
Retain.chm
Support.chm
```

For Booking Requests users should also copy the following files (in addition to the files listed above):

```
bookingrequests.exe
bookingrequests.ini
BookingRequests.hlp
```

### BookingRequests.cnt

3. Copy the 'data' sub-folder that contains Retain Notebook (.RetainNotebook) files that you have created to the destination folder on the client machines. For Retain Enterprise Reports users you also need to copy the 'ReportTemplates' folder.

#### Distribution by mini-install scripts

You could distribute the client files by creating a mini-install script as a batch file that users can run in order to copy the relevant files to their local machines and modify the relevant server path.

## 3 Reference

### 3.1 Technical specification

#### Retain product:

##### Product name & version number:

Retain Wallchart Version 5.

##### What is its business function?

To schedule resources against jobs using a graphical interface resembling to a manual Wallchart which can be used in conjunction with other modules, such as a Booking Requests module, to complete the various processes involved in requesting, approving, modifying and comparing changes to the resource plan as well as reporting.

##### What language is it written in?

Borland C++, Delphi

##### What database format and version number does it support?

Oracle 8i, 9i and 10g as well as SQL Server 2005.

##### What engine?

Native drivers are used on the server, depending on the database platform you require. Either the Oracle client or a current version of ADO (2.8) for SQL Server.

##### ODBC drivers required?

Retain Enterprise does not require any drivers on the client machines.

##### Does it make direct calls to the Network operating system and hence use any specific protocols?

TCP/IP needs to be enabled to allow Retain Enterprise client software to communicate with Retain Server software.

##### What network operating systems and versions will it run on?

We primarily support Windows 2000 and XP as the client platform, although the software will operate with earlier versions. The Retain Server platform has to be Windows 2000 Server or Server 2003. The database server software can be run on any platform supported by the database software.

#### Files:

See the [Retain components](#) section for a list of installation setup files and the [Files and folders](#) section for a typical file structure created after the installation.

#### Installation:

##### What minimum system specification is required for the product?

See the [Installation overview](#) section for details.

##### What bandwidth is required?

On average, we would expect an active user to use bandwidth of about 1,600 bits/sec but a user would require a peak rate of 6,400 bits/sec to get reasonable performance when first opening a screen on a large view. Users who have Retain open but are not actively using the system do not use up any bandwidth.

The activity of users, the size of the database and the density of bookings will all affect the bandwidth requirements.

##### How can bandwidth be minimised?

###### Users

- Enter Retain once during the day and leave open
- Avoid running reports involving utilisation and availability calculations more than necessary
- Use notebooks with pre-defined selections (both on resources and jobs)

- Use refresh sparingly
- Keep defaults lists for fields to a reasonable level

#### *Database server*

- Unnecessary fields - hide through views or remove altogether

#### What user accounts are required?

Although it is possible to setup many users against the database, for ease of implementation we typically set up one Retain user against each database with access rights to insert, delete and update all of the Retain tables. In more complex cases we set up a few users with access rights to different views of the database.

#### What is the installation procedure?

See the [Installation overview](#) section for details.

#### In event of product failure, how is the product reinstalled?

Perform the installation again.

#### Are the product install files held on all servers?

The install files can be held on any number of file servers.

#### Is it possible to 'Uninstall' the product using Add/Remove programs within the Control Panel?

Yes.

### **Functionality:**

#### How is the product launched?

By double clicking on the Retain Wallchart icon and opening a new Retain notebook file or from 'Start' menu.

#### Does the product auto-backup user files? Does it create temporary files?

No. The main data is held on the database server.

### **Installer information:**

#### Is the vendor's technical support willing to be on site for half a day to review installer requirements?

Yes.

#### Has the vendor used an industry recognised installer such as Install Shield or has their own?

InstallAware is used.

#### How many annual updates are expected?

1-2 maintenance releases are made available throughout the year, major releases occur less frequently.

#### Is client or other data shared on the same location or nationally and internationally?

The data is stored in an Oracle/SQL Server database the location of which is determined by your organisation.

#### Do users expect to access their data from remote or other locations?

Data should be accessible across Wide Area Networks. The performance down dial up lines will depend on the size of the database.

### **Documentation:**

#### What other documents are provided to users?

Retain Wallchart User Guide and Retain Security Manager User Guide.

### **Support:**



### What Service Level Agreements are in place?

A minimum of one year telephone support and software maintenance.

## 3.2 Appendix A

### Customising the SQL Server database

After you have consulted with your [Support Service Provider](#), you may follow the step-by-step instructions below to customise a table in SQL Server:

1. Microsoft SQL Server should be installed and running as a service.
2. Run SQL Server Management Studio and locate the server where the database is running.
3. Expand 'Databases' to show all existing databases and expand the Retain database that you wish to edit.
4. Click on 'Tables' to show a list of all tables that make up your database.
5. Right-click the table you wish to edit and select 'Modify'.
6. Make the required changes to the table by either adding new fields or amending existing fields. E.g. by changing the column names, length or precision and then close the table.
7. Make the exact same changes to the corresponding \_Log table, if there is one.

If you need to make changes by running a script (which may be provided by your [Support Service Provider](#) after a consultation) you may do the following:

1. In SQL Server Management Studio, select the required database from the list.
2. Click on 'New Query'.
3. Copy and paste the script from the .sql file provided into the query window and run the script by clicking on the 'Execute' button in the tool bar.
4. Check that changes have been made by expanding 'Tables' section for that database.

### Customising the Oracle database

The Oracle platform has a similar user interface to SQL Server Management Studio. However, some database administrators may prefer to use the command line to connect to the database. The example below is for using the Oracle user interface:

1. Run the Oracle Enterprise Manager Console.
2. Expand 'Databases' and click on the database server that your database resides.
3. You will be asked to provide Username and Password - normally the name of a database schema on the server.
4. Once connected, expand 'Schema' to see the list of all the databases on the server connected.
5. Click on the database schema you want to edit and you should be able to see all the database objects such as tables, views, index, triggers and functions on the right hand side.
