

IBM Workload Scheduler



# Readme File for Fix Pack 1

*Version 9.3.0*



IBM Workload Scheduler



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*Version 9.3.0*

**Note**

Before using this information and the product it supports, read the information in "Notices" on page 29.

This edition applies to Fix Pack 1 for version 9, release 3, modification level 0 of IBM Tivoli Workload Scheduler (program number 5698-WSH) and to all subsequent releases and modifications until otherwise indicated in new editions.

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# Chapter 1. IBM Workload Scheduler Readme File for Fix Pack 1 for version 9.3.0

**Date** 22 December 2015

**Fix Pack**  
9.3.0-IBM-IWS-FP0001

**Product**  
IBM® Workload Scheduler version 9.3.0

**General Description**  
IBM Workload Scheduler Fix Pack 1 for version 9.3.0

This readme file provides important information about Fix Pack 1 for IBM Workload Scheduler version 9.3.0.

This readme file is the most current information for the fix pack and takes precedence over all other documentation for IBM Workload Scheduler version 9.3.0 Fix Pack 1.

It is divided into the following sections:

- “About this fix pack”
- “Fix pack structure” on page 8
- “Installing the fix pack” on page 9
- “Documentation updates for IBM Workload Scheduler Fix Pack 1 for version 9.3.0” on page 26

IBM Workload Scheduler version 9.3.0 Fix Pack 1 supports all product versions indicated in the IBM Workload Scheduler version 9.3 Release Notes which can be accessed at the following link: [http://www-01.ibm.com/support/docview.wss?uid=swg27045180#h3interop\\_tables](http://www-01.ibm.com/support/docview.wss?uid=swg27045180#h3interop_tables).

For the most up-to-date information about supported operating systems, software and hardware requirements, see the Detailed system requirements document at the following URL: <http://www-01.ibm.com/support/docview.wss?uid=swg27045181>.

*Review this section thoroughly before installing or using this Fix Pack.*

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## About this fix pack

This section contains information specific for this fix pack including what has been modified or introduced, what has been fixed, product versions or components to which the fix pack applies, and compatibility issues, if any.

**Product versions and components to which the fix pack applies**  
This fix pack can be applied only on top of IBM Workload Scheduler V9.3.0.

This section includes the following subsections:

- “Features introduced with Fix Pack 1” on page 2
- “Problems fixed in IBM Workload Scheduler Fix Pack 1 for version 9.3.0” on page 4
- “Known limitations and workarounds” on page 7

## Features introduced with Fix Pack 1

### Conditional dependencies (RFE 103337)

With IBM Workload Scheduler you can define jobs to run when and as often as necessary. Sometimes some jobs might have to wait for other jobs to finish successfully before they start. Add even more flexibility to your job flows by choosing which job to run depending on the result of the job status or output of a previous job. Whenever you have conditions that specify whether or not a segment of your job flow should run, then that is a conditional dependency. When specifying dependencies, you can define job flows with alternative branches based on conditions, specifically to achieve the same results as using IF/THEN/ELSE statements. You can use return codes, job status, output variables, and job log content as conditional logic elements to determine the start of a successor job. In addition to providing flexibility to your job flows, the Graphical View provides a graphical representation of the relationships between the jobs and job streams, including the dependencies and conditions. This at-a-glance view of your job flow is easy to read and you can also edit your job flow from this view. For more information, see Applying conditional branching logic.

### New job plug-ins

#### IBM Workload Scheduler Plug-in for Liberty

With the new IBM Workload Scheduler plug-in for JSR 352 Java™ Batch (plug-in for Liberty), you can schedule, run, and monitor your Java Batch applications and integrate them into more complex, composite batch workflows. For more information, see Schedule, execute, and monitor your Java Batch applications with IBM Workload Automation.

#### IBM Workload Scheduler Plug-in for MQTT

IBM Workload Scheduler integrates with MQTT to provide centralized management of your "Internet of Things" devices. MQTT is a publish and subscribe, simple, and lightweight messaging protocol. For more information, see Monitor and control your "Internet of Things" devices.

### WebSphere Application Server tools enhancements (RFE 33301)

Credentials required to submit WebSphere® Application Server tools (wastools) scripts supplied with the product are now optional when you submit the scripts to run. WebSphere Application Server administration scripts, such as starting and stopping the WebSphere Application Server, supplied with IBM Workload Scheduler retrieve the credentials stored in the `soap.client.props` file located in the properties directory of the WebSphere Application Server profile to avoid the necessity of supplying a user name and clear text password in the command line.

In addition to added security protection, the enhancement eliminates the maintenance costs associated with frequent password changes. The user ID and password are now optional and the credentials are retrieved from the `soap.client.props` file. However, unlike the master domain manager installation where the `soap.client.props` file is automatically customized with these credentials, the Dynamic Workload Console requires you to manually customize the `soap.client.props` file with the credentials to be able to use this enhancement. For more information, see Application server - starting and stopping.



### **Scheduling the centralized agent update**

You can schedule the centralized update of multiple agent instances by creating a centralized agent update job, either by using the Dynamic Workload Console or the composer command line. When a job runs, it forwards to the master domain manager the Update agent request for all the fault-tolerant agent or dynamic agent instances that you selected, and then completes. For more information, see *Scheduling the centralized agent update*.

### **IBM i enhancements**

#### **Checking IBM i jobs that are waiting for a message reply**

You can now use the Dynamic Workload Console and **conman showjobs** command line to check if an IBM i job is waiting for a reply to a message. An IBM i job that is waiting for a message reply is in the SUSP (suspended) status. This status indicates that the job is running while waiting for input. When the input is received, the job status changes to EXEC (executing).

#### **Viewing the message for which an IBM i job is waiting for a reply**

You can also view the message for which the IBM i job is waiting for a reply. The message text and the reply are written into the corresponding IBM Workload Scheduler job log, so that the IBM Workload Scheduler operator knows the exact message the IBM i job is waiting for.

#### **Specifying the name of the queue where IBM i jobs are monitored**

You can specify the name of the queue where the monitoring agent component runs by using the customizable property **MonitorQueueName** in the native job launcher section of the `JobManager.ini` file. If you do not specify this property, the default queue (**QBATCH**) is used.

For more information, see *Scheduling jobs on IBM i systems*.

### **IBM Workload Scheduler integration with IBM Tivoli® Monitoring: situation refactoring and new view associations**

With this fix pack, two scripts are provided, `ITMCreateSituations` and `ITMSetSeverity`, that create the default situations for monitoring IBM Workload Scheduler processes and that associate these default situations to a respective severity and not automatically to a critical severity as with past releases. The default situations can be associated to a physical or logical view of your choice on the Tivoli Enterprise Portal. For more information, see *How to create IBM Workload Scheduler default situations*.

The following are requests for enhancements (RFEs) introduced in Fix Pack 1:

- 142421: Oracle E-Business plug-in: Add support for Operating Unit (ORD\_ID) attribute of Oracle Application programs
- 140990: SAP PI Channel Job fails with Certificate Error in TWS 8.6
- 138671: Support for installing TWS zCentric agent in Microsoft Windows cluster
- 132951: Webservice to see TWS log from previous plan
- 65686: Return code check and decision (branch) on which successor jobs to run based on this return code

For more information about new features introduced with this fix pack, see *IBM Workload Scheduler version 9.3 Fix Pack 1 enhancements*.

