TIBCO Runtime Agent™

Upgrading to Release 5.11.1

Software Release 5.11.1
November 2019

TIBCO®

Important Information

SOME TIBCO SOFTWARE EMBEDS OR BUNDLES OTHER TIBCO SOFTWARE. USE OF SUCH EMBEDDED OR BUNDLED TIBCO SOFTWARE IS SOLELY TO ENABLE THE FUNCTIONALITY (OR PROVIDE LIMITED ADD-ON FUNCTIONALITY) OF THE LICENSED TIBCO SOFTWARE. THE EMBEDDED OR BUNDLED SOFTWARE IS NOT LICENSED TO BE USED OR ACCESSED BY ANY OTHER TIBCO SOFTWARE OR FOR ANY OTHER PURPOSE.

USE OF TIBCO SOFTWARE AND THIS DOCUMENT IS SUBJECT TO THE TERMS AND CONDITIONS OF A LICENSE AGREEMENT FOUND IN EITHER A SEPARATELY EXECUTED SOFTWARE LICENSE AGREEMENT, OR, IF THERE IS NO SUCH SEPARATE AGREEMENT, THE CLICKWRAP END USER LICENSE AGREEMENT WHICH IS DISPLAYED DURING DOWNLOAD OR INSTALLATION OF THE SOFTWARE (AND WHICH IS DUPLICATED IN THE LICENSE FILE) OR IF THERE IS NO SUCH SOFTWARE LICENSE AGREEMENT OR CLICKWRAP END USER LICENSE AGREEMENT, THE LICENSE(S) LOCATED IN THE “LICENSE” FILE(S) OF THE SOFTWARE. USE OF THIS DOCUMENT IS SUBJECT TO THOSE TERMS AND CONDITIONS, AND YOUR USE HEREOF SHALL CONSTITUTE ACCEPTANCE OF AND AN AGREEMENT TO BE BOUND BY THE SAME.

ANY SOFTWARE ITEM IDENTIFIED AS THIRD PARTY LIBRARY IS AVAILABLE UNDER SEPARATE SOFTWARE LICENSE TERMS AND IS NOT PART OF A TIBCO PRODUCT. AS SUCH, THESE SOFTWARE ITEMS ARE NOT COVERED BY THE TERMS OF YOUR AGREEMENT WITH TIBCO, INCLUDING ANY TERMS CONCERNING SUPPORT, MAINTENANCE, WARRANTIES, AND INDEMNITIES. DOWNLOAD AND USE OF THESE ITEMS IS SOLELY AT YOUR OWN DISCRETION AND SUBJECT TO THE LICENSE TERMS APPLICABLE TO THEM. BY PROCEEDING TO DOWNLOAD, INSTALL OR USE ANY OF THESE ITEMS, YOU ACKNOWLEDGE THE FOREGOING DISTINCTIONS BETWEEN THESE ITEMS AND TIBCO PRODUCTS.

This document is subject to U.S. and international copyright laws and treaties. No part of this document may be reproduced in any form without the written authorization of TIBCO Software Inc.

TIBCO, the TIBCO logo, the TIBCO O logo, TIBCO Hawk, TIBCO Rendezvous, TIBCO Runtime Agent, ActiveMatrix BusinessWorks, TIBCO Administrator, TIBCO Designer, TIBCO ActiveMatrix Service Gateway, TIBCO BusinessEvents, TIBCO BusinessConnect, and TIBCO BusinessConnect Trading Community Management are either registered trademarks or trademarks of TIBCO Software Inc. in the United States and/or other countries.

Java and all Java based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

All other product and company names and marks mentioned in this document are the property of their respective owners and are mentioned for identification purposes only.

This software may be available on multiple operating systems. However, not all operating system platforms for a specific software version are released at the same time. See the readme file for the availability of this software version on a specific operating system platform.

THIS DOCUMENT IS PROVIDED “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT.

THIS DOCUMENT COULD INCLUDE TECHNICAL INACCURACIES OR TYPOGRAPHICAL ERRORS. CHANGES ARE PERIODICALLY ADDED TO THE INFORMATION HEREIN; THESE CHANGES WILL BE INCORPORATED IN NEW EDITIONS OF THIS DOCUMENT. TIBCO SOFTWARE INC. MAY MAKE IMPROVEMENTS AND/OR CHANGES IN THE PRODUCT(S) AND/OR THE PROGRAM(S) DESCRIBED IN THIS DOCUMENT AT ANY TIME.

THE CONTENTS OF THIS DOCUMENT MAY BE MODIFIED AND/OR QUALIFIED, DIRECTLY OR INDIRECTLY, BY OTHER DOCUMENTATION WHICH ACCOMPANIES THIS SOFTWARE, INCLUDING BUT NOT LIMITED TO ANY RELEASE NOTES AND "READ ME" FILES.

This and other products of TIBCO Software Inc. may be covered by registered patents. Please refer to TIBCO's Virtual Patent Marking document (https://www.tibco.com/patents) for details.

Copyright © 1999-2019. TIBCO Software Inc. All Rights Reserved.

Contents

Preface vii

Changes from the previous Release of this Guide viii

Related Documentation ix
- TIBCO Runtime Agent Documentation ix
- Other TIBCO Product Documentation ix

Typographical Conventions xi

TIBCO Product Documentation and Support Services xiv
- How to Access TIBCO Documentation xiv
- How to Contact TIBCO Support xiv
- How to Join TIBCO Community xiv

Chapter 1 Upgrading to Release 5.11.1 1

Typical Upgrade 2

Upgrade Overview 4
- Configuration Data 4

Compatibility 6
- Software Compatibility 6
- Project and Domain Compatibility 9

Upgrade Considerations and Steps 10
- Common Upgrade Considerations 10
- Upgrade Steps 10
- Upgrade Security Vendor 10
- Upgrade Each Primary and Secondary Administration Server 11
- Upgrade Each Client Machine 13
- Upgrade Applications 14

Files Changed When Upgrading to 5.11 16
- Changes Made to TIBCO Runtime Agent 5.11 Domain Property Files 16

Configuring Vendor-supplied Database Drivers 17

Upgrade Issues 19
- Using Oracle Thick Client on HP_UX Systems 19
- TIBCO Enterprise Message Service Server Version Number 19
- TIBCO Designer Strict Naming Convention 20
- Roles and TIBCO BusinessWorks Collaborator 21
- Adapters Based on the Generic Adapter Resource 21

Index 23

Preface

This document gives comprehensive instructions on how to upgrade TIBCO Runtime Agent™ software, administration domains, and applications to Release 5.11.1. It also outlines some issues to which you must take note while upgrading your installations and deployments.