6. Right-click on an object in the list and select 'View-> Edit Details...' to change the design, or 'View-> Edit Contents...' to change the contents of an object.

If you need to make changes by running a script which could be provided by your [Support Service Provider](#) after a consultation, you may do the following:

1. Repeat the above steps from 1 to 5.
2. From 'Tools' menu select 'Database Applications' and 'SQL\*Plus Worksheet'.
3. Switch to 'SQL\*Plus Worksheet' and make sure the selected database schema is connected.
4. Copy and paste the script from the .sql file provided and run the script by clicking on the green arrow button in the tool bar.
5. Switch back to Oracle Enterprise Manager Console and check that the changes have been made.

### Updating bookings with the changed time/rate information

Because some data is pre-calculated and stored in the BKG (Booking) table in order to speed up reports and the software in general, sometimes changes to the diary (e.g. the number of working days in a week) and/or charge rates (e.g. values for a resource charge rate) need to be manually 'pushed through' to existing bookings that will be affected.

To update all the existing bookings manually with the changes made using Retain Security, run the *UpdateBkg.sql* script.

**Note:** If you are upgrading to Enterprise Version 5, this script should be run by your Retain administrator after the diaries and charge rates are set up.

The script is found in the 'Server'-> 'Scripts' sub folder (if the sub-folder does not exist, you can create it and put *UpdateBkg.sql* there). To run the update script, you can use either:

- Retain Security (Scripts section) or
- ScriptRunner.exe, found in the 'Server' folder using the following command line:  
*ScriptRunner.exe Param.IdBasedScriptTable=BKG Script=UpdateBkg.sql*

**Note:** It is recommended to backup your database before running this script.

### Field mapping for old notebooks

When upgrading to Version 5, in order to open notebooks (.rtn) from Version 4 or earlier you need to map the old fields to the fields in the new database structure.

The key tables are:

Old name	New name
RESBOOK	BKG
RESRES	RES
RESTASK	JOB
RESCOMP	CMP

In [SvrCnfg.ini](#), define the field mapping under [FieldMap] section using the following format:

```
[OldTableName].[OldFieldName] = [TableName].[FieldName]
```

The default mappings specified in [SvrCnfg.ini](#) are:

```
[FieldMap]
```

RESTASK.MANAGER=JOB.JOB\_MANAGER  
RESTASK.ID=JOB.JOB\_ID  
RESTASK.NAME=JOB.JOB\_DESCR  
RESTASK.PRIORITY=JOB.JOB\_BKG\_BT\_Y\_ID  
RESTASK.ANALYSIS=JOB.JOB\_CRD\_ID  
RESTASK.RECOVERY=JOB.JOB\_RECOVERY  
RESTASK.STARTDATE=JOB.JOB\_START  
RESTASK.ENDDATE=JOB.JOB\_END  
RESTASK.UPDATED\_ON=JOB.JOB\_CHANGE\_DATE  
RESTASK.UPDATED\_BY=JOB.JOB\_UPDATED\_BY  
RESTASK.RETASK\_CLOSED=JOB.JOB\_RETASK\_CLOSED  
RESTASK.COMP\_LIST=JOB.JOB\_COMP\_LIST  
RESTASK.GROUPNAME=JOB.JOB\_GROUPNAME  
RESTASK.JOBCODE=JOB.JOB\_CODE  
RESTASK.SUPERVISOR=JOB.JOB\_SUPERVISOR  
RESTASK.RECURRING\_BIT=JOB.JOB\_RECURRING\_BIT  
RESTASK.SECURITY=JOB.JOB\_SECURITY  
RESTASK.TEXT1=JOB.JOB\_TEXT1  
RESTASK.TEXT2=JOB.JOB\_TEXT2  
RESTASK.TEXT3=JOB.JOB\_TEXT3  
RESTASK.TEXT4=JOB.JOB\_TEXT4  
RESTASK.TEXT5=JOB.JOB\_TEXT5  
RESTASK.TEXT6=JOB.JOB\_TEXT6  
RESTASK.TEXT7=JOB.JOB\_TEXT7  
RESTASK.TEXT8=JOB.JOB\_TEXT8  
RESTASK.TEXT9=JOB.JOB\_TEXT9  
RESTASK.TEXT10=JOB.JOB\_TEXT10  
RESTASK.NUMBER1=JOB.JOB\_NUMBER1  
RESTASK.NUMBER2=JOB.JOB\_NUMBER2  
RESTASK.NUMBER3=JOB.JOB\_NUMBER3  
RESTASK.INTEGER1=JOB.JOB\_INTEGER1  
RESTASK.INTEGER2=JOB.JOB\_INTEGER2  
RESTASK.INTEGER3=JOB.JOB\_INTEGER3  
RESTASK.DATE1=JOB.JOB\_DATE1  
RESTASK.DATE2=JOB.JOB\_DATE2  
RESTASK.DATE3=JOB.JOB\_DATE3  
RESTASK.LOGIC1\_BIT=JOB.JOB\_LOGIC1\_BIT  
RESTASK.LOGIC2\_BIT=JOB.JOB\_LOGIC2\_BIT  
RESTASK.LOGIC3\_BIT=JOB.JOB\_LOGIC3\_BIT  
RESTASK.TASK\_TYPE=JOB.JOB\_TASK\_TYPE  
RESTASK.LOCATION=JOB.JOB\_LOCATION  
RESTASK.FOCUSES=JOB.JOB\_FOCUSES  
RESTASK.SKILLS=JOB.JOB\_SKILLS  
RESTASK.PARTNER=JOB.JOB\_PARTNER  
RESTASK.CONTACT=JOB.JOB\_CONTACT  
RESTASK.CATEGORY=JOB.JOB\_CATEGORY  
RESTASK.FEE=JOB.JOB\_FEE  
RESTASK.BUDGETCOST=JOB.JOB\_BUDGETCOST  
RESTASK.BUDGETTIME=JOB.JOB\_BUDGETTIME  
RESTASK.CLIENTGROUP=JOB.JOB\_CLIENTGROUP  
RESTASK.PHONE=JOB.JOB\_PHONE  
RESTASK.YEAREND=JOB.JOB\_YEAREND  
RESTASK.TASKTYPE=JOB.JOB\_TASKTYPE  