Helpful videos demonstrating new features for IBM Workload Scheduler is available on Workload Automation channel.

## Problems fixed in IBM Workload Scheduler Fix Pack 1 for version 9.3.0

This section lists APARs and internal defects solved by Fix Pack 1. For additional information about documentation APARs and internal defects, see “Documentation updates for IBM Workload Scheduler Fix Pack 1 for version 9.3.0” on page 26.

### List of APARs fixed:

- **IV77863:** TWS WEBSHERE CRASHED DUE TO A NATIVE MEMORY CORRUPTION WHILE ACCESSING A .MSG FILE.
- **IV77609:** Agent process crashes after port scan on AIX® and Solaris.
- **IV77219 :** PROMPTSTATUSCHANGED EVENT LOST IF THE PROMPT HAS DOUBLE QUOTES .
- **IV77093:** WHEN LOGMAN IS RUN AGAINST A LIVE SYMPHONY FILE STATISTICS ARE NOT RECORDED FOR JOBS WHICH COMPLETE WHILE LOGMAN IS RUNNING.
- **IV76762:** Broker server does not link.
- **IV76744:** Add an index for DWB.JOB\_BROKER\_JOBS.
- **IV76743:** BRANCH JOB ERRORS.
- **IV76687:** Increase the robustness of batchman to manage corrupted dependencies.
- **IV75946:** TCLSH84.EXE CALLED FROM REP8.CMD HANGS ON EXIT.
- **IV75238:** Increase the robustness of connector to manage corrupted dependencies.
- **IV74788:** SUBMIT "EVERY 0000" JOB FROM TDWC RUNS ONLY ONCE INSTEAD OF EVERY.
- **IV74774:** REPLYING TO A PROMPT FROM THE TWSACTIONPROVIDER FAILS.
- **IV74756:** BATCHMAN EVENT 305 IS ALWAYS LOGGED TO EVENTS LOG.
- **IV74723:** UNABLE TO UPGRADE TWS 8.5.1 TO 9.1 ON HP-UX WITH INSTALLATION MANAGER 1.6.3.1.
- **IV74721:** EVENT 203 JOB NAME TRUNCATED FOR EVENT 203 WHEN JOB NAME LENGTH IS LONGER .
- **IV74489:** UNABLE TO SUBMIT ISERIES JOBS WITH PARAMETERS.
- **IV74466:** TWS 9.2 HAS INCORRECT PERMISSIONS IN THE TWS/TMP DIRECTORY.
- **IV74101:** TWS 9.3 TWS\_INST\_PULL\_INFO HANGS.
- **IV73920:** EVENT RULES ARE STUCK WITH OLD DDM AFTER A SWITCHMGR.
- **IV73926:** DYNAMIC JOB WITH NOT FOUND EXECUTABLE SCRIPT CREATES DEFUNCT PROCESS.
- **IV73190:** netman crashes during port scan.
- **IV73111:** Increase mirroring cache performance.
- **IV72859:** monman performance improvement.
- **IV72533:** twsClusterAdm.log is not flushed, and saved only at exit.
- **IV71543:** NATIVE LEAK WHEN TWS RUNS FOR A LONG TIME.

- **IV71470:** JOBS WITH OPENS DEP RUN INSTEAD OF CANCELLING AFTER A CANCEL PEND, FOLLOWED BY A RELEASE DEPS PERFORMED AGAINST THE JOB.
- **IV70832:** TWS ADMIN USER IS USED TO CHECK AN EXISTENCE OF SCRIPTNAME INSTEAD OF STREAMLOGON USER.
- **IV68941:** Create dbreorg for broker tables
- **IV68058:** sbs of a jobstream on a workstation set to IGNORE but still in the plan fails.
- **IV67024:** SAP JOBS FOR DYNAMIC AGENT REMAIN IN READY STATE CONSUME CPU LIMIT.
- **IV66331:** events-message.jar FileNotFoundException exception during server startup.
- **IV62180:** MBCS characters are garbled when running twsinst with "-LANG JA" or system environment LANG=JA on Japanese Windows operating system.
- **IV54835:** INSTALLATION FAILS WITH MISSING MSVCR71.DLL .
- **IV52812:** SHUTWOWN\_CLU.CMD DOES NOT STOP TOKENSERVICE.
- **IV73302:** CPU UTILIZATION COULD BE WRONG DUE TO INCORRECT CALCULATIONS.
- **IV77654:** Missing ITMCreatesituations.

**List of defects fixed:**

- **131495:** Jazz for Service Management fresh installation might take a long time to complete.
- **132608:** Tivoli Common Reporting: the scanner misses some required libs on RHEL 6.2.
- **133843:** JnextPlan -> deleting 1.4 10<sup>6</sup> entries from .JHR\_JOB\_HISTORY\_RUNS cause db2 error because exhausting db2 transactions log.
- **134827:** resource usage holders capping to 32 causes mirroring throughout to be decreased and overhead DB CPU consumption
- **136230:** Events not processed and discarded if the monbox.msg queue is full
- **136971:** during FINAL lots of Sinfonia.xxxx files are generated
- **137459:** IBMi agents: an error occurs trying to connect the agents by test connection
- **137853:** DWB thread used to move job history data to archive stops to work properly
- **138792:** Direct upgrade MDM 851fp -> 93: Restore step delete the backup.zip and the user cannot restore the old instance
- **141026:** Scheduling Centralized Agent Update Job: Test connection does not work when reopening the job in Workload Editor
- **141209:** Windows7 onPremise: installation fails if user's password contains special characters
- **142040:** SAP BO: Internal server error when add attachment option is selected
- **144320:** Change the select to poll to prevent crash in case of fd >1024.
- **143030:** "java.lang.ArrayIndexOutOfBoundsException" after Resetplan and Jnextpla doesn't allow to schedule anything on dynamic agents

- **143095:** "errno 9" while executing "sleep 1" command on AIX node with high concurrency
- **143153:** Monitoring of jobs in Hybrid configuration: dependencies don't work well when Context-ObjectCount is set to 0
- **143277:** more than 10K mirroring updates have been lost during standard performance workload
- **143809:** MDM 93FP1 Build doesn't contains files to manage manually the db upgrade
- **144214:** DWB thread used to move job history data to archive stops to work properly
- **144558:** Error in the Start / Stop / Link / Unlink operations for the Monitoring Domain
- **144729:** Planman checksync hangs on Windows operating systems.
- **144785:** NOP: The CANCP status does not allow some scenarios.
- **144860:** Upgrade to 93 FP1 hangs on Windows with Oracle db
- **144973:** FTA Fresh: failure during installLWAAction.sh
- **145005:** Rollback does not work correctly, after upgrade from 91FP1 to 93FP1 on Windows
- **145008:** Rollback does not work correctly, after upgrade from 86FP2 to 93FP1 on Linux
- **145054:** DA fresh installation no-root: JobManager doesn't start
- **145059:** After MDM installation FENCE is set to GO.
- **145194:** Incorrect job stream and dependency status working with pending predecessors.
- **145203:** Wrong status for JS with Until suppressed jobs
- **145581:** Every donostart is affected by the until issue on job stream
- **145600:** param CLI hangs on FTA installed on windows
- **146147:** Response files contains a real workstation name
- **146254:** The MDM update remove the libraries in the method folder
- **146259:** Incorrect profile name in the upgrade response file from 8.6 for MDM and DDM
- **146723:** Incorrect owner assigned to the localopts file during installation
- **146750:** FileTransfer job created on 931 fails on agent with version minor than 93
- **146812:** MDM installation failed on Windows with error "AWSJIM901E: File C:\twsapps\tws\tws\TWS\TSAMP does not exist".
- **146915:** Dependencies: defining an every option the condition are not correctly evaluated
- **146985:** Agent javacore dump on Linux X64
- **147280:** IBMi: File transfer job doesn't work
- **147314:** JobStreamInPlan --> getNumberOfJobDependencies(): Source Plan Symph = 0 Dest Plan DB = -1
- **147489:** Override estimation: the month table is filling the n-1 day
- **144168:** SwitchBroker does not work in 9.1 FP2.
- **144167:** AWSFAB025E message returned during installation.
- **144150:** Increase the stack size for the WebSphere Application Server on Linux.
- **144133:** Installation fails during update FTA 9.1 FP1 to FTA 9.1 FP2.

