

MooD Enterprise 16.076 Release Notes

Summary of updates to this document per version:

MooD 16.057	<p>Added support for SQL Server 2019</p> <p>Added additional notes for SQL Server setup.</p> <p>Added extra information about third party licences.</p> <p>Added known issue regarding Windows Updates causing issues with the formatted text editor and graphs in Business Architect.</p> <p>Added instructions for changing the default Excel range selection mechanism.</p>
MooD 16.076	<p>Updated the instructions for working around Request Validation exceptions raised by ASP.NET to recommend the new feature for turning off request validation per panel, control, symbol/node or field.</p> <p>Updated instructions for issues when using the placeholder localhost in SQL Connections.</p>

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Installing Mood 16

MooD is compatible with Microsoft® Windows® installations only. Additionally, you will need to connect to a SQL Server database to read or create MooD Repositories. Installation instructions for SQL Server are not included in this document. Please see [System Requirements](#) for information on platform and database requirements.

We recommend all Windows Updates are applied before installing MooD. Failure to do so could cause the installation to fail, or take hours to process. Please see the minimum client specifications in the link above for more information.

MooD Business Architect, MooD Business Integration Engine and MooD Active Publisher must be installed by opening **Setup.exe**, and not Data.msi. If you do so, your installation may be corrupted. If you need to use Business Architect only, then you do not need to install the other components. However, MooD Business Integration Engine and MooD Active Publisher both require MooD Business Architect to be installed first.

If you are installing all three, we recommend installing Business Architect first, followed by Business Integration Engine and finally Active Publisher. We also recommend uninstalling in the reverse order. Please refer to the **Active Enterprise Setup Guide**, available from MooD International Support for more instructions.

To install MooD Business Architect, locate **Setup.exe** on the MooD distribution media and **open it**.

- The installation will guide you through the process of installing prerequisites and will let you choose the installation location if you do not want to accept the default of **C:\Program Files (x86)\MooD\16**.

Once installed, a **MooD 16** icon will appear on your desktop. Double-click this icon to open Repository Manager. If you need to install a licence, run Repository Manager **as an Administrator** to enable MooD for all logged in users. This is particularly important if you also intend to install MooD Active Publisher and MooD Business Integration Engine, which use different service accounts.

To find out more about Repository Manager, please consult the **Repository Manager User Guide**, available from the Windows **Start** menu and from Repository Manager's **File** tab. It is an Adobe Acrobat (PDF) document. You will need a PDF viewer installed, associated as the default application to process .PDF files.

Known Installation Issues

MooD takes a long time to install, or complains of a failure to register a component.

If recent Windows Updates have not been applied, the Visual C++ 2017 Redistributable (x86) - also known as the "Visual C++ 14 Runtime Libraries (x86)" prerequisite may experience the following issues:

- An apparently quick install, followed by the message "**failure to register moodmodelpublisher.dll.**"
 - To resolve this error, cancel the install
 - go to the *Programs and Features* Windows applet
 - In the installed programs list, click **Repair** on the Microsoft Visual C++ 2017 Redistributable (x86)
 - try to install MooD again.
- A very slow install, possibly hours, we believe that Microsoft's Redistributable is comparing your Windows Updates and downloading required Windows Updates. We recommend waiting until it has completed. To avoid this situation, install MooD whilst disconnected from the network, or install all Windows Updates before attempting to install MooD.
- Prompts to install the Visual C++ "14" Runtime (x86) when it's already installed (this is a known Microsoft issue). Accept the EULA, and continue - the install will run through very quickly.

- Due to the above issue, when uninstalling 16.045 and re-installing 16.032, you may be presented with an error that a newer version of Visual C++ is already installed - in which case uninstall the 2017 version and try again.

Some files are left behind when I uninstall Mood

Uninstalling Business Architect will purposely leave some files on your system:

- RepositoriesManager.sdf - the connection details for your repositories.
- custom.cdf - the default custom dictionary file.

Uninstallation will remove all the other files.

MooD Installer launched from the .msi file

If you accidentally click on the MSI file instead of **Setup.exe** you may see *Licence client failed to initialize* or other errors when MooD Repository Manager is launched in **Run as administrator** mode. If you experience these symptoms, uninstall MooD, and then install MooD again using **Setup.exe**.

Uninstalling MooD, or other products may stop other MooD Technology Software from working

MooD Active Publisher and MooD Business Integration Engine depend on the installation of MooD Business Architect being present on the machine. Uninstalling MooD Business Architect will prevent these products from working. In addition, MooD depends on many Microsoft components which appear in the *Programs and Features* Windows applet. If these are removed, MooD may stop working, or may prevent MooD from uninstalling. If this occurs, you may have to reinstall these programs before being able to use or uninstall MooD. You can find these components within the installation media sub folders.

Upgrading MooD Repositories

Breaking changes between MooD 15 and MooD 16

Since build 100 of MooD 15, many concepts have been removed from the product, and we have discontinued support for some third-party technologies. This is an ongoing effort to streamline the product and user experience. This programme continued into MooD 16 with full and widespread consultation with our solution builders and partners. Features removed in 16.x will not be retrospectively removed in MooD 15.x. Users can continue to use those features in MooD 15, but should migrate to alternatives before upgrading to MooD 16.

MooD Repository Manager detects when a repository uses these concepts, and it provides a warning when an upgrade is attempted. Note: **The upgrade action is irreversible. Data may be lost. Always ensure you have a verified and credible backup of your repository before upgrading to MooD 16.**

If the data is not upgraded, then it is deleted. If you still require this data in your upgraded repository, our support department may be able to help you export it from your backup and re-import the required data into replacement structures which *are* supported. Please see the table in the next section for the full list of changes between Mood Versions.

MooD 16 replaced many MooD 15 Web Panels with modern, interactive versions. This allows for better design aesthetics and the use of Material Design principles. The balance had to be struck between upgrading solutions like-for-like whilst not polluting the vision and power the new panels can bring. As such, panels may look different from their MooD 15 equivalents.

When panels on a model upgrade from MooD 15, any appearance settings will be upgraded to best fit the new look and feel. For example, where the panel supports them, settings like *font style*, *line colour* will be upgraded. Where there are new options these will either try and use an appropriate setting from the original panel, or be set to the default value for the new panel. Options that are no longer relevant to the panel will be discarded.

The new design principles encourage more use of space, and solution designers should endeavour not to cram as much as possible on a single page. However, the size and fit of upgraded panels on model will be kept as close as possible to the original to limit the amount of rework required. For example, a *Radio Buttons* panel showing five options displayed in an appropriately sized panel should still fit in the same sized panel in a repository upgraded from MooD 15. However, if the panel had used column grouping, some text may appear clipped with ellipsis (...) because the new control does not support dynamic column widths. You may also notice that a **new Radio Buttons** panel added to model will, by default, be configured with a more generous amount of vacant space, and requires more space to fit those five options (reflecting the new desired look & feel); the panel can still be configured to use less space to attempt to match the style of upgraded panels.

New panels added to the model may have different default settings than in MooD 15, but can be sized and styled to fit with upgraded panels. For example, in MooD 15 a Button panel added to the model had a grey gradient fill, in MooD 16 they will be plain white.

Breaking changes between Mood builds

Feature Removed / unsupported	Build Removed	Impact/Assessment.	Warning given?	Data upgraded?
Upgrade of 2008se Repositories	15.100	Use build 99 or lower to upgrade a 2008se repository.	No	No
Simul8	15.100	Support for integration with the business simulation tool <i>Simul8</i> has been removed.	No	No
Table fields	15.101	The Table field type has been deleted, and as such all column definitions and data is also deleted. Table fields can be replicated by using multiple row relationship fields.	Yes	No
Internet Explorer 7.x	15.103	Viewing our web pages with IE7.x is no longer supported.	-	-
Microsoft SQL Server 2005.x	15.103	Storing a Mood Repository on this database version is no longer supported. Install a later version of SQL Server.	No	-

The pre-canned comment field within relationship fields.	15.105	The field is deleted, a normal string or text field is better suited and better supported.	Yes	No
Node sequences on models	15.105	Each node on a model could be assigned a particular sequence. Users could use this to replay the order in which events happen in a workflow. This poorly supported feature was removed.	No	No
Oracle 11gr2	15.105	Storing a MooD Repository within an Oracle database is no longer supported. Migrate to a supported version of SQL Server (either use MooD Integrator or database migration tools). Repository manager will not connect or list Oracle servers. MooD still supports Oracle as a 3 rd party data source.	-	-
Roles	15.106	The Role concept (typically used as the <i>Assigned Role</i> of a process) has been deleted from the product. A normal relationship to a user-defined type could be used instead.	Yes	No
Scenarios	15.106	The Scenario concept and Scenario Context Models have been removed from the product. A normal element type and model can be used instead, but there is no automatic conversion process.	Yes	No
Aztec Sunchart Visualization	15.107	The visualization will no longer work.	No	-
Delegated requirement links	15.107	A niche, and confusing sub-concept of requirement links was deleted.	Yes	No
Office 2007	16.001	MooD is no longer tested with Office 2007 products.		
Windows Vista (any)	16.001	MooD products are no longer supported or tested on any version of Windows Vista.		
Windows XP (any)	16.001	MooD products are no longer supported or tested on any version of Windows XP.		
Internet Explorer 8.x, 9.x, 10.x	16.001	Viewing our web pages with these browsers is no longer supported, although some sites may appear to work. We also do not support users with supported browsers <i>emulating</i> an unsupported browser version.	-	-
Web Publisher (not Active Publisher)	16.002	The ability to produce a static set of web pages which users shared on CD, USB or archived has been removed from the product. Users who value this feature need to stay on MooD 15 until further notice, or migrate to Active Publisher. Publishing Scheme configurations will be deleted.	-	No
Field Activation	16.005	Field activation – where any field of any element could perform a calculation or retrieve a value from an Excel file or other source was the root cause of multiple performance issues, limiting the success and longevity of solutions. The vast majority of activations discovered could be replaced by new functionality introduced into <i>Smart Columns</i> or by scheduled imports. The	Yes	Latest value kept.