RESTASK.calcTaskPriority=JOB.JOB\_BKG\_BT\_Y\_ID  
calculated.adjustedRevenue=JOB.AdJobRevDolrs  
calculated.jobTime=JOB.BookTme  
calculated.jobDays=JOB.BookTmeDays  
calculated.jobBookingCount=JOB.jobBookingCount  
calculated.jobRevenue=JOB.RevDolrs

RESRES.ID=RES.RES\_ID  
RESRES.GRADE=RES.CurrCRDDESCR  
RESRES.NAME=RES.RES\_DESCR  
RESRES.STARTDATE=RES.ResStartDate

RESRES.ENDDATE=RES.ResEndDate  
 RESRES.UPDATED\_BY=RES.RES\_UPDATED\_BY  
 RESRES.UPDATED\_ON=RES.RES\_CHANGE\_DATE  
 RESRES.EMAIL=RES.RES\_EMAIL  
 RESRES.GROUPNAME=RES.RES\_GROUPNAME  
 RESRES.OFFICE=RES.RES\_OFFICE  
 RESRES.STAFFNO=RES.RES\_STAFFNO  
 RESRES.GRADEDESCR=RES.RES\_GRADEDESCR  
 RESRES.GRADEORDER=RES.RES\_GRADEORDER  
 RESRES.SECURITY=RES.RES\_SECURITY  
 RESRES.TEXT1=RES.RES\_TEXT1  
 RESRES.TEXT2=RES.RES\_TEXT2  
 RESRES.TEXT3=RES.RES\_TEXT3  
 RESRES.TEXT4=RES.RES\_TEXT4  
 RESRES.TEXT5=RES.RES\_TEXT5  
 RESRES.NUMBER1=RES.RES\_NUMBER1  
 RESRES.NUMBER2=RES.RES\_NUMBER2  
 RESRES.NUMBER3=RES.RES\_NUMBER3  
 RESRES.DATE1=RES.RES\_DATE1  
 RESRES.DATE2=RES.RES\_DATE2  
 RESRES.DATE3=RES.RES\_DATE3  
 RESRES.LOGIC1\_BIT=RES.RES\_LOGIC1\_BIT  
 RESRES.LOGIC2\_BIT=RES.RES\_LOGIC2\_BIT  
 RESRES.LOGIC3\_BIT=RES.RES\_LOGIC3\_BIT  
 RESRES.INTEGER1=RES.RES\_INTEGER1  
 RESRES.INTEGER2=RES.RES\_INTEGER2  
 RESRES.INTEGER3=RES.RES\_INTEGER3  
 RESRES.NOTESID=RES.RES\_NOTESID  
 RESRES.WORKINGHOURS=RES.RES\_WORKINGHOURS  
 RESRES.SKILLS=RES.RES\_SKILLS  
 RESRES.FOCUSES=RES.RES\_FOCUSES  
 RESRES.LOCATION=RES.RES\_LOCATION  
 RESRES.MOBILITY=RES.RES\_MOBILITY  
 RESRES.PARTNER=RES.RES\_PARTNER  
 RESRES.MANAGER=RES.RES\_MANAGER  
 calculated.utilisation=RES.JobCUtil  
 calculated.availability=RES.DGAvail  
 calculated.utilised=RES.JobCUtilTm  
 calculated.available=RES.DGAvalTme  
 calculated.utilisableTime=RES.JobCUtilDenominator  
 calculated.resourceDays=RES.BookDays  
 calculated.resourceTime=RES.BookTme  
 calculated.maxBooked=RES.maxBooked  
 calculated.standardTime=RES.DGDryTme  
 calculated.utilisedDays=RES.utilisedDays  
 calculated.availableDays=RES.availableDays  
 calculated.standardDays=RES.DiaryDays  
 calculated.resourceBookingCount=RES.resBookingCount

RESBOOK.ID=BKG.BKG\_ID  
 RESBOOK.RES\_ID=BKG.BKG\_RES\_ID  
 RESBOOK.TASK\_ID=BKG.BKG\_JOB\_ID  
 RESBOOK.STARTDATE=BKG.BKG\_START  
 RESBOOK.STARTTIME=BKG.BKG\_START  
 RESBOOK.ENDDATE=BKG.BKG\_END  
 RESBOOK.ENDTIME=BKG.BKG\_END  
 RESBOOK.TIME1=BKG.BKG\_TIME  
 RESBOOK.PRIORITY=BKG.BKG\_PRIORITY  
 RESBOOK.CHARGERATE=BKG.BKG\_RATE1  
 RESBOOK.NOTES=BKG.BKG\_NOTES  
 RESBOOK.ACTUALTIME=BKG.BKG\_NUMBER2  
 RESBOOK.PLANNEDTME=BKG.BKG\_TIME  
 RESBOOK.RESGRADE=BKG.BKG\_GRADE  
 RESBOOK.CHARGETYPE=BKG.BKG\_CODE

RESBOOK.UPDATED\_BY=BKG.BKG\_UPDATED\_BY  
 RESBOOK.UPDATED\_ON=BKG.BKG\_CHANGE\_DATE  
 RESBOOK.LOADING=BKG.BKG\_LOADING  
 RESBOOK.FIXED\_TIME=BKG.BKG\_FIXEDTIME  
 RESBOOK.CUSTOMRATE=BKG.BKG\_CUSTOM\_RATE  
 RESBOOK.TEXT1=BKG.BKG\_TEXT1  
 RESBOOK.TEXT2=BKG.BKG\_TEXT2  
 RESBOOK.NUMBER1=BKG.BKG\_NUMBER1  
 RESBOOK.DATE1=BKG.BKG\_DATE1  
 RESBOOK.REQUESTED\_BY=BKG.REQUESTED\_BY  
 RESBOOK.REQUESTED\_ON=BKG.REQUESTED\_ON  
 RESBOOK.REQUESTED\_USR\_ID=BKG.REQUESTED\_USR\_ID  
 RESBOOK.LOGIC1\_BIT=BKG.BKG\_LOGIC1\_BIT  
 RESBOOK.TASKCOMP=BKG.BKG\_CMP\_ID  
 RESBOOK.CATEGORY=BKG.BKG\_CATEGORY  
 RESBOOK.calcStartDateTime=BKG.BKG\_START  
 RESBOOK.calcEndDateTime=BKG.BKG\_END  
 RESBOOK.calcStartDateTime=BKG.BKG\_START  
 RESBOOK.calcEndDateTime=BKG.BKG\_END  
 RESBOOK.calcBookingDays=BKG.BkgTimeDays  
 RESBOOK.calcFixCharge=BKG.BKG\_CUSTOM\_RATE  
 RESBOOK.calcFixTime=BKG.BKG\_FIXEDTIME  
 RESBOOK.calcBookingLoading=BKG.BKGTrueLoading  
 RESBOOK.calcBookingTime=BKG.BKGTimeHours  
 RESBOOK.calcPriorityAlias=BKG.BKG\_PRIORITY  
 calculated.priority=BKG.BKG\_BTY\_ID  
 calculated.bookingbookingCount= BKG.BKG\_NUMBER3  
 calculated.bookingCost= BKG.BkgRevDbCurrency  
 RESBOOK.calcCost=BKG.BKG\_COST1  
 RESBOOK.SCENARIOS= BKG.ScenarioName  
 calculated.bookingDays=BKG.BKGTimeDays  
 calculated.bookingTime=BKG.BKGTimeHours  
 calculated.maxBookingConflict=BKG.IntConflictNSs

### 3.3 Appendix B

#### Retain components

The main and additional components of Retain are listed below:

##### Main components of Retain

###### Retain Server

The application that connects your database with Retain client applications.