Topics

- Changes from the previous Release of this Guide, page viii
- Related Documentation, page ix
- Typographical Conventions, page xi
- TIBCO Product Documentation and Support Services, page xiv

Changes from the previous Release of this Guide

All the screenshots have been updated with new TIBCO logo.

Related Documentation

This section lists documentation resources you may find useful.

TIBCO Runtime Agent Documentation

The TIBCO Runtime Agent™ software suite is a prerequisite for other TIBCO software products. In addition to Runtime Agent components, the software suite includes the third-party libraries used by other TIBCO products, TIBCO Designer™, Java Runtime Environment (JRE), TIBCO Rendezvous®, and TIBCO Hawk®.

The following documents form the TIBCO Runtime Agent™ documentation set:

- *TIBCO Runtime Agent™ Installation* Read this manual for instructions on site preparation and installation.
- *TIBCO Runtime Agent™ Installing Into a Cluster* Read this manual for instructions on installing TIBCO applications into a cluster environment.
- *TIBCO Runtime Agent™ Upgrading to Release 5.11.1* Read this manual for instructions on upgrading from release 5.x to release 5.11.1.
- *TIBCO Runtime Agent™ Domain Utility User's Guide* Read this manual for instructions on using TIBCO Domain Utility to create and manage administration domains.
- *TIBCO Runtime Agent™ Scripting Deployment User's Guide* Read this manual for instructions on using the AppManage scripting utility to deploy applications.
- *TIBCO Runtime Agent™ Authentication API User's Guide* Read this manual for instructions on using Authentication API.
- *TIBCO Runtime Agent™ Release Notes* Read the release notes for a list of new and changed features. This document also contains lists of known issues and closed issues for this release.

Other TIBCO Product Documentation

You may find it useful to read the documentation for the following TIBCO products:

- TIBCO Administrator™ : TIBCO Administrator allows you to manage users, machines and applications defined in a TIBCO administration domain. The TIBCO Administrator graphical user interface enables users to deploy, monitor, and start and stop TIBCO applications.

- TIBCO Designer™: This graphical user interface is used for designing and creating integration project configurations and building an Enterprise Archive (EAR) for the project. The EAR can then be used by TIBCO Administrator for deploying and running the application.
- TIBCO Hawk®: This is a tool for monitoring and managing distributed applications and operating systems.
- TIBCO Rendezvous®: Rendezvous enables programs running on many different kinds of computers on a network to communicate seamlessly. It includes two main components: the Rendezvous application programming interface (API) in several languages, and the Rendezvous daemon.
- TIBCO Enterprise Message Service™: This software lets application programs send and receive messages using the Java Message Service (JMS) protocol. It also integrates with TIBCO Rendezvous and TIBCO SmartSockets® messaging products.
- TIBCO ActiveMatrix BusinessWorks™: ActiveMatrix BusinessWorks is a scalable, extensible, and easy to use integration platform that allows you to develop integration projects. ActiveMatrix BusinessWorks includes a GUI for defining business processes and an engine that executes the process.
- TIBCO® Adapter software: TIBCO Runtime Agent is a prerequisite for TIBCO Adapter products. You will therefore find TIBCO Adapter product documentation useful.

Typographical Conventions

The following typographical conventions are used in this manual.

Table 1 General Typographical Conventions

Convention	Use
ENV_NAME *TIBCO_HOME* *TRA_HOME*	TIBCO products are installed into an installation environment. A product installed into an installation environment does not access components in other installation environments. Incompatible products and multiple instances of the same product must be installed into different installation environments. An installation environment consists of the following properties: • **Name** Identifies the installation environment. This name is referenced in documentation as *ENV_NAME*. On Microsoft Windows, the name is appended to the name of Windows services created by the installer and is a component of the path to the product shortcut in the Windows Start > All Programs menu. • **Path** The folder into which the product is installed. This folder is referenced in documentation as *TIBCO_HOME*. *TIBCO Runtime Agent* installs into a directory within a *TIBCO_HOME*. This directory is referenced in documentation as <ProductAcronym>*_HOME*. The default value of <ProductAcronym>*_HOME* depends on the operating system. For example on Windows systems, the default value is `C:\tibco\<ProductAcronym>\<ReleaseNumber>`.
`code font`	Code font identifies commands, code examples, filenames, pathnames, and output displayed in a command window. For example: Use `MyCommand` to start the foo process.
`bold code font`	Bold code font is used in the following ways: • In procedures, to indicate what a user types. For example: Type **`admin`**. • In large code samples, to indicate the parts of the sample that are of particular interest. • In command syntax, to indicate the default parameter for a command. For example, if no parameter is specified, `MyCommand` is enabled: `MyCommand [`**`enable`**` | disable]`

Table 1 General Typographical Conventions (Cont'd)

Convention	Use
italic font	Italic font is used in the following ways: • To indicate a document title. For example: See *TIBCO ActiveMatrix BusinessWorks Concepts*. • To introduce new terms For example: A portal page may contain several portlets. *Portlets* are mini-applications that run in a portal. • To indicate a variable in a command or code syntax that you must replace. For example: `MyCommand` *PathName*
Key combinations	Key name separated by a plus sign indicate keys pressed simultaneously. For example: Ctrl+C. Key names separated by a comma and space indicate keys pressed one after the other. For example: Esc, Ctrl+Q.
	The note icon indicates information that is of special interest or importance, for example, an additional action required only in certain circumstances.
	The tip icon indicates an idea that could be useful, for example, a way to apply the information provided in the current section to achieve a specific result.
	The warning icon indicates the potential for a damaging situation, for example, data loss or corruption if certain steps are taken or not taken.

Table 2 Syntax Typographical Conventions

Convention	Use
`[ ]`	An optional item in a command or code syntax. For example: `MyCommand [optional_parameter] required_parameter`
`|`	A logical `OR` that separates multiple items of which only one may be chosen. For example, you can select only one of the following parameters: `MyCommand param1 | param2 | param3`

Table 2 Syntax Typographical Conventions (Cont'd)

Convention	Use

`{ }`	A logical group of items in a command. Other syntax notations may appear within each logical group.
	
