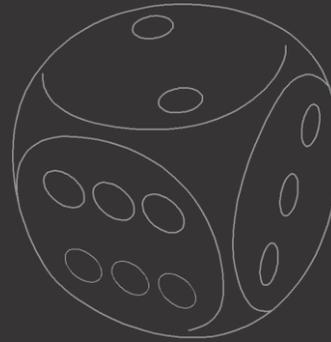
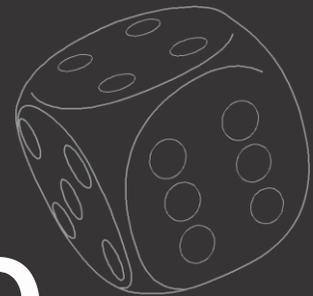


Full Monte™ — The better approach



to Schedule Risk Analysis



Full Monte™

for Primavera P6 – Installation Guide



BARBECANA

Table of Contents

Chapter 1: Installation	1
1.1 Overview	1
1.2 Prerequisites	1
1.3 Windows User Account Requirements	1
1.4 Obtain the software	1
1.5 Install the software	1
1.6 System Configuration Files	3
1.6.1 <i>FullMonteSystemConfiguration.txt</i>	3
1.6.2 <i>LocalFiles.txt</i>	3
1.6.3 <i>FullMonteUserConfiguration.txt</i>	4
1.7 Login Names and Passwords	5
1.8 Getting started with the Full Monte Sample Database	6
1.9 Configuring databases	8
1.8.1 <i>Configuring a new Oracle P6 database connection</i>	8
1.8.2 <i>Configuring a new Microsoft SQL Server P6 database connection</i>	9
1.8.3 <i>Configuring an SQLite database connection</i>	10
1.10 Logging in to a new database connection for the first time	11
Chapter 2: Full Monte Serial Numbers, Licenses and User Administration	12
2.1 Full Monte Serial Numbers	12
2.2 Full Monte for Primavera P6 License Types	12
2.2.1 Full Monte for Primavera P6 Trial License	12
2.2.2 Full Monte SRA for Primavera P6 Machine License	12
2.2.3 Full Monte SRA Contractor Edition for Primavera P6	12
2.2.4 Full Monte SRA for Primavera P6 Named User Database License	13
2.2.5 Full Monte SRA for Primavera P6 Concurrent User Database License	13
2.3 Full Monte vs Primavera Login Name and Password	13
2.4 Managing Users on a New Database	13
2.5 Duplicate Login	16
2.6 Managing Licenses	17
Chapter 3: Saving Full Monte Results to P6 User-Defined Fields	19
3.1 Introduction to Saving Full Monte Results	19
3.2 Saving Data to P6 User-Defined Fields	19

Chapter 1: Installation

1.1 Overview

Full Monte SRA for Primavera P6 is a standalone application that provides Schedule Risk Analysis (Monte Carlo simulation) capabilities for schedules stored in an Oracle Primavera P6 database.

1.2 Prerequisites

Full Monte SRA for Primavera P6 is supported with the following environments:

Oracle Primavera P6

Oracle Primavera P6 Professional R16.2 through R23.12. Primavera does not need to be installed on the same machine as Full Monte SRA for P6 although Full Monte SRA for P6 must have access to the P6 database.

Databases

SQL Server 2008 R2 or higher
SQLite

Operating Systems

Microsoft Windows 10 (x64)

Additional Requirements

Microsoft Visual C++ 2010 Redistributable Package (Installed automatically if required)

1.3 Windows User Account Requirements

Full Monte for Primavera P6 must be installed using an account with **Administrator rights** to the local computer for two reasons:

1. By default the application will be installed to C:\Program Files (x86)\Barbecana\Full Monte P6 so that it may be used by any account on the computer.
2. It may be necessary to install additional pre-requisite system components (for example Microsoft .Net 4.0) that can only be installed by Administrators.

*NOTE: We do not recommend using **Run as Administrator** to execute the installation program.*

Once installed, the application may be used by any Windows user account.

1.4 Obtain the software

Download the software from the Barbecana website by using the link provided when you purchased the software or by requesting a free trial (which will send an automated email with a link to download the software).

NOTE: The 'trial' software downloaded from the Barbecana website is a fully functional version of the software that will cease to function after 14 days from initial use unless a purchased license key is entered.

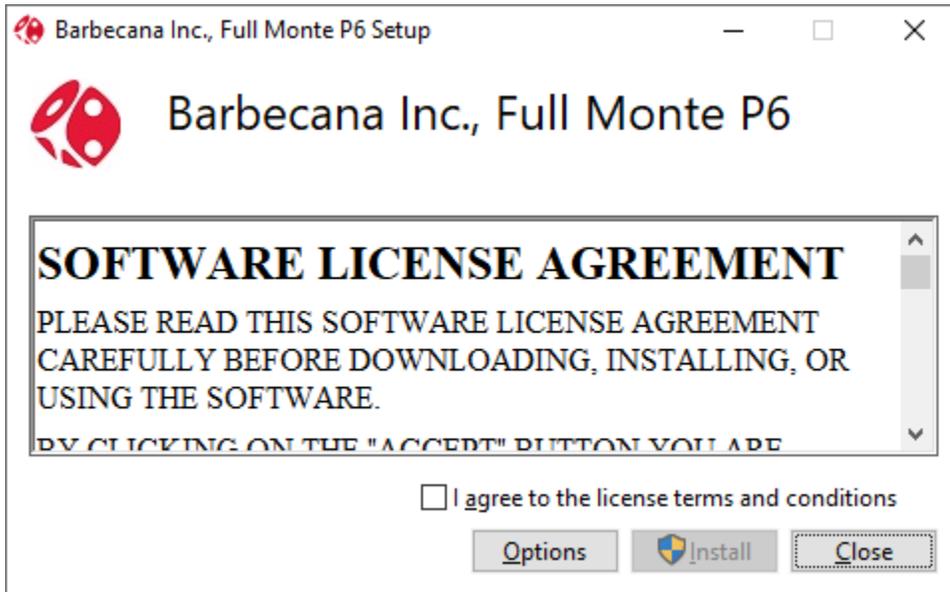
1.5 Install the software

While not essential, we recommend closing other applications prior to installing Full Monte. Doing so may avoid the need to restart Windows following the install.

NOTE: It is not required to have Oracle Primavera P6 installed on the computer where you plan to install Full Monte for Primavera P6 although it must be possible to connect to the appropriate Primavera database to perform analysis.