###### Retain Wallchart

The main resource scheduling application.

###### Retain Security Manager

Allows you to set up roles and user security access rights.

##### Additional components of Retain

###### Booking Requests

Provides a systematic approach to the various processes involved in requesting, approving, modifying and comparing changes to the resource plan.

###### Enterprise Reports

A flexible reporting tool that builds on the report writer concepts in Retain Wallchart interface and provides the capability to both, run predefined reports and create as well as design reports. It is designed for the central resource administrators and managers who require vital management

information.

#### Retain Notify

A utility that can be run periodically to send information about booking request changes both to the resources involved and to the requester. The notifications are generated from the audit trail of all booking requests and booking amendments.

#### Retain Calendar Link

Update Outlook or Lotus Notes calendars with bookings made in Retain Wallchart.

#### Retain Importer

Transfers or updates data from an external source into a Retain Enterprise database. This allows Retain to be kept up-to-date from other systems without re-keying. The source data can be a Dbase format file or a BDE alias which allows for data to be extracted directly from an Oracle or SQL Server database.

#### Retain Time

Designed to integrate with Retain Wallchart for sharing its database of jobs and resources and using bookings to plan time sheets.

#### Retain Skills

Designed to integrate with Retain Wallchart to allow detailed selection and maintenance of resources' skills.

### 3.4 Appendix C

#### **Details of installed files**

##### **Essential Retain Client files**

All client software will normally be installed into the main installation directory and share common configuration files. For details of a typical install see the [Files and folders](#) section.

The essential files required by Retain clients are:

Main application files:

- RetainWallchart.exe - Retain Enterprise executable.
- RetainEnt.exe - The splash screen for Retain Wallchart.
- rrpErr.exe - Retain Error Submitter, is be run automatically in the unlikely event of Retain crashing.
- rigc.dll - Memory management module for Retain software.
- rrpExcel.dll - Functions for exporting reports to Microsoft Excel.
- s2email.dll - Functions for sending e-mails with errors.
- VCLTranslations.sil - Language specific file for menus and dialogs.
- Retain.chm - Retain Wallchart user guide.
- Support.chm - Support information.

Retain Security Manager files:

- RetainSecurity.exe - Retain Security Manager executable.
- RetainSecurity.tdf - Retain Security Manager layout settings.

Configuration files:

- [Servers.ini](#) - Contains Retain Server connection information.
- [CIntCnfg.ini](#) - Contains main client configurations.
- [Retaine.ini](#) - Contains module specific settings.
- [bkgDialog.ini](#) - Contains booking dialog properties.
- rtlog.ini - Contains Delphi configurations.

If Retain Booking Requests, Enterprise Reports, Importer or Notifier is installed, you need to use Retain Security Manager to edit the functional access for the users who will use these modules. See the [Initial set-up after installation](#) section for more information.

After the initial set-up, these modules can be distributed to the users who need them. See the [Distributing installation to users](#) section for more information.

### Essential Retain Server files

The installation creates a 'Server' sub-folder under the main installation directory.

These are the essential files required by Retain Server:

The main application files:

- RetainServer.exe - Retain Server Manager application.
- RetainServersService.exe - This application may be run as a service and will manage one or more Retain Servers.
- RetainServersService.ini - Retain Service configuration file.
- RSManger.exe - Retain Server remote managing tool.
- RSServices.ini - Remote server configuration file.
- LicenceManager.exe - Licence administration tool.
- LicenceManager.chm - Licence Manager user guide.
- rigc.dll - Memory management module for Retain applications.

Configuration tools and files:

- [ServerCnfg.exe](#) - Configure Retain Server using this tool.
- [SvrCnfg.ini](#) - Retain Server database connection configuration file.
- [Servers.ini](#) - Defines location of Retain Servers.

Additional files:

- CalcFieldFiles (folder) - Contains definitions for the [calculated fields](#).

For a list of all the installed sub-folders and files see the [Files and folders](#) section.

### Files and folders

A typical file structure created after the first setup on a test machine should look like the one below. This shows a basic install which includes the most essential components.

