

# FX Trading (FXT)

## Supported Environments

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# About this document

## INTENDED READERSHIP

This document is for customers using or interested in or using FX Trading (FXT).

## IN THIS DOCUMENT

This document describes the hardware and software requirements for FXT Desktop application, FXT Feed adapters and Matching Credit Administration (MCA).

## FOR FURTHER INFORMATION

For questions or further information related to FXT, please contact the global Refinitiv help desk using the link below.

[MyRefinitiv – Contact Us](#)

## FEEDBACK

If you have any comments on this document, please contact the global Refinitiv help desk using the link below.

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# Chapter 1 Overview

This document describes the following:

- Hardware and software requirements for FXT Desktop Application V7.4.x and below from Refinitiv
- Hardware & software requirements for FXT Feed adapters from Refinitiv
- Hardware & software requirements for Matching Credit Administration (MCA) v1.6 from Refinitiv

The documented hardware specifications should be interpreted as the minimum required for satisfactory operation, sufficient consideration should be given to the hardware specification where other applications are running alongside FXT.

## Chapter 2 Hardware and Software Requirements - FXT Desktop Application V7.4.x and below

### SUPPORTED OPERATING SYSTEM

Windows 7 – Service Pack 1 (support ends Jan 14 <sup>th</sup> 2020)	Windows 8.1 – Update 1	Windows 10 (FXT 6.5.2 and above)
Enterprise Professional Ultimate Home Premium 64-bit	Basic Pro Enterprise 64-bit	Home Pro Enterprise 64-bit

### FXT AND MICROSOFT WINDOWS 7

Microsoft have previously announced that support for Windows 7 is ending. After January 14, 2020, Microsoft will no longer provide security updates or support for PCs running Windows 7. Please see the following Microsoft web site for further details: <https://www.microsoft.com/en-us/microsoft-365/windows/end-of-windows-7-support>.

Refinitiv recommends that all FXT users upgrade to a supported windows operating system. After January 14, 2020, only the following operating systems will be supported for use with FXT:

- Microsoft Windows 8.1 – 64 bit
- Microsoft Windows 10 – 64 bit

#### NOTE

A small number of clients may be planning to continue to use windows 7 after January 14, 2020 via an extended support contract with Microsoft. Any security patches for the windows 7 operating system released by Microsoft after January 14, 2020 will NOT be qualified with FXT GUI.

### FX TRADING GUI ENDING SUPPORT (EOS) OF MICROSOFT WINDOWS 32 BIT OPERATING SYSTEMS

**FXT version 7.4 is supported on 64-bit operating system only.** For all other FXT versions, from October 2019, FX Trading GUI will be ending support running on Microsoft Windows 32 bit operating systems. This is due to changes detailed in the Oracle Java SE Support Roadmap for the packaged Java environment. Customers that currently use a Microsoft Windows 32 bit operating system must update to a Microsoft Windows 64 Bit operating system. The full list of Windows operating systems that are supported with FX Trading is listed below:

- Microsoft Windows 7 SP1 – 64 bit (support will end on January 14, 2020)
- Microsoft Windows 8 and 8.1 – 64 bit
- Microsoft Windows 10 – 64 bit

## SUPPORTED OPERATING SYSTEM LANGUAGES

- FXT GUI and adapters supports all OS languages
- FXT GUI and adapters natively supports English only

Formally Qualified Language Packs	
English Japanese French German	Simplified Chinese Traditional Chinese MUI + Japanese Pack

## PDF VIEWER

FXT end users can save Dealing ticket and conversations to a locally generated PDF file. To use this functionality Adobe Reader (acrord32.exe) is required to be installed on the FXT PC. The Adobe Reader is also required to export trades from the Options blotter. Go to <https://get.adobe.com/reader/> to download the Adobe Reader.

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### NOTE

Adobe Reader is NOT installed as part of the FXT GUI installation package and so must be installed separately.

