FORTRA

Globalscape EFT v8.2.0 Installation and Implementation Guide

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Table of Contents

Introduction to EFT Managed File Transfer

More than just a managed file transfer (MFT) solution, Globalscape's Enhanced File Transfer (EFT) extends beyond standard MFT to allow you to connect with any industry-standard file-transfer client. With powerful security for meeting business and regulatory requirements, EFT ensures that encrypted transactions occur only with the appropriate entities, and that data confidentiality and integrity are preserved during transport and storage. EFT modular form makes it affordable by allowing you to purchase just the functionality you need, and add advanced features as your business needs change. That is, all module features are available during the trial.

EFT managed file transfer is available for the large enterprise and for small-to-medium businesses EFT Arcus is our cloud implementation. You can also deploy EFT in a hybrid environment (both on premises and in the cloud), and deploy EFT on an Amazon EC2 instance (virtual server in the cloud).

Refer to the Feature Availability table to view features available in EFT and EFT Arcus.

Available Modules (licenses required)

- **Advanced Authentication Modes Module (AAMM)** - The Advanced Authentication Modes Module protects data in transit by enforcing the use of secure protocols, strong ciphers and encryption keys, and maintaining strict password policies, and enables organizations to centralize their user access controls, improve productivity, and increase adherence to security policies, and provides administrators with the ability to easily maintain password security in one location to quickly commission and decommission user provisions in one central location. The module also provides SAML (WebSSO), RSA SecurID, RADIUS, and CAC support, which allows EFT to fit in seamlessly with existing authentication measures.
- **Advanced Workflow Module (AWM)** - Formerly the "Advanced Workflow Engine" (AWE), the Advanced Workflow module adds additional automation capabilities, allowing you to add scripting and variables to *Workflow Tasks*, then add these reusable Workflows to Event Rules. A Workflow is a series of steps that can perform file transfers, batch data processing, application testing, and so on, and are defined to run automatically when started by some event.
- **AS2 Protocol Module (AS2)** - Supports the exchange of structured business data securely on top of the HTTP or HTTP/S protocol.

- **Auditing and Reporting Module (ARM)** - Captures all of the transactions passing through EFT. You can query the data and create/view reports from within the EFT administration interface.
- **DMZ Gateway®** - used in combination with EFT to create a multitier security solution for data storage and retrieval. The DMZ Gateway resides at the edge of the network, brokering data between EFT residing behind your corporate firewall and your clients in the outside world.
- **Cloud Connector Module (CCM)** - Enables you to transfer files to and from cloud services such as AWS and Azure.
- **Enterprise Actions Module (EAM)** - Enables automation features (event rules) such as executing scripts, performing folder and file operations, compressing and decompressing files, and so on.
- **File Transfer Client (FTC)** - Enables you to define copy, move, and download actions in Event Rules. For example, you could define a rule to trigger when a file is downloaded, so that EFT moves it to another folder.

- **Folder Monitor Module (FMM)** - Creates an Event Rule trigger used to detect the creation, deletion, and renaming of files in a monitored folder and to perform Actions based on these triggers. For example, perhaps a weekly report is uploaded to a specific folder. You can define an Event Rule so that when EFT detects that a file has been added to the folder, an email is sent to notify one or more users that the report is available for download. As of v8.0.7, the FMM is no longer part of core EFT and requires a license to use the Upload, Download, Synchronize actions in event rules.
- **FTPS module** - Allows you to use FTP over SSL/TLS to for more secure transfers. (Plain FTP is included.)
- **HTTPS module** - Allows you to set up a secure connection to anyone in minutes using any Web browser. The HTTPS module adds the HTTP and HTTPS protocols to EFT, enabling you to support browser-based transfers without having to install a Web server. HTTPS encrypts the session data using the SSL (Secure Socket Layer) protocol, which provides protection from eavesdroppers and man-in-the-middle attacks. The Web Transfer Client (WTC) can deploy automatically upon client connection to EFT and can be used by any trading partner using virtually any Web browser.
- **OpenPGP module (PGP)** - Safeguards data at rest. The OpenPGP data encryption or decryption process is directed by Event Rules that specify how data files are treated in a particular context. EFT uses OpenPGP to encrypt uploaded data and the off-load capabilities of EFT to move the file to another location. (industry-standard, RFC 4880 compliant)
- **Regulatory Compliance Module (RCM)** - Supports PCI DSS, GDPR, and other compliance-related features to achieve or exceed security practices mandated by government and industry standards such as PCI DSS, HIPAA, and Sarbanes-Oxley for data transfer, access, and storage

- **Remote Agent module (RAM)** - Provides centralized control for automating transactions from distributed systems. RAM enables automatic interactions between branch offices, point-of-sale terminals, business partners, field agent laptops, or other remote systems and your EFT server (over HTTPS port 443) residing in a central location.
- **Secure Forms Module (SFM)** - Provides "upload forms," custom web forms that you create to capture metadata during file uploads when using the web clients. Metadata gathered by the upload form can be used in downstream event rules (that is, subsequent Actions) for conditional post processing.
- **SFTP Module** - Subset of the popular SSH protocol and is a platform independent, secure transfer protocol. SFTP provides a single connection port for easy firewall navigation, password and public key authentication, and strong data encryption, to prevent login, data, and session information from being intercepted and/or modified in transit.
  The SFTP module enables EFT to authenticate and transfer data securely with SFTP-ready FTP clients, such as CuteFTP®.
- **Timer Event Module (TEM)** - Allows you to execute a specified Action only one time or repeatedly at specified intervals. For example, you could schedule an Action (for example, generate and send a report) to occur on July 8 at midnight, or every Monday morning, or on the last Friday of every month at 2 a.m.
- **Workspaces** - Allows you to share folders and their files with internal and external users.

Additional tools (license required):

- Business Activity Monitoring (BAM) is a web-based dashboard tool that uses data from the Auditing and Reporting module to provide full visibility into the flow of data through your EFT system. Evaluate data trends over time and gain instantaneous knowledge about the current state of your system.

What's New in EFT?

Below is a **high-level summary** of changes in this version of EFT, with links to relevant help topics. **For a detailed log of changes and fixes, refer to the release notes in the Client Success Portal.**

> **NOTE:** If you don't have an account for the Client Success Portal, create an account using the name, email address, and serial number registered for your purchase.

v8.2

New Features

Security:

- Added ability to sort the Name and Fingerprint columns in the SFTP Public Key Select dialog box (when assigning a key to a settings template or user account). The modifications and changes are lost once the **SFTP Public Key Select** dialog box is closed.
- Added OpenID to Advanced Authentication Modes module for identity authentication on Globalscape EFT-authenticated and ODBC-authenticated sites
- Updated OpenSSL library
- Changed minimum password length to 15 characters, and minimum of 5 from the categories specified.

Event Rules:

- Added ability to specify a date range or time period (older than X) to compress files in event rules
- Added variable, **%FS.VIRTUAL_DIR_NAME%**, to display only the name alias of the directory instead of the full path, in event rule conditions and as replacement variable
- Added variable **%EVENT.ACTION_FAILURE_REASON%** to indicate failure cause for event rule actions.
- Added Google Drive storage compatibility to the Cloud Connector Module in Connection Profiles, virtual folders, Site root, Cloud Object Monitor event, and Cloud upload and download actions
- Added User: Create action to generate users in EFT without manual intervention or waiting for provisioning by external LDAP or similar services. This allows administrators to automate certain scenarios that require that user accounts be created based on event rule triggers.
- Added OpenSSL signature verification and signing Event Rule action

- Added the following AWS S3 regions to the Connection Profiles tab:
  - Asia Pacific (Hyderabad) - ap-south-2
  - Asia Pacific (Melbourne) - ap-southeast-4
  - Europe (Spain) - eu-south-2
  - Europe (Zurich) - eu-central-2
  - Israel (Tel Aviv) - il-central-1
  - Middle East (UAE) - me-central-1
  - AWS GovCloud (US-East) - us-gov-east-1
  - AWS GovCloud (US-West) - us-gov-west-1

Advanced Workflows Module (formerly the Advanced Workflow Engine)

- Updated Advanced Workflows module Task Builder (Automate 2024)
- Added link to Fortra Automate Connector Hub in EFT administration interface
- Advanced Workflows "splash screen" updated for the new version (shows when opening the Task Builder in EFT)
- Added ability to suppress Automate running task pop-up
- Enabled Windows user credentials to use with Automate service account
- See What's New in Automate for more information about Automate Desktop updates.

Administration:

- Added ability to propagate Custom Command, Advanced Workflow, and Connection Profile artifacts to other EFT servers (running same EFT version and with REST API enabled).
- Added ability to propagate EFT site artifacts
- Added support for OAuth for outbound email (Microsoft 365)
- Added support for OAuth for outbound email (Gmail)

Web Admin Console

- Added a new web administration console
- Added ability to view users in the web admin console
- Added ability manage users in the web admin console

WTC and Workspaces:

- Removed domain.username from shared workspace link notification
- Added redirect to WTC home page and login when URL is invalid
- Updated Angular to version 16

Auditing and Reporting Module

- ARM: Updated event action errors logged to ARM to be more informative.

Remote Agent Module

- Added support for proxy

EFT COM PI

- Refer to What's New in the COM API?

REST API

- Added new Event Rule counters under "Get Node Metrics": Running Timer Event Rule count, Running Folder Monitor Event Rule count, Running File Upload Event Rule Count, Running Verified File Upload Event Rule Count.
- Added ability to kick, lock, and unlock user accounts via REST API.
- Added ability to generate ARM reports in PDF, HTML, and VP formats via REST API.
- Added filtering option to the user's endpoint, which will help EFT administrators that have multiple user accounts defined within EFT.
- Generate Support Bundle – extended REST API support for the EFT Generate Support Bundle feature.
- Added ability to add sorting functionality to the User endpoint including sorting by group.
- Added support for EFT administrators to change their EFT password via REST API.
- Added ability to specify admin roles access to REST API in the administration interface.

Advanced Properties:

- **RemoveLinksFromWorkspaceInvitations** - When set to true will replace any links in the comment section of the folder-sharing email with the text "[LINK REMOVED]".
- **UseIdInWorkspaceLink** - When this advanced property is enabled, emails sent for shared workspaces should not include the domain and user in the email link; EFT will redirect the user to the proper folder (with current format) when the authentication is passed.
- Added an advanced property to enable incoming MKCOL requests. MKCOL requests are disabled by default. When **DisableMKCOLRequest** is true, EFT enables incoming MKCOL requests. When **tunnelNonHttpVerbs** (added in v8.0.5) is true, the WTC is prevented from sending out MKCOL (vs POST) method.
- Increase SFTP buffer size; the default value is 256K. The advanced property, **SFTPWinFileReadWriteBufferSizeKB**, allows up to 8192K.

- **PlainTextPasswordInServerLog**; To help troubleshoot the issues that log credentials from the connecting clients in cleartext to u_ex logs to determine if invalid/old credentials are the cause of the issue.
- **FailOnPGPVerifyOfUnsignedFile**; For testing purposes, used to toggle from preferred behavior (failure when not signed) to legacy behavior (pass when not signed). This AP will be defaulted to "true" to effect the preferred behavior. If a customer desires the legacy behavior this AP must be set to "false" in the json file.
- Added support for Server Name Indication (SNI) via the **ClientFTPEnableSNIExtTLS** Advanced Property. If **ClientFTPEnableSNIExtTLS** is enabled and the “Host address” field contains DNS name (instead of IPv4 or IPv6) for the TLS-related ClientFTP‘s outbound connections (for example in File download configuration wizard), then during TLS handshake, the DNS name of host is sent inside TLS SNI extension.
- **ICAPForceZeroPreview** for support of Trellix (Macaffe) ICAP server. When its value is 1, Preview:0 header will be sent in Reqmod/Respmod requests, whether it gets "Preview from Options" request or not. (Disabled by default.)
- The following Advanced Properties were added for upgrading from Advanced Workflow Engine v10 to the current version in EFT:
  - **AutomateInstallDir** - Automate installation directory; default is C:\\Program Files\\Globalscape\\Automate\\
  - **AutomateServiceName** -Type: string; for example ""AutomateDesktop2024"
  - **AutomateRestApiPort** - Type: number; range [10000, 12000]; default is 11012

Enhancements

- Improved accessibility of email templates. EFT administrators can view, edit, and remove available templates in the administration interface on the **Server > SMTP** tab, as well as create custom templates.
- Updated graphics to meet Fortra standards

System requirements changes

- Updated Microsoft .NET Framework to v4.8
- Updated OpenSAML in OpenSSL library

Fixes

- Removed deprecated EFT client tables from ARM database (SAT_Emails, SAT_Files, SAT_Transactions).

Before You Begin

When you first install EFT, wizards step you through creating a Server object, creating a Site (the connection to EFT), and creating your first user. Review the links at the list below to gain an understanding of what a typical EFT installation requires.

> **NOTE:** Even if you engage Globalscape Professional Services to deploy EFT in your network, there are steps that you need to follow prior to their engagement.

If you are installing EFT in the cloud, refer to the Globalscape Knowledgebase for information about EFT in AWS or Azure.

- For EFT on Amazon Web Services refer to: https://kb.globalscape.com/KnowledgebaseArticle11237.aspx
- For EFT on Microsoft Azure refer to: https://kb.globalscape.com/KnowledgebaseArticle11278.aspx

Before installation

- Review What's New? in your version of EFT
- Review the specifications, safe operating limits, and System Requirements for EFT and its modules
- If you are upgrading from a previous version, refer to Upgrading.
- Review EFT System Architecture
- Review Configuration and Security Best Practices
- If you're using DMZ Gateway:
  - Review how DMZ Gateway and EFT communicate
  - Review Default Network Ports for EFT and DMZ Gateway
- Review ARM storage requirements

Feature Availability

> **NOTE:** Please refer to the topic "EFT Arcus Features" in the Globalscape Knowledgebase if you are comparing EFT on-premises to EFT Arcus.

The tables below describe which features are included in EFT on premises, and which are available with the licensing of the modules.

Core Features of EFT

These features are part of EFT, but you still need to activate an EFT license after the trial has ended. Use of certain core features will require an additional module (such as HTTP/S, SFTP, or FTPS) or external tools (such as connection to an LDAP or ICAP server). Refer to the feature tables under Features by Category for details.

Active-Active clustering (HA)
Active-passive clustering (Failover for high availability)
Administrative console
Admin roles and permissions
Audit performance counters to Windows Perfmon
Auditing to text file
Auditing internal metrics to local database
Backup and restore wizard
Ban file types by extension
Batch management of users
Built-in, NTLM, AD, and LDAP auth (including AD admin auth)
COM API
Connection Profiles (requires HTTPS, SFTP, or FTPS to connect as the server)
Content Integrity Control (CIC)
Delegated administration
Denial of server and flood protection
Else conditional logic in rules
Encrypted folders (secure data at rest)
Expire inactive accounts (including admin accounts)
Expire passwords after N days (including admin accounts)
Expiration reminder
FIPS 140-2-certified crypto (requires SSL/TLS or SFTP)

FTP plain (FTPS requires FTPS module)
IP white/black listing
Mobile file transfer
Override VFS credentials
Password complexity
Performance counters
REST-based administration
Reusable connection profiles
Run command-line scripts
SSL client cert auth (full functionality available only when HTTPs or FTPs module is registered)
Triggers based on incoming (uploaded) files
Virtual folders mapped to shares
Windows EFS encryption
Event Rule Actions: • File scan for DLP/AV, ICAP/CIC • Flow: Stop Processing • Flow: Variable • Protocol: Email • System: Backup • System: Cleanup • User: Action • Windows: Event Log
Event Rules: • "IF" conditional for triggers • Create a change log for rules • "Else" conditional for triggers • Event Rule import/export • Group triggers into folders (Event Rule Folders) • Securable objects (Event Rule Permissions) • Connection Events (all) • File Server Events (all) • Server Events (all) • Site Events (all) • User Events (all)

Features by Category

These acronyms for the modules are used in the tables below:

AAMM = Advanced Authentication Modes Module

ARM = Auditing and Reporting Module

AS2 = AS2 protocol module

AWM = Advanced Workflow Module (formerly Advanced Workflow Engine, AWE)

BAM = Business Activity Monitoring

CCM = Cloud Connector Module

DMZ = DMZ Gateway

EAM = Enterprise Actions Module

FMM = Folder Monitor Module

FTC = File Transfer Client

FTPS = FTPS module

HTTPS = HTTPS module

PGP = PGP Module

RAM = Remote Agent Module

RCM = Regulatory Compliance Module

SFM = Secure Forms Module

SFTP = SFTP module

TEM = Timer Event Module

WSM = Workspaces

Protocols

Feature	Core or module
FTP protocol (RFC 959)	Core
FTP extensions (multi-part, resume, parallel threads, file integrity checking, custom commands, S-Key, PASV port range, UTF-8, customizable banner, command blocking, EBCDIC mode, PASV port range controls)	Core
SSL/TLS 1.2 – for secure communications	Core
SSL certificate management	Core
SSL client certificate authentication	Core
SSL control over ciphers, algorithms, and protocols	Core
Real-time session monitoring	Core
SFTP protocol	SFTP
SFTP advanced options (multiple auth methods)	SFTP
SFTP key management	SFTP

Feature	Core or module
SFTP control over ciphers, algorithms, and protocols	SFTP
FIPS 140-2 certified cryptographic module (Requires SFTP or HTTPS to function properly)	Core
HTTPS protocol	HTTPS
HTTPS extensions (various auths including IWA/SSO, configurable headers, compliance with OWASP security guidelines, HSTS support, many other headers,)	HTTPS
Web client – Built-in web client adds a rich set of features compared to script-driven HTTP/S transfers	HTTPS
HTTP to HTTPS auto-redirect	HTTPS
Customizable HTTP error messages	HTTPS
Mobile access via native mobile transfer client) – For iOS and Android	HTTPS
AS2 protocol	AS2 module
AS2 extensions (Message Level Security (MLS), Reliability Profile, Multiple Attachments (MA) profile.	AS2 module

Authentication (Access Controls)

Feature	Core or module
EFT-managed accounts (i.e., "built-in authentication, or Globalscape authentication)	Core
Active Directory (AD) – native Windows integration, including admin accounts) (In EFT Arcus, "AD impersonation" is available, but not authentication.)	Core
ODBC - leverage any ODBC data source	Core
LDAP - authenticate against LDAP sources, including AD	Core
SAML (WebSSO) - including Just In Time (JIT) provisioning	AAMM
RADIUS - often used as a two-factor authentication source	AAMM
RSA SecurID® (native and Steel-Belted Radius (SBR))	AAMM
CAC - Common Access Card authentication	AAMM
Secrets module	CCM
SMS authentication - two-factor authentication (2FA) for WTC and Workspaces (In EFT Arcus, the "out-of-ban0d" passcode to pick up files is available.	HTTPS

Authorization (Resource Controls)

Feature	Core or module
AD Impersonation - Active Directory manages permissions	Core
AD-based administration accounts	Core

Feature	Core or module
EFT managed folder permissions	Core
Role-based administrator accounts with granular permissions (Delegated administration)	Core
Permission groups – templatize sets of permissions	Core
Virtual folders - map virtual to physical folders including network shares	Core
Home folders - designate a home folder and optionally make it the user's root folder	Core
Set limits - number of logins, connections, file sizes, transfer speeds, disk quotas	Core
DoS/flood detection algorithms and auto-IP ban logic	Core
IP access rules - full featured IP access rule manager (whitelisting/blacklisting)	Core
Ban file types by extension - prevent upload of unwanted file types	Core
Monitor and kick offending users from the server	Core
Invalid account names - controls to auto-ban offender IP	Core
Invalid passwords - controls to auto-lockout, disable, or ban IP	Core
Password complexity - configure a number of password complexity options	Core
Password reset - user-initiated or on initial login	Core
Password reuse - disallow historical (previously used) passwords	Core
Expire accounts - disable account on a given date	Core
Expire inactive accounts - disable or remove account after N days of inactivity	Core
Expire passwords - expire passwords after N days	Core
Expiration reminder - email user reminder to change their password	Core
Data sanitization - securely clean deleted data using military grade wiping	RCM
Encrypted folders - EFT built-in, secure-data-at-rest Solution	Core
EFS - encrypt data at rest using Windows' Streaming repository encryption (EFS)	Core
Override VFS credentials	Core
OpenPGP - use OpenPGP to encrypt, sign, and decrypt data	OpenPGP
PCI DSS - Site settings to facilitate PCI DSS and other compliance mandates	RCM
DMZ Gateway®- securely proxy transfers through the DMZ	DMZ Gateway®

Administration

Feature	Core or module
Silent installation - unattended setup	Core
Administrator GUI - Windows based Graphical User Interface (GUI)	Core
Remote administration - administrate from other systems in the network	Core

Feature	Core or module
Secure remote administration - SSL encrypted administration communications	Core
Multiple administrators - allow concurrent administration	Core
Secure administration - same password complexity options available for administrators as for users	Core
Flexible authentication - leverage native, NTLM, or AD to authenticate administrators	Core
Forensics - audit and report on administrator activity and changes (Admin - Audit Log, Audit Log (detailed), Authentications)	ARM
COM API - programmatic administration	Core
REST endpoint for querying administrative info and server status	Core
Backup and Restore - one-click backup and easy restore of entire configuration	Core
Batch account management - perform actions to multiple accounts simultaneously (such as multi-select users to reset their passwords)	Core
Specify personal data and privacy settings on a Site and per user	RCM
Generate GDPR DPIA report	RCM

Auditing and Visibility

Feature	Core or module
Logging - flat (text) file log in W3C and other formats	Core
Monitor transfers in real time	ARM
View historical transfers in the administration interface	ARM
Audit Performance counters to Windows Perfmon	Core
Audit internal metrics to local database	Core
Audit to SQL - audit transactions to a SQL database	ARM
View reports (predefined)	ARM
Create custom reports	ARM
Audit to Oracle - audit transactions to an Oracle database	ARM
Business Activity Monitoring (BAM) - real-time visibility, dashboard, and analytics (Requires ARM)	BAM, ARM

Automation (Integration with Other Systems)

Feature	Core or module
Event Rules change log	Core
Group Event Rules into folders	Core
React to stimuli - trigger workflows based on file uploads and other server events	Core

Feature	Core or module
Send email to users or administrators as part of a workflow	Core
"Stop processing if failed" action	Core
"If" and "Else" Conditions in Event Rules	Core
Connection Events	Core
Import/Export Event Rules	Core
Context variables - use transaction values inside of workflows	Core
Conditional logic - build fine-grained business logic into workflows	Core
Backup Action - Back up files	Core
Cleanup Action - securely remove old files based on your organization's data retention policies	Core
Upload and download - push or pull files to remote servers as part of a workflow	FTC
User Account Action - for tasks like re-enabling user accounts and compliance requests (for example, HIPAA, GDPR) in which users might ask that an organization remove all traces of their account.	Core
Windows Event Log Action	Core
Create reusable connection profiles for use in Event Rules	Core
Integration with antivirus and DLP (Data Loss Prevention) tools to permit or prevent transfers based on policies. **NOTE:** ◦ **Content Integrity Control** is used in event rules to send a file to an external antivirus scanner or data loss prevention solution for processing. ◦ Customer must install an antivirus/ data loss prevention solution. Any third-party content inspection product that supports ICAP can communicate with the Content Integrity Control in EFT. ◦ EFT Arcus has built-in Windows Defender antivirus protection at the OS level.	Core
File Server Events	Core
Server Events	Core
Site Events	Core
User Events	Core
Operating System Events	FMM, TEM
Cloud-Based Events	CCM

Feature	Core or module
Workspace Events	WSM, HTTPS
Secure File Send Events	WSM, HTTPS
AS2 Events	AS2
Subroutine Event	EAM
Send pre- and post- commands to mainframe during copy/move actions	FTC
Perform folder and file operations	EAM
Event Rule invoke over WS/SOAP (uses HTTPS port)	EAM, HTTPS
Web Services - trigger workflows using Web Service calls; Invoke Web Service from URL	CCM
Execute a process, including scripts, as part of a workflow	EAM
Folder monitor - trigger workflows immediately after files arrive in a monitored folder	FMM
Schedule events - trigger workflows on a recurring basis	TEM
Compress/Decompress files	EAM
Advanced workflows - tap into the Advanced Workflow module to build sophisticated workflows	AWM
Integration with cloud (AWS and Azure) storage; Copy, move, and download from cloud storage	CCM
Ability to monitor and act upon AWS S3 and Azure blob storage activity	CCM
Centralized control for automating transactions originating from distributed systems (Remote Agents), including provisioning, management and Event Rules	RAM
Run PowerShell scripts in Event Rules	EAM
Move tabular data between programs using the Protocol: listing to Dataset Action, Get/Loop from Host, and Import/Export to/from Dataset.	EAM

Person-to-Person (P2P) File Transfer

Feature	Core or module
Ad hoc file transfer – Allow authorized users to share files or folders with guest users via Outlook or using the EFT web interface, for secure P2P file exchange	HTTP/S, Workspaces
Two-way file sharing - recipients provided with multiple methods to securely send files to each other	HTTP/S, Workspaces
Receipt notification - email notification when files are picked up by the recipient	HTTP/S, Workspaces
Pick-up authentication - recipients can be required to verify their identity before downloading files	HTTP/S, Workspaces

Feature	Core or module
Full file tracking - Users and administrators can view complete history of files sent and received	HTTP/S, Workspaces
Centralized policy controls - administrator can set defaults and mandate policies or let authorized users decide	HTTP/S, Workspaces
Mixed mode authentication - optionally authenticate internal employees against AD, while maintaining guest isolation	HTTP/S, Workspaces
Integration with EFT - monitor all ad hoc file transfer activity from EFT	HTTP/S, Workspaces
Request files – Authorized users can generate a request link that guests follow to securely upload files.	HTTP/S, Workspaces
Drop-off files to internal users with no attachment limits	HTTP/S, Workspaces
Manage personal data and privacy settings for GDPR and other privacy rules in the Workspaces client	HTTP/S, Workspaces, RCM
Multifactor authentication via email or SMS for client logins	HTTP/S, Workspaces
Gather metadata for uploads in the client via upload forms	HTTP/S, Workspaces, SFM
View sent and received messages history in client	HTTP/S, Workspaces

Architecture

Feature	Core or module
IPv6 - Full dual stack (IPv4/6 mixed) support	Core
Virtual - Install on virtual machines, e.g. VMware and Hyper-V	Core
Unicode - UTF-8 encoding of filenames and other fields where applicable	Core
IDN - Internationalized domain name support	Core
I/O Completion Ports - Technology that allows for fast performance on Windows systems	Core
Active-passive clustering - Failover for high availability	Core
Active-active, high availability (HA) clustering with two or more EFT servers	Core

System Requirements

Globalscape only offers support for EFT with the software and hardware on which we've tested EFT, as described below.

Listed below are the are the software applications that are compatible and supported on this version of EFT. (It is the customer's responsibility to install the correct versions.) For component versions that are packaged in EFT, refer to EFT Specifications.)

EFT (Server Service) Requirements

EFT and its modules can be installed on a physical computer, virtualization software such as VMWare, and in the cloud. EFT Arcus is our SaaS offering, hosted on Microsoft Azure.

- Operating systems:
  - Windows Server 2022
  - Windows Server 2019
  - Windows 11 (administration interface only)
  - Windows 10 (administration interface only)
- Free RAM:
  - **Minimum**: 4 GB free RAM
  - **Recommended**: 8 GB free RAM (moderate Advanced Workflows usage)
  - **High Performance**: 16 GB free RAM (if Advanced Workflows are used extensively)
  - More RAM could be required for large file transfers over the AS2 protocol. AS2 transfers can use up to 40% of the Server's RAM.
- CPU:
  - **Minimum:** Dual-core CPU of at least 2.5GHz (for minimal processing/ automation)
  - **Recommended**: Quad-core, at least 2.5 GHz (for moderate processing/ automation)
  - **High Performance:** 8+ cores, at 2.5 GHz (for high amount of processing/ automation)
- Microsoft .NET Framework 4.8 (.NET 4.8 is included in Windows Server 2022)
- EFT requires the following dependencies:

  - Microsoft ODBC Driver 17 for SQL Server (used for SQL ARM)
  - Microsoft OLE DB Driver v18.6.7.0 for SQL Server (used for SQL ARM)
  - Microsoft Visual Studio C++ 2010 x64 Redistributable – 10.0.30319
  - Microsoft Visual Studio C++ 2015-2022 Redistributable (x64) – 14.31.31103
  - Microsoft Visual Studio C++ 2015 -2022 Redistributable (x86) – 14.31.31103
- Max Latency (measured while not under load):
  - EFT to network share: <25ms
  - EFT to SQL/Oracle database: <10ms
  - EFT to DMZ Gateway: <50ms
  - EFT to Auth manager: <25ms
- **For HA (active-active) installations**:
  - Microsoft Message Queuing (MSMQ) must be installed.
  - Load balancer, such as F5® BIG-IP® Local Traffic Manager
  - File share (SMB or CIFS) for EFT configuration and users' files accessible via UNC path is required (configured as High Available storage for redundancy is recommended)
  - If file replication technology is used for Disaster Recovery, it must be configured as synchronous file replication. Technologies that use asynchronous file replication are not supported.
  - Fully qualified domain name (FQDN) or DNS record for File Shares and Databases is required and best practice
  - If *encryption at rest* is required, determine whether your storage vendor's solution includes built-in encryption or supports Microsoft's Encrypted File Shares (EFS). If neither option is available, you can leverage EFT built-in Encrypted Folders feature, which is available in standalone or high availability (HA) configurations.
  - Latency between all nodes should be the same. For example, if you have three nodes, A, B, and C, with latency between A and B at 50ms, but between A and C, or B and C is 100ms, this difference could cause EFT servers to crash, EFT server services restarts, configuration corruptions, and so on. Max Latency (measured while not under load):
    - EFT node to another EFT node: <25ms
    - Each EFT node to network share: <25ms, with no more than +/- 50% discrepancy between nodes (A single network share used both for EFT configuration and as a file repository. EFT does not support separate shares even if those are two-way synced.)