Root folder	Sub folder	Folder or file	Description
[RetainEnterprise V5]			
	[Data]		Contains notebook files (.RetainNotebook) and Retain reports (.rvs) created by the users
	[Documentation]		Contains the relevant help documents in the PDF format
	[Server]		Files and folders related to Retain Server
		RetainServer.exe	Retain Server executable
		ServerCnfg.exe	Retain Server configuration tool
		LicenceManager.exe	Licence managing tool

	RSManger.exe	Retain Server remote managing tool
	RetainServersService.exe	Retain service configuration tool
	rigc.dll	Memory management module for Retain
	LicenceManager.chm	LicenceManager help file
	Retaine.ini	Application specific configuration file
	RetainServersService.ini	Retain service configuration file
	SvrCnfg.ini	Information required by Retain client to connect to Retain Server(s)
	[Licence]	Retain licensing information
	[DatabaseScripts]	Oracle and SQL Server database scripts
	ADOCConnectionString.exe	Tool for producing connection string to Microsoft SQL Server database
	[CalcFieldFiles]	Contains calculated fields used by Retain
	InstallService.bat	Install Retain Server service
	StartService.bat	Start Retain Server service
	StopService.bat	Stop Retain Server service
	UninstallService.bat	Uninstall Retain Server service
	RetainEnt.exe	The splash screen for Retain Wallchart
	RetainWallchart.exe	Retain Wallchart executable
	rrpErr.exe	Retain Error Submitter. It is run automatically in the unlikely event of Retain crashing
	Retaine.ini	Application specific configuration file
	Install.ini	Installation configuration file (generated during installation)
	Servers.ini	Retain Server connection configuration file
	ClntCnfg.ini	Main client application configuration file
	bkgDialog.ini	Settings for the 'Booking' dialog within Wallchart
	RetainSecurity.exe	Retain Security Manager executable
	RetainSecurity.tdf	Retain Security Manager settings
	VCLTranslations.sil	Translations of strings used in the 'Booking' and 'Scenario Manager' dialogs
	WhoAmI.exe	Displays Retain user information
	retain.chm	Retain Wallchart help file
	Support.chm	Support service provider information
	RetainSecurity.chm	Retain Security Manager help file

## Calculated Fields Reference

### Introduction

Retain uses calculated fields to pre-calculate values that are used in different areas of the application. Calculated fields provide additional derived information to the user and are used by the software internally to determine certain values. Another advantage of using calculated fields is speeding up calculations thus enhancing performance.

When Retain Server is fired up, it registers, calculates and stores a number of calculated fields that are used multiple times in Retain Web processes. This allows the server to calculate the fields once and reuse them afterwards, avoiding redundancy.

Calculated fields are specified in the text files with a *.cff* (calculated field file) extension. By default, all the calculated field files are in the 'CalcField' folder in the root folder of Retain installation (this might vary depending on the installation). Retain Servers are configured from *SvrCnfg.ini* initialisation file to use specific set of calculated field files. You can use the relative or absolute path to point to calculated field files folder.

You can customise existing/create new calculated fields according to your requirements with Retain International's supervision and consent only. Furthermore, the standard set of calculated fields should be enough to work with and adding or changing the standard set of files should be avoided.

A calculated field file can contain:



- Calculated/Function field
- Calculated Table
- Calculated View
- Macros

Calculated tables and views act like database tables and views although they are created dynamically and destroyed when Retain Server is shutdown.

### Customisation

You can customise certain areas of Retain using calculated fields but only with Retain International's supervision and consent.

For example, you can add custom fields to appear in reports if you are using Retain Enterprise Reports. Another area is configuring security, for instance how the values will appear in the drop-down lists for a specific user. Possible areas which you might consider customising are:

- Company Constants
- Security

### Rules for Designing Calculated Fields

#### General Instructions

This sections is intended for users who want to create calculated fields. You should have a basic knowledge of SQL and general principles of programming. A good knowledge of underlying database structure can be very useful and helps in writing and understanding calculated fields.

#### Comments

A comment is the text that will be ignored while processing calculations in calculated field files. You can use comments when writing calculated fields. Writing comments is always recommended as they are helpful for future reference. You can use the following comment styles:

- Bracketed Comments: Introduced by /\* and ended with \*/ bracketed comments can span over multiple lines.
- Curly Brackets: Introduced by { and ended with } these comments can also span over multiple lines.
- Semi Colon: Comments that are introduced by semi colon and can only appear at the beginning of the line. They are used for commenting on a single line.
- Double Forward Slash: Comments that are introduced by // and can only appear at the beginning of the line. They are also used for commenting on a single line.

#### Naming Conventions

The following rules should be followed when naming is constructed (Function fields, Functions, Macros, etc.):

- Field names should be self explanatory and should reflect the intention of the field.
- Do not use special characters.
- Do not use spaces.
- Name the fields using the first letter of a word in upper case.

#### Available Structures/Objects

The following structures/objects can be specified when creating calculated fields:

- Tables

- Function Fields
- Views
- Macros

## Structure of the File

There are no strict rules for the structure of a calculated field file. Ideally, it should be similar to the following:

- General information about the file
- List of USE Statements
- List of Macros
- List of tables and its Function fields

## Tables and Function Fields

Function fields will be based on database tables. To write function fields for a database table, follow this syntax:

```

Table = <Table name>
{
  FunctionField
  {
    FieldName =           <Field name>
    FieldDescription =    <Field description>
    Calc =                <Calculation formula>
    From =                <From clause to pull values from a table>
    BaseField =           <Base field>
    Link =                <Link>
    Condition =           <One or more conditions to filter the data>
    NullValue =           <Value if result is Null>
    FieldType =          <Type of the field>
    Category =           <Category the field belongs to>
  }
}

```

- **Table Name:** The name of the table that the calculated field will be based on.
- **Field Name:** The calculated field name.
- **Field Description:** The description of the field. This should provide a clear indication of the purpose of the calculated field and its usage.
- **Calc:** The calculation formula that will be used to calculate the result.
- **From:** This is similar to the SQL *From* clause and specifies the names of tables that the field should pull the data from. We can also use this to alias the table names.
- **BaseField:** The value that a calculated field will be based on.
- **Link:** Link specifies the potential link between two fields.
- **NullValue:** The value in case the result is null.
- **FieldType:** The field type of the result, e.g.: integer, string, etc.
- **Category:** The name of the category that the field belongs to. You can categorise calculated fields as necessary by entering any value, e.g.: 'Main calculated fields'. The categories will be displayed in an alphabetical order in the table tree for interactive reports, allowing you to show the most used calculated fields first, for example.

