

Installation Guide Worksoft_® Execution Suite

Worksoft Execution Suite Installation Guide

Version 10

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Patent

Worksoft Certify® U.S. Patent No. 7,600,220

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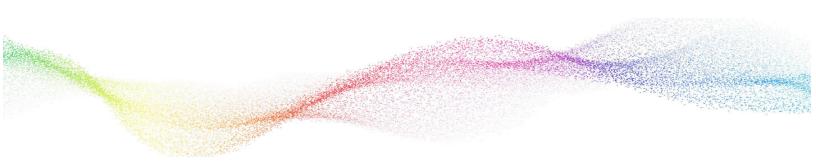
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Chapter 1 Preparing For Installation

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Understanding Worksoft Execution Suite

The Worksoft® Execution Suite consists of the following applications:

- Worksoft Management Studio[™] Registers database settings, data sources, and SAP systems that you
 intend to use with the Worksoft products.
- Certify Execution Manager™ Schedules and manages the remote execution of Worksoft Certify® processes.
- Certify Impact[™] Provides you with the ability to quickly deploy changes to your SAP[®] systems by identifying and executing a minimal set of Worksoft Certify processes for impacted programs and transactions.

System Requirements

Before you begin to install the Certify Execution Suite, verify that your environment has the needed system requirements installed. For information about system requirements and planning your environment, see the Worksoft Help Portal.

Warning:

Do not install Worksoft Execution Suite on the same server as the Worksoft Certify API data service because of the constraint of bandwidth on the network interface controller (NIC card).

Port Requirements

Worksoft Execution Suite requires that you use the following ports when configuring the product:

Component	Port Number
Worksoft Application Server	80 and 443

LDAP Port Requirements

If you are using LDAP for authentication, you will need to use the following ports and protocol:

Type of Traffic	AD and AD DS Usage	Protocol and Port Number
LDAP	Directory, Replication, User and Computer Authentication, Group Policy, Trusts	TCP and UDP 389
LDAP SSL	Directory, Replication, User and Computer Authentication, Group Policy, Trusts	TCP 363
LDAP GC	Directory, Replication, User and Computer Authentication, Group Policy, Trusts	TCP 3268
LDAP GC SSL	Directory, Replication, User and Computer Authentication, Group Policy, Trusts	TCP 3269

Configuring Your Application Server

One or more web application servers are required. There are window services and web applications that will be installed for each of the products in the Worksoft Execution Suite. Read *Planning and Provisioning for the Worksoft Execution Suite* in the Worksoft Help Portal to determine if additional web application servers will be required.

In order to transform your application server into a web server, Microsoft® Internet Information Services (IIS) must be installed and the Server Manager must be configured.

These procedures assume that you have not already configured your IIS. If you have already set up the Roles and Features, verify that the following Role Services on page 15 have been selected.

You need to first configure your server with HTTP, and then you can reconfigure the application server to use HTTPS.

Adding Roles and Features

The Server Manager allows you to add specific roles and features to your web server that are required for Worksoft products.

To add roles and features to your web server:

1 From the Start menu, select **Server Manager**.

The Server Manager opens.

🚵 Server Manager						- 8	- 0	ı x
Server M	anager • Dashboard			• © 🏲	Manage	Tools	View	Help
Dashboard Local Server All Servers File and Storage Services ▷	QUICK START 2 A 3 A WHAT'S NEW 4 C	ifigure this local server dd roles and features dd other servers to manage reate a server group onnect this server to cloud services						
	LEARN MORE ROLES AND SERVER GROUPS Roles: 1 Server groups: 1 Servers to	tal 1					ŀ	Hide
	File and Storage 1 Services 1 The service 1		 All Servers 1 Manageability Events Services Performance BPA results 					

- 2 In the Navigation pane, select **Dashboard**.
- 3 In the Summary Tasks pane, select **Add Roles and Features**.

The Add Roles and Features Wizard opens.

📥 Add Roles and Features Wizard				×
Before you begin Installation Type Server Selection Server Roles Features Confirmation Results	This wizard helps you install roles, role services, or features. You determine whi features to install based on the computing needs of your organization, such as hosting a website. To remove roles, role services, or features: Start the Remove Roles and Features Wizard Before you continue, verify that the following tasks have been completed: • Ne Administrator account has a strong password • Network settings, such as static IP addresses, are configured • The most current security updates from Windows Update are installed If you must verify that any of the preceding prerequisites have been complete complete the steps, and then run the wizard again. To continue, click Next.	ich roles, role sharing doo	vizard,	or
	< Previous Next >	Install	Cance	9

4 Click Next.

The Select Installation Type page opens.

📥 Add Roles and Features Wizard				×
Select installation	type	DESTINA	ATION SERV	'ER
Before You Begin Installation Type Server Selection Server Roles Features Confirmation Results	 Select the installation type. You can install roles and features on a running physic machine, or on an offline virtual hard disk (VHD). Role-based or feature-based installation Configure a single server by adding roles, role services, and features. Remote Desktop Services installation Install required role services for Virtual Desktop Infrastructure (VDI) to create or session-based desktop deployment. 	and in the second second		
	< Previous Next >	nstall	Cance	

5 Select the **Role-based or feature-based Installation** option.

6 Click Next.

The Select Destination Server page opens.

elect destinati	on server			DESTINATION SERVE
	Select a server or a	virtual hard disk on which	to install roles and features.	
Before You Begin				
Installation Type	 Select a server Select a virtual 	from the server pool		
Server Selection		naro disk		
Server Roles	Server Pool			
Features	F 10			
Confirmation	Filter:			
Results	Name	IP Address	Operating System	
	1 Computer(s) four	nd		
			ndows Server 2012 or a newer	release of Windows Serve
			Servers command in Server M	
	newly-added serve	ers from which data collect	ion is still incomplete are not	shown.

- **7** Select a server.
- 8 Click Next.

The Select Server Roles page opens.

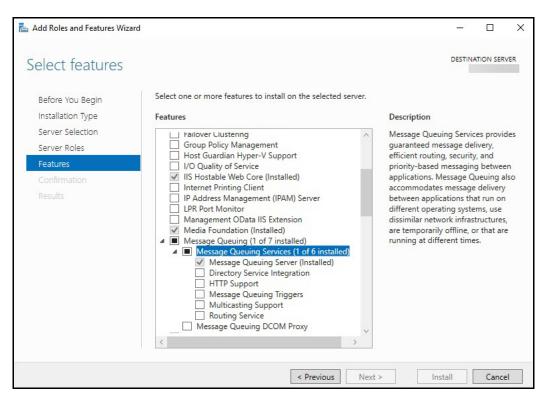
🚡 Add Roles and Features Wizard		– 🗆 X
Select server roles		DESTINATION SERVER
Before You Begin Installation Type	Select one or more roles to install on the selected server. Roles	Description
Server Selection Server Roles Features Confirmation Results	Active Directory Federation Services Active Directory Lightweight Directory Services Active Directory Rights Management Services Device Health Attestation DHCP Server Fax Server File and Storage Services (1 of 12 installed) File and Storage Services (nstalled) Host Guardian Service Hyper-V Network Policy and Access Services Print and Document Services Remote Access Remote Access Volume Activation Services Volume Activation Services Windows Deployment Services Windows Server Update Services	Web Server (IIS) provides a reliable, manageable, and scalable Web application infrastructure.
	< Previous Ne	xt > Install Cancel

- **9** From the Server Roles list, select the following roles:
 - File Services
 - Web Server (IIS)
- 10 Click Next.

The Select Features page opens.

📥 Add Roles and Features Wizard		- 🗆 X
Select features		DESTINATION SERVER
Before You Begin Installation Type Server Selection Server Roles Features Confirmation Results	Select one or more features to install on the selected serve Features Image: Select one or more features to install on the selected serve Image: Select one or more features to install on the selected serve Image: Select one or more features to install on the selected serve Image: Select one or more features to install on the selected serve Image: Select one or more features to install on the selected serve Image: Select one or more features to install on the selected serve Image: Select one or more features to install one or more features (Installed) Image: Select one or more features to install on the selected serve Image: Select one or more features to install one or more features (IPAM) Server Image: Select one or more features to install on the selected serve Image: Select one or more or	er. Description NET Framework 4.8 provides a comprehensive and consistent programming model for quickly and easily building and running applications that are built for various platforms including desktop PCs, Servers, smart phones and the public and private cloud.
	< Previous	Next > Install Cancel

- **11** Select the following features:
 - .NET Framework 4.8 Features and all of its child nodes
 - WCF Services and all of its child nodes
 - IIS Hostable Web Core and Media Foundation



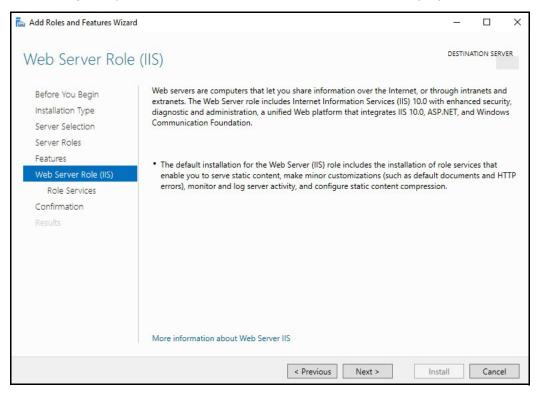
12 Verify that Message Queuing Services and Message Queuing Server are enabled.

- **13** Use the scroll bar to verify the **Windows Process Activation Service** is enabled with the following child nodes:
 - Process Model
 - Configuration APIs
- 14 Click Next.

Configuring the Web Server Role (IIS)

The Web Server Role (IIS) page opens if you have not already installed the web server.

1 In the Navigation pane, click **Role Services** under Web Server Role (IIS).



The Select Role Services page opens.

2 In the Role Services list, use the scroll bar to select the following services.

If you have already set up the Roles and Features, verify that the following services have been selected.

Node	Child Nodes
Common HTTP Features	Default Document
	Directory Browsing
	HTTP Errors
	Static Content
	WebDAV - Verify that this option is disabled. Worksoft's RESTful Services will not work correctly if enabled.
Health and Diagnostics	HTTP Logging
	Request Monitor
Performance	Static Content Compression
	Dynamic Content Compression
Security	Request Filtering
	Basic Authentication
Application Development	.NET Extensibility 4.8
	Application Initialization
	ASP
	ASP.NET 4.8
	CGI
	ISAPI Extensions
	ISAPI Filters
	WebSocket Protocol
Management Tools	IIS Management Console
	IIS Management Scripts and Tools
	Management Service

3 Click Next.

The Confirm Installation Selections page appears.

4 Click **Install** to install the role services.

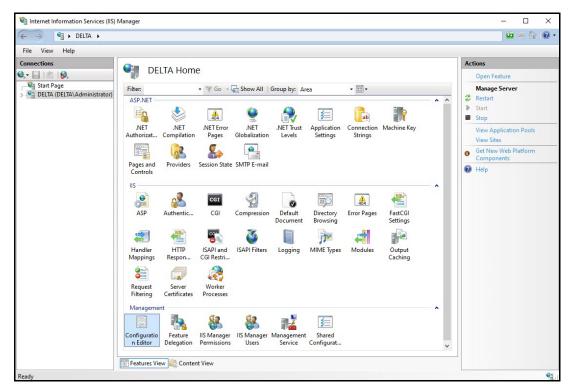
Configuring Application/Json MIME Type Compression

After you have enabled Dynamic Content Compression within IIS, you need to verify HTTP Compression for the application/json MIME type. Worksoft uses Dynamic Content Compression to improve performance, and HTTP compression must be enabled for the application/json MIME type.

When the Dynamic Content Compression feature is enabled, it will overwrite any previous HTTP compression settings.

To verify application/json MIME type compression:

- 1 Open **IIS Manager**.
- 2 In the left Navigation pane, click on your server.
- 3 In the Management section, double-click the **Configuration Editor**.



The Configuration Editor opens.

4 From the Section drop-down list, select **system.webServer > httpCompression**.

Configuration Editor		Actions
ection: appSettings	•	By Apply B _K Cancel
Dee 😑 🛄 system.webServer	^	Generate Script
(Col e tracing file webday	ht=0)	Configuration Search Configuration
-/ applicationInitialization -/ asp		Section C
-/ caching -/ cgi -/ defaultDocument		"(Collection)" Element
/ directoryBrowse / fastCgi		Edit Items
 globalModules handlers httpCompression httpCorging httpProtocol httpProtocol httpRedirect httpRedirect httpRedirect httpRedirect httpRedirect modules 		😢 Help
Collect / odbcLogging / serverRuntime / serverSideInclude	~	

5 In the httpCompression section, click **dynamicTypes**.

Configuration Editor			R Apply
ction: system.webServer/httpCompression	•		Bx Cancel
Deepest Path: MACHINE/WEBROOT/APPHOS	T	^	denerate Script
(Collection)	(Count=1)	- 111	Configuration
cacheControlHeader	max-age=86400	- 11 1	Search Configuration
directory	%SystemDrive%\inetpub\temp\IIS Temporary Compressed Files	- 11	Section
doDiskSpaceLimiting	True	- 11 1	2007 C
dynamicCompressionBufferLimit	65536	- 11 1	Lock Section
dynamicCompressionDisableCpuUsage	90	- 11 1	'dynamicTypes' Bement
dynamicCompressionEnableCpuUsage	50		
dynamicTypes	(Count≃5)		Lock Element
expiresHeader	Wed, 01 Jan 1997 12:00:00 GMT	_	X Remove
maxDiskSpaceUsage	100		Edit Items
minFileSizeForComp	2700		Help
noCompressionForHttp10	True	- 11	- Hop
noCompressionForProxies	True		
noCompressionForRange	True		
sendCacheHeaders	False	- 11	
staticCompressionDisableCpuUsage	100		
staticCompressionEnableCpuUsage	50		
staticCompressionIgnoreHitFrequency	False		

6 Verify that **application/json** is listed in the dynamic compression mime types. If it is not listed, click the **Add** button in the Collection section to add it.

Conection callor - system.we	o server/na	tpCompression/dynamicTypes/			× ۲
Items:				Actions:	
mimeType text/* message/*	True True	Entry Path MACHINE-WEBROOT/APPHOST MACHINE-WEBROOT/APPHOST MACHINE-WEBROOT/APPHOST		Collection Add Clear All	8
application/x-javascript application/javascript	True	MACHINE/WEBROOT/APPHOST MACHINE/WEBROOT/APPHOST		Item Properties	8
/	False	MACHINE/WEBROOT/APPHOST		Lock Item Remove	
×			>	Help Online Help	
Properties:					
enabled mimeType		= True ∓ application/juon			
enabled Data Type:bool					

 After you completed your verification or addition, click the Close button The Configuration Editor opens.