	For example, the following command requires two parameters, which can be either the pair `param1` and `param2`, or the pair `param3` and `param4`.
	
	`MyCommand {param1 param2} | {param3 param4}`
	
	In the next example, the command requires two parameters. The first parameter can be either `param1` or `param2` and the second can be either `param3` or `param4`:
	
	`MyCommand {param1 | param2} {param3 | param4}`
	
	In the next example, the command can accept either two or three parameters. The first parameter must be `param1`. You can optionally include `param2` as the second parameter. And the last parameter is either `param3` or `param4`.
	
	`MyCommand param1 [param2] {param3 | param4}`

TIBCO Product Documentation and Support Services

For information about this product, you can read the documentation, contact TIBCO Support, or join TIBCO Community.

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the TIBCO Product Documentation website mainly in the HTML and PDF formats.

The TIBCO Product Documentation website is updated frequently and is more current than any other documentation included with the product. To access the latest documentation, visit https://docs.tibco.com.

Documentation for TIBCO Runtime Agent™ is available on the https://docs.tibco.com/products/tibco-runtime-agent

How to Contact TIBCO Support

You can contact TIBCO Support in the following ways:

- For an overview of TIBCO Support, visit https://www.tibco.com/services/support.
- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the TIBCO Support portal at https://support.tibco.com.
- For creating a Support case, you must have a valid maintenance or support contract with TIBCO. You also need a user name and password to log in to https://support.tibco.com. If you do not have a user name, you can request one by clicking **Register** on the website.

How to Join TIBCO Community

TIBCO Community is the official channel for TIBCO customers, partners, and employee subject matter experts to share and access their collective experience. TIBCO Community offers access to Q&A forums, product wikis, and best practices. It also offers access to extensions, adapters, solution accelerators, and tools that extend and enable customers to gain full value from TIBCO products. In addition, users can submit and vote on feature requests from within the TIBCO Ideas Portal. For a free registration, go to https://community.tibco.com.

Chapter 1 Upgrading to Release 5.11.1

This section explains how to upgrade from releases 5.8, 5.9, 5.9.1, 5.10, 5.10.1, 5.11.0 to release 5.11.1.

Topics

- Typical Upgrade, page 2
- Upgrade Overview, page 4
- Compatibility, page 6
- Upgrade Considerations and Steps, page 10
- Files Changed When Upgrading to 5.11, page 16
- Configuring Vendor-supplied Database Drivers, page 17
- Upgrade Issues, page 19

Typical Upgrade

You can upgrade to release 5.11 quickly by installing the upgraded software and accepting the defaults on the installation screens. After you install both TIBCO Runtime Agent and TIBCO Administrator, the TIBCO Administrator installer launches TIBCO Domain Utility to upgrade the administration domains you select.

In most cases, you need not uninstall your existing TIBCO Runtime Agent release, but install the upgrade next to the existing release. For example, if you have TIBCO Runtime Agent release 5.8 installed in the `C:\tibco\tra\5.8` folder, release 5.11 will be installed, by default, in the `C:\tibco\tra\5.11` folder, allowing both releases to co-exist.

If multiple administration domains exist on a machine and TIBCO Runtime Agent 5.11 is installed on that machine, you can select which domains to upgrade. For example, if you have three administration domains on a machine that use release 5.9 and upgrade only one to use release 5.11, the non-migrated domains will continue to use release 5.9.

To Upgrade a Typical Environment

Follow the steps below to upgrade a typical environment. If your environment is complex and includes secondary administration servers, you should read this entire manual before upgrading.

Note that these instructions do not include changing to vendor-supplied database drivers from DataDirect drivers which are no longer shipped with TIBCO Runtime Agent. It is recommended that you install TIBCO Database Drivers Supplement or use a vendor-supplied database driver. See Configuring Vendor-supplied Database Drivers on page 17 for more information.

1. For the administration domain being upgraded, shut down the primary administration server and the TIBCO Hawk agent. Shutdown each secondary administration server and its corresponding TIBCO Hawk agent running in the domain to be upgraded.
2. Install TIBCO Runtime Agent 5.11 on each machine in the administration domain.
3. Install TIBCO Administrator 5.11 on the machine that hosts the administration server. After installation on each machine, the installer launches TIBCO Domain Utility to upgrade the administration domains you select.

4. If not installed, install TIBCO ActiveMatrix BusinessWorks, or other TIBCO products on machines that require it.
5. Upgrade your applications in the administration domain. See Upgrade Applications on page 14 for details.

Upgrade Overview

TIBCO Runtime Agent provides libraries and functionality to TIBCO applications including TIBCO Adapter, TIBCO Administrator, TIBCO Designer, TIBCO ActiveMatrix BusinessWorks and other TIBCO applications.

This section describes the upgrade process, compatibility among releases, and identifies changes to the configuration files that are preserved and modified.

Why Upgrade?

Upgrading to TIBCO Runtime Agent 5.11 is necessary when another TIBCO product requires it, or if you want to do one of the following:

- Use newer versions of TIBCO Rendezvous and TIBCO Hawk
- Use newer Apache Tomcat which has some security fixes
- Defect corrections as documented in the Release Notes
- Use new features as documented in the Release Notes

Configuration Data

Many TIBCO applications use property files (`*.tra` files) to store configuration information such as classpaths and Java properties that are used to launch TIBCO applications. Classpaths and properties can be modified by *upper-level* TIBCO products that are dependent on *lower-level* products in the stack.

When upgrading to TIBCO Runtime Agent 5.11, configuration and domain data from the latest 5.x installation on your machine is imported into the new installation. This means you do not have to recreate or reconfigure applications and domains and that the classpaths in the `.tra` files are valid.

For example, if you have both 5.7 and 5.8 installed on your machine, the `designer.tra` file from the TIBCO Designer 5.7 (latest resident release) is copied by the 5.11 installer and modified, so that the classpath includes the 5.8 adapter palette code as well as the 5.11 code. This enables you to use previously installed adapter palettes in TIBCO Designer 5.11 after installing release 5.11.

