

REFINITIV WORKSPACE

INSTALLATION AND CONFIGURATION GUIDE

Workspace 1.19

Version history

Merged Windows and Citrix Guides

Software version	Document version	Summary of Changes
1.19	119.02	This version contains information about the following updates: <ul style="list-style-type: none"> – Added Appendix E – Added VMware Horizon installation guidance – Other minor changes
	119.01	This version contains information about the following updates: <ul style="list-style-type: none"> – New version of the embedded and standalone System Test application – Revised Workspace Help parameters – New Configuration Manager section and screenshot updates – Expanded information about the recommended Refinitiv Real-Time Advanced Distribution Server version – Configuration override order – Expanded list of Workspace executable statements – Added the Example domain list section – Screenshots depict the new Workspace UI
1.18	118.06	Added Example domain list section to Appendix F
	118.05	Added the Rolling back section to Appendix I: Known issues
	118.04	Addresses a minor PDF rendering issue.
	118.03	Minor change to the Shared configuration bug section.
	118.02	Footnote added to Server software versions.
118.01	The following changes have been made to the guide: <ul style="list-style-type: none"> – Software release policy and contact details – System Test can now be run from Workspace – Post installation testing of Workspace – Excel data retrieval functions – Note regarding key letters - Special characters are not supported – Bandwidth test added to System Test – Updates to the Known issues section – Updated illustrations 	
1.17	117.06	Minor change to the Shared configuration file bug section.
	117.05	Footnote added to Server software versions.
	117.04	The following minor changes: <ul style="list-style-type: none"> – DPRM settings – Uninstallation note concerning peruser installations – Conflation rate footnote
	117.03	Added sections addressing a Real-Time server disconnection issue.
	117.02	Minor change to the known issues section regarding support for local contributions.
	117.01	This PRE-RELEASE version contains the following changes: <ul style="list-style-type: none"> – Configuration Manager > Advanced menu field name change – Executable file size – New, additional Refinitiv digital signature (related to PCN 13469) – Additional detailed qualified proxy information – Technical Roadmap added to documents list – Amendment to the Known issues > Shared configuration file bug section – Added Installation types summary table to Installing Workspace section
1.16	116.02	The global release version of installation guide, which contains the following minor textual changes: <ul style="list-style-type: none"> – System test download link provided – Clarification added to Workspace executable statements

Software version	Document version	Summary of Changes
	116.01	<ul style="list-style-type: none"> – Download path for COMODO certificate added – List of Excel add-ins for 1.16 added to Microsoft Office settings – RtContribute section added to Known issues <p>The Pre-release version of installation guide, which may be subject to change</p> <ul style="list-style-type: none"> – Minor textual and graphical changes throughout – Updated bandwidth recommendations – Added section on –help parameter – Minor updates to configuration manager section – Updated documentation locations – Updated System Test tool descriptions – Added JSON coding changes to troubleshooting section – Created Known issues appendix
1.15	115.02 115.01	<ul style="list-style-type: none"> – Fixed rendering issues with the System Test screen illustration on page 6. – Removed content filtering section. – Minor textual changes. – Corrected note regarding verbosity in the uninstall command lines. – Changes and additions to Configuration Manager section: <ul style="list-style-type: none"> – Streaming conflation field. – Advanced tab content. – Updated illustrations. – Added Vendor Subservice Definitions document link. – Added About Refinitiv Workspace dialog section. – Added more Operating system tools. – Additions to Troubleshooting: <ul style="list-style-type: none"> – Added Shared configuration bug section. – Added Using the Video Recorder tool section.
1.14	114.03 114.02 114.01	<ul style="list-style-type: none"> – Removed content filtering section. – Amended note regarding --user uninstallation statement being verbose by default. – Updated the Troubleshooting section regarding known issues with automatically generated shared configuration files. – Corrected the introduction to the Log upload troubleshooting section. <p>114.02</p> <ul style="list-style-type: none"> – Minor correction to fix a typographic error for some references to the --sharedconfig parameter. <p>114.01</p> <ul style="list-style-type: none"> – Instructions for running both the standalone and embedded System Test apps – Shared configuration file recommendation for SSO installations – Instructions for running Workspace web access through Internet or private network – Machine installation command lines with --sharedconfig parameters – Expanded explanation of key letters and Office aliases – (Optional) Batch print service – Appendix B - added Export control classification, Data dictionary support, and Local mode support – New Appendix C: System Test - summarizing the tests performed by the app – Appendix E - amended Excel add-ins list, added Customer managed over Internet section – Appendix F - new Embedded Messenger section

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About this document

This guide describes IT-managed installations to platforms running on the following environments:

- Microsoft® Windows® directly
- Citrix®¹, specifically:
 - Windows application virtualization with Citrix XenApp® (published app or published desktop)
 - Windows desktop OS virtualization with Citrix XenDesktop®
- VMware², specifically:
 - Horizon 8 Connection Server, Agent, and Client
 - Blast display protocol

This document details the steps and any post-installation customization that is required to install the application.

Intended readership

The Refinitiv® Workspace Advanced IT-Managed Installation Guide is intended for IT specialists that are responsible for the installation of Workspace and Messenger standalone.

Software releases and end of life

Refer to the [Workspace Support Policy](#), which can be found in the [Support and training](#) page on Refinitiv.com.

① The consultation period is until the end of Q2. For further information, see [PCN203434](#).

Contact information

To:

- Receive further assistance, contact customersupport@refinitiv.com.
- Provide feedback on Workspace technical content, contact DocFeedback@lseg.com.

¹ Refinitiv currently provides limited testing support and technical advice on Citrix Virtual Apps and Desktops (CVAD) solutions. However, customers deploying a CVAD solution should consider the following when deploying, updating, and running Workspace:

- The impact of network latency and equipment used.
- The potential for virtualization machines to adversely affect performance for end users.
- Legacy Refinitiv products such as Refinitiv Eikon will not work in parallel with Refinitiv Workspace

² As summarized for Citrix, above, Refinitiv currently provides limited testing support for VMware and the same considerations should be applied when deploying.

Pre-requisites

This section summarizes the information of which you should be aware prior to commencing the installation of Workspace.

In this section

- [Verifying system requirements](#)
- [Windows-specific environments](#)
- [Citrix-specific environments](#)

Verifying system requirements

Before installing Workspace, ensure that your hardware and software meet the [minimum requirements](#).

Related links

- [Download locations](#)
- [Appendix C: System Test](#)

Important:

For an installation, creating a Workspace test user ID is highly recommended to validate the installation. For further assistance, contact your account team or Customer Success Manager.

Refinitiv strongly recommends that 3D Graphics Processing Unit (GPU) acceleration is enabled. Workspace is based on Chromium, which uses the GPU for rendering environments.

System and network testing

The System Test application helps you determine whether your computer meets the minimum hardware, software, and connectivity requirements to run Workspace.

No personal information is sent to Refinitiv during this process.

To check whether your system meets the minimum requirements, run one of the following:

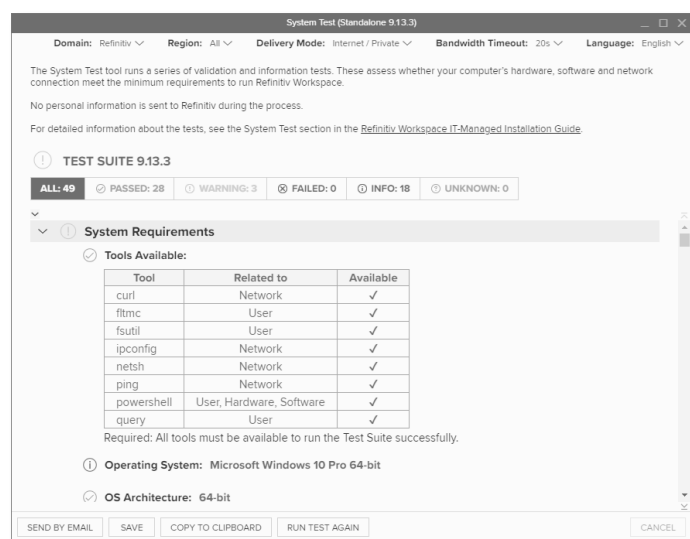
- standalone System Test, illustrated opposite, or
- embedded System Test
- in-product System Test

Running the standalone System Test

1. Open the [Workspace download page](#)³.

Related links

- [Running the standalone System Test](#)
- [Running the embedded System Test](#)
- [Running the in-product System Test](#)

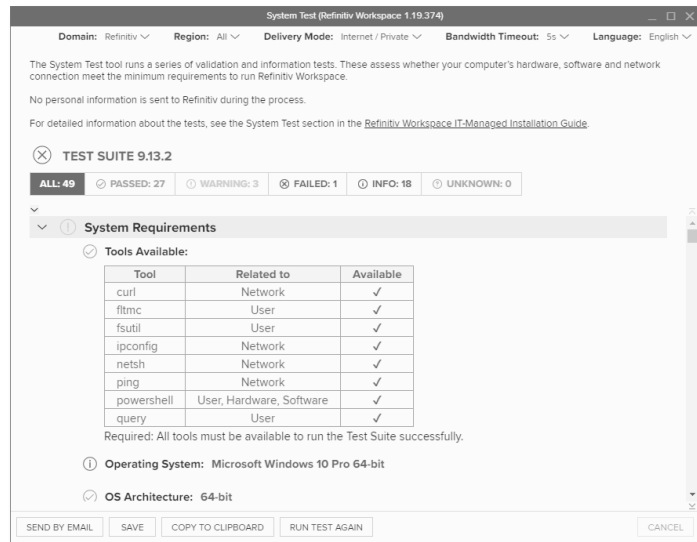


³ <https://www.refinitiv.com/en/products/refinitiv-workspace/download-workspace>

- Click the [Run this test \(downloadable\)](#) to verify your PC's compatibility link to download the System Test executable.

Running the embedded System Test

- Open a command prompt and navigate to the Workspace executable location.
- Run either of the following commands:
 - `Refinitivworkspace.exe --systemtest`
 - [Optional]
`Refinitivworkspace.exe --systemtest=bandwidth`, which includes the Bandwidth test section, illustrated opposite

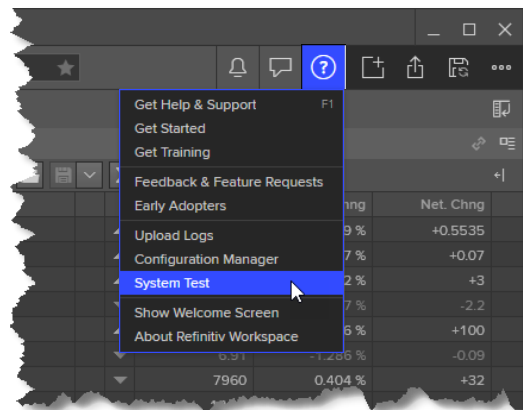


Running the in-product System Test

- Run Workspace
- Select the **Help** menu > **System Test**

Virtualized environments

When designing a deployed solution, individual utilization should be considered in the planning. If specific information is required, it is recommended that a selection of pilot users is monitored so benchmark testing can be performed by the relevant vendor support team.



Important: If you encounter an issue; Refinitiv requests that you confirm the issue has been reproduced in a non-virtualized environment.

VDI support

Support is included with your subscription, when Workspace is installed according to our system requirements on a standalone desktop PC for one user.

Due to the inherently complex and distributed nature of these solutions, we cannot offer the same unconditional support as a standard desktop for the following:

- Terminal/Citrix Server
- VMware Server
- Other multi-user or virtualized environments

Help with installing and/or operating our software in these environments is strictly limited to a commercially reasonable effort. While this document makes every attempt to highlight the issues you may encounter, we can make no guarantees regarding a successful outcome.

If you encounter problems, we cannot investigate or escalate unless the issue is reproducible on a standalone desktop running Workspace, in a single instance environment.

Installing Workspace

Workspace can be installed on Windows, as a User or Machine Installation, and deployed to CVAD.

However, it is recognized that there is much innovation and change in our marketplace. As such, the content of this document is updated, as warranted by future changes in the marketplace, and the evolving needs of our software products.

In this section

- [PC installation](#)
- [Citrix installation](#)
- [Running browser-based Workspace](#)
- [Uninstalling Workspace](#)

PC installation

This section discusses the installation of Workspace onto personal computers.

Related links

- [Command line statements](#)
- [Registry files](#)
- [Error codes](#)

Installation method summary table

Parameter	Location		Updated automatically	Windows service required
	Installation ⁴	Launch/Update		
--user		%LocalAppData%	Yes	-
--machine-autoupdate-service		%ProgramFiles%	Yes	Yes
--machine-autoupdate-no		%ProgramFiles%	-	-
--machine-autoupdate-peruser ⁵	%ProgramFiles%	%LocalAppData% ⁶	Launch/Update location only	-

Workspace Help parameter options

When installing Workspace, you can use the `--help` parameter to list all parameters that are available.

The Command Prompt also lists all error codes that could be displayed during a Workspace installation. These codes are listed in the [Error codes](#) section.

```

C:\windows\system32\cmd.exe
Refinitiv
Workspace

Usage: RefinitivWorkspace-installer-win32-x64_1.16.358.exe [OPTION]
The installer of Refinitiv Workspace

--silent          silent operation
--uninstall       uninstall operation
--forceinstall    to skip the prerequisite check
--lang<lang>     to specify installation language
  
```

⁴ Default locations. These are customizable during installation.

⁵ See Important note in Uninstalling Workspace.

⁶ A copy of the Installation (master image) will be created for each user when they first log into the machine. If the version of the master image changes, the local version is refreshed when a user next logs in.

These are listed in the following table:

Parameter	Purpose
<code>--silent</code>	No information messages are displayed during installation.
<code>--uninstall</code>	Uninstall Workspace.
<code>--forceInstall⁷</code>	Skips the check to ensure your system meets the prerequisites.
<code>--lang=<lang></code>	Allows you to specify the installation language. Where <lang> is: en English ja Japanese zh Chinese ko Korean
<code>--help</code>	Displays the list of parameters in a second command prompt window.
<code>--logpath=<Your log path></code>	Specify the log files path.
<code>--installpath=<Your install path></code>	Specify the installation path.
<code>--installerlogpath=<Your install log path></code>	Specify the installation log file path.
<code>--cachepath=<Your cache path></code>	Specify the cache file path.
<code>--shortcuts=<Your shortcuts path></code>	Specify the location of the Refinitiv Workspace and Refinitiv Workspace – Excel shortcuts. Enter NONE to hide the shortcuts.
<code>--sharedconfig=<shared config file path></code>	Specify the path to a shared configuration file.
<code>--user</code>	User installation. This is the default installation option.
<code>--machine-autoupdate-peruser</code>	Machine installation, with an auto-update per user.
<code>--machine-autoupdate-service</code>	Machine installation, with an auto-update service.
<code>--machine-autoupdate-no</code>	Machine installation, with no auto-updates.
<code>--client-ss=<Your ClientSSO URL></code>	Allows you to set up Single Sign-On (SSO), once Refinitiv Workspace has completed installation. SSO settings are stored in either <code>user-settings.json</code> or <code>machine-settings.json</code> , depending on which installation mode was used for Refinitiv Workspace.
<code>--shortcut-workspace=<FALSE / TRUE></code>	Setting this parameter to <code>false</code> installs the product without the Refinitiv Workspace shortcut.
<code>--shortcut-excel=<FALSE / TRUE></code>	Setting this parameter to <code>false</code> installs the product without the Refinitiv Workspace - Excel shortcut
<code>--messengeronly</code>	Installs Refinitiv Messenger only. This installation mode will not share the login session with Refinitiv Workspace.