Configuration Editor	•		The changes have b successfully saved.	een
 Deepest Path: MACHINE/WEBROOT/APPHO 		•	Actions	
(Collection)	(Count=1)	-	By Apply	_
cacheControlHeader	max-age=86400		Be Cancel	
directory	%SystemDrive%\inetpub\temp\IIS Temporary Compressed Files			_
doDiskSpaceLimiting	True		denerate Script	
dynamicCompressionBufferLimit	65536		Configuration	
dynamicCompressionDisableCpuUsage	90		Search Configuration	B
dynamicCompressionEnableCpuUsage	50		Section	
dynamicTypes	(Count=6)		Lock Section	
expiresHeader	Wed. 01 Jan 1997 12:00:00 GMT		LOCK Section	
maxDiskSpaceUsage	100		'dynamicTypes' Elemen	t
minFileSizeForComp	2700		Lock Element	
noCompressionForHttp10	True		× Remove	
noCompressionForProxies	True			
noCompressionForRange	True		Edit Items	
sendCacheHeaders	False		Help	
staticCompressionDisableCpuUsage	100			
staticCompressionEnableCpuUsage	50	100		
staticCompressionIgnoreHitFrequency	False	~		
lynamic Types				

- 8 Click **Apply** to apply your changes.
- **9** Verify that dynamicTypes lists a count of six.
- **10** Close the editor.

Enabling IIS Services

You will now need to verify that several IIS services are enabled.

To verify IIS services are enabled:

1 If the Server Manager is not open, select **Administrative Tools > Server Manager** from the Start menu.

The Server Manager opens.

- 2 In the Navigation pane, select **IIS**.
- **3** Scroll down to the Services section.
- 4 In the Services pane, verify that the following services are enabled and running:
 - World Wide Web Publishing Service
 - Web Management Service
 - Application Host Helper Service
 - Windows Process Activation Service
- **5** If any of these window services are not running, start the services.

To start a service, select the service from the list and click **Start** in the right menu. You can also start services by going to **Administrative Tools > Services** on your machine.

Configuring HTTPS on Your Application Server

To use HTTPS on your application server, leave the HTTP binding on default port 80. After you have reconfigured the application server to use HTTPS, the port now defaults to 443.

You need both ports open.

Complete the following tasks to configure HTTPS on your application server:

- Request an SSL Certificate from your IT department.
- Add the certificate to IIS.
- Add new binding to port 443.

Verify your SSL Settings on your application server.



Chapter 2

Preparing Your SAP Systems for Certify Impact

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Overview

If you do not intend to use Certify Impact, you do not need to follow these instructions.

If you plan to use Certify Impact, you must have your SAP BASIS administrator assist you with preparing the SAP systems. In order to prepare your SAP system, you will need to do the following:

- Create a Certify system account in your SAP systems
- Install Certify Impact transports in your SAP systems

If you choose to use the SAP Business Process Change Analyzer (BPCA) analysis type, one of the systems you register with the Worksoft Management Studio must be your SAP system hosting SAP® Solution Manager. You will later supply an alias system name during registration to the Certify Execution Suite web installer.

Creating a Certify System Account in your SAP System

Certify Impact connects to SAP systems through a Remote Function Call (RFC) by using a configured user account. Use the **SU01** transaction code and create the user account with the following information:

Setting	Value
User Type	SAP CPIC user for RFC communication
User Name	Account user name Name must have the same account credentials as when you register your SAP systems with the Worksoft Management Studio.
Password	User password
Defaults	Date format: "MM/DD/YYYY" Decimal notation: 1,234,567.89
Profiles	 Ability to execute the following transport function modules: S_A.CPIC S_A.SCON S_A.SYSTEM
Type of User	System

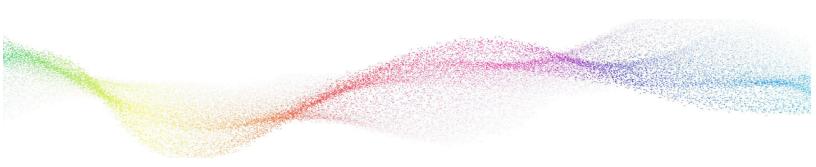
Installing Certify Impact Transports in Your SAP System

Your SAP BASIS administrator needs to install Certify Impact transports into your SAP system. These transport files are located in the Worksoft Customer Portal. You need a User ID and password to access these transports.

Select the transports that are best suited for your SAP system:

- IDES / ECC
- S4Hana

When running the SAP transports, turn off component checking because these SAP transports were created in a Worksoft SAP system that contains different components than your system.



Chapter 3 Installing Worksoft Application Server

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Installing Worksoft Application Server

The Worksoft Application Server installs the Worksoft Management Studio. The Management Studio tool registers database settings, data sources, and SAP systems that you intend to use with the Worksoft products.

The domain user name is required for installation. The domain user must be an administrator of the machine in order to install the Worksoft Application Server.

To install the Worksoft Application Server:

1 In your software distribution folder, right-click the **WorksoftApplicationServer.exe** file and select **Run as administrator**.

G Worksoft Application Server - InstallAware Wizard – 😐 🗴					
Welcome to the Worksoft Application Server Install Wizard					
The installation wizard will install Worksoft Application Server on your computer.					
WORKS()FT。					
WARNING: This program is protected by copyright law and international treaties.					
To continue, click Next.					
< Back Next > Cancel					

The Worksoft Application Server Wizard opens.

2 Click **Next** to begin the installation process.

estination Folder Select folder where setup will install files.	wo	ORKSC.
Install Worksoft Application Server to:		
C:\Program Files (x86)\Worksoft\Worksoft	Application Server Cha	ange
Destination Folder		
Destination Folder Required Disk Space: Remaining Disk Space:		,072 KB

After your system has been analyzed, the Destination page appears.

3 If you want to accept the default directory for your installation files, click **Next**.

If you do not want to accept the default directory for the installation files, click the **Change** button to select a different installation directory for the Certify client, and then click **Next**.

The Worksoft Application Server page appears.

Worksoft Application Server - InstallAwa rorksoft Application Server Specify Hosted Configuration in IIS		WORKSOF
Please se	ect the website for Worksoft applica	ation web components
Website:	Default Web Site	~

4 If you want to accept Default Web Site as your website, click **Next**.

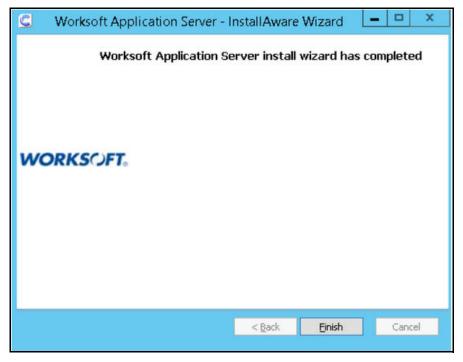
If you have other websites configured in the IIS, select the server from the drop-down list and click **Next**.

The Starting Installation page appears.

G Worksoft App	olication Server - I	nstallAware	Wizard	_ 0	x
	Starting Installati	on of Works	oft Applica	ntion Ser	ver
WORKS()FT。					
	- Click M	Vext to begin co	nfiguration		
	- Click E	Back to change s	ettings		_
	- Click (Cancel to exit			
		< Back	Next >	Ca	ncel

5 Click Next.

Then the installation completes, the Completed Installation page appears.



6 Click **Finish**.

Disabling Interactive Service Detection Service

You need to disable the Interactive Service Detection service on your application server because it interferes with RDP functionality.

To disable Interactive Service Detection service:

1 On your application server, open the Services program.

(Loca Service	es (Local)					
Interactive	Services	Name	Description	Status	Startup Type	Log On As
Detection		G Human Interface Device Access	Enables gen	Started	Manual	Local Syst
		GIKE and AuthIP IPsec Keying Modules	The IKEEXT		Manual	Local Syst
Start the se	ervice	G Intel Bluetooth Service		Started	Automatic	Local Syst
		GIntel(R) Capability Licensing Service Interface	Version: 1.3	Started	Automatic	Local Syst
Description	n:	A Intel(R) Capability Licensing Service TCP IP Interface	Version: 1.3		Manual	Local Syst
	er notification of	G Intel(R) Content Protection HECI Service	Intel(R) Con		Manual	Local Syst
	for interactive	Intel(R) Dynamic Application Loader Host Interface Service	Intel(R) Dyn	Started	Automatic (Local Syst
	hich enables access	(Intel(R) HD Graphics Control Panel Service	Service for I	Started	Automatic	Local Syst
to dialogs	services when they	GIntel(R) Management and Security Application Local Managem	Intel(R) Ma	Started	Automatic (Local Syst
	this service is	SIntel(R) PROSet Monitoring Service	The Intel(R)	Started	Automatic	Local Syst
stopped, n	otifications of new	G Intel(R) PROSet/Wireless Event Log	Manages th	Started	Automatic	Local Syst
	service dialogs will	G Intel(R) PROSet/Wireless Registry Service	Provides re	Started	Automatic	Local Syst
	function and there	G Intel(R) PROSet/Wireless Zero Configuration Service	Manages th	Started	Automatic	Local Syst
	be access to service dialogs. If	GIntel(R) Rapid Storage Technology	Provides sto	Started	Automatic (Local Syst
	is disabled, both	C Interactive Services Detection	Enables use		Manual	Local Syst
	ns of and access to	G Internet Connection Sharing (ICS)	Provides ne		Manual	Local Syst
	ctive service	GInternet Explorer ETW Collector Service	ETW Collect		Manual	Local Syst
dialogs will	I no longer	GIP Helper	Provides tu	Started	Automatic	Local Syst
Tunction		C IPsec Policy Agent	Internet Pro	Started	Manual	Network S
		C KtmRm for Distributed Transaction Coordinator	Coordinates		Manual	Network S
		Link-Layer Topology Discovery Mapper	Creates a N		Manual	Local Servi.
		G Media Center Extender Service	Allows Med		Disabled	Local Servi.
		G Microsoft .NET Framework NGEN v2.0.50727_X64	Microsoft		Disabled	Local Syst
		G Microsoft .NET Framework NGEN v2.0.50727_X86	Microsoft		Disabled	Local Syst
		G Microsoft .NET Framework NGEN v4.0.30319_X64	Microsoft		Automatic (Local Syst
		G Microsoft .NET Framework NGEN v4.0.30319 X86	Microsoft		Automatic (Local Syst

2 From the Services list, right-click on **Interactive Service Detection** and select **Properties**.

The Properties dialog box opens.

seneral	Log On	Recovery	Dependenci	es		
Service	e name:	UI0Dete	ct			
Display	y name:	Interactiv	ve Services D	etection		
Descrip	ption:			on of user input fo es access to dialo		* +
	executab	le: tem32\UI0De	etect.exe			
	0	an entre a co	964.2556.974.8755			
Startup	type:	Disable	d			
1			ed	9		•
Help m			artup options.			-
Help m Service	e configu	re service st	artup options.	Pause	Resume	
Help m Service You ca here.	e configu e status: Start	Stopped	artup options. J			m

- **3** From the Startup type drop-down list, select **Disabled**.
- 4 Verify that the Service status is marked **Stopped**.
- 5 Click OK.

Chapter 4

Configuring the Worksoft Management Studio

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Overview

On your web server where IIS is installed, you will need to configure your system in the Worksoft Management Studio. The Worksoft Application Server installed the Worksoft Management Studio.

Within the Worksoft Management Studio, you will need to do the following Management Studio configuration tasks:

- Create a Worksoft Management Studio database
- Register all Worksoft Certify databases
- Create and register a Worksoft Execution Manager database
- Create and register a Certify Impact database
- Configure Certify Impact
- Specify product users
- Configure services

The Management Studio database maintains configuration information used by Worksoft applications and services. Certify Execution Manager and Certify Impact leverage information from the Worksoft Management Studio.

Exploring Worksoft Management Studio

Worksoft Management Studio consists of the following navigation tabs:

Navigation Tab	Description		
User Administration	Register users and roles for each product.		
Master Configuration	Create the following databases: • Management Studio • Execution Manager • Impact • Analyze • BPP		
	Configure the following:SMTP settingsMaintenance window textTenant administration		

Navigation Tab	Description
Configuration	 LDAP Configuration - Configure your LDAP authentication service. Execution Manager - Disable notifications for each Certify process. Impact - Select your analysis engine and test execution integration. Certify Configuration - Add your Certify databases. Bookmark Administration - Create a shortcut to specific Certify process folders, Certify processes, or Micro Focus® Application Lifecycle Management® (ALM) Quality Manager test sets that you are able to run through web API.
Integration	 Configure your connections with the following products: ALM integration Panaya integration Analyze connections Certify/Analyze integration SAP systems
Change History	Display change history.

When you open Worksoft Management Studio, you will be able to see what part of your configuration requires attention by visual indicators.

Master Configuration	× •
→ Execution Manager	×
→ Impact	×
→ Analyze	×
\rightarrow BPP	1
→ Tenant Administration	

Listed below are the visual indicators:

- 1. A red X means that there is either mandatory missing information or a failure with the current configuration. Each tab provides diagnostic information that will explain what failed and how to resolve the failure.
- 2. An animated circle means a diagnostic test is being performed to see if the configuration is complete and functional. If the test is successful, the circle will disappear, and if not successful, a red X will show a failure.
- 3. An exclamation mark means that there is an optional configuration that is available. No configuration has been made in these tabs, and you may want to configure these options in the future.

Creating Your Worksoft Management Studio Database

The Management Studio database maintains configuration information used by Worksoft applications and services. Certify Execution Manager and Certify Impact leverage information from the Worksoft Management Studio.

Only one Management Studio database is needed regardless of how many Certify databases already exist.

• To create the Worksoft Management Studio database:

1 Open the Worksoft Management Studio on your web server by navigating to the following address: http://localhost/ManagementStudio.

WORKSCIFT, MANAGEMENT STUDIO			
	Management Studio Installation		Continue
		de the Database and URL for this configuration. If this is a new installation, use the sword to configure Management Studio after selecting continue.	e
	Management Studio URL	http://VABENNEY15/managementstudio	
	Management Studio Database		
	SQL Server		
	SQL User		
	SQL Password		
	Database Name		
		Test Configuration	
	Status		^
	Connection Not tested yet		

The Management Studio Installation page opens.