You should specifically check for `hawkagent_`*`domain_name`*`.tra` and `tibcoadmin_`*`domain_name`*`.tra` for each domain. The other .tra files are typically under the bin directory of each TIBCO product.

Deployed Project Data

Deployed applications will continue using the previous version of TIBCO Runtime Agent until the UpgradeManager is used on the machines where they are deployed. When those applications are redeployed, their .tra files will be updated to TIBCO Runtime Agent 5.11. This is not affected by upgrading the domain itself to use TIBCO Runtime Agent 5.11 on the target machine or TIBCO Administrator server machine. See Upgrade Applications on page 14 for information on upgrading your applications.

TIBCO Product Coexistence

TIBCO products (TIBCO Runtime Agent 5.11 and TIBCO Designer 5.11) can coexist on the same machine with previous releases, but you cannot have two administration domains of the same name even if they are different versions.

If you wish to preserve application and domain configuration information, you should not uninstall 5.x applications before installing 5.11 applications.

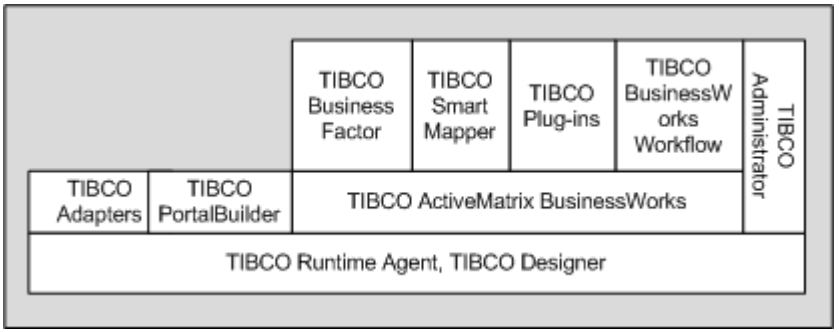
Uninstalling the Previous Version

After upgrading all the domains to release 5.11 and redeploying all the applications, you can use TIBCO Installation Manager to uninstall the previous releases. You can also choose not to uninstall a previous release if you have applications that will continue to use a previous release.

Compatibility

The following architecture diagram shows dependencies for a few TIBCO products. Other TIBCO products depend on TIBCO Runtime Agent, but are not shown in the diagram. Note that upgrading TIBCO BusinessWorks SmartMapper, TIBCO BusinessFactor, and TIBCO BusinessWorks Collaborator is not addressed in this document.

Figure 1 Architecture Diagram



Software Compatibility

Backward compatible applications can exchange data with and use configurations of previous releases. Products dependent upon an application can continue to be used with a newer release of the application.

The following table shows the compatibility among TIBCO Administrator, TIBCO BusinessWorks, TIBCO Adapter and TIBCO Runtime Agent on a specific machine. Yes indicates the releases are compatible. No indicates the releases are not compatible.

	TIBCO Runtime Agent 5.7	TIBCO Runtime Agent 5.8	TIBCO Runtime Agent 5.9	TIBCO Runtime Agent 5.10	TIBCO Runtime Agent 5.11
TIBCO Rendezvous 8.4.2	Yes	Yes	Yes	No	No
TIBCO Rendezvous 8.4.3	Yes	Yes	Yes	Yes	Yes
TIBCO Rendezvous 8.4.5	No	No	No	No	Yes

	TIBCO Runtime Agent 5.7	TIBCO Runtime Agent 5.8	TIBCO Runtime Agent 5.9	TIBCO Runtime Agent 5.10	TIBCO Runtime Agent 5.11
TIBCO Rendezvous 8.4.6	No	No	No	No	Yes
TIBCO Administrator 5.6.0	No	No	No	No	No
TIBCO Administrator 5.7.0	Yes	No	No	No	No
TIBCO Administrator 5.8.0	No	Yes	No	No	No
TIBCO Administrator 5.9.0	No	No	Yes	No	No
TIBCO Administrator 5.10.0	No	No	No	Yes	No
TIBCO Administrator 5.11.0	No	No	No	No	Yes
TIBCO ActiveMatrix BusinessWorks 5.6.0	Yes	No	No	No	No
TIBCO ActiveMatrix BusinessWorks 5.7.0	Yes	No	No	No	No
TIBCO ActiveMatrix BusinessWorks 5.8.0	Yes	No	No	No	No
TIBCO ActiveMatrix BusinessWorks 5.9.0	Yes	No	No	No	No
TIBCO ActiveMatrix BusinessWorks 5.10.0	Yes	No	No	No	No
TIBCO ActiveMatrix BusinessWorks 5.11.0	No	Yes	Yes	No	No
TIBCO ActiveMatrix BusinessWorks 5.12.0	No	No	Yes	No	No
TIBCO ActiveMatrix BusinessWorks 5.13.0	No	No	No	Yes	Yes
TIBCO ActiveMatrix BusinessWorks 5.13.1	No	No	No	Yes	Yes

	TIBCO Runtime Agent 5.7	TIBCO Runtime Agent 5.8	TIBCO Runtime Agent 5.9	TIBCO Runtime Agent 5.10	TIBCO Runtime Agent 5.11
TIBCO ActiveMatrix BusinessWorks 5.14.0	No	No	No	No	Yes
TIBCO Adapter 5.x	Yes	Yes **	Yes **	Yes **	Yes **
TIBCO Adapter 6.x	Yes	Yes **	Yes **	Yes **	Yes **
TIBCO EMS server 5.x	Yes	No	No	No	No
TIBCO EMS server 6.x	Yes	Yes	Yes	No	No
TIBCO EMS Server 7.x	Yes	Yes	Yes	No	No
TIBCO EMS Server 8.x	Yes	Yes	Yes	Yes	Yes

** **NOTE:** Support could vary by adapters. See the relevant adapter documentation or contact Customer Support for details.

As shown in the table:

- TIBCO Administrator 5.6 *requires* TIBCO Runtime Agent 5.6. The installer enforces this requirement.
- TIBCO Administrator 5.7 *requires* TIBCO Runtime Agent 5.7. The installer enforces this requirement.
- TIBCO Administrator 5.8 *requires* TIBCO Runtime Agent 5.8. The installer enforces this requirement.
- TIBCO Administrator 5.9 *requires* TIBCO Runtime Agent 5.9. The installer enforces this requirement.
- TIBCO Administrator 5.10 *requires* TIBCO Runtime Agent 5.10. The installer enforces this requirement.
- TIBCO Administrator 5.11 *requires* TIBCO Runtime Agent 5.11. The installer enforces this requirement.