    - Each EFT node to shared SQL/Oracle database: <10ms, with no more than +/- 50% discrepancy between nodes
    - Each EFT to a DMZ Gateway: <50ms, with no more than +/- 50% discrepancy between nodes
    - Each EFT to shared Auth manager: <25ms, with no more than +/- 50% discrepancy between nodes
- If accessing or monitoring shares, SMB v2.0 or 3.0
- The EFT server service runs under a user account, which must have full administrative rights (permissions) to the folder in which you install EFT. With administrative rights, the service can save all of your settings. If the service does not have administrative rights, you will lose settings and user accounts whenever you restart the EFT service, and you will need to reset permissions on the computer on which the EFT service is running. If you are using Active Directory, there are other considerations regarding permissions.

EFT Administration Interface Requirements

The administration interface must be installed on the same computer as EFT, but also can be installed on other computers for remote administration. (Refer to the ARM, Advanced Workflows, and AS2 requirements below if you plan to use those modules remotely.)

- Windows 10, 11, 2016, 2019
- 1 GB of free RAM
- 1280x800 resolution or higher display
- Microsoft Windows Installer 4.5
- Microsoft .NET Framework 4.8 "Full"

Auditing and Reporting Module (ARM) Requirements

- Microsoft SQL Server drivers are installed automatically, regardless of whether SQL Server will be used. (You can read more about SQL Server drivers here: https://docs.microsoft.com/en-us/sql/connect/oledb/oledb-driver-for-sql-server?view=sql-server-2017.)
- 3GB minimum hard drive space for the initial database size. Space requirements for transactions depend on estimated Event Rule activity, number of connections, and types of transactions. A general estimate is 3MB to 5 MB per 1000 files uploaded.
- PDF-viewing software (such as Adobe Reader) to view PDF reports.
- Access to a SQL Server or an Oracle database.
- EFT is supported with the following SQL Server version:

    - SQL Server 2022
    - SQL Express 2019 (bundled in EFT installer for evaluation purposes only)
- Microsoft® ActiveX Data Objects (ADO)
    - EFT uses Microsoft ActiveX Data Objects (ADO) 2.7 or later to handle database communication, which in turn should load the Oracle drivers to handle Oracle implementation details. How and what is connected largely depends upon the connection string. By default (if you do not supply the entire connection string in EFT), the Oracle connection string should look like the example below. Replace the values in curly braces { } with the required values (host, port, database name, username, and password).

Oracle Connection String

```
Provider=OraOLEDB.Oracle.1;
 Data Source=(DESCRIPTION =
(ADDRESS_LIST = (ADDRESS
 = (PROTOCOL = TCP)(HOST = {host value})(PORT
 = {port})))"
(CONNECT_DATA =(SERVICE_NAME
 = {database name})));
Persist Security Info=true;PLSQLRSet=1;PwdChgDlg=0;User
 Id={username};Password={password};
```

- Refer to Oracle's documentation regarding Oracle system requirements. Be sure to reboot after you install the Oracle Data Access Components (ODAC). You must install both the 32-bit ODAC drivers for the report writer, and the 64-bit ODAC drivers for EFT to work with Oracle.
- EFT supports the following Oracle versions:
    - Oracle Database 19c

NOTE: Older versions of SQL and/or Oracle could still work, however, they are no longer tested by the QA team.

- Don't use SQL Server Express Edition or Oracle Database Express Edition as the ARM production database.
- Install the ARM database on a separate database server; don't install EFT server and SQL Server Engine on the same operating system to avoid scaling issues during traffic peaks.

- Define and implement a database maintenance plan to keep space requirements to a minimum (aging/archiving/warehousing/truncating old data) that meets your business data retention requirements.
- For better database performance, follow the standard SQL/Oracle tuning guidelines in their respective documentation. See also Purging Data from the Database.
- For ARM upgrades, Microsoft .NET Framework 4.8

AS2 Module Requirements

- More RAM could be required for large, non-EDI file transfers. AS2 transfers can use up to 40% of the Server's RAM for file transfers.
- Refer to Installing and Activating the AS2 Module for detailed prerequisites.

Web Transfer Client (WTC) and Workspaces Requirements

The EFT installer is bundled with a compatible version of the WTC.

- 1280x800 resolution or higher display
- JavaScript must be enabled in the browser.
- WTC supports:
  - Directory listings that contain up to 1,000 items. More items can work on certain browsers; however 1,000 is the official (tested) supported item limit.
  - ASCII and UTF-8 encoded filenames that follow Windows' naming conventions
  - Directory trees up to the Windows "MAX_PATH" length, or 260 chars (note that this is absolute path, not relative path. Only the relative path is visible to the user).
- Web browser:
  - Unsupported browsers may force the use of the "plain-text client."
  - The WTC will work with most modern browsers that support HTML 5. Refer to https://kb.globalscape.com/KnowledgebaseArticle11367.aspx to see which browsers were tested with each version of EFT. (Internet Explorer does not support >4GB uploads.)
  - The browser running the client must have cookies enabled. Note that cookies work on IP addresses (for example, 127.0.0.0) or full domain names (for example, yourcompany.org), not *Localhost*.

Web Admin Client (WAC) Requirements

The EFT installer is bundled with a compatible version of the WAC.

- 1280x800 resolution or higher display
- JavaScript must be enabled in the browser.
- Web browser:
  - The WAC will work with most modern browsers that support HTML 5. Refer to https://kb.globalscape.com/KnowledgebaseArticle11367.aspx to see which browsers were tested with each version of EFT.
  - The browser running the client must have cookies enabled. Note that cookies work on IP addresses (for example, 127.0.0.0) or full domain names (for example, yourcompany.org), not Localhost.

Advanced Authentication Modes Module Requirements

- To generate PCI DSS reports, you will also need the Auditing and Reporting module.
- For Common Access Card authentication:
  - LDAP server
  - CAC smart card reader
  - EFT v8.x does not support UPLOADS from CAC-authenticated users when using Chrome or Edge browsers. Firefox (and possibly other browsers) will work.
- For RADIUS or RSA authentication:
  - RADIUS server
- For SAML (Web SSO) authentication:
  - Identity provider (for example, SafeNet, Salesforce, Shibboleth)

Regulatory Compliance Module (RCM) Requirements

- To generate PCI DSS and GDPR reports, you will also need the Auditing and Reporting module.

EFT Outlook Add-In Requirements

- The EFT Outlook Add-In is supported on Microsoft 365, Office 2016, Office 2019, with the latest service packs (as of this release).
- Microsoft .NET Framework 4.8

- Globalscape Support no longer tests the EFT Outlook Add-In with older versions, therefore it is not a supported configuration; however, some customers are still using those versions

DMZ Gateway® Requirements

- Refer to System Requirements for DMZ Gateway.
- EFT and DMZ Gateway cannot be installed on the same computer or virtual machine image, but must be installed no more than one network "hop" away with an average network latency no greater than 50ms, with zero percent packet loss, and normal packet flow. Refer to https://kb.globalscape.com/KnowledgebaseArticle11447.aspx for more information.

Advanced Workflow Module Requirements

> **NOTE:** EFT v8.2.x includes some functionality of Automated Desktop 2024 as part of the Advanced Workflow Module. It is not backwards compatible with the Advanced Workflow Engine (Automate v10). It is not recommended to run a standalone Automate version with EFT. Only the bundled version of Automate has been verified to be fully compatible with EFT and no other version is officially supported.

- Advanced Workflows 2024 requires Microsoft .NET Framework 4.8. If you are installing on Microsoft Server 2022, .NET 4.8 is included and EFT v8.2.x will install without any prompts. On Microsoft Server 2019 or earlier, you will need to install .NET 4.8 ***before*** installing EFT v8.2.x.

Remote Agent Module (RAM) Requirements

- HTTP/HTTPS module
- SSL must enabled and available on port 443
- Visual C++ and Redistributable for Visual Studio (for installation).
- EFT server must be registered
- Operating systems supported: Windows Server 2019, Windows Server 2016, Windows 10/ 11.
- After installation, the computer may require a reboot.

Mobile Transfer Client (MTC) System Requirements

MTC is supported on:

- Android- or iOS-based mobile devices of varying resolutions.
- Android 2.3 or later for general operations
- Android 3.0 or later if encrypted data store is required
- iOS 6.1 or later (tested on both 6 and 7)

Content Integrity Control Action Requirements

The Content Integrity Control (CIC) Action requires a connection to an ICAP server. The CIC action was tested with:

- Clearswift (DLP) version 5_5_202211301821
- MyDLP Community Edition Server version 2.2.32-1

- Symantec DLP version 14.5.0.24028
- Kaspersky version 5.5

When using the CIC action, EFT needs to use POST in HTTP requests. Refer to Globalscape Knowledgebase article https://kb.globalscape.com/KnowledgebaseArticle11375.aspx for information about enabling an advanced property.

EFT Specifications

This topic is intended as a quick reference of EFT specifications. Information is provided in detail in the applicable procedures.

See also:

- Safe Operating Limits for EFT
- EFT and Advanced Workflows Encryption Algorithms
- System Requirements

Item	Description
Protocols	FTP/S (SSL/TLS), SFTP (SSH2), HTTP/S, and AS2 (Certain protocols other than FTP require optional modules.) • FTP Commands Supported by EFT • The FTPS protocol in EFT is compliant with RFC4217, "Securing FTP with TLS." • EFT supports SFTP versions 2, 3, 4, and 6. The outbound client defaults to version 4, and it is not configurable through the GUI, but can be configured in advanced properties. The EFT outbound client negotiates the SFTP version with the receiving server during session establishment. That is, if the receiving server only supports version 2, EFT Server will negotiate down and operate at version 2. • SFTP hashing algorithms supported: For both FIPS and non-FIPS ciphers and algorithms, refer to SFTP FIPS.
SSH version	• EFT v8.0.x - 8.1.x use v8.1.0.0_openssh library, including OpenSSH DLLs for FIPS

Item	Description
SSL version	• EFT v8.2.0 uses OpenSSL v3.1.4; In EFT v8.2.x, the SAML library was updated to OpenSSL v3.2.1. • EFT v8.1.0.16 uses OpenSSL v1.1.1t for SAML; everything else SSL related (except FIPS) uses OpenSSL v1.1.1o; • EFT v8.0.6 - 8.0.7 use OpenSSL v1.1.1k; • EFT v8.0.4 - 8.0.5 use OpenSSL v1.0.2u (dated December 20, 2019), SSL.dll and SSLfips.dll; • EFT v8.0.0 - v8.0.3 use OpenSSL v1.0.2t; TLSv1.2 is set by default. For best security, in the TLS Settings dialog box, clear the check boxes for versions that you do not need enabled; do not enable SSLv3 ciphersuites Refer to FIPS below for the OpenSSL version used for FIPS.
SSL Certificate Key lengths supported	Key lengths supported: 1024, 2048, 3072, and 4096 bits
EFT-created SSL certificates	x.509 base-64 standard DER encoded
Allowed OpenSSL ciphers for inbound transfers (HTTPS and FTPS)	Refer to the **Server > Security** tab for available ciphers.
Authentication types	Built-in, AD/NTLM, LDAP, ODBC, RADIUS, RSA SecurID®
Log formats	W3C, Microsoft IIS, and NCSA
OpenPGP	EFTv8.10.5 uses IPWorks OpenPGP 2020 v20.0.8136 from /n Software for secure OpenPGP messaging and advanced encryption and decryption (http://cdn.nsoftware.com/help/IGB/cpp/) and is RFC 4880 compliant.
PCI DSS	EFT facilitates compliance with PCI DSS version 3.x.
AS2 module	EFT uses /n software's EDI Integrator library components, which are in the core of an application called RSSBus. RSSBus is Drummond Certified and in compliance with RFC4130. (EFT itself is not Drummond certified.) The maximum inbound file size for AS2 transfers is 20GB; there is no limit on outbound file size.

Item	Description
Advanced Workflow Module (AWM) version	EFT v8.2 uses Automate Desktop 2024 Task Builder and actions
ICAP/Content Integrity Control	• EFT supports RFC3507, sections 3.2 and 4.9. EFT supports: draft-stecher-icap-subid-00 section 4.5 and 4.6. • Microsoft .NET Framework 4.8
EFT Outlook Add-In library	EFT v8.0.6 and later use Apache log4net v2.0.12
RSA library	EFT 8.1 and later use RSA® Authentication Agent API 8.6
RegEx	EFT uses the regular expression engine in .NET.

Safe Operating Limits

The list of EFT object types and their maximum safe operating limits can be found at https://kb.globalscape.com/Knowledgebase/11543/Safe-Operating-Limits.

EFT System Architecture

EFT can be installed as a stand-alone deployment with one server (which can have multiple Sites/IP addresses). Several more complex options are available for how you configure EFT in your network architecture, described below, depending on what you need to accomplish.

Refer to the EFT System Architecture Guide in the Knowledgebase for descriptions and illustrations of the various architectures available.

Talk to your account manager or the Globalscape Professional Services team to design a custom architecture.

Installing EFT

The topics below provide information regarding installing and activating EFT, and configuring EFT on your network.

Before you run the installer, review the System Requirements, EFT Specifications, and the Knowledgebase article, Configuration and Best Practices.

- Installing the Server, Interface, and Modules
- Installing or Upgrading the Advanced Workflow Module
- Active-Active HA Cluster—Installing or Upgrading the Server
- Active-Passive Failover Clustering--Installing or Upgrading
- Installation Logging
- Upgrade HA Nodes with Zero Downtime
- Upgrading EFT
- Uninstalling the Software
- Silent Command-Line Installation

Installation Logging

The installation log file is intended for debugging purposes and contains messages that may help resolve issues that arise during installation.

- During installation and maintenance, the installer creates an **Installer.log** file in the **%TEMP%\<Product Name>** directory. For example:
  - **C:\Users\administrator\AppData\Local\Temp\EFT Server\Installer.log**
  - **C:\Users\administrator\AppData\Local\Temp\EFT Server\Installer.log**
- At the completion of the installation, either due to success or failure, the installer copies the final log to the **<InstallDir>\logs** directory, if it exists. If the installer fails during an initial clean installation, the **<InstallDir>\logs** directory may not exist. In this case, the final log file remains in the **%TEMP%\<Product Name>** directory.
- The installer attempts to append to the existing log file on subsequent runs of the installer (for example, if the user performs a Reinstall). It does this by copying any existing **Installer.log** file from the installation directory into the Temp directory, writing to it during installation, and then copying it back to the **<InstallDir>\logs** directory when the installation is finished.

- You can write out the same log messages to another log file of your choosing using the **/logfile=<Log file>** command line switch to the installer.

Debug Logging

The installer is capable of writing the same messages that go to the Main Installer Log using the Windows debug logging infrastructure. These messages may be viewed using a utility such as SysInternal's DebugView application. To enable this logging, the installer must be run from the command line with the **/debug** switch.

Installing EFT, Administration Interface, and Modules

The EFT installer is used to install EFT and its modules, except for DMZ Gateway.

Important Pre-Installation Information:

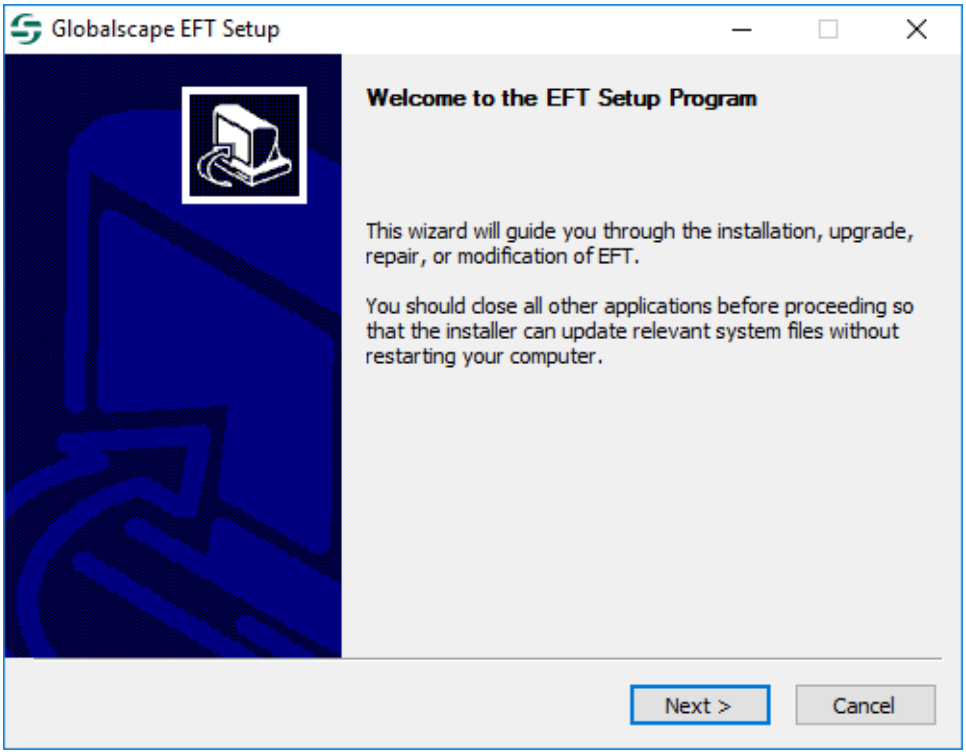
- **Before installing the software**, refer to System Requirements, and read the entire installation procedure below. Also review "Important information" in Installing the Advanced Workflow Module.
- After you have installed the system on a test computer and are now ready to move it to a production environment, refer to Backing Up or Restoring Server Configuration if you want to keep the test environment's Server, Site, and user configuration settings. Otherwise, perform a clean install as usual on the production system.
- **If you are installing in a cluster configuration**, refer to Installing or Upgrading the Server in a Cluster.
- **If you are connecting to an existing database**, ensure the database is installed and configured before starting the EFT installer. The installer will attempt to connect to the database. Or you can skip ARM installation and rerun the installer later in **Modify** mode.
- **If you are using an Oracle database**, ensure the ODAC client suitable for your database version is installed. (Refer to System Requirements.) For details of installing SQL Server, refer to the SQL Server Install pages on technet.microsoft.com.
- The EFT installer includes the ARM database installation and upgrade files. If you want to install or upgrade the database later, refer to Installing and Configuring the Auditing and Reporting Module, Upgrading the EFT Database, Upgrading Large Databases, and EFT Database Utility.
- The EFT installer does not support Unicode characters. Refer to Unicode Exceptions for details.

The installer verifies that the following items before continuing and will prompt you:

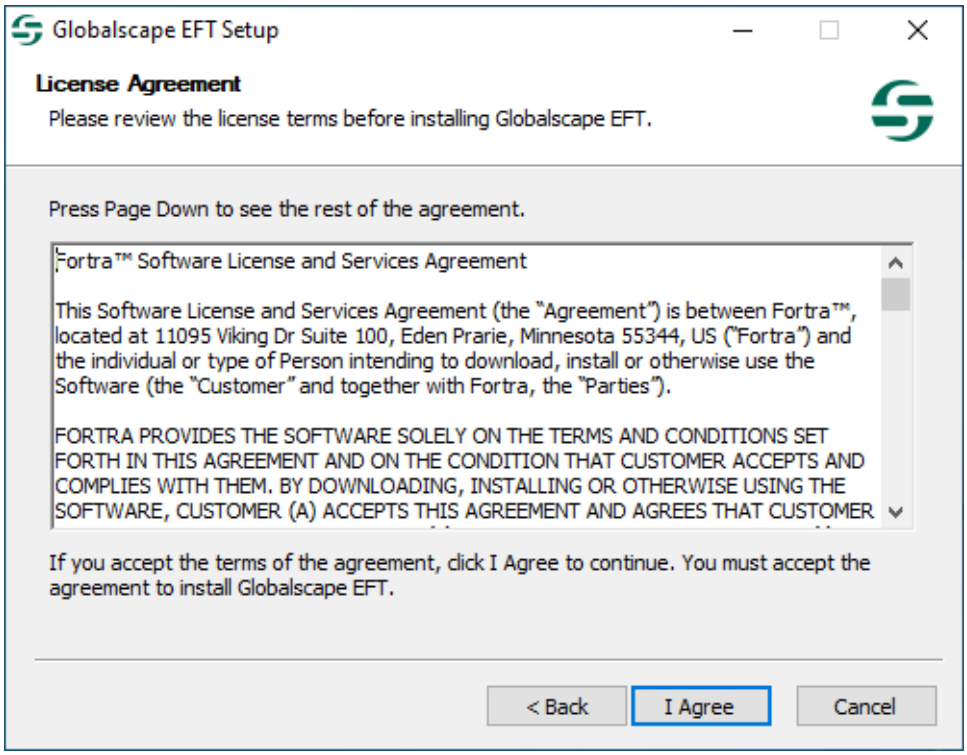
- OS compatibility
- Is the user an administrator?
- DMZ Gateway is ***not*** installed on this server?
- Correct .NET version installed?
- MSI 4.5 installed?
- MSMQ installed? (HA installations only)

To install EFT, administration interface, and all modules except for DMZ Gateway

1. Close all unnecessary applications so that the installer can update system files without rebooting the computer.
2. Start the installer. The **Welcome** page appears.

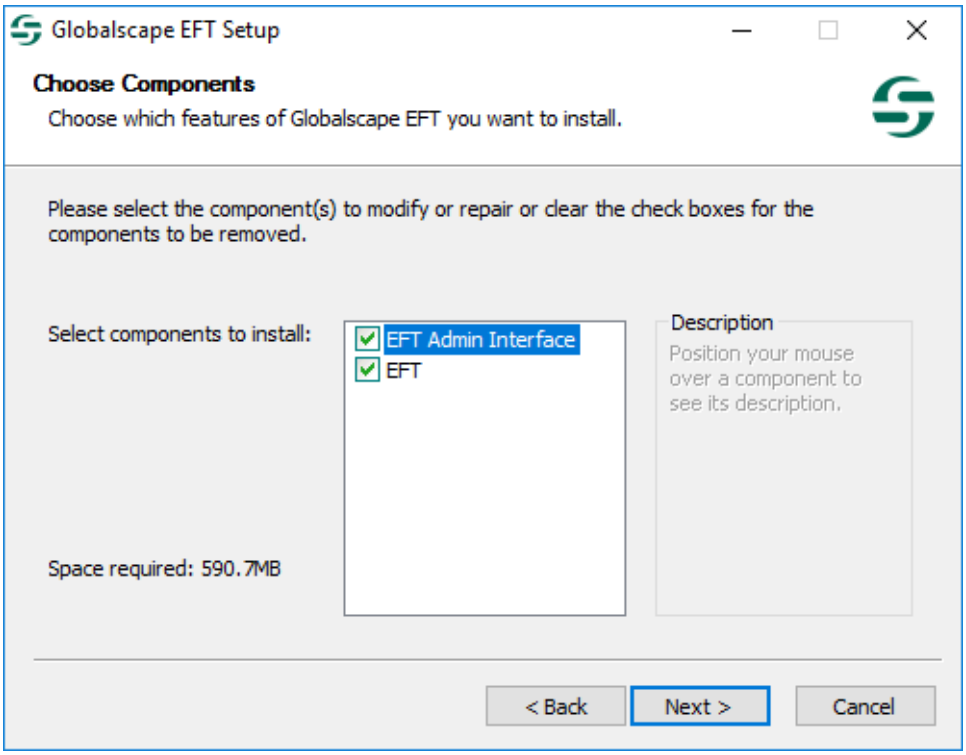


3. Read the **Welcome** page, and then click **Next**. The **License Agreement** page appears.



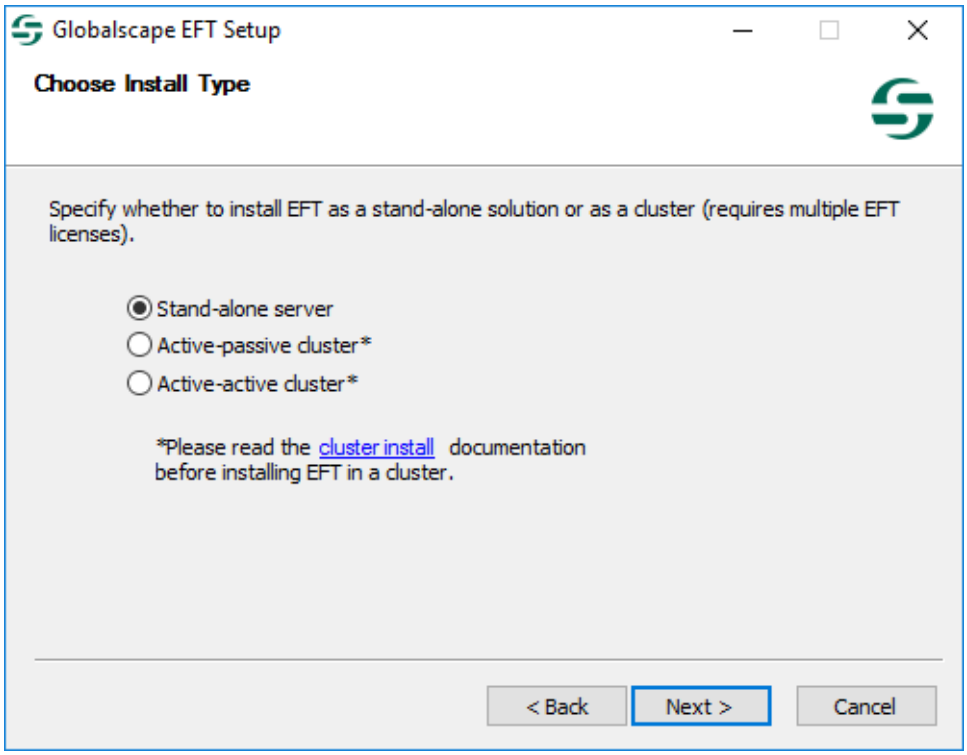
4. Read the license agreement, and then click **I agree** to accept it. Clicking **Cancel** aborts the installation.
    - If you are upgrading or reinstalling, the version detected page appears. Refer to Upgrading the Software for the procedure.

    The **Choose Components** page appears.



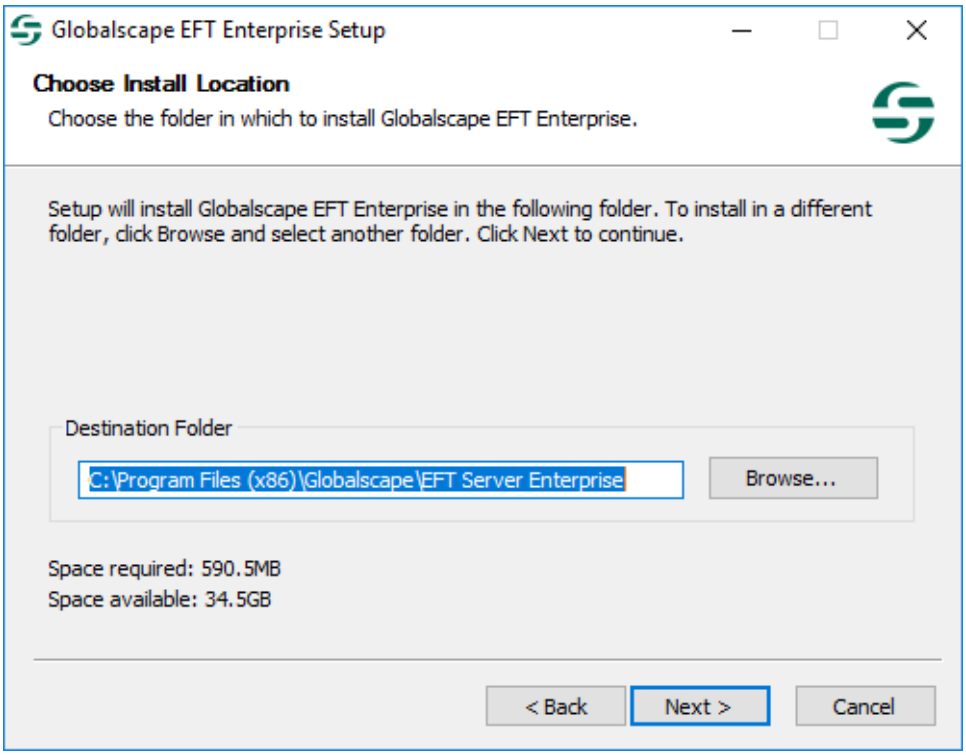
When you install EFT, the **EFT administrator Interface** check box must also be selected. After you have installed EFT and the administration interface on one computer, you can install the administration interface on other computers for remote administration (optional). (To install the administration interface on a remote computer, refer to Installing the administration Interface Remotely.)