2 Enter the Worksoft Management Studio URL address.

If you did not use the default website during installation, your URL address will be different. The implementation of your network landscape will need to be considered when choosing a URL address. Verify that the URL can be accessed by all users.

The URL address should either be a domain or a machine name for on-premise installations. If using a machine name, you will need to decide if a fully-qualified domain and machine name is required. Do not use IP addresses.

If your DNS settings require a fully-qualified machine name complete with domain, please make those changes accordingly.

If their is a load balancer in front of one or more web servers, then the URL address should point to the load balancer domain. If you have any questions about your specific URL address, ask your IT administrator.

3 In the Management Studio Database section, enter the server name in the SQL Server field.

Note: If your SQL Server database administrator does not approve of creating or updating the databases from within the web application for any reason, then they are able to manually create databases by using database scripts that are packaged within our distribution folder. For more information, see Appendix B "Creating Worksoft Execution Suite Databases with Apply.exe."

4 For SQL Database Authentication, type the SQL user name and password in the fields to access the database server.

The user name and password must have enough SQL Server permissions to create a database. After you created your database, you are able to use a different SQL user name and password.

5 In the Database Name field, enter the name of the Management Studio database.

Worksoft recommends using the database name *ManagementStudio* for easy identification.

6 Click the **Test Configuration** button to test your connection.

If the test fails, the reason for the database connection failure appears.

After it detects that the database does not exist, a Create button appears.

7 Click the **Create** button to create a new database.

If your SQL Server database administrator created the database with the Apply.exe tool or you are upgrading your database, then you will click the **Update** button.

After creating the database, your SQL Server database administrator should review the database settings and configuration so that it meets expectations and adheres to appropriate best practices, such as using an appropriate recovery model.

8 Click Continue.

1

After saving the Management Studio configuration, you will be prompted to log on to the Management Studio.

9 If you are a new user, type admin@worksoft.com in the User Name field.

If you are upgrading from v9.2 to v10, use your existing Worksoft Management Studio email address as your user name.

10 If you are a new user, type **password** in the password field.

If you are upgrading from v9.2 to v10, use the password that you created for your Worksoft Management Studio.

11 Click Login.

After applying this configuration, you have successfully enabled Management Studio to be operational. The User Administration tab opens.

12 Click the **Master Configuration** tab.

User Administration		Master Configuration			
Master Configuration	× [Management Studio Option	e		
→ Execution Manager					
Impact		Management Studi	o URL http://unclefester02/manag	zementstudio	
Analyze	×	maningerien enter		garrierinandaro	
→ BPP		Enable Verbose Logging			
Tenant Administration					
Configuration		Services			
ntegration	•				
Change History					
		Management Studio Databa	ase 🗸		8
		SQL Server	vwssql2016		
		SQL User	CertifyTester		
		SQL Password			
		Database Name	UF02DevMS		

13 If you want to enable verbose logging, select the **Enable Verbose Logging** option in the Management Studio Options section and click **Save Changes**.

Registering and Creating Certify Execution Suite Databases

Databases that should be created or registered in Worksoft Management Studio include the following:

- Execution Manager database
- Worksoft Certify databases
- Certify Impact database

If you are upgrading from v9.2 to v10, see Chapter 8 "Upgrading Worksoft Execution Suite."

To create a Certify Execution Manager database:

1 In the Worksoft Management Studio, click the **Master Configuration** tab.

2 Click the **Execution Manager** tab.

The Execution Manager tab opens.

WORKSOFT.	MANAGEMEN	IT STUDIO			Admin Admin -
🛔 User Administration		Execution Manager		Discard	Save Changes
B Master Configuration					
	4				
Impact		Execution Manager Databa	ise 🗸		^
Analyze	×	SQL Server	vwssql2016		
- BPP		out our of	- model of 0		
Tenant Administration Configuration		SQL User	CertifyTester		
b Integration	•	SQL Password			
Change History		Sul Password			
		Database Name	UF02DevEM2		
		Status		Test Config	juration
			iccessful .0.12.19		
			.0.12.19		
		SQL User Permissions 🗸 Su	iccess		

3 In the SQL Server field, enter the name of your SQL server.

Note: If your SQL Server database administrator does not approve of creating or updating the databases from within the web application for any reason, then manually create databases by using database scripts that are packaged within our distribution folder. For more information, see Appendix B "Creating Worksoft Execution Suite Databases with Apply.exe."

4 In the SQL User and Password fields, enter the SQL server user name and password.

The user name and password that you use will need to have enough SQL Server permissions to create a database. After you created your database, you are able to use a different SQL user name and password for use of the product.

5 In the Database Name field, enter the name for your new database.

Worksoft recommends using the database name *ExecutionManager* for easy identification.

- 6 Click the **Test Configuration** button to test the connection.
- 7 After it detects that the database does not exist, click **Create** to create a new Certify Execution Manager database.

If your SQL Server database administrator created the database with the Apply.exe tool, then you will click the **Update** button.

After creating the database, your SQL Server database administrator should review the database settings and configuration so that it meets expectations and adheres to appropriate best practices, such as using an appropriate recovery model.

8 Scroll down the Execution Manager tab to verify that the Execution Manager services are running.

WORKS()FT。	MANAGEME	INT STUDIO		AA Admin Admin Default
User Administration		Execution Manager	Discard	Save Changes
Master Configuration				
→ Execution Manager	(1)	Execution Manager Services		^
-+ Impact				
Analyze	×	Status		
→ BPP				
-+ Tenant Administration		Worksoft Execution Manager 🖌 Running Service		
Configuration				
b Integration		Worksoft Execution Manager 🗸 Running RDP Service		
Change History				
		RDP Servers		Add
		RDP Server Status		

9 Click Save Changes.

1

Note: If you want to register additional Remote Desktop Protocol (RDP) servers, you can add servers in the RDP Servers section. Only a single web server is required for the Certify Execution Suite. For more information, see "Adding RDP Servers" on page 49.

To register Worksoft Certify databases:

- In the Worksoft Management Studio, click the Configuration > Certify Configuration tab.
 The Certify Databases tab opens.
- 2 Click the **Add** button on the right side of the screen.

The Add Certify Database dialog box opens.

Add Certify Databa	ise		×
Name			
SQL Server	· [
SQL Use	r		
SQL Password			
Database			
		Test Config	guration
Status			
Connection	Not tested yet		
		Cancel	Add

- **3** In the Name field, enter a unique name for your database. This name will appear in Certify Execution Manager and Certify Impact as the database alias.
- 4 In the SQL Server field, enter the name of your SQL server.
- **5** In the SQL User and Password fields, enter the SQL server user name and password.
- **6** In the Database field, start typing in the name for your database.

A list of Certify database names appear.

7 Select a database.

If your database does not appear in the list, the permissions for the SQL User must not be adequate, or the database does not exist. Consult your database administrator.

8 Click the **Test Configuration** button to test the connection.

If the test fails, the reason for the database connection failure appears.

9 Click **Add** to save your registered Certify database.

When you save your Certify database, this database appears in the Certify Databases pane.

10 If you need to add another Certify database, repeat this process.

To create a Certify Impact database:

If you do not intend to use Certify Impact, you do not need to create a database.

- **1** In the Worksoft Management Studio, click the **Master Configuration** tab.
- 2 Click the **Impact** tab.

The Impact tab opens.

WORKSOFT.	MANAGEME	NT STUDIO			Admin Admin Defaut
🛔 User Administration		Impact		Discard	Save Changes
E Master Configuration					
Execution Manager	1			_	
Impact		Impact Database 🧹			^
Analyze	×				
→ BPP		SQL Server	vwssql2016		
Tenant Administration		SQL User	Cust		
Configuration		SQL User	CertifyTester		
h Integration	100	SQL Password			
Change History					
		Database Name	UF02DevIM		
		Status		Test Config	juration
		Connection 🗸 Sur	ccessful		
			0.12.19		
		Software Version 🗸 10.	0.12.19		
		SQL User Permissions 🖌 🖌 Su	ccess		

3 In the SQL Server field, enter the name of your SQL server.

- **Note:** If your SQL Server database administrator does not approve of creating or updating the databases from within the web application for any reason, then manually create databases by using database scripts that are packaged within our distribution folder. For more information, see Appendix B "Creating Worksoft Execution Suite Databases with Apply.exe."
- 4 In the SQL User and Password fields, enter the SQL server user name and password.

The user name and password that you use will need to have enough SQL Server permissions to create a database. After the database is created, you are able to use a different SQL user name and password.

- In the Database Name field, enter the name for your new database.Worksoft recommends using the database name *Impact* for easy identification.
- 6 Click the **Test Configuration** button to test the connection.

7 After it detects that the database does not exist, click **Create** to create a new Certify Impact database.

If your SQL Server database administrator created the database with the Apply.exe tool, then you will click the **Update** button.

After creating the database, your SQL Server database administrator should review the database settings and configuration so that it meets expectations and adheres to appropriate best practices, such as using an appropriate recovery model.

8 Click Save Changes.

Registering SAP Systems

If you plan to use Certify Impact, then you must register one or more SAP systems in Worksoft Management Studio. If you intend to just use Execution Manager, go to "Registering Users" on page 42.

Before you register your SAP system, you must have prepared your systems. For more information, see Chapter 2 "Preparing Your SAP Systems for Certify Impact."

To register SAP systems:

1 In the Worksoft Management Studio, click the **Integration > SAP Systems** tab.

The SAP Systems tab opens.

2 Click the **Add** button on the right side of the screen.

The Add SAP System dialog box opens.

Add SAP System		×
Name	WorksoftSAP	
App Server Host	192.168.3.56	
Sys Num	01 SAP Client 800	
SAP User	Irowley	
Password	••••••	
	Or use	
SAP Connection String		
	Test Configuration	

You have the option of providing your SAP information in the text fields or an SAP connection string. For more information about using the SAP connection string, go to page 40.

- **3** In the Name field, enter the name of your SAP system.
- 4 In the App Server Host field, type the IP address of where your application server is being hosted.
- **5** Enter the system number and SAP client number in their respective fields.
- **6** Enter the SAP user and password in their respective fields.

7 Click **Test Configuration**.

The Status section shows if your configuration was successful.

Status			
Connection	✓ Successful		
Worksoft Transports			~
	Transport	Description	
Certify Discovery	R3IK900746	Certify Discovery - Version 9.0.1 - Non-U	Inicode
Certify Learn	R3IK900994	Certify Live Learn - Version 8.6.4 NonUn Namespace	icode Old
Certify Data	R3IK901246	Changes For Data - Ty Henson	
Certify Impact	R3IK901250	Certify Impact - IDOC Changes	
Certify Performance	R3IK900787	Certify Performance Load Test Details E	xtract
Certify Security	R3IK900468	Worksoft Security Testing Initial Transpo	rt
Certify Capture	R3IK900651	Certify Capture- Version 8.5.10 - Non-Ur 4.7	iicode - Pre
		Cancel S	iave

8 Click **Save** to save your SAP system.

Your SAP system is now listed in the tab.

• To use an SAP connection string to register your SAP system:

Instead of completing all the fields, you can just use an SAP connection string to register your system.

1 In the SAP Connection String field, enter a string for your SAP system.

Example: TYPE=3; ASHOST=192.168.3.56; SYSNR=01; CLIENT=800; LANG=EN; USER=jdoe; PASSWD=password123;

2 Click Test Configuration.

The Status section shows if your configuration was successful.

3 Click **Save** to save your SAP system.

Configuring Certify Impact

If you intend to use Certify Impact, you will need to configure the following:

- Analysis engine
- Test execution integration

You will also need to add one or more SAP systems. For more information, see Chapter 2 "Preparing Your SAP Systems for Certify Impact."

To configure Certify Impact:

1 Click the **Configuration > Impact** tab.

The Impact tab opens.

User Administration		Configuration	Discard	Save Changes
à Master Configuration	× •			
O Configuration	*			
→ Execution Manager		Impact		^
	×			
→ Certify Configuration	×	Analysis Engine		
$\rightarrow \ \text{Bookmark Administration}$		Worksoft Certify Impact		
→ Licenses		SAP BPCA		
Integration	•			
Change History		C Live Company		
		Test Execution Integration		
		Worksoft Execution Manager		
		HP Quality Center		
			Test Configura	and a second

- **2** Select an Analysis Engine option:
 - Worksoft Certify Impact
 - SAP BPCA

If you choose to use the SAP Business Process Change Analyzer (BPCA) analysis type, one of your SAP systems registered with Worksoft Management Studio must be hosting SAP® Solution Manager.

- **3** Select a Test Execution Integration option:
 - Worksoft Execution Manager
 - HP Quality Center

For more information on how to integrate with Micro Focus® Application Lifecycle Management® (ALM) Quality Manager, see Chapter 10 "Configuring Micro Focus ALM/Quality Center Integration."

4 Click **Test Configuration** to test the connection.

Registering Users

The next step to configuring Worksoft Management Studio is to register users who will be using the Worksoft Execution Suite. There are two ways to register users:

- Manually create users in Worksoft Management Studio
- Import users from a Microsoft Excel® spreadsheet

To manually create users in Worksoft Management Studio:

- 1 In the Worksoft Management Studio, click the **User Administration** tab.
- 2 In the User Administration tab, click **Add**.

The Add User dialog box opens.

Add User		×
	ACTIVE	
First Name		
Last Name		
Email		
Password		
Confirm Password		
Authentication	LDAP V	
User Roles:		
Administrator	Upload Only	
Execution Analyz	tion Manager Impact	
Default Time Zone	Server Default - (UTC-06:00) Central Time (US & Canada) 🗸	
	Cancel Add	

- **3** To create an active user, verify that **Active** is selected. To deactivate a user, select **Inactive**.
- **4** In the related fields, enter the following information:
 - First name
 - Last name
 - Email
 - Password
 - Confirm Password

If you select LDAP authentication, you do not need to enter a password.

- **5** From the Authentication drop-down list, select an authentication option:
 - LDAP
 - Worksoft

The LDAP option only appears if you have already configured it. For more information, see "To configure your LDAP authentication service:" on page 46.

6 If you want to give the user administrative rights, select the **Administrator** option. Administrators have access to all products.

The Upload Only option is for Worksoft Analyze users.

- 7 Select the **Execution Manager** and/or **Impact** roles for the user.
- **8** From the Default Time Zone drop-down list, select your preferred time zone for Certify Execution Manager or keep it as the server default time.
- 9 Click Add.

The user name appears in the User Administration tab.