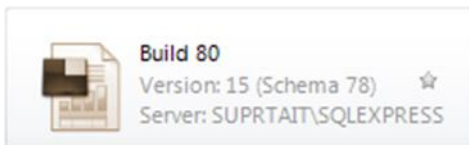
		conversion needs to be performed by the user before upgrade.		
Memo fields (Rich Text)	16.005	The field type <i>Memo</i> in MooD has been removed as RTF is not a Web friendly format, and there were significant performance issues at scale converting RTF to HTML and searching within RTF. During the upgrade process, Memo fields are upgraded into HTML fields. The quality of upgrade depends on the complexity of content. We recommend reviewing the upgraded content to determine if more work is required before making the solution live to your users. Typically, embedded images and documents are lost, and complex formatting may not appear as intended.	Yes	Attempted
The <i>Keep History</i> feature on field data.	16.006	The ability to track historical changes of simple field types has been removed. It was poorly supported and little used.	Yes	No
Microsoft Access Repository upgrades	16.007	Upgrades of MooD repositories stored in Microsoft Access files are no longer supported.	-	-
MooD 2010 Repository Manager settings file upgrade	16.007	The feature where repositories and servers from a MooD 2010 installation were automatically recognized when launching MooD 16 for the first time, has been removed. Servers and repositories will have to be reconfigured, or use MooD 15 as a pathway to retain the information.	No	No
Many action panels can no longer use Symbol Styles, but can use Style Sheets.	16.027	A new feature to handle styling of Web Action Panels, called Style Sheets has been introduced. If users have applied normal MooD Styles to these action panels, those panels will be disassociated from those styles, and the panels will adopt their last known appearance when the model was saved. If you have modified the MooD Style after a diagram has been saved, Repository Manager will list the models you should revisit and re-save before you continue with the upgrade.	Yes	Yes
Bing maps have been removed	16.045	Bing maps in MooD have been non-functional for many years, and with the popularity of other alternatives we <i>do</i> support, we have decided to remove the component instead of attempting to resurrect it. If this becomes a major issue for you or your customers please contact our support department.		
Formatted Text Editor has been upgraded	16.048	The third-party component which powers the Formatted Text Editor has been upgraded from TinyMCE v3 to TinyMCE v4. Any client-side customisations to this component may no longer work and will likely need updating to use the latest DOM structure and event model. See https://www.tiny.cloud/docs-4x/ for further information.	No	No

Schemas & Upgrades

The **schema** is fundamental to each repository and its upgrade process. A schema defines the structure of the database within which Mood Repository data is stored. When this structure changes, through functional evolution, your repository data and structure may need to be transformed. Mood Repository Manager can manage this process for you.

The Mood schema will change much less frequently than the Mood build number. Builds introduce features and bug fixes on top of a schema. Hence, a schema can support several future builds. Once you have upgraded to a schema, you cannot revert to an older schema, hence why taking a backup is important.

In Repository Manager, repositories that do not match the schema of your current build appear in shades of brown (sepia). For example:



Such repositories cannot be opened in your version of Mood unless upgraded to the same schema.

IMPORTANT: Before upgrading any repository, first ensure the repository is not being used by other users and then **take a backup**. If failures occur during the upgrade process, you **must not** attempt to use the resulting repository – you should revert to the backup and try again, or contact the Support team.

To upgrade to a newer schema, in Repository Manager, select the repository and then select **Upgrade** (it is one of the few commands available to you). However, note the following:

Once a repository has been upgraded to a new schema, you cannot open it in a version of Mood with an earlier schema.

Upgrades via the Command line interface

Repository Manager has a command-line interface which enables you to list, test upgrade, upgrade and mandate *multiple* repositories at a time. You can also schedule this via Task Scheduler. For more information at the command prompt where Mood is installed type

```
RepositoryManager /?
```

Restoring a repository with Change Data Capture Enabled

Restoring a backup of a repository from Mood 16 Build 32 or below that uses CDC will cause an exception to occur that the user *does not have elevated credentials to rebuild indexes*.

To solve this issue, restore the backup using SQL Management Studio using T-SQL with the KEEP_CDC parameter and then connect the Repository via Repository Manager to continue the upgrade process. Newer Mood repositories can be restored directly through Repository Manager, and CDC data will be kept automatically.

Upgrading Mood 2010 Repositories

Mood 16 can upgrade Mood 2010 repositories stored in SQL Server databases. However, Mood no longer supports upgrading repositories stored in Microsoft Access®, please use Mood 15 to upgrade the Access database into a SQL Server database and continue from there.

Blueprint Repositories may be provided by the Mood Install. If you need to use these repositories, please upgrade them yourself prior to incorporation.

Upgrading Mood 2008se repositories

Use a build of Mood 15 (prior to build 100) to upgrade the repository.

Known Issues by Product Area

This section lists known issues by the product areas listed below.

- [Active Enterprise](#)
- [Business Architect](#)
- [Knowledge Activation](#)
- [Microsoft Visio® Business Integration Activator](#)
- [Microsoft® Project Synchronization Activator](#)
- [Synchronization Activator Technologies](#)
- [XMI® Business Integration Activator](#)
- [Business Integration Engine](#)

Active Enterprise

Active Enterprise Requirements

Active Enterprise requires that both Mood and Business Integration Engine are installed previously. For further information and detail on how to smoothly install Active Enterprise and its prerequisites see the [Active Enterprise Server 16 Setup](#) document (Available from Mood International Support).

Action panel rendering issues

- Action panel content is always drawn on top of the panel label and border (in Business Architect the label and border are drawn on top).
- When published, action panel content is always drawn on top of the model image. If any model content (shapes or lines) overlaps an action panel, it will be drawn in a square block on top of the action panel. Any transparent parts of this block cannot therefore be clicked through to the action panel beneath. Performance indicators, when turned on, advise the user which items they may need to move, or change the z-order of, to ensure that this overlapping does not adversely affect the action panels.
- Action panel content is not clipped if it overlaps the edge of the model.
- Shape styling is not supported.
- Only a subset of bar, milestone and plot shapes in Time Line and Bar chart matrices are supported.

Opening Knowledge Activations in a new window

Windows may not open due to the web browser's pop-up blocker. This can occur when clicking on a button or link action panel or with the navigate action panel. The browser will report that the window has been blocked and provide the option to allow pop-ups. This should be enabled for the published site.

“A potentially dangerous Request.Form value was detected from the client” exception when saving data

By default, ASP.NET validates all information sent to the server for potential cross-site scripting attacks. If you try to save data containing certain text patterns (such as `<script>`), ASP.NET will detect this as a possible cross-site script attack and display the exception. Mood encodes all data before putting it on the page, so normally this added protection is unnecessary and can be removed. However, if the site has been extended with custom pages and controls, it may not be safe to disable it.

Workaround

Edit **web.config** and choose one of two methods, the first being the recommended:

The first method is to add some request validation exclusions to the **mood.web -> security -> requestValidation** section (and there are examples of these in the **web.config**). There are various ways of excluding parts of a solution from request validation, exclusions can be added for types of panel, type of web control, symbols (nodes) on a model or for certain fields, and these exclusions can be combined to target specific parts. Information about the panel name, control name and node are included in the exception when it occurs e.g.

```
"A potentially dangerous Request.Form value was detected from the client (...=""). Node Id: B640DF86F6664C5E891952735E132B62; Node Label: Text Editor; Panel Type: Text Editor; Control Type: TextBox;"
```

To add an exclusion or exclusions in the **web.config** uncomment the examples that exist already and modify and remove as appropriate or add to the **mood.web** section the **security** and **requestValidation** elements and the pertinent **add** elements from the below:

```
<mood.web>  
<security>
```

```

<requestValidation>
    <add controlType="control Type" /> <!-- This will turn off request validation for all controls with
the given type on a page, so if the control type "TextBox" were used then that would include the "Text Editor" panel
and also text boxes that appear in popup forms or composite controls like the "Login" panel. -->
    <add panelType="panel Type" /> <!-- This will turn off request validation for all controls for a given
panel type, for example if "Text Editor" were used then all "TextBox" controls on a page from "Text Editor" panels on
a model, but not those from composite controls or in popup forms would be excluded. -->
    <add nodeId="node id" /> <!-- This will turn off request validation for all controls for the given
symbol/node specified by the id on the model, symbol ids can be inspected by right clicking a panel on a model and
choosing "Examine" then looking at the "General" information "Symbol ID"-->
    <add nodeLabel="label name" /> <!-- This will turn off request validation for all controls for any
symbols/nodes on any models for the given label, in this example that is where the label is "label name". -->
    <add fieldTypeId="field Type id" /> <!-- This will turn off request validation for all controls set
to edit the field specified by the field type id, the id can be inspected by going to the Repository "Manage Field
Types" and opening the field "Details" for the "Field Type ID". -->
    <add fieldType="field Type" /> <!-- This will turn off request validation for all controls set to edit
fields of the specified field type, where field types are the simple types, String, Boolean, Whole, Fractional, Date,
Time, DateTime, and the Formatted Text, Pick List, or Relationship types. -->
    <add controlType="TextBox" nodeLabel="my label" /> <!-- The parameters can be used in
any combination to target specific controls, so for instance this will turn off request validation for all text box
controls for panels that have the label "my label". -->
</requestValidation>
</security>
</mood.web>

```

The second method is to change the request validation mode and revert to the .net 2.0 validation mode (note this may disable some cross-site scripting detection and other request validation capabilities):

```

<system.web>
    <httpRuntime requestValidationMode="2.0"/>
</system.web>

```

Then, either add `validateRequest="false"` to the **pages** element, to allow this behaviour on all pages:

```

<system.web>
    <pages validateRequest="false"/>
</system.web>

```

Or edit each `.aspx` page you require to support or suppress this error (i.e. **controller.aspx**, **login.aspx**) and add a `validateRequest="false"` attribute to the **Page** directive, for example:

```

<%@ Page language="c#" AutoEventWireup="true"
Inherits="Salamander.ActivePublisher.Controller" EnableViewState="False"
Codebehind="Controller.aspx.cs" aspcompat="true"
ValidateRequest="false"%>

```

Performance counters

When enabling performance counters, ensure that the Active Enterprise application pool is running under an administrative security context. Mood will create the performance counters if they are not already present on the Active Enterprise server (which requires administrative privileges).

Business Architect

Drawing artefacts with ultra-high resolution screens

When users view Mood Business Architect with an ultra high resolution display, for example 3840x2160 pixels, the user interface may look cramped, icons are too small, controls overlap and some buttons may be awkward to press. Many of these issues are a direct result from increasing text scaling in the Display Settings. Mood has addressed many such issues, but some may linger and be visually unappealing. We will continue to resolve these issues over time. For the best experience, we recommend using Mood at 100% magnification on a lesser resolution.