5. Click **Next**. The **Installation type** page appears.

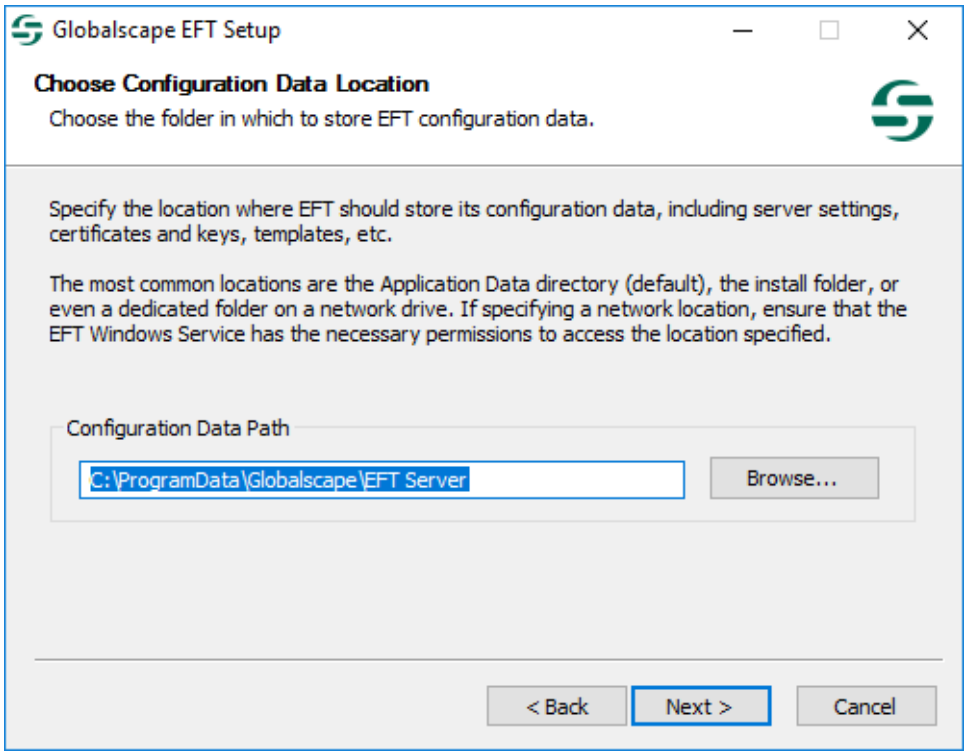


6. Specify the installation type, and then click **Next**.
    - Single server is the default installation type.
    - To install EFT as part of a failover cluster, review the cluster documentation, and then click **Part of a failover cluster**. A message appears cautioning that it is important to read and understand the cluster documentation if you are installing EFT in a cluster.
    - To install EFT as part of a high availability cluster, refer to Installing or Upgrading the Server in a Cluster.

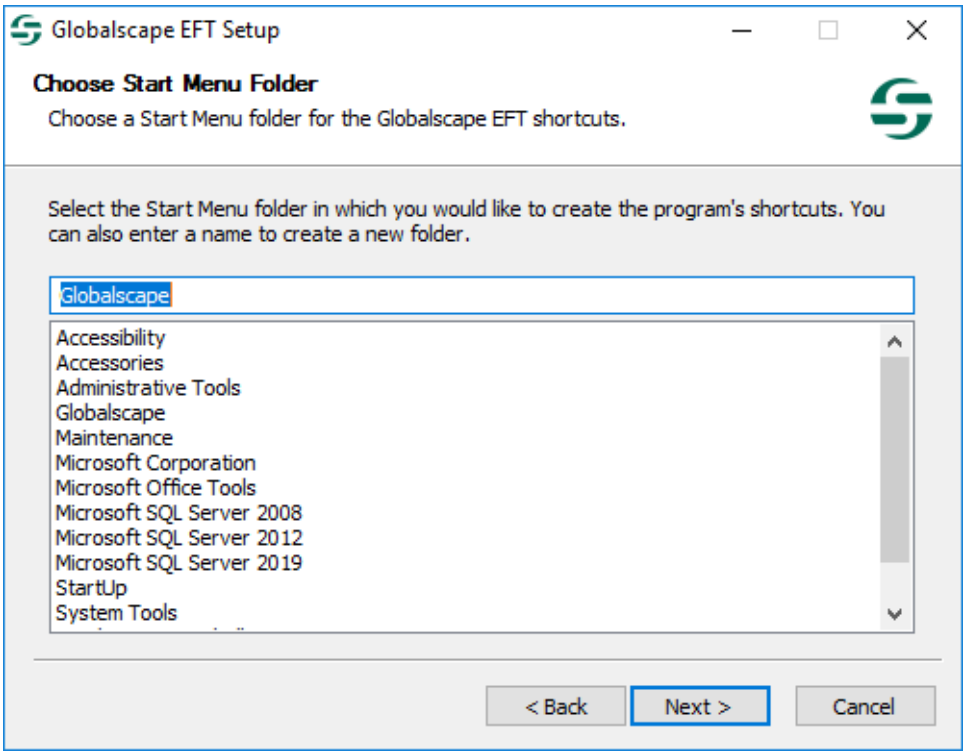
    The **Choose Install Location** page appears.



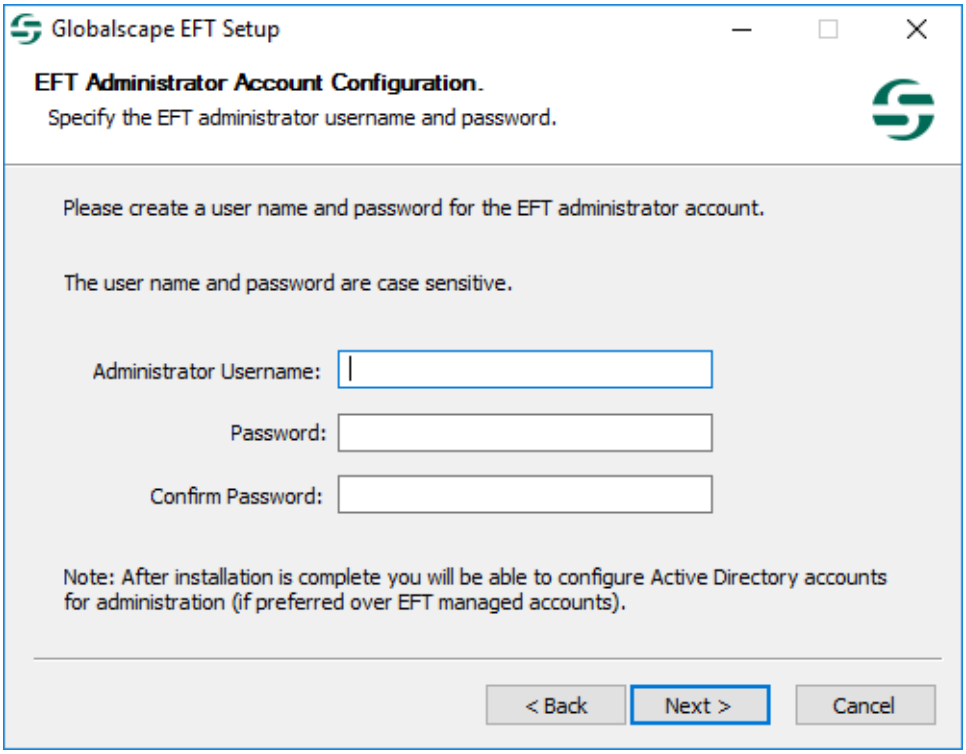
7. The default installation location appears in the **Destination Folder** box. Leave the default or click **Browse** to specify a different folder, and then click **Next**. The **Configuration Data Location** page appears. (The installer does not support Unicode characters in the path. Refer to Unicode Exceptions for details.)



8. Specify where you want to save the EFT configuration settings. For example, if you are installing in a cluster, you should specify a shared resource drive to synchronize settings across nodes. The EFT service must have permission to access the specified path. The default location is **%systemroot%\ProgramData**. The installer does not support Unicode characters in the path. (Refer to Unicode Exceptions for details.)
9. Click **Next**. The **Choose Start Menu Folder** page appears.



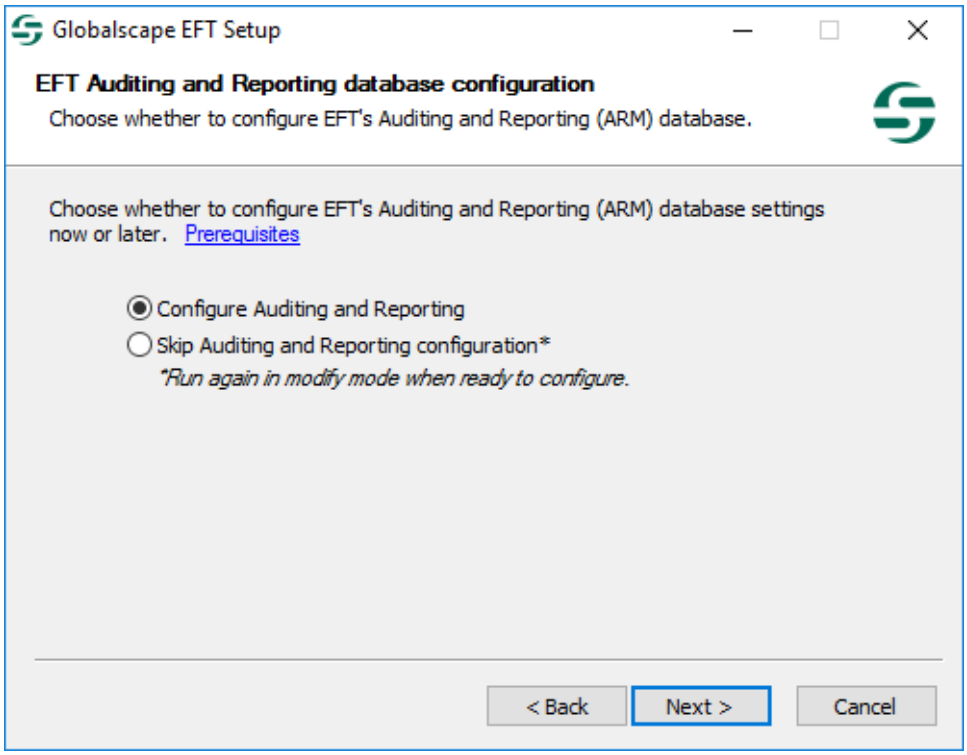
10. Keep the default shortcuts, specify an existing folder, or type a name for a new folder.
11. Click **Next**. The **Administrator Account Configuration** page appears.



12. Create a user name and password for the administrator account for connecting to EFT from the administration interface. Both the username and password are case sensitive. The installer does not support Unicode characters in the username or password.

    > **NOTE:** The administrator account password cannot be blank, can be up to 99 characters, and cannot be any of the following keywords: `password`, `administrator`, `sa`, or `sysadmin`. The administrator account password must also comply with the computer's Windows account password policy (local or domain policy) "Minimum password length" and "Password must meet complexity" items. To view the policy, click **Start > Run**, then type `secpol.msc`. The **Local Security Policy** snap-in appears. Under **Security Settings**, expand **Account Policies**, and then click **Password Policy**. Right click the policy, and then click **Properties** to view the details and to enable, edit, or disable the policy.

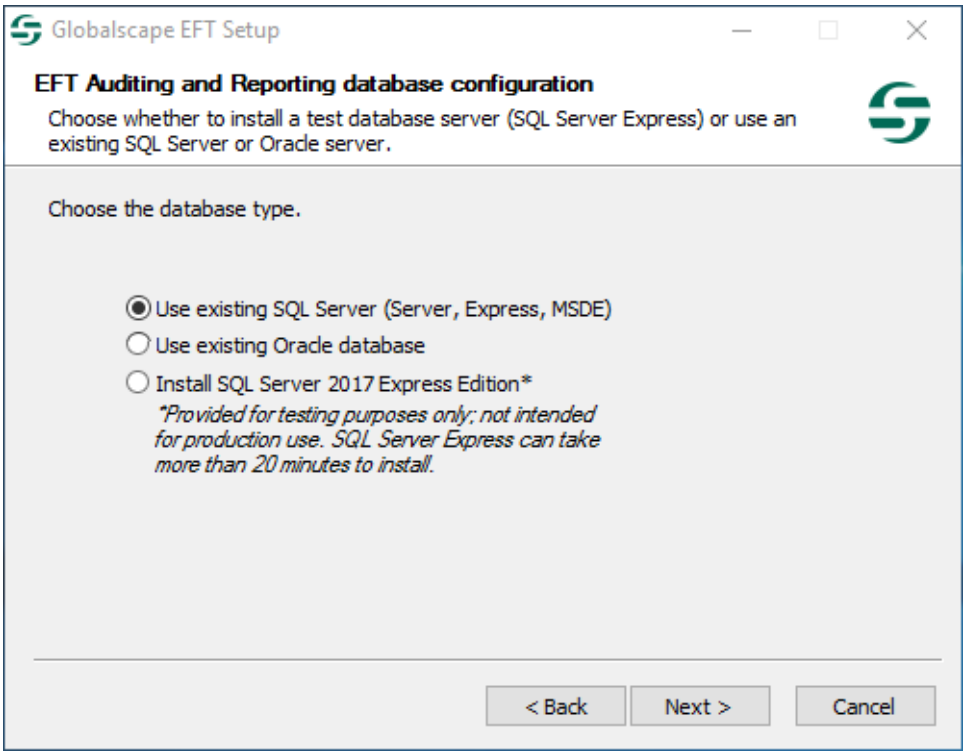
13. Click **Next**. The ARM selection page appears.



- If you want to configure auditing and reporting, click **Next**.
- If you do not want to configure auditing and reporting, click **Skip auditing and reporting configuration**, and then click **Next** to skip the database configuration pages. You can still configure the database later, if you want. (Skip to step 18.)

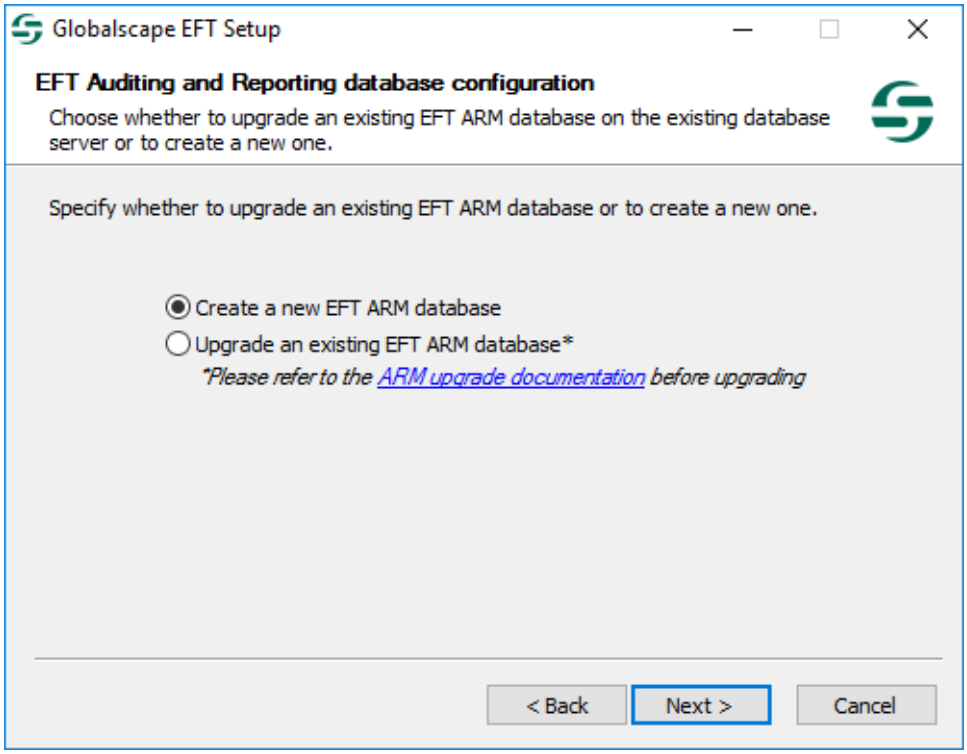
- If you want to manually create the database later, click **Skip auditing and reporting configuration**, and then refer to Manually Creating the ARM Database in SQL Server or Manually Creating the ARM Database in Oracle when you're ready to create the database. (Skip to step 18.)

14. Specify the type of database, SQL Server or Oracle, that EFT is to use. You will need the connection information available to point EFT to the database. If you already have a database to use, then you do not need to install SQL Server Express. (If you are using the "no db" installer, you will not see the "Install SQL Server" option.)

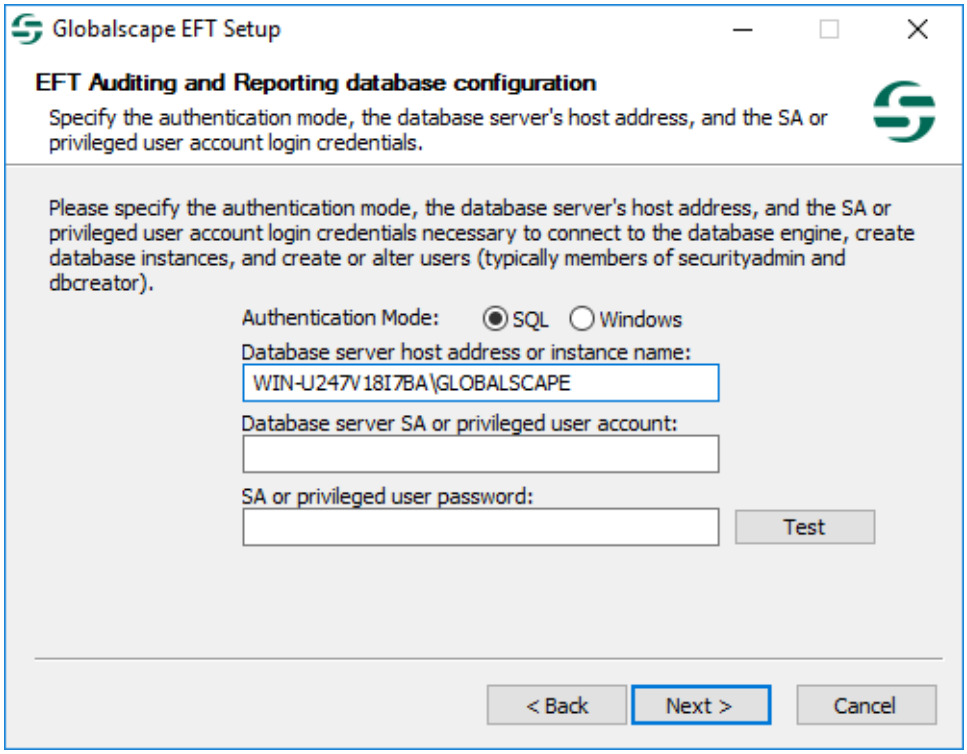


- **Install SQL Server Express**
  - SQL Server Express is provided for use in a trial. It is not intended for production use. During installation, a default system administrator account (the "sa" account) will be created within SQL Server Express. The EFT administrator account password will be used as the password for this "sa" account. Click **OK** to continue SQL Server Express installation and follow prompts to complete SQL Server Express installation.

- **Use existing SQL Server:**



a. Click **Create a new EFT ARM database**. The configuration page appears.



b. Specify **Windows** or **SQL** Authentication. (**Windows** mode allows you to connect through a Microsoft Windows NT or Windows 2000 user account. **SQL** allows you to connect using either Windows Authentication or SQL Server Authentication.)

c. Specify the host address or instance name.

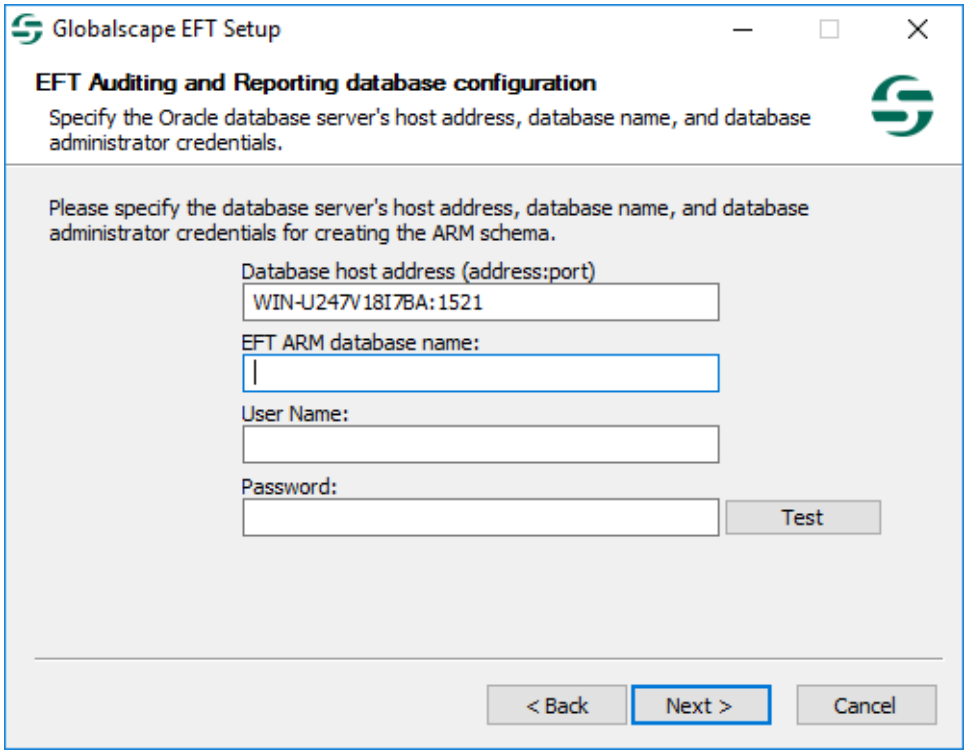
d. Specify the database server SA or privileged user account name (for example, sa).

e. Specify the database server SA or privileged user account password

f. (Optional) Click **Next** or **Test** to test the connection to the database. If the test fails, click **Yes** to verify database connection details or **No** to continue without configuring the database.

- **Use existing Oracle database:**

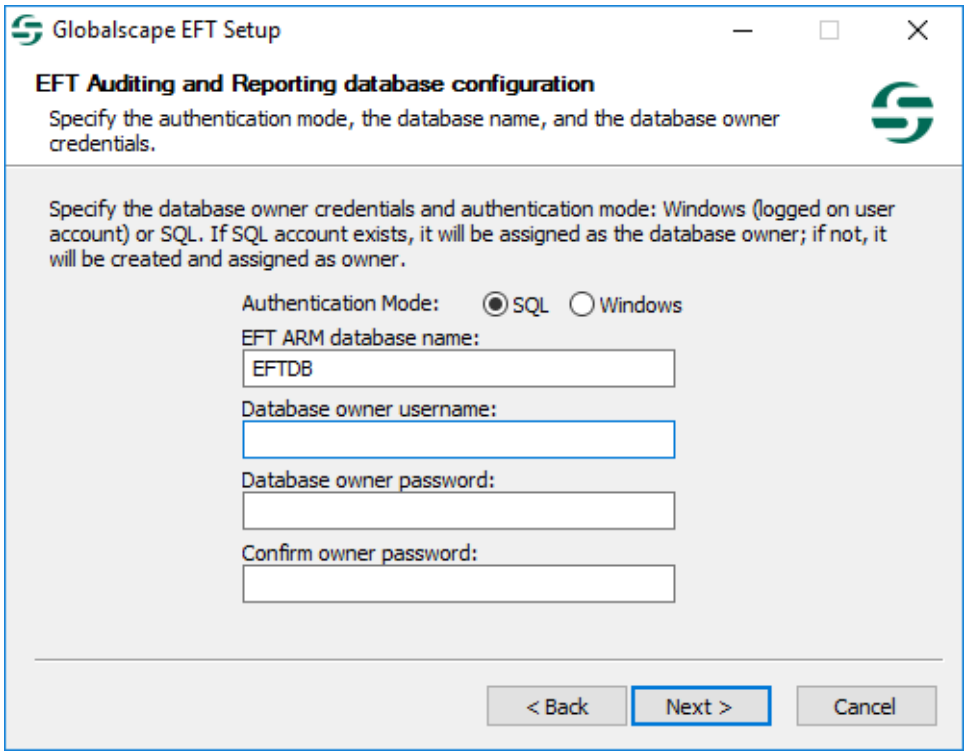
a. Click **Create a new schema**. The configuration page appears.



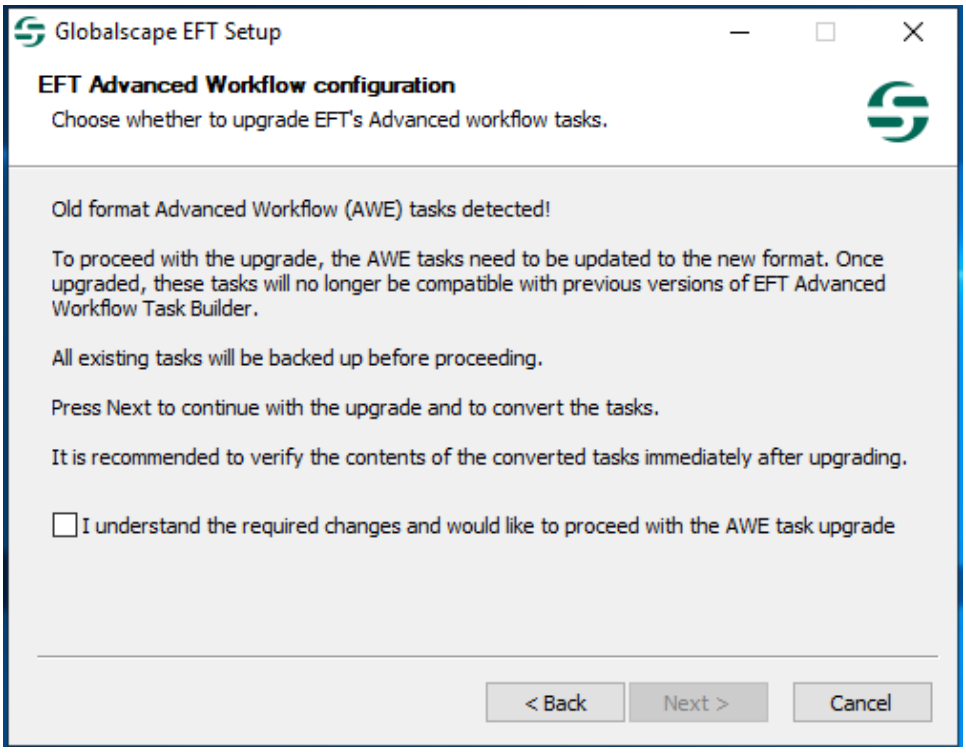
b. Specify the database host address and the EFT-specific schema name and database administrator credentials, and then click **Test** or **Next** to test the connection to the database. (If you have installed Oracle Database Express Edition (XE) for testing/demo purposes, the instance name is XE and the User Name is SYSTEM.)

- If the test fails, click **Back** to verify the configuration or click **Next** and then **Next** again to open the Oracle Technology Network download page and download "Oracle Data Access Components for Windows" driver, if necessary.

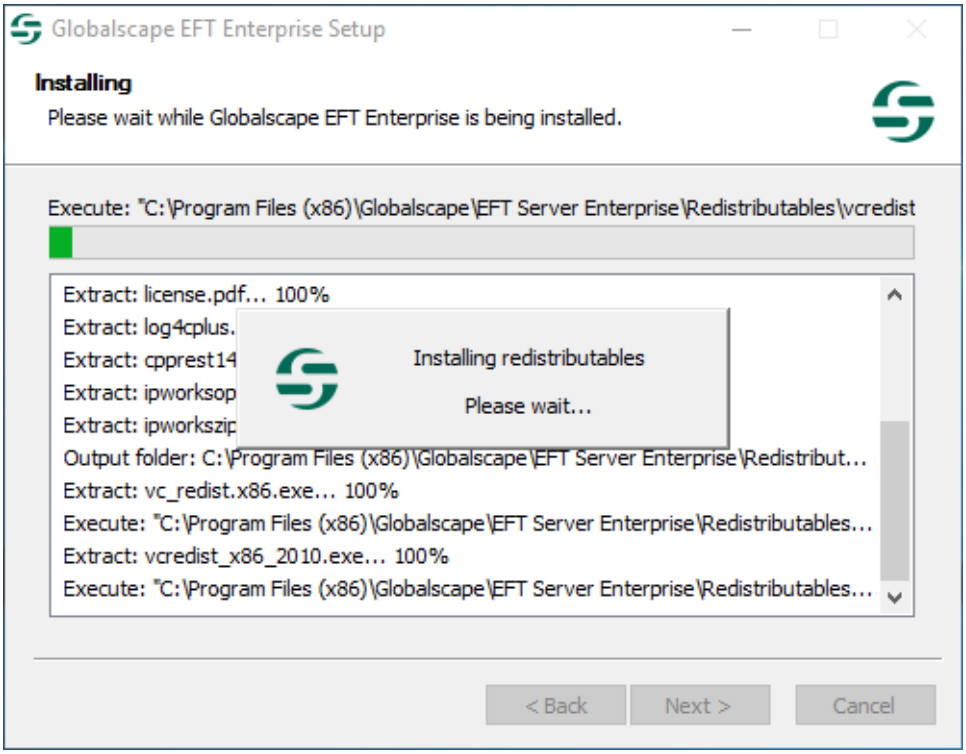
15. After the test is successful, click **Next**. The ARM schema owner credentials page appears.



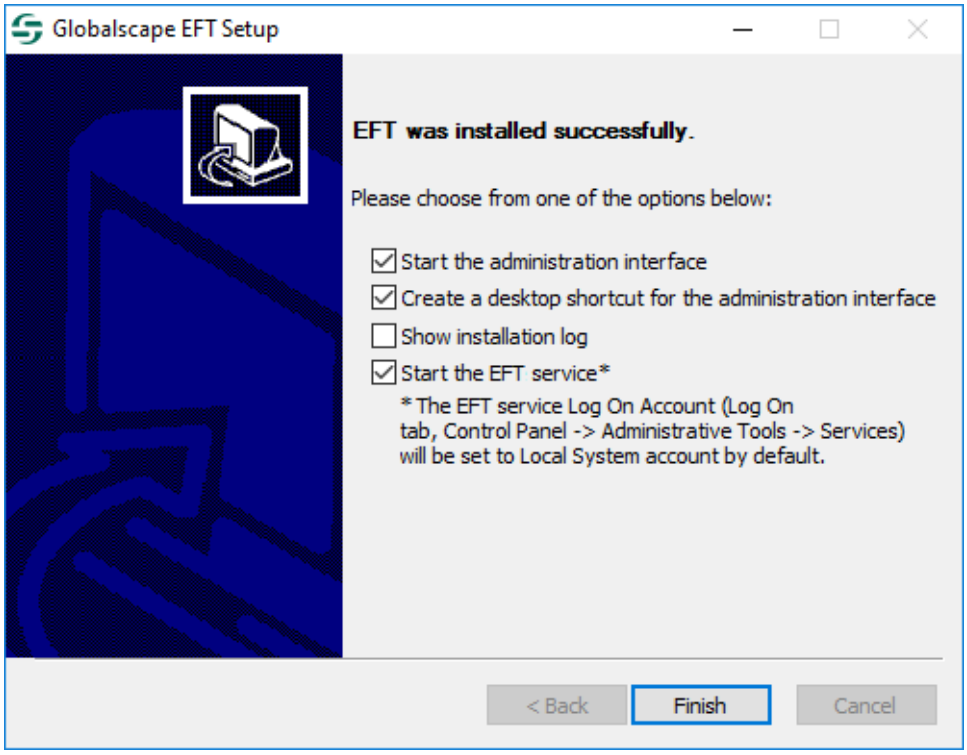
16. Specify or create the ARM schema owner credentials, then click **Next**. The installer creates the tables.
17. If this is not the first installation of EFT, the EFT Advanced Workflow configuration page appears.