WORKS()FT。	MANAG	IEMEN	VT STUL	DIO				Admin Debut	a Admin
Luser Administration			_						
B Master Configuration		*	U	ser Administr	ation			Ac	Ы
Configuration	×	*						, du limport	1 Every
Integration		2						12 million	Train
Change History				Full Name		Email	Roles		
				r dit Marrie		Civer	Rues		
			•	Admin Admin		admin@worksoft.com	Administrator		/
				DWard User		d@wso.com			/

Users with a green icon are active, and users with a gray icon are inactive.

10 Repeat this process to add more users. To edit a user, click the **Edit** icon next to the user.

• To register users by importing from a Microsoft Excel spreadsheet:

- **1** In the Worksoft Management Studio, click the **User Administration** tab.
- 2 In the User Administration tab, click **Import**.

The Import User dialog box opens.

Import Users		×
If you wish to import your users to Mana uploading an Excel works		ру
Download Import Docu	ment Template	
File Location	Choose File	
In the event that one or more user(s) and choose the behavior below which Overwrite		2
	Cancel	Import

- To download an Excel template, click **Download Sample Upload File**.Use this template to create your own Excel spreadsheet.
- 4 Click the **Choose File** button and select the CSV file that you want to import.
- **5** After you have selected your file, click the **Import** button.

The users are imported into the Worksoft Management Studio and appear in the User Administration tab.

Exporting a List of Users

From the Users Administration tab, you can export a list of the users in a CSV file.

To export a list of users:

1 Click **Export** in the Users Administration tab.

A message appears.



2 Click **Open** to open the file in Microsoft Excel or click **Save** to save the CSV file.

Configuring Your Email Service

The Certify Execution Manager and Certify Impact sends out email notifications when Certify Execution Manager request or Certify Impact analysis completes execution. You will need to specify the SMTP server that will send out the email notifications.

To configure your email service:

1 In the Worksoft Management Studio, click the **Master Configuration** tab.

The Master Configuration tab opens.

2 Scroll down to the SMTP Configuration section.

WORKSOFT. MA	NAGEMEN	IT STUDIO			AA Admin Admin ~
🚔 User Administration		Master Configuration		Discard	Save Changes
🔒 Master Configuration		SMTP Configuration	2		^
Execution Manager			36.		
Impact		From Email	UF02TDe@ws.com		
→ Analyze	×	provide the court.	an activity nation		
→ BPP		Host		Port 25	
→ Tenant Administration					
O Configuration		User Name			
% Integration					
Change History		Password			
			Use SSL	Test Conf	Iguration
		Status			
		Connection 🗸 S	uccessful		

- **3** In the SMTP Configuration section, enter the following information:
 - From Email
 - SMTP Host
 - SMTP Port
 - SMTP User Name
 - SMTP Password

- 4 If you want to use a SSL certificate, select the **SSL** option.
- **5** If you are using tenant spaces and want to use the Master Configuration SMTP configuration, select the **Offers to Tenant Spaces** option.
- 6 Click the **Test Configuration** button to test your connection.

If the test fails, the reason for the failure appears.

If the settings are not valid, the Certify Execution Suite will still be functional; however, the size of your log file will be affected since the products will log errors for all of the failed email notifications.

Disabling Notifications

You are able to disable email notifications to reduce the number of emails.

To disable notifications:

- **1** In the Worksoft Management Studio, click the **Configuration** tab.
- 2 Click the **Execution Manager** tab.
- 3 Select the **Disable notifications for each Certify process** option.
- 4 Click Save Changes.

Configuring Your LDAP Authentication Service

Worksoft Execution Suite allows you to authenticate users against your Lightweight Directory Access Protocol (LDAP) system. During the log on process, the user name and password combinations will be validated against LDAP.

To configure your LDAP authentication service:

1 In the Worksoft Management Studio, click the **Configuration** tab.

The Configuration tab opens.

User Administration		Configuration			
B Master Configuration	× -				
Configuration	-				
→ Execution Manager		LDAP Configuration			,
Impact	×	1000000000			
→ Certify Configuration	×	LDAP Settings			
→ Bookmark Administration → Licenses		Host / IP Address	hqdc01.worksoft.com		
6 Integration		LDAP Port			
Change History		Lore For			
		Base DN	OU=WorksoftUsers,DC=worksoft,DC	×com	
		Authentication Type	Basic		~
		User DN	ngurram@worksoft.com		
		Password	•••••		
		Filter	(&(objectCategory=person)(objectCla		

2 Enter the following information:

Field	Description
Host/IP Address	Enter the domain name or IP address of the LDAP directory server.
	Domain example: worksoft.com
LDAP Port	<i>Optional</i> - Enter the host port.
	The default port number is 389. If a value is not specified, the default port will be used.
	For secure connections using Secure Sockets Layer (SSL), the default port number is 636.
Base DN	Enter the Base Distinguished Name (DN) for LDAP.
	LDAP references an object by its DN. The Base DN identifies the starting point of a search with a sequence attributes connected by commas and no spaces.
	<pre>Example: ou=test,ou=sales,dc=example,dc=com</pre>
	If the LDAP authentication throws request time-out errors, make the base DN search more specific.
	<pre>Example: ou=people,dc=treea,dc=foobar,DC=com instead of dc=treea,dc=foobar,dc=com</pre>
	If you do not know the Base DN, consult your LDAP administrator or check your LDAP browser.
Authentication Type	Select the authentication method for your LDAP server:
	 Anonymous Basic (Default) Negotiate Ntlm
	If you do not know your Authentication Type, consult your LDAP administrator.
User DN	Enter the user who will connect to the server. This user must have read and execute permissions for the whole sub-tree.
	If your LDAP directory server requires a domain for logging on to the system, include the domain for the user as well.

Field	Description
Password	Enter the password to connect to the LDAP service on the specified LDAP Server.
	Although the LDAP default character length is 128 characters, Certify supports only 100 characters.
Filter	The default logical expression is ((uid={0}*)(sAMAccountName={0}*))
	This expression specifies attributes the requested LDAP entries must contain. Substitute the $\{0\}$ with the user name in which you plan to use when logging on to LDAP.
	If the LDAP authentication throws request time-out errors, edit the filter expression to the following:
	(&(objectCategory=person)(objectClass=user)(sAMAccoun tName={0}*))
	Example 2:
	(&(objectCategory=person)(objectClass=user) (userPrincipalName={0}*))
	Each customer may need to tailor this filter differently.

- **3** By default, LDAP traffic is transmitted unsecured. Select the **Use Secure Connection (SSL)** option to make LDAP traffic secure.
- 4 In the Verify LDAP User section, specify an email address and password to validate the accuracy of the Base DN and filter.

Verify LDAP User	
Please specify an email add	ress and password below to validate the accuracy of the Base DN and Filter
Email	
Password	
	Test Configuration

5 Click **Test Configuration** to verify that your LDAP configuration is valid.

If the test fails, the reason for the database connection failure appears.

6 Click Save Changes.

Adding RDP Servers

You are able to register additional Remote Desktop Protocol (RDP) servers within the Worksoft Management Studio. Only a single web server is required for the Certify Execution Suite.

However, if you determined that you need additional RDP servers after reviewing the system requirements at docs.worksoft.com, then you will need to add these additional Execution Manager web servers in Worksoft Management Studio.

Any additional RDP servers must have the same system requirements and configuration as your main web server. Also, all of the servers must have the same version of Certify Execution Manager installed. If any requirement is not met or a different version of Execution Manager is installed, then the RDP server will report failures.

To add additional RDP servers:

1 In the Worksoft Management Studio, click the **Master Configuration** tab.

2 Click the **Execution Manager** tab.

The Execution Manager tab opens.

3 Scroll down the tab until you see the RDP Servers section.

User Administration		Execution Manager	
E Master Configuration		Status	
-+ Execution Manager	T.		
Impact		Worksoft Execution Manager 🖌 Running Service	
→ Analyze	1		
BPP		Worksoft Execution Manager 🖌 Running RDP Service	
→ Tenant Administration			
O Configuration			
% Integration			
Change History		RDP Servers	Add
		RDP Server	

4 Click Add.

The Add RDP Server dialog box opens.

Add RDP	server		×
	Name		
		Test Cor	figuration
Status			
Connection	Not tested yet		
		Cancel	Add

5 In the Name field, enter the name of your additional RDP server.

The name of the server must be different from the original web server.

6 Click **Test Configuration**.

Worksoft Management Studio inspects the server to verify the requirements, services are running, and the version of Certify Execution Manager. If conditions are not me, the status reports errors and failures. Before you can add the server, you will need to fix the errors on your server.

7 If your server passes the test, click **Add** to add your server.

The server is listed in the RDP Servers section.

Modifying Maintenance Window Text

An administrator is able to modify the text shown in the login dialog box for Worksoft Management Studio and Worksoft Execution Suite.

Contact Supp		version : 10	0 1 567		Login	
Worksoft Managemer	nt Studio will	not be available on	Wednesdays	from 7 p.m. to	9 p.m. EST.	Window Messa
Weekly Schedu						
		r orgot your p	assilorar			Window Title
		Forgot your p	2010000			
Password						
Email						

The text that can be modified is meant for notifying when a product will not be available due to weekly scheduled maintenance. However, it can be modified and used for different purposes.

If you decide not to modify the text, then no information appears in your login dialog box, as shown below.

Email			
Password			
_	Forgot you	r password?	

To modify Maintenance window text:

- **1** Log on to Worksoft Management Studio.
- 2 In the Worksoft Management Studio, click **Master Configuration** tab.

The Master Configuration tab opens.

				Save Changes
Master Configuration -	0			
→ Execution Manager				3
Impact	Maintenance Window	1		
→ Analyze ×				
→ BPP	Product	Management Studio		~
Tenant Administration		Frank		
Configuration •	Language	English		~
b Integration •	Title	EnglishTitle		
Change History	1100	Lingwarthee		
	Description	EnglishDescription		
	Management Studio C	ptions		
	Management Studio	URL http://unclefester0;	2/managementstudio	

The Maintenance Window section is where you will specify your modifications.

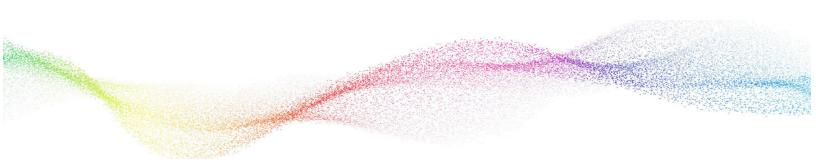
3 In the Maintenance Window section, select **Management Studio** from the drop-down list.

Note: Currently, only Worksoft Management Studio and Analyze are enabled.

- **4** From the Language drop-down list, select a language.
- **5** In the Title text field, enter the window title.

Titles can have a maximum of 60 characters.

- **6** In the Description text field, enter a message that will appear in the window. Descriptions can have a maximum of 90 characters.
- 7 Click Save Changes.
- 8 If you have other products in which you want to customize the login dialog box, repeat this process and select that product.



Chapter 5 Adding Bookmarks

In This Chapter

Creating Bookmarks

Within the Worksoft Management Studio, you are able to save your favorite Certify folders, Certify processes, and ALM/Quality Manager test sets by creating a bookmark. You will be able to run tests using the Execution Manager RESTful API.

The Bookmark Administration tab in the Worksoft Management Studio is where you create bookmarks for execution. You can create bookmarks for the following:

- Certify folder
- Certify process
- ALM/Quality Manager test sets
- To create a Certify folders bookmark:
- **1** Log on to Worksoft Management Studio as an administrator.
- 2 Under Configuration, click the **Bookmark Administration** tab.
- 3 In the Bookmark Administration tab select **Add > Certify Folder**.



The Bookmark Certify Folders dialog box opens.

Description Database	- Please Select - 🗸	Project	~

- 4 In the Name text field, type the name for your Certify folders bookmark.
- **5** In the Description text field, type a description for this Certify folders bookmark.
- **6** From the Database drop-down list, select the Certify database that contains the project which contains the process folder(s) you want to bookmark.

All Certify databases that are registered in Worksoft Management Studio are listed.

7 From the Project drop-down list, select the project that contains the process folder(s) you want to bookmark.

Folders within the project are shown.

Bookmark (Certify Folders			
Name	Transactional Tests			
Description	Tests			×
Database	UncleFester10_AU 🗸	Project	Test_EM	~
	1.3Utilities			
		Ca	ncel	Add

- 8 Select the Certify process folders that you want to include in your bookmark.
- 9 Click Add.

The bookmark is added to the Bookmark Administration tab.

You will notice that the Certify folders bookmark that you created has a Folder 🔲 icon next to it.

To create a Certify processes bookmark:

- **1** Log on to Worksoft Management Studio as an administrator.
- 2 Under Configuration, click the **Bookmark Administration** tab.
- 3 In the Bookmark Administration tab select **Add > Certify Process**.

Add +	
Certify Folder	
Certify Process	
HP ALM	

The Bookmark Certify Processes dialog box opens.

- 4 In the Name text field, type the name of your Certify processes bookmark.
- **5** In the Description text field, type a description for this Certify processes bookmark.
- **6** From the Database drop-down list, select the Certify database that contains the project which contains the processes you want to bookmark.

All Certify databases that are registered in Worksoft Management Studio are listed.

7 From the Project drop-down list, select the project that contains the processes you want to bookmark. Folders and processes within the project are shown.

tabase UncleFester10_AL ✓ Project Processes For EM ✓	Name	Certify Tests			>
	Description	Certify tests to execute			
	Database	UncleFester10_AL V	Project	Processes For EM 🗸	
	• (=	Test Folder		Ŷ	
Executing State And Abort Request1	- @	AdvanceCriteriaRule2			
- 🛞 🗌 Executing State And Abort Request2		_	Request1		
	- •	Executing State And Abort F	Request2	~	0.2

- 8 Select the Certify processes that you want to include in your bookmark.
- 9 Click Add.

The bookmark is added to the Bookmark Administration tab.

You will notice that the Certify processes bookmark that you created has a Process of icon next to it.

To create an ALM/Quality Manager test sets bookmark:

- **1** Log on to Worksoft Management Studio as an administrator.
- 2 Under Configuration, click the **Bookmark Administration** tab.
- **3** In the Bookmark Administration tab select **Add > HP ALM**.



The Bookmark ALM Test Sets dialog box opens.

- 4 In the Name text field, type the name of your ALM test sets bookmark.
- **5** In the Description text field, type a description for this ALM test sets bookmark.
- **6** From the ALM drop-down list, select the ALM instance that contains the test sets you want to bookmark. All ALM instances that you registered in Worksoft Management Studio are listed.