Customizing paths

During the installation, you have the option of determining your own path for installation files, logs, cache files, and shortcuts. To do this, use one of the following commands:

Action	Command
Change install location	<code>RefinitivWorkspace-installer-xxx.exe --installpath=<folder_path></code>
Change log location	<code>RefinitivWorkspace-installer-xxx.exe --logpath=<folder_path></code>
Change cache location⁸	<code>RefinitivWorkspace-installer-xxx.exe --cachepath=<folder_path></code>
Change icon shortcut location	<code>RefinitivWorkspace-installer-xxx.exe --shortcuts=<folder_path></code>
Change installer log path	<code>RefinitivWorkspace-installer-xxx.exe --installerlogpath=<folder_path></code>

You can use multiple parameters in one command line. For example:

```
RefinitivWorkspace-installer-xxx.exe --installpath=<folder path> --cachepath=<folder_path>
```

⁷ Do not use this flag without a clear purpose and understanding of the impacts, as it may result in degraded product experience.

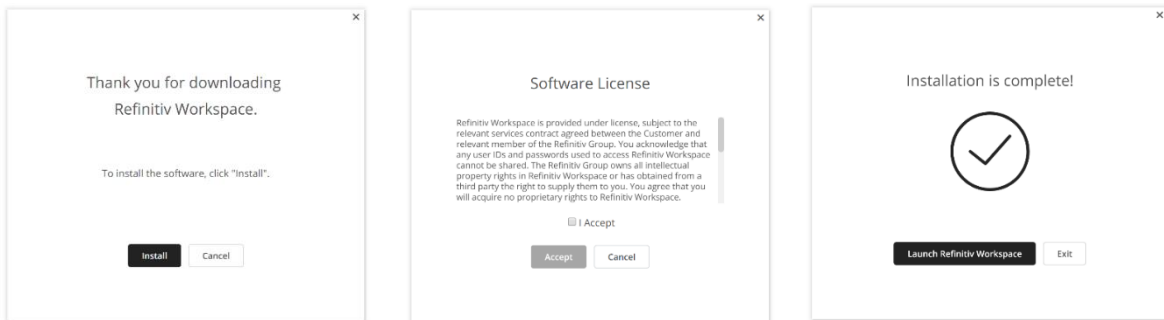
⁸ See [Cache path definition](#) in the [Known issues](#) section.

Performing a User installation

When you perform a user installation, files are created in the %LocalAppData%\Refinitiv\Refinitiv workspace\ folder.

To install Workspace on a user basis:

1. Download the Workspace package.
2. Run the .exe file or use the Workspace command lines using the command prompt app. In a user installation, administrator rights are not required.⁹
3. Follow the on-screen instructions to install Workspace:



Related links

- [Download locations](#)

Performing a Machine installation¹⁰

With auto-update per user¹¹

This installation mode is the preferred method for your organization, where:

- Users are not allowed to run programs from areas where they have no write permissions on %ProgramFiles%.
- Applications are reviewed before being approved across your organization, to ensure that they do not undermine application whitelisting. This is especially important for scripting languages, which have their own execution environment.

For this installation, files are created in the following folders:

Type of OS	Installation	Path
Windows	Master image	%ProgramFiles%\Refinitiv\Refinitiv workspace\
	Copy ^{12 13}	%LocalAppData%\Refinitiv\Refinitiv workspace\

Important: The master image must be updated on a regular basis – in accordance with the [Workspace Support Policy](#) – to avoid the situation where a new user on a machine can install a version of Workspace into their profile that is no longer supported.

To install Workspace on a machine basis:

1. Download the [Workspace package](#)

⁹ To review help for the Refinitivworkspace-installer-xxx.exe command, add the parameter --help.

¹⁰ To perform any *per machine* installation, you require administrator access rights.

¹¹ See Important note in [Uninstalling Workspace](#).

¹² Copy installation location.

¹³ Once the master image has been copied to the profile of the user, the user needs to restart their machine.

2. Open a Command Prompt window
3. Run `RefinitivWorkspace-installer-xxx.exe --machine-autoupdate-peruser --sharedconfig="<file path>"`¹⁴

With the auto-update Windows service

This installation mode is the preferred method for your organization, where:

- Users are not allowed to run programs from areas where they have no write permissions on `%ProgramFiles%`.
- Applications are reviewed before being approved across your organization, to ensure that they do not undermine application whitelisting. This is especially important for scripting languages, which have their own execution environment.

For this installation, files are created in the following folder:

Type of OS	Installation	Path
Windows	Default	%ProgramFiles%\Refinitiv\Refinitiv workspace\

To install Workspace on a machine basis:

1. Download the [Workspace package](#)
2. Open a Command Prompt window
3. Run `RefinitivWorkspace-installer-xxx.exe --machine-autoupdate-service --sharedconfig="<file path>"`¹⁴

Without auto-updates

This installation mode is the preferred method for organization running hot-desking, gold images, non-Persistent VDIs, or Provisioning Services (PVS) with configuration to clear changes once user close their Windows sessions.

For this installation, files are created in the following folder:

Type of OS	Installation	Path
Windows	Default	%ProgramFiles%\Refinitiv\Refinitiv Workspace\

To install Workspace without auto-updates:

1. Download the [Workspace package](#)
2. Open a Command Prompt window
3. Run `RefinitivWorkspace-installer-xxx.exe --machine-autoupdate-no --sharedconfig="<file path>"`¹⁴

¹⁴ Defining a shared configuration file (or files, for failover purposes) is optional but strongly recommended for mass configuration.

Performing an installation using your Single Sign On URL

Using a shared configuration file

Defining a shared configuration file (or files, for failover purposes) is optional but strongly recommended for mass configuration.

Using the command line

To install Workspace using your Single Sign On (SSO) URL, do the following:

1. Download the [Workspace package](#).
2. Open a Command Prompt window.
3. Add the appropriate parameter from the table below ¹⁵, depending on your environment:

Environment	Additional installation parameters	Settings location
User	--client-sso=<client SSO URL>	user-settings.json
Machine	--client-sso=<client SSO URL>	machine-settings.json

Related links

- [Installation statements](#)
- [Configuring Single Sign On \(SSO\) for Workspace web access](#)
- [Setting up config manager](#)
- [Shared configuration file bug](#)

Citrix installation

This section addresses the currently supported scenarios for Workspace deployment to CVAD. However, it is also recognized that there is much innovation and change in our marketplace. As such, the content is updated, as warranted by future changes in the marketplace, and the evolving needs of our software products.

Important! Workspace installers require administrator rights to create their own registry path entries.

Installing Workspace for Citrix XenApp

1. Check that no previous Eikon registry keys are set.
2. Ensure that the following registry keys are applied, to disable Citrix API hooks for a single executable file ¹⁶:

	CVAD 7 1912 LTSR	XenApp 7.6 LTSR	XenApp 7.15 LTSR ¹⁷
Key(s)	No modification to registry keys is required	HKLM\SOFTWARE\Citrix\CtxHook HKLM\SOFTWARE\Wow6432Node\Citrix\CtxHook	HKLM\SYSTEM\CurrentControlSet\services\CtxUvi
Value name		ExcludedImageNames	UviProcessExcludes
Type		REG_SZ	REG_SZ
Value to add¹⁸		RefinitivWorkspace.exe ¹⁹	RefinitivWorks ²⁰

Related links

- [Customizing installation paths](#)
- [Appendix D: Command line statements](#)

¹⁵ This parameter should be added to the installer executable, also in combination with additional parameters.

¹⁶ For further information, see <https://support.citrix.com/article/CTX107825>.

¹⁷ Reboot from the VDA required.

¹⁸ There is a 14-character limit on process names. For example, to exclude the application Tongappname.exe, you would add Tongappname.ex.

¹⁹ If you want to use the Session Sharing Chrome Extension, add Refinitiv-host.exe.

²⁰ If you want to use the Session Sharing Chrome Extension, add Refinitiv-host.exe.

- ① For further details regarding required CVAD and XenApp versions, refer to the [Workspace System Requirements](#).
- 3. To show the Workspace context menu when right-clicking the Windows taskbar, refer to the Citrix Support Knowledge Center article [CTX131995, User Cannot Launch Application in Seamless Mode in a Provisioning Services Server when XenApp Optimization Best Practices are Applied](#).
- 4. On the Citrix server, to change to installation mode, use the command line:
change user /install
- 5. To install Workspace, use the following command line, which includes the log and cache paths²¹, which must point to the same location from where RefinitivWorkspace.exe is run:
Refinitivworkspace-installer-xxx.exe --machine-autoupdate-no --logpath=" <folder_path>" --cachepath=" <folder_path>"
However, it is recommended that you define a shared configuration file (or files, for failover purposes) using the --sharedconfig=" <file_path>" parameter²². This is optional but strongly recommended for mass configuration.
- 6. Once the installation has finished, change back to execute mode, using the command line:
change user /execute

Publishing Workspace applications for XenApp

To complete the installation, you must publish both Workspace and Refinitiv Microsoft Excel applications in Citrix XenApp.

To do this, use your usual configuration software, whether Citrix or third party, with the following parameter settings:

Product	Parameter	Setting
Workspace	Path to the executable file	<installation_path>\Refinitivworkspace.exe
	Working directory	<installation_path>
Refinitiv Workspace for Excel	Path to the executable file	<installation_path>\Refinitivworkspace.exe
	Command line argument	--excel
	Working directory	<installation_path>

Installing Workspace for Citrix XenDesktop

If you use gold images, non-Persistent VDIs, or Provisioning Services (PVS) with configuration to clear changes after the user closes a session, you must install Workspace in *without auto-updates* mode using the following argument:

```
Refinitivworkspace-installer-xxx.exe --machine-autoupdate-no --sharedconfig=" <file path>"
```

- ① The Log and Cache path must point to the same location from where Refinitivworkspace.exe is run.

Related links

- [Without auto-updates](#)

²¹ See [Cache path definition](#) in the [Known issues](#) section.

²² For further information, see step 3 of [Setting up configuration manager](#).

In most cases, Per-Machine and Per-User installation modes of Workspace are also supported in Citrix XenDesktop.

VMware installation

This section describes the installation of products that are required for Workspace deployment to VMware.

Installing Workspace for VMWare Horizon virtual app

1. Change to installation mode:

On the Horizon server, use the command line:

```
change user /install
```

2. Install Workspace:

In a command-line interpreter, such as Command Prompt, type the following command line²³:

```
Refinitivworkspace-installer-xxx.exe --machine-autoupdate-no --logpath="<folder_path>" --cachepath="<folder_path>"
```

- ① It is strongly recommended, particularly for mass configuration, that you define a shared configuration file²⁴ (or files, for failover purposes). This is done by using the --sharedconfig="<file_path>" parameter.

3. Return to execute mode:

Once the installation has finished, change back to execute mode, using the following command line:

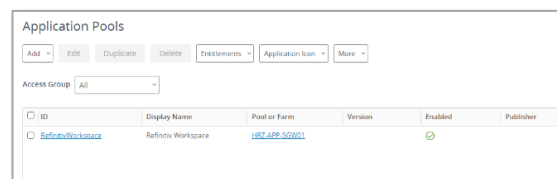
```
change user /execute
```

Configuring virtual applications on Windows Server

Installation is completed by publishing both Workspace and Refinitiv Microsoft Excel applications in the VMWare Horizon virtual app.

To publish the applications, perform the following steps using the Horizon Console:

1. In Horizon Console, select **Inventory > Applications**
2. In the Application Pools panel, select **Add > Add Manually**



²³ The command line is run from the folder where Refinitivworkspace.exe file is located and contains paths to the required log and cache file locations.

²⁴ For further information about shared configuration files, see step 3 of the [Setting up configuration manager](#) and the [Shared configuration file bug](#) sections.

3. For Refinitiv Workspace, in the **Add Application Pool** panel, complete the form using the following details:

In this field...	Type or select this ...
ID	Refinitivworkspace
Display Name	Refinitiv workspace
Path	<install_path>\Refinitiv workspace\Refinitivworkspac e.exe
Start Folder	<install_path>\Refinitiv workspace\
Entitle Users after Adding Pool	Select this checkbox
Multi-Session Mode	Select Disabled

4. Click **Submit**

The application appears in the **Application Pools** panel

5. Select **Add > Add Manually**

6. For Refinitiv Workspace – Excel, complete the form using the following details:

In this field...	Type or select this...
ID	RefinitivworkspaceExcel
Display Name	Refinitiv workspace – Excel
Path	<install_path>\Refinitiv workspace\Refinitivworksp ace.exe
Start Folder	<install_path>\Refinitiv workspace\
Parameter	--excel
Entitle Users after Adding Pool	Select this checkbox
Multi-Session Mode	Select Disabled

7. Click **Submit**

The application appears in the **Application Pools** panel

8. In the Application Pools panel, click **Entitlements**

9. In the **Add Entitlements** panel, click **Add**

The **Find User or Group** panel, opposite, is displayed

10. Use the fields in this panel – **Domain**, **Name/User Name**, and **Description** – search for existing VMware users and select the checkboxes next to their details

11. Click **OK**

ID	Display Name	Pool or Farm	Version	Enabled	Publisher
RefinitivWorkspace	Refinitiv Workspace	HRZ_APP-SGW01		<input checked="" type="checkbox"/>	

Name	User Name	Email	Description	In Folder
<input type="checkbox"/> horizon01	horizon01@bdqa.refinitiv.com			bdqa.refinitiv.com/h
<input checked="" type="checkbox"/> horizon11	horizon11@bdqa.refinitiv.com			bdqa.refinitiv.com/h
<input checked="" type="checkbox"/> horizon12	horizon12@bdqa.refinitiv.com			bdqa.refinitiv.com/h
<input checked="" type="checkbox"/> horizon13	horizon13@bdqa.refinitiv.com			bdqa.refinitiv.com/h

Installing Workspace for VMWare Horizon virtual desktop

If you use [instant clone desktop pools](#) (golden image), or [automated full-clone desktop pools](#), configured to clear changes after the user closes a session, you must install Workspace using the no automatic update mode. To do so, use the following command line²⁵:

```
Refinitivworkspace-installer-xxx.exe --machine-autoupdate-no --sharedconfig="<file_path>"
```

In most cases, the Per-Machine and Per-User installation modes of Workspace are also supported for VMware Horizon virtual desktop.

