LSEG Workspace Technical Readiness Guide

Technical requirements, connectivity options, software deployment, and support channels

MARCH 2024
v1.36

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Revision History

Date	Version	Summary of changes
Mar 2024	1.36	Changes to Protocol Support page; Office Workspace Add-In link changes
Jan 2024	1.35	Sample distribution.cnf additions for Customer Managed; Edited RWF Slide; Added Link to LSEG Workspace Technical Documents; Additional Links for Add-In; Removed outdated Links
Nov 2023	1.34	Added Link for Web vs. Desktop comparison; Changed wording for Full Tick support; Repaired broken Links
Sept 2023	1.33	Rebranding to LSEG Workspace; RWF Support information added; removed variants from required bandwidth chart
July 2023	1.32	VMWare now supports Windows Server 2022; Refinitiv Add-In install guide added; additional Useful Links added
April 2023	1.31	Added Refinitiv Workspace Vendor Subservice Definitions (DACS Codes) under Useful Links; Appendix change for DPRM
Feb 2023	1.30	Addition of Workspace Checklist (Internal Use) under Useful Links section, CIAM Information and Required bandwidth for Trading Variant
Dec 2022	1.29	Added information about TLS 1.2 needing to be enabled as of June 2023; recommend clients enable this now
Oct 2022	1.28	Additional information added for PCN 205034 for additional Whitelisting needed; Updated System Requirements Page; Renamed the Workspace Advanced IT-Managed Install Guide to Workspace Installation and Configuration Guide
Oct 2022	1.27	Added info about ADS 3.5.2.L1/L2 issues for CM sites
Aug 2022	1.26	Consolidated Support Overview slides and cleaned up Useful Links sections
May 2022	1.25	Cleaned up Links; Removed multiple links to documents; Full tick not supported; DPRM available; Updated System Requirements
Apr 2022	1.24	DACS Sync no longer mandatory; Replaced COS with IRM; Updated SSO and Workspace Service Model links
Mar 2022	1.23	Edited DACS Sync to be mandatory for CM users
Feb 2022	1.22	Updated links i.e., System Test, Eikon/DACS perm synch; Removed duplicate info in software deployment; Added minimum ADS/DACS versions.

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Ensuring Technical Readiness

- **Technical Environment**
  - **Hardware Requirements**
  - **Software Requirements**
  - **Networking Requirements**

- **Connectivity Options**

- **Software Deployment method**

- **Workspace Variant - Deployed Desktop vs. Web**

- **Additional Considerations - Professional Services, Packaging Support, Network Configuration, Single Sign On (SSO)**

- **Support Overview**

- **Useful Links**

TECHNICAL ENVIRONMENT

- Hardware Requirements
- Software Requirements
- Networking Requirements
- Workspace System Test Tool

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Reviewing technical readiness

Review Workspace system requirements

Review Workspace Technical Requirements:

- Minimum hardware specs
- Operating System
- Microsoft Office / Excel versions
- Network Bandwidth
- System Test Tool

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Reviewing technical readiness - Please see [Workspace System Requirements Guide](#) for full list of Requirements

Desktop access [1]

		High resource	Recommended	Minimum
Processor [2]	Intel®	Core™ i9 (14 cores)	Core i7 (10 cores)	Core i5 (8 cores)
	AMD	Ryzen™ 9 (12 cores)	Ryzen 7 (8 cores)	Ryzen 5 (4 cores)
	Apple	M1 Ultra	M1 Max	M1
Graphic Processing Unit		It is strongly recommended that 3D GPU acceleration is enabled. Workspace is based on Chromium, which uses the GPU for rendering environments.		
Memory		24 Gb	Single screen: 8 Gb Multiple screens [3]: 16 Gb	8 Gb
Hard disk		3 GB free disk space or higher		1 GB free disk space
Screen resolution		1920 x 1080 or higher	1920 x 1080	1280 x 1024
Virtual Desktop Infrastructure [4]		Support is based on the ability of VDI platforms to continuously meet the minimum system requirements.		
Operating system	Windows [5][6]	10 or higher (64-bit only)		
	macOS	10.13 (High Sierra) or higher		

Web access

	Recommended	Minimum
Display settings	1920 x 1280	1024 x 768
Web browser [7][8]	Workspace web access is supported on the following versions of: Google Chrome™ - Stable channel version(s) Microsoft Edge – Stable channel version(s) Apple Safari® - running under the Workspace-supported versions of macOS	

[1] Hardware - CPU, memory, and GPU - of a higher specification may be necessary, depending on the requirements of other LSEG or third-party applications that are run concurrently with Workspace.

[2] The number of cores (or logical processors) specified for each processor are for the base model of the respective processor that is currently available. However, earlier generations of the same processors that are still maintained by their respective manufacturers can be used to run Workspace at the resource levels indicated above.
So, for instance, the Intel Core i5 specified above, is a 13th generation processor. However, the base 7th generation 'Kaby Lake' processor (4 cores) is maintained by Intel and thus supported to run LSEG Workspace.

[3] With Advanced Monitoring - multiple screens, running different applications.

[4] LSEG currently provides limited testing support and technical advice on Citrix® VDI solutions. However, customers deploying a VDI 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.

[5] The recommended Windows 11 editions are Pro and Enterprise.

[6] The wmic (Windows Management Interface Command) tool can be removed from Windows version 10 onwards. However, it is currently a requirement for Workspace to run. This dependency will be removed from an upcoming version of Workspace.

[7] Workspace may run on other releases of these browsers, but you might not be able to use all features.

[8] Running on Windows OS or macOS platforms. Tablets are currently unsupported.

Real-Time Distribution System (formerly TREP)

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

Server software	Version
Refinitiv Real-Time Advanced Distribution Server (formerly ADS)	3.4[39] or higher
Refinitiv Real-Time Data Access Control System	7.2[40] or higher

[39] Issues in the L1 and L2 releases of Refinitiv Real-Time Advanced Distribution Server version 3.5.2 prevent Workspace from functioning and cannot be used. However, these issues were subsequently addressed in the L3 release. As such, to run the Contribution function, installing version 3.5.2 L3 (or higher) is required. For further information, see the Refinitiv Real-Time Advanced Distribution Server version issues section of the Workspace Installation and Configuration Guide.

[40] The specified version requirement is for DACS Permission Synchronization only.

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 Real-Time Distribution System (formerly TREP).

While we recommend DACS Permission Sync, for information regarding the configuration of the DPRM service, see Appendix in the [Workspace Installation and Configuration Guide](#).

Security

Transport Layer Security

To continue to access Real-Time services, Workspace users must ensure Use TLS 1.2 is enabled in their Internet Security settings. For further information, see [PCN205244-Change in supported TLS protocols for Eikon and Workspace.](#)

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Reviewing technical readiness - <u>**Workspace System Requirements**</u> (cont.)

Customer Identity and Access Management (CIAM) requirements

LSEG is in the process of replacing the Customer Identity and Access Management (CIAM) environment a critical factor to the success of our customers business. The new CIAM capability is built on top of a highly resilient and reliable cloud-based identity and access management platform, benefitting from continuous and seamless security updates continuously developed product feature roadmap managed by the market leader in this space.
The new identity and authentication service is cloud-hosted and does not use static IP addresses.

Workspace versions supported
v1.20 and above

Internet
If you whitelist access to the public Internet, you'll need to permit the following list of Fully Qualified Domain Names (FQDNs).

Note: You may already allow some of these domains as part of changes made in 2021. Any existing whitelisted domains previously communicated should not be removed.