If administration domains already exist on a machine when you install TIBCO Runtime Agent 5.11, the TIBCO Hawk agents for these domains will continue using existing 5.x code until you upgrade each domain using Domain Utility. The TIBCO Runtime Agent 5.11 installer provides an option to upgrade the TIBCO Hawk agent to use TIBCO Runtime Agent 5.11 software for each domain.

Project and Domain Compatibility

Forward compatible applications can exchange data with or use configuration information of newer versions of the application.

TIBCO Designer

TIBCO Designer 5.11 can open and edit projects saved by older versions of TIBCO Designer. After a project is saved by TIBCO Designer 5.11, you cannot re-open the 5.11 project with a release prior to TIBCO Designer 5.11.

TIBCO Administrator

You can use any TIBCO Administrator release to deploy applications created by any TIBCO Designer 5.x release.

- TIBCO Administrator 5.6, 5.7, 5.8 can deploy and administer enterprise archives created in previous versions of TIBCO Administrator.
- TIBCO Administrator primary and secondary servers must be of the same release.
- TIBCO Runtime Agent 5.11 can be part of a domain where the TIBCO Administrator server is 5.6, 5.7, 5.8.
- TIBCO Administrator 5.11 can communicate with a TIBCO Hawk Agent on another machine in the domain running TIBCO Runtime Agent 5.6, 5.7, or 5.8.

An application configured using TIBCO Designer 5.6 and above deployed using previous versions of TIBCO Administrator can also be deployed using TIBCO Administrator 5.11. The domain on the client machine where the application is running can be, but does not need to be, upgraded to use TIBCO Runtime Agent 5.11 as TIBCO Administrator can administer domains consisting of different versions of TIBCO Runtime Agent.

TIBCO Runtime Agent

Projects that are created on different versions of TIBCO Runtime Agent can be deployed and administered by the same version of TIBCO Administrator.

Upgrade Considerations and Steps

Before performing the upgrade steps, read the common considerations.

Common Upgrade Considerations

- You might have to restart your computer after installing version 5.11: On Microsoft Windows platform, if you have installed an earlier version (5.x) of TIBCO Runtime Agent, after installing version 5.11, you must restart your computer when prompted by the installer.
- DataDirect drivers are not included with the product since TIBCO Runtime Agent 5.7.0: You can install TIBCO Database Drivers Supplement or use a vendor-supplied database driver. The instructions for using the vendor-supplied drivers are included in each section.

Upgrade Steps

Read the Compatibility section to ensure the projects are compatible for upgrade.

- Upgrade Security Vendor, page 10
- Upgrade Each Primary and Secondary Administration Server, page 11
- Upgrade Each Client Machine, page 13

After upgrading all the domains to version 5.11 and redeploying all the applications, you can use TIBCO Installation Manager to uninstall the previous versions. You can also choose not to uninstall a previous version if you have applications that continue to use a previous version.

Upgrade Security Vendor

To migrate from Entrust security vendor to BouncyCastle FIPS, the following files have to be modified.

Table 3 Security Vendor properties files

File Name	Modification details
Administrationdomain.properties and **Authorization Domain.properties**	• Add `notifier.ems.ssl_trusted=<location of the trusted file>` **Example:** `notifier.ems.ssl_trusted=<TIBCO_HOME>/ems/8.3/samples/certs/server_root.cert.pem` • Remove `notifier.ems.ssl_no_verify_host=true` or set `notifier.ems.ssl_no_verify_host` to `false` • Remove `notifier.ems.ssl_no_verify_hostname=true` or set `notifier.ems.ssl_no_verify_hostname` to `false`
Hawkagent.cfg	• Comment `-ssl_no_verify_host true` and `-ssl_no_verify_hostname true` • Uncomment `-ssl_trusted <file-name>` For example: `-ssl_trusted=<TIBCO_HOME>/ems/8.3/samples/certs/server_root.cert.pem`
tibcoadmin_domainname.tra	Provide the following property: `java.property.TIBCO_SECURITY_VENDOR=bcfips`

After modifying the properties, your security vendor is successfully migrated from Entrust to BouncyCastle FIPS. Now, you must start the administration server and TIBCO Hawk agent services.

In tibcoadmin_domainname.tra and hawkagent.cfg files, `tibco.env.EMS_HOME` must point to EMS_Home.

Upgrade Each Primary and Secondary Administration Server

The primary administration server runs on the primary machine. A secondary administration server runs on a secondary machine. The primary administration server and secondary administration servers must use the same version of TIBCO Administrator and TIBCO Runtime Agent.

1. If you are using a file based repository, backup your 5.x domain directories and files in *TIBCO_HOME*`/administrator/domain`. This step should be performed for each administration domain you intend to upgrade.
2. For the administration domain being upgraded, shut down the primary administration server and the TIBCO Hawk agent. Shut down each secondary administration server and its corresponding TIBCO Hawk agent running in the domain to be upgraded. Note that you need not shutdown the secondary servers until the primary server is ready to start.
3. Install TIBCO Runtime Agent 5.11 on the primary machine.

   After installation, the installer launches a database configuration GUI for you to configure the path for a vendor-supplied database driver. If you skip this step by clicking Cancel, you must carefully follow the instructions given in Configuring Vendor-supplied Database Drivers on page 17 later to configure your TIBCO Runtime Agent installation and administration domains.

   a. Keep the **Use Vendor Native Driver** selected and supply the directory path to your vendor-supplied driver.

   b. Click **Next** to finish.
4. Install TIBCO Administrator 5.11 on the primary machine.

   After installation, the installer launches TIBCO Domain Utility to upgrade the administration domains you select. Refer to *TIBCO Runtime Agent Domain Utility User's Guide* for details.
5. As EMS libraries are no longer shipped with TIBCO Runtime Agent, run traUpgradeManager with -ems option to update the `tibcoadmin_domainname.tra` and `hawkagent_domainname.tra` files in case the domain uses EMS transport. The traUpgradeManager utility will update the path and classpath in the tra files by adding the location of the EMS libraries.

   `traUpgradeManager -path <TIBCO_HOME or the domain path>` -ems location where EMS is installed.