Running Workspace web access

Workspace is also accessible through the Internet or private network.

Related links

- [Configuring Single Sign On \(SSO\) for browser-based Workspace](#)

Accessing through the Internet

To access the Workspace sign-in page:

- Enter the following URL into your browser:
<https://workspace.refinitiv.com/web>

Accessing through a private network

To access the Workspace sign-in page:

- Enter the following URL into your browser:
<https://workspace.extranet.refinitiv.biz/web>

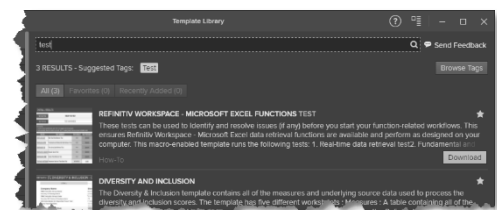
Post installation testing

Once Workspace has been installed, you can test the Workspace – Excel data retrieval functions using the testing tool provided in Refinitiv Workspace – Excel.

Downloading the tool

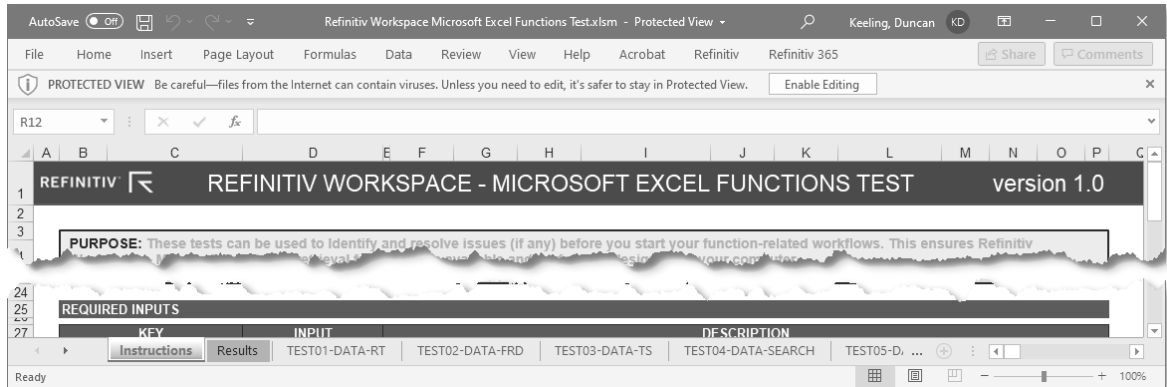
To download the testing tool, do the following:

1. Run Refinitiv Workspace – Excel
2. Under the **Refinitiv** menu:
 - a. Sign in, if necessary
 - b. Click **Templates**
 - c. In **Search for templates...**, type test and press **Enter**
 - d. In the first search result panel, Refinitiv Workspace – Microsoft Excel Functions Test, click the **Download** button



²⁵ Although not shown in this example, as for the virtual app, the command line should include the log and cache paths, which must point to the same location from where Refinitivworkspace.exe is run.

Once downloaded, the tool template opens automatically:



Running the tool

After checking the Prerequisites, listed in the Instructions section, do the following:

1. Click the **Results** worksheet tab
2. Click the **START THE TEST** button

The tests usually take less than a minute to run and, should an error occur, you are presented with diagnostic data under the relevant tab.

Uninstalling Workspace

You can uninstall Workspace, using the following command:

```
RefinitivWorkspace.exe --uninstall
```

Related links

- [Uninstallation commands](#)
- [Launcher message workflows](#)

Important: When the `--machine-autoupdate-peruser` installation method is used, running the uninstallation command removes the Workspace instance in the profile under which it is run. For instance, if the master image is removed, all clone images will remain installed.

Log file location

The uninstallation log file is stored in the `%Temp%\Refinitiv workspace Uninstall Logs\` folder.

Configuring Workspace

You can configure Workspace using the Configuration Manager, which is accessed by running the Workspace executable with the `--config-manager` parameter in a Command Prompt window or by selecting the **Help > Configuration Manager** option in Workspace.

In this section

- [Setting up config manager](#)
- [Creating a new config file manually](#)
- [Configuring Single Sign On \(SSO\) for browser-based Workspace](#)

Configuration Manager command lines

The command line you use depends on the installation type:

- For User installations, use the command:
`"<InstallDir>\Refinitiv\Refinitiv workspace\RefinitivWorkspace.exe" --config-manager`
- For Machine installations, use the command:
`"<InstallDir>\Refinitiv\Refinitiv workspace\RefinitivWorkspace.exe" --config-manager --machine`

Setting up configuration manager

In the Configuration Manager, choose your settings for the following panels:

1. In the **Network** panel, set the connection type in your environment to either Internet (the default value) or private network.
2. In the **Client SSO** panel, if you have SAML 2.0 set up, enter the URL in the **Client Single Sign On (SSO)** field.
3. In the **Shared Configuration** panel, select whether you are using a shared configuration, which overrides other settings.

- ① Defining a shared configuration file (or files, for failover purposes) is optional but strongly recommended for mass configuration, as it allows you to define configuration parameters for all users from a single location.

Related links

- [Configuration Manager parameters](#)
- [Customer managed over Internet](#)



Related links

- [Shared configuration installation statements](#)
- [Server software versions](#)
- [Logs](#)
- [Converting and modifying an Eikon configuration file](#)

Workspace uses different settings .json files based on the type of installation:

- For User installations, the file stores user-specific settings that are controlled by the user and can be found in the following location:

%AppData%\Refinitiv\Refinitiv workspace\Config\user-settings.json

- For Machine or Hot-Desking installations, the file stores machine-specific settings that are controlled by elevated computer administrator rights and can be found in the following location:

%ProgramData%\Refinitiv\Refinitiv workspace\Config\machine-settings.json

- ① A shared <override_settings>.json configuration file takes priority over local user-settings.json or machine-settings.json configuration files. When using the --sharedconfig parameter, Workspace reads the configuration from the specified location every time it is launched.²⁶

You can specify one or, for failover purposes, more configuration files that can be used across multiple desktops by putting these files on a shared drive or Web server (formerly Configuration Proxy concept).

To do this:

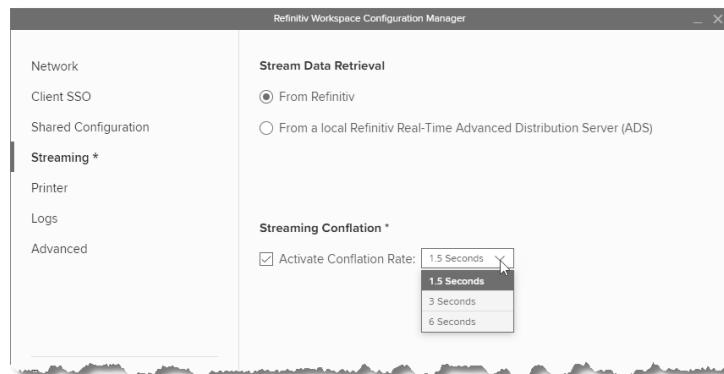
- Click **Export** and navigate to the configuration file, <override_settings>.json, from the Configuration Manager.
- Place this file on a shared drive or a Web server.
- Enter the URL or UNC path of the file into the installation command line, or add this path into the Configuration Manager directly. For example:

\\myserver\config\refinitiv\override-settings.json

- In the **Streaming** panel, you can choose streaming sources and whether to activate streaming conflation.

The **Streaming Conflation rate**²⁷ is used for desktop performance management by reducing CPU usage in downloading streaming data. In effect, it reduces data refresh rate from the default to every 1.5, 3, or 6 seconds.

- Also, in the **Streaming** panel, choose your **Streaming Data Retrieval** source. Data can be streamed from either a Refinitiv Data Platform or by defining one or more local Refinitiv Real-Time Advanced Distribution Servers (formerly ADS).



²⁶ For further information, see [Shared configuration file bug](#) section.

²⁷ Currently, this capability is for Workspace desktop access only and will not affect the conflation settings of the Workspace add-in running under Microsoft Office.

On Refinitiv Workspace desktop, the highest generally supported conflation rate is 300ms. However, certain exceptions, such as news and chart apps, can run at higher update rates.

Workspace uses the WebSocket²⁸ protocol to connect to the Workspace platform for streaming services:

- WebSocket Secure (wss://) for encrypted connections, and
- WebSocket (ws://) for unencrypted connections

Additional customer-managed sites use this connectivity to create a connection to the local Refinitiv Real-Time Advanced Distribution Server.

Some proxy servers may not support (or have disabled support for) the WebSocket protocol, which may cause Workspace streaming-related features not to work.

You must do the following:

- a. For Internet, allow WebSocket connectivity to the following URLs:

*.refinitiv.com
*.refinitiv.net

- b. For Delivery Direct, allow WebSocket connectivity to the following URLs:

*.refinitiv.biz
*.refinitiv.net

6. In the **Streaming > Servers** panel, enter the Refinitiv Real-Time Advanced Distribution Server IP address and hostname, together with the port. The default Refinitiv Real-Time Distribution System (formerly TREP) port for WebSocket is 15000.

① Only one server or DNS can be entered for each line.



7. In the **Streaming > Feeds** panel, configure feeds provided by local Refinitiv Real-Time Advanced Distribution Server.

① In supported Workspace versions, key letters²⁹ can be used as single-character shortcuts to additional feed sources. For example, Refinitiv Real-Time Advanced Transformation Server (formerly ATS) is key letter A.

① For Office aliases³⁰, there is a limit of 32 characters.

²⁸ The WebSocket(ws) protocol provides full-duplex communication channels over a single TCP connection. For further information, see [RFC 6455: The WebSocket Protocol \(rfc-editor.org\)](https://rfc-editor.org/rfc/rfc6455).

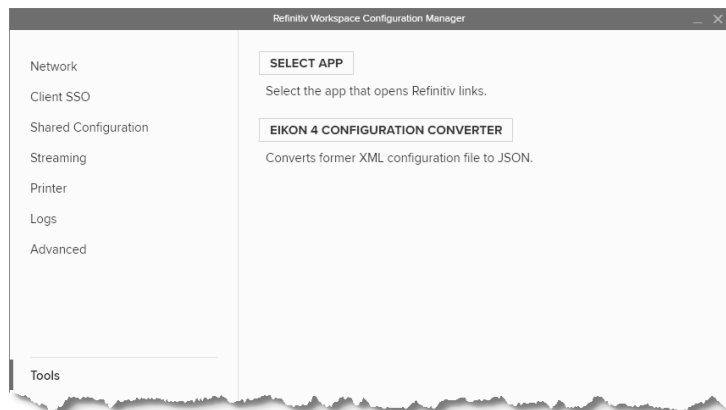
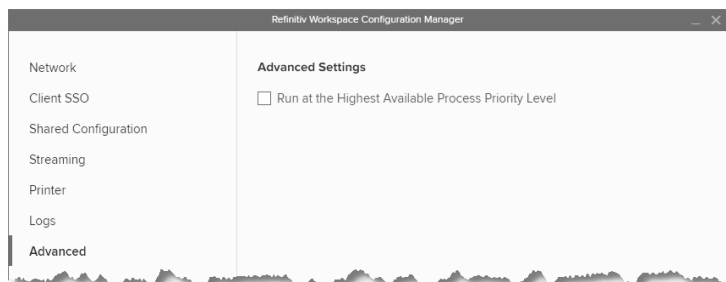
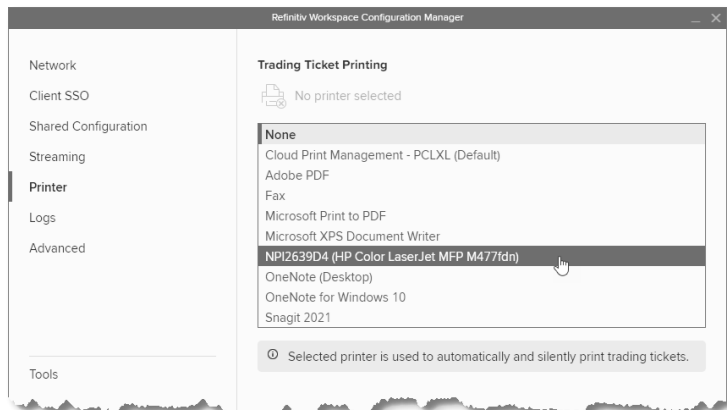
²⁹ Workspace supports only standard ASCII (Latin) alphabetic characters. That is, the values A-to-Z or a-to-z.

³⁰ A subset of ASCII printable characters is supported. That is, the values a-to-z, A-to-Z, and 0-to-9. Special characters (#, \$, &, and so on) are not supported.

8. In the **Streaming > DACS** panel, enter the Refinitiv Real-Time Data Access Control System username and position.
9. In the **Printers** panel, select the default printer or output mechanism that is to be used to print trading tickets silently. That is, without the need to select the printer each time.
10. In the **Logs** panel, you can modify the default value using these entries in your `machine-settings.json` file.
11. In the **Advanced** panel, you can choose whether Workspace is to run at above normal priority³¹ by selecting the **Run At the highest Available Process Priority Level** checkbox.³²
12. Finally, in the **Tools** panel, use the **SELECT APP** button to determine how links are handled.

This opens a dialog box that allows you to select whether links are opened on Workspace or Eikon³³.

- ❗ If you do not have Eikon installed, the message Eikon 4 is not installed is displayed.



Converting and modifying an Eikon configuration file

For test purposes, in the **Tools** panel of the Configuration Manager, you can use the Eikon 4 configuration converter to convert an existing `OverrideConfiguration.xml` file to `.json` format.

To convert and modify an existing file:

1. Click Eikon 4 Configuration Converter.
2. Select your saved `.xml` file. For example:

³¹ Currently, this capability is for Workspace running on Windows only and will not affect the process priority of Workspace on macOS or the add-in running under Microsoft Office.

³² This can also be achieved by using the command line parameter `--run-above-normal-priority`. For more information, see [Workspace executable statements](#).

³³ You are unable to switch between Eikon 4.0 and Refinitiv Workspace where there was a Citrix installation of Workspace. In Citrix we do not support multiple applications to be installed concurrently (Jira ref: [EFO-9593](#)).

```
\\myserver\config\refinitiv\OverrideConfiguration.xml
```

3. Click **Open**. The file is converted, and the converted configuration file is then displayed.
4. Click **OK**.
5. [Optional] Change your Network and SSO configuration.
6. Check that the Streaming settings are correct and make any necessary changes.
7. Click **Export** to create a new file with a .json extension.

Warning: The converted .json file still contains legacy configuration settings from Eikon, which could potentially raise issues.

Creating a new configuration file manually

To create a clean Workspace configuration file:

1. Delete your currently loaded configuration file.
2. Copy specific parameters from the Refinitiv Eikon Configuration Manager to the Refinitiv Workspace Configuration Manager.