Test Lab folders with their test sets appear,

Bookmark /	ALM Test Sets		×
Name	ALM Test Sets		
Description	Test Sets to execute		
ALM	Test ALM 1		~
	 EMS-2591 Execution Manager ↓ ♥ CK - Demo - 2 plans ↓ ● CK - Demo - ServiceNow ↓ ● CK - Demo End 2 End ↓ ● OTC SAP by ID ↓ ● RegressionTests Explore 		^
			~
		Cancel	Add

- 7 Select the test sets that you want to include in your bookmark.
- 8 Click Add.

The bookmark is added to the Bookmark Administration tab.

You will notice that the ALM test sets bookmark that you created has a Test Sets 4 icon next to it.

To edit or delete a bookmark:

1 If you need to edit or delete a bookmark, click the **Edit** button next to the bookmark in the Book Administration tab.

The Bookmark dialog box appear.

- 2 If you want to edit the bookmark, apply your edits and click **Save Changes**.
- 3 If you want to delete the bookmark, click **Delete**.

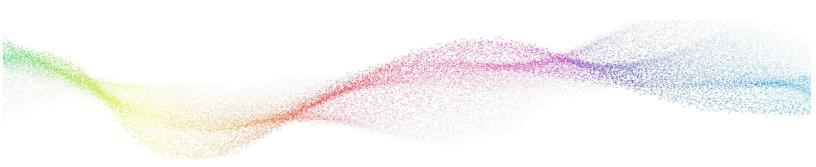
Executing a Bookmark

After you have created a bookmark, you will be able to execute it through the REST API calls with just the bookmark name or bookmark ID. Certify Execution Manager supports REST API calls from various development operating tools, such as Jenkins, to execute requests. For help and examples, see

http://<ServerName>/ExecutionManager/apidocs/

If you want to use this specification directly, the Swagger UI has a link that leads to the consumable Worksoft Execution Manager API Swagger Specification.

For more information on how to execute a bookmark, see the Worksoft Help Portal at docs.worksoft.com.



Chapter 6 Configuring Multi-Tenant Spaces

In This Chapter

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	F 0
Adding Tenants	59
Adding Users to Tenants	61
Adding Users to Tenants	61

Overview

Tenant Administration Option is for large companies who want to add multi-tenant support. Each tenant has isolated data for each of the products, and it is able to leverage the SMTP settings or configure a specific one.

When Worksoft Management Studio is installed, a single primary tenant is created by default, and this tenant is responsible for configuring the master configuration. From the primary tenant space, an administrator can create other tenant spaces if they want to partition data within their organization.

The administrator manages all tenants within Management Studio and assigns users to each tenant. These users will be managed by administrators in that tenant space.

Adding Tenants

Administrators add tenants in the Tenant Administration tab within the Worksoft Management Studio.

To add tenants:

- **1** Log on to Worksoft Management Studio as an administrator.
- 2 Under Master Configuration, click the Tenant Administration tab.The Tenant Administration tab opens.
- 3 Click **Add** to create a new tenant.

The Add Tenant dialog box opens.

dd Tenant						
					ACTIVE	
Tenant Name						
Email						
First Name						
Last Name						
Website						
Phone						
User Limit		🔽 No u	iser limit			
Default Time Zone	Server E	Default - (UT	C-06:00) (Central Time (U	S & Canada)	~
				Cancel	11	٨dd

- 4 To create an active tenant, verify that **Active** is selected.
- **5** In the related fields, enter the following information:
 - Tenant Name
 - Email
 - First Name
 - Last Name
 - Website
 - Phone

The user that you specify will be the main administrator for this new tenant space. The default password for the administrator is **password**.

6 If you want to limit the number of users, deselect the **No user limit** option and enter the number of users.

If you do not want to limit the number of users, leave this option selected.

7 From the Default Time Zone drop-down list, select your preferred time zone for Certify Execution Manager.

The time zone that you selected becomes the default time zone for this tenant and all users added to this tenant.

8 Click Add.

The new tenant appears in the Tenant Administration tab.

- **9** Log out of Worksoft Management Studio by clicking the arrow in the right-hand corner and selecting **Logout**.
- **10** Log on to Worksoft Management Studio with the email address you specified when creating the tenant and the default **password**.

You will now be able to perform administration tasks for the newly created tenant.

11 Repeat this process for creating additional tenants.

When creating additional tenants, an email account can be associated with more than one tenant space.

Switching Between Tenants

To switch between tenants, the administrator must log out of the Worksoft Management Studio. When logging on to Management Studio, the administrator must select a tenant from the Tenant list.

As long as the passwords for the tenant administrators are the same, then they will be able to select tenants from the Tenant list. If the password for either administrator is changed, then the user will not see the Tenant list and will only be able to manage the tenant in which it was created.

Adding Users to Tenants

You will now add users to your multiple tenants by one of the following methods:

- Manually add users in Worksoft Management Studio
- Import users from a Microsoft Excel® spreadsheet

To manually add users to tenants:

- **1** Log on to Worksoft Management Studio as the tenant administrator.
- 2 From the Tenant list, select the tenant in which you would like to create a new Execution Manager or Certify Impact user.
- 3 In the Worksoft Management Studio, click the **User Administration** tab.
- 4 In the User Administration tab, click **Add**.

The Add User dialog box opens.

Add User		×
	ACTIVE	
First Name		
Last Name		
Email		
Password		
Confirm Password		
Authentication	LDAP 🗸	
User Roles:		
Administrator	Upload Only	
Execut	ion Manager Impact	
Default Time Zone	Server Default - (UTC-06:00) Central Time (US & Canada) 🗸	
	Cancel Add	

5 To create an active user, verify that **Active** is selected.

To deactivate a user, select **Inactive**.

- **6** In the related fields, enter the following information:
 - First Name
 - Last Name
 - Email
 - Password
 - Confirm Password
- 7 From the Authentication drop-down list, use the default authentication option **Worksoft**.

If you have configured LDAP authentication, select the **LDAP** option.

- 8 If you want to give the user administrative rights, select the **Administrator** option.
- **9** If you want the user to only be able to upload Worksoft Capture files, select **Upload Only**.
- 10 Select Execution Manager and/or Impact under User Roles.
- **11** If you need to change the default time zone specified by the tenant, select a time zone from the Default Time Zone drop-down list of this user. This time zone is used for Certify Execution Manager.

12 Click Add.

The user appears in the left User Administration tab.

WORKSOFT, MA	NAG	GEMI	ENT STUDIC)				dmin Admin 👻
Ser Administration			. <u> </u>	_		_	_	
E Master Configuration	0	•	User	Administrati	ion			Add
Configuration	1	•					🕁 im	oort 🕂 Export
% Integration		•						
🖾 Change History				Full Name 🔺	Email	Roles		
				Admin Admin	admin@worksoft.com	Administrator		1
			•	Admin Support	supportadmin@worksoft.com	Administrator		/
				Dennis Palmer	dpalmer@worksoft.com	Administrator		/

13 Repeat this process to add more users.

To edit a user, click the **Edit** icon next to the user.

• To add users by importing from a Microsoft Excel spreadsheet:

- **1** In the Worksoft Management Studio, click the **User Administration** tab.
- 2 In the User Administration tab, click **Import**.

The Import User dialog box opens.

Import Users		×
If you wish to import your users to Manag uploading an Excel worksh		o by
Download Import Docum	nent Template	
File Location	Choose File	
In the event that one or more user(s) are choose the behavior below which Overwrite		ise
	Cancel	Import

- To download an Excel template, click **Download Sample Upload File**.Use this template to create your own Excel spreadsheet.
- 4 Click the **Choose File** button and select the CSV file that you want to import.
- **5** After you have selected your file, click the **Import** button.

The users are imported into the Worksoft Management Studio and appear in the Users Administration tab.

Chapter 7 Installing Remote Certify Execution Manager Agents

In This Chapter

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Configuring Resource Client Machines	69
Accessing the Certify Execution Manager Agent	71
Best Practices for Using RDP with Multiple Local Users	72

Installing Remote Certify Execution Manager Agents

In order to use the Worksoft Certify Execution Manager, you will need to install a Certify Execution Manager Agent on each dedicated machine allocated for remote execution. The Certify Execution Suite Server communicates with the Agents and sends requests to start executing processes and projects.

You are able to install Certify Execution Manager Agents two different ways:

- From the software distribution folder
- From Certify Execution Manager

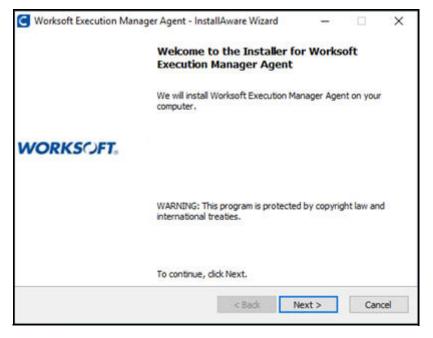


Note: If the Certify Execution Manager Agent is not installed on the default C: drive, then you will need to create an AGENT_LOCATION parameter when you configure a resource in Execution Manager.

Also, if Worksoft Certify is not installed on the default C: drive, then you will need to create a CERTIFY_LOCATION parameter when you configure a resource.

- **To install a Certify Execution Manager Agent from the software distribution folder:**
- **1** In your software distribution folder, double-click the **Remote Execution Agent.exe** file.

The Certify Execution Manager Agent installer opens.



2 Click Next.

When the system analysis has completed, the Destination Folder page appears.

Destination Folder	L	VO	DKG	CET
Select folder where setup will install files.	I files. WORK			
Install Worksoft Execution Manager Agent to:	-	-	200	
Install Worksoft Execution Manager Agent to: C: 'Program Files (x85) \Worksoft\'Execution Manager Agent		Chan	ge	
C:\Program Files (x86)\Worksoft\Execution Manager Agent		Chan	ge	
C: (Program Files (x86) \Worksoft\Execution Manager Agent Destination Folder				
C: Program Files (x86) Worksoft Execution Manager Agent		2,2	ge 44 KB 14 MB	
C: Program Files (x86) Worksoft Execution Manager Agent Destination Folder Required Disk Space:		2,2	44 KB	

3 If you want to accept the default directory for your installation files, click **Next**.

If you do not want to accept the default directory for the installation files, click the **Change** button to select a different installation directory for the Certify client, and then click **Next**.

If the directory is different, you will also need to update the directory in the Execution Manager Resources page.

The Registration Details page appears.

Norksoft Execution Manager Agent - InstallAware Wizard	-		×
Execution Manager Agent Registration Details These fields are required to register the agent with EM server.	wo	RKS	DFT.
Execution Manager URL (E.g.: https:// <executionmanagerserv< td=""><td>er>) - Requir</td><td>ed</td><td></td></executionmanagerserv<>	er>) - Requir	ed	
1]
Email (Eg: jdoe@yourcompany.com) - Required			
			1
Password - Required			-
Tenant Name (Optional)			
default		ter with El	ч
		N	en:
orksoft		-	

- 4 In the Execution Manager URL text field, enter the URL address for your Execution Manager.
- **5** In the Email and Password fields, enter your credentials to log on to Execution Manager.

- **6** If you have a tenant, enter the name in the Tenant Name field.
- 7 If you want to register your machine as a resource, select the Register with EM option.
- 8 Click Next.

The Completing the Installation page appears.

	Completing the Installation of Worksoft Execution Manager Agent					
WORKS()FT.	We are now ready to configure Worksoft Execution Manager Agent on this computer.					
WORKS(JFI:	- Click Next to begin configuration					
	- Click Back to change settings					
	- Click Cancel to exit					
	< Back Next > Cancel					

9 Click Next.

The Completing Last Steps page appears.

C Worksoft Execution Mar	nager Agent - InstallAware Wizard 🛛 — 🗌 🗙
	Completing Last Steps - Worksoft Execution Manager Agent
WORKS()FT.	You have successfully completed the installation for Worksoft Execution Manager Agent.
	To dose this wizard, click Finish.
	< Back Finish Cancel

10 Click Finish.

Certify Execution Manager Agent installation is complete. Repeat this installation process for all of the client machines that you intend to use with the Execution Manager Server.

The Certify Execution Manager Agent must be running in order for the Execution Manager Server to connect with the machine that will be executing Certify processes. When you start Certify Execution Manager, the agent will automatically start. When you log off, the Agent shuts down.

AutoDispose Parameter

When you register the agent as an Execution Manager resource during installation by selecting the Register with EM option, an AutoDispose parameter is added to the resource. This parameter warns the user that after the self-registered resource has been idle after a period of time, it will be deleted. The default time is six hours.

Parameter Name	Description	Value	
AutoDispose	Resource added by the Agent, will automatically be deleted.	True	REMOVE

This parameter's value can be changed in the ProductSettings database table in Worksoft Management Studio by changing the parameter value to False or deleting the parameter.

Installing the Agent from Execution Manager

You can also install an Agent from Execution Manager.

- **•** To install a Certify Execution Manager Agent from the Execution Manager:
- **1** From Certify Execution Manager, click the **Resources** tab.
- 2 In the right pane, click **Download E/M Agent**.

A message appears asking if you want to open or save the **ExecutionManagerAgent.zip** file.

- 3 Click **Open**, **Save**, or **Save As**.
- 4 If you clicked Save or Save As, unzip the ExecutionManagerAgent.zip file.
- 5 Right-click **Execution Manager Agent.exe**.

The Certify Execution Manager Agent installer opens.