- **143851:** SwitchBroker does not work.
- **143651:** monman improvement: send cpu name of dynamic agent.
- **143631:** Randomic Crash caused by GC on method calls local variable when GC runs.
- **143586:** The addBrokerWorkstation always sends a full scan.
- **143074:** TWS86 iSeries z-centric agent requires filewatch to run via OS/400®.

## Known limitations and workarounds

The following are software limitations and workarounds that affect IBM Workload Scheduler version 9.3.0 Fix Pack 1:

### Apache Commons Collections Vulnerability

WebSphere Application Server uses Apache Commons Collections which was found to contain a remotely exploitable vulnerability.

**Workaround:** To mitigate this problem, you must install the fix found in this technote: <https://www-304.ibm.com/support/docview.wss?uid=swg24041257>.

### File transfer job submitted on a Windows agent ends in error

When endpoint protection software is active on a Windows agent workstation, the FTP connection is blocked by Java. A Java technology bug reporting this issue can be accessed at [http://bugs.java.com/bugdatabase/view\\_bug.do?bug\\_id=7077696](http://bugs.java.com/bugdatabase/view_bug.do?bug_id=7077696).

### Centralized agent update fails on a dynamic agent, on UNIX operating systems, previously upgraded to the version 9.3 General Availability (GA) level

When applying version 9.3 Fix Pack 1 using the centralized agent update method on a dynamic agent only (without the fault-tolerant agent), on a UNIX operating system, that was upgraded to the version 9.3 GA level from a previous version, the update fails.

**Workaround:** Install the update manually on the agent workstation.

### Centralized agent update not supported on IBM i

Launching the centralized agent update on an IBM i agent, the update fails.

**Workaround:** Install the update manually on the agent workstation.

### On IBM i agent workstations the sendevent utility command requires manually setting

The **sendevent** utility command does not work unless an environment variable is set manually first.

**Workaround:** To use the utility command, **sendevent**, from the command line (./TWS/CLI/bin/sendevent) on IBM i, you must first set the environment variable *QIBM\_MULTI\_THREADED* to Y to alert the QShell to allow multithreading by submitting the following command:

```
export QIBM_MULTI_THREADED=Y
```

### When centralized agent update of a fault-tolerant agent fails, the restore operation sets the fence priority option to go

When a fault-tolerant agent is updated using the centralized agent update method, and the update fails, the fault-tolerant agent is restored to the previous release level, and the fence priority option is to go.

You can manually reset the fence priority option from the Dynamic Workload Console or using the conman command line. You can do this directly from the master domain manager rather than connecting to the agent workstation.

#### **Job dependency status incorrectly reported after job execution**

If plan replication is disabled, and you have a job or job stream running on a fault-tolerant agent, and there are conditional dependences defined, when monitoring the status of the job or job stream, some dependencies might report an undefined dependency status, even if the dependencies have been evaluated. The job or job stream status event might arrive on the master domain manager before the dependencies are evaluated.

**Workaround:** Decrease the value of the `bm look` option, for example to 5, in the `localopts` on the master domain manager so that batchman checks on the dependencies of the other workstations more frequently before the job or job stream status event arrives on the master domain manager.

---

## **Fix pack structure**

This section describes the structure of the images contained in this fix pack.

### **Fix pack files available for IBM Workload Scheduler using Fix Central**

This is the structure of the fix pack for the engine on Fix Central:

```
+---9.3.0-IBM-IWS-FP0001.README.zip
|
+---9.3.0-IBM-IWS-AIX-FP0001.zip
|
+---9.3.0-IBM-IWS-HPIA64-FP0001.zip
|
+---9.3.0-IBM-IWS-LINUX390-FP0001.zip
|
+---9.3.0-IBM-IWS-LINUXPPC-FP0001.zip
|
+---9.3.0-IBM-IWS-LINUX_X86_64-FP0001.zip
|
+---9.3.0-IBM-IWS-SOLARIS_I386-FP0001.zip
|
+---9.3.0-IBM-IWS-WINDOWS_X86_64-FP0001.zip
|
+---9.3.0-IBM-IWS-LINUX_X86_64_WORKBENCH-FP0001.zip
|
+---9.3.0-IBM-IWS-WINDOWS_X86_64_WORKBENCH-FP0001.zip
|
+---9.3.0-IBM-IWS-AIX_AGENT-FP0001.zip
|
+---9.3.0-IBM-IWS-HPIA64_AGENT-FP0001.zip
|
+---9.3.0-IBM-IWS-IBM_I_AGENT-FP0001.zip
|
+---9.3.0-IBM-IWS-LNX_I386_AGENT-FP0001.zip
|
+---9.3.0-IBM-IWS-LNX_PPC_AGENT-FP0001.zip
|
+---9.3.0-IBM-IWS-LNX_S390_AGENT-FP0001.zip
|
+---9.3.0-IBM-IWS-LNX_X86_64_AGENT-FP0001.zip
|
+---9.3.0-IBM-IWS-SOL_I386_AGENT-FP0001.zip
|
+---9.3.0-IBM-IWS-WIN_X86_64_AGENT-FP0001.zip
```

```

|
+---9.3.0-IBM-IWS-AIX_ZOS_AGENT-FP0001.tar
|
+---9.3.0-IBM-IWS-HPIA64_ZOS_AGENT-FP0001.tar
|
+---9.3.0-IBM-IWS-IBM_I_ZOS_AGENT-FP0001.tar
|
+---9.3.0-IBM-IWS-LNX_I386_ZOS_AGENT-FP0001.tar
|
+---9.3.0-IBM-IWS-LNX_PPC_ZOS_AGENT-FP0001.tar
|
+---9.3.0-IBM-IWS-LNX_S390_ZOS_AGENT-FP0001.tar
|
+---9.3.0-IBM-IWS-LNX_X86_64_ZOS_AGENT-FP0001.tar
|
+---9.3.0-IBM-IWS-SOL_I386_ZOS_AGENT-FP0001.tar
|
+---9.3.0-IBM-IWS-WIN_X86_64_ZOS_AGENT-FP0001.zip
|
+---9.3.0-IBM-IWS-AIX_BATCH_REPORTS-FP0001.tar
|
+---9.3.0-IBM-IWS-HPIA64_BATCH_REPORTS-FP0001.tar
|
+---9.3.0-IBM-IWS-LNX_PPC_BATCH_REPORTS-FP0001.tar
|
+---9.3.0-IBM-IWS-LNX_S390_BATCH_REPORTS-FP0001.tar
|
+---9.3.0-IBM-IWS-LNX_X86_64_BATCH_REPORTS-FP0001.tar
|
+---9.3.0-IBM-IWS-SOL_I386_BATCH_REPORTS-FP0001.tar
|
+---9.3.0-IBM-IWS-WIN_X86_64_BATCH_REPORTS-FP0001.zip

```

---

## Installing the fix pack

This section describes how to apply Fix Pack 1 to IBM Workload Scheduler version 9.3.0.