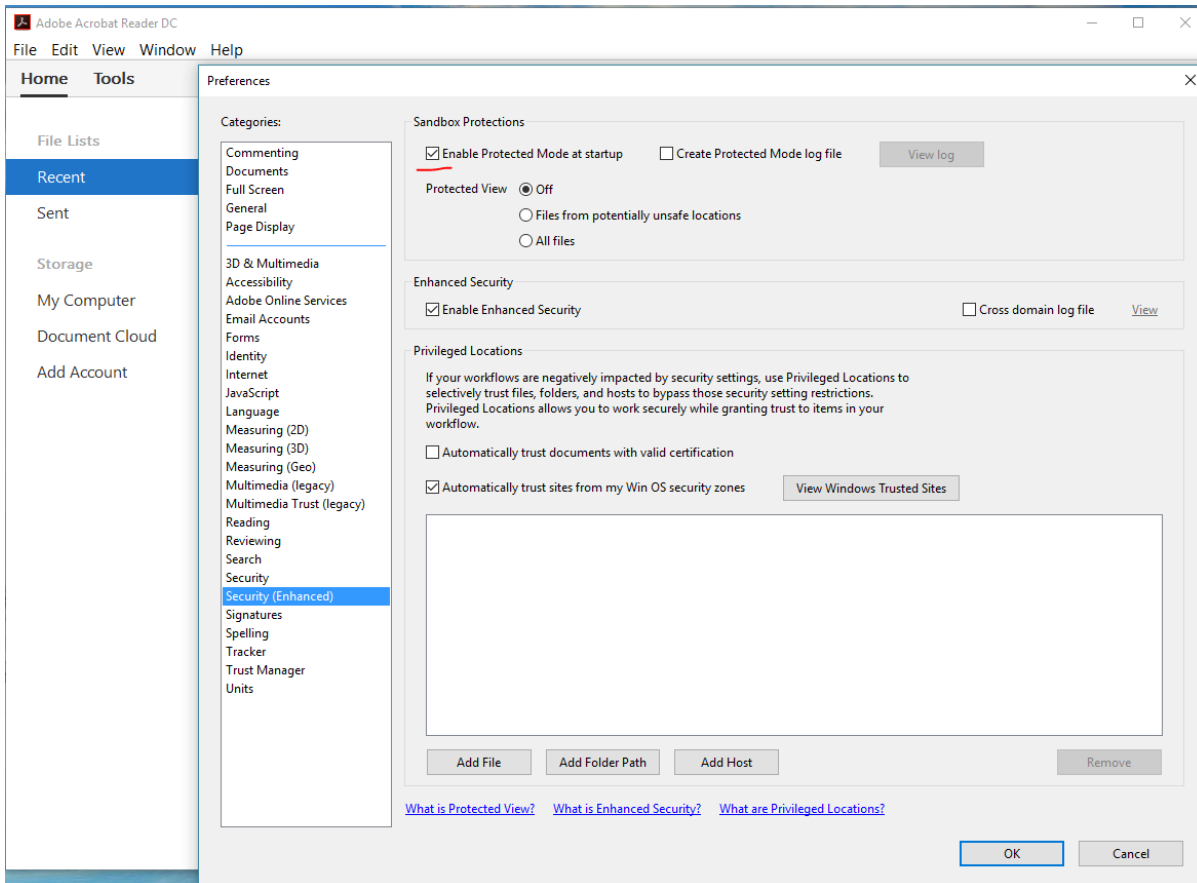
Using Citrix with multiple monitors and different text scaling

When using Citrix with multiple monitors where each monitor has mixed text scaling factors, mouse clicks can appear to be 100 pixels away from your intended location. Business Architect can also render as a completely black box, making the product unusable. When both displays are set to 100% scaling, this issue does not occur. As of writing, this is not a scenario supported by Citrix XenDesktop or XenApp environments, [see here](#) for more details.

Helpfiles do not launch

Helpfiles for Mood products are shipped in Adobe Acrobat format (.PDF). When you press F1 or navigate to them via the menu systems, you may receive messages asking how you would like to open the file. If you have installed Adobe Acrobat Reader DC, and have associated the product with PDF files yet are *still* being prompted, please use Acrobat Reader to open the files yourself, located in the Mood Installation folders.

The alternative is to turn off security features in Adobe Acrobat Reader, which we **do not recommend**.



Microsoft Office Automation - Requires Visual Basic for Applications

For MooD to successfully integrate with Microsoft Office applications, Visual Basic for Applications must be installed as part of your Microsoft Office installation. It is installed with a typical Microsoft Office installation, but can be omitted during a custom installation. If not installed, features such as the ability to save a Spotlight presentation as a Microsoft PowerPoint presentation will not be available.

Formatted text editor displays red error text after a long wait, Some graph panels show after a very long wait.

This appears to have been an issue introduced by the installation of .NET 4.8, as part of the May 2019 Windows Feature update, and is subsequently fixed in [KB4511555](#) released August 30th 2019.

An alternative workaround is,

- at the windows search bar/cortana, type 'OptionalFeatures.exe', press enter.
- Scroll down and expand Internet Information Services
- Expand World Wide Web Services
- Expand Security

- Tick Request Filtering
- Wait for the update to install and then retry the action. (You may have to restart Business Architect).

Knowledge Activation

Cannot connect to a document stored within a public folder on a Microsoft® Exchange server

When following an Activated link to a document stored in a public folder (also known as a **freedoc**) on an Exchange server, a **HTTP 403 (Forbidden)** response is served.

Workaround

Microsoft® recommends that you use controlled access folders when access to **freedocs** is required. See Microsoft Knowledge Base article [KB834743](#).

Errors when copying files and folders onto Microsoft® SharePoint® portal server

When copying folders into a Microsoft® SharePoint® server (by dragging a folder over the explorer view) files that have illegal characters will cause an error message of the form **An error occurred copying some or all of the selected files**. The files will not have been placed onto the SharePoint server.

A folder with illegal characters will trigger a similar, but more detailed message:

Unable to create a folder named <Name of folder>. Please enter a different name.

This is likely to happen when a published site contains Knowledge Centres within its structure (probably via the **Copy into Publication** option).

Workaround

Ensure that all files and folders to be copied do not have illegal characters in their names, including:

`/\:*? "<> | # <TAB> { } % ~ &`

An Activated link to a file that is stored in the published site is not relative

If a Knowledge Centre is published to the same path as the Mood® web publication, Knowledge Activation should recognize this and create associated Activation links with relative addresses (of the general form **.././kc/file.ext**).

This detection fails when illegal characters are used in the Knowledge Centre's publishing path. These illegal characters prevent the comparison of paths working. This is because the illegal characters in the path will be replaced with hexadecimal numbers.

Workaround

Ensure no illegal characters are used in Knowledge Centre publishing paths when it is important that the Activated file is accessed by a relative link. Illegal characters include:

% / # ? * ! <SPACE>

In general, all punctuation and whitespace, except minus and underscore, should be avoided in Knowledge Centre paths.

Changing Activator appears to lose properties from current Activation

If the Activator for a current Activation is changed, for example from a Word Document Activator to a Text File Activator, the properties that were used in the original Activation are not carried through to the new Activator. Clicking **OK** at this point, with no properties set, will then remove the Activation. Clicking **Cancel**, however, will reset the Activator and properties to their values prior to changing Activator.

Workaround

None. This is expected behaviour. Activators are not guaranteed to have compatible properties from one to another, so previous properties cannot be safely reused after changing Activator.

Administrator can't open read-only repository (or repository using read-only driver)

If the Administrator repository user opens a repository, Knowledge Activation will attempt to add a version stamp to the repository. This will fail, as the repository cannot be written to, and the following error will appear:

The database has reported a problem. If the problem re-occurs try re-starting Mood. Otherwise, contact the Administrator of this repository.

Non-administrator users will not encounter this error.

This only affects repositories which are set to read-only (or the driver used to access them is set to read-only using Repository Manager), and which have never been opened by the Administrator user with a previous version of Knowledge Activation installed.

Workaround

Before opening a repository for the first time ensure that the repository is not read-only, open the repository, close it again, then reset its read-only attributes.

First open of upgraded repositories may take a long time

After upgrading, it may take a long time to open the repository. Knowledge Activation needs to update Activations in the repository to the latest format.

The time this operation takes is linked to the repository size, the number of activations, the speed of the computer, and the speed of the network connection (if any).

Workaround

None. This is expected behaviour.

Activated links are broken after partial merge

After partial merge (Business Architect->File->Import), imported Activation links are broken because the Knowledge Centre the resources link to is not present.

This will only happen if the receiving repository does not already contain the same Knowledge Centre definition (with identical identifier).

Workaround

Ensure the receiving repository has the Knowledge Centre definition. This is best achieved through the working practice of partially merging satellite repositories into a master repository where the Knowledge Centre is initially defined. Satellite repositories should initially be created from the master using full integration once all Knowledge Centre definitions have been created.

Multiple select in the explorer bar

Several elements can be selected together in the Mood Business Architect explorer bar. If the pop-up menu is displayed while several elements are selected, then there is an activation option. Clicking this option will only activate the element that was selected last.

Workaround

Do not use multiple select to activate several elements at once.

Microsoft Visio® Business Integration Activator

Matrix and Measure properties not supported

Matrix and Measure properties are not included in the output as there is no place in Visio to represent these properties. Formatted text, Reference, Inputs and Outputs and Simple type properties are included as custom properties of the Visio shape.

Incorrect shape size

Some Visio shapes may not be the correct size. Models from some repositories upgraded from older versions may not display the shapes in the document output at the right size.

Workaround

This can be worked around by resizing the elements in Business Architect.

Incorrect shape orientation

Some Visio shapes may not be oriented correctly. Any element that has been rotated in Business Architect will not be shown rotated in the output document.

Workaround

There is no known work around for this apart from not rotating elements.

Shape style

The style of the element in Business Architect may not match the style of the Visio shape, including the type of shape, and the line, text or fill style. This is the main reason for the three different types of export, each export tries to set the style of the Visio shape using a different method. It is then up to the user to select how they want the output shape to be formatted, by selecting the appropriate export activator.

On import, if the Visio shape was based on a stencil, then a style is created or matched to in the style gallery based on this stencil. This style can then be edited so all elements representing Visio shapes from the same stencil can have the same properties. The style may then be used to match back to the original stencil to recreate the shape in an export using a style master document.

Microsoft® Project Synchronization Activator

The export activator is not intended for creating new MPP files from existing project data

It is designed to create MPP files for data that is original to Mood.

If you do export data brought in from Project, some information will be missing from the new file. For example, the project start date in the original project is not copied into your new file. Similarly, calendar and shift information will be missing, which may affect the duration and start dates of tasks.