NOTE: The installation of Full Monte for Primavera P6 includes a sample SQLite database that can be used to trial the product without having access to Primavera P6.

Using an account with Administrator rights, install Full Monte by running the setup program downloaded from our web site on the client machine. The installation wizard will be displayed:



We recommend you use the default installation folder (C:\Program Files (x86)\Barbecana\Full Monte P6) but if you wish to change the installation location click **Options**.

Important Note: *The default installation location is C:\Program Files (x86)\Barbecana\Full Monte P6\.* **If you are using an Oracle database, then you must choose an alternate location using the Change.... button due to a bug in the database drivers provided by Oracle. The Oracle database drivers will not work for applications installed with parenthesis () in the folder name. We recommend creating a new folder in a similar location to your Primavera P6 software. For example: C:\Oracle\Barbecana\.** You can use the default location if you plan to only connect to SQL Server or SQLite databases.

If you agree with the terms of the software license agreement, check the box, and complete the installation by selecting **Install**.

If prompted with a User Access Control dialog, please select Yes to proceed.

If prompted, please restart Windows.

1.6 System Configuration Files

1.6.1 FullMonteSystemConfiguration.txt

An optional file named FullMonteSystemConfiguration.txt can be created in the Full Monte program installation folder (default is C:\Program Files (x86)\Barbecana\Full Monte P6).

The contents of the file are in the following format:

OptionName=OptionValue

The supported options are:

- ConfigDir – Change the location for master configuration and document files.
- LocalDir – Change the location for the user’s local files (mainly database information).
- UseAppData - Change the location of the user’s local files to users\- DisablePasswords - Prevent Full Monte requiring Full Monte passwords for SQLServer and Oracle.
- SaveOldStyleResults – Enable this option to cause Full Monte to save activity results to an activity memo field. This feature pre-dates the newer saving of results to individual user defined fields.

Some Windows environment variables are supported:

- %USERNAME% substitutes the current user’s Windows username (e.g. Johndoe)
- %USERPROFILE% substitutes the current user’s profile home directory.(e.g. C:\Users\Johndoe)
- %OneDrive% substitutes the current user’s OneDrive home directory. (e.g. C:\Users\Johndoe\OneDrive)

Example FullMonteSystemConfiguration.txt:

```
CONFIGDIR=S:\Full Monte\Master Files
LOCALDIR=S:\Full Monte\%USERNAME%
DISABLEPASSWORDS=TRUE
```

1.6.2 LocalFiles.txt

A file called LocalFiles.txt can be created in the Full Monte installation folder (default is C:\Program Files (x86)\Barbecana\Full Monte P6).

Note: In Full Monte version 3.5 and earlier, this file was created during the installation. From version 3.6 it must be created manually if required. This change was made to prevent the existing LocalFiles.txt being overwritten during a software upgrade.

Note: This file is not as useful for Full Monte for P6 compared to Full Monte for Microsoft Project as Full Monte configuration data (Views, Templates, Filters etc.) are stored in the P6 database while Full Monte SRA for Microsoft Project stores this information in txt files in the Full Monte user folder.

This file can be used to copy pre-defined files into the Full Monte user folder at product startup.

The keyword VERSION on the first line of the file can be used to prevent re-copying of files. Examples include:

```
VERSION 1
VERSION 11/02/2022
```

The VERSION line is written to the first line of LocalFilesCopied.txt and if the remainder of the VERSION line has not changed then files are not copied. If you need files to be re-copied (files have been updated or new files added), update the VERSION command line to a different value.

The file LocalFilesCopied.txt is created in the destination Full Monte User Folder to document what has been copied and record any errors.

1.6.3 FullMonteUserConfiguration.txt

An optional configuration file called FullMonteUserConfiguration.txt can now be created in the Full Monte user folder.

The file is in the format OptionName=OptionValue

The supported options are:

- USERBUTTON1 - Define a user defined button on the Full Monte menu bar.
- DISPLAYCONVEREGNCE - Shows convergence information on the Risk Analysis dialog.
- USENEWXAXISSCALE - Full Monte uses a new auto scale algorithm for graphs.
- SAVEOLDSTYLERESULTS - Cause Full Monte to save old Memo field results.
- USEAPPDATA - Cause Full Monte to store user configuration data under APPDATA rather than the default location under <Documents>\Barbecana\Full Monte P6.
- DISABLEPASSWORDS - Cause Full Monte to not require Full Monte user passwords. Useful if you need to reset the Full Monte Administrator password.

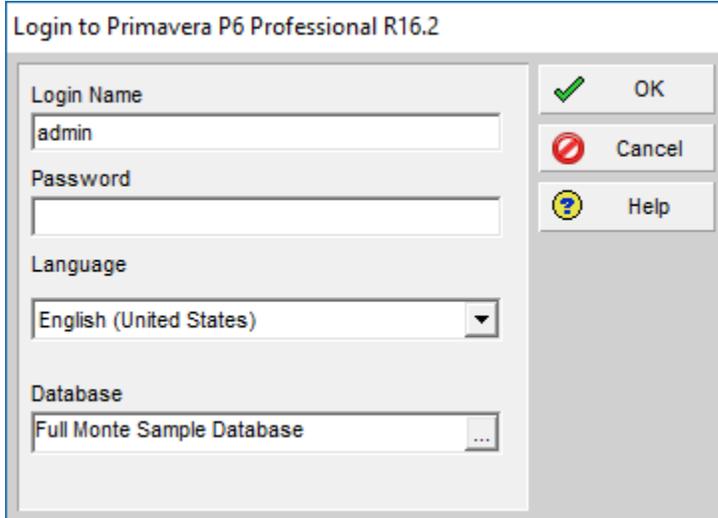
Example FullMonteUserConfiguration.txt:

```
USERBUTTON1=Cost Tornado,Tornado (Cost)
DISPLAYCONVERGENCE=TRUE
USENEWXAXISSCALE=TRUE
```

The USERBUTTON1 option is followed by two parameters: Button Label, Full Monte View Name. All other options are followed by either =TRUE or =FALSE.

1.7 Login Names and Passwords

As Full Monte will be accessing project data in your Primavera P6 databases, the user is required to provide a P6 Login Name when accessing Full Monte. This Login Name must exist in the P6 database and is typically the same as the Login Name you enter on the P6 Login Dialog as shown here.



The P6 Login name is used to apply security so you can only see and update projects to which you have been granted access in P6.