FQDN[1]	Protocol/Port	New domain	Delivery	Description
refinitiv.com refinitiv.net refinitiv.biz	HTTPS/443	No	Internet or Refinitiv Delivery Direct	Login page** Password reset
https://authenticator.pingone.com/	HTTPS/443	Yes	Internet	Multi-Factor Ping Authenticator app
https://idpxnyl3m.pingidentity.com/	HTTPS/443	Yes	Internet	Multi-Factor Ping Authenticator app

[1] Domains listed in the table above are wildcard values, where a subdomain may prepend and/or append the listed domain.
**Login authentication is currently via the Internet. Delivery Direct as a connectivity option will be introduced by Q1 2023

Private networks
To access new AWS service endpoints, customers using a private network must whitelist the following new IP addresses, which will impact Delivery Direct, FCN and CMC users.
- 159.43.192.0/23 [AMERS]   amers-passage.extranet.refinitiv.biz
- 159.43.200.0/23 [EMEA]   emea-passage.extranet.refinitiv.biz
- 159.43.208.0/23 [APAC]   apac-passage.extranet.refinitiv.biz

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Workspace Network / Bandwidth Requirements

Review Relevant Workspace Technical Documentation:

- Workspace System Requirements Guide – Covers Desktop, Web, Mobile, Virtualized Environments and Data Transfer Rates

- Workspace Basic Installation Guide – Guide for simple, end-user installation

- Customer Connectivity Guide - for customers with private-line connectivity. Please see Table 14 of the Guide for new Whitelisting IPs. Also review PCN 205034

- Workspace Installation and Configuration Guide - covers more complex set up options (installing in a virtualized environment, SSO, software packaging, etc.). Also has info on System test, Workspace Messenger and some troubleshooting/known issues.

Network/bandwidth requirements:

- These calculations are based on the bandwidth used over a several-week period using typical Investment Banking and Wealth Advisor watchlists

- Actual bandwidth utilization will vary based on the actual number of symbols in a user's workspace and the frequency at which those instruments update

Workspace Product	Bandwidth per user
Workspace Desktop	175 KB/s
Workspace Web	100 KB/s

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Workspace System Test tool

System Test Tool

- The Workspace System Test Tool helps determine whether a user meets the minimum hardware, software, and connectivity requirements to properly run Workspace

- The Workspace System Test is launched automatically during the initial Workspace installation but can also be run as a standalone tool in order to confirm technical readiness prior to installation

- No personal information is sent to LSEG during this process

- The output of the system test has multiple sharing options and can be sent by email, saved as a file, or copied to the system clipboard

- Standalone System Test executables for Window and Mac are available on the [LSEG Workspace for Desktop Product page](#)

- For more details on running and interpreting system test results, see the [Workspace System Test Guide](#)

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CONNECTIVTY OPTIONS

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Recommended Connectivity Options
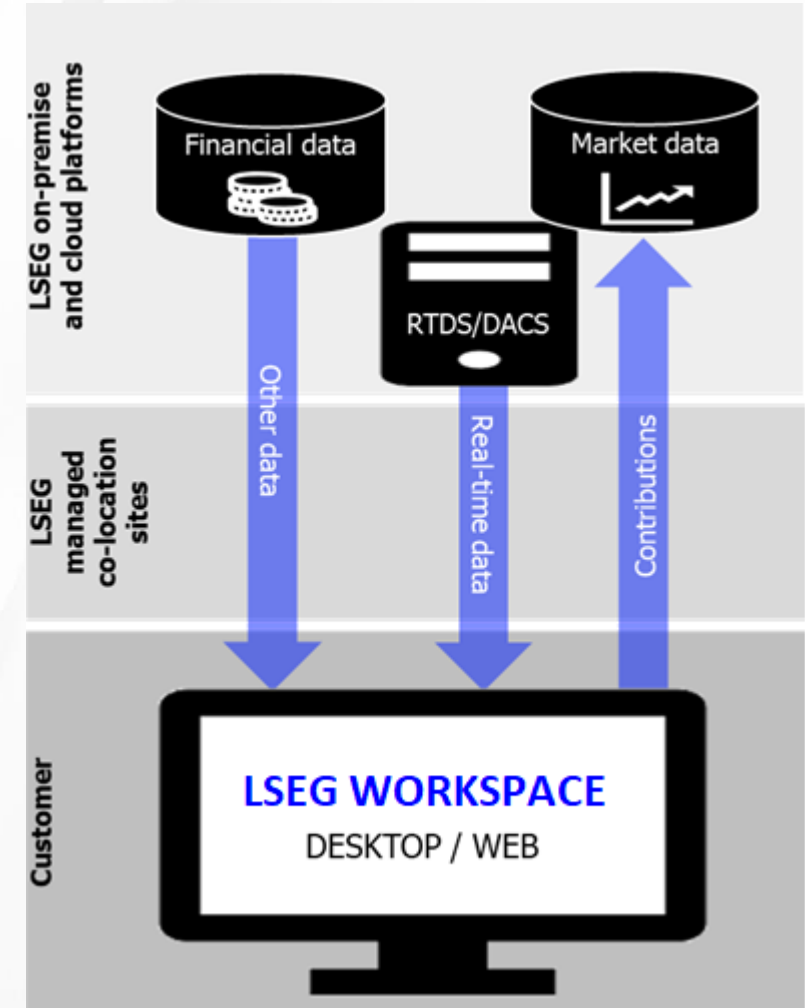
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Hosted - Internet

Recommended for standalone Workspace users

Overview

- **Standalone Workspace Desktop or Workspace Web**
- **LSEG hosted service provides Market data**
- **Internet provides connectivity**

Use Cases

- **Easier to provide faster response times**
  Applications move to AWS Cloudfront CDN, so users always connect to closest AWS PoP

- **Web access requires no software install**

- **Desktop access requires local desktop install**
  If the multi-window / tiled user interface approach required

- **No deployment of on-site Market Data Servers**

- **Lower specification desktop hardware can be used**
  Using a managed or conflated data service, the desktop (or virtual desktop) hardware and bandwidth requirements are reduced


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Hosted – Private Line

For Workspace users connecting via a private line

Overview

- **Standalone Workspace Desktop or Workspace Web**
- **LSEG hosted service provides Market data**
- **Private circuits provide connectivity**

Use Cases

- **Web access requires no software install**
- **Desktop access requires local desktop install**
  If the multi-window / tiled user interface approach required
- **No deployment of on-site Market Data Servers**
- **Private circuits connecting to the LSEG network set up in client data centres**
- **Lower specification desktop hardware can be used**
  Using a managed or conflated data service, the desktop (or virtual desktop) hardware and bandwidth requirements are reduced
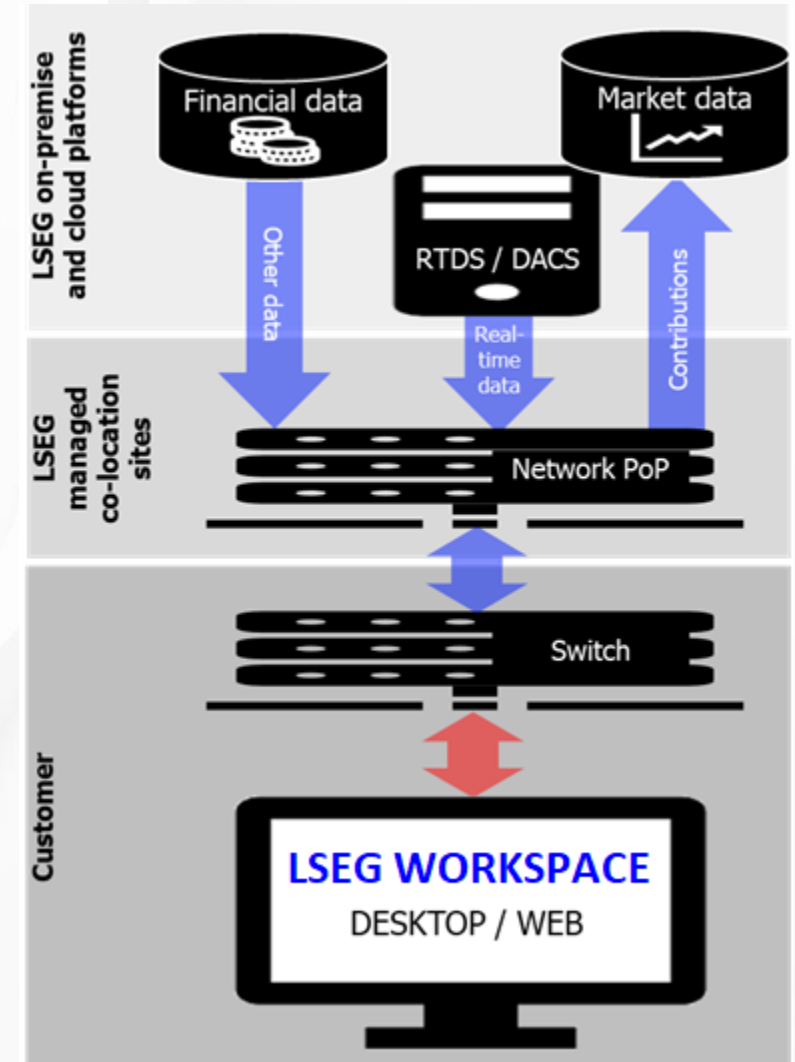
Customer Managed / Local RTDS/DACS