Configuring Resource Client Machines

The resource machine where Certify Execution Manager Agent is installed needs to be able to respond to pings from the web server when you utilize Remote Desktop Protocol (RDP). You will need to complete the following settings in order for your machines to successfully execute requests:

- Configure resource machines to be responsive to Execution Manager pings
- Disable Windows Fast User Switching mode

Configuring Resource Machine to be Responsive to Execution Manager Pings

In order for you to be able to ping your resource machine in the Certify Execution Manager Resources screen, you will need to enable the following inbound rules:

- File and Printer Sharing (Echo Request ICMPv4-In)
- File and Printer Sharing (Echo Request ICMPv6-In)

• To configure your resource machine to be responsive to pings:

- **1** Open Windows Firewall with Advanced Settings tool on your machine.
- 2 In the left Navigation pane, click **Inbound Rules**.

ile Action View Help						
• 🐟 🙇 📰 🕞 📔 ன						
Windows Firewall with A	Inbound Rules		1.1. · · · ·			Actions
🗱 Inbound Rules	Name	Group	Profile	Enabled		Inbound Rules
Cutbound Rules	Distributed Transaction Coordinator (RPC-EPMAP)	Distributed Transactio	Private	No		New Rule
Connection Security R	Distributed Transaction Coordinator (TCP-In)	Distributed Transactio	Private	No		
Monitoring	Distributed Transaction Coordinator (TCP-In)	Distributed Transactio	Domain	No		Filter by Profile
	File and Printer Sharing (Echo Request - ICMPv4-In)	File and Printer Sharing	Domain	Yes		Filter by State
	File and Printer Sharing (Echo Request - ICMPv4-In)	File and Printer Sharing	Private	No		Filter by Group
	File and Printer Sharing (Echo Request - ICMPv6-In)	File and Printer Sharing	Domain	Yes		View
	File and Printer Sharing (Echo Request - ICMPv6-In)	File and Printer Sharing	Private	No		
	File and Printer Sharing (LLMNR-UDP-In)	File and Printer Sharing	All	No		G Refresh
	File and Printer Sharing (NB-Datagram-In)	File and Printer Sharing	Private	No		🗟 Export List
	File and Printer Sharing (NB-Datagram-In)	File and Printer Sharing	Domain	No		7 Help
	File and Printer Sharing (NB-Name-In)	File and Printer Sharing	Private	No	Ξ	
	File and Printer Sharing (NB-Name-In)	File and Printer Sharing	Domain	No		File and Printer Sharing (Echo Request - ICMPv4-In)
	File and Printer Sharing (NB-Session-In)	File and Printer Sharing	Private	No		Disable Rule
	File and Printer Sharing (NB-Session-In)	File and Printer Sharing	Domain	No		🔏 Cut
	File and Printer Sharing (SMB-In)	File and Printer Sharing	Domain	No		
	File and Printer Sharing (SMB-In)	File and Printer Sharing	Private	No		Сору
	File and Printer Sharing (Spooler Service - RPC)	File and Printer Sharing	Private	No		K Delete
	File and Printer Sharing (Spooler Service - RPC)	File and Printer Sharing	Domain	No		Properties
	File and Printer Sharing (Spooler Service - RPC-EPMAP)	File and Printer Sharing	Private	No		7 Help
	File and Printer Sharing (Spooler Service - RPC-EPMAP)	File and Printer Sharing	Domain	No		incip.
	Wetworking - Echo Request (ICMPv4-In)	File and Printer Sharing	Public	Yes		
	Wetworking - Echo Request (ICMPv6-In)	File and Printer Sharing	Public	Yes		
	Google Chrome (mDNS-In)	Google Chrome	All	Yes		
	HomeGroup In	HomeGroup	Private	No		
	HomeGroup In (PNRP)	HomeGroup	Private	No		
	iSCSI Service (TCP-In)	iSCSI Service	Private	No		
	iSCSI Service (TCP-In)	iSCSI Service	Domain	No		
	Kou Managament Convice (TCD In)	Vou Management Conv	Drivato	Mo	*	

- **3** Verify that the following inbound rules are enabled:
 - File and Printer Sharing (Echo Request ICMPv4-In)
 - File and Printer Sharing (Echo Request ICMPv6-In)
- 4 If any of these rules are not enabled, right-click on the **No** next to the rule in the Enabled column and select **Enable Rule**.
- **5** After you have enabled all of these rules, close the Windows Firewall with Advanced Settings tool.



Note: If you have a Citrix environment, the Citrix server must be configured to support RDP sessions. Test your configuration by running mstsc.exe. This configuration setting is not enabled by default.

Disabling Windows Fast User Switching Mode

Execution Manager Agents require the ability to enter a user name and password on the screen. If the login screen displays a Switch User button, then the Agent will not start. Consult your IT administrator about disabling the Fast User Switch mode in the Local Group Policy Editor.

- **To disable Windows Fast User Switch mode:**
- 1 From the Windows Start menu, type gpedit.msc, and press Enter.

The Local Group Policy Editor opens.

- 2 In the Local Group Policy Editor Navigation pane, drill down and select **Computer Configuration > Administrative Templates > System > Logon**.
- In the Setting pane, double-click Hide entry points for Fast User Switching.The Properties dialog box for this setting opens.
- 4 Select the **Enabled** option.
- 5 Click OK.

Accessing the Certify Execution Manager Agent

On the client machine, select **Start > Programs > Worksoft Execution Manager Agent > Worksoft Execution Manager Agent**.

The Execution Agent opens.

ecution Manager URL	Fo	nail		
ttp://unclefester02/		dmin@worksoft.com		
enant Name		ssword		
Optional	**	*****		
Save Settings				
Test	Message			
Execution Manager Connection	Email and/or pass	word are invalid.	×	
Credential Provider(s) May not be CredProvHe		compatible with Execution Manager: elper.		
Free Disk Space (C:)	Meets system req	uirements.	~	
Worksoft Certify Installation	Meets system req	virements.	~	
CA Identity Minder Installation	Meets system requ	virements.	~	
Administrator Privileges	Meets system req	uirements.		

When you start the Execution Agent, you will see a list of diagnostic tests that have been performed on your machine. Each test displays one of the following status icons:

lcon	Description
\checkmark	Test passed.
×	Mandatory configuration was not met and must be fixed. You will not be able to execute requests.
!	Warning that there is a failure, but requests still might be able to run.

The last run diagnostics status also displays below the grid.

Each time the Execution Manager starts, it automatically performs the analysis and reports these findings. If you make adjustments to the configuration and policy, click **Run Diagnostics** to run the tests again and to see if all the tests passed.

Best Practices for Using RDP with Multiple Local Users

If you have multiple local users running tests using RDP, you will need to configure your machine to avoid initial log on time consumption and requests failing to execute.

Avoiding Initial Log on Time Consumption

After creating a local user on a machine, manually log on as the new user because the initial log on to Windows is sometimes time consuming.

Avoiding Requests Failure

Even if the local user running tests belongs to the Administrator group on the machine, you will still need to turn off the User Account Control notifications. If you do not turn them off, the requests fail to execute.

Open the User Account Control Settings window and select **Never Notify** to prevent any unexpected notifications that might get in the way of the Execution Manager Agent.

😵 User Account Control Settings 📃 🗉 🕱		
User Account Control he	e notified about changes to your computer lps prevent potentially harmful programs from making changes to your computer. r Account Control settings	
Always notify		
- [Never notify me when:	
	 Programs try to install software or make changes to my computer I make changes to Windows settings 	
	Not recommended. Choose this only if you need to use programs that are not certified for Windows 7 because they do not support User Account Control.	
Never notify		
	Solution Cancel	

Troubleshooting RDP Sessions

If any of the following conditions occur, then it will result in black screen captures and the automation will fail:

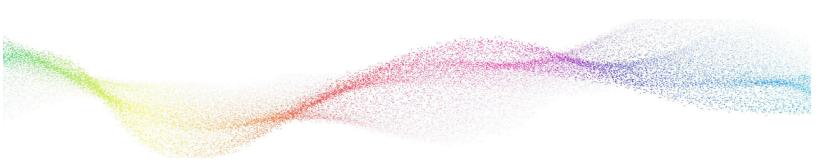
- Minimizing an RDP session
- RDP session disconnected

Examples: User clicks **Close** button, maximum CPU utilization, network NIC card maximized, VPN turned off, or any network communication issues

Machine gets locked

Examples: Screen saver locks it or user or domain policy locks the machine

 Execution Manager Agent does not start automatically. For more information, see Appendix C "Creating a Task in the Windows Task Scheduler."



Chapter 8 Upgrading Worksoft Execution Suite

In This Chapter

Upgrading Worksoft Execution Suite v9.2 to v10	. 75
Upgrading Databases for Multi-Tenancy	. 77
Updating Resources	. 78
Upgrading Worksoft Execution Suite v10.0.0 to v10.0.X	. 79

Upgrading Worksoft Execution Suite v9.2 to v10

- Uninstall Worksoft Execution Suite v9.2. 1
- 2 After you uninstall the Execution Suite, delete the Worksoft Application Server folder in the following default location: C:\Program Files (x86)\Worksoft
- 3 Install the Worksoft Application Server v10. For information on how to install the server, see Chapter 3 "Installing Worksoft Application Server"
- 4 Open the Worksoft Management Studio on a local machine by navigating to the following address: http://localhost/ManagementStudio.

WORKSOFT, MANAGEMENT STUDIO			
	Management Studio Installation		Continue
		de the Database and URL for this configuration. If this is a new installation, use the sword to configure Management Studio after selecting continue.	e
	Management Studio URL	http://VABENNEY15/managemenIstudio	
	Management Studio Database		
	SQL Server		
	SQL User		
	SQL Password		
	Database Name		
		Test Configuration	
	Status		^
	Connection Not tested yet		

The Management Studio Installation page opens.

5 Enter the Worksoft Management Studio URL address.

> If you did not use the default website during installation, your URL address will be different. The implementation of your network landscape will need to be considered when choosing a URL address. Verify that the URL can be accessed by all users.

The URL address should either be a domain or a machine name for on-premise installations. If using a machine name, you will need to decide if a fully-gualified domain and machine name is required. Do not use IP addresses.

If your DNS settings require a fully-qualified machine name complete with domain, please make those changes accordingly.

If their is a load balancer in front of one or more web servers, then the URL address should point to the load balancer domain. If you have any questions about your specific URL address, please ask your IT administrator.

If you intend to use HTTPS for your application server, you will need to first configure your server with HTTP, and then you will be able to reconfigure the application server to use HTTPS. For more information, see Appendix B "Creating Worksoft Execution Suite Databases with Apply.exe.".

- **6** If you want to enable verbose logging, select the **Enable Verbose Logging** option.
- 7 To view the status of your services, click the **Services** down arrow.
- 8 In the Management Studio Database section, enter the server name in the SQL Server field.
- **9** For SQL Database Authentication, type the SQL user name and password in the fields to access the database server.

The SQL Server user account must have necessary permissions to create or update the database. If needed, you are able to use a temporary SQL Server administrator with permissions, and then update the SQL Server user credentials for only this database.

- **10** In the Database Name field, enter the name of the Management Studio database.
- **11** Click the **Update** button.

A message appears asking if you want to update the Worksoft Management Studio database.

12 Click Update.

13 Click Continue.

After saving the Management Studio configuration, you will be prompted to log on to the Management Studio.

- **14** In the User Name field, use your existing Worksoft Management Studio email address as your user name.
- **15** In the Password field, use the password that you created for Worksoft Management Studio.
- 16 Click Login.
- **17** In the Worksoft Management Studio, click the **Master Configuration** tab.
- **18** Click the **Execution Manager** tab.

The Execution Manager tab opens.

19 Click the **Update** button to update the database.

A message appears asking if you want to update the Certify Execution Manager database.

- 20 Click Update.
- 21 Click the **Impact** tab.

The Impact tab opens.

22 Click the **Update** button to update the database.

A message appears asking if you want to update the Certify Impact database.

23 Click Update.



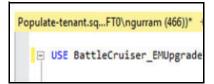
Note: If you have more than one Certify Execution Manager and Certify Impact databases, you are able to easily update the database. Start typing the name of the database in the field, and a list of database names appear. If your database does not appear in the list, the permissions for the SQL User must not be adequate. Consult your database administrator.

Upgrading Databases for Multi-Tenancy

To finish the upgrade process, open the Microsoft SQL Management Studio to configure databases for multi-tenancy. Because of the major architecture updates, there is an extra manual step that is required by your Microsoft SQL Server database administrator. You will need to have permissions and access to manually run two database scripts.

To upgrade Certify Execution Manager database for multi-tenancy:

- **1** Open the Microsoft SQL Management Studio.
- **2** Open the Databases folder for ExecutionServer.
- **3** Open the **Populate-tenant.sql** file in the Microsoft SQL Management Studio.
- **4** In the Use line, add the Execution Manager database name that needs to be upgraded for multi-tenancy.



This line verifies that the Execution Manager database is the focus, and it will be the actual database updated during this operation. Use the full name of the Execution Manager database.

5 In the Declare line, add your Execution Manager database and the SQL Management Studio database that you will need sync with for the multi-tenancy.



This line verifies that this TSQL script knows the name of the Management Studio database, and it will be querying information required from the Management Studio database to perform the update on the Execution Manager database. Use the full name of the Management Studio database within the single quotes at the end of this line, as shown in red.

- **6** Run the SQL query.
- 7 Verify that you get a success message after the query has completed.

• To upgrade Certify Impact database for multi-tenancy:

- **1** Open the Microsoft SQL Management Studio.
- **2** Open the Databases folder for Impact.
- **3** Open the **Populate-tenant.sql** file in the Microsoft SQL Management Studio.
- 4 In the Use line, add the Certify Impact database name that needs to be upgraded for multi-tenancy.

This line verifies that the Certify Impact database is the focus, and it will be the actual database updated during this operation. Use the full name of the Certify Impact database.

5 In the Declare line, add your Certify Impact database and the SQL Management Studio database that you will need sync with for the multi-tenancy.

This line verifies that this TSQL script knows the name of the Management Studio database, and it will be querying information required from the Management Studio database to perform the update on the Certify Impact database. Use the full name of the Management Studio database within the single quotes at the end of this line.

- **6** Run the SQL query.
- 7 Verify that you get a success message after the query has completed.

Updating Resources

Certify Execution Manager v10 provides the ability for concurrent Remote Desktop Protocol (RDP) user sessions on remote machines for continuous testing in parallel and helps remove several constraints and limitations.

With this version, you will need to add users to your resources. Resource machines need to be powered on, but they no longer need to have the Execution Manager Agent running. Execution Manager starts the Agent before execution. You will need to edit each resource and configure user credentials in order for processes to execute properly.

In this release, Certify Execution Manager will automatically:

- Identify an available machine and an available user account.
- Reserve the machine and user account for the duration of executing a Certify process.
- Log on to the reserved machine using the user account to automatically start the Execution Manager Agent.
- Start Certify to execute the process and results are saved in the Certify database.
- Close Certify and Execution Manager Agent when the execution of the Certify process is complete.
- Log out of the machine.

The machine and user account will then be available for subsequent executions of other Certify processes.

For information on how to configure and register your resources, see the topic *Upgrade to Certify Execution Manager v10* in the Worksoft Help Portal.



Note: If you are upgrading from v9.2 to v10, you will need to provide additional settings for your LDAP Connection. For more information, see "To configure your LDAP authentication service:" on page 46.

Upgrading Worksoft Execution Suite v10.0.0 to v10.0.X

Before upgrading Worksoft Execution Suite, verify that you have installed Media Foundation when you configured your application server. For more information, see page 12.