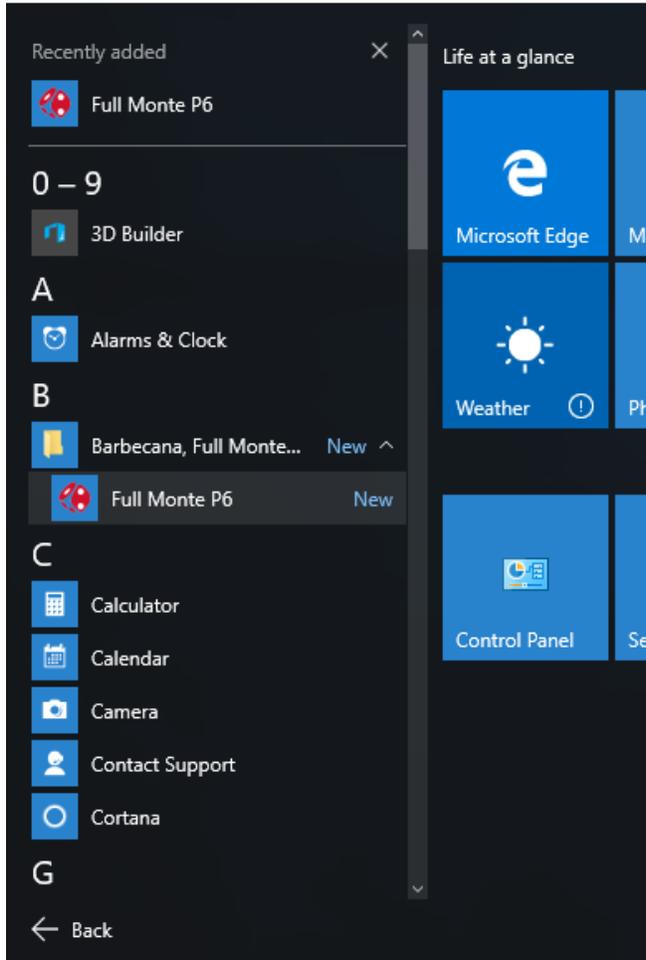
However, as Full Monte is unable to validate passwords against the P6 passwords in the database (Barbecana makes no attempt to decrypt secure information in the P6 database), Full Monte will use its own passwords for access to the P6 Oracle and SQL Server databases. We do not require user passwords for P6 Standalone SQLite databases.

The Full Monte Sample Database has a P6 Login name of 'admin'.

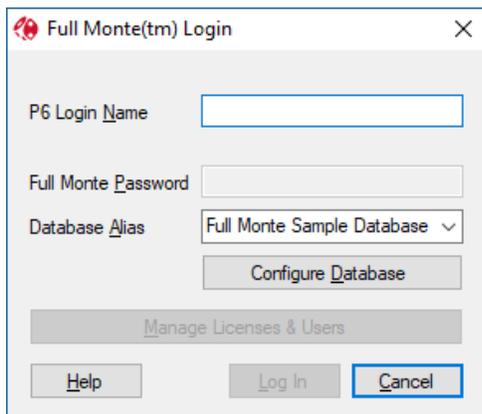
Note: The FullMonteSystemConfiguration.txt option DISABLEPASSWORDS=TRUE can be used to prevent Full Monte from requiring Full Monte passwords for SQL Server and Oracle databases.

1.8 Getting started with the Full Monte Sample Database

Launch Full Monte P6 from the Window's Start Menu.



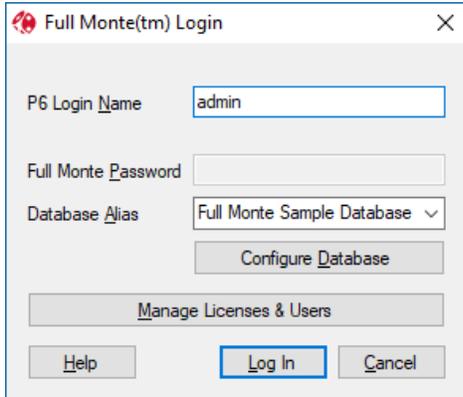
The Full Monte login dialog will be displayed:



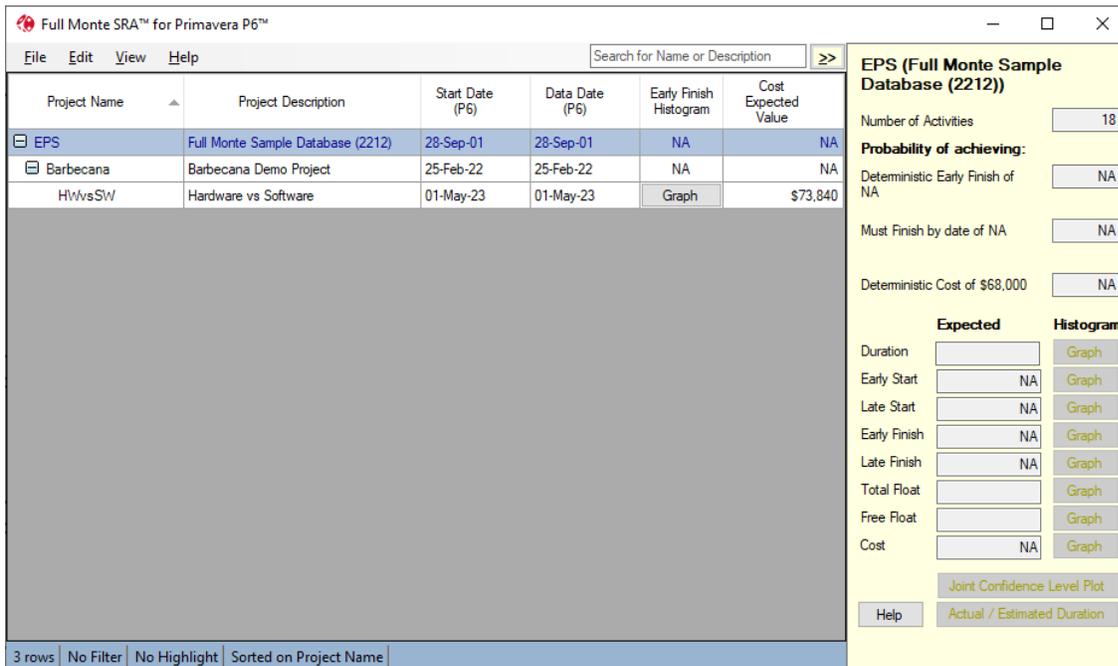
On first use, Full Monte is configured with a sample SQLite database. This is a standalone database created using Oracle Primavera P6 version 16.2. The database can be used to experiment with the Full Monte features but will not be visible to your local copy of P6 without further configuration (and then only if you have P6 16.2 or later).