**Traditional data delivery method for sell-side customers**

Overview

- **Workspace Desktop only**
  Real-time data from the RTDS provides data to the Workspace Desktop only (Workspace Web cannot receive data from local RTDS)

- **Private circuit provides RTDS connectivity**

Use Cases

- **For users requiring higher frequency (max 300ms conflated), low latency market data**

- **Requirement to provide market data to internal systems, and/or a need to contribute prices from these systems , view 3rd party data, and/or leverage RTDS capabilities (like ATS)**

- **Important: Full tick data is not displayed in Workspace. If connecting to a Full Tick Network, Workspace will display the data as 300ms conflated data**

Perm Synch: Strongly recommended to setup DACS Permission Synchronization on client's DACS for CM users. If unable to implement, DPRM is available via adding parameters to the Workspace config file, see Appendix in the Workspace Installation and Configuration Guide

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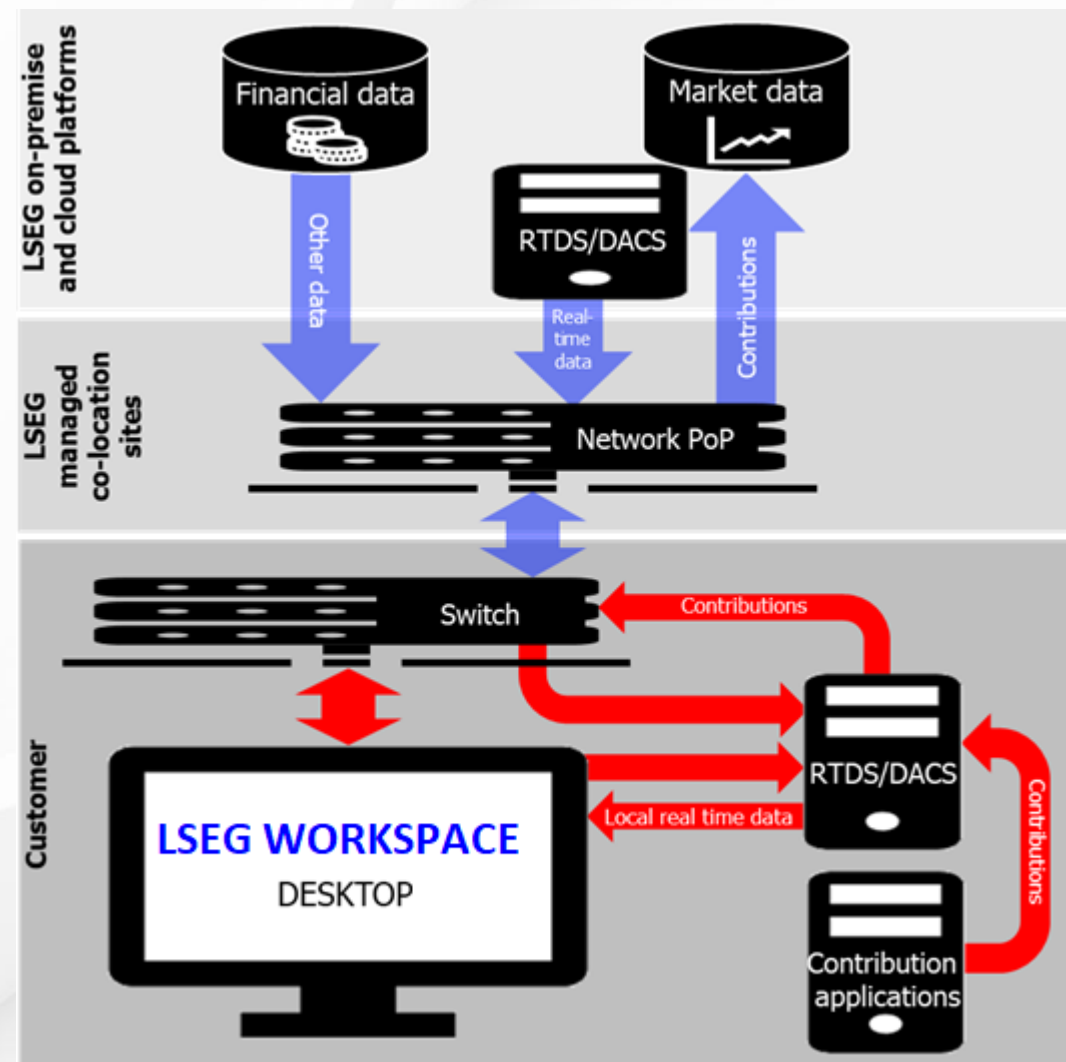
RTDS - ADS Config Changes Needed