The section is divided into the following subsections:

- “Installation notes”
- “Interoperability notes” on page 11
- “Disk space requirements” on page 11
- “Installation methods” on page 12
- “Installing IBM Workload Scheduler for the first time using the IBM Installation Manager wizard” on page 15
- “Installing the fix pack on the IBM Workload Scheduler General Availability version 9.3 using the IBM Installation Manager wizard” on page 16
- “Installing the fix pack on a IBM Workload Scheduler version earlier than 9.3 using the IBM Installation Manager wizard” on page 18
- “Installing the fix pack using IBM Installation Manager silent installation” on page 19
- “Installing the fix pack on agents using the twsinst script” on page 21
- “Uninstalling the entire IBM Workload Scheduler instance” on page 25
- “Installation log files” on page 25

## Installation notes

When installing the IBM Workload Scheduler, follow these recommendations:

- Before installing the fix pack, ensure you have installed the required prerequisite software. To obtain the latest information about software requirements for IBM Workload Scheduler, run the Software Requirements report and browse to the relevant section.
- Before installing this fix pack on AIX V7.1 operating systems, you must apply the patch for APAR IZ99634. For more information, see: <http://www-01.ibm.com/support/docview.wss?uid=isg1IZ99634>.
- On UNIX operating systems, before installing the IBM Workload Scheduler fix pack, ensure that your **umask** is set to **022**. To verify that **umask** is set to the correct value, from a command prompt, run the **umask** command. If the value is different from **022**, modify it by running the command:  

```
umask 022
```
- On UNIX operating systems, the data base administrator must have read and run privileges for the IBM Workload Scheduler installation path; otherwise the installation fails. (54367)
- If you get an error message indicating *permission denied* for the installation process, to run a script in the `tw_s_tools` directory as a user, different from the root user because this user does not have write, read, and execute rights in this directory, you must:
  1. Extract the eImages to a directory where all users have write, read, and execute rights.
  2. Restart the installation process from this directory.

After the fix pack installation completes, verify the following information:

- This fix pack installs a new version of file `tw_s_env.sh` in the directory `<TWA_HOME>/TWS/config`, where `<TWA_HOME>` is the IBM Workload Scheduler installation directory, without overwriting the original version. You must merge the content of this new version with the content of the original version in `<TWA_HOME>/TWS` to carry your customized content in the new version. (119928 - IV64313)
- On IBM i operating systems, if you want to install the fix pack on the IBM Workload Scheduler for z/OS Agent and IBM Workload Scheduler Dynamic Agent, verify that the user profile used as TWSUser is not a member of a group profile. Set the group profile associated with the TWSUser to *\*NONE*. If the TWSUser is a member of a group, the fix pack installation fails.
- Only on Windows operating systems, to correctly display double-byte character set (DBCS) characters, you must perform the following actions:
  - Set the **LANG** environment variable to the DBCS language code you want to use, for example, set `LANG=zh_CN`.
  - Set the **TWS\_TISDIR** environment variable to the IBM Workload Scheduler home directory, for example, set `TWS_TISDIR=C:\FTA\TWS`.
  - Open the Control Panel window and click **Clock, Language, and Region**.
  - Click **Region and Language**.
  - In the **Format** tab, choose from the **Format** drop-down list the language you want to use.
  - In the **Keyboards and Languages** tab, under **Display Language**, click install and follow the steps to install the DBCS language pack you want to use.
  - In the **Administrative** tab, click **Change system locale** and, from the drop-down list, choose the language (system locale) you want to use.



Note that all the settings must be coherent, that is they must refer to the same DBCS language setting. After you have completed these changes, reboot your workstation to have the changes take effect.

## Interoperability notes

IBM Workload Scheduler version 9.3.0 Fix Pack 1 supports all product versions indicated in the IBM Workload Scheduler version 9.3 Release Notes which can be accessed at the following link: [http://www-01.ibm.com/support/docview.wss?uid=swg27045180#h3interop\\_tables](http://www-01.ibm.com/support/docview.wss?uid=swg27045180#h3interop_tables).

## Disk space requirements

For the most up-to-date information about disk space and memory requirements, generate a dynamic hardware requirements report from the IBM Software Product Compatibility Reports web site at the following URL: <http://www-969.ibm.com/software/reports/compatibility/clarity-reports/report/html/hardwareReqsForProduct?deliverableId=1393949467532&osPlatforms=AIX|HP|IBM%20i|Linux|Solaris|Windows|z/OS&duComponentIds=S002|S001|A005|A003|A004>.

Before starting the fix pack installation, ensure that you have the following space available in the file system:

*Table 1. Disk space requirements for installing a master domain manager or a backup master fix pack*

Operating System	Installation directory	Temporary directory
AIX	1 GB	1750 MB
HP-UX	1,1 GB	1000 MB
Solaris	1 GB	1800 MB
Microsoft Windows	1 GB	1000 MB
Linux	1,1 GB	800 MB

*Table 2. Disk space requirements for installing IBM Workload Scheduler agents and the Java Extension fix pack*

Operating System	Installation directory	Temporary directory
AIX	2 GB	40 MB
HP-UX	2 GB	40 MB
Solaris	2 GB	40 MB
Microsoft Windows	2 GB	40 MB
Linux	2 GB	40 MB

*Table 3. Disk space requirements for installing IBM Workload Scheduler agents fix pack*

Operating System	Installation directory	Temporary directory
AIX	450 MB	40 MB
HP-UX	560 MB	40 MB

Table 3. Disk space requirements for installing IBM Workload Scheduler agents fix pack (continued)

Operating System	Installation directory	Temporary directory
Solaris	450 MB	40 MB
Microsoft Windows	370 MB	40 MB
Linux	410 MB	40 MB

Table 4. Disk space requirements for installing the IBM Workload Scheduler for z/OS agent fix pack

Operating System	Installation directory	Temporary directory
AIX	340 MB	40 MB
HP-UX	420 MB	40 MB
Solaris	290 MB	40 MB
Microsoft Windows	275 MB	40 MB
Linux	275 MB	40 MB

**Note:** Only on HP and Solaris operating systems, the fix pack installation requires also 300 MB free disk space in the temporary directory `/var/tmp`.