Synchronization Activator Technologies

Localhost isn't recognized when configuring Manage Connections

You may be unable to communicate with SQL Server when specifying *localhost* in the Manage Connections dialogs.

Workaround

Try using the machine name MACHINENAME or 127.0.0.1 (adding the \instancename if required), or use SQL Server Configuration Manager to enable named pipes as a connection protocol.

Selecting Ranges In Excel - general

As of Mood 16.057, the Excel Range selector interface, which enables the user to specify the cell ranges and headers from Microsoft Excel spreadsheets, has been modified to use an internal engine in preference to Microsoft Excel's Interop API. This should provide a faster start-up time and prevent Excel.exe appearing in your list of running tasks.

However, if you encounter problems using the internal engine, it is possible to instruct Business Architect to use Excel first, in preference to the internal engine.

This instruction is specified in a Windows Registry Key value which may exist in the Current User or Local Machine sections of the registry. (Using the Regedit application)

Under

```
Computer\HKEY_CURRENT_USER\Software\MooD International\Business Developer\16.0  
Computer\HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\MooD International\Business  
Developer\16.0
```

Create a sub key called `ExcelSelector`

Within the key create a string value called `TryUseExcel`

Modify the Data of this value to say `On` to use Excel, or `Off` to not use Excel. (Off is the default).

The Current User key, if it exists, will take precedence over the Local Machine key.

If you do not have permission to use RegEdit, you can copy all the following text and save as a .reg file.

```
Windows Registry Editor Version 5.00  
  
[HKEY_CURRENT_USER\Software\MooD International\Business Developer\16.0\ExcelSelector]  
  
"TryUseExcel"="On"
```

Then, open a command prompt and assuming your file is called `useExcel.reg` located in `c:\temp`

```
Reg.exe import c:\temp\exceluse.reg
```

Using SAT with Microsoft Access 2010 .accdb format files

If SAT does not recognize the `.accdb` file format, you need to install the Microsoft Access Database Engine 2010 32 bit Redistributable from this location:

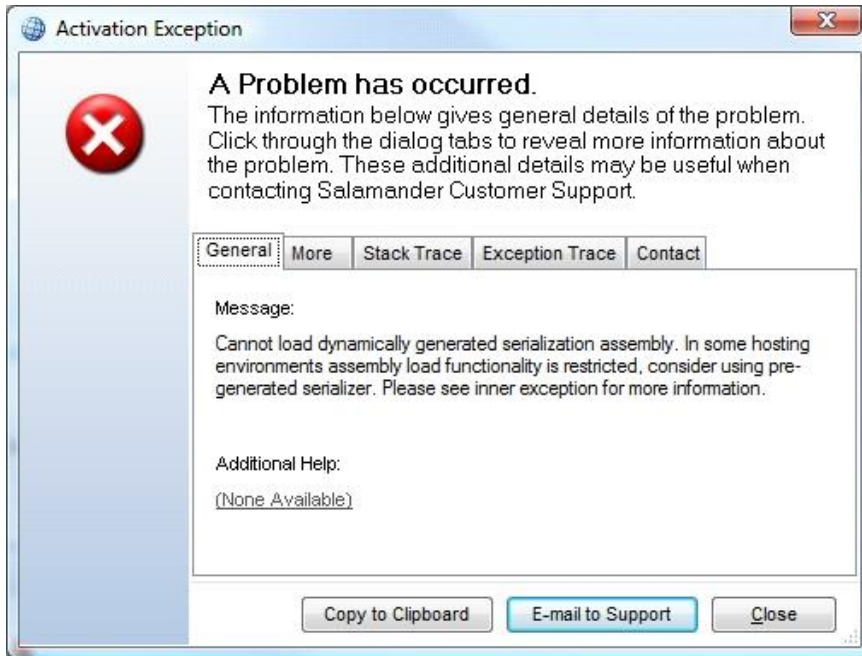
<http://www.microsoft.com/en-gb/download/details.aspx?id=13255>

If you have a 64 bit version of Office installed, you need to run this installer from the command line using the `/passive` option ([see here](#)):

```
AccessDatabaseEngine.exe /passive
```

Saving Synchronization Activations creates temporary assemblies in the TEMP folder

Synchronization activators use Microsoft .NET Framework® XmlSerialization to save serialization activations. The use of XmlSerialization creates and executes assemblies in the **TEMP** folder. If a policy has been set which prevents execution of assemblies in the **TEMP** folder, saving synchronization activations will fail and the following error will be shown:



Workaround

To change this location modify **MooD.exe.config** in your MooD installation folder and add the **system.xml.serialization** section as below (note the double \\ when specifying folder paths):

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
<system.xml.serialization>
<xmlSerializer tempFilesLocation="c:\\tempfolder"/>
</system.xml.serialization>
</configuration>
```

Excel imports may unexpectedly clear fields or create empty measures

Excel formats that include either hierarchies or metric grids may clear fields or create empty measures unexpectedly. This occurs when either a hierarchy has been compressed (Fig a) or a metric grid has missing entries (Fig b).

	A	B	C	D
1	Continent	Country	City	Value
2	Europe	England	London	10,000

Fig a Compressed Hierarchy

	A	B	C	D
1	Name		2006	2007
2	London	Sales	15	20
3		Return	20	30
4	York	Sales	9	12

Fig b Missing Metric Values

It is not always obvious that fields on the record description may not actually be specified within the source data. Those which are undefined will be cleared within Mood. In the above examples (Fig a) the Value field for Europe and England will be cleared, in (Fig b) the Return 2006 & Return 2007 fields for York will be cleared.

Workaround (Hierarchy)

Specify all the data explicitly, where each row represents a single hierarchical element with a defined value. Alternatively run 2 separate imports, the 1st importing a hierarchy, the 2nd importing values for elements, skipping elements if necessary by excluding them from the source data.

Workaround (Metric)

Ensure all the metric values are specified explicitly, or run individual imports for each measure, skipping elements if necessary by excluding them from the source data.

Imported themes not visible

If an import is used to add new themes to a repository, the new themes are not visible in Mood Business Architect until it is restarted. This is because the list of themes is not refreshed in Mood Business Architect.

Workaround

Close then reopen the repository. The newly created themes will then be visible.

XML exports may take a long time to complete

Using an Activator that exports data from the repository may take a long time to complete. The time the export operation takes is linked to the size of the repository, not the size of the tree being exported. Export Activators create an XML representation of the entire repository before transforming this into the desired format, so larger repositories will take longer to perform exports.

Workaround

None, this is expected behaviour.

XMI® Business Integration Activator

Rational Rose XMI not imported into Mood

If a UML Model in Rational Rose has been exported into XMI using version 1.3.4 or above of the Unisys XML Tools for Rational Rose, then the XMI will not be imported into Mood Business Architect. This is due to the fact that the targeted version of the Unisys XML Tools is 1.3.2.

Workaround

Use version 1.3.2 of the Unisys XML Tools for Rational Rose to export UML models into XMI.

Business Integration Engine

Business Integration Engine Requirements

Business Integration Engine requires that Mood is installed beforehand and also requires a specific Server Licence. The Licence must be installed via Repository Manager as **Administrator** and then applied to **All Users**.

When installing the Business Integration Engine, the background service will automatically start before you have the opportunity to install a licence. Thus, after you have configured a valid licence you may need to restart the **Business Integration Engine 16** service in the *Windows Services* applet.

Business Integration Engine and Active Enterprise do not support licence server based licensing

Business Integration Engine and Active Enterprise do not support licence server based licensing. To correctly license these services you should request a node locked licence from Mood Support. This is by design.

Scheduling certain synchronizations will fail on Windows 7

Synchronizations affected: Microsoft PowerPoint export, Microsoft Project import and export, and Document export

Using the Business Integration Engine to schedule updates of an activator which uses any of the above synchronizers will fail when Business Integration Engine is hosted on Windows 7 or earlier.

Windows EventViewer will show the following error in the Application log when the schedule executes:

System.Runtime.InteropServices.COMException

MooD Licence Server

MooD Licence Server Requirements

The MooD Licence Server requires that MooD is installed beforehand and also requires a specific Server Licence. The Licence must be installed via Repository Manager as **Administrator** and then applied to **All Users**.

When installing the Licence Server, the background service will automatically start before you have the opportunity to install a licence. Thus, after you have configured a valid licence you *may* need to restart the **MooD Licence Server** service in the Windows *Services* applet.

MooD SSIS Execution Synchronizer usage and guidance

The MooD (SQL Server) *SSIS Execution Synchronizer* can be used to execute SSIS packages on local or remote SQL Server Integration Services instances.

Some actions may be necessary when building the environment to enable SSIS synchronizers to access the SSIS packages. The nature of these actions differs according to the version of the SSIS instance and whether the target SSIS instance is on the same machine as MooD, or on a remote machine.

The steps necessary to enable the synchronizer to access the SSIS package will differ according to the version of the SSIS instance and whether the instance is installed on the local or a remote server.

Execute SSIS packages on SSIS 2008 R2 on local machine

Prerequisites on local machine:

- MooD
- SQL Server 2008 R2 with “Integration Services” and “Client Tools Connectivity”

In the SSIS Execution synchronizer, use the ‘local’ SSIS Connection.

Execute SSIS packages on SSIS 2012 on local machine

Prerequisites on local machine:

- MooD
- SQL Server 2012 with “Integration Services” and “Client Tools Connectivity”
- Install the MooDSSISExecution service for SQLServer 2012 as detailed below.

In the MooD Repository, from the **Synchronizers** library, create a new SSIS Connection to the local machine (as though it were a remote machine). Provide the server details for the local machine and specify the port on which the MooDSSISExecution service is listening.

Execute SSIS package on SSIS 2008 R2 on remote machine

Prerequisites on local machine:

- Mood

Prerequisites on remote machine:

- SQL Server 2008 or 2008 R2 with “Integration Services” and “Client Tools Connectivity”
- Install the MoodSSISExecution service for SQLServer 2008 R2 as detailed below.

In the Mood Repository, from the **Synchronizers** library, create a new SSIS Connection to the remote machine. Provide the server details for the remote machine and specify the port on which the MoodSSISExecution service is listening.

Execute SSIS package on SSIS 2012 on remote machine

Prerequisites on local machine:

- Mood

Prerequisites on remote machine:

- SQL Server 2012 with “Integration Services” and “Client Tools Connectivity”
- Install the MoodSSISExecution service for SQLServer 2012 as detailed below.

In the Mood Repository, from the **Synchronizers** library, create a new SSIS Connection to the remote machine. Provide the server details for the remote machine and specify the port on which the MoodSSISExecution service is listening.

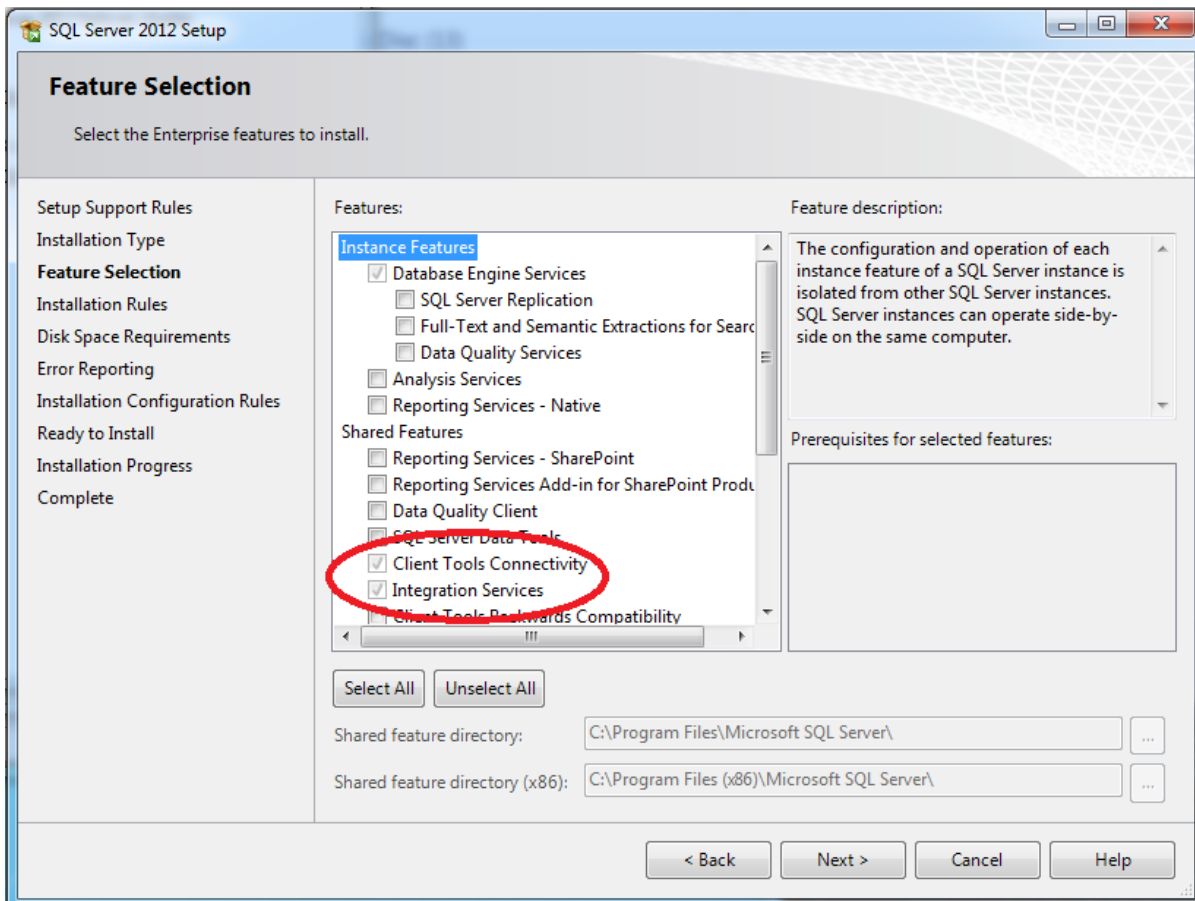
Execute SSIS package on SSIS 2014 or above

Instructions as per SSIS 2012.

SQL 2016 must be version 13.0.4199.0 (SP1) or above.

Installing SQL Server “Integration Services” and “Client Tools Connectivity”

The “Integration Service” and “Client Tools Connectivity” features can be installed from SQL Server installation media.



Installing MoodSSIS Execution service

The Mood SSIS Execution service must have access to the Microsoft.SQLServer.ManagedDTS.dll assembly and any dependencies. By installing the SQL Server “Client Tools Connectivity” these assemblies will be installed to the Global Assembly Cache and hence be available to the service on the machine. It should be installed on the SQL Server machine, and enables the BIE Engine to communicate to the SQL/SSIS server wherever it may be.

If the “Client Tools Connectivity” features have just been installed, the machine may need to be restarted to ensure these assemblies are available.

Delete the MoodSSISExecution.exe.config file

If the MoodSSISExecution service has already been installed, uninstall it prior to deleting the config file.

Locate the MoodSSISExecution.exe.config file in an installed version of Mood 16. On a default installation, it can be found in the following location:

```
C:\Program Files (x86)\Mood\16\Business Activation\MoodSSISExecution.exe.config
```

Delete this file.

Install MoodSSISExecution service

On the machine on which the SSIS packages will be run, open a command prompt as administrator.

In the command prompt navigate to the folder which contains the MoodSSISExecution.exe file

```
cd "C:\Program Files (x86)\MooD\16\Business Activation"
```

And execute the MoodSSISExecution with appropriate flags

i.e. For SQLServer 2008

```
MooDSSISExecution /install 2008
```

This will install the MoodSSISExecution service which will listen on port 50016 by default.

It will also create a new version of the MoodSSISExecution.exe.config file. This file is required for operation of the service.

Changing the MoodSSISExecution service port

The default port for the SSIS execution service is 50016, being the same as the default port for BIE.

If it is necessary to install the service on a machine which must also run an instance of BIE, it will be necessary to change the port on which the MoodSSISExecution service is listening.

This can be done by modifying the config file after the service has been imported.

Stop the MoodSSISExecution service (if running).

In the directory in which the MoodSSISExecution.exe was installed, a file named MoodSSISExecution.exe.config will have been created.

Open MoodSSISExecution.exe.config in an xml or text editor add or change the appSettings section as follows:

```
<configuration>
...
<appSettings>
    <add key="port" value="<yourPortValue>" />
</appSettings>
...
</configuration>
```

In the same directory create a copy of the MoodSSISExecution.exe.config file and rename it to be SSISExecution.exe.config

Restart the MoodSSISExecution service.

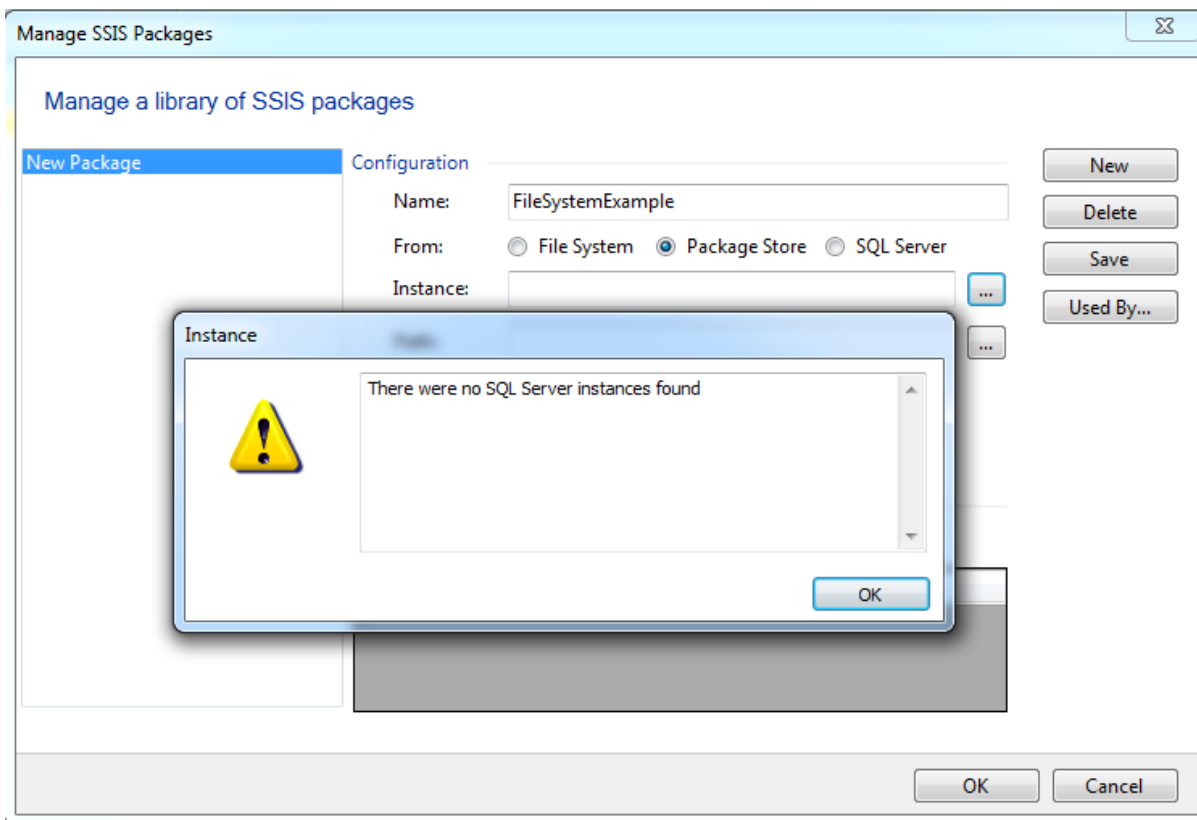
Uninstalling the MoodSSISExecution service

To uninstall the MoodSSISExecution service, locate the MoodSSISExecution.exe file from which the service was installed. Run the executable and the service will be uninstalled.

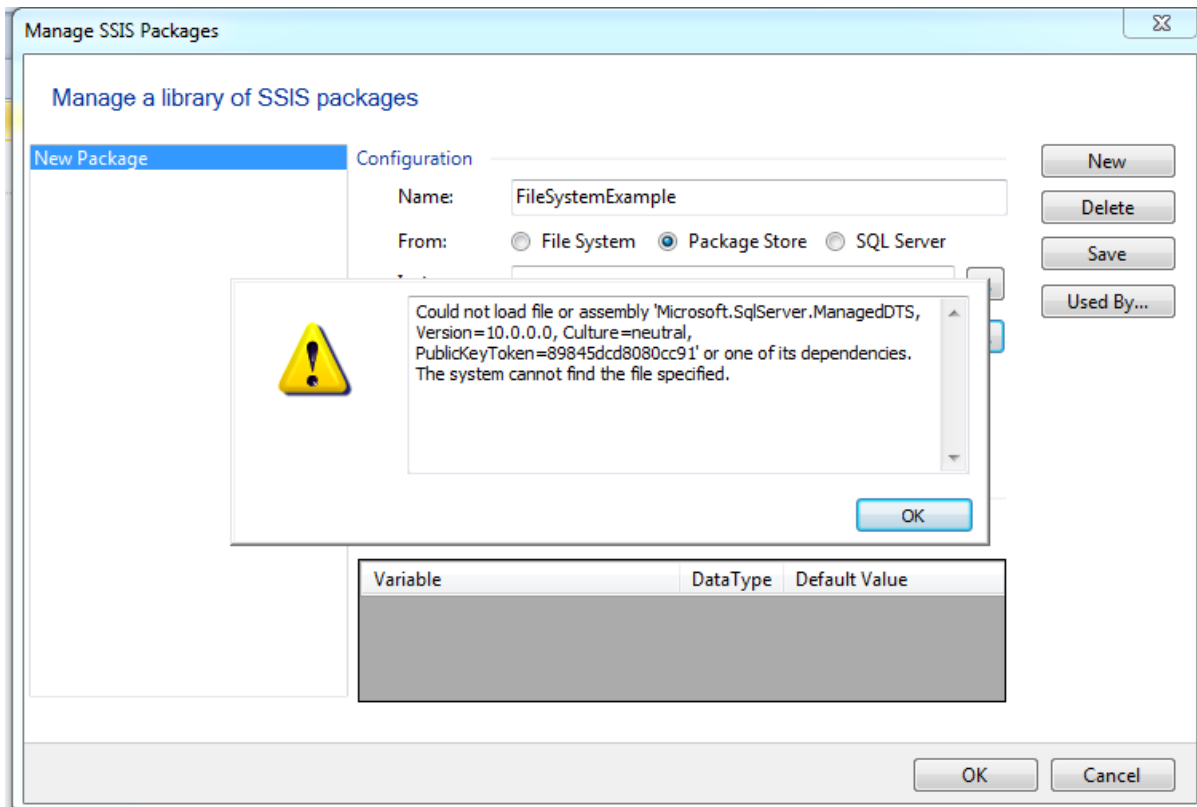
Known issues with SSIS Package configuration on Mood

When the machine which is hosting Mood does not have SQL Server connectivity tools installed, the following behaviours can be encountered when configuring SSIS packages in the 'Manage SSIS Packages' dialog:

'No SQL Server instances found' message when using '...' button to help search for SSIS instances:



Exception when trying to inspect instance for available packages:



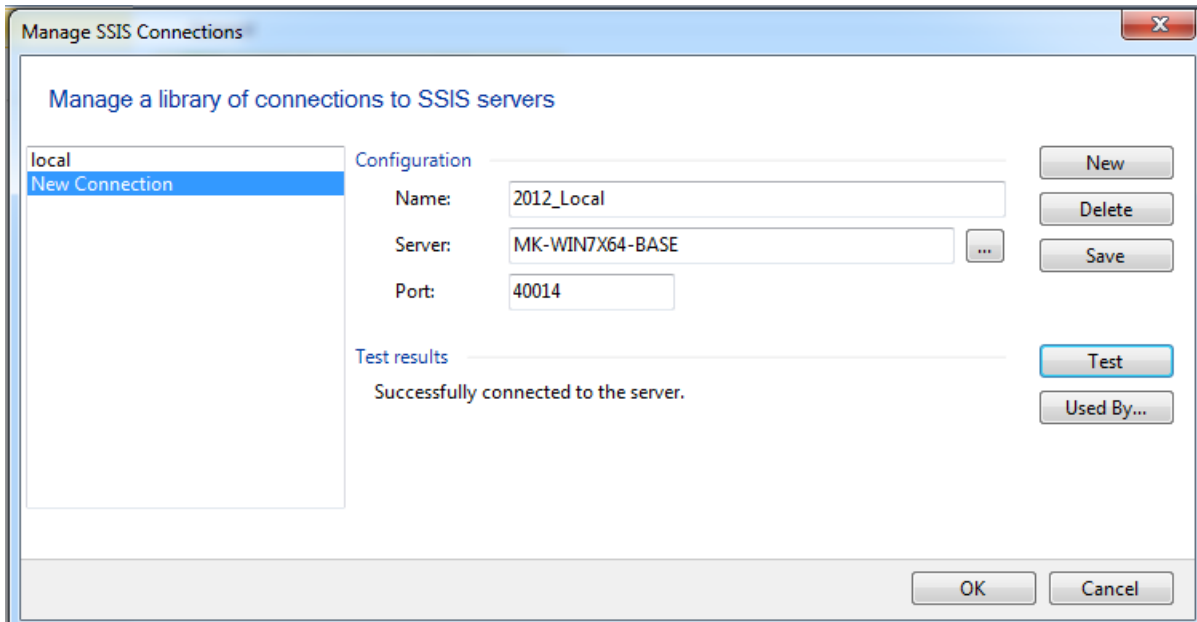
Both behaviours are due to Mood expecting to find the SQL Server connectivity tools which are not available on the server. The values for both fields may be entered manually.

Screenshots from configuration of SSIS Connection and SSIS Package on Mood

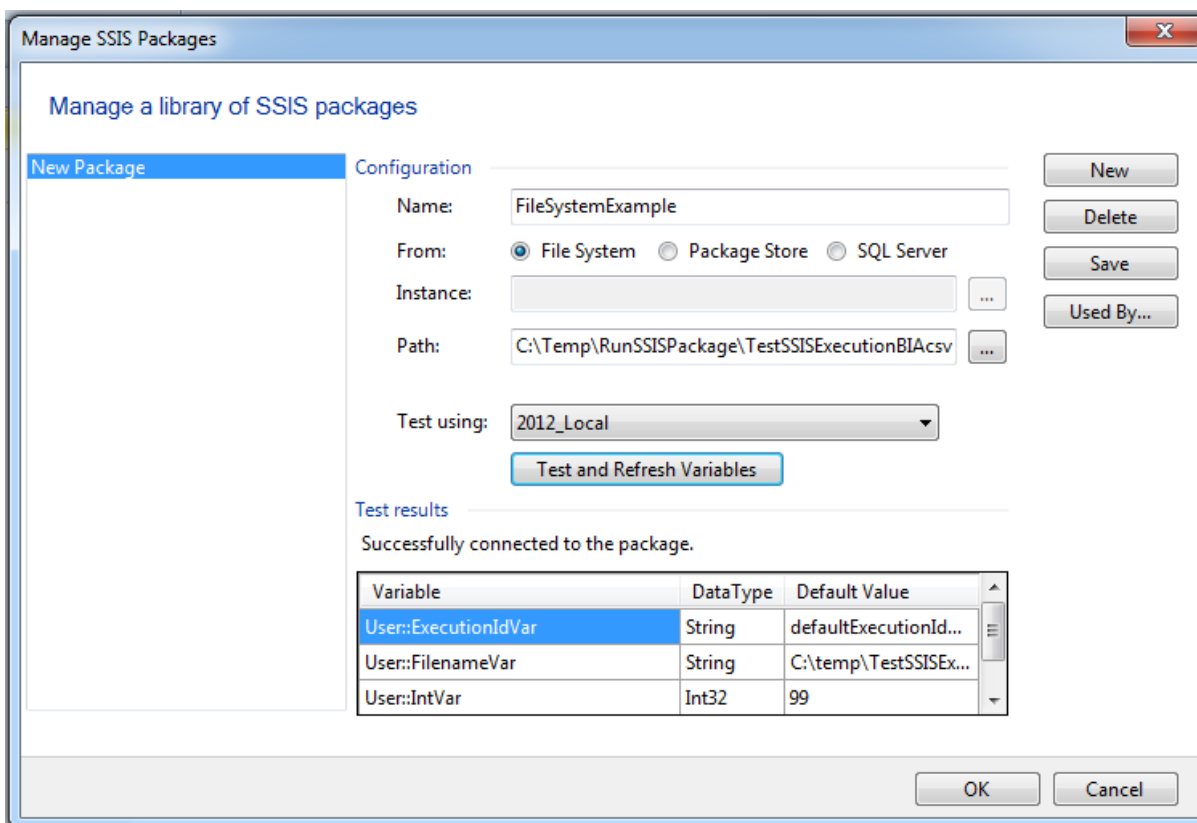
The following screenshots are taken from a sample deployment against SQLServer 2012 on the local machine.

Manage SSIS Connections:

Note the non-default port setting.



Manage SSIS Packages:



System Requirements

Below are the client requirements for Business Architect. See the [next page](#) for the server requirements for the Web presentation layer.

Please note, if you are performing expensive database queries, or generating large reports or manipulating high resolution graphics – specifications need to account for this with appropriate and available RAM, CPU, GPU and Hard drive capacity. If using virtualization, use these specifications as a rough guide for initial sizing, and re-provision as demand grows.

Minimum Client requirements for Business Architect

Note: If the client installation requires a database server, the minimum specification of the database server should be added to the Business Architect requirements, and provide storage for predicted growth.

- Processor: 2GHz 32-bit or 64-bit processor with at least two cores
- Memory: 1GB free RAM, after the operating system has loaded.
- Display: 1024x768 or greater, 16bit colour depth or greater
- Hard disk: 2GB free for installation

Workstation Operating Systems supported:

- Microsoft Windows 7® SP1
- Windows 8.1® with S14 update(KB2919355).
- Windows 10 Version 1511 **Build 10586.36** or above.
 - For earlier versions of Windows 10 please install [.NET4.6.1](#) first.
 - To discover your version information, In the *Start/Windows* menu type *winver* and press enter.

Browsers supported (we encourage use of the latest version of each of these browsers and may not be able to support older versions i.e. Chrome 49.x, Edge v13.x may not be compatible):

- Microsoft Internet Explorer® 11, Edge, Edge v79+ (Chromium)
- Google Chrome

Additional components installed:

- Microsoft .Net 4.6
- Microsoft Core XML 6 Services SP2
- Microsoft SQL Server 2008 R2 Native Client Driver
- Microsoft SQL Server compact edition 3.5
- Microsoft Visual C++ 2017 Redistributable (x86 14.16.27012) (installs faster when all windows updates have been applied).

Databases supported:

- Microsoft® SQL Server 2008 R2, 2012, 2014, 2016 SP1+, 2017, 2019.
 - If the client machine is used to develop Mood repositories on-the-go, with a local installation of Microsoft SQL Server Express, then the SQL Server version should match the eventual deployment server version. For example, if your Solution will be deployed on SQL Server 2012, install SQL Server Express 2012.

- We recommend adding full text indexing services to your server instance; even on Express versions (download the 'Advanced Services' version of the installer).
- We recommend using the latest service pack available.

Typical Server requirements for the Presentation Layer (Active Publisher, Business Integration Engine)

Typical hardware (assuming one average sized Mood Repository with 50 users, and no other major services/apps contending for resources, and SQL Server not on the same machine):

- 2 x XEON X5675 6 Core 3.06GHz processors.
- 12 GB RAM.
- 2GB free hard disk space for installation, 10GB free for operational working
- 1 gigabit LAN card

Typical software:

- Microsoft Windows Server® 2016 64bit
- (if required) Microsoft Office® 2007, Microsoft Office 2010 or Microsoft Office 2013
- The appropriate MS SQL Native Client Driver

Operating systems supported:

- Microsoft Windows Server 2008 R2 SP1 64bit
- Microsoft Windows Server 2012 with S14 update(KB2919355)
- Microsoft Windows Server 2012 R2 with S14 update(KB2919355)
- Microsoft Windows Server 2016
- Microsoft Windows Server 2019

Typical Server requirements for the Database Layer

For ultimate security and flexibility, production databases are often housed on a different machine to the Web Server, and thus the latency between web server and database needs to be low, and storage subsystems configured appropriately for the workloads required. Each repository requires careful capacity consideration for data imports, daily usage, log file storage and growth.

Versions of SQL Server

- Non-express versions of Microsoft SQL Server 2008 R2, 2012, 2014, 2016 SP1+, 2017,2019
- Full Text Indexing must be installed (see below for more information)
- Operating systems as per the Presentation Layer, constrained by SQL Server's requirements.
- Tips:
 - As of SQL 2016 TempDBs are typically allocated correctly, but on older versions, ensure one TempDB is created per processor core.
 - Ensure all TempDBs have an identical initial size and fixed growth factors. (Rather than percentage based).