You can specify as many fields as you like for a table. Fields should be nested inside the body of a table, i.e. within the curly brackets.

## Views

Views defined in calculated fields are similar to views in the database. They are used to represent data from multiple tables.

## Macros

Macros are essentially SQL statements that are grouped together to compute specific data. This is similar to functions in some programming languages. Macros can be called multiple times and you can also pass arguments to macros.

## Conditional Logic

Calculated fields support specification of conditional logic statements. Specify Boolean conditions using the following syntax:

```
? <condition(1)>
    action if condition true
|? <condition(2)>
    action if condition true
|? <condition(n)>
    action if condition true
/?
```

## Available Functions

The predefined functions, which can be used while creating calculated fields, are:

- REPL: Replace the string with specified value.
- DB\_CODE: Specify the target database.

## Adding Calculated Fields

It is possible to add calculated fields but this is not advisable or supported. Moreover, no utilities exist that would aid the creation of fields. However, if you have decided to make changes, the following guidelines should be observed:

1. Back up the existing files before making any changes.
2. Create new calculated fields wherever possible and do not delete/amend the existing ones.
3. Add fields to the end of the file. A table can exist in more than one group, thus there is no need to squeeze the calculated field at the top of the file.
4. Clearly mark the changes you have made, so that if the altered file is supplied by Retain, your changes could be easily fitted into the modified file.
5. Read through the existing set of calculated fields.
6. Calculated fields can refer to other fields or calculated fields against a table and currently no mechanism exists for referring to fields from another table.
7. Do not make calculated fields that may directly or indirectly refer back to themselves.
8. Work on a file using a test server.

## Constants

Constants defined in Retain yield the same value throughout the Retain Web process.

Constants that need to be configured when Retain is installed for the first time are the following:

- Company Name
- Skill attributes
- Any Company Constants

**CalcFields.cff**

CalcFields.cff specifies the files included in the calculation. By default, a number of files are provided for Retain server to be able to run. Calculated files can be included using the `r pb` keyword.

If you want to include a file, apply the `r pb` keyword followed by the equal sign and the file name. For example, if you want to include a file called ABC.cff, type in:

```
r pbZ^_`ANN
```

**Note** that the file should be in the same folder and that the specification of absolute or relative paths is not supported.

**DefineCompany.cff**

To customise Retain according to a specific installation, some of the constants that will be used throughout Retain have to be defined.

DefineCompany.cff file specifies the name of the company for which Retain is implemented. This name will be used in other calculated field files.

By default, the define company file looks like this:

```
REPL(COMPANY) = NOCOMPANY
```

Replace NOCOMPANY with the name of your company and save the file. After changing your company name you need to rename the NOCOMPANYConsts.cff file to the company name you have specified in the DefineCompany.cff file. For example, if the name of your company is ABC, set the following values:

**DefineCompany.cff**

```
REPL(COMPANY) = ABC
```

**NOCOMPANYConsts.cff**

Rename the file to **ABCConsts.cff**

**Note** that only the 'NOCOMPANY' string is changed and Consts.cff remains the same.

**CompanyConsts.cff**

Company constants are defined in the CompanyConsts.cff file. By default, the file looks like this:

**CompanyConsts.cff**

```
REPL(RESUMEID) = 1
REPL(SKILLSDOCID) = 1003
REPL(BOOKINGHISTORYDOCID) = 1000
REPL(RESOURCE DATADOCID) = 1001
REPL(RESPREFDOCID) = 1002
REPL(RESUMENAME) = CV
REPL(SKILLDOCNAME) = SKILLSDOC
```

REPL function is used to specify values for the following constants: Resume, Skills, Booking History, Resource Data, Resource Preference Documents as well as Resume Name and Skills Document Name. These constants represent the unique IDs of attributes in the ATR table.

If you want to add another skill attribute, you need to add it to Retain database as well as the CompanyConsts.

cff file. For example, if you want to add skill attribute Qualification Matrix with ID 108 to the database, you need to type in:

```
REPL(QUALIFICATIONMATRIXID) = 108
```

### **Built-in Calculated Fields**

The following calculated field files are installed by default together with Retain:

- CalcFields.cff
  - CalcFieldsDGD.cff
  - ConflictsAllScenarios.cff
  - ConflictsNoScenarios.cff
  - ConflictsSA.cff
  - DBInd.cff
  - Debug.cff
  - DefineCompany.cff
  - Dependencies.cff
  - FastTime.cff
  - Forecast.cff
  - ModelSecurity.cff
  - NOCOMPANYConsts.cff
  - OldRevenueCost.cff
  - OriginalTime.cff
  - Phonetics.cff
  - Precalc.cff
  - RequestEconomics.cff
  - RevenueCost.cff
  - ScenarioFilter.cff
  - scenarios.cff
  - Security.cff
  - Team.cff
  - Triggers.cff
  - Variance.cff
  - Wallchart.cff

### **Calculated Fields Files**

This file defines the files that Retain will use in calculations. The files are included by using the key word 'USE'.

For example, if you want to include a new file called NewCalcFldFile.cff, add the following to the CalcFields.cff:

```
USE=NewCalcFldFile.cff.
```

### **Calculated Fields for Diaries**

This file contains the fields that are used in diaries.

## **Conflicts**

The following files contain the fields that are involved in booking conflicts:

- ConflictsAllScenarios.cff
- ConflictsNoScenarios.cff
- ConflictsSA.cff

## **Define Company**

This file contains the company name. It should be replaced by a specific company name.

## **Database Independence**

This file contains the function mapping that is available for a different database.

## **Fast Time**

These are the basic calculation fields that are used when scheduling.

## **Company Constants**

By default, NOCOMPANYconsts.cff file contains company constants.

This file should be renamed according to a specific company. Also, the constants defined for skills should be modified according to the database settings.

## **Phonetics**

This file contains functional fields/tables used by Retain Wallchart's phonetic algorithm for indexing names by sound.

## **Pre-calculated Fields**

Pre-calculated fields speed up calculations. They are mostly used for reports.