The installer installs the options that you've selected, then the **Installation Complete** page appears.



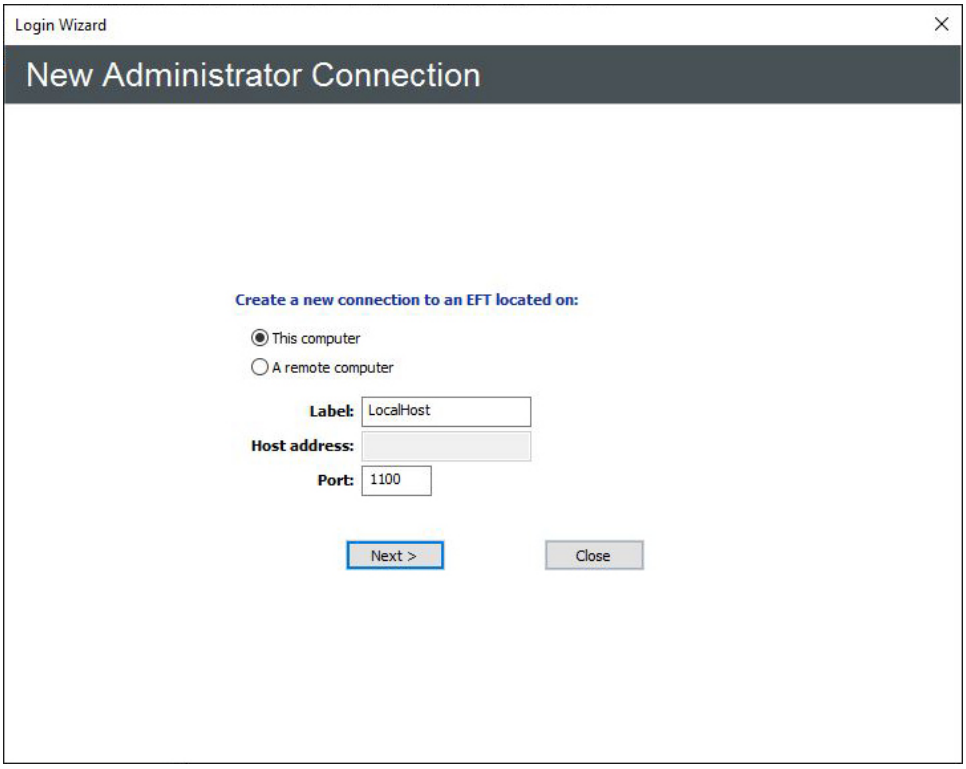
18. Click **Next**. A page appears allowing you to start EFT, create a shortcut to the administration interface on the desktop, open the administration interface, and/or view the EFT version history.



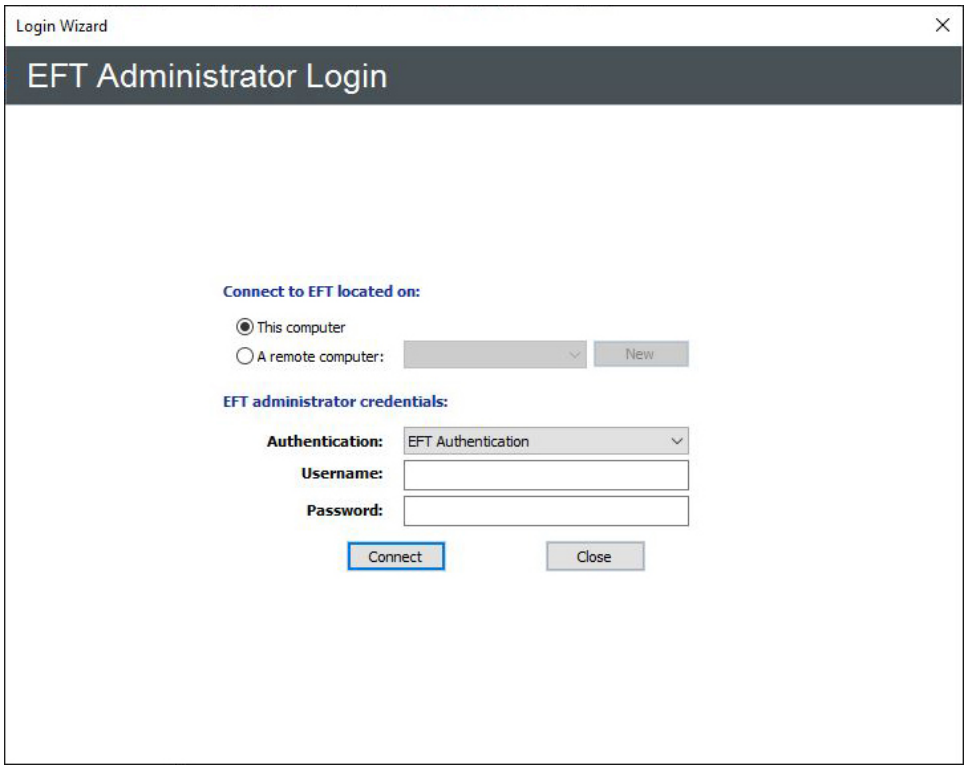
- **Start the administration interface** - If you do not want to open the interface, clear the check box. You can also open the interface from the **Start** menu.
- **Create a desktop shortcut** - An administration interface shortcut is created on the desktop by default. If you do not want to create a shortcut, clear the check box.
- **Show version history** - If you want to read the release notes, select the **Show Version History** check box. If you want to read it later, the file, **notes.txt**, is stored in the EFT installation directory.
- **Show installation log** - If you want to review the installation log now, select the check box. If you want to review it later, it is stored in a temporary folder, **C:\Program Files\GlobalSCAPE\EFT Server\Installer.log**.
- **Start the EFT Server Service** - Clear the check box if you do not want to start the Service yet. Select the check box if you want to start the service when you click **Finish**. The service is configured to start automatically when the computer starts. If you do not want the service to start automatically, you will have to configure it in Windows to start manually. The EFT service Log On Account is set to "Local System account."

> **IMPORTANT:** After it is installed, EFT has access to local folders and files. To run EFT as a service with permissions to the network and mapped drives, you must create an NT account, assign the EFT server service to the account, and log EFT on as a service. Security policies should allow user accounts to log in locally. You can edit the settings for that account as described in Windows Account for the EFT Service.

19. Click **Finish**. If the administration interface check box was selected and the EFT service was started, the **Login Wizard** appears.



20. With **This computer** selected, click **Next**. (You must create a local connection first. Then later you can create remote connections, if you want.) The **EFT Server Administrator Login** page appears.



21. Click in the **Authentication** box and specify the type of authentication to use for this login. Future connections will default to the authentication type that you specify during this initial login, but you can choose a different type. Authentication types include:
    - **EFT Authentication** - Choose this option to log in with an EFT-specified administrator account, such as the one you created during installation.
    - **Integrated Windows Authentication** - Choose this option to log in with an Active Directory or local Windows account.
    - **Windows NET logon** - Choose this option to log in with a local Windows account.
22. In the **Username** and **Password** boxes, provide the login credentials that you created during installation, and then click **Connect**. The **Welcome** page appears. Since you have not yet activated the software, the "Free Trial" reminders appear. After you activate, you will not see the reminder prompt.

Next Steps:

- If you are evaluating the software or just do not want to activate yet, click **Start Trial**, then follow the prompts to Configure EFT.
- If you want to restore EFT configuration from a backup, refer to Backing Up or Restoring Server Configuration.

- If you have purchased a license, click **Activate Now**, then follow the procedures for activating the software.
- Set Windows System Services (You do not have to activate the software before you do this. All features and modules are available during the trial.)

The EFT service runs under a user account, which must have full administrative rights to the folder in which you install EFT. With administrative rights, the EFT service can save all of your settings. **If the service does not have administrative rights, you will lose settings and user accounts whenever you restart the EFT service and you will need to reset permissions on the computer on which the EFT service is running.**

If you are using Microsoft IIS on the same computer as EFT, refer to Running EFT and Microsoft IIS on the Same Computer.

Installing the Advanced Workflow Module

The Advanced Workflow module (AWM) is installed with Fortra's EFT Server and is included in the 15-day trial of EFT, during which you can create, edit, and execute powerful workflows using the EFT Event Rule system. After the trial has expired, you can still create new workflows and edit existing ones; however, after the trial expires, you will no longer be able to execute the workflows with EFT Event Rules. After you purchase and activate a serial number for the module, you will once again be able to use the workflows in Event Rules. The workflows are not deleted until you delete them.

EFT subscription licenses have a week-long grace period in which the module will continue to function after being expired. Automate does not have this week-long grace period. When the Advanced Workflow module (AWM) expires from a subscription license and enters its grace period, the Automate side will expire with no grace period; the AWM module will stop functioning in its grace period.

IMPORTANT: If you are upgrading from a version of EFT before v8.2, please read Upgrading the Advanced Workflow Module. There are numerous items that you need to know BEFORE you upgrade, such as the conversion of Advanced Workflow AML files.

Installing the Administration Interface Remotely

When you install EFT, you also install the administration interface. After you have installed EFT and the administration interface on one computer, you can also install the administration interface on remote desktops. You do not need a separate license for each installation of the administration interface.

- The necessary DLL files are also installed and registered when you install the interface remotely, in case you plan to use the COM API remotely.
- For help using the COM API, refer to the online help for the COM API.

This procedure is for installing only the administration interface on a computer that is remote from EFT.

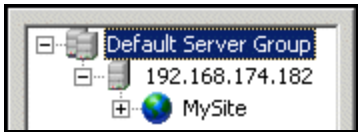
To install EFT and the administration interface on the same computer, refer to Installing the Server, Interface, and Modules.

To install the administration interface remotely

1. Close all unnecessary applications so that the installer can update system files without rebooting the computer.
2. Start the installer, and then click **Next**.
3. After installation components are loaded, the **Welcome** page appears.
4. Read the **Welcome** page, and then click **Next**. The **License Agreement** page appears.
5. Read the license agreement, and then click **I agree** to accept it. (Clicking **Cancel** aborts the installation.) The **Choose Components** page appears.
6. To install **only** the administration Interface, clear the **EFT Server** check box, and then click **Next**. The **Choose Install Location** page appears.
7. The default installation location appears in the **Destination Folder** box. Leave the default or click **Browse** to specify a different folder, and then click **Next**. The **Configuration data path** page appears.
8. Leave the default or click **Browse** to specify a different folder, and then click **Next**. The **Choose Start Menu Folder** page appears.
9. Keep the default shortcuts, specify an existing folder, or type a name for a new folder, and then click **Next**. The administration interface installs.
10. When installation is complete, click **Next**.
    - Leave the **Start the administration interface** check box selected so that you can configure a connection to the remote EFT next.

- If you want to create a desktop shortcut for the administration interface leave the **Create a desktop shortcut** check box selected.
- If you want to review the version history in your default text editor, select the **Show version history** check box.
- If you want to display the installation log, select the **Show installation log** check box.

11. Click **Finish**. The administration interface appears and the **EFT Server administrator Login** wizard appears.
12. Click **A remote computer**, then ensure the remote EFT's IP address appears in the drop-down list. If the remote EFT's IP address does not appear in the list, ensure you can connect to it from this computer and that remote administration is allowed on EFT. Otherwise, click **New** and configure the remote connection.
    - In the **Label** box, provide a name for the EFT to which you want to connect. You can call it anything you want; it has nothing to do with EFT's computer name. This name will appear in logs and reports.
    - In the **Host address** box, type the IP address of EFT computer.
    - In the **Port** box, type the port number used by EFT for remote connections.
13. Click **Next**. The **EFT Administrator Login** page appears.
14. Click the **Authentication** box and specify the type of authentication to use for this login. Future connections will default to the authentication type that you specify during this initial login, but you can choose a different type. Authentication types include:
    - **EFT Authentication** - Choose this option to log in with an EFT-specified administrator account.
    - **Integrated Windows Authentication** - Choose this option to log in with an Active Directory or local Windows account.
    - **Windows NET logon** - Choose this option to log in with a local Windows account.
15. In the **Username** and **Password** boxes, provide the login credentials that you created during installation, and then click **Connect**. The **Welcome** page appears.
    - If connection was not successful, verify the IP address and port on which EFT listens for connections, that remote administration is enabled on the server, and that SSL is properly configured, if used, on EFT.
    - If connection was successful, the remote Server appears in the tree.



Active-Active HA Cluster—Installing or Upgrading the Server

Refer to the Globalscape Knowledgebase article #11271 for information about installing or upgrading the server in an active-active, high availability (HA) configuration.

See also Upgrade HA Nodes with Zero Downtime.

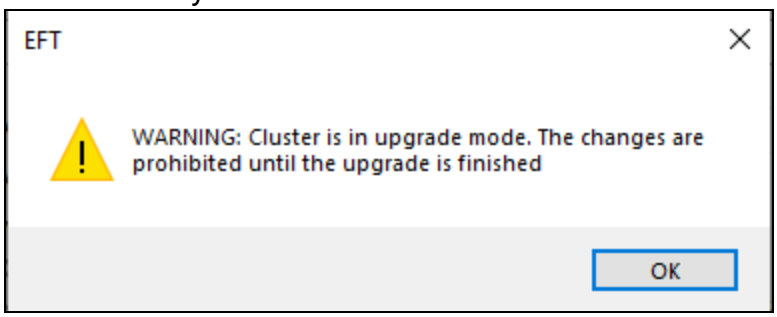
Active-Passive Failover Clustering--Installing or Upgrading

Refer to Globalscape Knowledgebase article #11146 for details of installing or upgrading the server in an active-passive failover configuration.

Upgrade HA Nodes with Zero Downtime

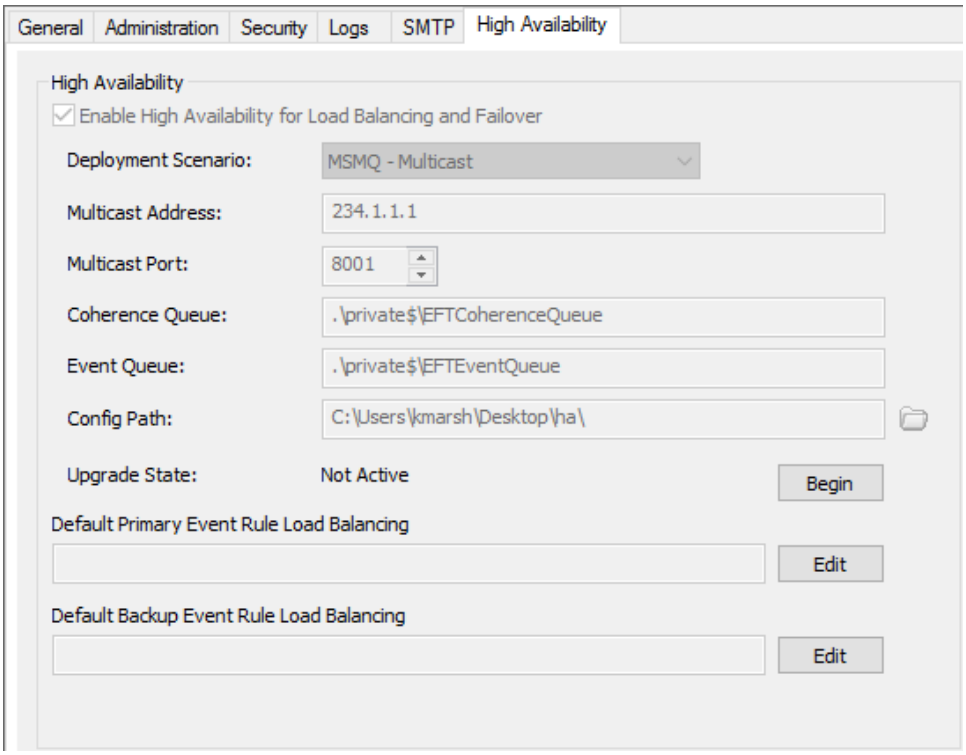
EFT administrators can upgrade their HA nodes with "zero downtime," meaning you can upgrade a cluster without stopping all nodes at the same time.

NOTE: The warning prompt "Cluster is in upgrade mode" is thrown when a user makes a configuration change and then refreshes the EFT administration interface while the server is in "read only" mode.



The Server > HA tab is used to manage the cluster upgrade state

- The button will be displayed as **Begin** when upgrades have not been started.



- The button will be displayed as **End** when upgrades have been completed. Administrators can execute the End state at any point, but nodes that have not been upgraded will fail to start until they are upgraded.
- When enabling the upgrade, EFT administrators will be prompted with a warning that the transition and change cannot be undone.
- The warning prompt should reference details to review documentation.

To upgrade all of the HA nodes at that same time—without stopping any nodes

In the EFT administration interface, on the **Server > High Availability** tab, you must manually put the cluster into the **Upgrade** state, upgrade each node one by one, then after the upgrade has completed successfully, manually transition the cluster back to **Normal** state.

- **Upgrade State**. Allows simultaneous updates to nodes that have an **Outdated** version.

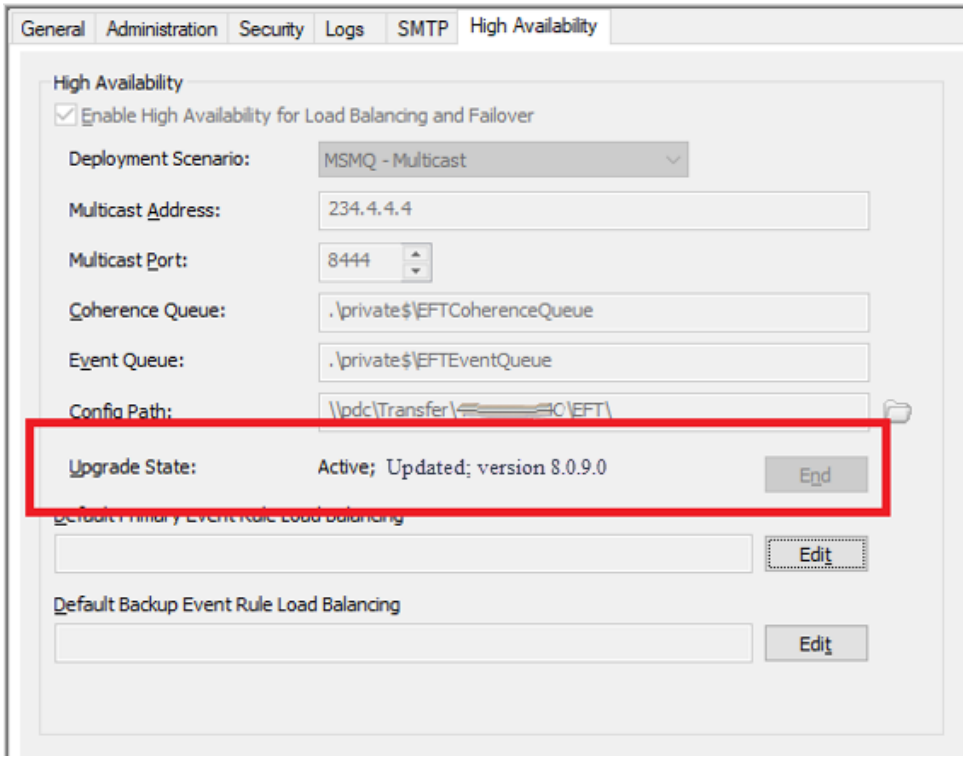
Upgrade state limitations:

- Backup/Restore feature is prohibited
- No configuration changes are allowed during the Upgrade state, except moving the cluster back into the Normal state

- **Normal State**. Requires all nodes have the same version. Upon transition to Normal, the Upgrade State will display “Not Active”

  Normal state limitations:

  - Loading old nodes is prohibited. EFT will not start when the nodes are not upgraded.
  - You will be unable to transition from Upgrade to Normal when an upgrade has not been completed. This only affects nodes that have not been upgraded.
  - EFT will prevent COM API from transitioning from Upgrade to Normal state. A proper response code/error will be presented
  - EFT will prevent REST API from transitioning EFT from Upgrade to Normal state. A proper response code/error will be presented.
  - When upgrade has ended (at the global level or a node that was upgraded), for any nodes that were not upgraded, the EFT Server Service will stop and fail to start until they are upgraded.
  - Transition state from Upgrade to Normal are global, which affects all nodes within the cluster, so administrators should only end upgrades after all nodes have been upgraded.



Upon successful HA upgrade to a new version, the **High Availability** tab's **Upgrade State** will display “Active; Updated; x.x.x.x”, where x.x.x.x is the newer version of EFT (the version to which EFT was upgraded).

Normal state to Upgrade state

- All nodes are Outdated. Admin logins to any of the nodes and enter the cluster into the "Upgrade" state (with GUI/COM/REST).
    - EFT admins shall be able to transition from Normal to the Upgrade state via our EFT administrator interface High Availability tab.
    - EFT admins shall be able to transition from Normal to the Upgrade state via COM. Appropriate error message(s) will be provided if enabling Upgrade state on any node when the cluster is already configured for Upgrade.
    - EFT admins shall be able to transition from Normal to the Upgrade state via REST API. Appropriate error message(s) will be provided if enabling Upgrade state on any node when the cluster is already configured for Upgrade.
    - The ability to start the Upgrade state is a global setting; once set at any node, all nodes will report the same state.
    - Upgrade state should be used ONLY when upgrading to a new version of EFT and not when an EFT administrator forgets to upgrade a node in the cluster from a previous upgrade.
- Once configured for Upgrade, the cluster is in Upgrade state, and you can upgrade each node one by one.
- Outdated nodes write audit data to local *.sql files only; Each node will have their own local *.sql file.
- Updated nodes write into ARM database; If no SQL schema changes exist, there is a post process in the Normal state that will migrate the data from the *.sql file into the ARM database.
- Uses Web folder appropriate to node's version.
    - The nodes' version should match the same version.
    - Shadowfax folder will be copied from \\<HASharedPath>\Web to \\<HASharedPath>\UpgradeFromx.x.xx (where x.x.x.x is the older EFT version); This …\UpgradeFromx.x.x.x will be used for Outdated nodes.
    - Shadowfax folder \\<HASharedPath>\Web will be used for Updated nodes and will be updated with the first upgraded node.
- Outdated nodes allow admins to login in read-only mode. EFT administrators will not be able to make any configuration changes to EFT.
- Updated nodes allow admins to login in read-only mode AND move the cluster to Normal state.

- Configuration changes write in deltas only (there could be only internode mx messages).
    - Changes are not saved into the configuration files, ServerConfig.db and SiteConfigXX.db files. (Part of the advanced property HAFullConfigDumpIntervalMins.)
    - Internode mx messages are communications between EFT nodes (no QA validation).
- Unknown internode messages are ignored; These are internal nodes for Outdated nodes that may not know about freshly added internode messages in Updated nodes.
- Cluster Management subsystem doesn't send any messages and ignores all received messages.
- ERLB subsystem doesn't delegate to run any event rules - all rules are processed with Master node only. Client connections to the server will be processed without any restrictions during the Upgrade state.

Upgrade state to Normal state

- All nodes are Updated. Admin will need to log into any node and end the upgrade which will switch it back to Normal state (with GUI/COM/REST)
    - EFT admins shall be able to transition from Upgrade to Normal state via our EFT Admin UI
    - EFT admins shall be able to transition from Upgrade to Normal state via COM; Appropriate error message(s) will be provided if enabling Normal state on any node when the cluster is already configured for Normal
    - EFT admins shall be able to transition from Upgrade to Normal state via REST API; Appropriate error message(s) will be provided if enabling Upgrade state on any node when the cluster is already configured for Upgrade
    - The ability to end the upgrade state is a global setting; once set at any node, all nodes will report the same state. Nodes that were not upgraded and the upgrade state has ended, will fail to start.
    - Nodes that were not upgraded after the Upgrade state ends, now Normal, can be upgraded later and will be visible and continue to work in the cluster
- Normal state limitations: Loading old nodes is prohibited. EFT will not start when the nodes are not upgraded

COM has several methods to manage cluster upgrade state

- Enum: HAUpgradeNodeState
    - NotInUpgrade = 0,
    - OldNode,
    - NewNode
- Method: ICIServer::GetHAUpgradeNodeState; Retrieves node upgrade state
- REST has two endpoints to manage cluster upgrade state:
    - Get HA node upgrade state; GET /server/ha/upgrade
    - Changes entire HA cluster state to the upgrade or normal state: POST /server/ha/upgrade

Upgrading EFT and Modules

For a successful upgrade, it is important to understand the changes between your current version and the version you are upgrading to. In some cases, you will need to do a "stepped" upgrade, as you can't upgrade directly from some older versions to the current version.

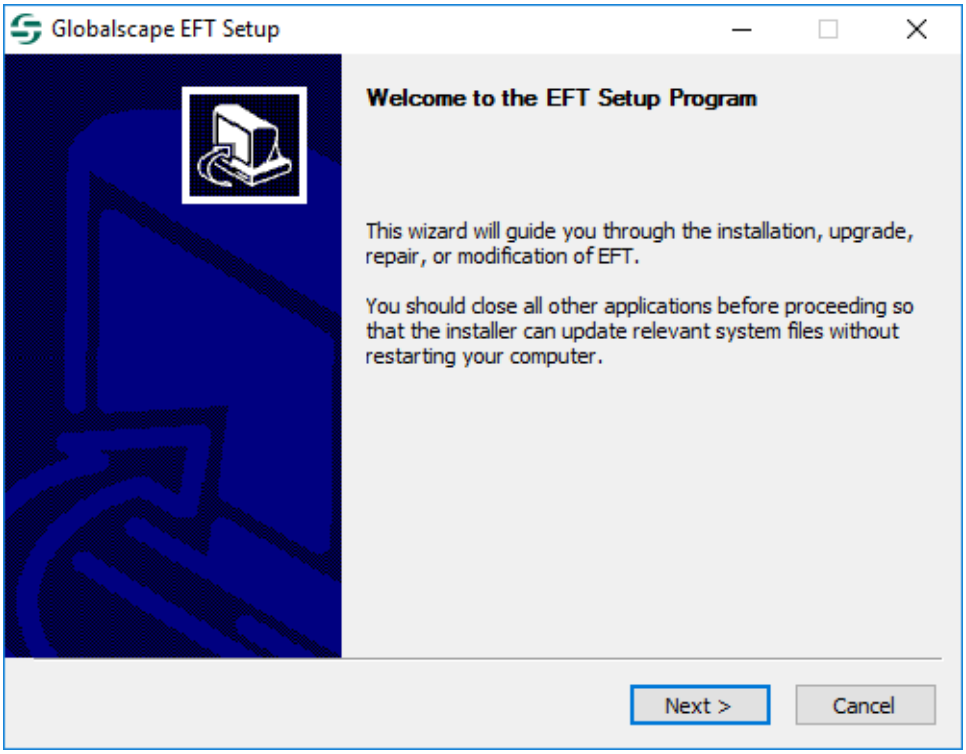
Upgrades to EFT v8.2 can be made from EFT v8.1.0.16, 8.0.7.4, 8.0.6.18 and 8.0.5.17. The installer will prevent you from upgrading from versions 8.0.4.x and below.

IMPORTANT: The Advanced Workflow Engine (AWE), based on Automate Desktop v10, is now the Advanced Workflows Module, based on Automate 2024. ***BEFORE*** upgrading EFT and its modules, refer to Upgrading the Advanced Workflow Module for details of issues to be aware of, such as converting AML files.