To upgrade Worksoft Execution Suite v10 to v10.0.1:

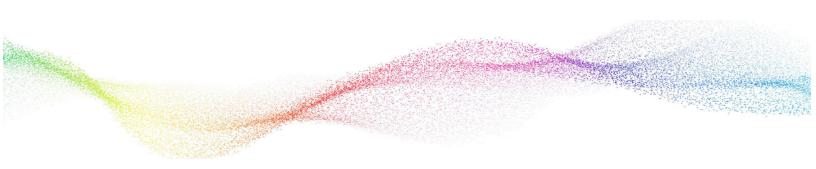
1 From the distribution package, run the installer.

The application will install on top of the previous version.

2 In the Worksoft Management Studio, verify that all of your configurations are set correctly.

Any configuration problems will be highlighted in the color red. After you have reset your configurations, you are ready to start using the applications.

- **3** Each time you perform an upgrade, you will need to update the following databases:
 - Management Studio
 - Execution Manager
 - Certify Impact



Chapter 9 Accessing Worksoft Execution Suite

In This Chapter

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Accessing Certify Execution Manager	81
REST API Support for Execution Manager	81

Accessing Certify Impact

The URL address for Certify Impact is /Impact/">http://servername>/Impact/

Accessing Certify Execution Manager

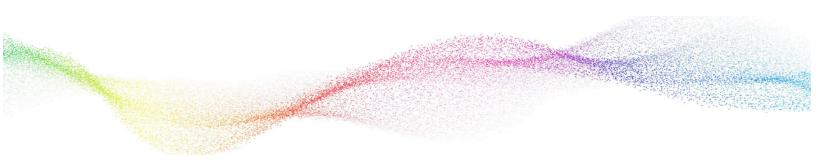
The URL address for Certify Execution Manager is /ExecutionManager/">http://servername>/ExecutionManager/

REST API Support for Execution Manager

Certify Execution Manager supports REST API calls from various development operating tools, such as Jenkins, to execute requests. For help and examples, see

http://<ServerName>/ExecutionManager/apidocs/

If you want to use this specification directly, the Swagger UI has a link that leads to the consumable Worksoft Execution Manager API Swagger Spec.



Chapter 10

Configuring Micro Focus ALM/Quality Center Integration

In This Chapter

Overview	83
Installing the ALM/Quality Center Connectivity Add-On Tool	83
Integrating Worksoft Execution Suite with ALM/Quality Center	84

Overview

You are able to integrate with Micro Focus® Application Lifecycle Management® (ALM) Quality Manager and leverage your test sets from Certify Execution Manager. The Certify Execution Manager runs ALM/Quality Center test sets in parallel which reduces the time needed for regression testing. The results are stored directly into ALM/Quality Center, and a consistent audit log is provided.

In order to run ALM/Quality Center test sets from Certify Execution Manager, the web server hosting Worksoft Execution Suite and each resource machine must have the following:

- ALM/Quality Center Client installed
- ALM/Quality Center Connectivity tools installed
- ALM/Quality Center Client registered

For information on how to install the ALM/Quality Center Client and register it, go to the Micro Focus ALM site.

Installing the ALM/Quality Center Connectivity Add-On Tool

To connect ALM/Quality Center with the Worksoft Execution Suite, you need to install the ALM/Quality Center Connectivity Add-On tool on the web server hosting Worksoft Execution Suite and each resource machine.

To install the ALM/Quality Center connectivity add-on tool:

- **1** Open the Micro Focus Application Lifecycle Management (ALM) site.
- 2 Click **Tools**.
- 3 On the Tools screen, click **HP ALM Connectivity**.
- 4 Click **Download HP ALM Connectivity**.
- 5 On the ALM Connectivity screen, click **Save** and save the **TDConnect.exe** file.
- 6 Browse to where you saved the file, and right-click on **TDConnect.exe** and select **Run as administrator**.

After the installation completes, a message appears.

7 Click OK.

Integrating Worksoft Execution Suite with ALM/Quality Center

If you plan to integrate with ALM/Quality Center, you will need to validate your connection with Worksoft Management Studio.

To validate ALM/Quality Center with Worksoft Execution Suite:

- **1** In the Worksoft Management Studio, click the **Integration** tab.
- 2 Click the **ALM Integration** tab.

The ALM Integration tab opens.

3 Click Add.

The Add ALM Configuration dialog box opens.

Add ALM Conf	figuration		×
	ur web server is configured onnectivity tools is installed, are reg	as well as details pertai	
Name			
Instance URL			
Domain			
Project			
User			
Password			
		Tes	t Configuration
Status			
Connection	Not tested yet		
		_	
		Cancel	Add

4 Enter the following information:

Field	Description
Name	Name for your ALM/Quality Center connection
Instance URL	ALM/Quality Center URL address
Domain	ALM/Quality Center domain
Project	ALM/Quality Center project
User	ALM/Quality Center user name
Password	ALM/Quality Center password

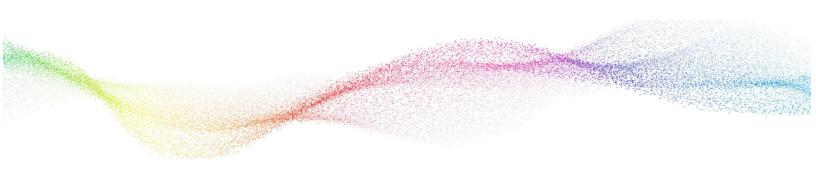
5 Click **Test Configuration**.

Information about the connection appears in the Status section.

~	Successful	
~	Success	Details
~	Success	
×	Success	
~	Success	
	~ ~ ~	 Successful Success Success Success Success Success

Integrating with Certify Impact

To integrate with Certify Impact, select ALM/Quality Center as the Test Execution Integration option in the Configuration tab. For more information, see "Configuring Certify Impact" on page 41.



Chapter 11 Configuring Panaya TDx Integration

In This Chapter

Overview	87
Configuring Certify BPP	87
Adding Panaya TDx Information to Worksoft Management Studio	88
Creating Bookmarks for Panaya TDx Integration	90
Creating a Worksoft Automation Cycle	90

Overview

Worksoft supports the integration with the Panaya Test Dynamix (TDx) Platform. The common workflow for TDx is the reporting of test results based on build numbers. Worksoft Certify results can contain an application and build number to correlate results with reporting on changes in the build.

In order to enable this integration with TDx, you will need to complete the following:

- Enable Panaya TDx for API integration.
- Configure Certify Business Process Procedure (Certify BPP) in Worksoft Management Studio. Certify BPP is used to create comprehensive reports for test results.
- Add Panaya TDx information to Worksoft Management Studio for integration.
- Create bookmarks in Worksoft Management Studio for Certify processes that you want to make available in Panaya TDx.

Configuring Certify BPP

After you have enabled Panaya TDx for API integration, you will open Worksoft Management Studio to complete the configuration. The first step is to configure Certify BPP. Certify BPP is a web-based reporting tool that automatically generates comprehensive reports for development, quality assurance, training, and compliance.

For more information about Certify BPP, see the Worksoft Help Portal.

Certify BPP has Certify databases specified in its configuration file. Each Certify database in Certify BPP has an alias name, and each Certify database in Worksoft Management Studio has an alias name. You must verify that the Certify databases in the Certify BPP configuration file match the database names in Worksoft Management Studio.

If there are differences in the database names, Worksoft recommends that you change the names within the Certify BPP configuration file.

To configure Certify BPP:

- **1** Open Worksoft Management Studio.
- 2 In the Worksoft Management Studio, click the **Master Configuration** tab.
- 3 Click the **BPP** tab.

The BPP tab opens.

User Administration		BPP		
B Master Configuration	× -			
-+ Execution Manager	×			
-+ Impact	×	BPP Configuration 🗸		^
-+ Analyze	×			
→ BPP		Instance URL http://litan		
→ Tenant Administration				
Configuration	•		Test Config	juration
% Integration	×.			
Change History				
		BPP Services 🗸		^
		Status		
		BPP Web Application 🖌 Running		
		BPP Archive Service 🖌 Running		
		BPP Automated Reports 🖌 Running Service		
		BPP Report Template Service Running		

- In the Instance URL text field, enter the URL address for your Certify BPP instance. Examples: http://machinename or https://machinename
- 5 Click Test Configuration.

Adding Panaya TDx Information to Worksoft Management Studio

The next step is to add Panaya TDx information to Worksoft Management Studio so that the Worksoft Integration Gateway can point to the instance.

- **To add Panaya TDx information:**
- **1** In the Worksoft Management Studio, click the **Integration** tab.
- 2 Click the **Panaya Integration** tab.

The Panaya Integration tab opens.

User Administration		Integration			
B Master Configuration	× •				
Configuration					
Integration		Panaya Integration 🗸			^
→ ALM Integration					
-+ Analyze Connections	1	Service URL	https://my.panaya.com		
→ Certify/Analyze Integration	1	System UID	_2bf2f931_166b6f8bce4_4f29		
→ SAP Systems		0,000			
Panaya Integration		User	agoetz@worksoft.com		
Change History					
		Password	•••••		
		Polling Interval (seconds)	30		
		BPP Report Template	Default 4	×	
		Certify Results Folder	Panaya Results Mainline		
				Test Configuration	

- **3** In the Service URL field, enter the URL address for your Panaya instance.
- 4 In the System UID field, enter the unique identification number for Panaya.

To find the UID in Panaya, open the Settings panel and select **Configuration**. In the Automatic Testing Tool section, click on **Copy UID To Clipboard**.

- **5** In the User and Password fields, enter your Panaya credentials in the respective fields.
- **6** In the Polling Interval field, enter the number of seconds Execution Manager will query for new tasks in Panaya TDx.

The recommended value from Panaya is 60 seconds or greater.

7 In the BPP Report Template drop-down list, select the template that you want to use for your report.

You must have Certify BPP configured in order to see the templates list.

You can select multiple templates by pressing the **<Ctrl>** key while selecting several templates or by pressing the **<Shift>** key when selecting a consecutive range of templates. If more than one template is specified, one report is generated for each template. For example, if you selected three report templates, each process will generate three reports.

- 8 In the Certify Results Folder field, enter the name of the folder in which your results will be saved.
- 9 Click **Test Configuration**.

A message appears if the connection was successful.

Creating Bookmarks for Panaya TDx Integration

The next step is to create bookmarks in Worksoft Management Studio that will point to the Certify processes that you want to make available in Panaya TDx.

Worksoft Management Studio integrates with Panaya TDx with bookmarks. When using Panaya, a user can select either a single bookmark or all bookmarks. As a result, the Certify processes are added to a Panaya Worksoft Automation Cycle accordingly.

For information on how to create bookmarks, see Chapter Chapter 5, "Adding Bookmarks," on page 52.

After you have completed creating bookmarks, your integration is complete.

Creating a Worksoft Automation Cycle

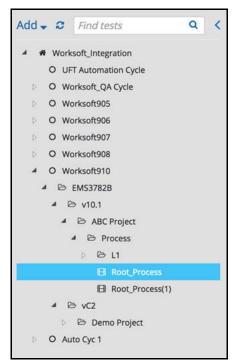
After you have configured the integration, create a new automation cycle in Panaya and select the **Worksoft Automation** option.

O Pa	anaya < w	orks	oft_Integratio	on	
PROJECT	DEVELOPMENT		TESTS 2	DEFE	ECTS 👩 REPORTS
🕞 Tree	🔳 List 🛛 🖻 Pl	aylist	Execution	۵ Te	est Box
Add 🗸	<i>C</i> Find tests		۹ <	# PRC	JECT Worksoft_Integration
4 8 1	Norksoft_Integration	B	Test		Summary
-	Create Playlist		Quick Test		
	Import Export	Ca)	Business Pr Folder	ocess	Worksoft_Integration
	Mass Edit	0	Cycle Automation	Cycle 🕨	Hanager: agoetz@worksoft.com HP UFT
	Link to Requirement		Automation	Project	Tricentis Tosca Worksoft Automation
	Сору			Project	Type: Testing

In order for Panaya to communicate with Worksoft Integration Gateway, you need to do the following:

- Select the new Worksoft cycle in the Navigation pane.
- Click the **Sync Settings** tab.
- In the Sync Settings tab, click **New**.
- From the Machine drop-down list, select the host name of Worksoft Management Studio and click **Save**.
- Click **Sync** and click the **Refresh** button.

Under the Worksoft cycle, the Worksoft project and processes appear.



Now that the Certify processes appear within Panaya, it is possible to create one or more Panaya playlists using one or more of these processes at any time. When you run the Panaya playlist, the Worksoft Integration Gateway will be instructed to begin execution. An Execution Manager request is created within Execution Manager automatically. The new request contains each of the Certify processes that were added to the Panaya playlist.

For more information about Panaya playlists, go to Panaya's web page.

After test execution is complete, you can view the results in Panaya TDx. The results appear in a report that utilizes the Certify BPP template you specified in Worksoft Management Studio.

Appendix A Troubleshooting

Before contacting Worksoft Support, use the **Worksoft Diagnostics** tool that is located in the **Tools** folder of the installation package. When you run the Worksoft Diagnostics tool on your web server, this tool generates a diagnostic results file.

- **To create a diagnostic results file with the Worksoft Diagnostics tool:**
- **1** In the Tools folder of the installation directory, copy the **worksoftdiagnostics.exe** file to your web server.
- 2 Right-click on the **worksoftdiagnostics.exe** file and select **Run as Administrator**.
- 3 Click the **Start** button.

The process will take several minutes. The **WorksoftDiagnostic_<machine name>.html** file opens in the default browser on the machine.

- 4 Review the diagnostic results file and follow the instructions listed in the file.
- **5** After you have completed the tasks listed in the file, rerun the tool again if you are still having trouble with installation.
- **6** If needed, send the last results file to Worksoft Support.

If you still have trouble installing the Worksoft Execution Suite, go to the **Worksoft Community** site to view solutions to issues that you may have encountered with the installation. In order to utilize the Worksoft Community site, you will need to register on this site: http://portal.worksoft.com/.

Verifying the Worksoft Management Studio Configuration File

If you are having trouble with Worksoft Management Studio's URL address, you can verify the address in the configuration file.

• To verify the Worksoft Management Studio configuration file:

1 Open the Worksoft Management Studio configuration file in Notepad. Go to the following default folder to open the file:

C:\Program Files (x86)\Worksoft\Worksoft Application Server\ ManagementStudio\web.config

- 2 In the configuration file, find the setting <add key="MgmtStudioURL" value=.
- **3** Verify that the URL address matches the one that you entered in the Configuration tab of the Management Studio.