- Enable TCP/IP protocols in SQL Configuration manager for the server if you use different machines for SQL and presentation layer.
- Enable the Named Pipes protocol if using 'localhost' in connections.
- If you do not need point-in-time recovery, consider changing database recovery models to 'Simple', and taking regular backups yourself. 'Full' recovery model is disk intensive.

Typical Hardware (increase or decrease based on analysis of queries and user loads)

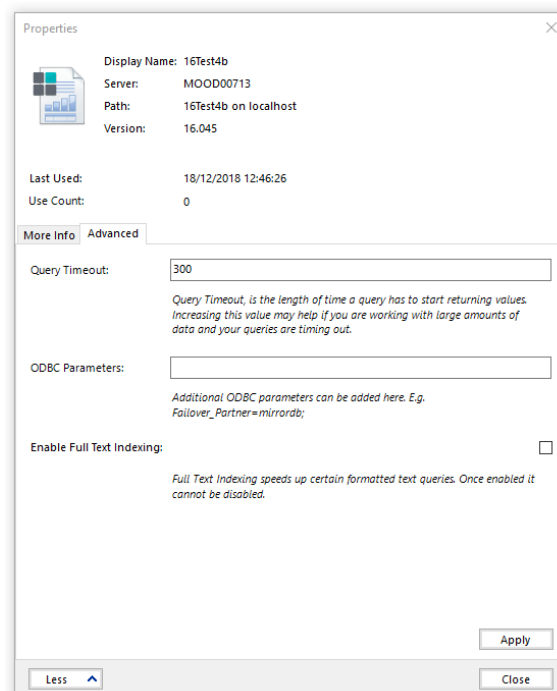
- 4 cores (3.06GHz processors).
- 16 GB RAM.
- 1 gigabit LAN card
- At least 3500 Read I/O per second, 1000 Write I/O per second, measured by Microsoft [DskSpd](#).
- Note: In comparison, 50k read and 15k write I/O per second is not uncommon for a modern laptop & Solid State Drive.

Full Text Indexing and SQL Server

To improve performance for certain Mood Queries which search through Formatted text field values, full text indexing (FTI) services should be installed when SQL Server is installed.

If you are using queries with Formatted text fields and your server is not enabled for FTI, Mood Business Architect will warn you via the Welcome Screen, Mood Repository Manager will warn you in the Advanced Properties page, and when visiting the Active Enterprise page *status.aspx*.

Our support team has put together [this article](#) (account required) to guide you through the process of installing and enabling FTI after installation. In addition, if services are installed but the feature is not enabled in the Mood Repository, Mood Repository manager can enable FTI from the Advanced properties dialog:



Further Information and Contact Details

MooD has a UK based technical support team. The contact details are:

Email: support@moodinternational.com

Telephone: +44 (0) 1904 717 316

Web: <http://www.moodinternational.com/>

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 - 3.1 Save as expressly stated in this Licence, the User shall not acquire any interest in any of the Intellectual Property Rights of Mood International or of its licensors (including, without limitation, the licensors of Licensed Third-party Products). The User agrees not to use Mood International's logos, trade names or trademarks on User Software Products on any marketing material or otherwise, but will include the following statement "This Software Product is powered by Mood® from Mood International" or alternative text agreed in writing with Mood International on its User Software Products or marketing material which encompass or refer to the Mood® Technology.
 - 3.2 The User agrees that any distribution or sub-licensing of the User Software Products will be subject to an end-user agreement the terms of which shall be provided by and agreed with Mood International.
 - 3.3 The User shall indemnify and keep Mood International indemnified against all costs, expenses, damages or losses suffered or payable by Mood International in relation to the User Software Products and to defend Mood International at the User's own cost against any such actions.
- 4. Licensed Third-Party Products**
 - 4.1 Mood® Technology may use Licensed Third-party Products.
 - 4.2 Third-party Products are supplied "as-is", with no warranties from Mood International. This means no express, implied or statutory warranty, including without limitation, warranties of merchantability or fitness for a particular purpose or any warranty of non-infringement.
 - 4.3 The User agrees not to remove any Licensed Third-party Products' copyright/trade mark notices included with Mood® Technology.
 - 4.4 Neither Mood International nor the owner or licensor of Licensed Third-party Products will be liable for any of indirect, special, consequential, or incidental damages resulting from the use of the Licensed Third-party Products or Mood® Technology.
 - 4.5 Nothing in this Licence shall be deemed to transfer, assign or otherwise vest any of the Licensed Third-party's rights (including any Intellectual Property Rights) in the User (or any other third party).
 - 4.6 Licence to use Licensed Third-party Products expires with this Licence.
 - 4.7 The User agrees to reproduce and include the notices in clauses 4.1, 4.2, 4.3, 4.4, 4.5, 4.6 and 4.7 on all copies of Mood® Technology.
 - 4.8 The User shall indemnify and keep Mood International indemnified against all costs, expenses, damages or losses suffered or payable by Mood International arising from the User's use of the Licensed Third-party Products beyond the terms of this Licence and to defend Mood International at the User's own cost against any such claims.
- 5. Software Warranties and Limits of Liability**

- 5.1 During the period of ninety days ("**Warranty Period**") following delivery of a particular element of Mood® Technology, Mood International will make reasonable efforts to correct any fully documented Non-Conformity in that element of Mood® Technology. If, within the Warranty Period, the User notifies Mood International in writing of any Non Conformity, and such Non Conformity does not result from the User, or anyone acting with the authority of the User, having amended the Mood® Technology or used it outside the terms of this Licence, for a purpose or in a context other than the purpose or context for which it was designed or in combination with any other software not provided by Mood International, then Mood International shall, at its option, do one of the following:
- 5.1.1 repair the Non-Conformity in the Mood® Technology; or
- 5.1.2 replace the Mood® Technology provided; or
- 5.1.3 terminate this Licence immediately by notice in writing to the User and refund any of the Licence Fee paid by the User as at the date of termination (less a reasonable sum in respect of the User's use of the Mood® Technology to the date of termination) on return of the Mood® Technology and all copies thereof, in all cases, provided that the User provides all the information that may be necessary to assist Mood International in resolving the Non Conformity, including sufficient information to enable Mood International to re-create the Non Conformity.
- 5.2 The remedy set out in clause 5.1 shall constitute the User's sole remedy in relation to any Non-Conformity and shall be subject to the User complying with its obligations hereunder.
- 5.3 All other conditions, warranties or other terms which might have effect between the parties or be implied or incorporated into this Licence or any collateral contract, whether by statute, common law or otherwise, are hereby excluded so far as is permitted in relevant applicable law, including, without limitation, the implied conditions, warranties or other terms as to satisfactory quality, fitness for purpose or the use of reasonable skill and care.
- 5.4 Mood International does not warrant that the Mood® Technology will meet the User's requirements or that the operation of the Mood® Technology will be uninterrupted or error free or that defects will be corrected. Mood International shall also not be responsible for any failure by the Mood® Technology to provide any functions not specified in the Release Notes.
- 5.5 The exclusions set out in this Licence shall apply to the fullest extent permitted by the law provided that nothing shall limit Mood International's liability for: death or personal injury caused by its negligence or that of its officers, employees, contractors or agents; for fraud; for breach of the obligations implied by section 12 Sale of Goods Act 1979 or section 2 Supply of Goods and Services Act 1982, or for any other liability which may not be excluded by law.