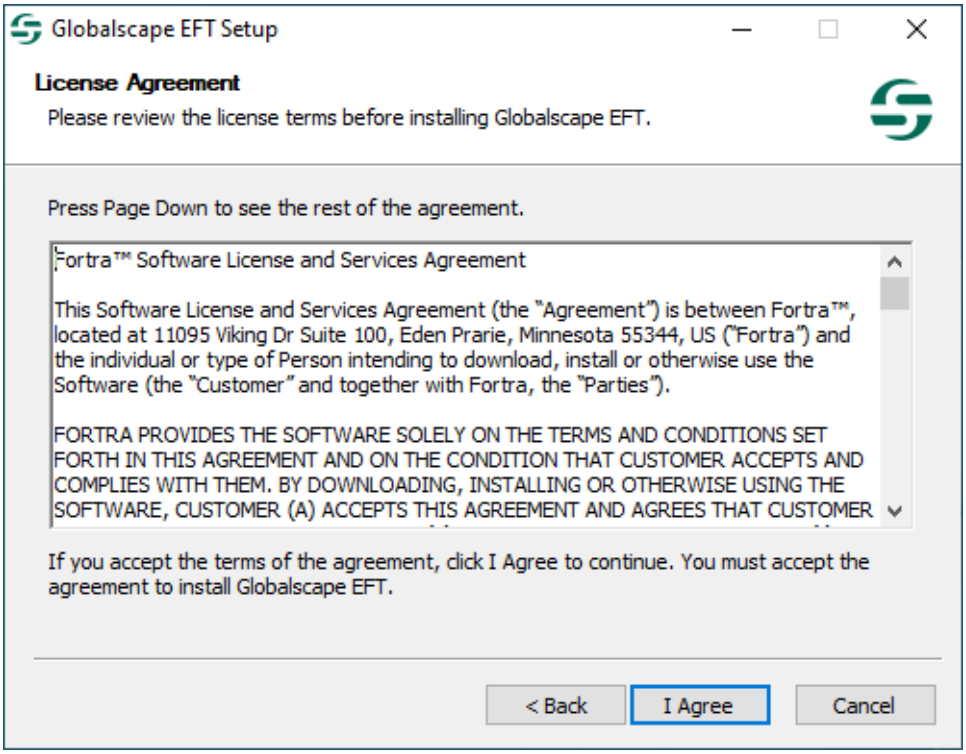
- If you are upgrading a cluster node, refer to Active-Passive Failover Clustering--Installing or Upgrading or Active-Active HA Cluster - Installing or Upgrading the Server .
- Upgrade an HA Cluster with Zero Downtime

To upgrade EFT and its modules

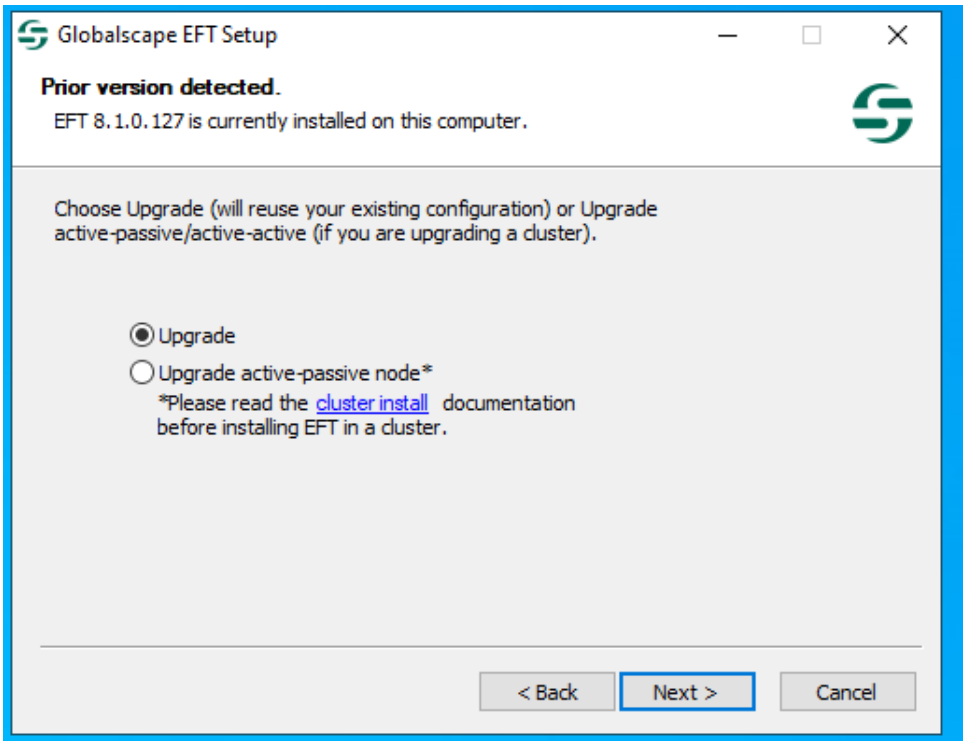
1. Close all unnecessary applications so that the installer can update system files without rebooting the computer.
2. Start the installer. The **Welcome** page appears.



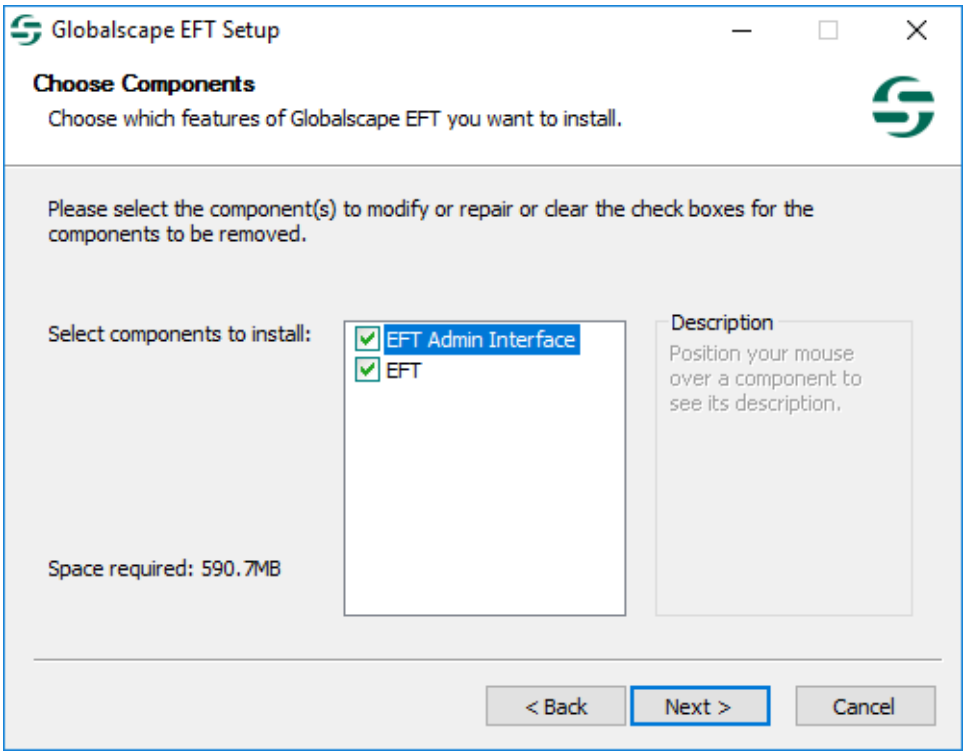
3. Read the **Welcome** page, and then click **Next**. The **License Agreement** page appears.



4. Read the license agreement, and then click **I agree** to accept it. Clicking **Cancel** aborts the installation.
    - If you are upgrading or reinstalling, the version detected page appears.



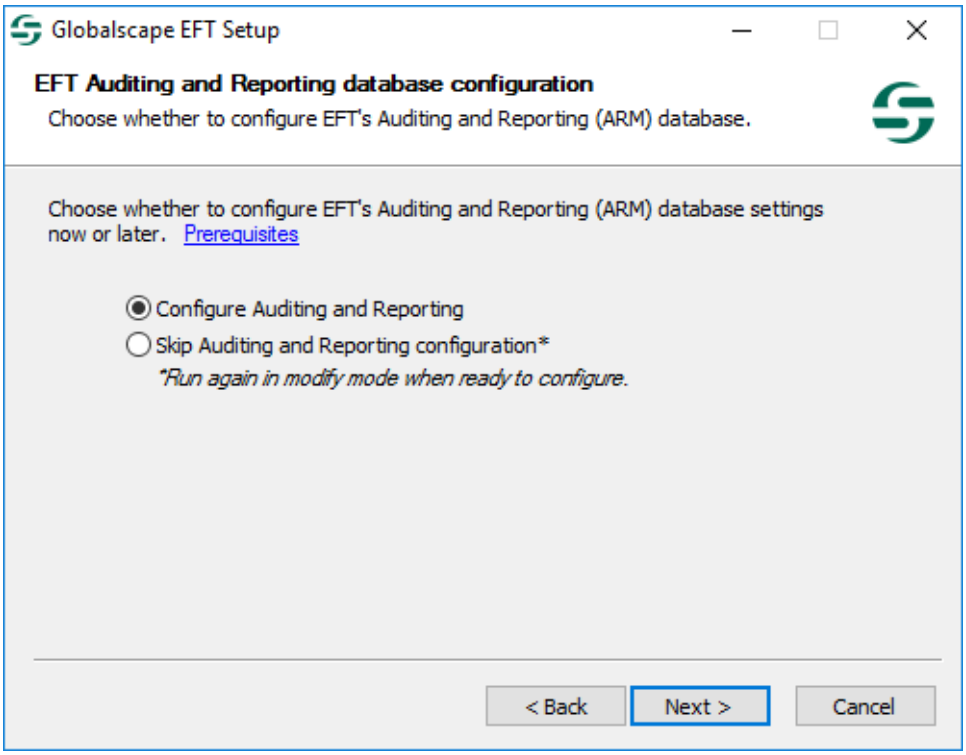
5. Click **Upgrade** then click **Next**. The **Choose Components** page appears.



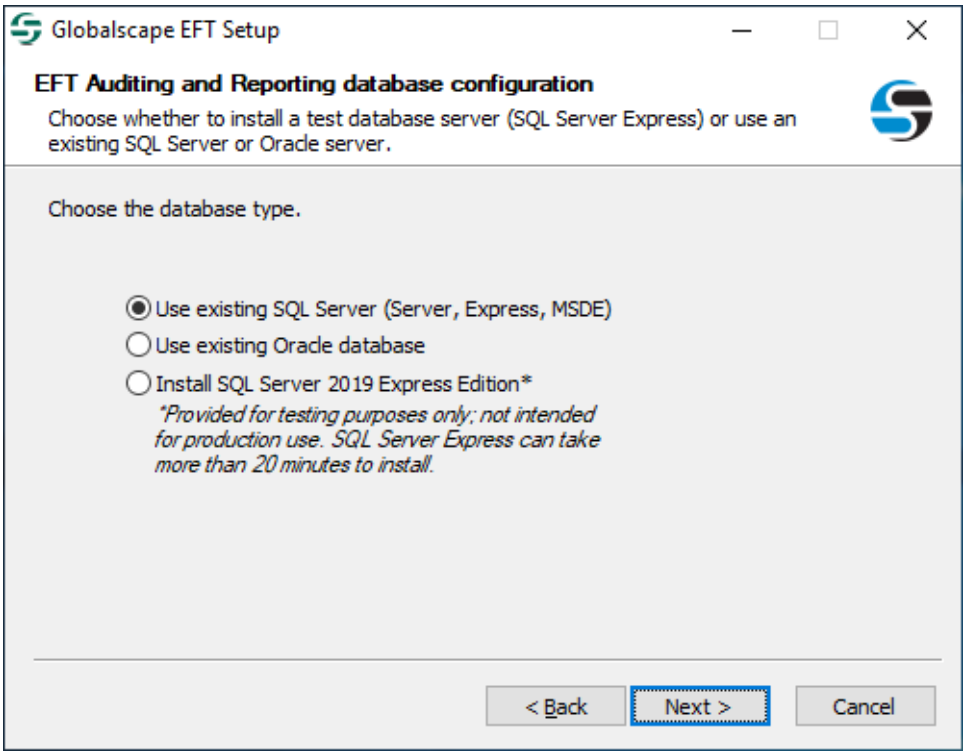
When you install EFT, the **EFT administrator Interface** check box must also be selected. After you have installed EFT and the administration interface on one

computer, you can install the administration interface on other computers for remote administration. (To install the administration interface on a remote computer, refer to Installing the administration Interface Remotely.)

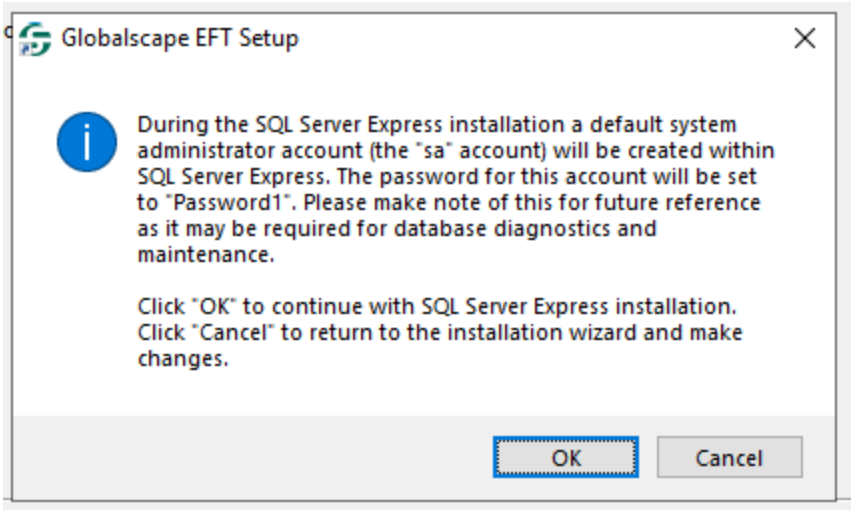
6. Click **Next**. The ARM selection page appears.



   - If you want to configure auditing and reporting, click **Next**.
   - If you do not want to configure auditing and reporting, click **Skip auditing and reporting configuration**, and then click **Next** to skip the database configuration pages. You can still configure the database later, if you want.
   - If you want to manually create the database later, click **Skip auditing and reporting configuration**, and then refer to Manually Creating the ARM Database in SQL Server or Manually Creating the ARM Database in Oracle when you're ready to create the database.
7. Specify the type of database, SQL Server or Oracle, that EFT is to use. You will need the connection information available to point EFT to the database. If you already have a database to use, then you do not need to install SQL Server Express. (If you are using the "no db" installer, you will not see the "Install SQL Server" option.)

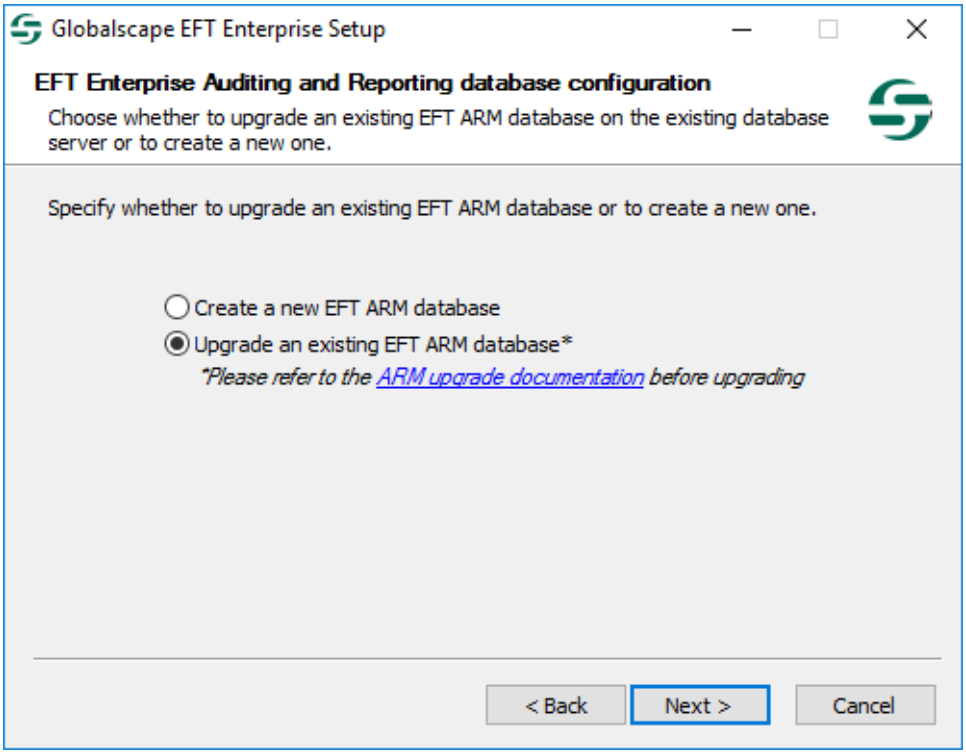


- **Install SQL Server Express**
  - SQL Server Express is provided for use in a trial. It is not intended for production use. During installation, a default system administrator account (the "sa" account) will be created within SQL Server Express. The password is set to Password1.

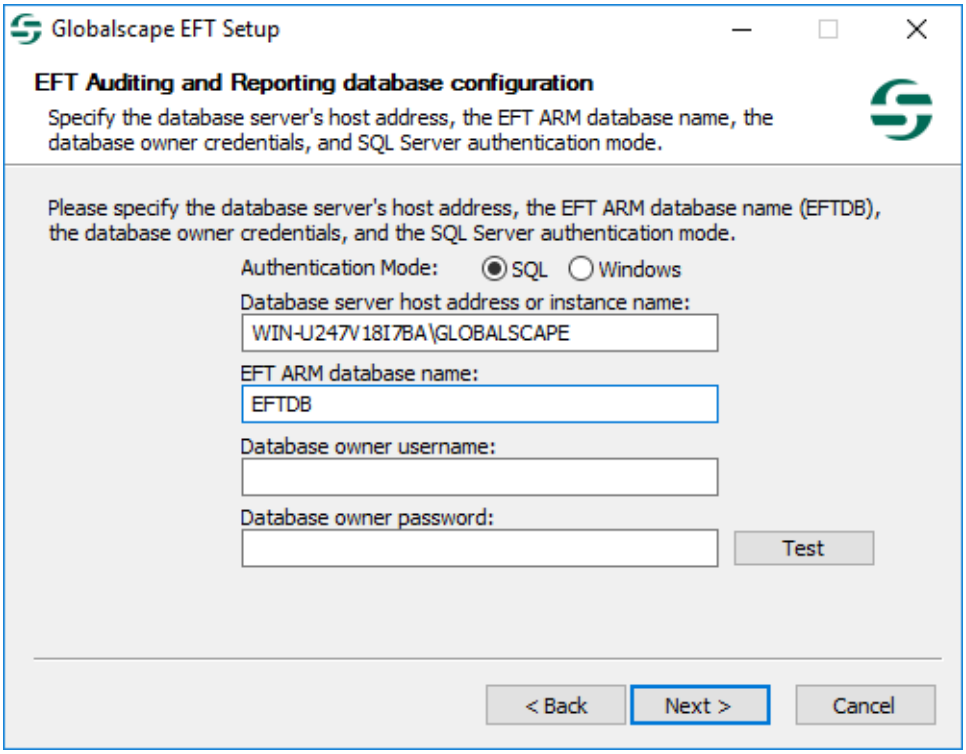


  - Click **OK** to continue SQL Server Express installation and follow prompts to complete SQL Server Express installation.
  - Once the SQL Server Express installation begins, you can't cancel it. The only way to stop it is to reboot the computer.

- **Use existing SQL Server**:



a. Click **Use an existing EFT ARM database**. The configuration page appears.



b. Specify **Windows** or **SQL** Authentication. (**Windows** mode allows you to connect through a Microsoft Windows user account. **SQL** allows you to connect using either Windows Authentication or SQL Server Authentication.)

c. Specify the host address or instance name.

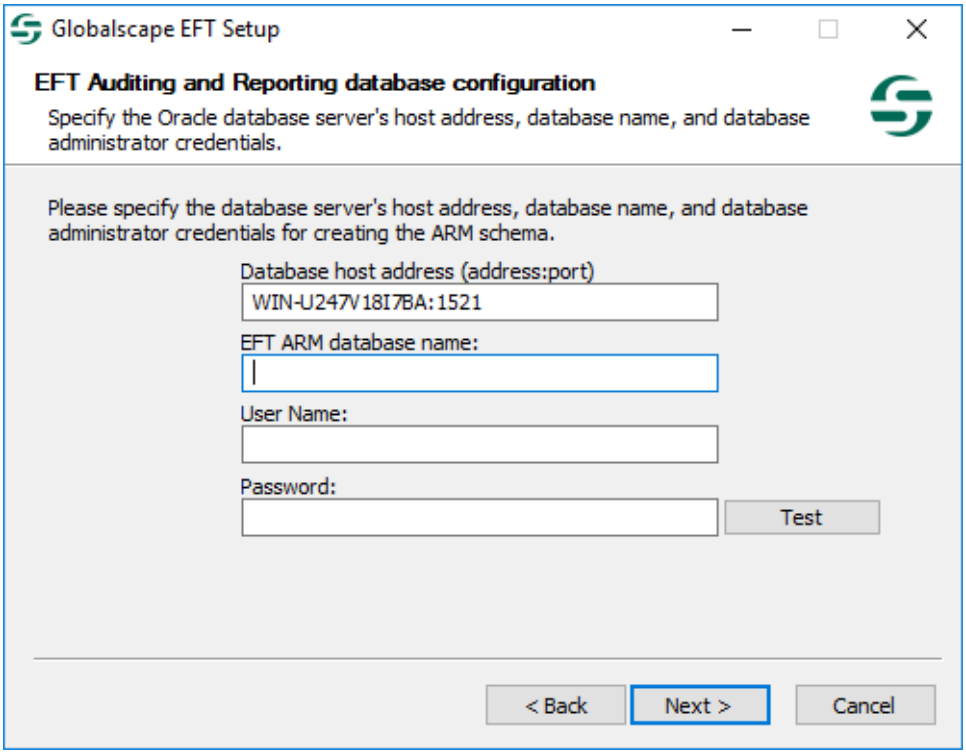
d. Specify the database server SA or privileged user account name (for example, sa).

e. Specify the database server SA or privileged user account password.

f. (Optional) Click **Next** or **Test** to test the connection to the database. If the test fails, click **Yes** to verify database connection details or **No** to continue without configuring the database.

- **Use existing Oracle database:**

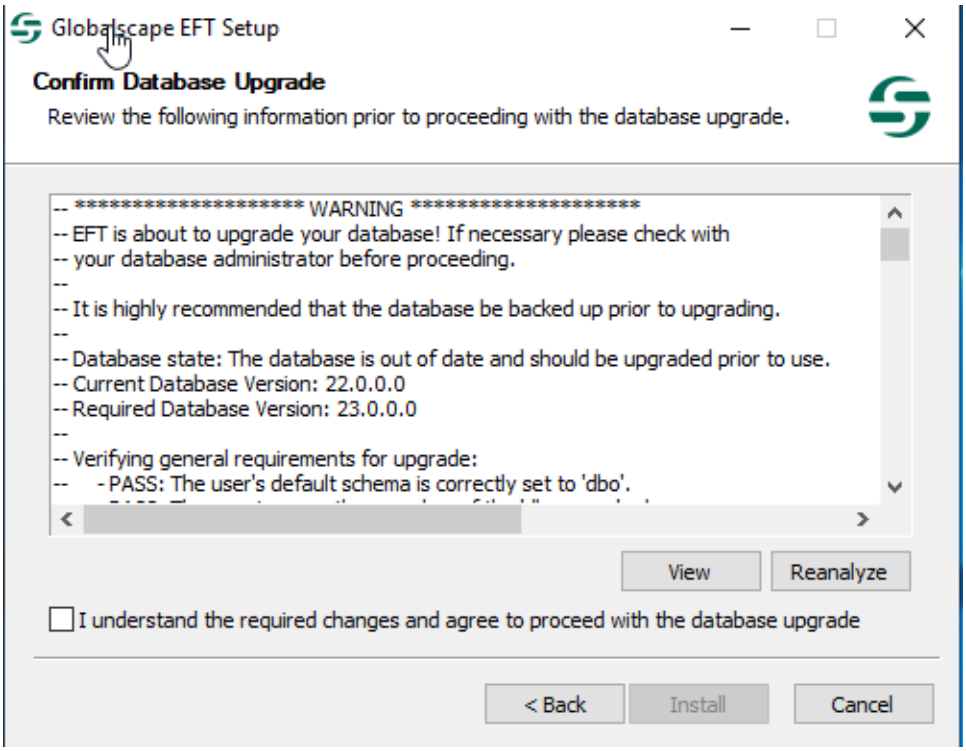
a. Click **Create a new schema**. The configuration page appears.



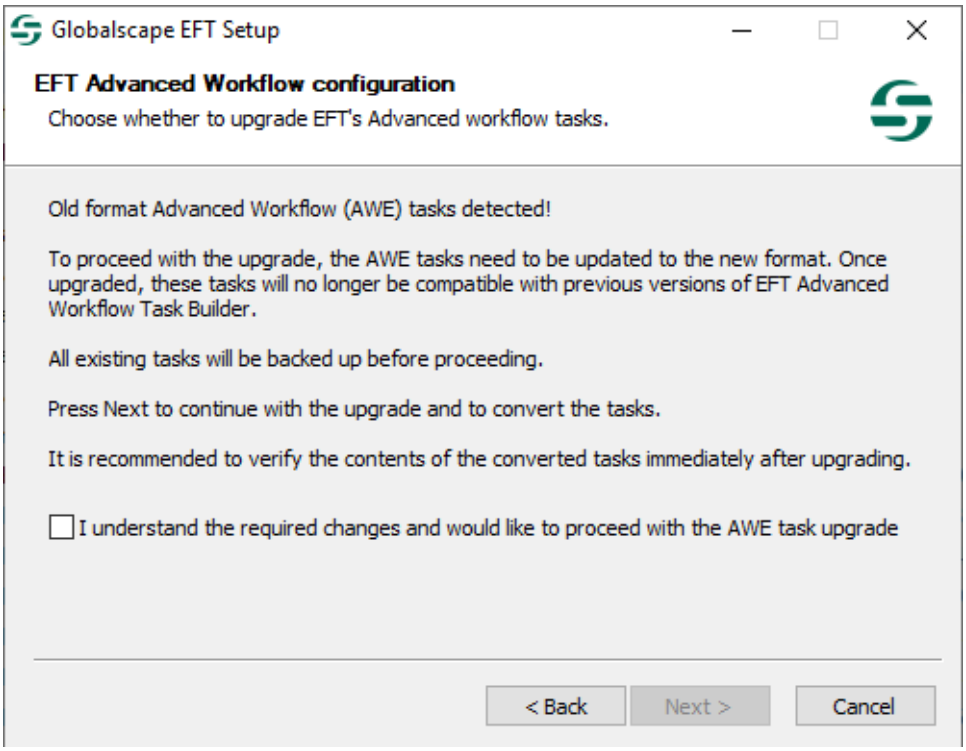
b. Specify the database host address and the EFT-specific schema name and database administrator credentials, and then click **Test** or **Next** to test the connection to the database. (If you have installed Oracle Database Express Edition (XE) for testing/demo purposes, the instance name is XE and the User Name is SYSTEM.)

- If the test fails, click **Back** to verify the configuration or click **Next** and then **Next** again to open the Oracle Technology Network download page and download "Oracle Data Access Components for Windows" driver, if necessary.

8. After the test is successful, click **Next**. The **Confirm Database Upgrade** page appears.

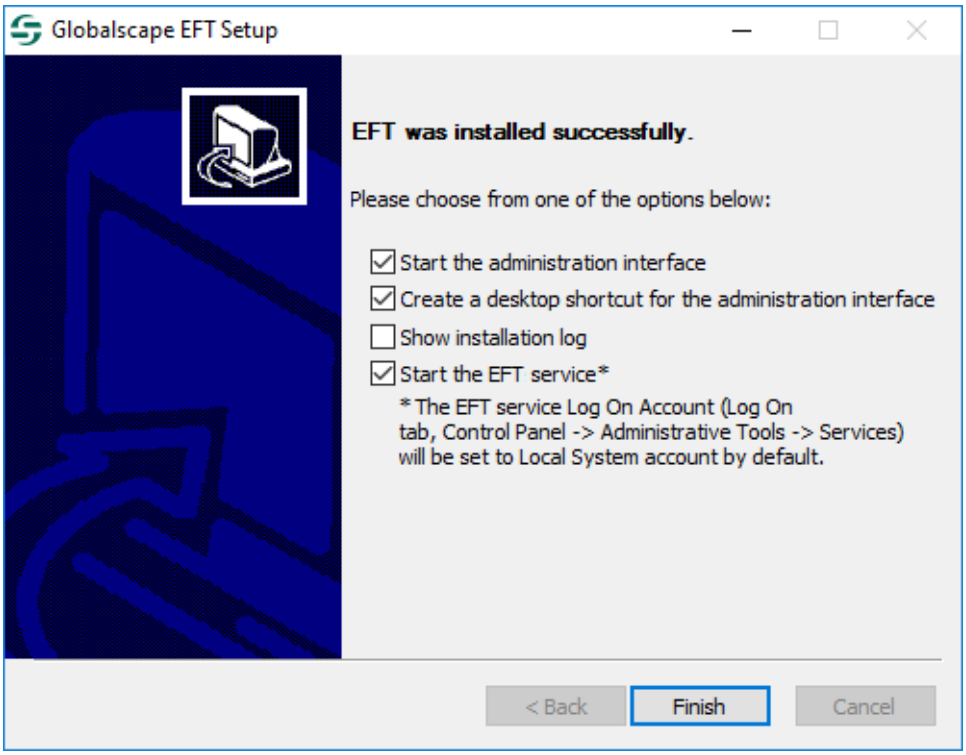


9. The database version information is displayed.
   - Click **View** to open a TXT file of the database upgrade details and save the file for later, if needed.
   - **Reanalyze** compares the new database information to the old and displays it on the page.
   - Select the **I understand...** check box to continue, then click **Install**.
   - After the database has been upgraded, the **Old format Advanced Workflow task detected** page appears.



- Select the **I understand the required changes...** check box, then click **Next** to proceed with the upgrade.
- Click **Install**. When installation is complete, a **Completed** page appears.

10. Click **Next**. On the final page, select or clear check box to start the administration interface, create a shortcut to the administration interface on the desktop, show the installation log, and/or start the EFT server service.



11. Click **Finish**.

Uninstalling the Software

Uninstalling EFT removes everything installed in the **\Program Files\Globalscape** folder. It does not uninstall configuration files, Oracle or SQL Server tables, Reports, or Backup files in **\ProgramData\Globalscape\EFT Server**. (To see \ProgramData\, open Windows File Explorer, click **View**, then select the **Hidden Items** check box.)

