

# Rainbow Analyst Professional Managed Deployment Guide

Mike Shallcross, 4 October 2021

## Software installation options

There are a number of options for installing the Rainbow Analyst Professional (“Rainbow”) add-in for Excel and activating a licence (if one has been purchased):

- In small organisations it will be simplest for each user to install their own copy of Rainbow. They will need to download (from <https://www.themodelanswer.com/download/>) and run the Windows installer file RainbowPro.msi. Then to activate a Rainbow licence they can click under User Guide (on the Rainbow tab) and About Rainbow and enter the relevant licence details.
- If there is a problem downloading or running the installer file, another option is to download the Rainbow add-in file from <https://www.themodelanswer.com/download/#addinfiles>. The add-in file (RainbowPro.xlam) can then be copied to the user’s add-ins folder or other convenient location, and activated through the Excel menu (e.g. Excel Add-ins on the Developer tab).
- In larger organisations the installed software base will generally be managed centrally by the IT function. The following sections of this document aim to provide the relevant technical data needed in order to implement remote deployment and configuration of the Rainbow software.

Although installation is normally straightforward, there are a number of IT configuration issues that can occasionally cause problems. These are explained in detail in the Frequently Asked Questions (FAQs) at <https://www.themodelanswer.com/support/>

## Managed deployment

Many larger organisations are using SCCM or InTune from Microsoft to automate software deployment. To enable Rainbow to work better with these Microsoft platforms, Rainbow versions from 12.4 (14 August 2021) onwards use a Windows (MSI) installer instead of the previous proprietary EXE installer.

The details of how to deploy Rainbow with SCCM or InTune will vary between organisations, but the following will be relevant:

- The RainbowPro.msi installer can be run in silent mode with the parameter INSTALL=QUIET (not case-sensitive), e.g. `msiexec /i RainbowPro.msi install=quiet`.
- Generally it should be possible to install Rainbow under InTune as a basic line-of-business (LOB) app rather than a Win32 app.
- The Rainbow licence can be activated with a registry key script as described below (under Licence activation). The RainbowPro.msi installer also supports the parameters UNAME, UEMAIL and UCODE to set up the UserName, UserEmail and UserCode registry key data.  
**PLEASE NOTE** that by using this procedure you are confirming that you and your organisation have read and accepted the Rainbow License Agreement (see Appendix) or other terms and conditions agreed between your organisation and M G Shallcross trading as The Model Answer.

- If UserName contains whitespace, the UNAME value will need double quotes, and in PowerShell the no-parse marker --% will also be needed. Alternatively ++ can be substituted for the space character.
- For example, `msiexec /i RainbowPro.msi install=quiet uname="XYZ Company" uemail=itsupport@xyzcompany.com ucode=4350-0710-8701-6949`
- Alternatively, `msiexec /i RainbowPro.msi install=quiet uname=XYZ++Company uemail=itsupport@xyzcompany.com ucode=4350-0710-8701-6949`
- By default the Rainbow installer sets up the registry key values AllowVBScript, DirectSupport, and IncludeAgrmnt (as described below under Functionality management) with data values of 1, as appropriate for an individual Rainbow user.
  - Alternatively, the installer will accept the parameter USAGE=CORPORATE to set all three values to 0, e.g. `msiexec /i RainbowPro.msi install=quiet usage=corporate`
  - For a more complex setup with a mix of 1 and 0 values, it will be necessary to use a registry key script as described below.
- If it proves necessary to make direct changes to the registry keys for licence activation and functionality management (as described below), instead of supplying parameters to the Rainbow installer (as described above), this can be done with a registry key script file.
  - Either export the relevant keys as a REG file from the Registry Editor, or create the REG script file with a text editor using the templates set out below.
  - Run the file with Administrator privileges using `regedit /s file.reg` (for local testing, open a Command Prompt window as Administrator and run this command).
- Because the Rainbow add-in file is comparatively small (around 2 MB), there is no separate process for patching the software. Updates can be installed simply by deploying an updated version of the add-in file RainbowPro.xlam to the user's add-ins folder (normally `C:\Users\[username]\AppData\Roaming\Microsoft\AddIns`). The add-in file is available for download from <https://www.themodelanswer.com/download/#addinfiles>. There is no need to change or re-initialise any of the registry keys that have already been set.

## Licence activation

The Rainbow licence can be activated remotely (without user involvement) by setting the relevant keys in the HKCU registry hive. These can be set either by supplying parameters to the Rainbow installer file (as described above), or by directly setting the required values.