   `traUpgradeManager -path c:/tibco/tra/domain/<domain name>` -ems c:/tibco/ems/8.0

   `traUpgradeManager -path c:/tibco/administrator/domain/<domain name>` -ems c:/tibco/ems/8.0
6. If you use a vendor-supplied database driver, for each domain on the primary machine you have just upgraded, change the database driver from DataDirect to the one whose path you configured in step 3, by following the instructions in *TIBCO Runtime Agent Domain Utility User's Guide*. Skip this step if you did not configure the path of a vendor-supplied database driver.

7. If you use a vendor-supplied database driver, for each domain on the primary machine you have just upgraded, you need to run the `traDBConfig` utility to configure the path of the vendor-supplied database driver for the `tibcoadmin_`*`domain_name`*`.tra` file.
8. Start the administration server for each upgraded domain on the primary machine. Shut down the secondary servers (if any) before starting the upgraded server.
9. Start the TIBCO Hawk agent for each upgraded domain on the primary machine.
10. If you have a secondary administration server, do the following for each administration domain's secondary server:
    a. Install TIBCO Runtime Agent 5.11 on the secondary machine.

       Be sure to configure a vendor-supplied database driver, as you have done on the primary machine.

    b. Install TIBCO Administrator 5.11 on the secondary machine.

       After installation, the installer launches TIBCO Domain Utility to upgrade the administration domains you select.

       In case the EMS is used as a domain transport, run traUpgradeManager with –ems option. Refer step 5.

    c. Start the administration server for each upgraded domain.
    d. Start the TIBCO Hawk agent for each upgraded domain.
11. Update all the .tra files on the machine.

Upgrade Each Client Machine

Client machines need not be upgraded and can be upgraded one at a time. They can be upgraded before or after the administration servers are upgraded. Installation can be done without upgrading some or all domains, with upgrading occurring later.

Follow the steps below for each client machine:

1. On the client machine, shut down the TIBCO Hawk agent for each domain you wish to upgrade.
2. Install TIBCO Runtime Agent 5.11.

   After installation, the installer launches a database configuration GUI for you to configure the path for a vendor-supplied database driver. If you skip this step by clicking Cancel, you must carefully follow the instructions given in

Configuring Vendor-supplied Database Drivers on page 17 later to configure your TIBCO Runtime Agent installation and administration domains.

a. Keep the **Use Vendor Native Driver** selected and supply the directory path to your vendor-supplied driver.

b. Click **Next** to finish.

3. Follow the instructions below to upgrade each administration domain with TIBCO Domain Utility:

   a. Invoke: *TIBCO_HOME*`/tra/5.11/bin/domainutility`

   b. Click **Next** in the splash screen.

   c. Click **Migration** in the left panel.

   d. Click **Upgrade Domains to 5.11** and click **Next**.

   e. In the pop-up select the domain to migrate. Multiple domains can be selected.

   f. Click **Next**.

   g. Click **Next**.

4. If you use a vendor-supplied database driver, for each domain you have just migrated, change the database driver from DataDirect to the one whose path you configured in step 2. If you didn't select a native driver in step 2, you need to run the `traDBConfig` utility prior to upgrading the domain or manually change it by following the instructions in *TIBCO Runtime Agent Domain Utility User's Guide*. Skip this step if you have configured the path of a vendor-supplied database driver.

5. Start the TIBCO Hawk agents for the upgraded domains.

6. Install upgraded TIBCO software on each machine that requires it. For example, install TIBCO BusinessWorks 5.14 on each machine that requires the upgrade.

Reinstall the upgraded set of TIBCO software based on software compatibility matrix on each machine to migrate from previous release of TIBCO Runtime Agent to TIBCO Runtime Agent 5.11

Upgrade Applications

If you do not uninstall your existing 5.x TIBCO Runtime Agent release, you need not upgrade your applications. They will continue to run using the Runtime Agent release they were configured to use. However, if you want your applications to use release 5.11, you must follow the steps in this section to enable them to do so.

If a machine with prior versions of TIBCO Runtime Agent already has applications deployed on it, the deployed application's .tra files will continue to refer to the previous versions of TRA, TPCL and JRE. Installing TIBCO Runtime Agent 5.11 and re-deploying those applications will not update the TRA, TPCL and JRE references in the deployed services' .tra files.

You must use the `traUpgradeManager` utility to upgrade the references in the product's .tra template file, and then undeploy and redeploy each service. The `traUpgradeManager` utility is in the *TIBCO_HOME*`/tra/`*version*`/bin` folder. A product's template file is located in the product's bin directory.

For example, the following steps explain how to upgrade the TIBCO BusinessWorks 5.14 template file to use TIBCO Runtime Agent release 5.11 on Windows 32-bit platform. After updating the BusinessWorks template file and using TIBCO Administrator to undeploy and redeploy a BusinessWorks process instance, its .tra file will be updated to use TIBCO Runtime Agent 5.11.

1. In the command line, change the directory to *TIBCO_HOME*`/tra/5.11/bin.`
2. Invoke the following command. The first option is the location of the BusinessWorks home and the second option is the TIBCO Runtime Agent release number to upgrade to.

   `traUpgradeManager -path` *TIBCO_HOME*`\bw\5.14 -traversion 5.11 -jre` *TIBCO_HOME*`\tibcojre\1.8.0 -rv` *TIBCO_HOME*`\tibrv\8.4`
3. Using TIBCO Administrator, undeploy and redeploy each TIBCO BusinessWorks 5.14 process instance.
4. As EMS libraries are no longer shipped with TIBCO Runtime Agent, run traUpgradeManager with -ems option to update the `tibcoadmin_domainname.tra` and `hawkagent_domainname.tra` files in case the domain uses EMS transport. The traUpgradeManager utility will update the path and classpath in the tra files by adding the location of the EMS libraries.

   `traUpgradeManager -path <TIBCO_HOME or the domain path>` -ems location where EMs is installed.

   `traUpgradeManager -path c:/tibco/tra/domain/<domain name>` -ems c:/tibco/ems/8.0

   `traUpgradeManager -path c:/tibco/administrator/domain/<domain name>` -ems c:/tibco/ems/8.0

   `traUpgradeManager -path c:/tibco/bw/5.14` -ems c:/tibco/ems/8.0

Repeat the same steps for other products whose services you need to update, and then use TIBCO Administrator to undeploy and redeploy each product service instance.