To remove EFT

1. Click **Start > Programs (Apps) > Globalscape > EFT > Uninstall EFT**. The **Uninstall** wizard appears.
2. Click **Uninstall**. The uninstalling progress page appears.
3. After the program files are removed, the **Uninstallation Complete** page appears. Your license information remains in the Windows Registry, in case you decide to reinstall. Click **Close**.

For a "Clean" Uninstall

After uninstalling above is complete, you can clean up any leftover files manually. Some files are left behind in case you want to reinstall EFT. The table below lists the various folders, files, and registry settings that can be removed if you don't plan to reinstall EFT.

- The EFT uninstall wizard does not affect the database. If you want to purge the database, do that **before deleting** **\ProgramData\Globalscape\EFT Server** because that is where the purge scripts are stored.
- Uninstalling EFT removes everything installed in the **\Program Files\Globalscape\EFT Server** folder. It does not uninstall configuration files, Oracle or SQL Server tables, Reports, or Backup files.
- Your license information remains in the Windows Registry, in case you decide to reinstall.
- For HA installations, there will be configuration and EFT user files in the shared location.

Artifact Type	Artifact Default Location	Description
Database tables	ARM database; ODBC Authentication (SQL Server or Oracle)	Database-specific purge scripts are installed with EFT. The scripts are installed under the "SQL Server" and "Oracle" sub-directories of the **\ProgramData\Globalscape\EFT Server\ directory.**

Artifact Type	Artifact Default Location	Description
Folder\Files	\Program Files\Common Files\Globalscape	Directory where application is installed
Folder\Files	\ProgramData\AutoMate	Directory where Advanced Workflow Engine files are installed
Folder\Files	\ProgramData\Globalscape	Directory where application configuration and site information is stored
Folder\Files	\Users\<usernames>\AppData\Local\GlobalSCAPE\	administrator user files; delete if no longer needed
Folder\Files	\Users\<usernames>\AppData\Roaming\GlobalSCAPE\	administrator user files; delete if no longer needed
Folder\Files	\inetpub\EFTRoot	EFT user files; delete if no longer needed
Registry	HKEY_LOCAL_ MACHINE\SOFTWARE\Wow6432Node\Globalscape	You can delete the entire **Globalscape** folder (if you have no other Globalscape products)
Registry	HKEY_LOCAL_ MACHINE\SOFTWARE\Wow6432Node\GlobalSCAPE Inc	You can delete the entire **Globalscape Inc** folder (if you have no other Globalscape products)
Registry	HKEY_CURRENT_USER\Software\Globalscape	You can delete the entire **Globalscape** folder (if you have no other Globalscape products)
Registry	HKEY_LOCAL_MACHINE\SOFTWARE\Computer\HKEY_ LOCAL_MACHINE\SOFTWARE\AutoMate	Automate files; You can delete the entire **Automate** folder
TEMP folders	Temp location of account used for EFT service and Temp location of user running EFT installer	temporary files

After You Are Done

Congratulations! EFT is now installed.

Next steps:

- Review Configuration and Security Best Practice for helpful configuration tips and recommended settings.
- Read the following topics for additional information about your next steps.

- Configure the First EFT Connection
- Activate the Software (EFT and Modules) (You will need your license keys.)
- Create a Windows Account for the EFT Server Service
- HA Nodes Configuration File
- Install the Administration Interface Remotely
- Backing Up or Restoring Server Configuration
- Modifying or Repairing the Installation
- Promoting EFT Stand-Alone to Cluster Node
- Upgrading the Software
- Upgrade an HA Cluster with Zero Downtime
- Uninstalling the Software

Configuration and Security Best Practices

Refer to Globalscape Knowledgebase article #11312 for details about configuration and security best practices.

Creating and Configuring an EFT Server

After you follow the procedures Installing the Server, Interface, and Modules, the next step is to log in to EFT via the Server interface, called the *administration interface* or AI, and configure the client connections to EFT. The instructions below describe how to configure the first EFT connection.

***You must configure EFT for the first time on the computer on which the EFT service is installed*.** After you have created the local connection and enabled remote connections, you can connect to and administer EFT remotely.

Even if you plan to restore the Server from a backup, you must still create the initial Server object in the administration interface.

Anytime you connect to the EFT Server service, if no Servers have been defined, the **Server Setup** wizard **Welcome** page appears. The **Server Setup** wizard guides you through EFT configuration or allows you to restore from backup. The wizard helps you configure Server-specific options such as allowing remote administration. After the brief **Server Setup** wizard is completed, you have the option to run the **Site Setup** wizard to configure a Site, and then the **User Setup** wizard to provision a user. (You have to create at least one site for users to be able to connect to EFT.)

You may cancel out of the **Server Setup** wizard anytime by clicking **Cancel** or the **X** in the upper right corner. However, any settings made through the wizard are discarded, except for keys/certificates added to the key manager (by creating or importing).

You will need the following information to create and configure EFT:

- If you are allowing remote administration of EFT and you are using SSL, you need to know the SSL settings and have access to the SSL keys and certificates.
- If you are restricting remote administration to specific IP addresses, you need to know the IP addresses and ports.
- If you are using DMZ Gateway, install and configure DMZ Gateway (on a different computer). The installation and configuration of DMZ Gateway is not *required* before creating Servers and Sites, but the Site setup wizard asks for the DMZ Gateway information. Alternatively, you can configure DMZ Gateway after Site setup is complete, and then provide the DMZ Gateway connection information in EFT's administration interface.

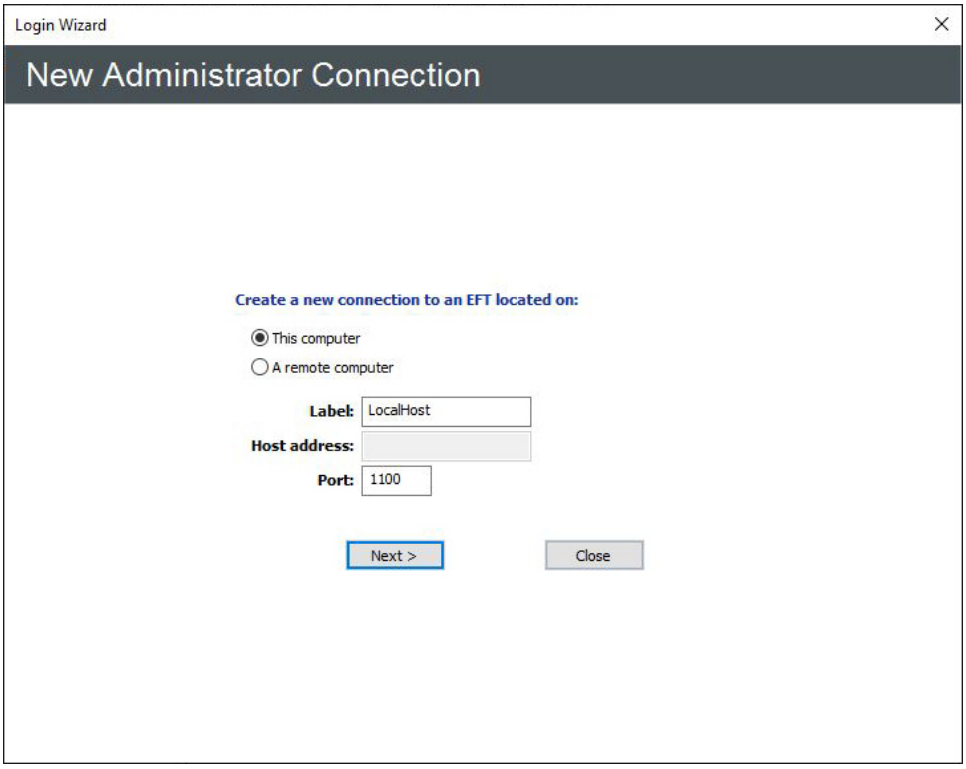
If you are configuring your first EFT Server connection, refer to **Configure the First EFT Connection**. If you are configuring a new, remote EFT connection, refer to **Creating a Remote Connection**.

Configure the First EFT Connection

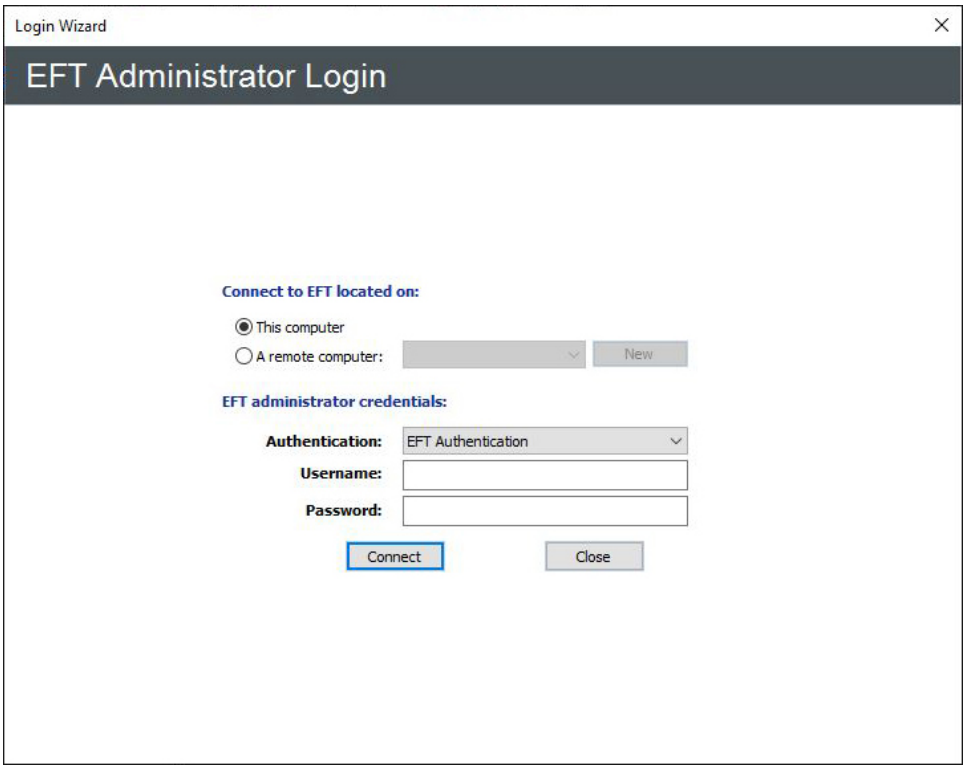
You must first configure the local connection before you can configure a remote location.

To configure EFT on the local computer

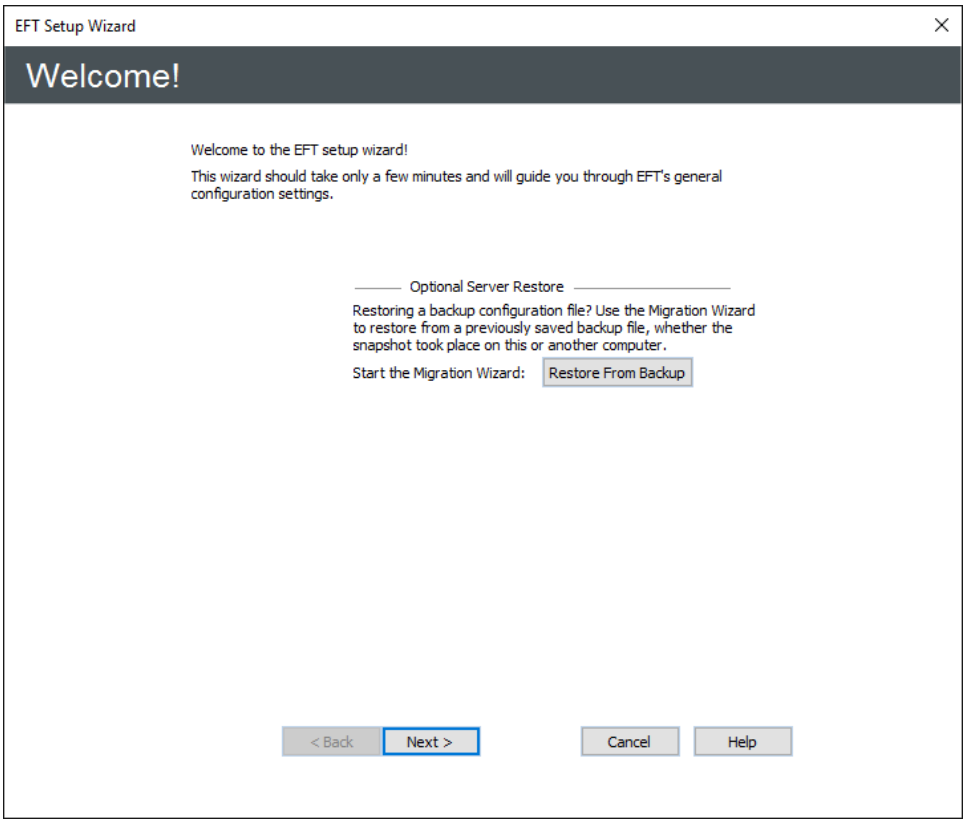
1. After installation is complete, the **New Administrator Connection** wizard appears. (If you have already defined a connection and want to create another one, refer to **Creating a Remote Connection**.)



2. Leave **This computer** selected, then specify the **Label** for the local connection. By default, the label is `LocalHost`. Because LocalHost is a very common label, it is a good idea to change the label to something that is easily identifiable in error logs, reports, and remote connections. For example, `GS_EFTS`. You can label EFT anything you want; the EFT name is ***not*** dependent upon the computer name. The **EFT Administrator Login** page appears.

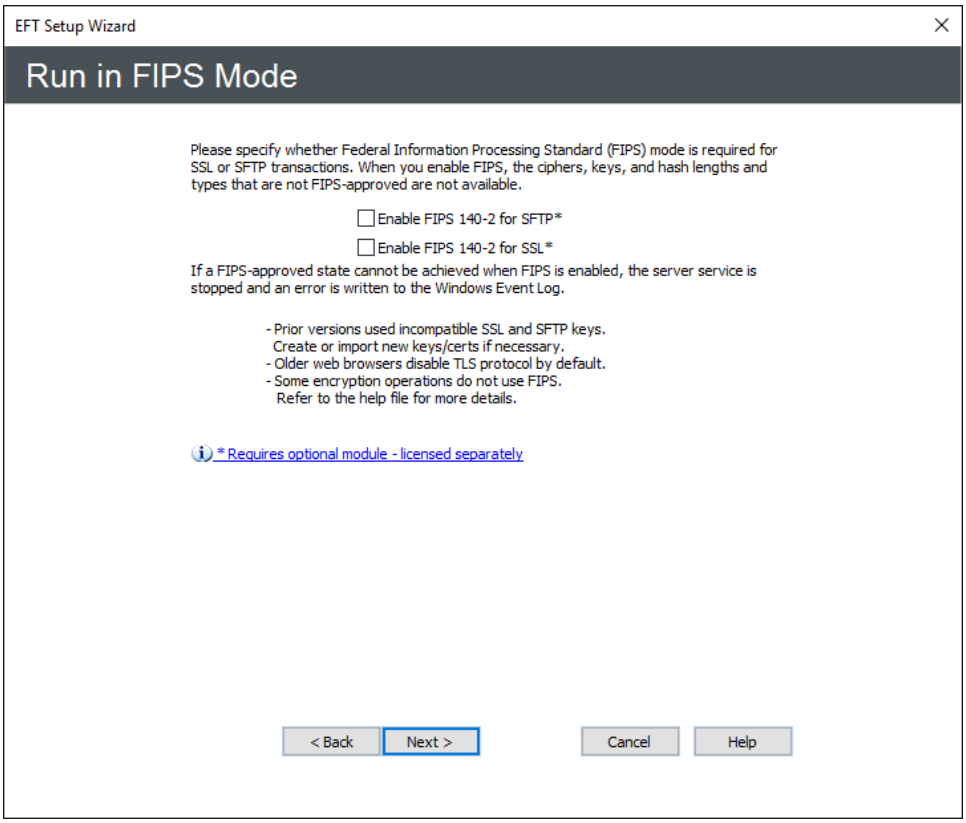


3. Click the **Authentication** box and specify the type of authentication to use for this login. Future connections will default to the authentication type that you specify during this initial login, but you can choose a different type. Authentication types include:
    - **EFT Authentication** - Choose this option to log in with an EFT-specified administrator account, such as the one you created during installation.
    - **Integrated Windows Authentication** - Choose this option to log in as the currently logged on user (Integrated Windows Authentication).
    - **Windows Authentication** - Choose this option to log in using a specific Windows account.
4. If you specified **EFT Server Authentication** or **Windows Authentication**, in the **Username** and **Password** boxes, provide the login credentials that you created during installation. The **Welcome** page appears. Because you have not yet activated the software, the "Free Trial" reminders appear. After you activate, you will not see this prompt.
5. Do one of the following:
    - If you are evaluating the software or just do not want to activate yet, click **Start Trial**, then follow the procedures in Creating and Configuring an EFT Server.
    - If you have purchased a license, click **Activate Now**, then follow the procedures for activating the software.
6. Click **Next**. The **Server Setup** wizard **Welcome** page appears.



- If you are not restoring from a backup, click **Next**.
- If you are restoring from a backup, click **Restore from Backup**, then refer to Backing Up or Restoring Server Configuration for the procedure.

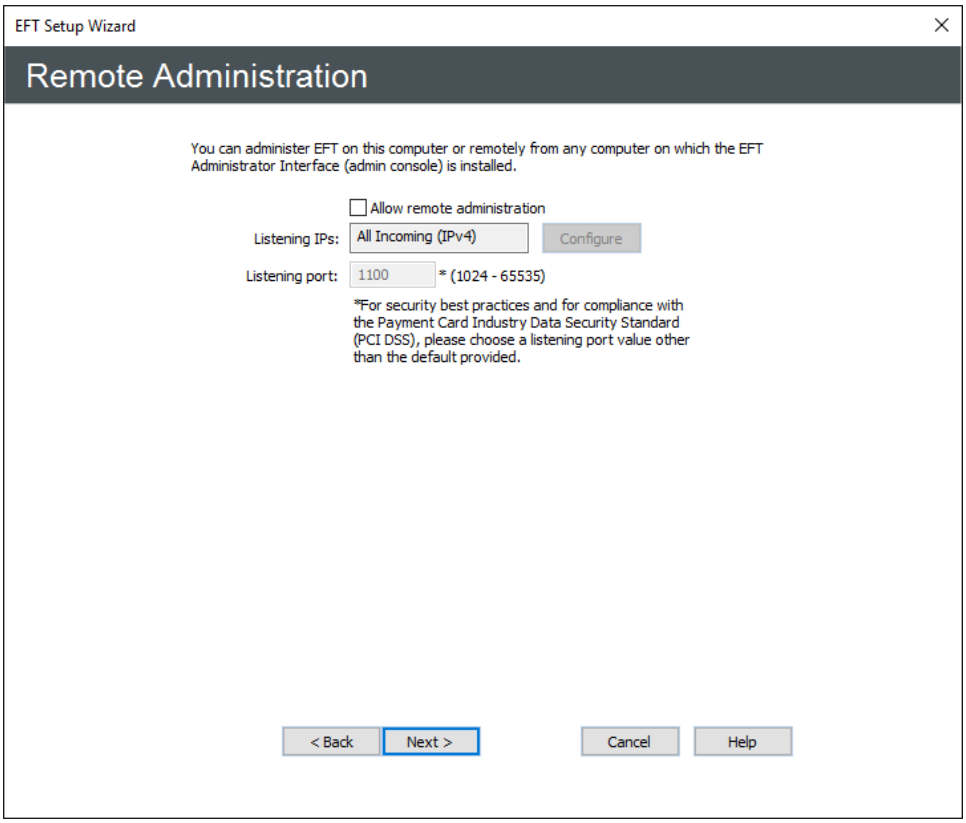
7. Click **Next**. The **FIPS Options** page appears.



When you enable FIPS mode, the ciphers, keys, and hash lengths and types that are not FIPS approved are not available. If a FIPS-approved state cannot be achieved when FIPS is enabled, the EFT service is stopped and an error is written to the Windows Event Log.

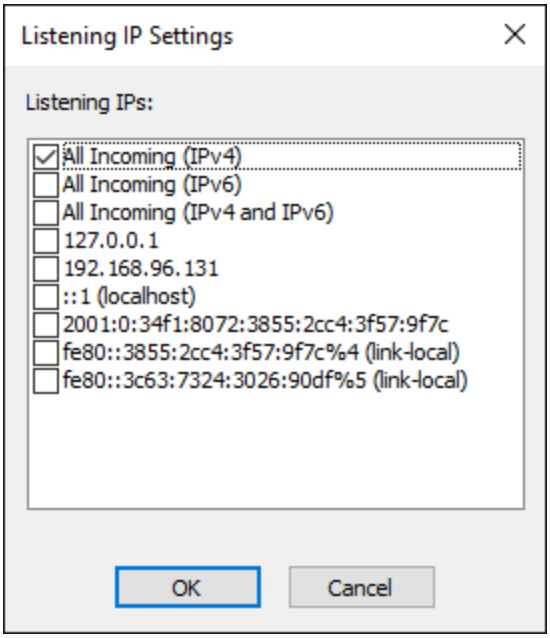
- To use FIPS for SFTP (SSH2), select the **Enable FIPS for SFTP** check box. To use FIPS for SSL, select the **Enable FIPS for SSL** check box.
- A confirmation prompt appears when you select either check box. When you enable FIPS, the EFT service must be restarted. Click **OK** to continue with FIPS enabled or click **Cancel** if you do not want to use FIPS and restart the EFT service.

8. Click **Next**. The **Remote administration** page appears.



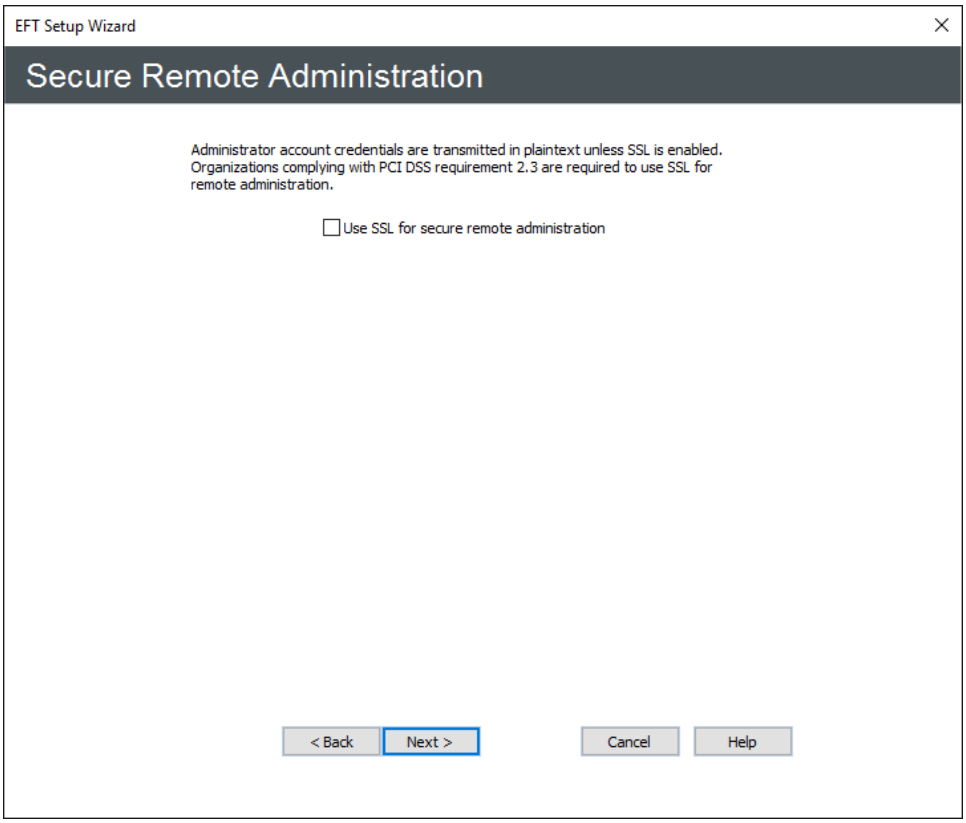
- If you do not want to allow remote administration, clear the **Allow remote administration** check box.
- If you want to allow remote administration:
  a. Select the **Allow remote administration** check box and specify the **Listening IPs**.
  b. Click **Configure** to specify one or more IP addresses. The **Listening IP**

Settings dialog box appears.

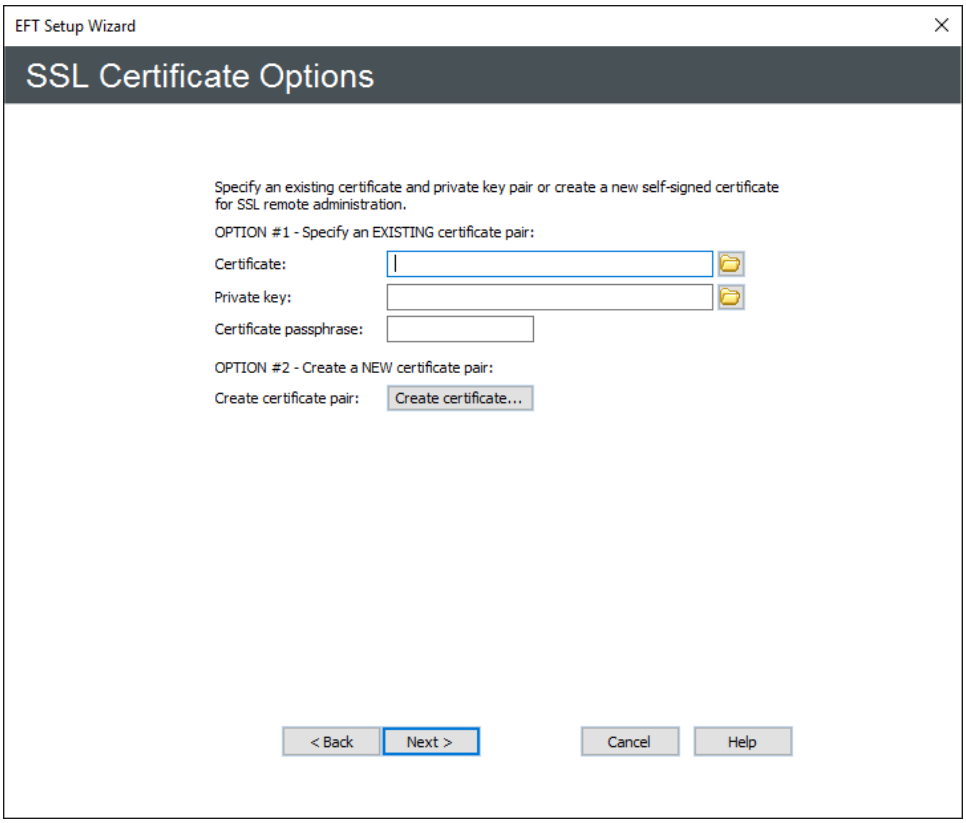


- **All Incoming (IPv4)** is selected by default. Select the check boxes for addresses that you want to allow; clear the check boxes for the addresses that you do not want to allow, then click **OK**.

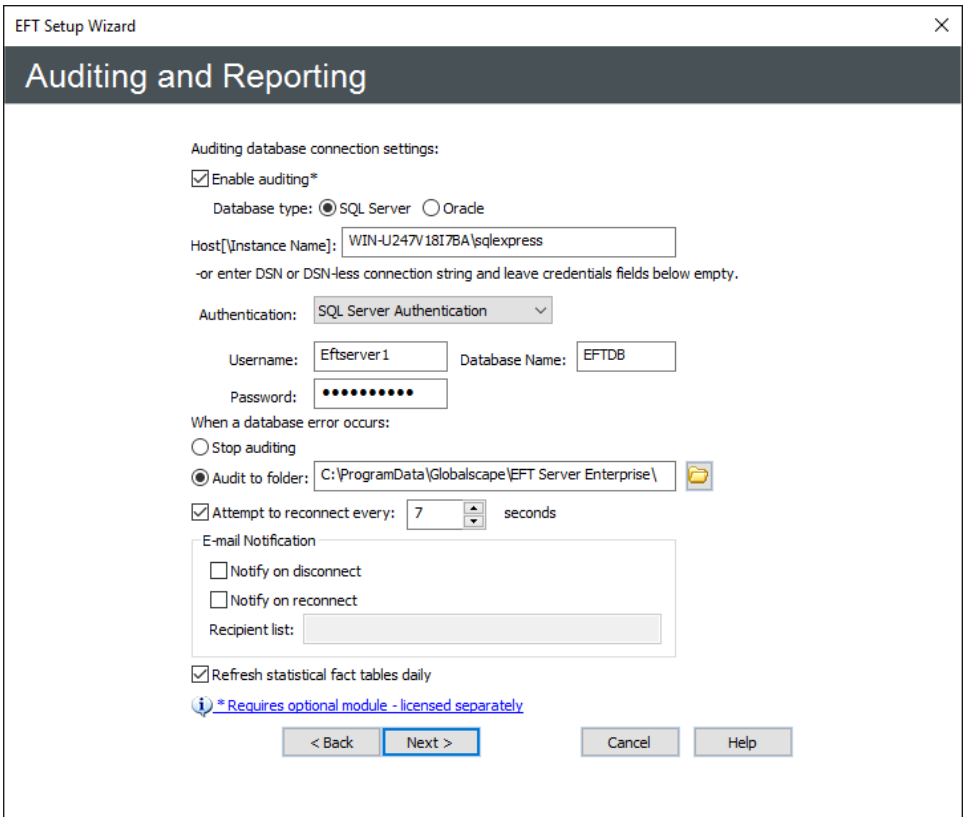
9. Specify the **Listening port**. (For security best practices and compliance with the PCI DSS, specify a port other than the default of 1100.)
10. Click **Next**. If you chose remote administration, the **Secure Remote administration** page appears.