Parameters in the Eikon Configuration Manager largely share the same names as their counterparts in Workspace. However, the following table lists the exceptions (parameter name and location):

Eikon	Workspace
Distributors Configuration: Customer Managed (Local Configuration Files) > Real-Time tab > ADS Connection – RSSL protocol	Hostname or IP Streaming > Servers
User Name Configuration: Customer Managed (Local Configuration Files) > Permissions tab > DACS Identification	Username Streaming > DACS

For more complex environments and further support, contact Workspace [technical support](#), who can assist in converting the content of the `OverrideConfiguration.xml` and `RFA.RFA-configuration-files`.

Configuring Single Sign On (SSO) for Workspace web access

Required configuration for when Refinitiv is the Service Provider (SP):

- Embed the Workspace web access URL within the Identity Provider (IDP) initiated login URL. This redirects to Workspace after a successful login.

For example:

```
https://id-abc.com/abc-sso/eikonweb?RelayState=https://workspace.refinitiv.com/web
```

- The appropriate attribute name must be used, as indicated by the IDP software, for example, `RelayState` or `TargetResource`.

Appendix A: Folders and files

In this section

- [Packages](#)
- [Server software versions](#)
- [Executable files](#)
- [Digital signatures](#)
- [Registry files](#)
- [Configuration files](#)
- [Shortcuts](#)
- [Folder structures](#)
- [Proxies](#)

Packages

This document can be used by IT to create an installation package and provide documentation for future updates to the application.

Download locations

You can download the latest version of the installation file, `Refinitivworkspace-installer_xxx.exe`, from the locations listed in the table below. The executable file is currently 95 megabytes in size:

Location	Link
Internet	https://workspace.refinitiv.com
Private network	https://workspace.extranet.refinitiv.biz

Server software versions

The following table lists the Refinitiv Real-Time Distribution System (formerly TREP) server software version requirements:

Server software	Version
Refinitiv Real-Time Advanced Distribution Server (formerly ADS)	3.4 ³⁴ or higher
Refinitiv Real-Time Data Access Control System	7.2 ³⁵ or higher

Important: DACS Permission Synchronization for Workspace is recommended – rather than the Deployed Permissions Reconciliation Manager (DPRM) service - to prevent misconfiguration or permission issues between the Refinitiv Data Platform and local Refinitiv Real-Time Distribution System (formerly TREP).

While we recommend DACS, for information regarding the configuration of the DPRM service, refer to [Appendix F: Settings](#).

³⁴ Issues in the L1 and L2 releases of Refinitiv Real-Time Advanced Distribution Server version 3.5.2 were subsequently addressed in the L3 release. As such, to run the Contribution function, installing version 3.5.2 L3 (or higher) is recommended. For further information, see the [Refinitiv Real-Time Advanced Distribution Server version issues](#) section.

³⁵ The specified version requirement is for DACS Permission Synchronization only.

Creating an internal connection

To create a connection to the Refinitiv Real-Time Distribution System, you must download the Data Dictionary from a Refinitiv Real-Time Connector (RTC) or Refinitiv Real-Time Advanced Distribution Server (formerly ADS).

However, to do so, you must do either of the following:

- Set the `*maxOutputBuffers` value in the Refinitiv Real-Time Distribution System to 5000, or
- For Workspace 1.17 and higher, you can use the following multi-part dictionary setting to enable the download to be performed successfully:

```
*<XYZ>*enableMultiPartDictionary : True
```

① Using this approach, the `maxOutputBuffers` parameter remains unchanged.

Executable files

The core installation of Workspace has the following executables:

Process Name	Service
Refinitivworkspace.exe	Refinitiv Workspace (the main Workspace process)
Refinitiv-host.exe	Session Sharing Chrome Extension
RWupdaterService.exe	Software update installation service
Refinitiv.workspace.BatchService.UserInteraction.exe	(Optional) Batch print service ³⁶
Setup.exe	Called by the main processes to perform various sub-processes

Note: Workspace uses .zip for updates. This may change in 2022, when smaller (delta) installation packages are introduced.

Digital signatures

The executable (.exe) and dynamic link library (.dll) files are digitally signed.

Refinitiv signatures

Publisher	REFINITIV US LLC
Subject	C=US/PostalCode=10036/S=New York/L=New York/STREET=3 Times Square/O=REFINITIV US LLC/CN=REFINITIV US LLC
Issuer	C=GB/S=Greater Manchester/L=Salford/O=Sectigo Limited/CN=Sectigo RSA Code Signing CA
Publisher³⁷	REFINITIV US LLC
Subject	C=US/S=New York/O=REFINITIV US LLC/CN=REFINITIV US LLC
Issuer	C=GB/O=Sectigo Limited/CN=Sectigo Public Code Signing CA R36

³⁶ The Batch Print service is an optional download, used to print or save documents from the search results grid. The service can be downloaded using the following URL:

<https://cdn.refinitiv.com/public/packages/batchsaveinstall/RefinitivWorkspaceBatchService.msi>

³⁷ For further information, refer to [PCN 13469](#)

Microsoft signature

Publisher	Microsoft Corporation
Subject	C=US/S=Washington/L=Redmond/O=Microsoft Corporation/CN=Microsoft Corporation
Issuer	C=US/S=Washington/L=Redmond/O=Microsoft Corporation/CN=Microsoft Code Signing PCA 2010

Registry files

Installation mode	Description	Registry key	User
User	The registry is deployed only once, at installation time	HKCU ³⁸	Current user
Machine with an auto-update per user	The registry is deployed multiple times, as it depends on Active Setup	HKCU, HKLM	Every user (Separate user profile)
Machine with auto-update service or no auto-updates	The registry is deployed only once, at installation time.	HKLM ³⁹	Every user

Configuration file settings

The following settings are customizable in your `.json` configuration file.

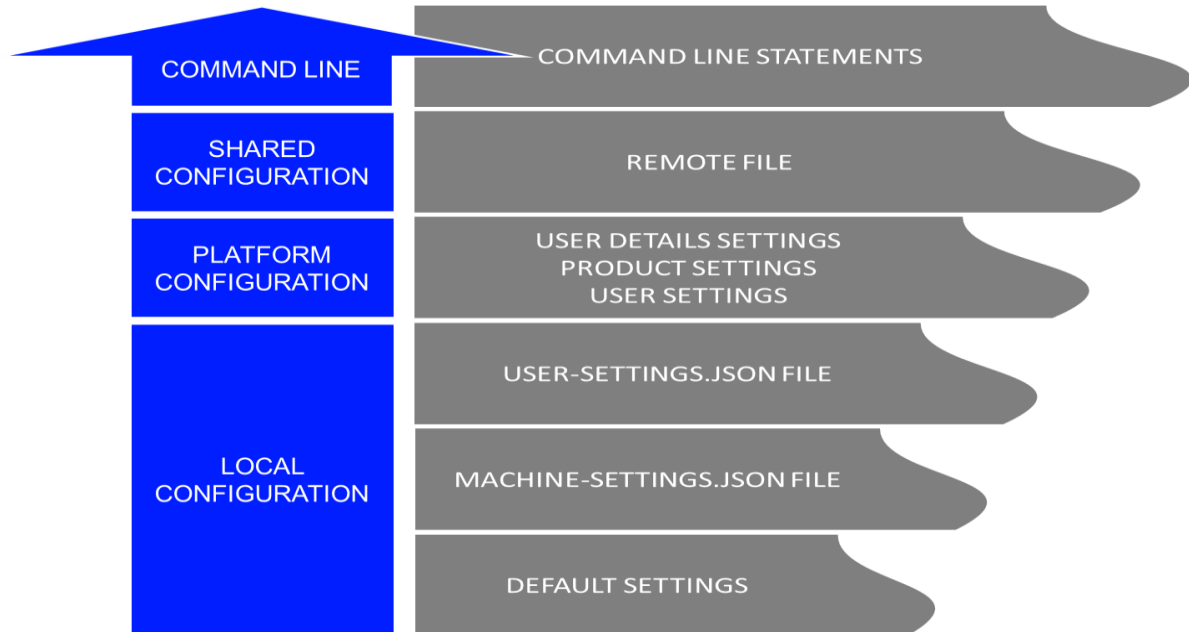
Setting	Customization
<code>EIKON.STREAMING.API.LOCAL.ALLOWHOSTEDFALLBACK</code>	Defining this setting as <code>false</code> , indicates that you do not want Workspace to fall back to the Common Platform hosted streaming servers. In this case, if the connection to all configured local server URLs fails, Workspace is unable to retrieve streaming data. By default, Workspace systematically attempts to connect to the Common Platform hosted streaming servers, if no local connection can be made.
<code>EIKON.STREAMING.API.LOCAL.DACS.APPLICATIONID</code>	This setting allows you to customize the DACS application ID, for Workspace it is 56 by default.
<code>CLIENTSSO_URL.ENABLED</code> <code>CLIENTSSO_URL</code>	Support Client SSO service to allow the user to use company credentials to login.

³⁸ HKEY_CURRENT_USER

³⁹ HKEY_LOCAL_MACHINE

Configuration override order

The illustration below shows the override order for configuration settings, where commands issued using the command line have the highest level of priority:



Shortcuts

There are two shortcuts created under the **Refinitiv** folder, found under the Windows Start menu:

- Refinitiv Workspace
- Refinitiv Workspace - Excel

Default folder structures

User installation

The installer installs the product in the non-roaming profile: %LocalAppData%

```
%LocalAppData%
├── Refinitiv
│   ├── Refinitiv Workspace - (working directory)
│   ├── Refinitiv for Office
│   ├── Refinitiv Workspace Logs
│   └── Refinitiv Workspace.versions
%AppData%
├── Refinitiv
│   └── Refinitiv Workspace
```

Machine installation

The installer installs Refinitiv Workspace in %ProgramFiles%.

```

%ProgramData%
├── Refinitiv
│   ├── Refinitiv Workspace
│   └── Refinitiv Workspace.versions
%ProgramFiles%
├── Refinitiv
│   ├── Refinitiv Workspace
│   └── Refinitiv for Office
%AppData%
├── Refinitiv
│   ├── Eikon API Proxy
│   └── Refinitiv Workspace 40
%LocalAppData%
├── Refinitiv
│   ├── Refinitiv Workspace 41
│   ├── Refinitiv for Office
│   └── Refinitiv Workspace Logs
  
```

Hot-desking installation

The installer installs Workspace in %ProgramFiles%.

```

%ProgramData%
├── Refinitiv
│   ├── Refinitiv Workspace
│   ├── Refinitiv Workspace Install Logs
│   └── Refinitiv Workspace.version
%ProgramFiles%
├── Refinitiv
│   ├── Refinitiv for Office
│   └── Refinitiv Workspace
%AppData%
├── Refinitiv
│   └── Refinitiv Workspace
%LocalAppData%
├── Refinitiv
│   └── Refinitiv Workspace Logs
  
```

Additional folder structures

Automatic update: Machine installation

The directory structure for the automatic update feature:

```

%LocalAppData%
├── Refinitiv
│   ├── Refinitiv Workspace.versions
│   ├── Extract
│   ├── RFVWindow_Core_1.x.xxx.zip
│   └── Refinitiv Workspace.ToInstall
  
```

⁴⁰ cache

⁴¹ working Directory

Update service: Hot-desking installation

The directory structure for the update service feature:

```
%ProgramFiles%
├── Refinitiv
│   └── Refinitiv Workspace Update Service
```

[Optional] Batch print service Installation

The directory structure of the optional batch print service feature:

```
%ProgramFiles%
├── Refinitiv
│   └── Workspace Batch Service
```

Proxies

Qualified Proxy

Workspace is qualified with the following authenticated proxy:

Proxy	Authentication Method
Squid 2.7	– No authentication
	– Basic
	– Digest
	– NTLM
	– Kerberos
Squid 3.5.28	– Basic
	– Digest

HTTP/1.1 (or above) Compliant Proxy

Workspace requires HTTP/1.1. Workspace can attempt to use HTTP/2 but falls back to HTTP 1.1 if it is not viable.

It is vital that you use an HTTP/1.1+ Compliant Proxy to have the best connection between the Workspace key station and the Refinitiv Platform on the head end.

Important: The Streaming Service requires a *keep alive* or *persistent* connection, which is supported in the HTTP/1.1 specification.

Appendix B: Software information and support

In this section

- [Documentation locations](#)
- [Export control classification](#)
- [Hosted connection item limits](#)
- [About Refinitiv Workspace dialog](#)
- [Data dictionary support](#)
- [Local mode support](#)

Documentation locations

Documentation	Location(s)
Workspace Administration Panel Configuration	A description of the functions of the Workspace Administration Panel can be found in the Configuration Guide on Refinitiv.com and under the Workspace section of the MyRefinitiv website.
Workspace System Requirements	The system requirements documentation can be found in the System Requirements document on Refinitiv.com and under the Workspace section of the MyRefinitiv website.
Refinitiv Real-Time Data Access Control System (formerly DACS)	The DACS permission synchronization requirements can be found in the DACS Permission Synchronization Configuration Guide , under the DACS section of the MyRefinitiv website.
Refinitiv Real-Time Advanced Distribution Server (formerly ADS)	An overview of the ADS WebSocket connection configuration can be found in the ADS Software Installation Manual, under the Advanced Distribution Server (ADS) section of the MyRefinitiv website.
Financial Community Network (FCN) and Delivery Direct	For further information about FCN and Delivery Direct, see the Private Network Overview section of the MyRefinitiv website.
Chrome Extension	For further information about the Google Chrome extension, see the MyRefinitiv website.
Release Notes	A summary of the features in the latest release of Workspace can be found in the Release Notes document on Refinitiv.com and under the Workspace section of MyRefinitiv website.
Service Description	The Workspace Service Description document can be found in the Service Description document on Refinitiv.com and under the Workspace section of the MyRefinitiv website.
Workspace Vendor Subservice Definitions	A list of the Products, Exchanges, and Specialist Data definitions can be found in the Vendor subservice definitions document on Refinitiv.com and under the Workspace section of MyRefinitiv website. These are managed using the Refinitiv Real-Time Data Access Control System (DACS).
Technical Roadmap	A tabular summary of known significant changes to upcoming releases of Workspace can be found on Refinitiv.com .

Important: DACS Permission Synchronization for Workspace is recommended – rather than the DPRM service - to prevent misconfiguration or permission issues between the Refinitiv Data Platform and local Refinitiv Real-Time Distribution System (formerly TREP).

While we recommend DACS, for information regarding the configuration of the DPRM service, refer to [Appendix F: Settings](#).