## **Request Economics**

This file contains fields that are used for the booking requests calculations.

## **Scenarios**

This file is used by Retain Wallchart for the functionality of scenarios. Scenarios are mechanisms used for grouping bookings together.

## Security

These macros are mostly used to represent security and business rules, such as the drop down values that will be visible to a specific user. You might consider customising these fields in the Security.cff file.

## Triggers

This file contains database triggers that are run upon specific events. A database trigger is a code that is automatically executed in response to certain events on a particular table in the database. By default, there are two files for triggers: Triggers and SQL Triggers.

## Team

These calculated fields are related to the team functionality.

This file is to be edited before deployment in order to reflect the company's decisions on how the manager and administrator roles are determined and how to affect the team work flow.

## Variance

These calculated fields define the variance calculated fields which compare budgeted time, revenue and cost to the planned schedule.

## Wallchart

These calculated fields are used by Retain Wallchart.

## Calculated fields and replacement strings

Below is a list of the calculated fields for the three main tables in Retain: RES (Resource), JOB (Job) and BKG (Booking).

**Note** that depending on your deployment, not all of these fields may be available to you.

Table	Calculated Field	Alias	Description
RES			
	GhostBookTme	All booked time	Total booked time within the reporting period, including time coming from ghost bookings
	DGAvail	Availability	The resource's availability percentage in the reporting period
	DGAvalTme	Available Time	The resource's available time (in minutes) within the reporting period with no negative values allowed
	BookDays	Booked Days	Total amount of time (in days) the resource has been booked on within the reporting period
	BookTme	Booked Time	Total amount of time (in minutes) the resource has been booked on within the reporting period
	BookedOnMyJobs	Booked on My Jobs	Returns 'Y' if the currently logged in user is booked on any of my jobs; 'N' otherwise
	CurrCRDESCR	Current Charge Band	The current value of the resource's 'Charge band' history field
	CurrentDiary	Current Diary	Current diary profile the resource is assigned to (current value for the 'Diary' history field)
	CurrentDiaryStart	Current Diary Start	Start date of the current diary profile the resource is assigned to
	CurrGrade	Current Grade	The resource's current value of the 'Grade' history field
	DGDefaultDryTme	Default Diary Time	Total diary time for the default diary (in minutes) within the reporting period
	ResEndDate	End Date	End date of the Blank diary
	DGDryTme	Diary Time	Total diary time for the resource (in minutes) within the reporting period
	GhostHolBkgTme	Ghost Holiday Booking time	Total time (in minutes) the resource is booked on holidays in the reporting period
	GhostJobCUtil	Ghost Utilisation	Utilisation percentage for the reporting period based on the charge band of the jobs and including ghost bookings

	GhostNonUDryTme	Ghost true diary time	Utilisation percentage for the reporting period, computed using the diary time excluding holidays (including those generated by ghost bookings)
	DGGhostAvail	Ghosted availability	Availability percentage for the resource including time generated by ghost bookings in the computation
	HolBkgTme	Holiday Booking time	Total time (in minutes) the resource is booked on holidays in the reporting period
	IsTMdByMe	Is Managed by me	Returns 'Y' if the resource is talent managed by the currently logged on user; 'N' otherwise
	IsInAdministeredBRQ	Is in administered booking request	Returns 'Y' if the resource is in a team managed by the currently logged on user and there is an active booking request for that user; 'N' otherwise
	IsInMyPC	Is in the same Department	Returns 'Y' if the resource is in the same profit center as the currently logged on user; 'N' otherwise
	IsInSubmittedBRQ	Is in submitted booking request	Returns 'Y' if the resource has a submitted request; 'N' otherwise
	LastBkgChange	Last Booking Change Date	Returns the last change date of a live booking made against the resource
	RevDolrs	Revenue \$	Revenue (Cost 1) in Dollars
	ResRevCAD	Revenue Can\$	Revenue (Cost 1) in Canadian Dollars
	ResRevEuro	Revenue Eur	Revenue (Cost 1) in Euros
	RevSterl	Revenue £	Revenue (Cost 1) in British Pounds
	Cost1DBCurrency	Revenue in DB currency	Revenue in default currency set in the database
	ResSvrName	Server Name	Name assigned to the Retain Enterprise deployment
	ResStartDate	Start Date	Start date of the Default diary
	CFMarketTeam	Sub Department	The Line of Service of the job
	JobCUtil	Utilisation	Utilisation percentage for the resource within the reporting period based on the charge rate of the jobs the resource is assigned to
	JobCUtilTm	Utilised Time	Total utilised time (in minutes) for the resource within the reporting period
	NonUDryTme	True diary time	Total diary time for the resource in the reporting period, except for time already booked on holidays
	maxBooked	Maximum Loading %	Maximum percentage booked in a day within the period
	utilisedDays	Utilised Days	Utilised days within the period by resource
	availableDays	Available Days	Available days within the period for a resource
	resBookingCount	Booking Count	Number of bookings within the period for a given resource
	DiaryDays	Diary Days	Total amount of diary time (in days) for the resource
	ResourceWarning	Diary Warning	Calculated field used to determine whether a resource has bookings after the termination date
	IsCoachFor	Is Coach for this resource	Returns 'Y' if the resource is coached by the currently logged on user; 'N' otherwise
	ScnDGAvailTme	Scenario Available Time	The resource available time (in minutes) within the currently displayed date range including active scenario bookings
	ScnDGAvail	Scenario Availability	The resource's availability percentage within the currently displayed date range including active scenario bookings
	ScnJobCUtil	Scenario Utilisation	Utilisation percentage for the resource within the displayed date range based on the charge rate of the jobs the resource is assigned to, including scenario bookings