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- Create registry key `HKCU\Software\VB and VBA Program Settings\RainbowAnalyst\UserDetails` and within it create the following REG\_SZ values corresponding to the licence details:
  - UserName - e.g. XYZ Company
  - UserEmail - e.g. itsupport@xyzcompany.com
  - UserCode - e.g. 4350-0710-8701-6949
- The REG file required to set the above registry values will be something like this:  
*Windows Registry Editor Version 5.00*

```
[HKEY_CURRENT_USER\Software\VB and VBA Program Settings]
[HKEY_CURRENT_USER\Software\VB and VBA Program Settings\RainbowAnalyst]
[HKEY_CURRENT_USER\Software\VB and VBA Program Settings\RainbowAnalyst\UserDetails]
"UserName"="XYZ Company"
"UserEmail"="itsupport@xyzcompany.com"
"UserCode"="4350-0710-8701-6949"
```

- The above registry values will activate the licence, and after the user next runs Excel (which will automatically load Rainbow Analyst), the Rainbow software will create further REG\_SZ values showing the licence expiry date and the Rainbow version number:
  - ExpiryDate - e.g. 12/31/2022 0:0:0
  - ExpiryPeriod - normally blank until close to the licence expiry date
  - Version - e.g. 12.4.0.0

## Functionality management

There are a few minor elements of Rainbow's functionality which may need to be managed in a corporate environment. This can be done either by supplying a parameter to the Rainbow installer file (as described above), or by directly setting the relevant values in the HKCU registry hive:

- Create registry key HKCU\Software\RainbowAnalyst and within it create the following REG\_DWORD values with data 0 (or anything other than 1):
  - AllowVBScript - This disables the two Rainbow functions that attempt to create and run a VBScript file, viz. "Check For Updates" and "Uninstall"; instead Rainbow will display a message stating that the function has been disabled.
  - DirectSupport - This removes all references (in message boxes etc. within Rainbow) to "support@themodelanswer.com" (the email address for direct support from the The Model Answer) and replaces them with references to "your local IT support team".
  - IncludeAgrmnt - This removes the final "Licence Agreement" section of the User Guide, so that the "User Guide" function only shows the preceding sections of the Guide.
- The relevant REG file will be something like this:

```
Windows Registry Editor Version 5.00
[HKEY_CURRENT_USER\Software\RainbowAnalyst]
"AllowVBScript"=dword:00000000
"DirectSupport"=dword:00000000
"IncludeAgrmnt"=dword:00000000
```

## Access to the VBA Project Object Model (VBOM)

In order for Rainbow to function fully, it needs to be able to access the Visual Basic Object Model (VBOM), or in other words, Rainbow's VBA code needs to be able to access information about the VBA Project in any workbook that is being analysed. And so when Rainbow first runs, if it finds that access to the VBOM is not enabled, it will prompt the user to turn this on by selecting File > Options > Trust Center > Trust Center Settings > Macro Settings and checking the box marked Trust access to the VBA project object model.

It is also possible to enable access to the VBOM directly through the Windows registry. The value for this option is normally stored in registry key HKCU\Software\Microsoft\Office\16.0\Excel\Security,

in a REG\_DWORD value AccessVBOM, which is set to 0 or 1 to prevent or allow access. In addition, it is possible for IT administrators to set a corresponding value in the HKLM hive of the registry, i.e. HKLM\SOFTWARE\Microsoft\Office\16.0\Excel\Security\AccessVBOM. This HKLM value (if it exists) overrides the HKCU value, and the relevant option is then greyed out (cannot be modified) in the Excel user interface.

Occasionally IT administrators may take the view that enabling access to the VBOM is a security threat, but this is very much a minority view. It is important to recognise that disabling VBOM access only prevents programmatic (e.g. VBA) access to the VBOM, and does not prevent someone from opening the VB editor and manually writing harmful VBA code. And if VBOM access is disabled, some features of Rainbow will not be available. In particular, it will not be possible to use the Data Explorer, the Macro Explorer, the Names Toolbox report and the Tidy Up Reports function. In addition there will be no interactive Help button on the reports in other functions, and the Summary Report will show "N/K" (not known) against Visual Basic modules and VB code (lines).

If for some reason it is decided to disable access to the VBOM, then (as noted above) Rainbow will display a message prompting users to enable VBOM access. It is possible to suppress this message by creating registry key HKCU\Software\VB and VBA Program Settings\RainbowAnalyst\GenlPrefers and then within this key setting up a REG\_SZ value EnableVBOM with data of 0. This can still be changed (restoring the prompt message) by setting the "Enable access to Visual Basic" option in Rainbow's Preferences, but this will not allow the VBOM access to be modified if an overriding value has been set in the HKLM hive as described above.

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