The P6 Login Name for the Full Monte Sample Database is 'admin'.

Note: Full Monte does not prompt for a Full Monte Password for SQLite databases as described in section 1.6.



The Full Monte Project View will be displayed:



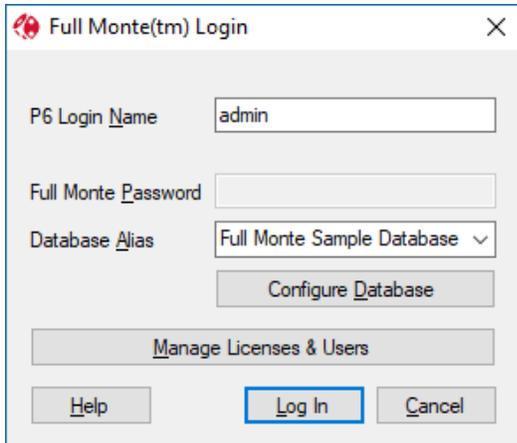
For more information on the Project view please see section 2.2 of the Full Monte User Guide.

1.9 Configuring databases

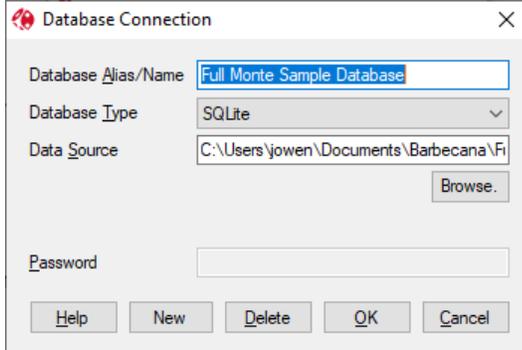
Full Monte for P6 (with a 'machine' license) can be configured to connect to any number of Primavera P6 databases of any type (Oracle, SQL Server, or SQLite). Full Monte automatically detects the P6 database version so a single instance of Full Monte P6 can connect to databases created by multiple versions of P6.

Note: As of the time of writing this guide, Full Monte for P6 is tested to support Primavera P6 6.2 through 22.12 databases.

New databases can be configured from the Full Monte P6 Login dialog:



Click Configure Database to open the database configuration dialog.



The dialog will initially display the configuration for the currently selected database (in this example the Full Monte Sample Database).

To modify the settings for the current database, simply make any required amendments and click OK to save them.

To create a new database connection, click New, and enter a new Database Alias (a friendly name used to help identify the database) and then enter the required information which will vary depending on the Database Type selected.

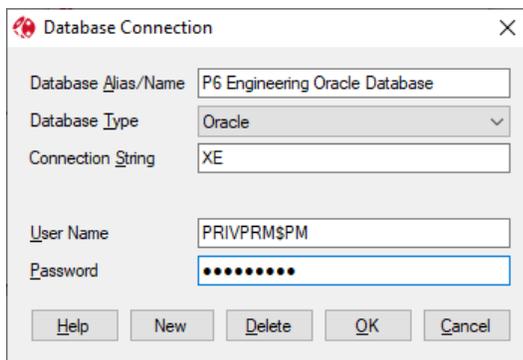
1.8.1 Configuring a new Oracle P6 database connection

Important Note: As described in section 1.5 (Installation), there is a known issue with certain Oracle database drivers that means applications using them must be installed in locations that

do not include parenthesis () in the file path name. If you find you are unable to connect to a Primavera P6 Oracle database, please verify that Full Monte has not been installed in a location that includes parenthesis in the path name (e.g. C:\Program Files (x86)\Barbecana\Full Monte P6\ is not a supported location with some Oracle database versions).

To configure a connection to an Oracle P6 database you will need the Oracle database connection string (either as configured during the Primavera installation or provided by your Oracle database administrator). You will also need the credentials for the Primavera Private/Privileged user account. This was configured during the Primavera P6 installation or provided by your Oracle database administrator.

Note: Software drivers for an Oracle database are not included with either Windows or Full Monte. You must either have installed Oracle Primavera P6 or manually installed the required database drivers provided by Oracle. For further information please consult your I.T. dept.



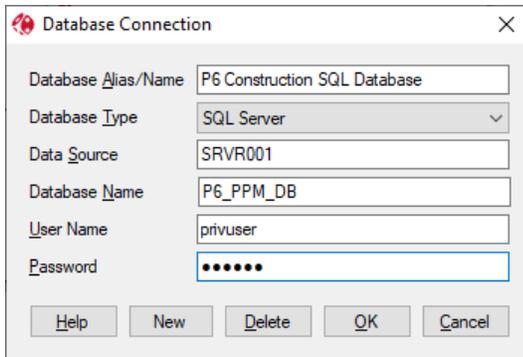
In this example, the connection string was XE and the Primavera Private/Privileged user account is PRIVPRM\$PM (an example commonly used in Primavera Oracle implementations). However please note that the User Name is implementation specific so if unsure, please consult your Oracle database administrator. The password will need to be provided by the Oracle/Primavera systems administrator.

Note: If your Primavera/Database administrator does not wish to disclose the Private/Privileged database account name and password, they can use Full Monte themselves to create a file (FullMonteConnectionData.txt) that will contain the connection information in a secure encrypted form. This file can be shared with users to allow them to connect to the database with no further configuration on their part.

Important Note: *You cannot use the Primavera Public user account as typically used by Primavera P6 to connect to the database. P6 uses the Public account to extract the Private/Privileged account information from the database in an encrypted form. Full Monte makes no attempt to decrypt secure P6 information.*

1.8.2 Configuring a new Microsoft SQL Server P6 database connection

To configure a connection to a SQL Server P6 database you will use the SQL Server name or network IP address for the Data Source along with the individual database name on the data source. You will also need the credentials for the Primavera Private/Privileged user account. This was configured during the Primavera P6 installation or provided by your SQL Server database administrator.



In this example, the SQL Server database server network name is 'SRVR001'. It is permissible to use a network IP address in the form nnn.nnn.nnn.nnn where nnn represents a number between 0 and 255. The Primavera Privileged user account has been specified as 'PRIVUSER'. This is a common default for P6 SQL Server databases but may be different in your environment. If in doubt, please consult your SQL Server database administrator.