Files Changed When Upgrading to 5.11

When installing release 5.11, some 5.x property files are used as the basis for 5.11. Release 5.11 does not install over 5.x, but installs next to it. Release 5.x property files are not changed in the installed locations.

The following sections list which files are copied and modified.

Changes Made to TIBCO Runtime Agent 5.11 Domain Property Files

When upgrading existing 5.x domains to 5.11, the following property files in the domain directories are modified to be used in release 5.11. The 5.11 installer creates a backup of the existing 5.x files. No properties are changed in these backup files.

TIBCO_HOME/tra/domain/*domainName*

Properties in `AdministrationDomain.properties`, `hawkagent.cfg`, `hawkagent_`*domain*`.tra` and `local.properties` are changed to point to release 5.11. See below for more information.

- `AdministrationDomain.properties` is copied to `AdministrationDomain.properties_backup5.`*x*.
- `hawkagent.cfg` is copied to `hawkagent.cfg_backup5.`*x*.
- `hawkagent_`*domain*`.tra` is copied to `hawkagent_`*domain*`.tra.backup5.`*x*.
- `local.properties` is copied to `local.properties_backup5.`*x*.
- `hawkhma.cfg and tibhawkhma.tra` are generated in the tra domain directory

After migrating the domain, `hawkhma.cfg` and tibhawkhma.tra files are generated.

TIBCO_HOME/administrator/domain/*domainName*/*bin*

- Properties in tibcoadmin_*domain*.tra are changed to point to the current release.

Configuring Vendor-supplied Database Drivers

DataDirect drivers are not shipped since TIBCO Runtime Agent 5.7.0. You can install TIBCO Database Drivers Supplement or use a vendor-supplied database driver for your administration domains. You can use the `traDBConfig` utility to configure the path of a vendor-supplied driver. The `traDBConfig` utility is in the *TIBCO_HOME*`/tra/`*<version>*`/bin` folder. For more information about this utility, see *TIBCO Runtime Agent Installation*.

Take note of the following caveats before you begin:

- Migrate a domain to 5.11 *before* using `traDBConfig` to configure a vendor-supplied driver for that domain.
- Configure the vendor-supplied driver for your machines in the following order: the primary server, then the secondary server, then the client machines.

Follow the instructions below to configure your 5.11 installations and administration domains with vendor-supplied drivers. On each server and client machine where DataDirect drivers had been used:

1. In the command line, change the directory to *TIBCO_HOME*`/tra/5.11/bin`.
2. Execute the `tradbconfig` command for TIBCO Runtime Agent. For example:

   ```
   traDBConfig -type OracleThin -dbPath c:\oraclejdbcdir -product
   tra
   ```

3. **(Server machines only)** Execute the `traDBConfig` command for TIBCO Administrator. For example:

   ```
   traDBConfig -type OracleThin -dbPath c:\oraclejdbcdir
                                                    -product admin
   ```

4. Begin an empty text file with the string `FILES` with a space after it.
5. Append the absolute path of each 5.11 domain's .tra file which the machine administrates or to which the machine belongs, separated by semicolons (no space):

   (For 5.11 server domains)
   TIBCO_HOME`/administrator/domain/`*domainname*`/tibcoadmin_`*domain*`.tra`

   (For 5.11 client domains)
   TIBCO_HOME`/tra/domain/`*domainname*`/hawkagent_`*domain*`.tra`

   For example:

   ```
   FILES c:/tibco/tra/domain/sample/hawkagent_sample.tra;c:/...
   ```

6. Save the file.

7. In the command line, execute the `traDBConfig` command on the file. For example:

```
traDBConfig -type OracleThin -dbPath c:\oraclejdbcdir
-filelist c:\filelist.txt
```

If you are using the Oracle thick client, you must also set the `-ociPath` parameter in `traDBConfig`.

In addition, you must set the `ORACLE_HOME` environment variable prior to performing each of step 8, step 9, and step 10. See Using Oracle Thick Client on HP_UX Systems on page 19 for more information.

8. For each 5.11 domain on the machine, change the database driver from DataDirect to the one whose path you configured in the previous steps, by following the instructions in *TIBCO Runtime Agent Domain Utility User's Guide*.
9. **(Server machines only)** Start the administration server for each 5.11 domain.
10. Start the TIBCO Hawk agents for each 5.11 domain.
11. If any applications are running locally in your 5.11 domains using *custom* database settings, you must manually select the database setting for these applications one by one in the TIBCO Administrator GUI and redeploy them. Applications that otherwise use the default database settings will automatically use the driver you selected in TIBCO Domain Utility. See *TIBCO Administrator User's Guide* for more information.

Upgrade Issues

See the *TIBCO Runtime Agent Release Notes* and the *TIBCO Administrator Release Notes* Known Issues sections for descriptions of additional issues related to migration.

Using Oracle Thick Client on HP_UX Systems

In order to use the thick database client supplied by Oracle on HP_UX systems, you must set the `ORACLE_HOME` environment variable each time prior to performing one of the following functions:

- running TIBCO Domain Utility (both GUI and command-line)
- starting the administration server
- starting the Hawk agent.

For example, if your Oracle home directory is `/u01/app/oracle/product/10.2`, you must execute the following shell command:

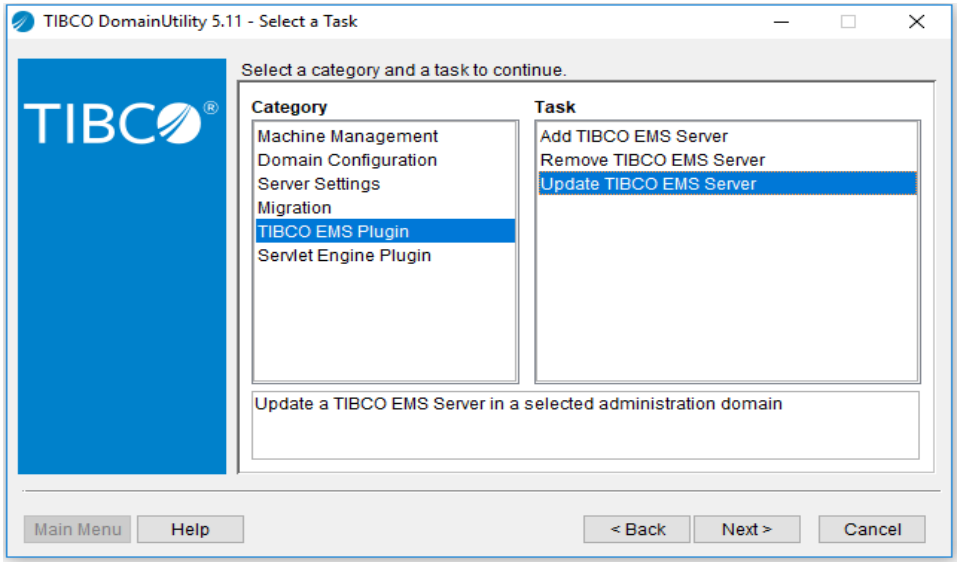
```
% export ORACLE_HOME=/u01/app/oracle/product/10.2
```