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## Chapter 3 Desktop Hardware Specifications

Three desktop specifications are provided:

- **Conversational Dealing only** – Applies to users of the Conversational Dealing service only.
- **Minimum Specification Desktop** – Applies all other FXT users, including users of Treasury Centre and ET, excluding those to whom the High Specification Desktop applies.
- **High Specification Desktop** – Applies to users whose patterns of Price Stream and/or Matching usage are greater or equal to the following thresholds.

### PRICE STREAM AND/OR MATCHING USAGE THRESHOLDS

Where use of Price Stream or Matching is equal or greater to one of the following patterns of use, the High Specification Desktop should be applied.

Trade Venue	Montage Count	Grid Pairs	Forward Grid	Active Markets
Matching Only	24	75 Pairs 20 Viewable	6 Forward Runs per Grid View	All Spot
Price Stream Only (10 Providers)	24	75 Pairs 20 Viewable	Not Applicable	Not Applicable
Matching and Price Stream (10 Providers)	24	75 Pairs 20 Viewable	6 Forward Runs per Grid View	50 Spot Pairs

### CONVERSATIONAL DEALING ONLY DESKTOP SPECIFICATION

#### Minimum Specification Desktop

Minimum desktop specification for FXT users of all trading services, including users of Treasury Centre and ET, excluding those to whom the High Specification Desktop applies.

Minimum Specification Desktop
Intel 4th Generation i5 or equivalent* 4GB RAM 1.6GB HDD Free PCIe card with minimum of 128MB memory per port. Supporting DirectX 11 Colour Depth 32 bit 64 bit OS

#### High Specification Desktop

Minimum desktop specification for FXT users to whom the High Specification Desktop applies i.e. have a pattern of use that meets or exceeds the defined threshold.

Windows 7 – Service Pack 1 & Windows 8.1 – Update 1, Windows 10
Intel 4th Generation i7 or equivalent* 8GB RAM 1.6GB HDD Free PCIe card with minimum of 256MB memory per port. Supporting DirectX 11 Colour Depth 32 bit 64 bit OS

\* This is the recommended CPU. Clients using lower specifications should conduct local testing to confirm acceptable performance levels.

## SUPPORTED SCREEN/MONITOR RESOLUTION

FXT is a Java 8.x based product. Issues may be seen when using the product with high resolution 4K monitors/screens. Font sizes can be changed from within the FXT GUI. The Windows font magnification settings are not supported with the FXT GUI. FXT is tested with screen resolutions of 1920 x 1080 or 1280 x 1024

## FXT PROXY SERVER AUTHENTICATION

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### NOTE

Basic and NTLM squid and NTLM Bluecoat Proxy authentication is supported via user name and password authentication. Smart card authentication is not supported. Kerberos authentication including Blue Coat Proxy using SSL interception is not supported.

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## FXT ET REQUIREMENTS

If you are using Electronic Trading (ET) and you are not a high volume Price Stream or Matching user as defined, it is recommended that you use the Standard Specification Desktop as a minimum.

## FXT TREASURY CENTER REQUIREMENTS

If you are using FXT Treasury Center and you are not a high volume Price Stream or Matching user as defined, it is recommended that you use the Standard Specification Desktop as a minimum.

## FXT AND EIKON CO-EXISTENCE

When running Eikon and FXT GUI on the same desktop, the Eikon memory and disk space requirements must be followed. [Click here for Eikon Technical requirements](#). For the majority of users the Eikon recommended requirements for memory and CPU will give enough resources to also run FXT.

Windows 7 – Service Pack 1 & Windows 8.1 – Update 1, Windows 10
Intel 4th Generation i7 or equivalent 8GB RAM (12GB preferred) 5GB HDD Free PCIe card with minimum of 256MB memory per port. Supporting DirectX 11 Colour Depth 32 bit 64 bit OS 250 MB or higher Temporary internet file size

As every site and users' usage of Eikon and FXT are different, it is strongly recommended that clients test the two applications running on the same desktop to make sure their PC hardware covers their individual needs.

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### NOTE

4GB is the maximum addressable memory in a Windows 32 Bit operating system. If greater than 4GB memory is required (for example running FXT and Eikon on the same desktop) a Windows 64 bit operating system must be present.