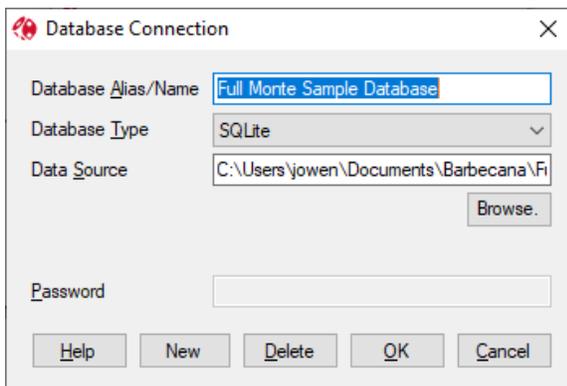
Note: If your Primavera/Database administrator does not wish to disclose the Private/Privileged database account name and password, they can use Full Monte themselves to create a file (FullMonteConnectionData.txt) that will contain the connection information in a secure encrypted form. This file can be shared with users to allow them to connect to the database with no further configuration on their part.

Important Note: You cannot use the Primavera Public user account as typically used by Primavera P6 to connect to the database. P6 uses the Public account to extract the Private/Privileged account information from the database in an encrypted form. Full Monte makes no attempt to decrypt secure P6 information.

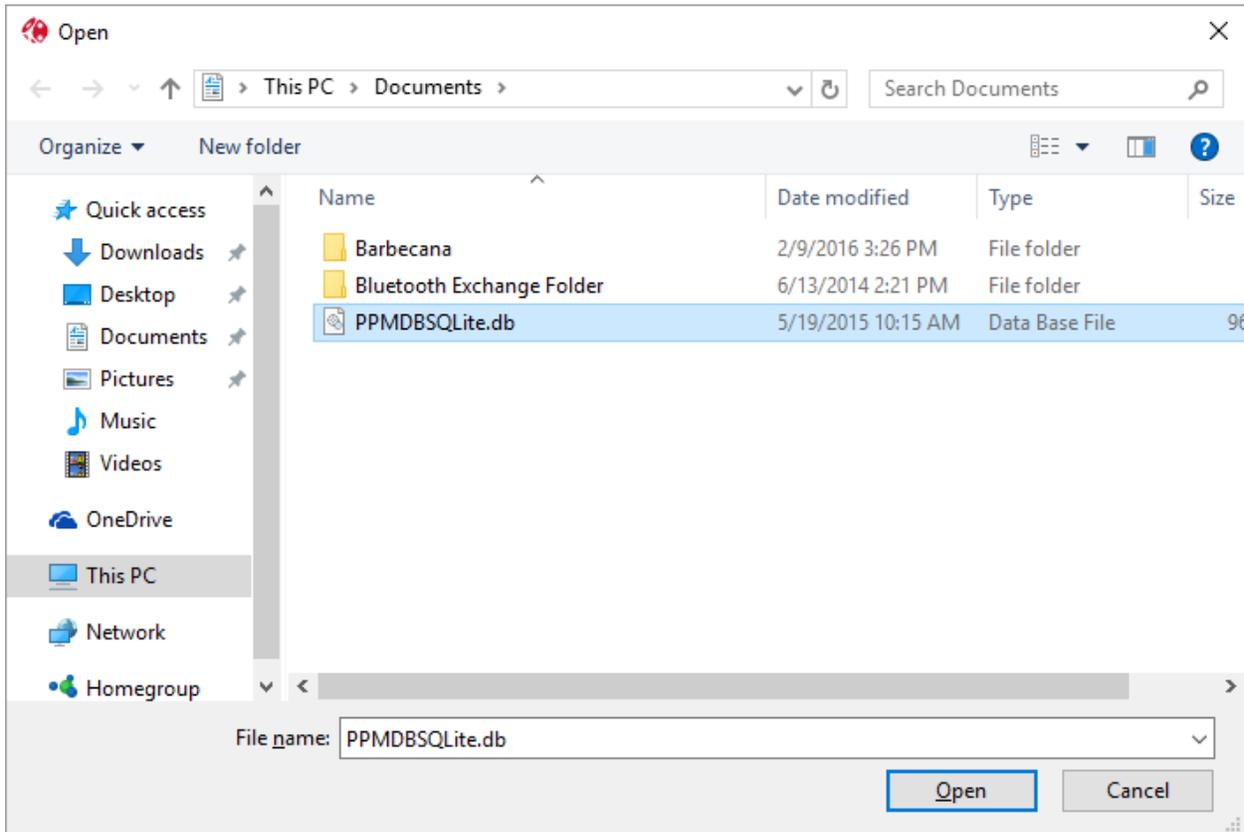
1.8.3 Configuring an SQLite database connection

Oracle introduced support for SQLite database files in Primavera R8.4. This is a simple file-based database solution that is useful for standalone P6 implementations. It avoids the overhead of installing an Oracle or SQL Server database on a local machine for standalone use.

To configure a SQLite database all that is required is access to the database file.



This example shows the connection information for the sample SQLite database provided with Full Monte. To select another database simply click the Browse... button and locate the appropriate file.



The default Primavera SQLite database file is called PPMDBSQLite.db and the default location is your Documents folder.

1.10 Logging in to a new database connection for the first time

On initial installation, Full Monte for P6 activates a 14-day trial 'machine' license. This will allow your copy of Full Monte to access any P6 database during your trial period. For further information regarding licensing please see chapter 2.

Note: If a P6 database has already been configured with a Full Monte for P6 'database' license then the Full Monte Administrator for that database will need to grant you access.

After defining a new Database Connection in Full Monte (as described in section 1.7), the exact login procedure will depend on whether a Full Monte Database License has already been installed in the connected database.

Chapter 2: Full Monte Serial Numbers, Licenses and User Administration

2.1 Full Monte Serial Numbers

When a customer purchases Full Monte, they are allocated a unique Serial Number, typically one for each copy of the software purchased. Serial Numbers are numeric and contain either 5 or 6 digits.

The Serial Number is effectively your proof of purchase and should be recorded carefully.

The Serial Number is required to obtain Full Monte licenses and request technical support.

2.2 Full Monte for Primavera P6 License Types

There are three different license types available for Full Monte for P6.

2.2.1 Full Monte for Primavera P6 Trial License

When Full Monte for P6 is first installed and used on a new computer, the computer is automatically assigned a trial **Machine License** that will expire 14 days after first use. The trial license can be used to experiment with Full Monte using both the included sample database and by connecting to any existing P6 database (see section 1.7 for more information on connecting to existing P6 databases).

Note: If Full Monte is connected to a P6 database that already contains a Full Monte for P6 Database License then the Full Monte administrator for that database will need to grant access.

To view and manage licenses you are required to provide a valid login name (and password if required) for the currently selected database. On first use, when the Full Monte Sample Database is selected, the default login name is Admin.