	ScnBookTme	Scenario Booked Time	Total booked time against the resource in the currently displayed date range including scenario bookings
	ScnJobCUtilTm	Scenario Utilised Time	Total utilised time (in hours) for the resource within the currently displayed date range including scenario bookings
	AttachmentCount	Attachments Count	The number of attachments associated with the resource
JOB			
	IsEMdByMe	Am I EM for the job	Returns 'Y' if the currently logged on user is an engagement manager for the job; 'N' otherwise
	BookDays	Booked Days	Total amount of time (in days) booked against the job within the reporting period
	BookTme	Booked Time (Hours)	Total amount of time (in hours) booked against the job within the reporting period
	CostDolrs	Cost \$	Total cost produced by all of the bookings made against the job in US Dollars
	CostDlrsVariance	Cost \$ Variance	Job Cost Variance in US Dollars
	JobCostCAD	Cost Can\$	Total cost produced by all of the bookings made against the job in Canadian Dollars
	CostCadVariance	Cost Can\$ Variance	Job Cost Variance in Canadian Dollars
	JobCostEuro	Cost Eur	Total cost produced by all of the bookings made against the job in Euros
	CostEuroVariance	Cost Euro Variance	Job Cost Variance in Euros
	Cost2DBCurrency	Cost in DB currency	Job Cost in default currency set in the database
	CostSterl	Cost £	Total cost produced by all of the bookings made against the job in British Pounds
	CostSterlVariance	Cost £ Variance	Job Cost Variance in British Pounds
	IsInMyPC	Is Job in my PC	Returns 'Y' if the job is in the same current profit center as the logged on user; 'N' otherwise
	IsInManagedPC	Is Job in my managed PCs	Returns 'Y' if the job is in one of the profit centers talent managed by the currently logged on user; 'N' otherwise
	IsInAdministeredBRQ	Is in administered booking request	Returns 'Y' if there is a booking request on that job and the resource is in a team managed by the currently logged on user; 'N' otherwise
	IsInSubmittedBRQ	Is in submitted booking request	Returns 'Y' if a request exists against the job; 'N' otherwise



	IsMyJob	My Jobs	Returns 'Y' if there are bookings made against the job and the currently logged on resource; 'N' otherwise
	RevDolrs	Revenue \$	Revenue (Cost 1) in US Dollars
	RevDlrsVariance	Revenue \$ Variance	Job Revenue Variance in US Dollars
	ResRevCAD	Revenue Can\$	Revenue (Cost 1) in Canadian Dollars
	RevCadVariance	Revenue Can\$ Variance	Job Revenue Variance in Canadian Dollars
	ResRevEuro	Revenue Eur	Revenue (Cost 1) in Euros
	RevEuroVariance	Revenue Euro Variance	Job Revenue Variance in US Euros
	Cost1DBCurrency	Revenue in DB currency	Job revenue in default currency set in the database
	RevSterl	Revenue £	Revenue (Cost 1) in British Pounds
	RevSterlVariance	Revenue £ Variance	Job Revenue Variance in British Pounds
	JobSvrName	Server Name	Name assigned to the Retain Enterprise deployment
	TimeVariance	Time Variance	Total time booked against a job
	TotBookTmeHrs	Total Booked Time (Hours)	Total hours booked against a job regardless of the reporting period
	jobBookingCount	Booking Count	Number of bookings within the period for a given job
	AttachmentCount	Attachments Count	The number of attachments associated with the job
BKG			
	BrqSubmitDate	BRQ Submit Date	Returns the earliest request submission date
	BKGClass	Booking Class	Displays the booking class: line of a booking request, actual or ghost
	BkgConflict	Booking Conflict	Total loading for the reporting period
	BRQNotes	Booking Request Notes	Returns the notes stored against booking requests
	FastBKGTimeHours	Fast Time (Hours)	Time (in hours) against a booking for the reporting period
	IsActiveScenarioBK G	Is Active Scenario Booking	Returns 'Y' if the booking is in an active scenario; 'N' otherwise
	IsLiveOrBrqAdmin	Is Live Booking or Admin BRQ	Returns 'Y' if the booking is live; 'N' otherwise
	IsLiveOrSubmittedB rq	Is Live Booking or Submitted BRQ	Returns 'Y' if the booking is a live or submitted request; 'N' otherwise
	IsSubmittedBrqLine	Is Submitted BRQ line	Returns 'Y' for submitted requests; 'N' otherwise
	IsBrqAdminLine	Is a Administered Booking Request Line	Returns 'Y' if the request is in currently logged on user's administered queue; 'N' otherwise
	IsManagedJobConfl ict	Is in conflict on managed job?	Returns 1 if there is a conflict on a job managed by the currently logged on user; 0 otherwise
	IsManagedResConfl ict	Is in conflict on managed resource?	Returns 1 if there is a conflict on a resource managed by currently logged on user; 0 otherwise
	RESDGDryTme	Resource Diary Time	The amount of diary hours against the booked user during the date range of the booking
	RESDGDryTmeEm g	Resource Emergency Diary Time	The resource emergency time (in hours) during the date range of the booking
	RevDolrs	Revenue \$	Booking Revenue in US Dollars
	ResRevCAD	Revenue Can\$	Booking Revenue in Canadian Dollars
	BkgRevDbCurrency	Revenue Default Currency	Booking Revenue in default currency set in the database
	ResRevEuro	Revenue Eur	Booking Revenue in Euros
	RevSterl	Revenue £	Booking Revenue in British Pounds
	ScenarioId	Scenario ID of booking	The Scenario ID which the booking belongs to
	ScenarioName	Scenario Name	Name of the scenario which the live booking belongs to
	ScenarioStatusCod e	Scenario Status Code	Returns the status code of the scenario booking
	BKGTimeDays	Time (Days)	Total time of the booking in days
	BKGTimeHours	Time (Hours)	The time of the booking in hours
	BKGTrueLoading	True Loading	True loading for fixed time bookings
	BKGTrueTime	True Time	The time of the booking in hours used to fix up fixed loading Bookings
	MaxBooked	Maximum Loading %	Maximum percentage booked in a day within the period
	AttachmentCount	Attachments Count	The number of attachments associated with the booking

## 4 Support Services

Support for Retain is available worldwide. This topic is linked to your support provider's information: [Support Service Provider](#).

# retaininternational

USA phone: 1 646 688 4496  
UK phone: 0845 458 8660  
World phone: +44 20 7538 4774

USA fax: 1 646 478 9475  
World fax: +44 845 458 8661

General E-mail: [info@retaininternational.com](mailto:info@retaininternational.com)  
Support E-mail: [support@retaininternational.com](mailto:support@retaininternational.com)

Postal Address: Retain International Ltd  
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