Export control classification

The following table contains export control classification details for Refinitiv Workspace:

Program Name	Refinitiv Workspace
ICOS Reference	6420
Program Version	1.x
Sub-Products	6413 for Windows & 6414 for macOS
ECCN (United States)	EAR99
ECCN (European Union)	None
Refinitiv Export Code	NL
Export Note	This export code means 'Not Licensable' and is applied to items that can be exported 'no license required', under both EU and US regulations. Exports of NL items can be made to all countries except embargoed countries (Iran, Syria, North Korea, Cuba, or Crimea).
US Commerce, BIS CCATS number	self-classified

Hosted connection item limits

For the deployed desktop hosted connection, the Item limit is 2500. This can be extended to 5000, with a fee-liable Product Line Item (PLI) add-on.

About Refinitiv Workspace dialog

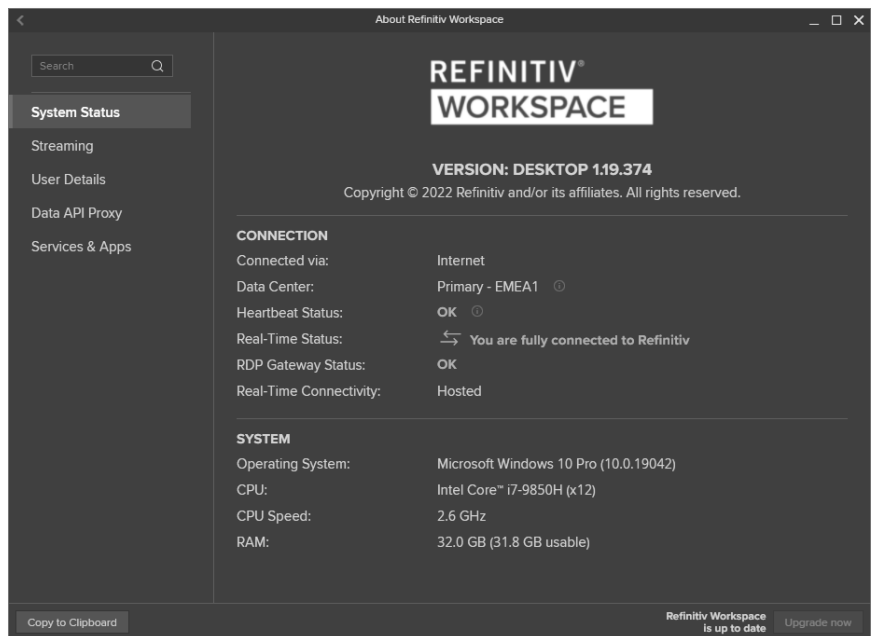
The **About Refinitiv Workspace** dialog box provides information about the viewed Workspace installation and environment.

To open the **About Refinitiv Workspace** dialog, In Workspace:

- Click **Help > About Refinitiv Workspace**

The dialog box divides information over five panels:

- **System Status** contains Workspace version and variant information, together with service connection details and an overview of the computer on which this iteration of Workspace is running.
- **Streaming** contains information about real-time data sources, including the primary feed used and any other feeds provided through a local Refinitiv Real-Time Distribution System.



- **User Details** contains information about the currently logged in user, including their email address, their user unique identifier (UUID), job role, and location information.
- Along with the proxy URL and version, the **Data API Proxy** panel also contains information about the status of the proxy, indicating whether it is available for external connections.
- **Services & Apps** contains version information about services and apps that have been made available to the user.

Data dictionary support

Access to a Data Dictionary is only supported from a Refinitiv Real-Time Advanced Distribution Server (formerly ADS).

Local mode support

The Local Mode feature, as found in Refinitiv Eikon, is not supported.

Appendix C: System Test

A System Test is a suite of tests that verifies whether your hardware, software, and network environments are suitable to run Refinitiv Workspace and its associated applications.

Once you have installed Refinitiv Workspace, the embedded System Test application runs regularly to verify performance and identify possible issues. The set of tests performed depends on when you run them; before installation, during installation, or once the product is installed.

For information about the Financial Community Network (FCN) and Delivery Direct, see the repository for the Customer Connectivity DNS Migration Guide and Finance Community Network (FCN) document:

<https://my.refinitiv.com/content/mytr/en/policies/private-network-overview.html>

In this section

- [System Test types](#)
- [Standalone download locations](#)
- [Operating system tools](#)
- [System Test results](#)
- [Prerequisite tests](#)
- [Information tests](#)
- [Bandwidth tests](#)
- [Network tests](#)

System Test types

There are two types of System Test:

Test	Summary
Validation	Displays a validation status to indicate whether the test has passed, failed, and so on
Information	Communicates detailed technical information and not a validation status

Standalone download locations

You can download the standalone version of System Test for both Windows and macOS from the following locations:

- <https://emea1-apps.platform.refinitiv.com/Apps/ProductSystemTest/>
- <https://emea1-apps.platform.refinitiv.biz/Apps/ProductSystemTest/>

Operating system tools

System Test requires the following operating system tools to produce the full set of results.

Windows

Tool	Type	Summary	System Test use
chcp		Used to change the active console code page to UTF-8.	Changes the default console code page to UTF-8.
curl	Network	Used to get or send data including files using URL syntax.	Tests IP address accessibility.
findstr		Used to search for a specific text string in files.	Retrieves a specific text string in a file.
fltmc	User	Used to load and unload mini-filter drivers, which monitor or track file system data, attach, or detach mini-filter drivers from volumes, and enumerate mini-filter drivers, instances, and volumes.	Retrieves the installed mini-filter drivers.
fsutil	User	Lists hard links for a file or creates a hard link (a directory entry for a file).	Checks admin rights.
ipconfig	Network	Determines the IP address of your computer, together with other information, such as the address of its default gateway.	
netsh	Network	Allows you to display or modify the network configuration of a computer that is currently running.	Retrieves the proxy settings.
netstat	Network	Displays incoming and outgoing TCP network connections, routing tables, and several network interface and network protocol statistics.	Retrieves the routing table.
ping⁴²	Network	Used to troubleshoot connectivity, reachability, and name resolution.	Tests IP address accessibility.
powershell	Hardware, Software	A task-based command-line shell and scripting language, used to automate tasks in the Windows ecosystem, including active directory and exchange.	Retrieves screen resolutions.
query	User	Displays information about processes, sessions, and Remote Desktop Session Host servers.	
reg	Hardware, Software	Used to perform operations on registry subkey information and values in registry entries.	Reads registry entries.
where	Software	Displays the location of files that match a search pattern.	Retrieves the location of tools files.
whoami	User	Used to display user, group, and privilege information for the user who is currently logged into the local system. If used without parameters, it displays the current domain and username.	Retrieves the security identifier of the current user.

macOS

Tool	Type	Summary	System Test use
cat	Software	Allows the creation of single or multiple files, view contents of files, concatenate files, and redirect output.	
df	Hardware	Displays disk usage information based on file system.	Retrieves the amount of available disk space.
diskutil	Hardware	A native Apple command-line utility used to retrieve detailed disk information, such as disk partitioning.	Retrieves disk and partitioning information.






⁴² See also [Invalid ping request](#).

Tool	Type	Summary	System Test use
echo	Software	Used to output the strings it is passed as arguments.	
grep	Software	Used to search text and strings in files.	
ioreg	Hardware	Displays the I/O Kit registry.	
ifconfig	Hardware, Software	Used to configure network interface parameters.	Retrieves network information.
ipconfig	Software	Manages the IP configuration state.	
netstat	Network	Displays incoming and outgoing TCP network connections, routing tables, and several network interface and network protocol statistics.	Retrieves the routing table.
route	Network	Used to retrieve network routing table information, such as the default gateway.	Retrieves information on the default gateway and network interfaces.
scutil	Network	Used to manage system configuration parameters: scutil-nwi Retrieves network information scutil-dns Retrieves DNS information scutil-proxy Retrieves system proxy settings	Retrieves network, DNS, and system proxy information.
sw_vers	Software	Displays the macOS version.	Retrieves the macOS version.
sysctl	Software	Allows kernel variables to be queried and set.	Retrieves system information.
system_profiler	Hardware, software	Used to retrieve system hardware and software configuration information.	Retrieves memory system information.
who	User	Displays who is currently logged into a machine.	
whoami	User	Used to display user, group, and privilege information for the user who is currently logged into the local system. If used without parameters, it displays the current domain and username.	Retrieves the security identifier of the current user.

System Test results

When you run a System Test, Refinitiv Workspace displays the test results with relevant messages and a status. The result displays the test status as an icon.

The table below describes what the various test results mean:

Result	Icon	Description
None / Unknown		No test status has been found.
Passed		Test matches the required conditions. No further action is required.
Failed		Test does not match the required conditions. Further action needs to be taken to address the issue.
Warning		Test results may not be critical. If Refinitiv Workspace displays a warning message while running the prerequisite tests, you can continue with the installation process. While running the diagnostics tests, this status may restrict some features, but will not prevent you from using the product.
Information		No validation is required for the test, and it is only for information. No further action is required.

Prerequisite tests⁴³

Software and hardware prerequisite tests ensure that all software prerequisites (such as operating system version, third-party software, and so on), and all hardware prerequisites

⁴³ Currently, some of the values returned by System Test are not in line with the system requirements for Workspace. For further information, refer to the [Workspace System Requirements](#) document.

(such as the CPU speed, RAM size, and so on), meet the minimum requirements to install Refinitiv Workspace.

Test	Description	Type
Tools available	The hardware, software, network and user tools that must be available to run Refinitiv Workspace.	Validation
Operating System	Verifies if the Windows version installed on your workstation is compatible with Refinitiv Workspace. If the required Operating System is not available, then this test stops the installation of Refinitiv Workspace.	Validation <ul style="list-style-type: none"> – Windows release number See Windows 10 in the list of Microsoft Windows versions. – Mac release number See macOS 10.13 onwards in macOS version history.
OS Architecture	Tests the power of your processor.	Validation <ul style="list-style-type: none"> – Required: 64-bit
OS Version	Tests for the version of your processor.	Validation <ul style="list-style-type: none"> – Required: 6.1
OS Service Pack	If relevant, the service pack number of your operating system.	Information
Operating System Language	Displays the interface language of your system.	Information
CPU Description	Displays a description of your system.	Information
CPU Type	Provides information regarding the type of CPU you use.	Information
CPU Speed	Checks whether the minimum CPU speed (in GHz) of your computer supports Refinitiv Workspace.	Information
Number of CPU cores	The CPU number of cores (= logical cores = physical cores x threads)	Validation <ul style="list-style-type: none"> – Required: 2 cores
Installed Memory	This test verifies if you have enough memory installed on your computer for optimal performance. Installed memory is also known as physical memory or random access memory (RAM).	Validation <ul style="list-style-type: none"> – Required: 4GB
Primary screen resolution	This test is run to verify whether the resolution on your primary screen meets the minimum requirements to support Refinitiv Workspace.	Validation <ul style="list-style-type: none"> – Required: 1280 x 1024
Color Depth	Verifies if the value of the color depth that you have on your computer supports Refinitiv Workspace.	Validation <ul style="list-style-type: none"> – Required: 24-bit
Video Adapters	Displays the model, RAM, and manufacturer of the video adapter on your computer.	Validation <ul style="list-style-type: none"> – Required: 128 MB
Free Disk Space	Displays the drive that has the most available free space. It provides information on whether enough free disk space is available for installation of Refinitiv Workspace.	Validation <ul style="list-style-type: none"> – Required: 1 GB
Disk Write Privilege	Verifies that you have access rights to the required folders.	Validation
Registry Access Rights	Verifies that you have access rights to the required registry.	Validation

Test	Description	Type
Microsoft Office version	Verifies the version of Microsoft Office.	Validation – Required: Version 15 or higher
Microsoft Office installed through Windows Store	Verifies the installation type of Microsoft Office.	Validation – Required: false

Information tests

These tests provide information about your installation of Refinitiv Workspace. These details can help your support team identify and rectify issues.

Test	Description	Type
Computer Name	Displays the name of the computer.	Information
Computer Domain	Displays the name of the computer domain.	Information
User Account Name	Displays the username used in the current login session. You can see the login information.	Information
Admin Rights	Displays whether you have admin rights on the computer	Information
User Time Zone	Displays the time zone that is set on your system.	Information
Local Time	The Local Time test displays the local time that is set on your system.	Information
User Locale	Displays the language code from your Regional and Language Options. For example, en-US represents English (United States) or en-GB represents English (United Kingdom).	Information
Microsoft Office Language	The Microsoft Office Language test displays the language that you have set for Microsoft Office.	Information
Thin Client Run Mode	Verifies if the current session is running remotely or locally.	Information
Screens	This test collects information on the number of screens.	Information
Screen Details	Displays: <ul style="list-style-type: none"> – Model Name – Screen Resolution – Primary Screen 	Information

Bandwidth tests

Bandwidth tests are used to check connection speeds to Refinitiv data platforms. This includes:

- Content Delivery Network (CDN)
- Reverse proxy

Network tests

Network tests are used to test connectivity, including:

- Missing connection
- Speed of connection

- Connection to services
- Connection to real-time data
- Connection to time series data

Test	Description	Type
Use HTTP 1/1	Verifies the status of the HTTP 1.1 protocol.	Validation – Required: true
Use HTTP 1.1 Through Proxy Connections	Verifies the status of HTTP 1.1, using the proxy connections protocol.	Validation – Required: true
Certificates	Commodo	Validation
Check for publisher's certificate revocation	Activating this setting may cause installation to fail because Refinitiv certificates cannot be updated on a private network without direct Internet access.	Validation – Required: false
Check for server certificate revocation	Activating this setting may cause the installation to fail because Refinitiv certificates cannot be updated on a private network without direct Internet access.	Validation – Required: false
Product page	Tests connectivity to the product page of Refinitiv Workspace.	Validation
Content Delivery Network	Tests connectivity to content delivery network.	Validation
Login – Authentication	Checks login authentication.	Validation
Login – Heartbeat	Checks login heartbeat.	Validation
Support	Checks connectivity to Support.	Validation
API/s	Checks connectivity to API/s.	Validation
Messenger	Checks connectivity to Messenger.	Validation
Apps	Checks connectivity to Apps.	Validation
Views	Checks connectivity to Views.	Validation
Real-time	Checks the availability of real-time data, the type of network you are using for real-time data delivery (Private or Internet), your deployment model, and whether your IDN permissions are synchronized.	Validation
Datastream	Checks connectivity to Datastream.	Validation
Content Filtering Domains	Checks for DNSs that are permitted by Refinitiv Workspace.	Validation

Appendix D: Command line statements

In this section

- [Installation statements](#)
- [Uninstallation statements](#)
- [Configuration Manager parameters](#)
- [Workspace executable statements](#)

Installation statements

The table below list command line statements that can be used to install Workspace:

Related links

- [Performing an installation using your Single Sign On URL](#)

Installation mode	Command
Base commands	
User ⁴⁴	Refinitivworkspace-installer-xxx.exe --user
Machine	Refinitivworkspace-installer-xxx.exe --machine-autoupdate-peruser
Machine without Auto-Update	Refinitivworkspace-installer-xxx.exe --machine-autoupdate-no
Machine with Update Service	Refinitivworkspace-installer-xxx.exe --machine-autoupdate-service
SSO	Refinitivworkspace-installer-xxx.exe --client-sso=<client SSO URL>
Installation help page	Refinitivworkspace-installer-xxx.exe --help
Run Messenger only	Refinitivworkspace-installer-xxx.exe --messengeronly
Shared configuration ^{45 46}	
Additional parameter	--sharedconfig="<file path>"
Failover	--sharedconfig="<file path-1>";"<file path-2>";"<file path-3>"

Uninstallation statement

The table below list command line statements that can be used to uninstall Workspace:

Command
Refinitivworkspace.exe --uninstall

Configuration Manager parameters

The table below list command line statements that can be used to configure Workspace:

Installation mode	Command
User	"<InstallDir>\Refinitiv\Refinitiv workspace\Refinitivworkspace.exe" --config-manager

⁴⁴ This is the default method of installing Workspace. As such, the --user parameter is not a requirement.