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## JAVA RUN-TIME ENVIRONMENT (JRE) AND FXT

During FXT installation a dedicated JRE is installed as one of the system's components in the specified installation folder. This JRE does not impact any JREs that already reside on the PC.

JRE 8 Update 202 64-bit version is currently installed with FXT.

It is important that no changes are made to the Java components used by FXT. The FXT GUI states that [1024](#)Mb of Java Heap size is available. The Java flag Xmx specifies the maximum memory allocation pool for a Java Virtual Machine (JVM), while Xms specifies the initial memory allocation pool. For the FXT GUI both Xmx and Xms must be set to [1024](#)Mb

## VIRTUAL ENVIRONMENTS – IS THE FXT GUI SUPPORTED IN A VIRTUAL (E.G. CITRIX) ENVIRONMENT?

Refinitiv support is included with your subscription when installed according to our system requirements on a standalone desktop PC for one user. This policy does not cover Terminal/Citrix Server and other multi-user or virtualized environments. Due to the inherently complex and distributed nature of these solutions, we cannot offer the same unconditional support as a standard desktop. Help with installing and/or operating our software in these environments is strictly limited to a commercially reasonable effort. While installation document makes every attempt to highlight all the caveats 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 stand-alone desktop running FX Trading in a single instance environment.

## RUNNING THE FXT DESKTOP APPLICATION AND 4 ADAPTER INSTANCES ON THE DESKTOP HARDWARE (STANDARD DESKTOP SPECIFICATION)

It is possible to run the FXT desktop and a number of feed adapters on the same hardware, the following is the minimum specification required to run 4 feed adapter instances (i.e. DTF or DTFE, TOF, Ticket and Conversation Printing) alongside a Standard Specification FXT desktop.

### Windows 7 – Service Pack 1 & Windows 8.1 – Update 1 , Windows 10

Intel 4th Generation i5 or equivalent  
6GB RAM  
14 GB HDD Free  
PCIe card with minimum of 128MB memory per port. Supporting DirectX 11  
Colour Depth 32 bit  
64 bit OS

## Chapter 4 Hardware and Software Requirements - FXT Feed Adapters

Software Pre-Requisites:

### SUPPORTED OPERATING SYSTEM

Windows 7 Service Pack 1	Windows 8.1 Update 1	Windows Server 2008 R2 –SP1	Windows 10	Windows Server 2012 & 2012 R2	Windows Server 16
Enterprise Professional 64-bit	Pro Enterprise 64-bit	Standard Enterprise 64-bit	Pro Enterprise 64-bit	Standard 64-bit	Standard 64-bit

#### NOTE

32 bit editions of operating systems are not supported. FXT feed adapter v1.5 prevents installation on non-supported operating systems (for example installation is prevented on Windows Vista, XP and 2003 OS)

### SUPPORTED OPERATING SYSTEM LANGUAGES

- FXT GUI and adapters supports all OS languages
- FXT GUI and adapters natively supports English only

Formally Qualified Language Packs	
English Japanese French German	Simplified Chinese Traditional Chinese MUI + Japanese Pack

### CLUSTER INSTALLATION (LIVE/STANDBY (AUTOMATIC/MANUAL) CONFIGURATION)

Microsoft recommends that the two server hardware platforms used in the cluster have the same configuration and specification:

- Support operating system – Windows 2012 R2 – 64 Bit
- iSCSI shared storage with 60Gb shared storage
- 4GB memory per server platform
- CPU usage - follow the standard requirements as listed in this document

### VIRTUAL ENVIRONMENTS AND POST TRADE ADAPTERS

For Customers who run Virtual Environments the Refinitiv recommendation is to opt for the FIX interface for their STP solution as this is delivered as a service by Refinitiv and is not dependent on clients' environments.

The XML and TOF Feeds, together with the Post Trade Feed Admin GUI are options that are installed in clients' environments. They are designed to run on a Microsoft Windows environment. While Refinitiv does not support or certify the running of Post Trade Feeds in virtualized environments, it is not aware of anything in the design of these applications that would prevent them from running against such environments and much of Refinitiv Feed Adapter testing is conducted against VMWare virtualized environments.