2.2.2 Full Monte SRA for Primavera P6 Machine License

A Full Monte Full Version Machine License is allocated to a specific computer and allows the Full Monte user on that computer to connect to any available P6 database. This license type can be purchased through our web site.

Note: If Full Monte is connected to a P6 database that contains a Full Monte for P6 Database License then the Database License will take precedence for security purposes and the Full Monte administrator for that database will need to grant access.

2.2.3 Full Monte SRA Contractor Edition for Primavera P6

A Full Monte License is allocated to a specific computer and allows the Full Monte user on that computer to connect to any available P6 **SQLite** or Microsoft SQL Server P6 database. This license type can be purchased through our web site.

2.2.4 Full Monte SRA for Primavera P6 Named User Database License

A Full Monte Named User Database License is installed in a specific P6 database and allows a Full Monte administrator to grant access to multiple named users up to the limit controlled by the license.

Note: If a Full Monte user who has a Trial or Full Machine License on their local computer connects to a P6 database that contains a Full Monte Database License, then the Database License will take precedence. If the user has not been granted access to the database by the appropriate Full Monte administrator, then they will not be able to access projects in the database.

2.2.5 Full Monte SRA for Primavera P6 Concurrent User Database License

A Full Monte Concurrent User Database License is installed in a specific P6 database and allows a Full Monte administrator to grant access to multiple concurrent users up to the limit controlled by the license.

Note: If a Full Monte user, who has a Full Machine License on their local computer, connects to a P6 database that contains a Full Monte Concurrent User Database License, then their local machine license will be used for licensing purposes however the Full Monte database administrator must still grant them access to use Full Monte on that database.

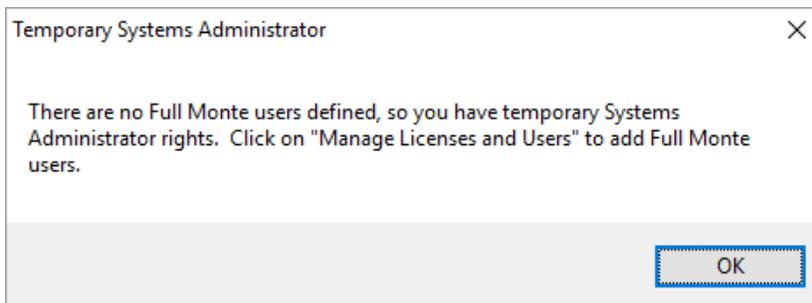
2.3 Full Monte vs Primavera Login Name and Password

Full Monte uses the existing P6 Login Names from the connected database to control access to Full Monte and P6 project data however, to avoid security issues with P6 data, the Full Monte password is stored and maintained separately to the P6 password for each Login Name. This means that the Full Monte password for any given Login Name may be different to the P6 password. In many cases users choose to make them the same for ease of recall.

2.4 Managing Users on a New Database

When Full Monte first connects to a new P6 database, that has never been used with Full Monte before, you will be required to identify which P6 users can use Full Monte and define at least one of the selected users as the Full Monte Administrator.

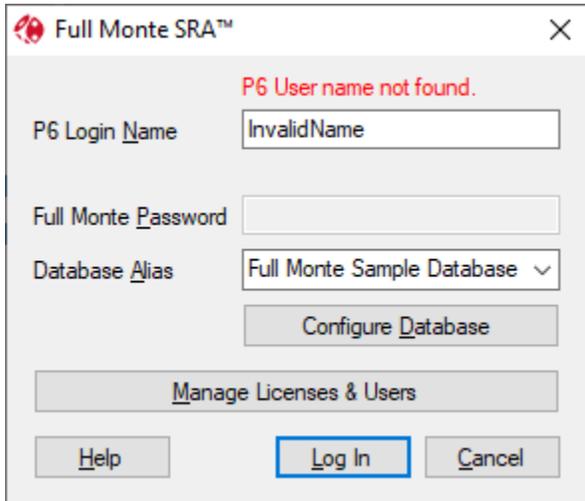
After making the database connection, if you then attempt to simply login to the new database as a Full Monte user you will receive the following message.



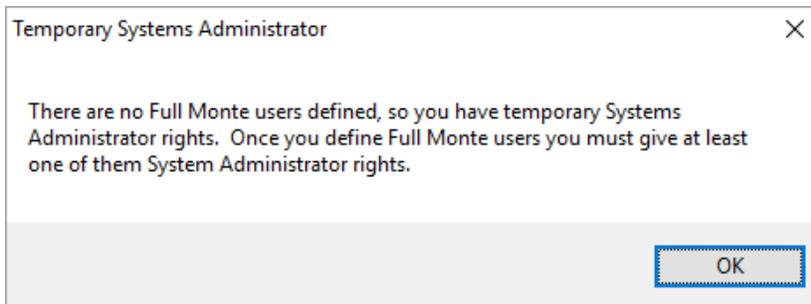
This message is warning you that none of the P6 users in the database have been configured to use Full Monte and that you should instead click 'Manage License and Users' to perform that configuration.

Clicking OK will take you back to the Full Monte Login dialog.

On the Login dialog you must enter a valid P6 Login Name for the selected database (typically the same as the login name you use to login to P6 itself). In the following examples the login name 'admin' has been used but any valid P6 Login Name for the selected database can be used. In the case of a first connection to a new P6 database the Full Monte Password is undefined so can be left blank. If you enter an invalid Login Name, the Login dialog displays a warning as show.

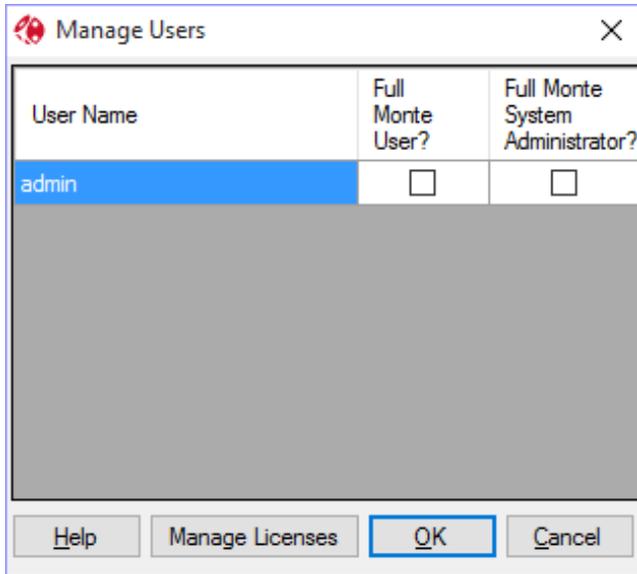


After entering a valid Login Name, click Manage Licenses & Users. The following message will be displayed:



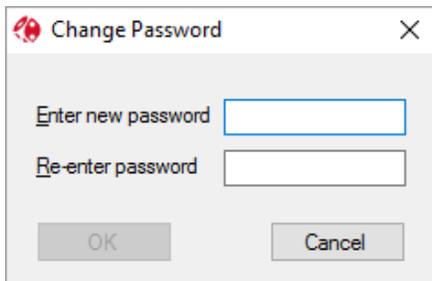
This message reminds you that the database is new to Full Monte and that you must specify which P6 users can access Full Monte and identify at least one of those users to be the Full Monte administrator.