Example: https://worksoftMSServer.worksoft.com/managementstudio

4 Save the updated configuration file.

Appendix BCreating Worksoft Execution SuiteDatabases with Apply.exe

You will create and update your Worksoft Execution Suite databases in the Worksoft Management Studio. If your database administrator needs to create these databases, they are able to utilize the Apply.exe tools in the Databases folder within your Worksoft Execution Suite distribution package. This Appendix will show you how to update all of your databases with the Apply.exe tool.

Creating or Updating the Worksoft Management Studio Database

The Worksoft Management Studio tool registers database settings, data sources, and SAP systems that you intend to use for Worksoft products. The Management Studio database maintains configuration information used by applications and services. Only one Management Studio database is needed regardless of how many Certify databases already exist.

To create a Worksoft Management Studio database:

1 Locate the **Apply.exe** utility within your Worksoft Execution Suite distribution package:

... \Databases \ManagementStudio

2 Double-click **Apply.exe**.

The Apply utility opens.

Create/Update Manag	ement Studio Database
Database Configuration	n
Database Server:	
Database Name:	
	Windows Authentication ?
User ID:	
Password:	
	User ID must have permissions to create, update, and delete databases.
	Start

- **3** In the Apply tool's text fields, enter the following database connection information:
 - Database server name
 - Database name
- **4** Do not select the **Windows Authentication** option. Worksoft Execution Suite does not support Windows authentication.
- **5** For SQL server authentication, type the user name and password in the text fields.
- 6 Click Start.

The Apply utility begins to create your new database.

If the database created successfully, then a message appears.

7 Click OK.

Creating or Updating Your Execution Manager Database

You need to create your database for Execution Manager before you install the Worksoft Execution Suite. If you have an existing Execution Manager database, follow the instructions in this procedure to update it.

To create an Execution Manager database:

1 Locate the **Apply.exe** utility within your Worksoft Execution Suite distribution package:

... \Databases \ExecutionServer

2 Double-click **Apply.exe**.

The Apply utility opens.

🖳 Worksoft			X
Create/Update Workso	ft Certify Execution Manager Database		
Database Configuration	n		
Database Server:			
Database Name:			
User ID:	Windows Authentication ?		_
Password:			
Password.	User ID must have permissions to create, update, and delete d	atabases.	
		Start	

- **3** In the Apply tool's text fields, enter the following database connection information:
 - Database server name
 - Database name

- **4** Do not select the **Windows Authentication** option. Worksoft Execution Suite does not support Windows authentication.
- **5** For SQL server authentication, type the user name and password in the text fields.
- 6 Click Start.

The Apply utility begins to create your new database.

If the database created successfully, then a message appears.

7 Click OK.

Creating or Updating a Certify Impact Database

You need to create your database for Certify Impact before you install the Certify Execution Suite. If you have an existing Certify Impact database, follow the instructions in this procedure to update it.

To create a Certify Impact database:

1 Locate the **Apply.exe** utility within your Certify Execution Suite distribution package:

...\Databases\Impact

2 Double-click **Apply.exe**.

The Apply utility opens.

🖳 Worksoft	
Create/Update Workso	ft Impact Database
Database Configuration	n
Database Server:	
Database Name:	
	Windows Authentication ?
User ID:	
Password:	
	User ID must have permissions to create, update, and delete databases.
	Start

- **3** In the Apply tool's text fields, enter the following database connection information:
 - Database server name
 - Database name

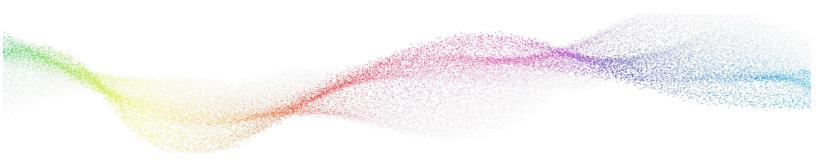
- **4** Do not select the **Windows Authentication** option. Worksoft Execution Suite does not support Windows authentication.
- **5** For SQL server authentication, type the user name and password in the text fields.

6 Click Start.

The Apply utility begins to create your new Certify Impact database.

If the database created successfully, then a message appears.

7 Click OK.



Appendix C Creating a Task in the Windows Task Scheduler

The Windows Task Scheduler can be used to start an Execution Manager Agent if you notice that the Agent does not automatically start after the RDP session starts. In some cases, the application security configuration prevents starting the Execution Manager Agent application with elevated privileges. In this case the Windows Task Scheduler should be used to initiate the Execution Manager Agent with elevated privileges on user login.

To create a task in Windows Task Scheduler:

File Action Year Year Image: Scheduler (Local) Image: Scheduler Summary (Last refreshed: 2/6/2018 10:83:11 AM) Actions Image: Task Scheduler Library Image: Scheduler Computer Task Scheduler (Local) Image: Task Scheduler Library Image: Scheduler Computer Image: Computer Computer Image: Task Scheduler Library Year: Computer will carry out automatically at the times you specify. To begin, Cick a command in the Action menu. Image: Computer Task Image: Task Status Image: Computer Computer Task. Image: Computer Computer Image: Task Status Image: Computer Com	Task Scheduler		– O X
 Task Scheduler (Local) Task Scheduler Library Task Scheduler to create and manage common tasks that your computer will carry out automatically at the times you specify. To begin, click a command in the Action menu. Tasks are stored in folders in the Task Scheduler Library. To view or perform an operation on an individual task, select the task in the Task Scheduler Library and click on a command in the Action menu. Task Status Status of tasks that have started in the following ti Status of tasks that have started in the following ti Status of tasks that have started in the following ti Summary: 0 total - 0 running, 0 succeeded, 0 stopped, 0 failed Task Name Run Result Run Start Run End 	File Action View Help		
 Task Scheduler Library Overview of Task Scheduler Overview of Task Scheduler to create and manage common tasks that your computer will carry out automatically at the times you specify. To begin, click a command in the Action menu. Tasks are stored in folders in the Task Scheduler Library. To view or perform an individual task, select the task in the Task scheduler Library and click on a command in the Action menu. Task Status Status of tasks that have started in the following ti Last 24 hours Summary: 0 total - 0 running, 0 succeeded, 0 stopped, 0 failed Task Name Run Result Run Statt Run Statt Run End 	🔶 🌳 🔚		
Overview of Task Scheduler Image: Connect to Another Computer		Task Scheduler Summary (Last refreshed: 2/6/2018 10:33:11 AM)	Actions
Active Tasks Active tasks are tasks that are currently enabled and have not expired. Last refreshed at 2/6/2018 10:33:11 AM Refresh	> 💦 Task Scheduler Library	Overview of Task Scheduler Image: Constraint of the second scheduler is the second sc	Connect to Another Computer Create Basic Task Create Task Import Task Display All Running Tasks Enable All Tasks History AT Service Account Configuration View Refresh Refresh

1 From the Windows Start menu, open **Task Scheduler**.

2 In the right Actions pane, select **Create Task**.

The Create Task dialog box opens.

) Create Task	
General Trig	gers Actions Conditions Settings
Name:	
Location:	1
Author:	WORKSOFT0\Irowley
Description:	ions
	ng the task, use the following user account:
WORKSOFT	O\lrowley Change User or Group
Run only	when user is logged on
Run whe	ther user is logged on or not
Do no	t store password. The task will only have access to local computer resources.
Run with	highest privileges
Hidden	Configure for: Windows Vista™, Windows Server™ 2008 ▼
	OK Cancel

- 3 In the Name field of the General tab, enter Start EM Agent.
- 4 In the Description field, type Start EM Agent on user login.
- 5 Click the **Change User or Group** button.

The Select User or Group dialog box opens.

Select this object type:	
User, Group, or Built-in security principal	Object Types
From this location:	
52TCXY1	Locations
<u>E</u> nter the object name to select (<u>examples</u>) Users	Check Names
Enter the object name to select (<u>examples</u>) Users	

- **6** In the Enter the Object Name field, type **Users**.
- 7 Click Check Names.

The text field auto populates with <machine_name>\Users.

8 Click OK.

The dialog box closes, and **BUILTIN\Users** appears in the User Account field.

	gers Actions	Conditions	Settings			
Name:						
Location:	N					
Author:	WORKSOFTO	\Irowley				
Description		<u>n 8</u>				
Security op	tions					
When runn	-	e the followi	g user account:			
	cerc				Change User or Group.	4
BUILTIN\U	3013					
	y when user is l	ogged on				
Run onl		55	t			
 Run onl Run wh 	y when user is le ether user is log	iged on or no	t will only have access	to local com	puter resources.	
 Run onl Run wh Do r 	y when user is le ether user is log ot store passwo	iged on or no ord. The task		to local com	puter resources.	
 Run onl Run wh Do r 	y when user is log ether user is log ot store passwo h highest privile	iged on or no ord. The task			puter resources.	

- **9** In the Security Options section, select the following:
 - Run only when user is logged on
 - Run with highest privileges
- **10** Click the **Triggers** tab.

The Triggers tab opens.

Vhen vou cre	ers Actions Conditions Settings ate a task, you can specify the condit	tions that will trigger the task.
Trigger	Details	Status
New	Edit Delete	
	Euit Delete	

11 To create a new trigger, click the **New** button.

The New Trigger dialog box opens.

New Trigger									×
Begin the task:	At log	on				•			
Settings									
Any user									
Specific u	iser:		WOF	KSOFT0\lrowle	(Change User	
Advanced set	tings								
🔲 Delay tasl	c for:	15 m	ninutes	-					
🔲 Repeat ta	sk every:	1 ho	ur	-		for a duration	n of:	1 day 🔻	
🗌 Stop	o all runni	ing tas	sks at e	nd of repetition	durati	on			
Stop task	if it runs l	onger	than:	3 days	•				
Activate:	2/15/20)18		11:35:11 AM	×	Synchron	nize a	across time zones	
Expire:	2/15/20)19		11:35:11 AM	×	Synchron	nize a	across time zones	
Enabled									
								ОК С	ancel

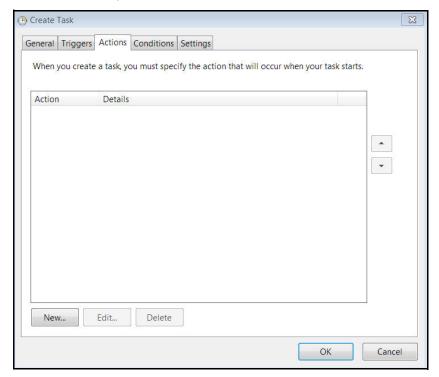
- **12** In the Begin the task drop-down list, select **At log on**.
- 13 Click OK.

The new trigger appears in the Triggers tab.

Vhen you crea	ate a task, you can specify the conditions th	at will trigger the task.
Frigger	Details	Status
At log on	At log on of any user	Enabled

14 Click the **Actions** tab.

The Actions tab opens.



15 To create a new action, click the **New** button. The New Action dialog box opens.

Action:	Start a program			+
Setting	5			
Progra	m/script:			
			Bro	owse
Add a	guments (optional)			
Start i	n (optional):			

- **16** From the Actions drop-down list, select **Start a program**.
- **17** Click the Program/Script **Browse** button and point to where **WorksoftExecutionAgent.exe** is installed.
- **18** Click **OK**.

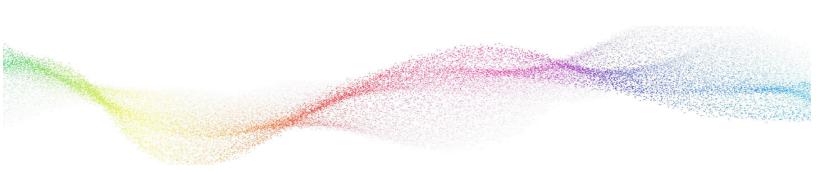
The new action appears in the Actions tab.

- **19** In the Conditions tab, keep all defaults.
- 20 Click the **Settings** tab.

The Settings tab opens.

Create	Task				8
General	Triggers	Actions	Conditions	Settings	
Specify	additiona	l settings	that affect t	he behavio	r of the task.
✓ Allo	ow task to	be run or	demand		
Run	task as so	on as po	ssible after a	scheduled	start is missed
🗌 If th	e task fail	s, restart (every:		1 minute 👻
Atte	empt to re	start up t	0:		3 times
Sto	p the task	if it runs l	onger than:		3 days 👻
If th	e running	task doe:	s not end wh	en requeste	ed, force it to stop
If th	e task is n	ot schedu	uled to run a	gain, delete	e it after: 30 days 👻
If the ta	ask is alrea	dy runnin	ig, then the f	ollowing ru	le applies:
Run a n	ew instand	ce in para	llel 🔻		
					OK Cancel

- **21** Verify that the following two options are NOT selected:
 - Stop the task if it runs longer than:
 - If the running task does not end when requested, force it to stop.
- 22 From the If the task is running.... drop-down list, select **Run a new instance in parallel**.
- 23 Click OK.



Appendix D Silent Installation

Silent Install

To run Worksoft Execution Suite installation silently, run the installer from the command line and add **/s** option to the executable:

WorksoftApplicationServer.exe /s

Installation Log File

The default installation log is located at **%userprofile%** of the user who installed Worksoft Execution Suite. To provide an alternative location for this installation file, enter the following command to override the original file location:

WorksoftApplicationServer.exe /s /l=C:\temp\WASiInstalllog.txt

Silent Uninstall

To uninstall Worksoft Execution Suite silently, enter the following command:

WorksoftApplicationServer.exe /s MODIFY=FALSE REMOVE=TRUE UNINSTALL=YES

Execution Manager Agent

Silent Install

If using Worksoft Execution Suite version v10.1.0 or higher, enter the following command to install the Agent and register the Agent with Execution Manager:

Remote Execution agent.exe /s em_url=https://EMServer email=admin@worksoft.com password=password tenant=tenantname register=true

Enter the following command to install the Agent and skip registration of the Agent with Execution Manager:

Remote Execution agent.exe /s em_url=https://EMServer email=admin@worksoft.com password=password tenant=tenantname register=false (to NOT register)

If using an earlier version, run the installer from the command line and add **/s** option to the executable:

Remote Execution agent.exe /s

Installation Log File

The default installation log is located at **%userprofile%** of the user who installed the Agent. To provide an alternative location for this installation file, enter the following command to override the original file location:

Remote Execution agent /s /l=C:\temp\EMAiInstalllog.txt

Silent Uninstall

To uninstall Execution Manager Agent silently, run the installer from the command line and enter the following string:

Remote Execution agent.exe /s MODIFY=FALSE REMOVE=TRUE UNINSTALL=YES