TIBCO Enterprise Message Service Server Version Number

If you have used TIBCO Domain Utility to add the Enterprise Message Service server to a domain, when you upgrade the server to a new version, the Software column in the TIBCO Administrator GUI Application Management > All Service Instances panel is not updated with the correct version number. After installing the upgraded server software, you must rerun TIBCO Domain Utility to update the server information. You must logout and log back into the TIBCO Administrator GUI to see the changes.

1. Start TIBCO Domain Utility and from the TIBCO EMS Plugin category, select **Update TIBCO EMS Server**.

Figure 2 Select Update TIBCO EMS Server



2. Select a domain and provide the domain administrator credentials. Click **Next**.
3. Select the server to be updated. Click **Next**.
4. Update the Version field with the correct version number. Click **Next**.
5. Test the connection to verify the parameters supplied. Click **Next**.
6. A summary screen appears indicating success. Click **Exit** to close TIBCO Domain Utility.
7. If you were logged into the TIBCO Administrator GUI for the domain, you must logout and log back in to see the changes.

TIBCO Designer Strict Naming Convention

A stricter naming convention is enforced in TIBCO Designer 5.2 and above. The strict naming convention prevents you from renaming an object by changing case and prevents the use of certain characters. The strict naming convention must be turned off if you are opening 5.1.x project in TIBCO Designer 5.11 that contains characters that are illegal in those releases.

The `-Dstrictnames` flag is used to enforce or relax the strict naming convention. The flag is set by adding `java.extended.properties=-Dstrictnames=true` to the `designer.tra` file. The default is `true`.

- If set to `true`, the strict naming convention is enforced. This means you cannot rename an object by changing case. For example, you cannot rename an object from `myobject` to `MyObject`. You also cannot use the following characters in an object name: `| / \ " ' : ?`.
- If set to `false`, the strict naming convention is not enforced. This means you can rename objects by changing case. You also can use the following characters in an object name: `| / \ " ' : ?`.

The `-Dstrictnames` flag should be set to `false` when opening a 5.1.3 project in TIBCO Designer 5.11 that contains object names which use the disallowed characters. After opening the project, you should change object names by removing the disallowed characters and reset the `-Dstrictnames` flag to `true`.

Roles and TIBCO BusinessWorks Collaborator

TIBCO BusinessWorks Collaborator 5.5.x using TIBCO Runtime Agent 5.5.x can work with applications in a 5.11 administration domain. However, the new features in 5.11 will not work in the following cases:

- If a 5.11 domain contains a role with other roles as members that are standard (not LDAP group-synchronized) roles, its membership is not computed correctly by the Collaborator 5.5 client.
- If a 5.11 domain contain multiple search parameter sets or LDAP referrals, the Collaborator 5.5 client will not provide a correct set of users, group-synchronized roles or its memberships.
- TIBCO BusinessWorks Collaborator 5.5.x does not work correctly with TIBCO Runtime Agent 5.11. Contact TIBCO Support for details.

Adapters Based on the Generic Adapter Resource

TIBCO Adapter software is developed by TIBCO and new releases of these adapters will be compatible with BusinessWorks 5.x. However, there are some adapters both created by TIBCO and created by third parties that use the Generic Adapter Configuration resource. Adapters that have been created using the Generic Adapter Configuration resource have two known compatibility issues:

- The Adapter Service URIs have changed in this release. Therefore, ActiveEnterprise Adapter activities will have broken references to these URIs. You must resolve the broken references before running a project that references these URIs.
- In previous releases, endpoints were encapsulated within a Generic Adapter Configuration. In this release, endpoints can be defined directly at the activity level. You may need to recreate your endpoints manually after migrating your

project. Use the TIBCO Designer `Resources > Validate References` menu command to resolve endpoint references.

Index

A

Adapters Based on the Generic Adapter Resource 21

C

Changes Made to TIBCO Runtime Agent 5.7 Domain Property Files 16
Compatibility 6
Configuration Data 4
  Deployed Project 5
  TIBCO Product Coexistence 5
Configuring Vendor-supplied Database Drivers 17
customer support xiv

D

Deployed Project Data 5

E

ENV_NAME xi

F

Files Changed When Upgrading to 5.7 16
  Changes Made to TIBCO Runtime Agent 5.7 Domain Property Files 16

P

Project and Domain Compatibility 9

R

Roles and TIBCO BusinessWorks Collaborator 21

S

Software Compatibility 6
support, contacting xiv

T

technical support xiv
TIBCO Designer Strict Naming Convention 20
TIBCO Enterprise Message Service Server Version Number 19
TIBCO Product Coexistence 5
TIBCO support
  TIBCOmmunity xiv
TIBCO_HOME xi
Typical Upgrade 2

U

Uninstalling the Previous Release 5
Upgrade Applications 14
Upgrade Each Client Machine 13

Upgrade Issues 19
Adapters Based on the Generic Adapter Resource 21
Roles and TIBCO BusinessWorks Collaborator 21
TIBCO Designer Strict Naming Convention 20
TIBCO Enterprise Message Service Server Version Number 19
Using JVM 1.6 on HP-UX 11i 19
Using Oracle Thick Client on HP_UX Systems 19
Upgrade Overview 4
Upgrade Steps 10
Using JVM 1.6 on HP-UX 11i 19
Using Oracle Thick Client on HP_UX Systems 19

W

Why Upgrade 4