## Installation methods

You can install the fix pack using one of the following methods:

### For Master domain manager or dynamic domain manger or their backups:

- “Installing IBM Workload Scheduler for the first time using the IBM Installation Manager wizard” on page 15
- “Installing the fix pack on the IBM Workload Scheduler General Availability version 9.3 using the IBM Installation Manager wizard” on page 16
- “Installing the fix pack on a IBM Workload Scheduler version earlier than 9.3 using the IBM Installation Manager wizard” on page 18
- “Installing the fix pack using IBM Installation Manager silent installation” on page 19.

### For fault-tolerant agent or domain manager:

- “Installing the fix pack on agents using the `twsinst` script” on page 21.

## Before Installing

Before installing the fix pack using any of the methods described in the following sections, perform the following actions:

1. Unlink the host on which you are installing the fix pack from the IBM Workload Scheduler network.
2. Shut down IBM Workload Scheduler.
3. Run the following commands, depending on your configuration:

**Master domain manager or dynamic domain manger or their backups:**

**On Windows operating systems:**

```
conman "unlink @; noask"  
conman "stop; wait"  
conman "stopmon;wait"  
ShutdownLwa.cmd  
stopServer.bat
```

**On UNIX and Linux operating systems:**

```
conman "unlink @; noask"  
conman "stop; wait"  
conman "stopmon;wait"  
conman "shut;wait"  
ShutDownLwa  
./stopServer.sh
```

**Fault-tolerant agent or domain manager:**

**On Windows operating systems:**

```
conman "unlink @; noask"  
conman "stop; wait"  
conman "stopmon;wait"  
ShutdownLwa.cmd
```

**On UNIX and Linux operating systems:**

```
conman "unlink @; noask"  
conman "stop; wait"  
conman "stopmon;wait"  
conman "shut;wait"  
ShutDownLwa
```

**IBM Workload Scheduler for z/OS agent or IBM Workload Scheduler dynamic agent:**

**On Windows operating systems:**

```
ShutdownLwa.cmd
```

**On UNIX and Linux operating systems:**

```
ShutDownLwa
```

If you have jobs scheduled to run on the instance you are upgrading, make sure that they have completed otherwise some processes, such as jobmon or joblnch, might still be active.

4. Download the appropriate ZIP file specific for the operating system from IBM Fix Central.
5. Delete the content of the following directory: <TWA\_HOME>/TWS/ITA/cpa/temp/ipc, where <TWA\_HOME> is the IBM Workload Scheduler installation directory.
6. Extract the content of the ZIP files into a directory, using one of the extraction tools available on your system or downloadable from the Internet. The tool you use must be able to keep the file permissions on the extracted files, for example, infozip.

**Note:**

- If you want to install the fix pack on IBM i, to untar the eImages, see “Extract the eImages for the IBM Workload Scheduler for z/OS Agent and Dynamic Agent on IBM i operating systems” on page 14.
- To extract the .zip file onto a Windows 64-bit system, ensure that the eImage is not located on the desktop because the Windows operating system extract tool has a problem. Choose another directory into which to extract the fix pack eImage.

## Creating or updating the IBM Workload Scheduler SQL database tables

Before launching any of the installation methods, manually create the SQL database tables following the procedure in the *Planning and Installation* guide that best suits your environment.

The *Planning and Installation* guide contains procedures for creating or upgrading the IBM Workload Scheduler database tables for DB2, Oracle, Informix Dynamic Server, and Microsoft SQL Server databases before you perform the installation. The procedures reference various files located in the `dbtools` directory of the product installation.

The IBM Workload Scheduler version 9.3 Fix Pack 1 image contains an updated `dbtools` directory. When performing any of the procedures for creating or updating the IBM Workload Scheduler SQL database tables in the *Planning and Installation* guide, always use the files contained in the `dbtools` directory of the fix pack image.

Refer to the topics in the *Planning and Installation* guide about *Creating or upgrading the IBM Workload Scheduler database tables before installing or upgrading* for your database type and then remember to use the files provided in the `dbtools` folder of the fix pack image.

## Extract the eimages for the IBM Workload Scheduler for z/OS Agent and Dynamic Agent on IBM i operating systems

The following packages are available with this fix pack:

- 9.3.0-IBM-IWS-IBM\_I\_ZOS\_AGENT-FP0001.tar: The IBM Workload Scheduler for z/OS Agent on IBM i image.
- 9.3.0-IBM-IWS-IBM\_I\_AGENT-FP0001.zip: The dynamic agent on IBM I image. This package also contains an extraction tool executable that can be copied to the IBM i workstation.

To untar or unzip the fix pack eimages, you can use the *PASE* shell or the *AIXterm*.

### Using *PASE* shell:

1. Open the *PASE* shell.
2. Run the command:  
"CALL QP2TERM"
3. Locate the folder where you downloaded the fix pack eImage and run the command:

#### **IBM Workload Scheduler for z/OS Agent**

```
"tar xvf 9.3.0-IBM-IWS-IBM_I_ZOS_AGENT-FP0001.tar"
```

#### **Dynamic agent**

```
"unzip 9.3.0-IBM-IWS-IBM_I_AGENT-FP0001.zip"
```

4. Exit from the *PASE* shell.

### Using *AIXterm*:

1. Start the *Xserver* on your desktop.
2. On the iSeries machine, open a *QSH shell* and export the display.
3. In *QSH shell*, go to the directory `/QopenSys` and run the command:  
"aixterm -sb"
4. A pop-up window is displayed on your desktop. Using this pop-up window, unzip the 9.3.0-IBM-IWS-IBM\_I\_AGENT-FP0001.zip file, or untar the 9.3.0-IBM-IWS-IBM\_I\_ZOS\_AGENT-FP0001.tar.

## Installing IBM Workload Scheduler for the first time using the IBM Installation Manager wizard

To install IBM Workload Scheduler for the first time using the interactive wizard, complete the following steps:

1. Complete the actions described in section “Before Installing” on page 12.
2. Download the IBM Workload Scheduler version 9.3 General Availability eImage from Passport Advantage Online specific for the operating system and extract it into a path of your choice.
3. Download the TAR or ZIP file specific for the operating system and extract it. To extract the `.tar` file, ensure that you use the GNU version of the TAR command. Otherwise, if you extract the file using a version other than GNU, your fix pack installation fails. If you are installing on a UNIX operating system, run the following command:

```
chmod -R 755 <imagesDir>
```

4. Depending on the type of operating system, run the following command:

### On Windows operating systems:

From the directory where you extracted the files, run `setupTWS.cmd -gapath <extraction_path>`.

### On UNIX and Linux operating systems:

From the directory where you extracted the files, run `setupTWS.sh -gapath <extraction_path>`.

where `<extraction_path>` is the path into which you extracted the IBM Workload Scheduler General Availability eImage.

The IBM Installation Manager window opens.