⁴⁵ For example, RefinitivWorkspace-installer-xxx.exe --machine-autoupdate-peruser --sharedconfig="<file path>" is the command line for a machine installation with a shared configuration.

⁴⁶ The content of the file(s), identified by the --sharedconfig parameter, could change from version-to-version. So, refer to the appropriate documentation for amendments to this parameter when there is a new release.

Installation mode	Command
Machine or Hot-Desking	"<InstallDir>\Refinitiv\Refinitiv workspace\Refinitivworkspace.exe" --config-manager --machine

Workspace executable statements

There are various parameters you can add to the Workspace executable, located in the `c:\Program Files\Refinitiv\Refinitiv workspace\<version>` folder.

The command line structure is:

```
Refinitivworkspace.exe <Parameter>
```

For example:

```
Refinitivworkspace.exe --systemtest=bandwidth
```

The following parameters are available:

Parameter	Purpose
--clearCache	Clear the Electron cache of Refinitiv Workspace
--clearLogs	Clear the logs folder of Refinitiv Workspace
--clearRememberMe	Delete the automatic login cookie
--client-ss0	Set the URL for your SSO
--connection=<type>	Set the connection mode for the platform, where <type> is: <ul style="list-style-type: none"> - Internet - Private
--dumpApps	Dump available Apps of Refinitiv Workspace into the logs folder
--dumpConfig	Dump the configuration of Refinitiv Workspace into the logs folder
--excel	Start Excel with the Refinitiv ribbon add-in
--log-level=<level>	Set the level of detail for log files, where <level> is: <ul style="list-style-type: none"> - error - warning - information - verbose - debug
--resetCache	Reset the product cache of Refinitiv Workspace to its default state
--systemtest	Run the embedded System Test
--systemtest=bandwidth	Runs the embedded System Test, with the additional bandwidth tests
--upload-logs	Upload log files
--version	Show the version of Workspace
--versions	Display the version of underlying components of Refinitiv Workspace, for example: --versions=electron, node (or simply --versions)
--nofile	Start Refinitiv system tray icon only

Installer command line statements

Currently, only the following command line statement is available, which enables Workspace to run at a higher processing priority:

```
Refinitivworkspace-installer-xxx.exe --run-above-normal-priority
```

Appendix E: Automatic update workflow

The content in this appendix applies to the following installation types:

- `--user`
- `--machine-autoupdate-peruser`⁴⁷
- `--machine-autoupdate-service`

The `--machine-autoupdate-no` installation mode is not discussed, as automatic update functionality is disabled for that mode.

Checking new version availability

1. Login into Workspace
2. Randomly, between 5-60 minutes after login, **RefinitivWorkspace.exe** checks the availability of the new target version for the current user. Version checks are then scheduled daily, at 00:<randomMinutes>.
 - ① This check can also be triggered by opening the **About Box**
 - a. Checks the new version with **Admin Panel**⁴⁸
 - b. Checks the new version with **Desktop Deployment Portal**

Changing the update time

To change update time after login, use the command `--checkupdateTime=<n>`, where:

- `--checkupdateTime=0` – Checks for a new version instantly after login
- No parameter set – Checks for a new version randomly between 5-60 minutes after login

Setting up a custom scheduler

To set up a custom scheduler to check for new versions, use the command:

```
--autocheckupdateTime=<a> <b> <c> <d> <e>
```

Where:

- <a> Day of week (0 – 7, where 7 is Sunday). You can also use names, that is, Monday, and so on.
- Month (1 - 12)
- <c> Day of month (1 - 31)
- <d> Hour (0 - 23)
- <e> Minute (0 - 59)

⁴⁷ For `--machine-autoupdate-peruser` mode only: To update the master installation automatically (bulk autoupdate), the administrator should get the latest version and reinstall Refinitiv Workspace. All users, that have a lower version than the master installation, are updated to the new version of master installation automatically, with the active setup, once they log off from Windows, and log in again.

⁴⁸ For further information, see the [Administration Panel Configuration Guide](#).

For example, for an update check to be performed every Sunday, at 5:30 PM, use the command:

```
--autocheckupdate=7 * * 17 30
```

If a new version is detected see the next steps.

Downloading a version and preparing for upgrade

1. Workspace receives the target version information (including URL) and automatically downloads the zipped package.

Calling process Refinitivworkspace.exe

URL https://cdn.refinitiv.net/public/packages/RFVWWindows/RFVWWindows_Core_x_xx_xxx.zip

Installation type	Download location
--user	%AppData%\Local\Refinitiv\Refinitiv Workspace.ToInstall
--machine-autoupdate-peruser	%AppData%\Local\Refinitiv\Refinitiv Workspace.ToInstall
--machine-autoupdate-service	%programdata%\Refinitiv\Refinitiv Workspace\Refinitiv Workspace.ToInstall

2. Workspace extracts the files from the zipped file to a newly created Extract folder

Calling process Refinitivworkspace.exe

Unzip tool yauzl node_module⁴⁹

Extract location <Download location>\Extract

Checking new package with Desktop Deployment Portal

1. Checks whether the content in the Extract\checkUpdateInfo.json matches the content received from the Desktop Deployment Portal (by checking the file hash code):

If...	Then...
Yes	Skip downloading the new package and wait for the upgrade initiation
No	Delete the downloaded package and Extract folder

2. Download the new package, with the updated Extract\CheckUpdateInfo.json content (see [Downloading a version and preparing for upgrade](#))

Initiating an update

1. The persons required to perform this step depend on the installation type:

Installation type	Performed by
--user	The user of the machine where Workspace was installed
--machine-autoupdate-peruser	Each Workspace user on the machine where the application was installed
--machine-autoupdate-service	Any user of the machine(s) where Workspace was installed

⁴⁹ <https://www.npmjs.com/package/yauzl>

To begin the upgrade, do one of the following:

- Select the **Help** menu, choose **About Refinitiv Workspace**, and click the **Upgrade now** button.
 - Select the **Refinitiv Workspace** menu and choose:
 - **Sign Out**, or
 - **Exit Refinitiv Workspace**
2. `Refinitivworkspace.exe` runs an `Extract\setup.exe` command, with arguments based on `setupArgs`, defined in `CheckUpdateInfo.json`.

Installation type	Example command
<code>--user</code>	<code>setup.exe --update --rerun --silent --forceInstall --calledByCheckupdate --execute=Refinitivworkspace.exe --appLocation= C:\\Users\\%Username%\\AppData\\Local\\Refinitiv\\Refinitiv workspace</code>
<code>--machine-autoupdate-peruser</code>	<code>setup.exe --update --rerun --silent --forceInstall --calledByCheckupdate --execute=Refinitivworkspace.exe --appLocation=C:\\Program Files\\Refinitiv\\Refinitiv workspace\\1.19.447</code>

Upgrade workflow

The following actions are performed by `Extract\Setup.exe`:

1. Waits for several seconds until `Refinitivworkspace.exe` is terminated⁵⁰
 - ① If `Refinitivworkspace.exe` has not been terminated, `Setup.exe` force-kills the process
2. Performs a backup of installation folders, based on the information in the `files` section of `InstallInfo.json`
 - a. `--machine-autoupdate-service` only: Checks whether Workspace is in use by another user:

If...	Then...
Yes	Go to step 2.c.
No	Go to step 2.b.

- b. Backs up the Workspace installation folder:

Installation type	Installation folder	Backup location
<code>--user</code>	Refinitiv workspace	<code><install_path>\Refinitiv workspace.Backup</code>
<code>--machine-autoupdate-peruser</code>	workspace <code><version></code>	<code><install_path>\Refinitiv workspace\<version>.Backup</code>

- c. `--machine-autoupdate-service` mode only: Checks whether Microsoft Office is in use by another user on the same machine:

If...	Then...
Yes	Go to step 2.e.
No	Go to step 2.d.

⁵⁰ For `--machine-autoupdate-service` mode: Only the instigating user is required to terminate their Workspace session.

- d. Backs up the Refinitiv for Office installation folder:

Installation type	Installation folder	Backup location
--user	Refinitiv for Office	<install_path>\Refinitiv for Office.Backup
--machine-autoupdate-peruser	office <version>	<install_path>\Refinitiv for Office\<version>.Backup

- e. --machine-autoupdate-service mode only: Performs a backup of the Update Service installation folder:

Installation type	Installation folder	Backup location
--machine-autoupdate-service	Update Service <version>	<install_path>\Refinitiv workspace Update Service\<version>.Backup

3. Backs up the shortcuts folder, based on the information in the shortcutsFolder section of InstallInfo.json:

Installation type	Backup location
--user	%appdata%\Refinitiv\Refinitiv workspace\Backup\<randomname>-backupshortcut\
--machine-autoupdate-peruser	%programdata%\Refinitiv\Refinitiv workspace\Backup\<randomname>-backupshortcut\

4. Creates new folders and installs files:

Installation type	Workspace location	Office location	Update Service location
--user	<install_path>\Refinitiv workspace	<install_path>\Refinitiv for Office	n/a
--machine-autoupdate-peruser	<install_path>\Refinitiv workspace\<version>	<install_path>\Refinitiv for Office\<version>	<install_path>\Refinitiv workspace Update Service\<version>

5. Installs shortcuts:

Installation type	Installation location
--user	%AppData%\Microsoft\windows\Start Menu\Programs\Refinitiv
--machine-autoupdate-peruser	– %AppData%\Microsoft\windows\Start Menu\Programs\Refinitiv – %ProgramData%\Microsoft\windows\Start Menu\Programs\Refinitiv
--machine-autoupdate-service	%ProgramData%\Microsoft\windows\Start Menu\Programs\Refinitiv

6. Installs Add Remove Programs (ARP) registry entries for Workspace

7. Checks whether Workspace was installed with --messengeronly parameter:

If...	Then...
Yes	Go to step 9
No	Go to step 8

8. Installs Office Registry and Office Add-ins

9. Creates `install-settings.json`, containing settings for Microsoft Office, providing the location for Workspace and Office add-ins:

Installation type	File location
--user	<install_path>\Refinitiv workspace\
--machine-autoupdate-peruser	<install_path>\Refinitiv workspace\
--machine-autoupdate-service	<install_path>\Refinitiv workspace\<version>

10. Creates `com.refinitiv.workspace.sessionsharing.json`, providing Chrome extension settings and the location of the `refinitiv-host.exe` file:

Installation type	File location
--user	<install_path>\Refinitiv workspace\
--machine-autoupdate-peruser	<install_path>\Refinitiv workspace\
--machine-autoupdate-service	<install_path>\Refinitiv workspace\<version>

11. Checks whether the installation was completed successfully:

If...	Then...
Yes	Removes backup folders ⁵¹
No	Removes all newly installed files and restores backup folders. Ends the installation with an error message.

12. Creates `InstallInfo.json`, in a mode-specific location, and writes new installation information, such as installation paths, shortcut paths, and so on:

Installation type	File location
--user	<install_path>\Refinitiv workspace\
--machine-autoupdate-peruser	<install_path>\Refinitiv workspace\
--machine-autoupdate-service	<install_path>\Refinitiv workspace\<version>

13. If the update was triggered by signing out of Workspace, it relaunches Workspace with `-startApp`

⁵¹ For the `machine-autoupdate-service` only: If Workspace is in use at the time of update, the previous `<version>` folders under Refinitiv Workspace and Refinitiv for Office are preserved. Once all users have logged out of their devices and logged in again, access to the new Workspace version is facilitated using Active Setup.

Appendix F: Settings

In this section

- [Networking](#)
- [Microsoft Office settings](#)
- [Security](#)

Networking

Ports

Workspace uses the following connections:

API ⁵²	Connection	Port ⁵³
Desktop Data API	http://localhost:9000/api/	9000
Side by Side API ⁵⁴	http://localhost:9000/sxs/	9000
Refinitiv Workspace Bus	http://localhost:49152/	49152

Communication protocols

Protocol	Port Number	Workspace Services	Required For
TCP	1024+ → 80 1024+ ← 80 1024+ → 443 1024+ ← 443	Refinitiv Workspace Platform	Administration Services, View Service, Search & Navigation Service, Time Series Service, Refinitiv Messenger Service, Trading Service, Update Service, Thomson Reuters Remote Support (TRRS), Datastream Service, Refinitiv Newscasts (internet only), FXall, Flextrade Spark Real-Time Data
TCP	1024+ → 15000 1024+ ← 15000	Real-Time Data	Refinitiv Real-Time Advanced Distribution Server (formerly ADS)
TCP/UDP	1024+ → 53 1024+ ← 53	DNS Server	Domain Name Resolution from Domain Name Server

Services

This section summarizes the services and features related to connectivity and provides links to further information.

⁵² You can find further information regarding APIs on the [Refinitiv Developer Community](#) website.

⁵³ 9000 and 49152 are internal ports. If the port is already in use, Workspace increments, for Desktop Data and Side by Side, from 9000 and, for Workspace Bus, from 49152, until a free port number is found.

⁵⁴ For further information, see [Workspace Web Side by Side API](#) on the Developer Community website.

Financial Community Network and Delivery Direct

For further information about Finance Community Network (FCN) and Delivery Direct, see the [Private Network Overview](#) section of [MyRefinitiv](#), containing the following documents:

- Customer Connectivity DNS Migration Guide
- FCN Customer Connectivity Guide

Internet

Refinitiv will not divulge IP address information under any circumstances. Doing so prevents us from changing IP addresses, as and when needed, without a notification period. These IP addresses may not always be under our direct control.

Web hosted services

The following services and features are accessed through the Internet and not reached through a private network:

MyRefinitiv (my.refinitiv.com)	The documentation repository.
Contact Us	For raising questions, issues, and other topics.
Desktop crash dump upload utility	Sends data to the Refinitiv support platform. This is in case a user has a session crash. The crash data is sent from the user session to Refinitiv, so we can investigate the crash.
GetSupport or interactive Chat	Where feedback / support issues are logged, and you can establish a chat dialogue with an agent.
Messenger Traffic	All traffic will be over internet, by default. ⁵⁵
Portal SDK starter kit (cdn.refinitiv.com)	Software Development Kit (SDK) is a toolkit that you can use to interact with the app and our platform. This is hosted on CloudFront.
Chrome Extension	This is accessed from an external web site, either by the user going to the Google store, or through enterprise set-up.