11. Administrator account credentials are transmitted in plaintext unless SSL is enabled. Organizations complying with the PCI DSS are required to use SSL for remote administration. To enable secure remote administration, select the **Use SSL for secure remote administration** check box, and then click **Next**. The **SSL Certificate Options** page appears.



12. Do one of the following:
    - In the **Certificate** and **Private Key** boxes, click the folder icon to browse for the private key pair files.
    - Click **Create certificate** to create one. Refer to SSL Certificate-Based Login, Creating Certificates and Importing a Certificate into the Trusted Certificate Database for information regarding certificates.
13. Click **Next**. The **Auditing and Reporting** page appears.



14. If you are using Auditing and Reporting, select the **Enable auditing** check box, then provide the information required to connect to the ARM database as described below. If you are not using Auditing and Reporting, skip to the next step. (Auditing and reporting is a requirement of the PCI DSS.)
    a. In the **Database type** area, specify whether you are using **SQL Server** or **Oracle** for the auditing database.
    b. In the **Host[\Instance Name]** box, type EFT name or IP address.

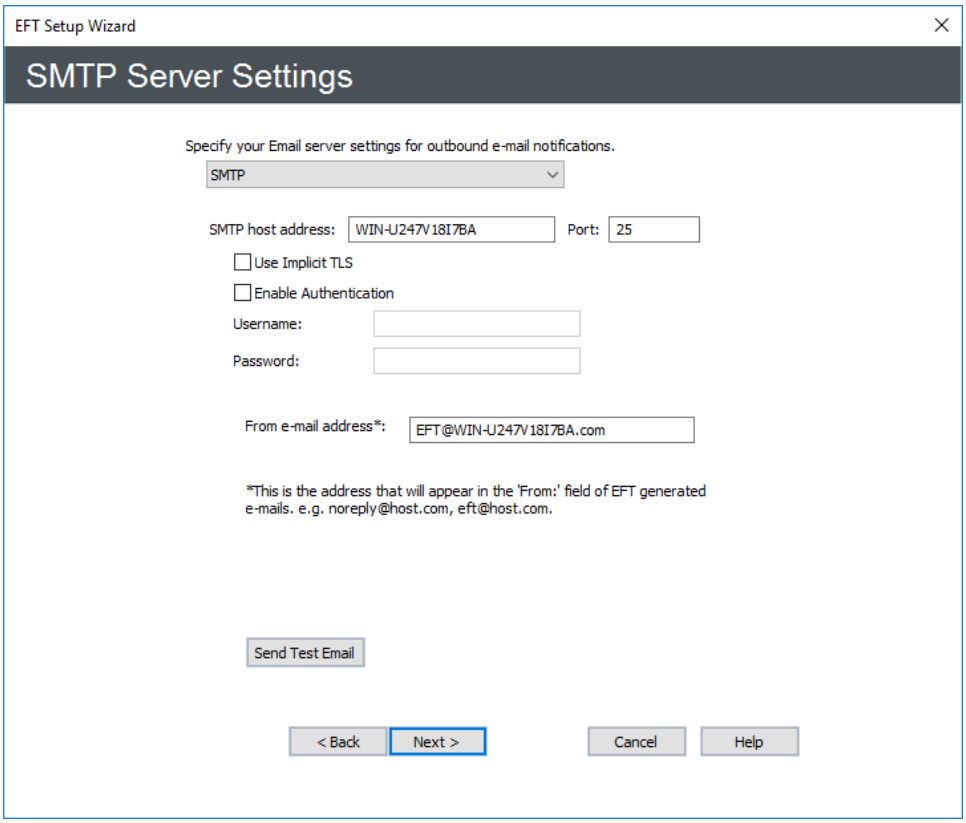
       If you are using SQL Server as the Auditing Database, **\InstanceName** corresponds to SQL Server's notion of named instances, a feature that allows a given computer to run multiple instances of the SQL Server Database Service. For more information, refer to http://msdn2.microsoft.com/en-us/library/ms165614.aspx

    c. In the **Authentication** box, specify the type of authentication used by the database, either **Windows Authentication** or **SQL Server Authentication**.
       - If you choose **SQL Server Authentication**, you must also specify the "sa" username and password. In the **Username** and **Password** boxes, type the username and password used to connect to the database (***not*** the EFT credentials).
    d. In the **Database Name** box, type the name of the database.

e. In the **In case of audit database error** area, specify an Action for EFT to take if there is an error with the database. To stop recording data, select **Stop auditing**. To continue recording data to a file, select **Audit to folder**, and specify the location for the log file.

   UNC paths are supported. The Globalscape Server service must run on a computer that has access to the network share, and the full UNC path must be used, that is: \\xcvd.forest.intranet.xc\Common_Files, **not** G:\Common. IPv6 literals must use the Microsoft-specific IPv6 address form that uses "ipv6-literal.net" for use in a UNC path. (Refer to the Wiki article about IPv6 for more information about IPv6 literals in UNC paths.)

15. To try to recover from a database error automatically, select the **Attempt to reconnect every** check box and specify the frequency in seconds.
16. In the **email notification** area, select the **Notify on disconnect** check box and/or the **Notify on reconnect** check box, and then specify the email address(es) to which EFT is to send database connection error notifications. You can add as many email addresses as needed; separate the addresses with a comma or semicolon. EFT uses its global SMTP email settings from the SMTP Configuration to send the emails. You will configure those settings on the next page.
17. The **Refresh statistical fact tables daily** check box is selected by default. If you do not want the database fact tables to be refreshed as part of EFT's hard-coded nightly cleanup routine (at midnight), then clear the check box.
18. Click **Next**. The specify **SMTP Server Settings** page appears.



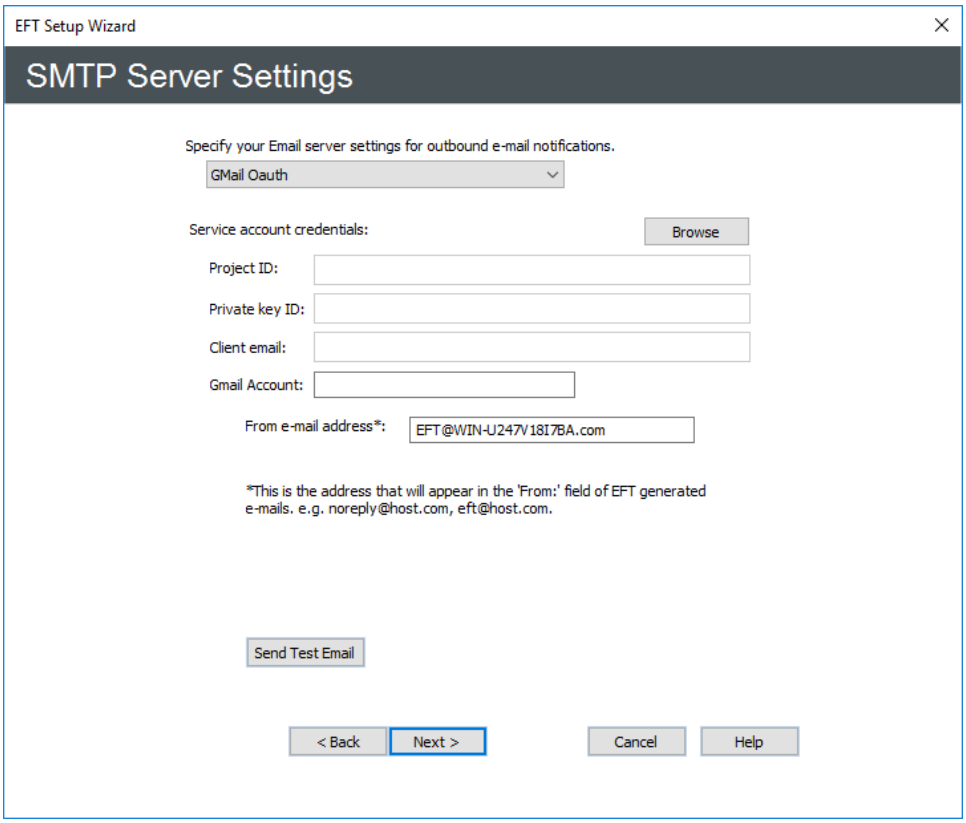
19. To specify your email server settings for outbound email notifications, click the drop-down box and select **SMTP** (default), **GMail Oauth**, or **Office 365 Oauth**. The options on this page of the wizard change based on your selection.

    For SMTP

    - In the **SMTP host address** boxes, specify the SMTP server host address and port.
    - Select the **Use Implicit TLS** check box, if needed.
    - If using the SMTP server, select the **Enable authentication** check box and provide the **Username** and **Password**.

    NOTE: If you're not sure what to use for credentials, skip this step by selecting **Next** to continue with the server, site, and user setup. Later you can configure SMTP in the administration interface.

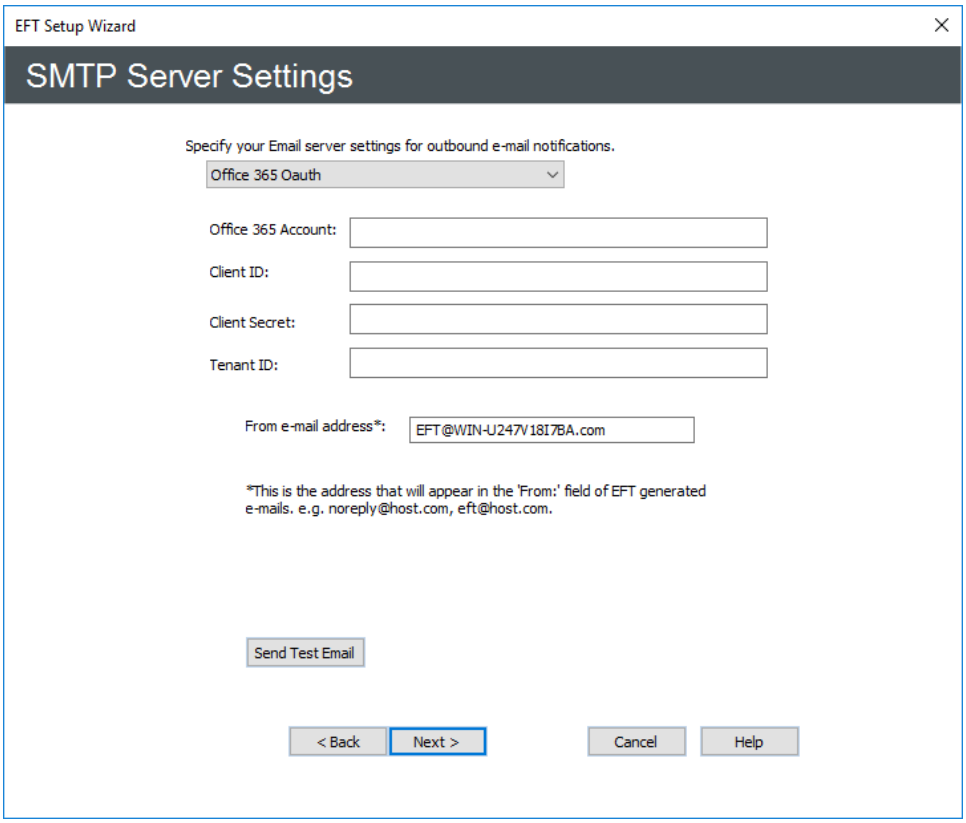
For Gmail Oauth



- In **Service account credentials**, click **Browse** and select the file that contains the **Service account key json path** file. The fields will be completed with the information from the JSON file.

> **NOTE:** For details of using Gmail Oauth service accounts, refer to https://developers.google.com/identity/protocols/oauth2/service-account.

For Office 365 Oauth



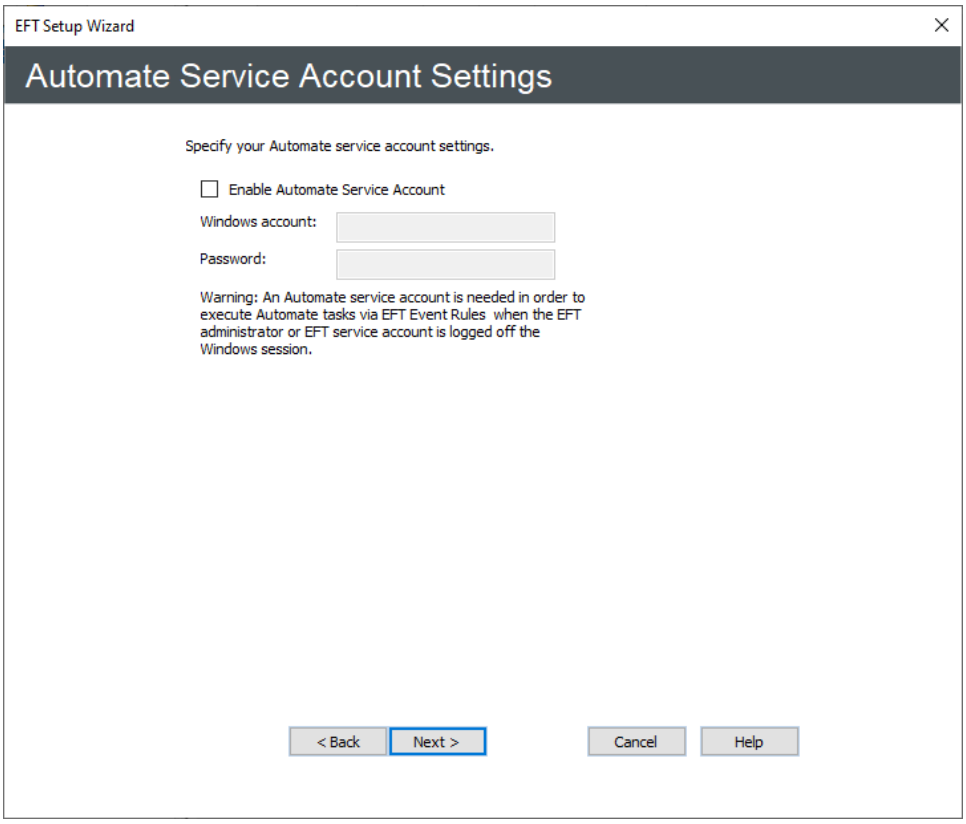
- Complete the fields to connect to the Office 365 mail server:
  - Office 365 Account -
  - Client ID -
  - Client Secret -
  - Tenent ID -

> **NOTE:** Microsoft recommends that you disable SMTP AUTH organization-wide or per mailbox (hosted in Office 365 or Microsoft 365). For more details, refer to the Microsoft topic at https://learn.microsoft.com/en-us/exchange/clients-and-mobile-in-exchange-online/authenticated-client-smtp-submission.)

20. In the **From email address** box, specify the email address for email notifications (such as those triggered by Event Rules). This is the address that appears in the **From** box of emails sent by EFT. For example, type `noreply@serverhost.com`.

> **NOTE:** The email address syntax is validated when you click **Send Test Email** or **Next.**. If the email address contains invalid characters or does not contain @, an error message appears. Click **OK** to dismiss the error message, then correct the address.

21. Click **Send Test Email** to ensure the credentials are correct.
22. Click **Next**. The **Automate Service Account Settings** page appears.



The Automate Service Account must be enabled and provided Windows account credentials so that the Automated Workflows can continue to run in event rules when the Windows session is logged out or locked or EFT server service account is logged out. Select the **Enable Automatic Service Account** check box and provide the Windows credentials.

23. Click **Next**. Server Setup is complete.

    You are offered the option of continuing to the Site Setup wizard, or quitting the wizard, saving EFT settings, and configuring the Site(s) later. You must configure at least one Site (a virtual host) to service inbound connections to EFT.

24. Click an option, then click **Finish**. If you chose FIPS mode for SSL and/or SSH, prompts appear explaining that EFT has entered FIPS mode. Click **OK** to dismiss the prompts.
25. If you chose **Run the Site Setup wizard now**, the Site Setup wizard **Welcome** page appears.
26. Next, refer to Creating a Site for the procedure for configuring the first Site.

Activating the Software (Licensing EFT and Modules)

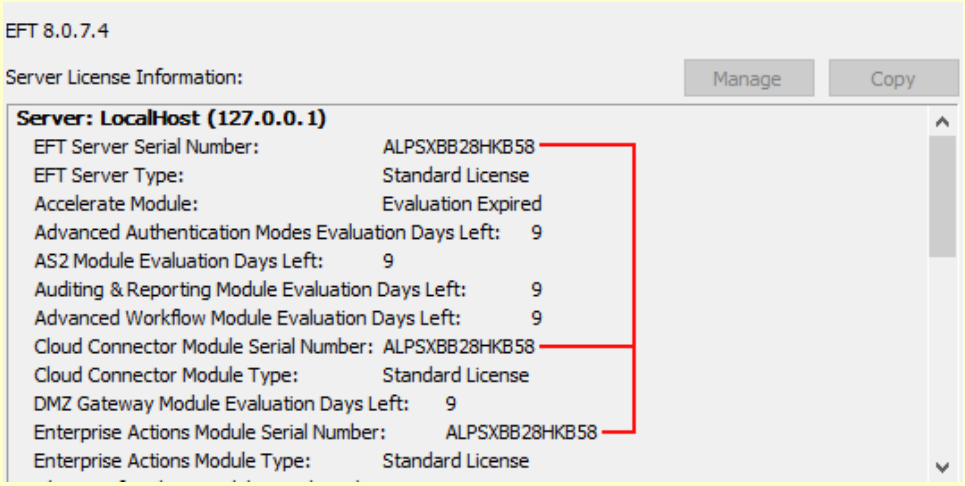
The EFT server with FTP is free, but you should still register your EFT serial number in case you need support. EFT on-premises licenses are available as a perpetual license (register once and never have to register again, except in some upgrade instances), or as a monthly or yearly subscription.

When the trial period ends for modules for which you did not purchase a license, an information error appears in the Windows Event Log to indicate the module has expired.

After you register the EFT license, the **About EFT** dialog box shows that EFT is licensed.

IMPORTANT: When upgrading from v8.0.5 or 8.0.6 to 8.0.7 (in preparation for upgrading to 8.0.7, and then 8.1 or 8.2), it is important to register EFT Server *first* before you register any module licenses.

- When registering a new installation after v8.0.5, it has been found that if you register a module before you register the EFT license, the server will act as though EFT has already been registered. That is, in **Help > About** it will show the module registered, but it will reference the same key as the module that was registered before EFT.



- If you run into an issue where your EFT Server license will not work, please contact support. Do not enter any other serial numbers until EFT has been registered.
- If you register a module without first registering EFT, then our registration process will not work properly and you might have troubles should you need support.
- Registration of EFT with older EFT Server Enterprise or Express serial numbers are supported; this will unlock certain features similar to an upgrade scenario.
- Manual registration of EFT with older EFT Server Enterprise or Express serial numbers is supported, however, we recommend you work with our support team.
- EFT 8.0.7 and later do not support DMZ Gateway single site registration via manual registration.
- Do not use your Automate license key with EFT, as this is managed by EFT's licensing. Having an Automate license does not automatically grant a license in EFT to unlock the Advanced Workflow Module (AWM) in EFT.

Registering EFT and the Modules

You must activate the software with a serial number. Each module is available during the EFT trial and must be activated separately.

- If you are moving an EFT from one computer to another, contact the Globalscape customer service team or your account manager so that we can adjust your account on our activation server. Activation on the new computer will not be possible until the adjustment is made.
- If you are upgrading EFT residing in a clustered environment, refer to Installing EFT in a Cluster and contact Globalscape technical support for assistance, if necessary.
- If you have troubles with activation, refer to manual registration below.

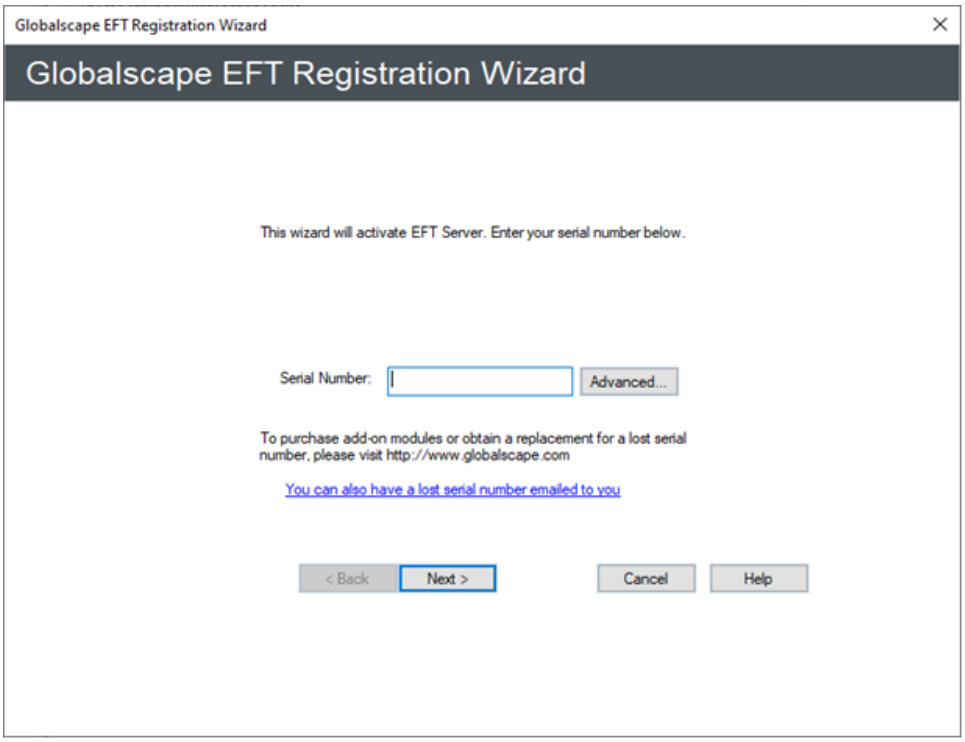
To activate online, you must be connected to the Internet, and activation must be performed through the administration interface on the EFT computer. You cannot activate through a remote installation of the administration interface.

Refer to If you do not have Internet access on the EFT computer for manual registration without the Internet.

After you activate a product, the "Activate" text for that product on the **Help** menu is unavailable.

To activate EFT and/or add-on modules via the Internet

1. On the main menu click **Help**, and then click the product you want to activate. The **Registration Wizard** appears.



2. In the **Serial Number** box, provide your serial number, and then click **Next**.

   See below for Advanced Registration Options, if needed. The Advanced Registration Options are not required for successful registration, but is for specific use cases with manual registration, or to determine if the registration server is returning a registration limit error. (A DMZ Gateway Multi-Site license requires manual registration.)
3. You should receive a message confirming online activation. Click **OK**. Activation is complete. (If registration fails, try entering your serial number again.)
4. The **Help > About** dialog box displays the status of the activation, such as number of licenses on certain modules, and whether it is a standard or subscription license, and renewal date.
5. Once you've activated module, the text on the **Help** drop-down menu will dim to indicate that it's registered, aside from the **Activate Workspaces Module** text which does not dim, because you can add more seats, as needed.

Subscription Licenses:

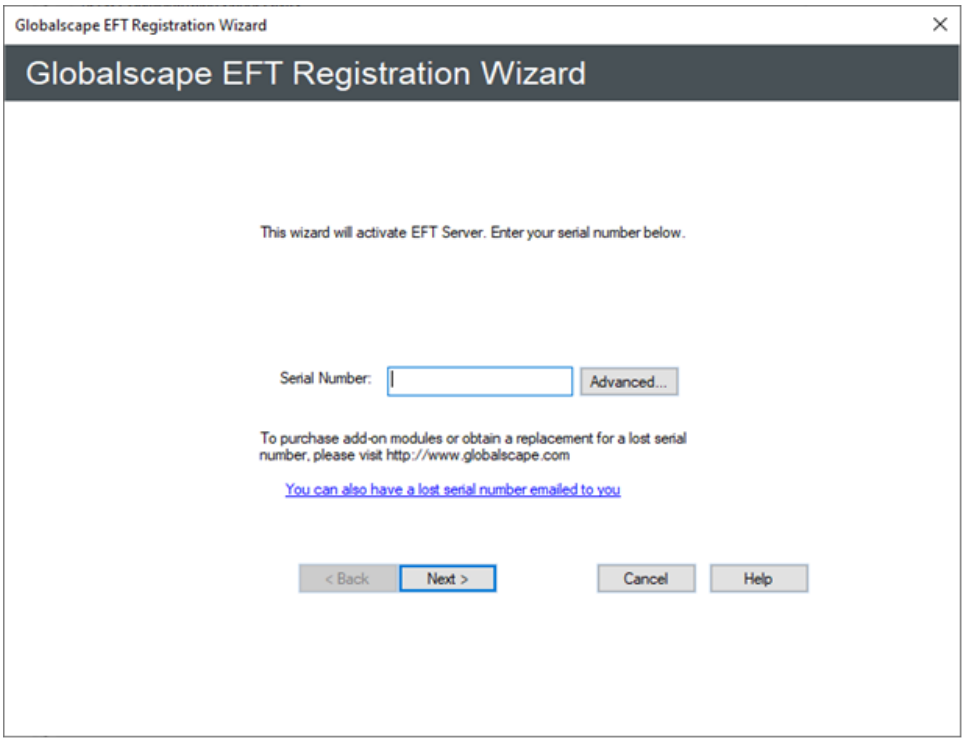
IMPORTANT: Internet access is a pre-requisite to complete activation and renewal of a subscription license. EFT reaches out to the server at **dbregistration.globalscape.com** on port 80 to send the registration request, and receive the registration response back. If EFT cannot connect directly, it will attempt to connect via each DMZ Gateway defined (as a proxy) in turn. If that still fails, please contact Support. There is no manual process for **subscription** licenses at this time.

- A subscription license key can be used to activate EFT and modules.
- Click **Help > Activate** [product name], and follow the prompts to active your license(s).
- The **Help > About** dialog box displays the subscription license type and the subscription term, which is based on the term dates stated in your invoice.
- Upon the renewal date, EFT will attempt to re-activate the license and, therefore, must have internet access at that time.
    - If there are additional months/years remaining in your term, EFT will successfully renew and start its countdown to the next renewal date.
    - If your subscription has run out or if EFT encounters any other problem during renewal, EFT will enter a grace period, also indicated in **Help > About**.
- During the grace period, EFT will attempt to renew the subscription every hour, if possible, for about a week, before it finally gives up or succeeds. During this period, EFT will display warnings upon administrator login, and will log an event to the Windows Event Log. This grace period affords you the time to contact sales and renew if your subscription, if desired.
    - If it succeeds, then all is well and the new renewal date is shown in the **Help > About** dialog box.
    - If it fails, then EFT will enter its pre-activation state, where all modules become disabled and all protocol activity will cease.

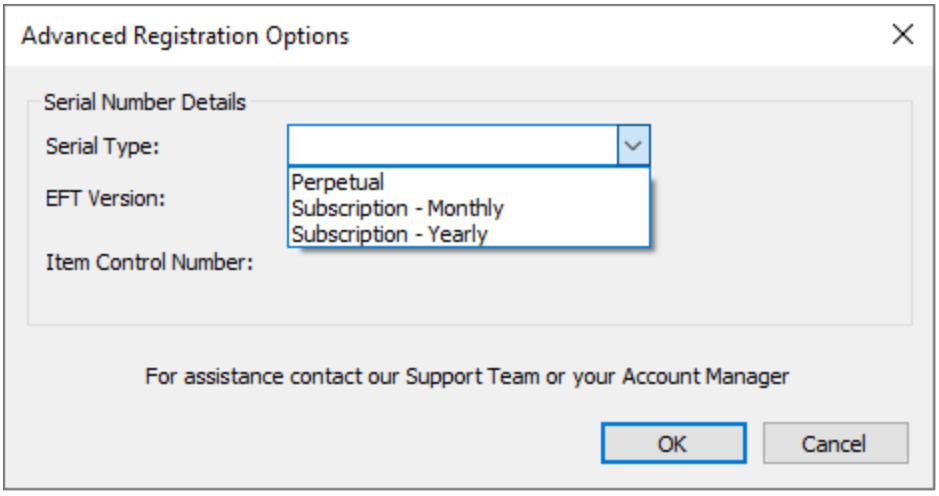
The Advanced EFT Registration options allow EFT administrators to provide more details on a registration request so that they can obtain proper registration status or correct manual registration details. When the Advanced Registration Options is configured and submitted to the registration server, EFT will make one single request to the Registration Server with the defined **Item Control Number** (IcN) instead of trying multiple attempts to register EFT or the corresponding module.

To register a subscription license

1. In the administration interface, connect to EFT then click the **Administration** tab.
2. On the main menu, click Help > then click the product that you want to register.

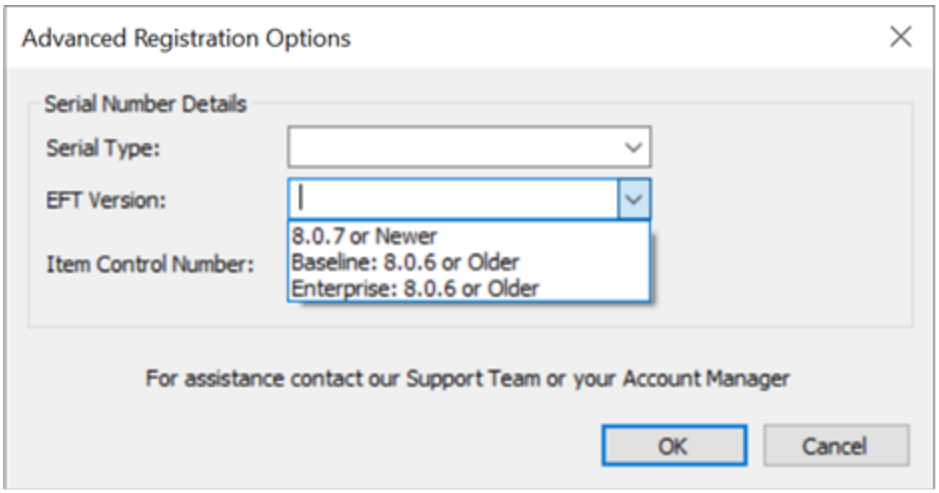


3. Next to the **Serial Number** box, click **Advanced**. The **Advanced Registration Options** dialog box configures specific serial number details that are then sent to the registration server.
4. In the **Serial Type** box, click the drop-down list and click the type of serial number: **Perpetual**, **Subscription - Monthly**, or **Subscription - Yearly**.