(This is only a sample as client's needs may vary. Please see the REFINITIV REAL-TIME ADVANCED DISTRIBUTION SERVER SYSTEM ADMINISTRATION MANUAL for more information)
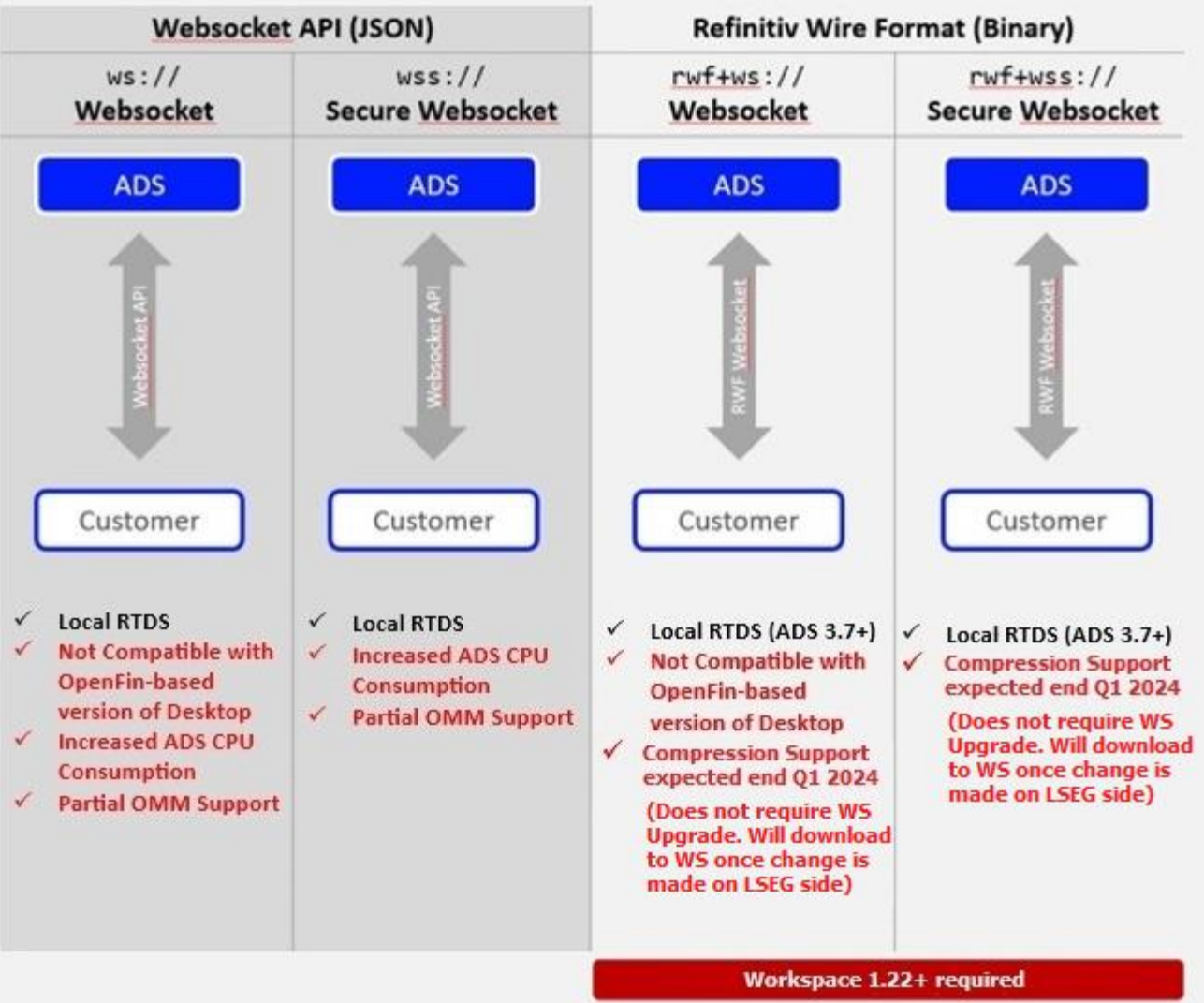
```
Parameters to be added to distribution.cnf
*****************************************
        *ads*allowWSConnections : True
        *ads*wsPort : 15000
        *ads*15000*applicationIdName : applicationId
        *ads*15000*authTokenName : AuthToken
        *ads*15000*clientToServerPings : True
        *ads*15000*compressionType : 0
        *ads*15000*flushInterval : 1
        *ads*15000*maxMounts : 256
        *ads*15000*minCompressionThreshold : 0
        *ads*15000*pingTimeout : 30
        *ads*15000*poolSize : 16000
        *ads*15000*positionName : AuthPosition
        *ads*15000*serverToClientPings : True
        *ads*15000*tcpNoDelay : True
        *ads*15000*tcpRecvBufSize : 64240
        *ads*15000*tcpSendBufSize : 64240
        *ads*15000*timedWrites : True
        *ads*15000*zlibCompressionLevel : 3
        *ads*15000*maxOutputBuffers : 4000 (add this parameter if not found)
        *ads*15000*poolSize : 300000 (add this parameter if not found)
        *ads*defaultJsonServiceId : 23
        *ads*wsMsgPacking : True

        *ads*enableMultipartDictionary : True
        *ads*enableMultipleTransportFilterThreads : False
        *ads*maxOutputBuffers : 400 or 5000 (change to 300000)

        *ads*catchUnknownJsonFids : True
        *ads*catchUnknownJsonKeys : False
        *ads*defaultJsonQosDynamic : False
        *ads*jsonExpandedEnumFields : True
        *ads*wsMsgPacking : True
```

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Supporting LSEG Wire Format (RWF) Protocols

Websocket API (JSON)		Refinitiv Wire Format (Binary)	
ws:// Websocket	**wss://** Secure Websocket	**rwf+ws://** Websocket	**rwf+wss://** Secure Websocket
ADS	ADS	ADS	ADS
↕ Websocket API	↕ Websocket API	↕ RWF Websocket	↕ RWF Websocket
Customer	Customer	Customer	Customer
✓ Local RTDS ✓ Not Compatible with OpenFin-based version of Desktop ✓ Increased ADS CPU Consumption ✓ Partial OMM Support	✓ Local RTDS ✓ Increased ADS CPU Consumption ✓ Partial OMM Support	✓ Local RTDS (ADS 3.7+) ✓ Not Compatible with OpenFin-based version of Desktop ✓ Compression Support expected end Q1 2024 (Does not require WS Upgrade. Will download to WS once change is made on LSEG side)	✓ Local RTDS (ADS 3.7+) ✓ Compression Support expected end Q1 2024 (Does not require WS Upgrade. Will download to WS once change is made on LSEG side)

Workspace 1.22+ required

Protocol support

Customer managed

From Workspace 1.22 onwards, the new protocols are supported for use through your Local LSEG Real-Time Distribution System. Where:

Version requirements	WebSocket API (JSON)		Refinitiv Wire Format (Binary)	
	ws	wss	rwf+ws	rwf+wss
All versions of LSEG Real-Time Distribution System	●	●		
LSEG Real-Time Distribution System version 3.7 (or higher)	●	●	●	●

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The two services that are managed by LSEG – Hosted Market Data System and LSEG Contributions Channel – currently use wss://. However, in a future release, this will change to rwf+wss://.

Additional Protocol Support can be found in the Appendix of the [Workspace Installation and Configuration Guide](#)

Workspace will follow the ADS configuration just as Eikon did for compression. It will be based on the ADS' *forceRsslCompression* setting.

➢ If the client is concerned about bandwidth consumption, they should go with the JSON over Secure WebSocket option.

➢ Otherwise, they should disable compression on the ADS and go with the RWF over Secure WebSocket option.

Hosted – Internet / Private Line Local RTDS/DACS hybrid

Recommended for managed RTDS/DACS users with different user group requirements

Overview

- **Hybrid configuration:**

  User group 1 – Workspace Web or Desktop
  - LSEG hosted service provides Market data
  - Internet provides connectivity

  User group 2 – Workspace Desktop only
  - Local RTDS/DACS provides Market data
  - Private circuit provides RTDS/DACS connectivity