Content filtering domains

You need to whitelist the domains for content that can be accessed through Workspace.

Important: Third Party apps in Workspace may require access to specific domains. For information about specific access requirements, it is advisable to contact the app developer directly.

Example domain list

The following list of domains is not exhaustive and is for illustrative purposes only.

- ① Many of the domains listed in the table below are wildcard values, where a subdomain may prepend and/or append the listed domain.

DNS	Workspace services
autex.com autexnow.com	Autex
bit.ly reut.rs tmsnrt.rs	Bit.ly Integration Information

⁵⁵ This is not the case when private line connectivity is enabled for Refinitiv Messenger. For further information, see [Appendix E: Refinitiv Messenger standalone](#).

DNS	Workspace services
trmcs- documents.s3.amazonaws.com	Central Bank Polls
session.rservices.com	Contribution address, News documents
cnbc.com ft.com moodys.com	Miscellaneous external content
googleapis.com	Google
chrome.google.com	Refinitiv Workspace Chrome Extension
virtualearth.net thomsonreuters.wdtinc.com	Interactive Map
lipperweb.com	Lipper Market Insight
loanconnector.com	Loan Connector
loanpricing.com	Loan Pricing
depth.finance	Market Depth
cdn.mathjax.org	MathJax JavaScript display engine
storage.tr.191.it thomsonone.com ws.platts.com	News Documents
reuters.com breakingviews.com	News URL link
refinitiv.com refinitiv.net refinitiv.biz thomsonreuters.com thomsonreuters.net thomsonreuters.biz	Refinitiv
globalrelay.com	Refinitiv Messenger Compliance
salesforce.com webtrendslive.com	Refinitiv Migration Tools
kaltura.com reuters.tv vmnd.tv	Refinitiv Newscasts (formerly Reuters Insider)
cxvid- livecapture.s3.amazonaws.com	Refinitiv Newscasts (formerly Reuters Insider): Recording Video and Images
thomson.112.2o7.net	Refinitiv Newscasts (formerly Reuters Insider): Analytics and user interaction reporting
gstatic.com apis.google.com bv-predictions2021.com cloudfront.net google-analytics.com googletagservices.com product.datastream.com themes.googleusercontent.com trust.org views.rkd.reured.com	Reuters Interactive graphics
bing.com	Search engine
media-server.com	Street Event content

DNS	Workspace services
comodo.com	TLS/SSL Client Certificate (HTTPS)
tradeweb.com	Tradeweb
fxall.com	Trading Service
pbs.twimg.com twitter.com	Twitter integration
wom.finance	Wealth Order Management
awsglobalaccelerator.com	
avatars.stocktwits.com	Social Media Monitor
img.en25.com eloqua.com	Refinitiv Training
salesforceliveagent.com	Support
oneaccess.io	OneAccess
dtn.com	Weather layers in InteractiveMap app

Trusted root certification

You can download and verify the COMODO certificate from the appropriate location be

Internet	https://cipher-test.refinitiv.com/
Private network	https://cipher-test.extranet.refinitiv.biz/

Certificate details:

	Issued by	CN	O	C
COMODO	COMODO RSA Certification Authority	COMODO RSA Certification Authority	COMODO CA Limited	GB

Microsoft Office settings

Refinitiv Workspace for Excel VSTO add-in

For the Microsoft Excel Visual Studio Tools for Office (VSTO) add-in, Workspace installs a single DLL file under the Windows operating system, `refinitiv-shim.dll`. This supports the core features of the Refinitiv Workspace for Excel (**Refinitiv** ribbon) add-in.

MS Office	File location
32-bit	<InstallDir>\Refinitiv\Refinitiv for Office\x.x.x.x\Office_x86
64-bit	<InstallDir>\Refinitiv\Refinitiv for Office\x.x.x.x\Office_x64

There is no linking, presentation tools, or deal analytics package.

The Refinitiv Workspace for Excel (**Refinitiv** ribbon) add-ins are listed in the table below:

Version	Add-ins
1.19	No changes
1.18	No changes
1.17	No changes

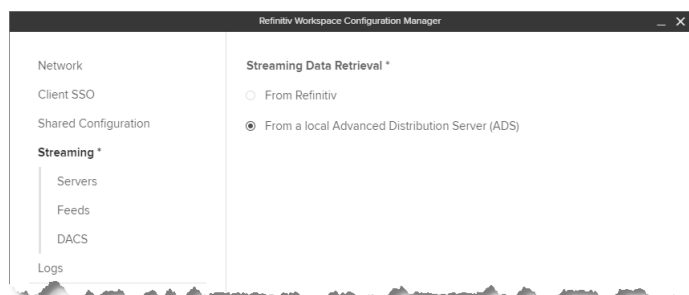
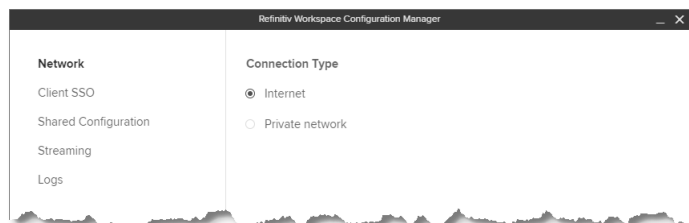
Version	Add-ins
1.16	=RDP.Publish() =RtContribute() ⁵⁶ =RDP.PublishChain() =RtContributeChain() =DSCHART()
1.15	No changes
1.14	No changes
1.13	No changes
1.12	=TRAggregate() =RDP.Aggregate() =RDP.Analytics() =RDP.Data() =RDP.HistoricalPricing() =RDP.Price()
1.11	=RDP.Today() =RDP.Now()
1.10	=RtToday() =RtNow()
1.9	Refinitiv.EmbeddedApplication (financial chart) =DSGRID() =Thomson.Reuters.AFOSpreadSheetFormulas.DSGRID() =RDP.Search()
1.8	=RHistory() =RtGet() =TR()

Customer managed over Internet

Customer managed over Internet mode is a sub deployment, where Workspace connects the real time data on a user's own local Refinitiv Real-Time Distribution System (formerly TREP) infrastructure, while other content is sourced from the Refinitiv Data Platform, through the Internet.

To configure this:

1. In Workspace, open Configuration Manager.
2. In the **Network** panel, under **Connection Type**, select **Internet**.
3. In the **Streaming** panel, under **Streaming Data Retrieval**, select **From a local Advanced Server (ADS)**.
4. This opens three separate panels – **Servers**, **Feeds**, and **DACS** – where you can add your server and feed information.



⁵⁶ See [Contributions \(RtContribute\)](#) in the [Known issues](#) section.

Security

FIPS

Workspace is not supported in a 140 series Federal Information Processing Standards (FIPS) environment.

User Agent

A User Agent is an application that retrieves and presents Web content for users or is implemented using Web technologies.

Workspace identifies connections to the ADS User Agent. For example, this could contain the following string and version: `RFV-Workspace/1.13.413`, where the version is updated to match the Workspace executable version.

Enabling the DPRM service

For those Workspace desktop customers who want to use the optional DPRM service in their local Refinitiv Real-Time Distribution System, the settings in the following table can be added to the `<override_settings>.json` file.

① The `EIKON.STREAMING.API.LOCAL.DACS.DPRM.PORT` parameter is mandatory.

Setting	Description
<code>EIKON.STREAMING.API.LOCAL.DACS.DPRM.PORT</code>	This allows you to specify the port to use to retrieve the entitlements used for DPRM. In general, the port should be set to either of the following modes ⁵⁷ : – 8261 - Permission proxy mode, or – 8302 - Permission service mode ⁵⁸
<code>EIKON.STREAMING.API.LOCAL.DACS.DPRM.INTERVAL</code>	This allows you to set the interval, in milliseconds, between each reconciliation of DACS entitlements with the DPRM service. Default value: 86400000 (24 hours).
<code>EIKON.STREAMING.API.LOCAL.DACS.DPRM.DELAY</code>	This allows you to set the delay, in milliseconds, between Workspace initialization after login and the reconciliation of DACS entitlements with the DPRM service. Default value: 60000 (60 seconds).
<code>EIKON.STREAMING.API.LOCAL.DACS.DPRM.SERVERS</code>	This parameter is used when running permission service mode only. This allows you to specify a list of servers to use for DPRM. This setting is defined as a JSON-encoded array of permission service hostnames. For example: <code>"[\"dacs01\", \"dacs02\", \"dacs03\"]"</code>

DPRM settings example

```
"EIKON.STREAMING.API.LOCAL.DACS.DPRM.PORT": "8261",
"EIKON.STREAMING.API.LOCAL.DACS.DPRM.INTERVAL": "43200000",
"EIKON.STREAMING.API.LOCAL.DACS.DPRM.DELAY": "50000",
```

⁵⁷ If not set to one of these values, DACS synchronization is not performed.

⁵⁸ In permission proxy mode, the list of servers in the `EIKON.STREAMING.API.LOCAL.SESIONS` setting is used.

Appendix G: Refinitiv Messenger

Standalone

Refinitiv Messenger private line connectivity

You can use Refinitiv Messenger to send and receive text messages, photos, and stock prices.

Once you have installed Refinitiv Messenger, if you require connectivity through a Private Line, do the following:

1. Navigate to the Refinitiv Workspace shortcut:
 - a. Click **Start** and scroll to **Refinitiv > Refinitiv Workspace**
 - b. Right-click **Refinitiv Workspace** and select **More > Open file location**
2. In File Explorer, right-click the **Refinitiv Workspace** shortcut and select **Properties**
3. Add the following parameters to the end of the Target field:


```
--messenger-ur1="https://collab.platform.refinitiv.biz/eikonmessenger"
```

Embedded

Running Messenger traffic through a private network

To allow Messenger to route traffic through a private delivery network, you need to request that Workspace is permissioned for Messenger Private Delivery, using the following values:

Product code	100464
Permission Object name	COLLRMPRIVATE

Appendix H: Troubleshooting

In this section

- [Crash information uploads](#)
- [Shared configuration file bug](#)
- [Installer help parameter](#)
- [Error codes](#)
- [Logging](#)
- [Networking issues](#)
- [Using the Video Recorder tool](#)
- [Known issues in Citrix environments](#)



Crash information uploads

If a crash occurs, Workspace sends the dump file to the Refinitiv support platform.

Whenever possible, Workspace also uploads session logs to provide more information to the support teams.

Crash and log files are sent to the following internal Refinitiv support platform:

<https://dst.platform.refinitiv.com/>

JSON coding changes

The following additional, advanced syntax changes have been made to the coding of JSON files:

- Add single line comments, using `//` at the beginning of the line
- Multiple line comments, using `/* text text text */`
- Empty lines are permitted
- Indentation errors are skipped and do not cause interruptions
- The last line of the file is not required to end with a comma

Error codes

The following error codes may be reported during an installation failure:

Error reported	Code	Summary
UNSUPPORT_PLATFORM	100	Unsupported Platform.
FAILED_TO_INSTALL	101	Failed to install Refinitiv Workspace.
FAILED_TO_COPY_FILES	102	Failed to copy files to %AppData%/Refinitiv.
CANNOT_GET_FOLDER_SIZE	103	Cannot get folder size for stamping to Add/Remove program.
FAILED_TO_INSTALL_ADD_REMOVE_PROGRAM	104	Failed to install Add/Remove program.
FAILED_TO_INSTALL_WINDOWS_REGISTRY	105	Failed to install Windows registry.

Error reported	Code	Summary
FAILED_TO_CONFIG_PRODUCT	107	Failed to create/update config product.
FAILED_PREREQUISITE_CHECK	108	Failed prerequisites check.
ALREADY_INSTALLED	109	Already installed
NO_INSTALLATION_FOUND	110	No installation found
FAILED_TO_UNINSTALL	201	Failed to uninstall
FAILED_TO_UNINSTALL_CANNOT_REMOVE	202	Failed during uninstall process. Cannot remove Refinitiv Workspace folder
FAILED_TO_UPDATE_INSTALL	301	
FAILED_TO_UPDATE_INSTALL_CANNOT_REMOVE	302	Failed update during install process. Cannot remove Refinitiv Workspace folder.
FAILED_TO_UPDATE_UNINSTALL_CANNOT_REMOVE	402	Failed update during uninstall process. Cannot remove Refinitiv Workspace folder
UNKNOWN_ERROR	999	Unknown error

Logging

Trace levels

Desktop logs are vital tools for troubleshooting issues⁵⁹. The log files show Greenwich Mean Time (GMT) as standard.

The trace levels error, warn, info, verbose, and debug are available:

Warning: Using verbose or debug mode impact system performance and can increase the logging into the folder. The default logging level is info, so verbose/debug messages are not displayed.

You can modify the default value using these entries in your `machine-settings.json` file:

```
{
  "EIKON.LOG.TRACELEVEL": "debug"
}
```

Or by starting the product with one of following command line parameters:

```
--log-level=error
--log-level=warning
--log-level=information
--log-level=verbose
--log-level=debug
```

Uploading Workspace logs

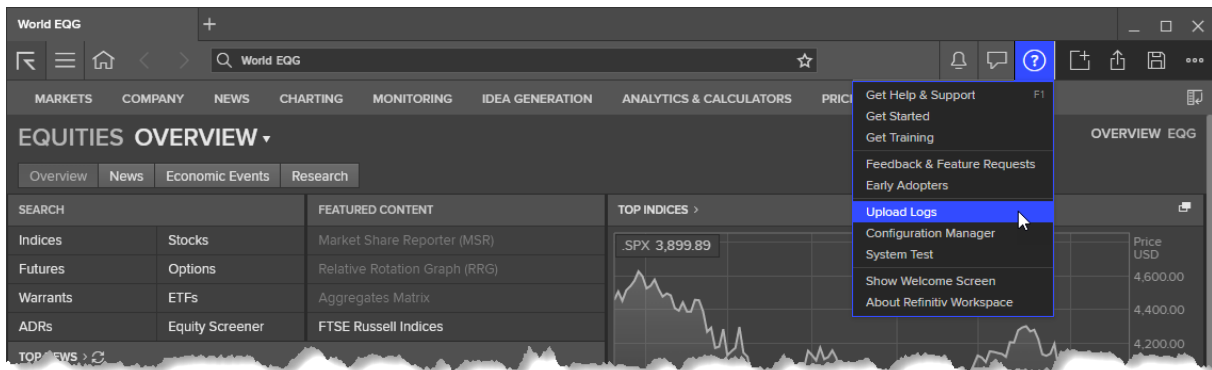
You can upload Workspace logs by using:

- A menu option
- Excel launcher

⁵⁹ See also, [Log upload workflow](#)

Menu option

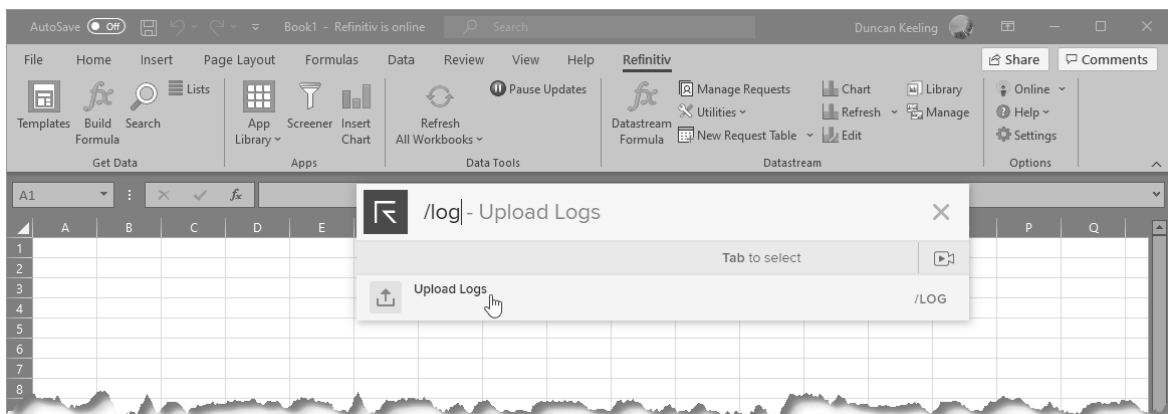
From the **Help** menu, select **Upload logs**.