Click OK and the following dialog is displayed:

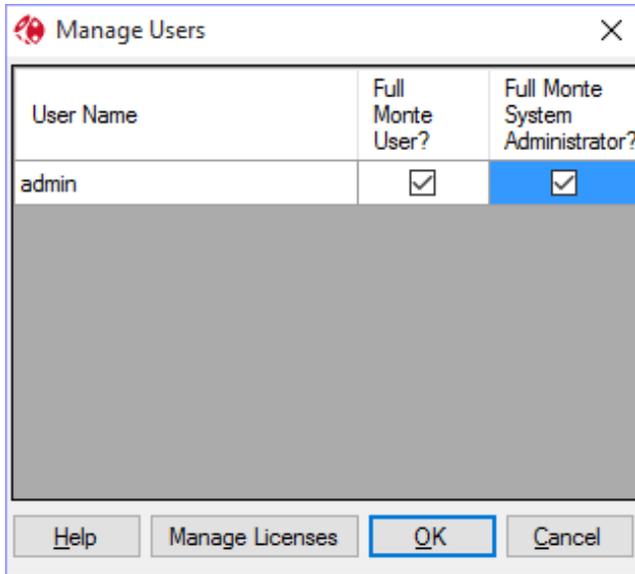


The list of users will include all P6 Login names defined in the P6 database. In the above example, only one P6 user, admin, has been defined.

Select the check boxes to identify any P6 users who can access Full Monte. As each user is selected you will be prompted to provide a Full Monte password for the user. Full Monte users can change their own password later if required.



Identify at least one user as the Full Monte Systems Administrator.



Click OK to save your changes.

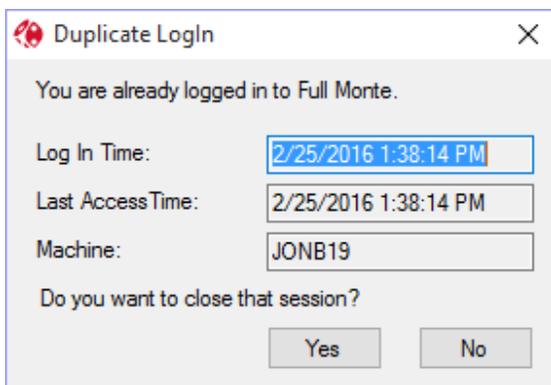
You can now login to Full Monte, using a P6 Login Name authorized to use Full Monte, and the Full Monte password defined when the user was authorized.

Note: If you have a Trial or Machine license, and provided there is no existing Full Monte database license installed, you may grant any number of P6 users access to Full Monte however the individual users will need to have their own Full Monte Trial or Machine License to be allowed to login.

If the database contains a Full Monte database license then the number of P6 users who can be granted access to Full Monte will be controlled by that database license.

2.5 Duplicate Login

Full Monte will only allow one session at any one time for each P6 users authorized to use Full Monte in a specific database. If you attempt to login a second time (perhaps from a different computer) using the same P6 Login Name then the following dialog will be displayed.

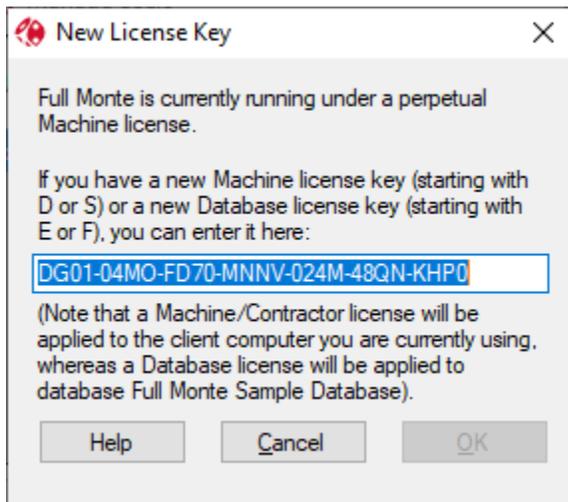


It is possible that there is an orphaned session that is no longer active. This could happen for several technical reasons including the user terminating Full Monte by shutting down their Windows computer

without closing Full Monte. If you believe the existing session is no longer valid you may close it by selecting 'Yes' on the dialog. This will delete the orphaned session information and complete the current login process. If you select 'No' then the current session will be allowed to continue and your attempt to login will be terminated.

2.6 Managing Licenses

Full Monte license management features are accessed from the Full Monte Login dialog by first entering a valid P6 Login Name and associated Full Monte password and then clicking the 'Manage Licenses and Users' button. This will open the Manage Users dialog where the user can click 'Manage Licenses' to open the New License Key dialog.



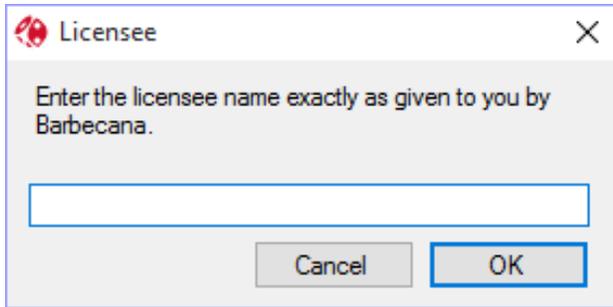
This dialog provides information about the currently active license and allows a new license to be entered. In the example above, the current license is identified as a perpetual Machine license.

If you have purchased a copy of Full Monte you will have been provided with a unique **Serial Number**, **License Key** and **Licensee Name**. You can use the serial number to request a new or replacement license code for Full Monte.

The type of license that you have purchased (Machine, Named or Concurrent) will depend on your circumstances. Please contact Barbecana sales department to discuss the most appropriate license.