#### NOTE

Refinitiv cannot guarantee performance of our applications with virtualization software.

Refinitiv prefers for clients to run installations on physical machines as running in virtualized environments can result in additional complexity when troubleshooting reported issues. In the event that a user does encounter an issue, Refinitiv requests that the user confirm whether the issue occurs in a non-virtualized environment. Clients can progress with a virtualized install if that is their preference but Refinitiv is unable to recommend specific versions or configurations to clients.

If the reported issue is on the current adapter version, Refinitiv will attempt to reproduce the issue in a physical environment available to FXT Post Trade support team. If TR is unable to reproduce the issue in a physical environment then TR will not be in a position to support further.

## BROWSER REQUIREMENTS

The FXT Post Trade Feed Adapter Administrator is compatible with Microsoft Internet Explorer version 10 or later.

## SOFTWARE PRE-REQUISITES – MICROSOFT.NET FRAMEWORK 4.0 OR ABOVE

The FXT Post Trade Feed Adapter installer requires the installation of Microsoft® .NET Framework 4.0 or above, the installation process will prompt for installation if not present.

Microsoft® .Net Framework 4.0 can be downloaded here: <http://www.microsoft.com/en-gb/download/details.aspx?id=17851>.

## FEED ADAPTER HARDWARE SPECIFICATION

### Single Adapter Instance

Each FXT feed adapter instance requires approx. 10% of a 2.7Ghz - 2.8Ghz processor core, 512MB of RAM and 3GB of HDD space.

When deploying multiple feed adapter instances on the same host it is recommended that processor core loading does not exceed 50%.

### Example hardware required to run 4 Adapter Instances

To run 4 FXT feed adapter instances the following would be required:

Item	Description
Processor	1 x 2.7Ghz (or faster) CPU Core available for adaptor use
RAM	2GB available for adaptor use
Hard disk	12 GB available for adaptor use
Operating System	Windows 7 (64-bit) SP1 Professional Edition Windows Server 2012 (64-bit) Standard Edition

### Example hardware required to run 40 Adapter Instances

To run 40 FXT feed adapter instances the following would be required:

Item	Description
Processor	8 x 2.7Ghz (or faster) CPU Cores available for adaptor use
RAM	20 GB available for adaptor use
Hard disk	120 GB available for adaptor use
Operating System	Windows 7 (64-bit) SP1 Professional Edition Windows Server 2012 (64-bit) Standard Edition

### Example Desktop class machine – Lenovo M91P

Given the example of the Lenovo M91P specification below, 12 FXT feed adapter instances could be supported, this equates to 3 TCIDs where all 3 TCIDs have elected to receive DTF or DTFE, TOF, Ticket and Conversation Print feeds.

Item	Description
Processor	Intel Core i5-2500S Quad-core Processor 2.7 GHz (50% of CPU cores available for adapter use)
RAM	8 GB - (4 GB standard and additional 4 GB upgrade) 6 GB available for adapter use
Hard disk	40 GB
Operating System	Windows 7 (64-bit) SP1 Professional Edition
Number of adapters	12 (3 TCIDs)

### Example Server class machine – HP DL360 G7

Given the example of the HP DL360 G7 specification below, 24 FXT feed adapter instances could be supported, this equates to 6 TCIDs where all 6 TCIDs have elected to receive DTF or DTFE, TOF, Ticket and Conversation Print feeds.

Item	Description
Processor	Intel Xeon X5660 6 Core 2.8 GHz (50% of CPU cores available for adapter use)
RAM	32 GB (12GB available for adapter use)
Hard disk	80 GB
Operating System	Windows Server 2012 (64-bit) Standard Edition
Number of adapters	24 (6 TCIDs)

## DEAL TRACKER

FXT users that want to use Deal Tracker will have to use Deal Tracker 8.0 or above.