Excel launcher

If you are logged into Excel:

1. Press **Shift+Ctrl+Space**.
2. In the Search window, type **/log**.



3. Click **Upload Logs**.

Log upload workflow

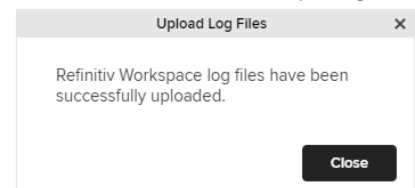
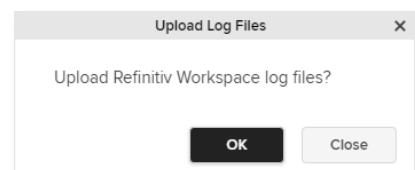
By user request or if a crash occurs, Workspace sends the contents of the application logs folder to the Refinitiv support platform:

<https://dst.platform.refinitiv.com/>

To save bandwidth, log uploads are sent in chunks of no more than 5Mb. Additionally, logs that have already been uploaded are not uploaded again.

You can also upload log files to the desktop support site using the following command line:

```
Refinitivworkspace.exe --upload-logs
```



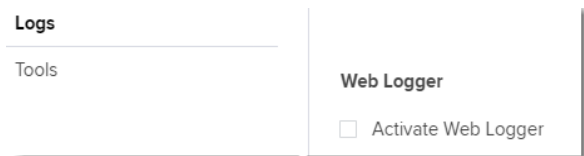
Log upload troubleshooting

For troubleshooting purposes, the settings⁶⁰ shown in the table below can be written to the `user-settings.json` or `machine-settings.json` file:

Setting	Purpose
<code>EIKON.LOGSUPLOAD.VERBOSEOUTPUT</code>	set to true to have some output generated in the console.
<code>EIKON.LOGSUPLOAD.DEACTIVATEENCRYPTION</code>	set to true to send the logs without encryption.
<code>EIKON.LOGSUPLOAD.WRITETEMPFILESONDISK</code>	set to true to write the original and the crypted zips in the %TEMP% folder.
<code>EIKON.LOGSUPLOAD.TESTDECRYPTIONLOCALLY</code>	set to true to test that decryption works locally (useful with <code>VERBOSEOUTPUT</code> and/or <code>WRITETEMPFILESONDISK</code>).

Networking issues

After installing Workspace, you have the option of using the web logger command to troubleshoot networking issues. To do this:



- Use the command `Refinitivworkspace.exe --web-logger`, or
- Activate it using Configuration Manager > Logs > Web Logger:

To troubleshoot networking issues:

1. Launch Workspace with the `--web-logger` parameter, using the Command Prompt, or through the Configuration Manager.
2. Enter your credentials and login.
3. Navigate to the log folder location.
4. Open the most recently created desktop log file (`web-requests.log`)⁶¹. This file is created and available with all captured web calls from Workspace.

Resetting Electron application data

You can use the following parameters to delete application data – configuration files, caches, preferences, and settings – resetting Electron.

① Close all Workspace applications before running these commands.

To do this, depending on your requirements, run `Refinitivworkspace.exe` use one of the following parameters:

<code>--resetCache</code>	Resets the product cache of Refinitiv Workspace to its default state. That is, as it would be after a fresh installation.
<code>--resetElectronCache</code>	Reset the Electron cache of Refinitiv Workspace to its default state

⁶⁰ By default, all these settings are set to FALSE.

⁶¹ When Workspace shuts down, it generates both the `web-requests.log` file and a HAR-based topology log file.

Using the Video Recorder tool

The Video Recorder tool allows you to capture and save video footage of your entire desktop or a particular screen. This is particularly useful for capturing issues you are experiencing with your environment to provide additional information to Refinitiv Support.

Starting the tool

Run Workspace with the `--video-recorder` parameter. This can be done either by:

- adding the parameter to the application shortcut by editing its properties, or
- using the appropriate command line statement:

Windows	<code>"%LOCALAPPDATA%\Refinitiv\Refinitiv workspace\Refinitivworkspace.exe" --video-recorder</code>
macOS	<code>"/Applications/Refinitiv workspace.app/Contents/MacOS/Refinitivworkspace" --video-recorder</code>

The following dialog is displayed:



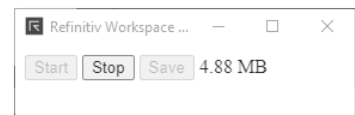
Capturing a video

To capture a video, do the following:

1. Click **Start**.
2. In the dialog that is displayed, choose whether to capture video of your whole desktop or of a specific screen.

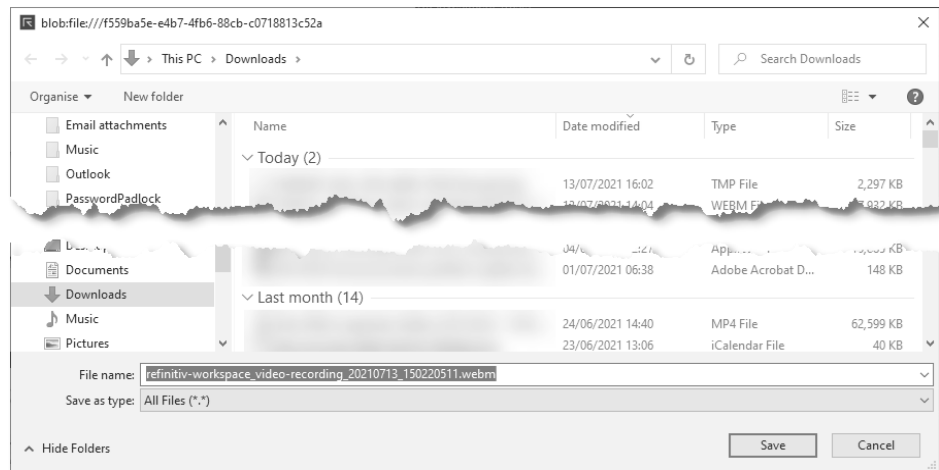
While the video is recording, a dialog is displayed which shows the current size of the video file, as it is recording.

3. Once you have captured the content you require, click **Stop**.
4. Then, in the main dialog, click **Save**.



A Windows Explorer dialog is displayed, with the **Downloads** folder open, by default.

5. Optionally, navigate to a different download folder.
6. Click **Save**.
7. Email the saved .webm file to support@refinitiv.com.



Appendix I: Known issues

Contributions (RtContribute)

The Refinitiv Workspace for Excel (Refinitiv ribbon) add-in was added in Workspace version 1.16. The following list summarizes the known issues and their solutions or when they are to be addressed.

Issue	Solution/To be addressed in
RTDS requires updating to a new Data Dictionary version.	
Refinitiv Real-Time Advanced Distribution Server (formerly ADS) version 3.5.2 L1 does not support the contribution from Workspace Excel.	Install version 3.5.2 L3 ⁶² or higher.
POS and LANGUAGE parameters are not supported. Requires sending data in RMTES encoding.	Only UTF-8 is supported by the API

Refinitiv Real-Time Advanced Distribution Server version issues

There were several issues with the handling of WebSocket connections in the initial release of version 3.5.2, which were only partially resolved in 3.5.2 L2.

Further issues concerning WebSocket connections were addressed in the L3 release, together with minor changes to the default settings, which improved the handling of larger messages.

Virtualized environment issues

Important: If you encounter an issue; Refinitiv requests that you confirm the issue has been reproduced in a non-virtualized environment.

CVAD environments

This section lists all known issues for running Workspace on a CVAD environment, identifying where the issue is version-specific. That is:

- **Blue** cell shading indicates that the problem occurs in 7.15 LTSR and 7.6 LTSR only
- **Red** cell shading indicates that the problem occurs in Citrix 7 1912 LTSR only

Subject	Jira reference	XenApp pub. app	XenApp pub. d'top	Xen Desktop
Menu from System Tray is not closed when user click on other area	SAP-8345	■		
Options are not shown, when right click on "Task bar"	SAP-8599	■ ⁶³		
All menus are displayed as separate entry in taskbar	SAP-9231	■		
Toast UI is displaying as separate entry in taskbar	SAP-9233	■		
Icon is not displayed in taskbar for Messenger window	SAP-9235			■

⁶² See also [Creating an internal connection](#).

⁶³ Confirmed by Citrix as expected behaviour.

Subject	Jira reference	XenApp pub. app	XenApp pub. d'top	Xen Desktop
Notification Centre: Toast still appears when user activate Focus Assist on local machine	SAP-9617	■		
There is a small black area around toasts	SAP-9620	■		
Pressing Alt+F2 to open the Thin Monitor DEBUG window is minimized (for enhanced troubleshooting only)	MON-662	■		
Pressing Alt+F2 to open the Thin Monitor DEBUG window is not working/nothing happens (for enhanced troubleshooting only)	MON-662		■	■
Black areas are shown near guidelines and snapping lines	SAP-10399	■		
Snapping/grouping features breaks after moving a tile (moving frame)	SAP-10368	■		
Shortcut (ALT + S) doesn't work	SAP-10009			■
Refinitiv for Excel is not automatically sign in and retrieve the data when Open saved Functional template + native excel via command line	EFO-8579		■	■
RtGet function returns an error message "#N/A Source not available." on 1 specific field	EFO-8371	■	■	■
Add registry support for VDI mode installation	EFO-9593	■	■	■
RICS, Graphics hyperlinks does not work when user click from Rich text format (Word)	NEWS1-1687	■	■	■
Cannot open Launcher by shortcut if some window of Refinitiv Workspace is not on focus	SAP-8344	■		
Toast does not appear at the edge of the screen	SAP-14611	■		
No OS notifications for downloads	SAP-22534	■		
[Widely:] Palo Alto Networks TS Agent can raise problems - whitelisting	---			

VMware environments

This section lists all known issues for running Workspace on a VMware Horizon 8 environment:

Subject	Jira reference	Horizon virtual apps
There's only 'Close window' in the task bar	SAP-10823	■
Published Apps - Do not disturb option is activated on Published Apps when Focus assist is OFF in OS settings	SAP-10972	■
Published Apps - Impossible to copy screenshot to clipboard for Virtual App	SAP-11011	■
Tiles - Snapping line and guideline are visible only after dropping a tile	SAP-11025	■
Tiles - Group movement is not working properly	SAP -11026	■
Tiles - Single tile resizing works for snapped or grouped tiles	SAP-11027	■
Impossible to open deep link	SAP-11955	■
Published Apps - RW desktop 1.19 is not resized	SAP-22571	■
Tiles - Pinned tile manager can be moved	SAP-22620	■

Shared configuration file bug

The automatically generated shared configuration file contains several lines that currently have no impact on the running of Workspace. These should be removed manually.

Open the file and remove the following lines:

```
"REFINITIV.WORKSPACE.WEBLOGGER.ENABLE":
"EIKON.INTRANET_OVERRIDE.ENABLED":
"ICADDIN.ADDIN.DEFAULTFOLDERPATH":
"EIKON.LOG.TRACELEVEL":
```

To use Workspace as the default application for links, add the following line:

```
"EIKONPROTOCOL.ISDEFAULTAPPLICATION": "true",
```

- ① Currently, once the default application for handling links has switched to Workspace, it is not possible to return this function to Eikon without a clean reinstallation of Workspace. This is a known issue⁶⁴ and will be addressed in an upcoming release.

SSL inspection support

Refinitiv does not support or enforce SSL inspection, sometimes referred to as TLS/HTTPS Interception.

If clients use SSL inspection, they must configure URL filtering profiles **not** to enforce SSL inspection on Refinitiv domains, such as *.refinitiv.com, *.refinitiv.net, *.refinitiv.biz.

Real-Time server disconnections

In the event where the Refinitiv Real-Time Distribution System disconnects immediately following a successful mount, refer to [Creating an internal connection](#).

Cache path definition

An alternative cache path can be defined for Workspace during its installation, using the parameter:

```
RefinitivWorkspace-installer-xxx.exe --cachepath="<folder_path>"
```

However, currently, this does not re-route the entire content of the Refinitiv workspace folder in the cache. That is, while the electron folder is moved to the new location, the following subfolders are not:

- Config
- Dictionaries
- Data API Proxy
- File Links

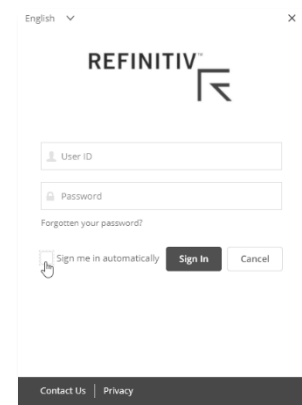
⁶⁴ [SAP-22355](#)

Signing in automatically

When users first log into Workspace, they have the option of choosing to sign in automatically in future, which creates a cookie in the electron cache for the user.

However, if electron is upgraded to a higher version, the cache is cleared and users are expected to sign in again.

- ① As this may occur many months later, users may have lost their credentials.



Rolling back

If your instance of Workspace was upgraded automatically, you can return to the previous version of Workspace by using the rollback parameter in the command line:

```
"<Install Path>\Refinitiv\Refinitiv workspace\RefinitivWorkspace.exe"  
--rollback
```

However, this command also disables the automatic update feature for subsequent releases of Workspace.

This issue will be resolved in an upcoming release. However, an interim workaround will be formulated for this issue in beforehand.

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