Use Cases

- **Two groups of users:**

  Wealth Advisors/Research Analysts, require less frequent market data update dates – managed data provided through nearest AWS PoP
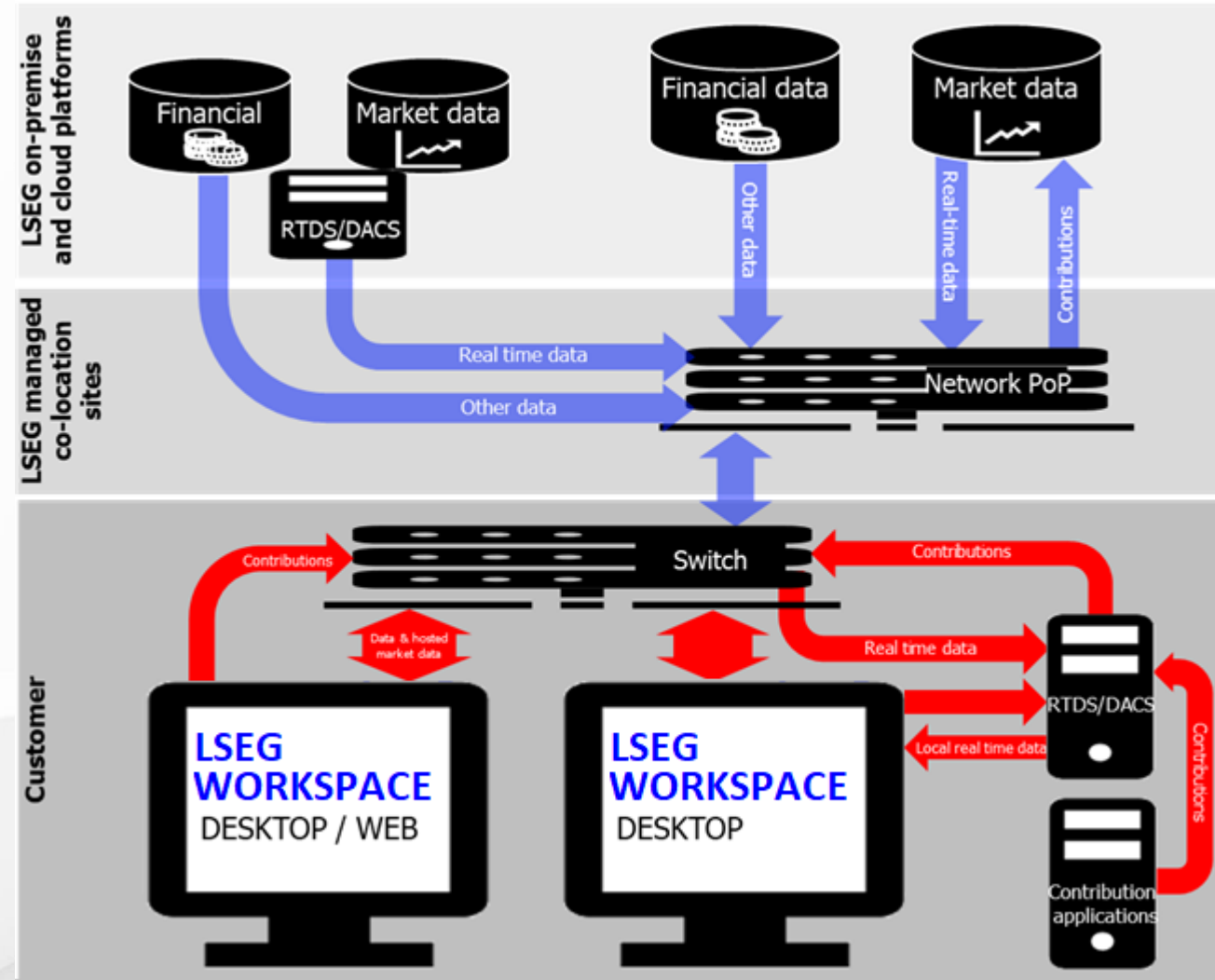 - Workspace Web recommended using Internet connectivity
  - Lower administrative overhead
  - Using a managed or conflated data service, the desktop (or virtual desktop) hardware and bandwidth requirements are reduced

  Traders, requiring high frequency (max 300ms conflated data), low latency market data provided through local RTDS/DACS
  - Workspace Desktop only
  - Higher spec PCs hardware may be required for heavy Excel users
  - Potential of slower application response times when connecting through private circuit (based on location)

Optional: Hosted Internet Users permed via DACS, only possible to do if DACS Permission Synchronization is enabled on client's DACs

Perm Synch: Strongly recommended to setup DACS Permission Synchronization on client's DACs for CM users. If unable to implement, DPRM is available via adding parameters to the Workspace config file, see Appendix in the **Workspace Installation and Configuration Guide**

Hosted – Private Line | Local RTDS/DACS hybrid

Recommended for managed RTDS/DACS users with different user group requirements

Overview

- **Hybrid configuration:**

  User group 1 – Workspace Web or Desktop
  - LSEG hosted service provides Market data
  - Private circuit provides connectivity

  User group 2 – Workspace Desktop only
  - Local RTDS/DACS provides Market data
  - Private circuit provides RTDS/DACS connectivity

Use Cases

- **Two groups of users**

  Wealth Advisors/Research Analysts, require less frequent market data update dates – managed data provided through nearest AWS PoP
  - Workspace Web, with Private circuit connectivity
  - Lower admin overhead
  - Using a managed or conflated data service, the desktop (or virtual desktop) hardware and bandwidth requirements are reduced

  Traders, requiring high frequency (max 300ms conflated data), low latency market data provided through local RTDS/DACS
  - Workspace Desktop only
  - Higher spec PCs hardware may be required for heavy Excel users

Optional: Hosted Internet Users permed via DACS, only possible to do if DACS Permission Synchronization is enabled on client's DACs

Perm Synch: Strongly recommended to setup DACS Permission Synchronization on client's DACs for CM users. If unable to implement, DPRM is available via adding parameters to the Workspace config file, see Appendix in the Workspace Installation and Configuration Guide

RTMDS (EaaS) Deployment Options

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Hosted – Internet / Private Line Hosted RTDS/DACS (RTMDS) hybrid

Recommended for managed RTDS/DACS users with different user group requirements

Overview

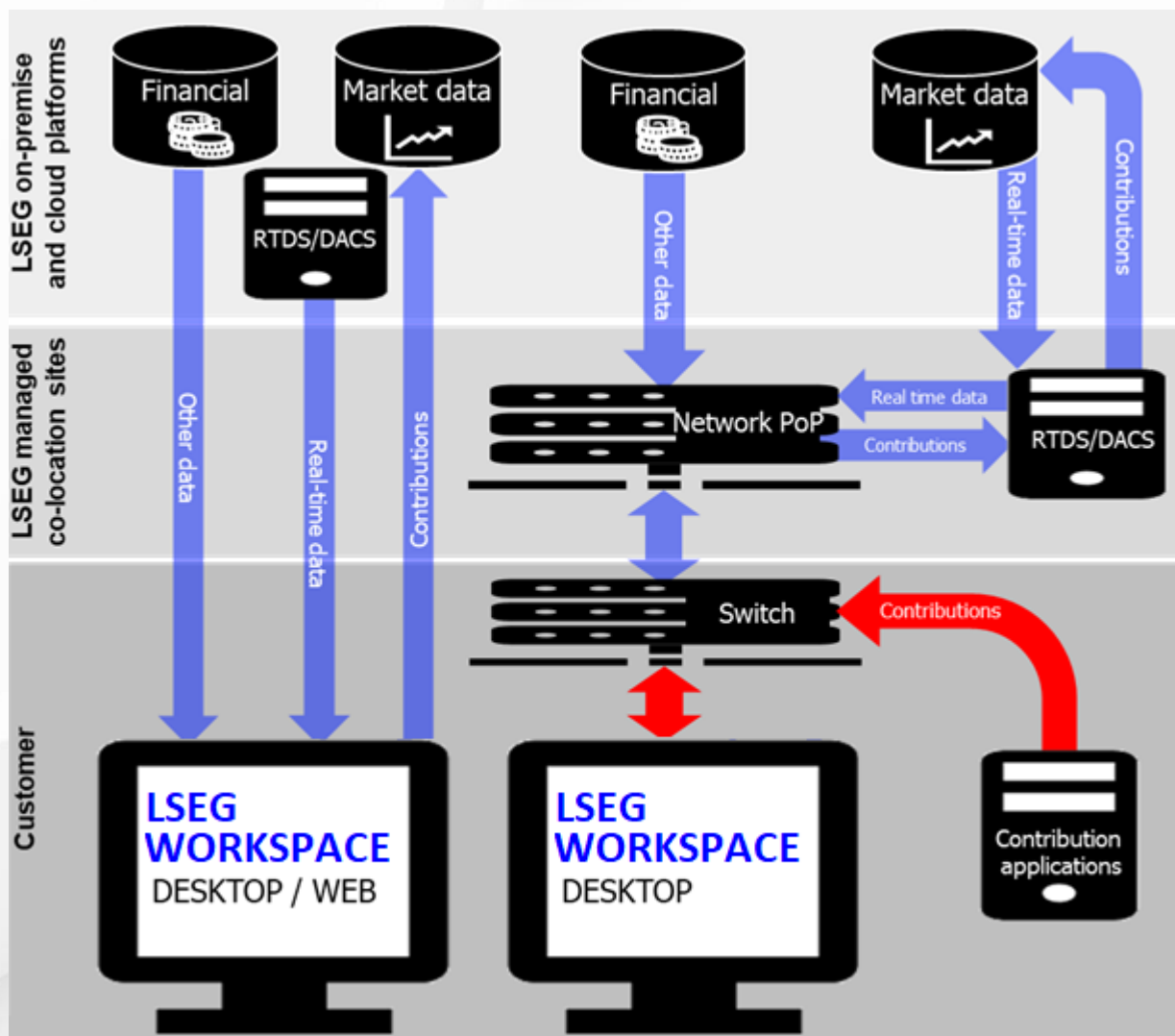- **Hybrid configuration:**

  User group 1 – Workspace Web or Desktop

  – LSEG hosted service provides Market data

  – Internet provides connectivity

  User group 2 – Workspace Desktop only

  – Hosted RTDS/DACS (RTMDS) provides Market data

  – Private circuit provides RTDS/DACS connectivity

  – **Important:** For RTMDS, an order must be placed to enable WebSockets and this is only available for conflated feeds (max 300ms) and full tick is not supported.