5. Select the packages you want to install and then click **Next** to continue.
6. In the Validating Results page, check that all the prerequisites are fulfilled and then click **Next** to continue.
7. In the Licenses page, read the license agreement for the selected package. If you agree to the terms of all the license agreements, click **I accept the terms in the license agreements** and then click **Next**.
8. In the Install Packages page, type the directory where you want to install the product and then click **Next** to continue.
9. In the Features page, select the IBM Workload Scheduler features:
  - master domain manager
  - dynamic domain managerClick **Next** to continue.
10. Complete the not disabled fields in the following panels:

### For master domain manager

- User information
- Master configuration
- Database configuration
- WebSphere profile configuration
- WebSphere ports configuration
- Disk space check

### For dynamic domain manager

- User information

- Dynamic domain manager configuration
- Database configuration
- WebSphere profile configuration
- WebSphere ports configuration
- Disk space check

For each panel, click **Validate** to validate that the information you entered is correct and then click **Next** to continue.

11. In the Summary page, review your choices before upgrading the product package. To change any choices that you made on previous pages, click **Back** and make the changes. When you are satisfied with your installation choices, click **Install** to install the packages.
12. Ignore any request to create the WebSphere Application Server administrator user.
13. Click **Finish** to complete the installation.

## Installing the fix pack on the IBM Workload Scheduler General Availability version 9.3 using the IBM Installation Manager wizard

To install the fix pack using the interactive wizard, complete the following steps:

1. Complete the actions described in section “Before Installing” on page 12.
2. Download the TAR or ZIP file, from IBM Fix Central, specific for the operating system and extract it. To extract the **.tar** file, ensure that you use the GNU version of the TAR command. Otherwise, if you extract the file using a version other than GNU, your fix pack installation fails. If you are installing on a UNIX operating system, run the following command:
 

```
chmod -R 755 <imagesDir>
```
3. You can start the installation process by using one of the following methods: the:

### IBM Installation Manager program

- a. Start the Installation Manager.
- b. In the menu bar, click **File > Preferences**.
- c. The Repositories window opens. Click **Add Repository**.
- d. In the Select a Repository window, in the Filter pane, type the path to the directory where the fix pack files are located.
- e. In the Directories pane, select the directory containing the fix pack files and click **OK**.

### The scripts **update.bat** or **update.sh**

Depending on the type of operating system, run the following command:

#### On Windows operating systems:

On Windows platforms, you must use only the 32-bit version of IBM Installation Manager. From the root directory of the eImages, run **update.bat**.

#### On UNIX and Linux operating systems:

From the root directory of the eImages, run **update.sh**.

The IBM Installation Manager window opens.

4. Verify that the check box **Search service repositories during installation and updates** is not selected, then click **OK** in the Repositories window.
5. Click **Update**.
6. In the Installation Packages page, select the "Tivoli Workload Scheduler" > "Version 9.3.0.1" product package. Click **Next** to continue.
7. In the Licenses page, read the license agreement for the selected package. If you agree to the terms of all the license agreements, click **I accept the terms in the license agreements** and then click **Next**.
8. In the Features page, select the IBM Workload Scheduler features:
  - master domain manager
  - dynamic domain manager

Click **Next** to continue.

9. Complete the not disabled fields in the following panels:

**For master domain manager**

- Upgrade configuration
- User information
- Master configuration
- Database configuration
- WebSphere profile configuration
- WebSphere ports configuration
- Disk space check

**For dynamic domain manager**

- Upgrade configuration
- User information
- Dynamic domain manager configuration
- Database configuration
- WebSphere profile configuration
- WebSphere ports configuration
- Disk space check

For each panel, click **Validate** to validate that the information you entered is correct.

10. In the Summary page, review your choices before upgrading the product package. To change any choices that you made on previous pages, click **Back** and make the changes. When you are satisfied with your installation choices, click **Update** to install the update packages
11. Click **Finish** to complete the installation.

**Note:** If the fix pack installation fails, the IBM Workload Scheduler General Availability version 9.3 instance might not work properly and the following error is shown in the installation logs:

An error occurred while restoring the Tivoli Workload Scheduler instance from the backup, located in the folder `<backup_folder>`

where `<backup_folder>` is the folder where the IBM Workload Scheduler backup files are located.

To recover from this issue, complete the following steps:

1. Check that you have right permissions for the IBM Workload Scheduler installation path, that there is enough disk space, and that no process is locking the files located in the IBM Workload Scheduler installation path.
2. Access the *<backup\_folder>* and remove the folders with the same names as those located in the IBM Workload Scheduler installation folder.
3. Copy all the folders from the *<backup\_folder>* to the IBM Workload Scheduler installation folder.
4. Rerun the fix pack installation steps.

## Installing the fix pack on a IBM Workload Scheduler version earlier than 9.3 using the IBM Installation Manager wizard

To install the fix pack on a IBM Workload Scheduler version earlier than 9.3 using the interactive wizard, complete the following steps:

1. Perform the actions described in section “Before Installing” on page 12.
2. Download the TAR or ZIP file specific for the operating system and extract it. To extract the *.tar* file, ensure that you use the GNU version of the TAR command. Otherwise, if you extract the file using a version other than GNU, your fix pack installation fails. If you are installing on a UNIX operating system, run the following command:

```
chmod -R 755 <imagesDir>
```

3. Depending on the type of operating system, run the following command:

### On Windows operating systems:

From the directory where you extracted the files, run `setupTWS.cmd -gapath <extraction_path>`.

### On UNIX and Linux operating systems:

From the directory where you extracted the files, run `setupTWS.sh -gapath <extraction_path>`.

where *<extraction\_path>* is the path where you extracted the TAR or ZIP file specific for your operating system.

The IBM Installation Manager window opens.

4. Select the packages you want to install and then click **Next** to continue.
5. In the Validating Results page, check that all the prerequisites are fulfilled and then click **Next** to continue.
6. In the Licenses page, read the license agreement for the selected package. If you agree to the terms of all the license agreements, click **I accept the terms in the license agreements** and then click **Next**.
7. In the Install Packages page, type the directory where the earlier IBM Workload Scheduler version is installed and then click **Next** to continue.
8. A warning window opens with the message:  
The location *<installation\_path>* already contains a Tivoli Workload Scheduler instance of version *<version>* that will be upgraded.

where *<installation\_path>* is the directory where the earlier IBM Workload Scheduler version is installed and *<version>* is the installed version.

Click **OK** to continue.

9. In the Features page, select the IBM Workload Scheduler features:
  - master domain manager
  - dynamic domain manager



Click **Next** to continue.

10. Complete the not greyed fields in the following panels:

**For master domain manager**

- Upgrade configuration
- User information
- Master configuration
- Database configuration
- WebSphere profile configuration
- WebSphere ports configuration
- Disk space check

**For dynamic domain manager**

- Upgrade configuration
- User information
- Dynamic domain manager configuration
- Database configuration
- WebSphere profile configuration
- WebSphere ports configuration
- Disk space check

For each panel, click **Validate** to validate that the information you entered is correct and then click **Next** to continue.

11. In the Summary page, review your choices before upgrading the product package. To change any choices that you made on previous pages, click **Back** and make the changes. When you are satisfied with your installation choices, click **Install** to install the packages.
12. In the Install packages page, in the **Which program do you want to start?** pane, select **None** and then click **Finish** to complete the installation.

## Installing the fix pack using IBM Installation Manager silent installation

After you complete the actions described in the section “Before Installing” on page 12, if you want to install the fix pack in silent mode use silent installation. When you run a silent installation, you must create a response file to use as input to the IBM Installation Manager silent installation commands. The response file includes all the information required to run the installation without user intervention. The response file includes all the information required to run the installation without user intervention.