Please enter the License Key and registered Licensee Name (excluding the square brackets) into the fields provided in the registration dialog, taking care to differentiate between 0/O and 1/I when entering the license key. The Licensee name must be entered exactly as shown and is case sensitive.

After the License Key is entered, click OK and the Licensee Name dialog will be displayed:



Enter the Licensee text (typically your company name) exactly as shown in the email from Barbecana (again excluding the square brackets) to complete the license installation process.

If you wish to obtain a Named or Concurrent user database license, please contact the Barbecana Sales Department.

Chapter 3: Saving Full Monte Results to P6 User-Defined Fields

3.1 Introduction to Saving Full Monte Results

After a Risk Analysis has been performed in Full Monte, and the user chooses to exit from Full Monte, the user is offered the opportunity to 'Save Results' by the dialog shown in Figure 3.1.

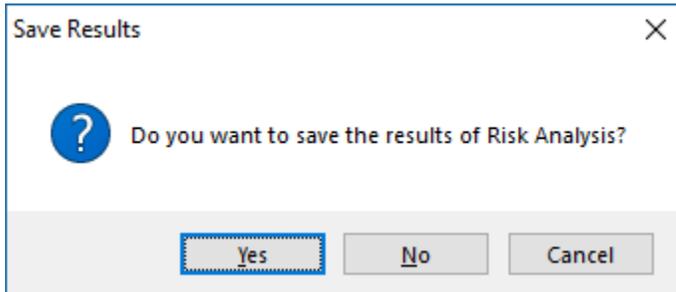


Figure 3.1

The primary purpose is to save results that can be re-loaded by Full Monte when a subsequent Full Monte session is started. This information is stored in P6 Notebook Topics:

- Full Monte Readable Task Results
- Full Monte Task Histograms
- Full Monte Task Misc. Results

As the name suggests, the topic 'Full Monte Readable Task Results' contains some basic result information in a human readable format. An example follows.

Expected Early Start is 5/1/2017:8:00 AM (80th percentile 5/1/2017:8:00 AM)
Expected Early Finish is 5/8/2017:8:03 AM (80th percentile 5/8/2017:11:47 AM)
Expected Cost is \$32 (80th percentile \$35)
Sensitivity Index is 16%
Based on 10000 iterations performed on project HWvsSW on 5/2/2019:12:48 PM

The content of the information in the 'Full Monte Readable Tasks Results' is not configurable.

3.2 Saving Data to P6 User-Defined Fields

User configured information can also be stored to P6 User-Defined Fields using the Full Monte Edit, P6 user-Defined Fields menu option. This menu option is available from both the Full Monte Project view and the Activity Edit View. The dialog is shown in Figure 3.2.

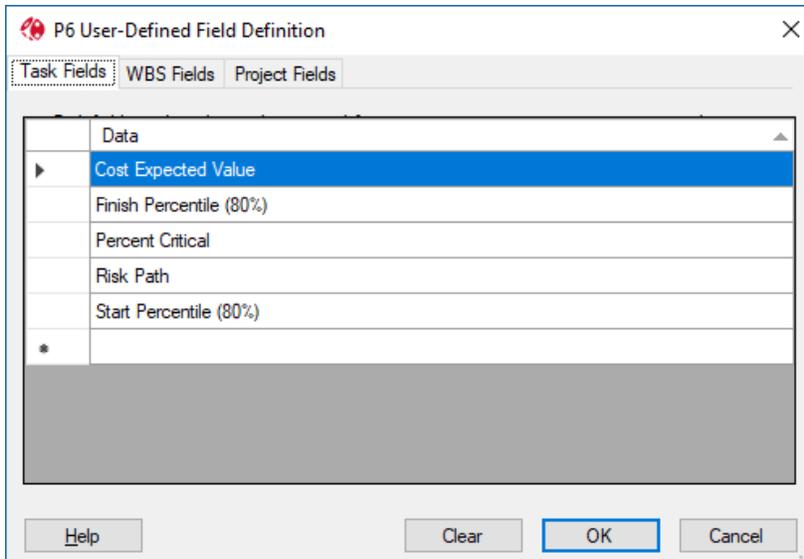


Figure 3.2

To add additional fields to be saved, click the blank row and choose the appropriate Full Monte field.

Subsequently, when the user chooses to Save Results when they close a project in Full Monte, a User-Defined Field will be created in P6 to contain the specified information.

P6 User-Defined Fields created by Full Monte will have a prefix of FM as shown in Figure 3.3.

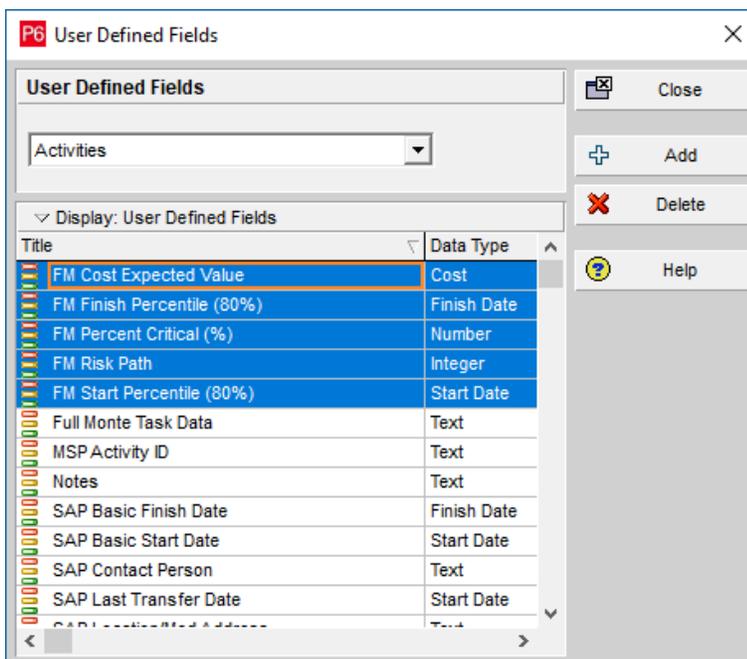


Figure 3.3

Note: When a new field is added to the list to be saved, results will not be available until a Risk Analysis is performed and the project saved.

User-Defined Fields created by Full Monte are created in the currently connected P6 database. The fields will be available for all projects in that database but will be empty unless an analysis has been performed in Full Monte for a specific project.

If Full Monte User-Defined Fields are deleted in either P6 or Full Monte, then the data will be removed for all projects in the database.

Note: Each additional User-Defined Field defined for Full Monte results will have some impact on the time taken to save results.