Use Cases

- **Two groups of users:**

  Wealth Advisors/Research Analysts, require less frequent market data update dates – managed data provided through nearest AWS PoP

  – Workspace Web recommended
  – Lower admin overhead
  – Using a managed or conflated data service, the desktop (or virtual desktop) hardware and bandwidth requirements are reduced

  Traders, requiring high frequency (max 300ms conflated data), low latency market data provided through local RTDS/DACS

  – Workspace Desktop only
  – Higher spec PCs hardware may be required for heavy Excel users
  – Potential of slower application response times when connecting through private circuit (based on location)

Optional: Hosted Internet Users permed via DACS, only possible to do if DACS Permission Synchronization is enabled on client's DACs

Perm Synch: Strongly recommended to setup DACS Permission Synchronization on client's DACs for CM users (only available for clients with dedicated DACS, not shared). If unable to implement, DPRM is available via adding parameters to the Workspace config file, see Appendix in the Workspace Installation and Configuration Guide

Hosted – Private Line / Hosted RTDS/DACS (RTMDS) hybrid

Recommended for managed RTDS/DACS users with different user group requirements

Overview

- **Hybrid configuration:**

  User group 1 – Workspace Web or Desktop
  - LSEG hosted service provides Market data
  - Private circuit provides connectivity

  User group 2 – Workspace Desktop only
  - Hosted RDMS/DACS (EaaS) provides Market data
  - Private circuit provides RDMS/DACS connectivity
  - **Important:** For RTMDS, an order must be placed to enable WebSockets and this is only available for conflated feeds (max 300ms) and full tick is not supported.

Use Cases

- **Two groups of users:**

  Wealth Advisors/Research Analysts, lesser refresh rate requirements provided through nearest AWS PoP
 - Workspace Web access recommended
  - Lower admin overhead
  - Using a managed or conflated data service, the desktop (or virtual desktop) hardware and bandwidth requirements are reduced

  Traders, requiring high frequency (max 300ms conflated data), low latency market data provided through local RDMS/DACS
  - Workspace Desktop access only
  - Higher spec PCs hardware may be required for heavy Excel users

Optional: Hosted Internet Users permed via DACS, only possible to do if DACS Permission Synchronization is enabled on client's DACs

Perm Synch: Strongly recommended to setup DACS Permission Synchronization on client's DACs for CM users (only available for clients with dedicated DACS, not shared). If unable to implement, DPRM is available via adding parameters to the Workspace config file, see Appendix in the Workspace Installation and Configuration Guide
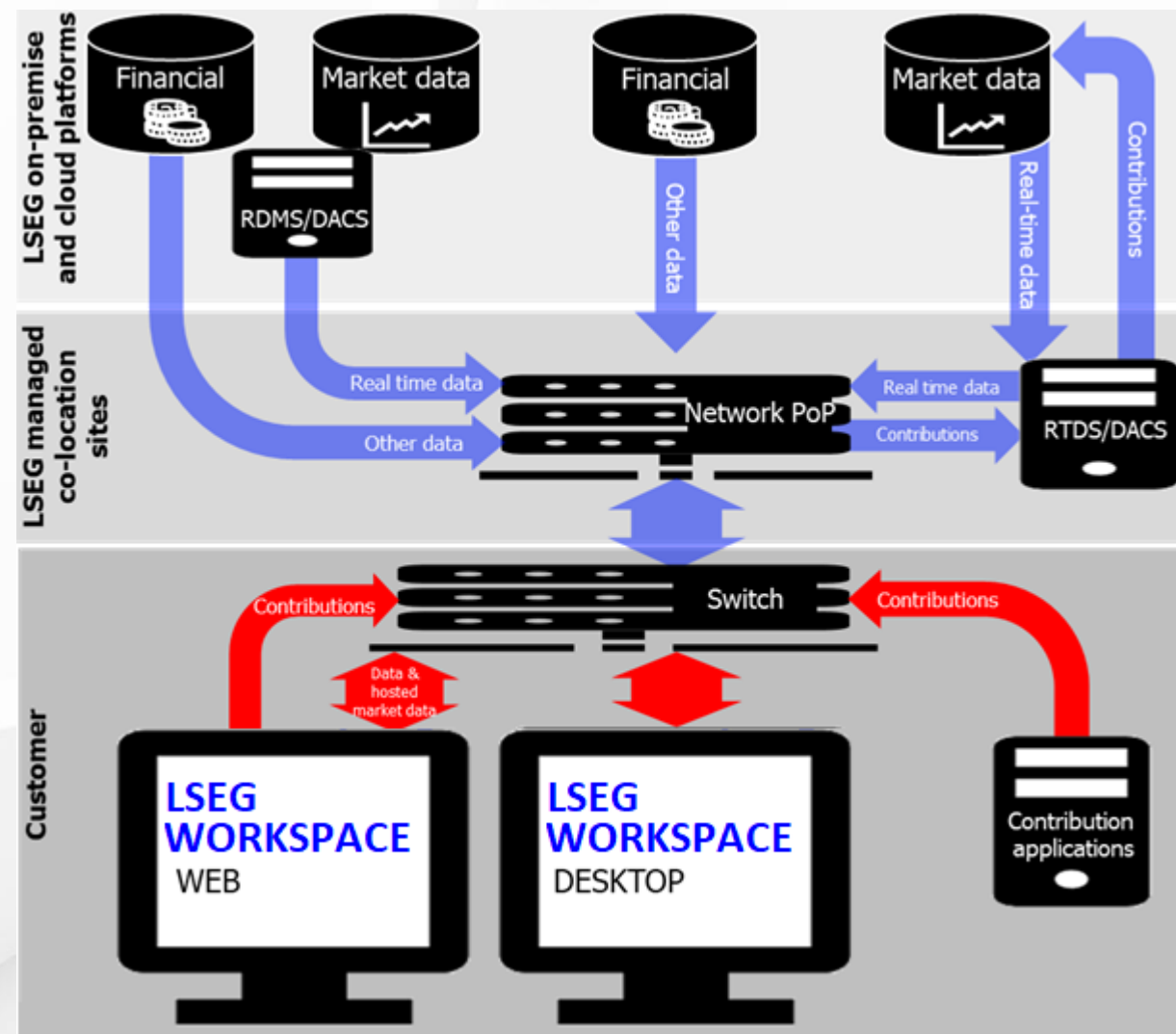
Customer Managed / Hosted RTDS/DACS (RTMDS)

Overview

- **Workspace Desktop only**
  Real-time data from the RTDS provides full-tick data to the Workspace Desktop only (Workspace Web cannot receive data from RTMDS)

- **Hosted RTDS/DACS (RTMDS) provides Market data**

  - **Important:** For RTMDS, an order must be placed to enable WebSockets and this is only available for conflated feeds (max 300ms) and full tick is not supported.