- 5.6 Mood International shall have no liability to the User (or any person claiming under or through the User) for:
- a. any indirect, special, punitive, incidental, exemplary or consequential loss or damage;
 - b. any loss of profits, anticipated savings, turnover, business opportunity or damage to goodwill (whether direct or indirect); nor
 - c. any loss of data.
- Even if Mood International has been advised of the possibility of such damages.
- 5.7 Mood International's total aggregate liability, whether under this Licence or any collateral contract, in respect of loss or damage to the User's tangible property caused by the negligence of Mood International, its officers, employees, contractors or agents, shall not exceed five hundred thousand pounds.
- 5.8 Notwithstanding clause 5.6 Mood International's total aggregate liability, whether in contract, tort or otherwise and whether in connection with this Licence or any collateral contract, shall in no circumstances exceed a sum equal to the Licence Fees actually paid by the User to Mood International under this Licence.
- 5.9 The User accepts that the exclusions and limitations detailed above are reasonable and reflect the nature and application of the Mood® Technology, and are reflected in the Licence Fee.
- 6. Modifications**
- 6.1 The User recognises that modifications and upgrades to Mood® Technology pursuant to clauses 5.1.1, 7.8 or under the Support and Maintenance Agreement may affect their performance or functionality.
- 6.2 Subject to the provision of reasonable written notice to the User, Mood International reserves the right to amend the terms and conditions of this Licence and the accompanying Release Notes upon receipt by the User of the modifications and upgrades to Mood® Technology referred to in clause 6.2 above.
- 7. User Responsibilities and Acknowledgments**
- 7.1 The User will endeavour, subject to security constraints, to provide Mood International or its agent with all information considered necessary by Mood International to diagnose and remedy any Non Conformity or defect or alleged defect in Mood® Technology.

- 7.2 The User shall be responsible for providing proper and accurate operating methods, security, data input, back up, restart procedures and power supply.
- 7.3 The User agrees to reproduce and include any Mood International copyright and confidentiality notices on all copies of Mood[®] Technology.
- 7.4 The User recognises that the effective use of the Mood[®] Technology is dependent on proper training and compliance with good computer practices, which the User shall be responsible for implementing.
- 7.5 The User agrees to notify Mood International (or their licensed distributor) immediately if the User becomes aware of any unauthorised use or violation of the Mood[®] Technology by any person.
- 7.6 Other than in relation to Licensed Third-party Products, this Licence does not include any right to use Third-party Products including those required or utilised by Mood[®] Technology. User agrees to obtain, as required, such Third-party Products licences at their own expense.
- 7.7 Should the User fail to perform any of its responsibilities under this Licence then Mood International will not be responsible for any delay, expense or other consequences arising from such failure, and the client shall reimburse Mood International for any costs or expenses incurred due to such failure.
- 7.8 The User acknowledges that during Licence Activation the Mood[®] Technology will send information about the Hardware Device and the software on it to Mood International and the User consents to the transmission of this information.
- 7.9 During Licence Activation, Mood[®] Technology may modify components of the Mood[®] Technology installed on the designated Hardware Device and the User hereby consents to those modifications which shall not significantly affect the functionality of the Mood[®] Technology otherwise than as notified to the User by Mood International.
- 7.10 The User acknowledges that no representations were made prior to entering into this Licence. The User agrees that, in entering into this Licence, it did not rely on any representations (whether written or oral) of any kind or of any person other than those expressly set out in this Licence. The User shall have no remedy in respect of any representation (whether written or oral) made to it on which it relied in entering into this Licence and Mood International shall have no liability otherwise than pursuant to the express terms of this Licence

8. Intellectual property rights

- 8.1 The User acknowledges that all Intellectual Property Rights in the Mood[®] Technology (including without limitation all upgrades, enhancements and modifications) belong and shall belong to Mood Enterprises, and the User shall have no rights in or to the Mood[®] Technology other than the right to use it in accordance with the terms of this Licence.
- 8.2 Mood International undertakes at its own expense to defend the User or, at its option, settle any claim or action brought against the User alleging that the possession, use, development, modification or maintenance of the Mood[®] Technology (or any part thereof) in accordance with the terms of this Licence infringes the UK Intellectual Property Rights of a third party (**Infringement Claim**) and shall be responsible, subject to clause 5, for any reasonable losses, damages, costs (including legal fees) and expenses incurred by or awarded against the User as a result of or in connection with any such Infringement Claim. For the avoidance of doubt, clause 8.2 shall not apply where the Infringement Claim in question is attributable to possession, use, development, modification or maintenance of the Mood[®] Technology (or any part thereof) by the User other than in accordance with the terms of this Licence or use of a non-current release of the Mood[®] Technology.
- 8.3 Clause 8.2 is conditional on:
- 8.3.1 the User notifying Mood International in writing, as soon as reasonably practicable, of any Infringement Claim of which it has notice;
- 8.3.2 the User not making any admission as to liability or compromise or agreeing to any settlement of any Infringement Claim without the prior written consent of Mood International, which consent shall not be unreasonably withheld or delayed; and
- 8.3.3 Mood International having, at its own expense, the conduct of or the right to settle all negotiations and litigation arising from any Infringement Claim and the User giving Mood International all reasonable assistance in connection with those negotiations and such litigation at Mood International's request and expense.
- 8.4 If any Infringement Claim is made, or in Mood International's reasonable opinion is likely to be made, against the User, Mood International may at its sole option and expense:
- 8.4.1 procure for the User the right to continue using, developing, modifying or maintaining the Mood[®] Technology (or any part thereof) in accordance with the terms of this Licence; or
- 8.4.2 modify the Mood[®] Technology so that it ceases to be infringing; or
- 8.4.3 replace the Mood[®] Technology with non-infringing software; or