5. In the **EFT Version** box, click the drop-down list and click the version number you are registering. (For example, **8.0.7 or Newer**, **Enterprise: 8.0.6 or Older**, **Express: 8.0.6 or Older**.) Select **8.0.7 or Newer** when attempting to register an EFT Serial number issued for v8.1.

This option mainly affects the registration of EFT server since there are no differences between modules in Express or Enterprise.



The **Item Control Number** (IcN) box is a read-only field which is populated with the IcN (item control number) of the given configuration. This information is provided in case the customer needs to reach out to Support. For example, if the customer attempts to register Cloud Connector Module, Perpetual and 8.0.6 or Older, the IcN display would be CCM.

Additional notes:

- The Advanced Registration Options are retained only for the current registration session. If you close the Registration Wizard or successfully register a module on any subsequent attempts, the previous configuration is not retained, and the EFT admin must reconfigure the Advanced registration details.
- If you want to undo the configuration, you need to close the Registration Wizard and relaunch the module registration to try again.
- Advanced Registration Options are not submitted on the registration request unless you make modifications to the Advanced Registration Options and click **OK**.
- Making changes and clicking **Cancel** will not submit the advanced registration options, and existing behavior is submitted to the registration server.
- When configured, and **OK** is clicked, the registration request will submit the configured IcN that is displayed in Advanced Registration Options along with the entered serial number.
- Only one request is made to the registration server instead of multiple requests; the IcN that is displayed in the Advanced Registration Options along with the entered serial number are submitted.

If you do not have Internet access on the EFT computer:

1. Complete registration information in the Registration Wizard, as usual:
    - Serial number
    - Registered to information on next page
2. Click the option to email registration request.
    - Ignore any message that says "could not find mail software." This action is to copy information into the clipboard.
3. Open up a text editor.
4. Paste the content from the Clipboard into the new blank text document.
    - The first line should say something about emailing; delete that line.
5. Save this document and transfer it to a computer that has Internet access.
6. Copy the information from the text document and paste it into the form found at this address: http://www.sat.globalscape.com/register/.
7. Click **Register Me**.
8. This will either download a REG file or output the information within the browser, depending on the browser that you use.
    - If it is in the browser, copy this and paste it into a new blank text document. Save it as a .REG file and move it back to the server computer.
9. With the service NOT running, double-click the REG file to merge the key to the registry.
10. Restart the EFT server service. When you log in to the administration interface, you should see that it is registered when you click **Help > About**.
11. Repeat these steps for any additional modules that need to be registered.

Alternatively, you can email the content of the Clipboard to `manreg@globalscape.com`. You will receive a .REG file from Globalscape Support.

Windows Account for the EFT Server Service

After it is installed, EFT has access to local folders and files. To run EFT as a service with permissions to the network and mapped drives, you must create a Windows account, set Windows NT permissions for EFT, assign the EFT server service to the account, and log EFT on as a service. Security policies should allow user accounts to log in locally.

The EFT server service must have full administrative rights to:

- the folder in which you install EFT
- the location in which the users' home folders are stored
- the Windows Registry
- map a virtual folder to a network drive

With administrative rights, the service can save all of your settings. ***If the service does not have administrative rights***, you will lose settings and user accounts whenever you restart the EFT server service, and you will need to reset permissions on the computer on which the EFT server service is running.

If EFT is running in HA mode and sharing a network resource, you must run the EFT server service with an account that can access that shared network resource.

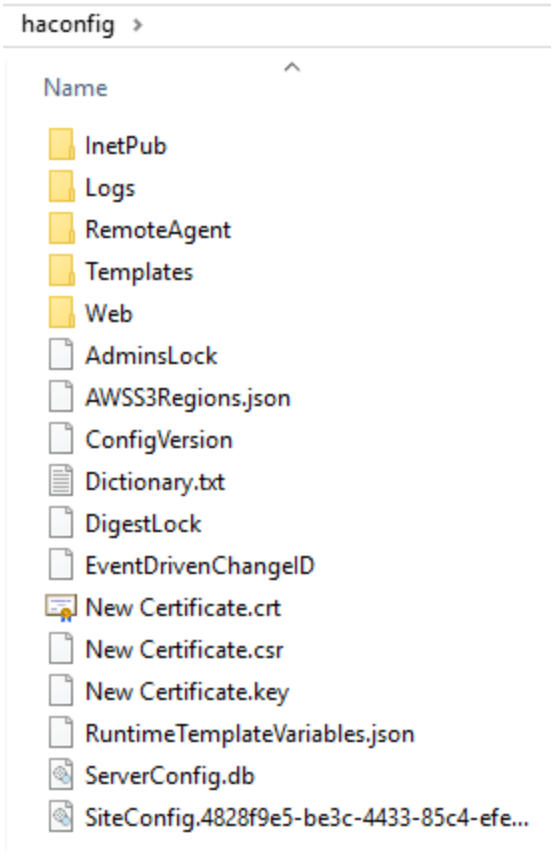
> **NOTE:** During upgrade, the name of the server service will be different; therefore, you will lose the connection to the server service Log On account. Refer to Assigning the Service to a Windows User Account to add the "Log on as" account for the EFT Server service.

Refer to Local Security Policy Setting when Using Active Directory Authentication for more information about configuring EFT on an AD network. Consult with your AD network administrator for assistance, if necessary.

After you have installed EFT, created a Windows account for EFT, and assigned permissions to the account, you should edit the service itself so that it will ***not*** run as a "System Account" (the default account choice). Running the service as System Account poses the potential hazard of giving users complete access to your system.

HA Nodes Configuration Files

When installing EFT in an HA configuration, you must specify a shared configuration location (which must be accessible by all of the nodes in the HA cluster). The files that all of the HA nodes will share are saved and updated in the shared configuration directory.



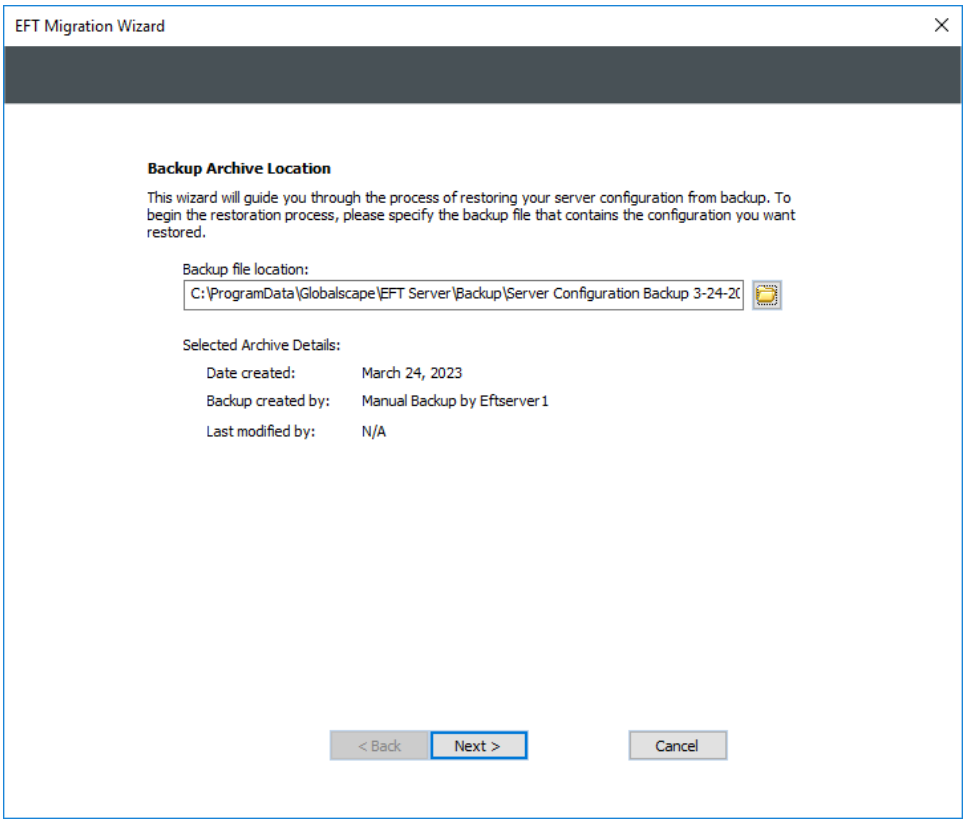
- An Advanced Property was added to improve performance when configuration is copied to the cluster share. When off, `HAFullConfigDumpIntervalMins = 0` or is not defined, the full configuration is copied on each change. Add the Advanced Property and set it between 1-10 minute intervals to reduce network traffic.
- A local configuration path for each node must also be specified for each node for local caching. When configuration changes are made to SSH, trusted SSL certificates, OpenPGP key materials, and AML files (Advanced Workflow tasks), those files are cached locally, and uploads are safely synchronized to the shared config path.

The other nodes then update their local cache from the central location. Thus, the central share always contains the current version of those files. When, for example, a new SSL Cert or AML file is created, the creator directly adds/modifies the files on the network share then tells the other nodes that the file was modified/created and they need to update their local cache (that is, copy the file to their local ProgramData directory).

- When using HA, **you need to specify a unique location (local) for the log files**. This is for troubleshooting purposes (to know on which node the issue occurred). Also, having two nodes write to the same file causes issues with file locking, which will cause data in the logs to be lost. For visibility into node status, enable cluster logging. Logging.cfg has new logging options specifically for HA. When configuring RSA in an HA environment be sure to have the **sdconf.rec** file stored locally for each node. Each node MUST have its own copy of sdconf.rec.
- When using Encrypted folders, you can only encrypt files in the directory hierarchy of the Site's root folder. Make sure that the Site root folder on the **Site > General** tab is pointing to the correct path. That is, if your HA config drive is on **D:\HAConfig\,** you should edit the site root folder to point to **D:\HAConfig\InetPub\EFTRoot\MySite**.

Backing Up or Restoring Server Configuration

When migrating from a development, staging, or test computer to another computer, you cannot simply copy over EFT's configuration files to the new host. You can use the EFT Migration Wizard (pictured below) to gather each of the necessary files, then package them into one easy-to-transport file. The Migration wizard can recreate the entire folder structure and settings automatically or you can run it in manual mode and verify every setting as you step through the wizard. (Physical folders under the VFS are not recreated when the configuration is restored. However, if those physical folders are present at the time of restoration, then any VFS permissions assigned to the folders are retained.)



The EFT Migration Wizard is an interactive tool designed to assist you in the following situations:

- **Performing Disaster Recovery**. If the production Site is corrupted and configuration is lost, damaged, or destroyed, the wizard can assist you with restoring EFT to a prior working state.
- **Migrating from staging to production or to new hardware**. If you want to move EFT from a staging or development box to a production server or have set up a Server with one or more Sites on one computer and want to move it to another computer or a different network location, the wizard can assist you with gathering all the necessary files for a successful move.
  - If you are migrating from a test environment to a production environment and do not need to keep the test environment's Server, Site, and user configuration settings, you do not need to use the EFT Migration Wizard. You can just start from scratch, and run the Server, Site, and New User wizards on the new system.
  - The migration wizard will only accept **backups created with the same version** that is being restored to; using backups from different versions will not work.
  - To restore, you will use the login credentials of the server administrator that you are logged in as, regardless of the credentials used to back up the configuration.

- **Backing up for disaster mitigation (routine backups, or backup prior to major changes)**. If you need a backup to be readily available and require automatic backup, the wizard can backup all of your settings. The EFT Migration Wizard can also help if a major change is about to be made, such as new hardware changes to the EFT computer, and you need a mechanism to manually backup the current configuration. The EFT Migration Wizard can take a snapshot immediately before the major change takes place, in addition to the automatic daily backups.

The migration fails if there is a mismatch/discrepancy in listening IP addresses, VFS root or structure, Authentication Manager settings, DMZ Gateway settings, or database connectivity.

The Migration wizard backs up the entire EFT configuration in an archive file at a path that is accessible to the EFT service.

Log files are not backed up in the Backup and Cleanup Rule (because that is intended as a configuration backup). You can create your own Event Rule to back up log files, if needed.

The following items are backed up to C:\ProgramData\Globalscape\EFT Server\Backup (by default):

- The configuration files
- All certificates and keys that are pointed to from configuration files
- Any custom reports
- Advanced properties
- The \Web\ folder to capture any customizations
- Entire VFS structure (physical folders recreated only under the Site root, not those pointed to by virtual folders)
- Any Advanced Workflows created

The wizard can be initiated manually in the EFT administration interface from the **File** menu or automatically in Event Rules. When you create your first Site, a Timer Rule is created that runs the **Backup Server Configuration** Action once a day at midnight, using all defaults for naming and backup location (**\backup\Server Configuration Backup [Month] [Day] [Year].bak**). The Rule includes a **Cleanup** Action to delete backup files (***.bak**) older than 30 days in that same folder. This **Backup and Cleanup** Rule is enabled by default, but you can disable it and edit it as necessary.

It is a good idea to save the backup on a drive other than on the one on which the EFT is installed. If EFT's hard drive fails, you will want to use the backup to restore configuration. Refer to Backup Server Configuration Action for details of editing the **Backup and Cleanup** Rule.

To manually back up Server configuration

1. On the main menu, click **File > Backup Server Configuration**. The standard **Save As** dialog box for your operating system appears.
2. Specify the location in which to save the backup, then click **Open**. Save the backup on a drive other than on the one on which the EFT is installed. The configuration is saved and is named *Server Configuration Backup [Month] [Day] [Year]* with a **.bak** extension.
3. One of the following occurs:
    - If a "backup successful" message appears, click **OK** to dismiss the message.
    - If a failure message appears, restart the EFT service, then run the backup again.

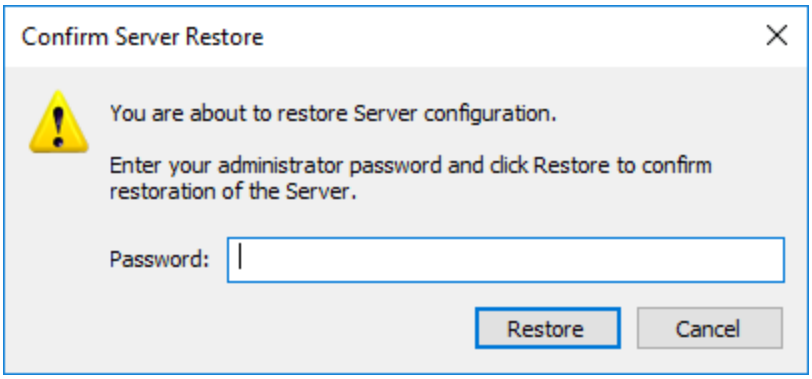
Any configuration changes made since the backup are, obviously, not included in the restore. For example, if you have deleted or added users since the last backup, those users will have to be deleted or added again after you restore.

Backups from IPv4-only EFT versions will listen only on IPv4 addresses; if all listeners selected for administrative connections are unavailable, then switch to listening on localhost.

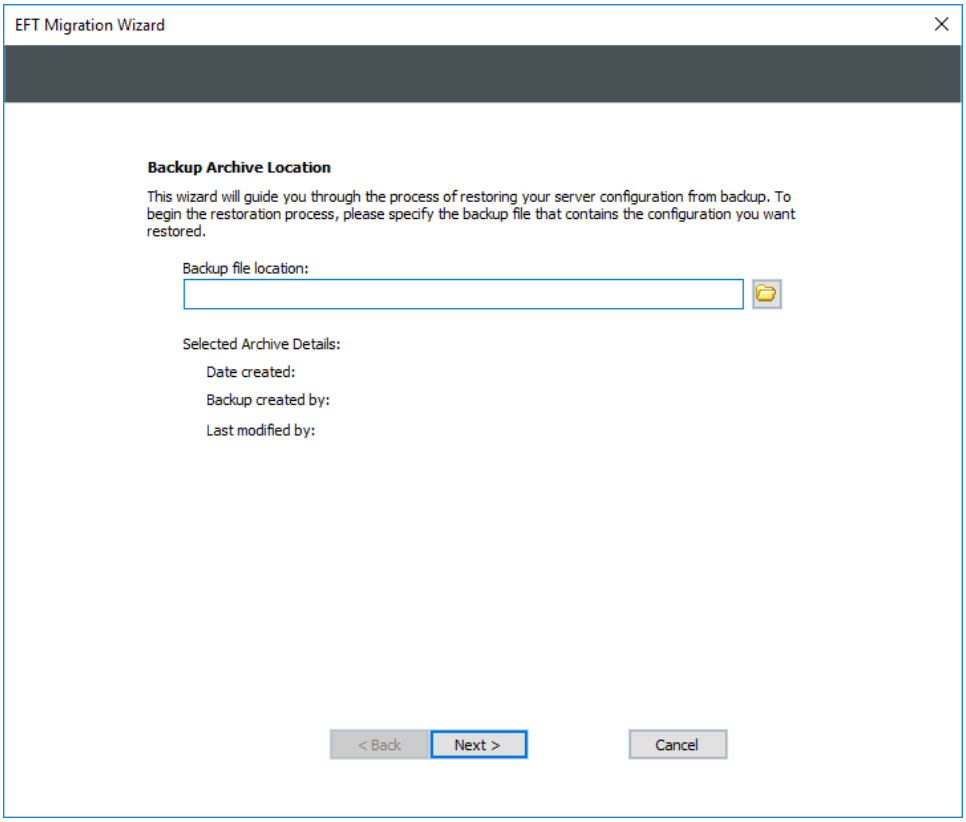
To restore Server configuration

1. Install and activate the product on the target system, if restoring to a different computer.
2. After installation is complete, the **New Administrator Connection** wizard appears. You must configure the local connection (that is, create the LocalHost Server object in the tree) before you can restore from backup.
3. In the **Connection** wizard, leave **This computer** selected, and specify the **Label** for the local connection. By default, the label is `LocalHost`. Because LocalHost is a very common label, it is a good idea to change the label to something that is easily identifiable in error logs, reports, and remote connections. For example, `GS_EFTS`. You can label EFT anything you want; the EFT name is ***not*** dependent upon the computer name.
4. After you are logged in to EFT, do one of the following:
    - In the **Server Setup** wizard, click **Restore from Backup**.
    - On the main menu, click **File > Restore Server Configuration**.

    The **Confirm Server Restore** dialog box appears.

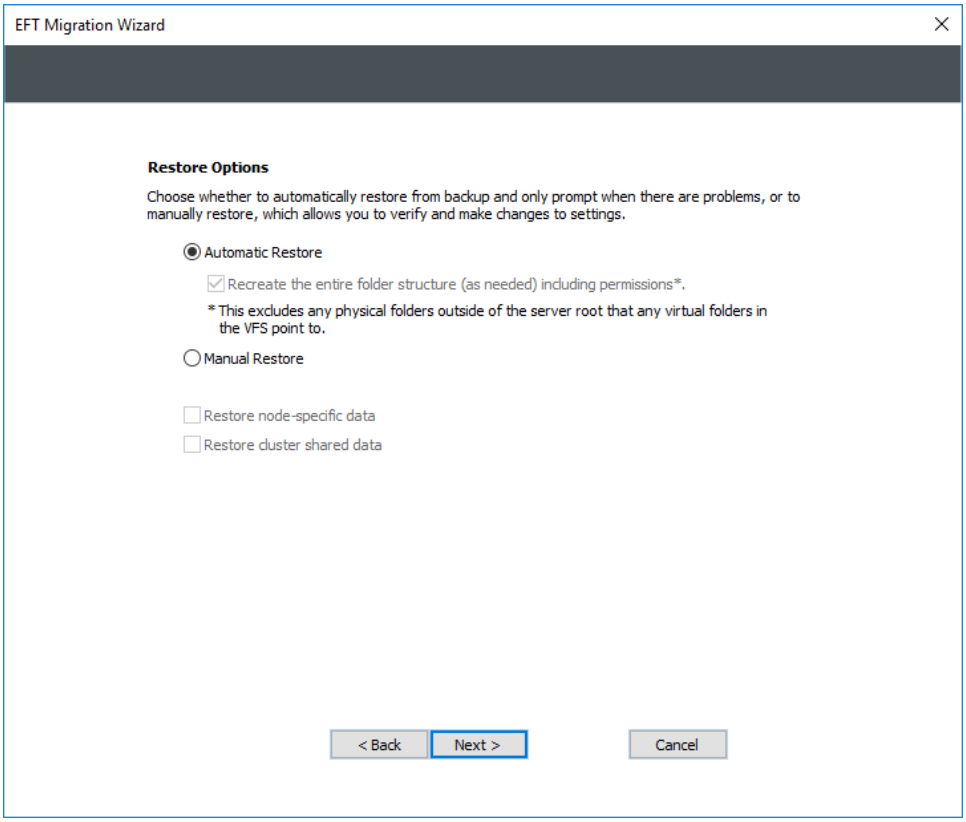


5. Provide the administrator login credentials for the configuration being restored, and then click **Restore**. (You can use the EFT administrator credentials, Windows Authentication, or the currently logged on user's credentials.) The **EFT Migration Wizard** appears.



6. Select the folder icon to select the backup to restore. The path to the backup file appears in the **Backup file location** box. The **Selected Archive Details** area displays the date the backup was made and the username that created the backup, if it was a manual backup, or "Automatic Recurring Backup" if it was an Event Rule-created backup.

7. Click **Next**. The **Restore Options** page appears.



8. Select the **Restore node-specific data** check box to restore data that is specific to that node (that is, listening IP address, DMZ Gateway settings, registration).
9. Select the **Restore cluster-shared data** check box to restore data that is shared amongst the cluster. When this check box is selected, the **Recreate the entire folder structure** check box is also selected. Clear that check box if you do not want to recreate the folder structure.

   When the restore process begins, other nodes stop with -1 error. This triggers them to be restarted by Windows Service Manager, at which point those other nodes will wait for restore operation to complete. Once the restore has completed on one of the nodes, the other nodes that had been waiting will proceed with loading configuration. After the restore completes, the node that did restore also restarts in the same way. Thus, all nodes in the cluster have restarted with restored configuration up-and-running.

10. Click either **Automatic Restore** or **Manual Restore**:

    Automatic Restore—**Automatic Restore** prompts only when the wizard encounters discrepancies or problems with restoring. **Automatic Restore** is the default setting. In automatic mode, you are not prompted to verify settings or allowed to change them.

a. Click **Automatic Restore**. The **Recreate the entire folder structure** check box is selected by default. Clear this check box if you do not want to recreate the VFS folder structure.

   If your EFT folder structure includes user folders (for example, C:\Inetpub\EFTRoot\MySite\Usr\<username>), if you clear the **Recreate the entire folder structure** check box and do not recreate these folders manually, the users will not be able to access their folders.

b. Click **Next**. The **Ready to Restore** page appears. Read the information on the page, and then click **Restore**.
c. After the Server is restored, restart EFT and log in to the administration interface. A log appears describing the restore process, including file names and paths, and contains any errors encountered during restore.

Manual Restore—Manual Restore allows you to verify and make changes to settings, as needed.

a. Click **Manual Restore**, and then click **Next**.

   The **Server Administration Connectivity** page appears.
b. Review the IP address for each Site. If you are restoring a Site to a different IP address, click to edit the IP address in the **New IP Address Assignment** list. The **Sites to Restore** page appears.
c. Click **Next**. Select the check boxes of the Sites whose settings you want to import and clear the check boxes of the Sites whose settings you do not want to import.
d. Click **Next**. In the **Site Listening IP Address Assignment** page appears. Click the links to specify one or more IP addresses to use (or All Incoming), and then click **OK**.
e. Click **Next**. The **Site Authentication Manager Settings** page appears.
f. The authentication database for each Site to be restored appears in the list. In the **Settings** column, click **View/Modify** if you want to view or change the path where EFT will store the user database. (You cannot change the type of authentication.)
   - If EFT cannot connect to the Site's authentication provider, an error message appears.
   - Click **OK** to continue as is or click **Cancel** to modify the authentication provider settings.
g. Click **Next**. The **Site Root Folder** page appears.

h. Review the root folder location for each Site that you are restoring. If necessary, click the folder icon to specify a different location, and then click **Next**.

i. If the DMZ Gateway is defined and configured in EFT that you are restoring, the **DMZ Gateway** page appears. If not, skip this step.

   i. Review the IP addresses and ports for the DMZ Gateway. Click to edit the IP address or port, if different.

   ii. Click **Next**. EFT will test the DMZ Gateway connection and, if successful, the wizard proceeds to the next page.

   - If a failure occurs, the wizard displays a warning prompt indicating failure to connect to the DMZ Gateway and allowing you to either fix the problem (go back to the previous page to verify the IP address and port) or proceed anyway (if the IP address and port are correct, but the DMZ is not communicating).

j. If the Auditing and Reporting module is defined and configured in EFT that you are restoring, the **Auditing Database Connectivity** page appears. If not, skip this step.

   - Click **Test** to verify connectivity to Auditing and Reporting Module queue and, if successful, send a test message to the database. If a connection to the database cannot be made within 5 seconds, a warning prompt appears. (Verify that the database is available.)

k. Click **Next**. Database connectivity is again verified and the **Ready to Restore** page appears.

l. Read the information on the page, and then click **Restore**.

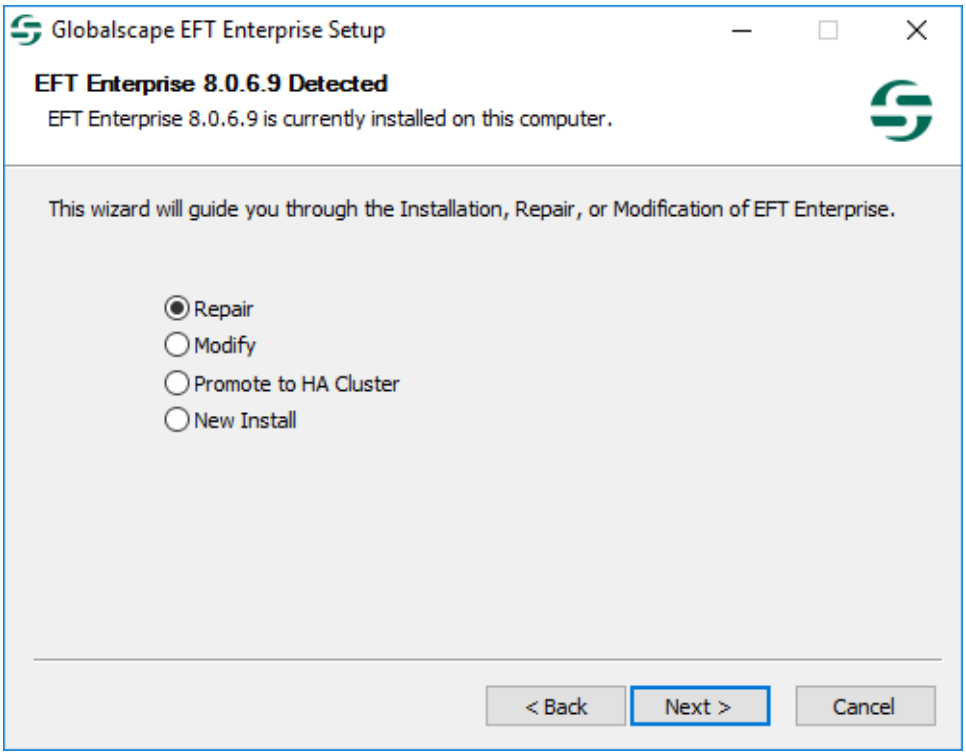
m. A message appears indicating whether the configuration was successfully restored. Click **OK**.

n. Review the log if errors were encountered during restore.

Modifying or Repairing the Installation

After you have installed EFT, you might later want to install other features, such as the administration interface or the Auditing and Reporting module. Or, if you accidentally deleted or edited necessary program files, you can repair the installation.

If you want to promote a stand-alone EFT server to an HA node, use the **Modify** option.



To modify or repair the software

1. Launch the installer. The installer will detect an existing installation.
2. Do one of the following:
    - To upgrade the existing installation, click **Repair**. (**Repair** overwrites changed files and reinstalls missing files.)
    - To install or uninstall specific components, click **Modify**. (**Modify** installs selected components; removes unselected components.)
    - To install a fresh installation, including a new configuration file, click **New Install**.
3. Click **Next** and follow the instructions in the wizard. Refer to Installing EFT, administrator, and Modules, if necessary.
4. If you chose **Modify** in step 2, on the **Components** page, select the check boxes of components you want to install and clear the check boxes of components you want to remove. ***If you clear the check box of an installed component, it will be uninstalled!***
5. When the wizard is finished, restart the Server services. The EFT service **Log On as** account will be set to **Local System** account by default. You can edit this in the service's **Properties** dialog box, on the **Log on** tab. (**Start > Run >**`services.msc`.)

Repair/modify activities are logged in the installer log file (for example, **C:\Program Files\GlobalSCAPE\EFT Server**). If you need additional information or help, visit Globalscape's Support Center.

Promoting EFT Stand-Alone to Cluster Node

You can "promote" an EFT stand-alone server to a new cluster node. Refer to Globalscape Knowledgebase article #11542, Promote Stand-alone EFT to HA node for details of promoting a stand-alone server to a node in a cluster configuration.

You cannot promote a stand-alone server to an existing cluster. In that case, you would have to reinstall EFT on the stand-alone box as a active-active server, using instructions in Upgrade HA Nodes with Zero Downtime, and then point the new active-active server to the existing cluster configuration path.