Use Cases

- **All users require high frequency (max 300ms conflated data), low latency market data**

- **Requirement to provide market data to internal systems, and/or a need to contribute prices from these systems , view 3rd party data, and/or leverage RTDS capabilities (like ATS)**

- **Perm Synch: Strongly recommended** to setup DACS Permission Synchronization on client's DACs for CM users (only available for clients with dedicated DACS, not shared). If unable to implement, DPRM is available via adding parameters to the Workspace config file, see Appendix in the Workspace Installation and Configuration Guide
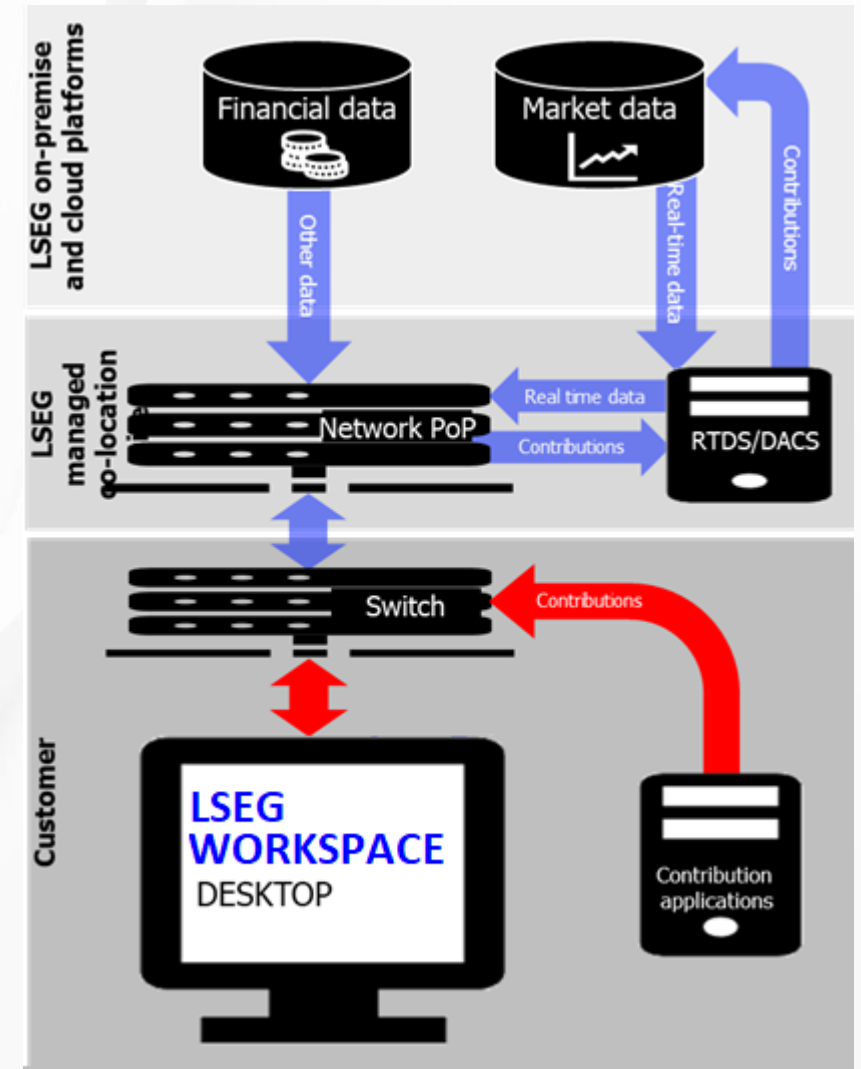
Connectivity Method Feature Matrix

| | Hybrid deployment | Hosted RTDS (RTMDS) | Workspace Variant | | Connectivity | | | Market data update rate | | Deployed (on-site) market data servers | | Users require high frequency / low latency data | Need to provide data to internal systems, and/or a need to contribute prices from these systems, view 3rd party data, and/or leverage RTDS capabilities |
			Workspace Desktop	Workspace Web	Internet	Private circuit	Private circuit (RTDS/DACS)	Conflated / Managed	Full-tick / Unmanaged	Yes	No		
Hosted - Internet			●	●	●			●			●		
Hosted – Private Line			●	●		●		●			●		
Customer Managed / Local RTDS/DACS			●				●		●	●		●	●
Customer Managed / Hosted RTDS/DACS (RTMDS)		●	●					●	●		●		●
Hosted – Internet / Private Line Local RTDS/DACS	●		●	●	●		●	●	●	●		●	●
Hosted – Private Line / Local RTDS/DACS	●		●	●		●	●	●	●	●		●	●
Hosted – Internet / Private Line Hosted RTDS/DACS (RTMDS)	●	●	●	●	●		●	●			●		●
Hosted – Private Line / Hosted RTDS/DACS (RTMDS)	●	●	●	●		●	●	●			●		●

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Software Deployment Options

Manual Desktop Installation

- Install from LSEG download site or launching the Workspace installation package from a network drive

Deployed Software Package

- Workspace software packaged and deployed to client desktops

Virtualized Environment/Virtual Desktop Infrastructure (VDI)

- No local Workspace software install – instead, leverages VDI (Citrix, VM Ware, etc.)

- VDI installation is a utilized method if an organization uses the technology to create a virtualized desktop environment on a remote server setup for LSEG Workspace

- There is no auto-update for LSEG Workspace on VDIs

Mobile

- LSEG Workspace Mobile is available for IOS and Android environments
  - ❖ iOS
  - ❖ Android

- It provides users with access to LSEG data, presented via an easy to navigate, customizable display, designed for smaller screens

- Users are automatically signed into Workspace Messenger when they sign-in to LSEG Workspace

Office Workspace Add-In / Workspace Lite (365) Add-In

- The Workspace excel add-in comes installed automatically with Workspace, see the LSEG Workspace Add-Ins – Workspace Installation Guide for details on minimum requirements

- Some features are web apps that require a minimum of Office 365 for corporate Office subscriptions, as well as other settings; see LSEG Workspace Add-Ins – System Requirements for more information

- Mac and web-only excel users should use the Workspace Lite add-in, which is platform independent LSEG Workspace Add-Ins – Workspace Lite Installation Guide

- See Microsoft Office Section of the LSEG Workspace System Requirements and the Technical Documentation Section on LSEG Data & Analytics Page for more information on Add-Ins

- Microsoft Office Workspace Lite (365) Add-In FAQ

Web-based version – Accessed via web browser (Chrome, Edge, Safari)

- Workspace Web is limited to 500 instruments per monitor / screen

- Workstation can display a maximum of 1,000 total unique streaming instruments per session

Single Sign On (SSO)

- Does your organization currently use (or plan to implement) Single Sign On (SSO)? IRM can involve the TIS group to assist the client in setting this up

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WORKSPACE VARIANT
WEB vs. DESKTOP

Workspace Web vs. Desktop

Workspace Web

- Browser-based application

- Regardless of the number of tabs or windows open, LSEG Workspace Web supports up to:
  - 500 instruments per monitor / screen
  - 1,000 total unique streaming instruments per session

- LSEG Workspace Web Access requires no installation but must meet some basic System Requirements

- An Exclusive Sign-On (ESO) policy is enforced - users cannot access the desktop client and Workspace Web at the same time (the Workspace Chrome Extension can be used concurrently with Workspace Web)

- Workspace Web - Quick Start Guide

Internet	Private Network
https://workspace.refinitiv.com/web	https://workspace.extranet.refinitiv.biz/web

Web vs. Deployed Desktop Comparison
(Follow Link for Full List)

	Desktop	Web
Excel Add-in	Y	N *
Layouts	Y	Y
Tiles	Y	N
Search Results Previews	Y	Y
Configuration Manager	Y	N
Notification Manager	Y	N
Integrated Messenger	Y	N *(Stand-Alone Web Messenger)*
Side by Side API	Y	N
Data API	Y	N
Launcher (CTRL+SHIFT+SPACE)	Y	N

*LSEG Workspace Excel 365 online add-in can be used for customers who subscribe to Office 365

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Workspace variant – Web vs. Desktop

Requirements	Desktop	Web
Personal Computers		
Hardware	• Minimum / Recommended • **Processor:** Intel i5 / Intel i7 • **RAM:** 8 GB / 16GB • **Hard Disk:** 1 GB free disk space / 3 GB free disk space • **Display Setting:** 1280 x 1024 / 1920 x 1080	