### **Virtual Environments – is Deal Tracker supported in a virtual environment?**

Deal Tracker is a suite of software deployed products designed to run in a Microsoft Windows Server or Desktop environment.

While Refinitiv does not support, certify or test the running of Deal Tracker in virtualized environments, it is not aware of anything in the design of the applications that would prevent it from running in such an environment. However, should a customer decide to run Deal Tracker in a virtualized environment; they should be aware of the minimum operating environment detailed in the Deal Tracker Software Installation User Guides relating to available memory, CPUs, and storage.

## Chapter 5 Matching Credit Administration (MCA) system requirements

### SOFTWARE REQUIREMENTS

Operating System	32 bit	64 bit
Microsoft Windows 7	✓	✓
Microsoft Windows 8 & 8.1	✓	✓
Microsoft Windows 10	✓	✓

#### NOTE

To use MCA Standalone MCA on Microsoft Windows 7 you must install either:  
 NET 4.0 Client Profile (or higher)  
 or  
 .NET 4.0 Framework (or higher)

### HARDWARE REQUIREMENTS

PC Specification	Minimum	Recommended
Processor	Dual core	Dual core
RAM	2Gb	4Gb
Speed	1.3 Ghz	2.4 Ghz
Free Disk Space	300Mb	500Mb
Screen Size	1024x768	1280x1024

### BANDWIDTH REQUIREMENTS

1Mbps per site.



## Chapter 6 Document Change History

Ver	Date	FXT Ver	Comments
1.11	9 Mar 16	6.5.2	Updated statement on virtualization for FXT adapters
1.2	26 Apr 16	6.6	Changed text so it covers 6.6. No change to technical content.
1.3	23 May 16	6.6	Clarified Microsoft.net requirement, and updated statement on support for Virtualised Environments and post trade adapters.
1.4	30 Jun 16	6.7	Cluster Installation (Live/Standby (Automatic/Manual) configuration)
1.5	12 Jul 16	6.7	Added section for MCA, updated statement on OS support for FXT adapter 1.4
1.6	18 Jul 16	6.7	Clarified which languages are supported and support for NTLM authentication.
1.7	7 Sep 16	6.7.2	Clarified FXT Proxy Server Authentication.
1.8	31 Oct 16	6.8	Updated FXT Proxy Server Authentication.
1.9	9 Mar 17	6.8.x	Updates to type of PDF reader.
1.92	21 Apr 17	6.9.x	Update Proxy supported types (Kerberos), updated FXT GUI version numbers, updated Citrix Support statement
1.93	8 May 17	6.9.x	Updated supported proxy types.
1.94	9 May 17	6.9.x	Updated supported proxy types.
1.95	18 Jul 17	6.9.5	Formatting changes only.
1.96	23 Jul 17	6.9.5	FXT Feed adapters changed to v1.5
1.97	3 Oct 17	6.9.6	Clarified Java settings on page 4.
1.98	26 Oct 17	6.9.8	Java version changed to 1.8.0_144
1.99	30 Oct 17	6.9.8	Added and updated information about Deal Tracker. Smart card authentication is not supported.
2.00	28 Mar 18	7.0.0	Added Window 16 as a supported environment for FXT feed adapter 1.5
2.1	3 Aug 18	7.1	Java version changed to 1.8.0_172 and large 4k monitors not supported.
2.3	6 Nov 18	7.2	Clarified end of support for 32-bit operating system
2.4	23 Jan 19	7.2	Removed FXall reference in heading. This document covers FXT only.
2.5	3 May 19	7.3	Updated Java version and changed to Refinitiv template.
2.7	11 Jul 19	7.4	Clarified 64-bit only for FXT 7.4
2.8	12 Aug 19	7.4	Updated version of Java
2.9	24 Sep 19	7.4	Clarified which versions of Windows are supported after Jan 14, 2020.
3.0	4 Nov 19	7.4	FXT users that want to use Deal Tracker will have to use Deal Tracker <b>8.0</b> or above.

### FOR MORE INFORMATION

Please visit [MyRefinitiv](#) for more information about FXT or contact your Refinitiv Technical Account Manager.

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