- 8.4.4 terminate this Licence immediately by notice in writing to the User and refund any of the Licence Fee paid by the User as at the date of termination (less a reasonable sum in respect of the User's use of the Mood[®] Technology to the date of termination) on return of the Mood[®] Technology and all copies thereof, provided that if Mood International modifies or replaces the Mood[®] Technology, the modified or replacement Mood[®] Technology must comply with the warranties contained in clause 5.1 and the User shall have the same rights in respect thereof as it would have had under those clauses had the references to the date of this Licence been references to the date on which such modification or replacement was made.
- 8.5 The User hereby agrees to indemnify Mood International against any claims, damages, legal costs and judgments arising from the User's use of the Mood[®] Technology beyond the terms of this Licence.

9. Term and Termination

9.1 Either party may terminate this Licence at any time on written notice to the other if:

9.1.1 the other is in material or persistent breach of any of the terms of this Licence and either that breach is incapable of remedy, or the other party fails to remedy that breach within 30 days after receiving written notice requiring it to remedy that breach;

9.1.2 the other is unable to pay its debts (within the meaning of section 123 of the Insolvency Act 1986), or becomes insolvent, or is subject to an order or a resolution for its liquidation, administration, winding-up or dissolution (otherwise than for the purposes of a solvent amalgamation or reconstruction), or has an administrative or other receiver, manager, trustee, liquidator, administrator or similar officer appointed over all or any substantial part of its assets, or enters into or proposes any composition or arrangement with its creditors generally, or is subject to any analogous event or proceeding in any applicable jurisdiction; or

9.1.3 if an Event of Force Majeure continues for 60 days.

9.2 MooD International may terminate this Licence:

9.2.1 at any time upon written notice to the User in the event that the User initiates formal legal proceedings that challenges the validity of MooD Enterprises' Intellectual Property in the MooD® Technology;

9.2.2 if an applicable Licence Fee is not paid within 60 days of receipt of MooD International's invoice in relation to the same; or

9.2.3 if the User fails to pay fees due under the Support and Maintenance Agreement within 60 days of receipt of MooD International's invoice in relation to the same.

9.3 Termination by either party in accordance with the rights contained in clause 9 shall be without prejudice to any other rights or remedies of that party accrued prior to termination.

9.4 On termination for any reason:

9.4.1 all rights granted to the User under this Licence shall cease;

9.4.2 the User shall cease all activities authorised by this Licence;

9.4.3 the User shall immediately pay to MooD International any sums due to the MooD International under this Licence; and

9.4.4 the User shall immediately destroy or return to MooD International (at MooD International's option) all copies of the MooD® Technology then in its possession, custody or control and, in the case of destruction, certify to MooD International that it has done so.

9.5 Clauses 3, 4, 5, 7, 8, 9, 10, 11, 12, 13 and 14 shall survive such termination.

10. Prices and Payment

10.1 The User shall pay to MooD International the applicable Licence Fee in relation to each component of MooD® Technology.

10.2 Subject to clause 5.1.3, the Licence Fee shall be non-refundable.

10.3 Where payment is not made by electronic means prior to download, the Licence Fee shall be payable by the User to the account specified on MooD International's invoice and no later than 30 days following receipt of MooD International's invoice (electronic or otherwise).

10.4 MooD International shall be entitled to charge interest on late payments at a rate of [3] % above the Bank of England base rate.

10.5 Title to licences and all other rights associated with those licences, are retained by MooD International until payment in full is received.

11. Confidential Information

11.1 Neither party may disclose to any commercial third parties any commercial in confidence information received from the other in the course of implementing this Licence unless otherwise agreed in writing by the other party.

11.2 Clause 10.1 shall not apply to information which has entered the public domain or which has been obtained from a third party legitimately without restriction.

12. Force majeure

12.1 No party shall be liable to the other for any delay or non-performance of its obligations under this Licence arising from any cause beyond its control including, without limitation, any of the following: act of God, governmental act, war, fire, flood, explosion or civil commotion (an "**Event of Force Majeure**"). For the avoidance of doubt, nothing in clause 12 shall excuse the User from any payment obligations under this Licence.

13. Waiver

13.1 No forbearance or delay by either party in enforcing its rights shall prejudice or restrict the rights of that party, and no waiver of any such rights or of any breach of any contractual terms shall be deemed to be a waiver of any other right or of any later breach.

14. Severability

14.1 If any provision of this Licence is judged to be illegal or unenforceable, the continuation in full force and effect of the remainder of the provisions shall not be prejudiced.

15. Amendments

15.1 Any amendment, waiver or variation of this Licence shall not be binding on the parties unless set out in writing, expressed to amend this Licence and signed by or on behalf of each of the parties.

16. Third party rights

16.1 No term of this Licence is intended to confer a benefit on, or to be enforceable by, any person who is not a party to this Licence.

17. Notices

17.1 Any notice required to be given pursuant to this agreement shall be in writing, and shall be sent to the other party by first-class mail or fax, provided that faxes are confirmed within 24 hours by first-class mailed confirmation of a copy. Correctly addressed notices sent by first-class mail shall be deemed to have been delivered 72 hours after posting and correctly directed faxes shall be deemed to have been received instantaneously on transmission, provided that they are confirmed.

18. Entire agreement

18.1 This Licence, together with the Support and Maintenance Agreement, where applicable, contains the whole agreement between the parties relating to the subject matter hereof and supersedes all prior agreements, arrangements and understandings between the parties relating to that subject matter.

19. General

19.1 The terms and conditions of this Licence shall apply to all software and services supplied by Mood International or its agent to the User, unless subject to a subsequent agreement between the parties.

19.2 This Licence may not be assigned by the User without the prior written consent of Mood International.

19.3 This Licence may be assigned by Mood International without the prior written consent of the User.

19.4 This Licence shall be governed by English Law and subject to the non-exclusive jurisdiction of the English courts.

19.5 The Mood® Technology is protected by copyright and intellectual property laws both nationally and internationally.

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