Software	• Microsoft Windows 10 (64-bit only)
	• Microsoft Widows 11 (recommend Pro and Enterprise editions)
	• macOS 10.13 (High Sierra)
	• macOS 12 (Monterey) Workspace 1.17 or higher
	• Latest versions of: Office 2013; Office 2016; Office 2019; Microsoft 365, Office 2021 (Workspace 1.17 or higher)
		• Operating System: No specific requirements
		• Web browser: We support the current versions of:
		  o Google Chrome - Stable channel version(s)
		  o Microsoft Edge - Microsoft-maintained version(s)
		  o Apple Safari - Browsers running under the LSEG-supported versions of macOS (see System Requirements

Minimum bandwidth	175 KB/s	85 KB/s
Internals		
Platform	ElectronJS, in addition to opensource projects, including Atom, GitHub Desktop, Light Table, Visual Studio Code, and WordPress Desktop	HTML5 web application
Frontend	HTML5 UI	
Backend	Cloud and on-premise	
Installation		
Link to installer	The landing page, below, contains a link to the installer: Internet: https://workspace.refinitiv.com Private network: https://workspace.extranet.refinitiv.biz	No installation required. The browser-based version of Workspace is available through the following URLs: Internet: https://workspace.refinitiv.com/web Private network: https://workspace.extranet.refinitiv.biz/web

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Workspace variant – Web vs. Desktop

Requirements	Desktop	Web
Maintenance and updates		
Workspace	The platform updates automatically. Updates can also be managed manually.	Platform is updated automatically, without affecting user operations.
Browser	Underlying browser (chromium) is updated together with updates to the ElectronJS.	Maintained versions of the Chrome and Edge browsers, and Safari on supported macOS versions only
Office and Data API		
Office	COM Excel Add-in, requires installation	See Authentication > ESO support for Office
Office 365	The Workspace 365 plugin is available from the Microsoft Store. However, it has less functionality compared to the COM Add-in.	
Data API	Data API is available, including Eikon Data API for PythonDesktop	RDP Typescript Library is under development
3rd Party Integrations		
Side-by-Side (SxS)	Desktop SxS API is available	SxS API is under development
AppStudio	Y	Y
Authentication		
LSEG Authentication (AAA)	Y	Y
Exclusive Sign-On (ESO) support for Office	Workspace Desktop and Office can run simultaneously	User needs to install a Chrome Extension to run browser-based Workspace and Office
SSO Support	Y	Y

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Workspace variant – Web vs. Desktop

Requirements	Desktop	Web
Collaboration		
Screen Capture and Send screenshot capability	Y	Y
Send by email	Y	News only
Integrated Messenger	Y	N (Stand-Alone Web Messenger available)
Data access		
Auto-updated historical charts	Y	Under development
Office 365	The LSEG 365 plugin is available from the Microsoft Store. However, it has less functionality compared to the COM Add-in.	
Streaming data limits	• 2,500 RICs for Hosted environment • No limit for Customer Managed environment	• 500 instruments per monitor (screen) • 1,000 total unique streaming instruments per session
Other capabilities		
Tiles - Advanced market monitoring (traditionally trading) workflows with floating windows and search bar	Y	N
Notifications	Y	N
Launcher	Y	N
Workspace Browser	Y	N
Screenshots	Y	N
Deep links	Y	N

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ADDITIONAL CONSIDERATIONS

- Sign-On (SSO)
- Software Packaging Support
- Professional Services
- Network Configuration Support

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Additional considerations

SSO / Professional Services / Software packaging & support / Network configuration support

Single Sign On (SSO)

- Clients self-administer SSO in their environment
- Support is available to customers who require assistance - the IRM can coordinate additional support resources (TIS involvement)

Professional Services

- Our Professional Services team can package software, configure Single Sign On (SSO), or help with other integration work (*additional fees will apply*)
- Please contact your Account Manager or IRM for more information

Software Packaging

- Clients who choose to package Workspace software will find useful information in the Workspace Installation and Configuration Guide. Additional packaging assistance can be coordinated through the IRM

Network Configuration Support

- Detailed networking requirements are outlined in the Workspace Installation and Configuration Guide as well as the Private Network Connectivity Guides
- Additional network / firewall configuration assistance can be obtained through our support desk, or via a call coordinated by the IRM

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SUPPORT OVERVIEW

- **Statement of Service**
- **MyAccount (MyRefinitiv)**
- **Methods of Support**

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LSEG Support

Statement of service / Methods of support

Statement of Service

- The LSEG Statement of Service is a client-facing, end-to-end support guide outlining our support model and various ways to contact support

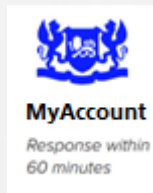- The latest version of the LSEG Statement of Service document can be found here

MyAccount

- MyAccount provides a consolidated access point to support, product information/documentation/downloads, alerts, notifications, and billing
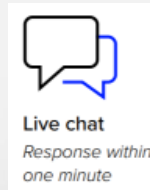
Customer Support

- LSEG Customer Support is your central point of contact for all questions associated with our products and content
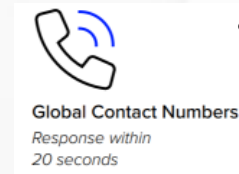
- Support can be obtained via:

Get help
- Help or Support sections of the product

MyAccount
Response within 60 minutes
- MyAccount

Live chat
Response within one minute
- Messenger Chat

Global Contact Numbers
Response within 20 seconds
- Telephone

Can be found at the end of the LSEG Statement of Service

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USEFUL LINKS

Useful Links

Workspace Technical Documentation

Private Network Connectivity Guides

Documents outlining all network and firewall configurations required for private line connectivity

Workspace Administration Panel App User Guide

Guide documenting the Workspace Administrative Panel which allows IT specialists to create / assign default home pages to users as well as manage desktop version updates

Workspace Installation and Configuration Guide

The LSEG Workspace Installation and Configuration Guide is intended for IT specialists that are responsible for the installation of Workspace, this document includes additional information about Virtualization, Single Sign On, etc.

Workspace Basic Installation

An installation guide for users self-installing Workspace

Workspace Download Page / System Test

Links to download Workspace / System Test (for Windows and MacOS), Access Workspace Web, and launch the Workspace System Test

DACS Permission Synchronization Configuration Guide

DACS permission synchronization guide which outlines the steps to configure DACS with Workspace

LSEG Workspace Vendor Subservice Definitions

This document provides a list of the Products Exchanges and Specialist Data definitions for LSEG Workspace that are managed using DACS.

Workspace Home on MyAccount

Workspace technical documents, product overview, support documents, and other product links

Workspace Single Sign On Manual (Internal SharePoint link)

SSO Self-admin user manual for LSEG Workspace.

Workspace System Requirements

This document outlines the system requirements for Workspace

LSEG Workspace Technical Documents

This page has various LSEG Workspace documents that may not be referenced in this Guide

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Useful Links

Workspace Support Documentation

MyAccount Support Portal

Main support page where users can request product or content assistance

LSEG Statement of Service

Client-facing, end-to-end support guide outlining our support model and various ways to contact support

Workspace Support & Training Documents

Support page with documentation, Release Notes, Training Videos and FAQs

Workspace Service Model (Internal SharePoint link)

This document describes the service that customers of LSEG Workspace can expect. It also provides internal process information and links that will help with the ordering, delivery, and support of LSEG Workspace

Workspace Checklist (Internal SharePoint link)

This document should be used as a guide for conversations with clients for technical readiness prior to installing Workspace. It also provides a comparison between Eikon and Workspace for system requirements and port/network differences

Workspace Web Access

Workspace Web Access Link – Internet

Link to access Workspace Web via the Internet

Workspace Web Access Link – Private Line

Link to access Workspace Web via a Private Line connection

Workspace Web Quick Start Guide

This document provides a high-level overview of how to configure and access the browser-based Workspace Web application

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Thank you

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