You are provided with several sample response files located in the `\response_files\` directory. Depending on the initial version of your components, select the appropriate response file:

*Table 5. Response files for fix pack installation*

Response File Name	Description
IWS93_UPDATE_<component_name>_from93_<os_name>.xml	This response file applies the fix pack to version 9.3 component bringing it to the 9.3 FP1 level. To run the installation, download and extract the appropriate fix pack image and set the fix pack repository.

Table 5. Response files for fix pack installation (continued)

Response File Name	Description
IWS93_UPGRADE_<component_name>_from9x_<os_name>.xml	This response file upgrades a version 9.1 or 9.2 component to the 9.3 FP1 level. To run the installation, download and extract the appropriate eImage for the 9.2 GA version as well as the appropriate fix pack images and set both the version 9.3 GA repository and the fix pack repository.
IWS93_UPGRADE_<component_name>_from86_<os_name>.xml	This response file upgrades a version 8.6 component to the 9.3 FP1 level. To run the installation, download and extract the appropriate eImage for the 9.3 GA version as well as the appropriate fix pack images and set both the version 9.3 GA repository and the fix pack repository.
IWS93_UPGRADE_<component_name>_from851_<os_name>.xml	This response file upgrades a version 8.5.1 component to the 9.3 FP1 level. To run the installation, download and extract the appropriate eImage for the 9.3 GA version as well as the appropriate fix pack images and set both the version 9.3 GA repository and the fix pack repository.
IWS93_FRESH_<component_name>_<os_name>.xml	This response file performs a fresh installation of the version 9.3 GA product plus fix pack 1. Use this installation if you have WebSphere Application Server and Installation Manager already installed. To run the installation, download and extract the appropriate eImage for the 9.3 GA version as well as the appropriate fix pack images and set both the version 9.3 GA repository and the fix pack repository.
IWS93_FRESH_FULL_<component_name>_<os_name>.xml	This response file performs a first time fresh installation of the version 9.3 GA product, fix pack 1, WebSphere Application Server, and Installation Manager. WebSphere Application Server must be purchased separately. To run the installation, download and extract the appropriate eImage for the 9.3 GA version as well as the appropriate fix pack images and set the repositories for 9.3 GA, the fix pack, WebSphere Application Server, and Installation Manager.

Create your own response file or customize a sample response file to include the options required to complete the installation you require.

Complete the following steps:

1. Copy the relevant response file to a local directory.
2. Edit the IBM Workload Scheduler section. For details about the response file properties, see *Planning and Installation*.
3. Save the file with your changes.
4. Open a command-line prompt.
5. Go to the Installation Manager tools directory.

The default tools directory is:

- **On Windows operating systems:**  
C:\Program Files\IBM\Installation Manager\eclipse\tools
- **On UNIX and Linux operating systems:**  
/opt/IBM/InstallationManager/eclipse/tools

6. Run the following command:

- **On Windows operating systems:**  
imcl.exe -c
- **On UNIX and Linux operating systems:**  
./imcl -c

7. Type *P* and press the Enter key to access the **Preferences** menu.

8. Type *1* and press the Enter key to access the **Repositories** menu.

9. Remove all the listed repositories by typing the number beside each repository to edit it and then type *2* to remove the repository. Perform these actions for each of the listed repositories.

10. If there is an *X* beside the **S** menu item related to **Search service repositories**, type *S* and press the Enter key to deselect it.

11. Type *A* and press the Enter key to apply the changes.

12. Type *R* and press the Enter key to return to the main menu.

13. Type *X* and press the Enter key to exit.

14. Go to the Installation Manager tools directory.

The default tools directory is:

- **On Windows operating systems:**  
C:\Program Files\IBM\Installation Manager\eclipse\tools
- **On UNIX and Linux operating systems:**  
/opt/IBM/InstallationManager/eclipse/tools

15. Run the following command:

- **On Windows operating systems:**  
imcl.exe input <local\_dir>\response\_file.xml  
-log <local\_dir>\log\_file.xml  
-acceptLicense nosplash
- **On UNIX and Linux operating systems:**  
./imcl input /<local\_dir>/response\_file.xml  
-log /<local\_dir>/log\_file.xml  
-acceptLicense nosplash

where *response\_file* is the name of the response file to be used for the installation, and *log\_file* is the name of the log file that records the result of the silent installation.

## Installing the fix pack on agents using the twsinst script

You can use the following procedure to install the fix pack on an existing agent installation using the **twsinst** script with the **-update** option. To perform a fresh installation of the agent, you can use the **twsinst** script with the **-new** option, refer to the *Planning and Installation* guide for the complete procedure.

**Note:** If you are upgrading an agent from version 8.5.1, you must obligatorily specify the **-password user\_password** parameter.

**To show command usage:**

**On Windows operating systems:**

```
cscript twsinst.vbs -u | -v
```

### On UNIX and Linux operating systems:

```
./twsinst -u | -v
```

### To install a fix pack:

#### On Windows operating systems:

```
cscript twsinst -update -uname TWS_user -password user_password  
[-domain user_domain]  
[-inst_dir installation_dir  
[-recovInstReg {true | false}]] [-wait <minutes>] [-lang <lang_id>]
```

#### On UNIX and Linux operating systems:

```
./twsinst -update -uname TWS_user [-inst_dir installation_dir  
[-recovInstReg {true | false}]] [-wait <minutes>][-lang <lang_id>]
```

Where:

#### **-update**

Upgrades an existing agent that was installed using the **twsinst** script.

#### **-uname** *TWS\_user*

The name of the user for which IBM Workload Scheduler is upgraded.

#### **-password** *user\_password*

Windows operating systems only. The password of the user for which you are upgrading IBM Workload Scheduler.

#### **-domain** *user\_domain*

Windows operating systems only. The domain name of the IBM Workload Scheduler user. The default is the name of the workstation on which you are upgrading the product.

#### **-inst\_dir** *installation\_dir* [-recovInstReg *true* | *false* ]

The name of the directory where you installed IBM Workload Scheduler. When installing the fix pack the *inst\_dir* parameter is used:

- If the installation process cannot retrieve the product installation location from the registries.
- If you need to re-create the IBM Workload Scheduler registries again before the fix pack installation. Set the value of *recovInstReg* to *true* if you want to re-create the registry files while performing a fix pack installation on a fault-tolerant agent.

#### **-wait** *minutes*

The number of minutes that the product waits for jobs that are running to complete before starting the fix pack installation. If the jobs do not complete during this interval the installation process does not proceed and an error message is displayed. Valid values are integers or -1 for the product to wait indefinitely. The default is 60.

#### **-lang** *lang\_id*

The language used for the **twinst** messages displayed. The default is the value of the system variable *LANG*. If the language catalog for the value you specified is missing, the default C language catalog is used.

**twsinst** for Windows is a Visual Basic Script (VBS) that you can run in CScript and WScript mode. The IBM Workload Scheduler user is automatically created. The software is installed by default in the IBM Workload Scheduler installation directory. The default value is %ProgramFiles%\IBM\TWA. If you enabled the Security Warning, a dialog box is displayed during the installation. In this case answer **Run** to continue.

After you complete the actions described in the section “Before Installing” on page 12, perform the following action:

- Run **twsinst** with the options you need for your fix pack installation scenario.

**Note:** On IBM i operating systems, if you are installing the fix pack on a IBM Workload Scheduler for z/OS Agent or a IBM Workload Scheduler Dynamic Agent, after you complete the actions described in the section “Extract the eImages for the IBM Workload Scheduler for z/OS Agent and Dynamic Agent on IBM i operating systems” on page 14, run the **twsinst** script from the *QSH shell*.

## Installing the fix pack on multiple fault-tolerant and dynamic agents

You can install fix packs for multiple fault-tolerant agent and dynamic agent instances, by downloading a package on the master domain manager workstation and updating the multiple agent instances by running an action from the Dynamic Workload Console. You can also schedule the centralized update of multiple agent instances, by using the Dynamic Workload Console or the command line.

### Before you begin

This procedure can be used from an IBM Workload Scheduler master domain manager version 9.3.0 or later to centrally update only instances of fault-tolerant agents version 9.3.0 or later and dynamic agents version 9.3.0 or later.

In the master domain manager Security file, you must have manage authorization for all the agent workstations for TWS\_master\_user, root, or Administrator users. If your master domain manager is a version 9.3.0 fresh installation, the authorization role is automatically added to the Security file. If your master domain manager is an upgraded version 9.3.0 instance, you must manually add the authorization. For more information about the manage keyword usage, see the Object type - cpu topic in the *Administration Guide*. For an example of a master domain manager Security file, see topic about the security file on the master domain manager to install fix packs or upgrade fault-tolerant agents and dynamic agents in the *Administration Guide*.

### About this task

Complete the following steps:

#### Procedure

1. From IBM Fix Central, download on to the master domain manager workstation, the fix pack installation package you want to install on fault-tolerant agent or dynamic agent instances, to the following default directory:

**On Windows operating systems:**

<TWA\_home>\TWS\depot\agent

### On UNIX operating systems:

<TWA\_home>/TWS/depot/agent

where <TWA\_home> is the master domain manager installation directory.

You can change the default directory value executing the following steps:

- Stop the WebSphere Application Server on the master domain manager.
- Modify the com.ibm.tws.conn.engine.depot key value in the following property file:

### On Windows operating systems:

<TWA\_home>\WAS\TWSPProfile\properties\TWSSConfig.properties

### On UNIX operating systems:

<TWA\_home>/WAS/TWSPProfile/properties/TWSSConfig.properties

- Start the WebSphere Application Server.
2. Log on to the Dynamic Workload Console.
  3. Create a Monitor Workstations task.
  4. Run a Monitor Workstations task and select one or more dynamic agent or fault-tolerant agent instances that you want to update.
  5. Click **More Actions** > **Update agent**. The **Update agent** action checks whether the selected agent is a supported workstation type.

The **Update agent** action is applicable to the following workstation types only:

- Dynamic Agent
- Fault-tolerant agent

The **Update agent** action is not applicable to the following workstation types:

- Master domain manager
- Backup master domain manager
- Dynamic domain manager
- Backup dynamic domain manager
- Extended agent
- Standard agent
- Remote engine
- Broker
- Pool
- Dynamic pool
- Limited fault-tolerant agent

The process updates the agent only if the workstation type is supported. Otherwise, either an error message is displayed on the Dynamic Workload Console, or is written in the operator log messages console, depending on the workstation type.

You can schedule the centralized update of multiple agent instances, by using the Dynamic Workload Console or the command line. For a description of how to schedule the update see the topic about scheduling the centralized agent update in the upgrading section of the *Planning and Installation* guide.

For a description of the **Update agent** action on fault-tolerant agents and dynamic agents, see the topic about Updating fault-tolerant agent and dynamic agent instances in the *Planning and Installation* guide.

## Results

Verify the update agent results by completing one of the following actions in the Dynamic Workload Console:

### Check the operator log messages console:

Click **System Status and Health > Event Monitoring > Monitor Triggered Actions** and check the messages related to the agent workstation update.

The following event rules are triggered:

#### UPDATESUCCESS

When the workstation is successfully updated

#### UPDATEFAILURE

When an error occurs

#### UPDATERUNNING

With the information about the update process status

### Check the workstation version changes:

After the next plan update, in the Monitor Workstations view of the Dynamic Workload Console, you can check the updated version in the Version column of the selected agent. Otherwise, if you do not want to wait for the next plan update to see the updated version, run the command `JnextPlan -for 0000` with the `-noremove` option.

You can also perform a **manual check of the update agent results** by looking at the following log files on the agent system:

#### On Windows operating systems:

`<TWA_home>\TWS\logs\centralized_update.log`

#### On UNIX operating systems:

`<TWA_home>/TWS/logs/centralized_update.log`

## Uninstalling the entire IBM Workload Scheduler instance

### Master domain manager or dynamic domain manager or their backups:

To uninstall using the IBM Installation Manager, see *Planning and Installation*.

### Fault-tolerant agent or domain manager:

To uninstall the entire IBM Workload Scheduler instance, use the `twinst -uninst -uname username` command from the `TWS_home` directory, where *username* is the name of the user for which the IBM Workload Scheduler agent is uninstalled.

## Installation log files

The following installation log files give you details about the status of the fix pack installation for the master domain manager, backup master domain manager, the agents, and the connector:

- Log file for master domain managers, dynamic domain managers, and their backups:

#### On Windows operating systems:

`C:\ProgramData\IBM\InstallationManager\logs\<YYYYMMDD_HHMM>.xml`

**Note:** The folder ProgramData is a hidden folder.

#### On UNIX and Linux operating systems:

```
/var/ibm/InstallationManager/logs/<YYYYMMDD_HHMM>.xml
```

where <YYYYMMDD> is the date and <HHMM> is the time when the log file is created.

- Log file for fault-tolerant agents and dynamic agents:

**On Windows operating systems:**

```
%Temp%\TWA\tws9300\  
twsinst_<operating_system>_<TWS_user>^9.3.0.1n.log
```

**On UNIX and Linux operating systems:**

```
/tmp/TWA/tws9300/  
twsinst_<operating_system>_<TWS_user>^9.3.0.1n.log
```

where

<operating\_system>

is the operating system running on the workstation where you are applying the fix pack.

<TWS\_user>

is the name of the user for which IBM Workload Scheduler was installed (the name you supplied during installation).

*n* is the fix pack number.

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## Documentation updates for IBM Workload Scheduler Fix Pack 1 for version 9.3.0

Any additions or changes to the documentation as a result of this fix pack have been integrated into the online product documentation available in IBM Knowledge Center.



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## Chapter 2. Contacting IBM Software Support

Before contacting IBM Software Support with a problem, refer to the IBM Software Support site by accessing the following Web address:

<http://www.ibm.com/software/support>

To access Tivoli support, click the Tivoli support link at the bottom right of the page.

If you want to contact IBM Software Support, see the *IBM Software Support Handbook* at the following Web site:

<http://techsupport.services.ibm.com/guides/handbook.html>

The guide provides information about how to contact IBM Software Support, depending on the severity of your problem, and the following information:

- Registration and eligibility.
- Telephone numbers, depending on the country in which you are located.
- Information you must have before contacting IBM Software Support.



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