

IBM Tivoli Workload Scheduler



Readme File for Fix Pack 02 PTF U820098

Version 8.4.0

IBM Tivoli Workload Scheduler



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Version 8.4.0

Note

Before using this information and the product it supports, read the information in Chapter 3, "Notices," on page 45.

This edition applies to Fix Pack 02 (PTF U820098) for version 8, release 4, modification level 0 of IBM Tivoli Workload Scheduler.

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Chapter 1. IBM Tivoli Workload Scheduler Readme File for Fix Pack 02 for Version 8.4.0

Date	September 26, 2008
Fix Pack	8.4.0-TIV-TWS-FP0002
PTF Number	U820098
Product	IBM® Tivoli® Workload Scheduler version 8.4.0
General Description	IBM Tivoli Workload Scheduler Fix Pack 02 for version 8.4.0

This readme file provides important information about Fix Pack 02 (PTF U820098) for IBM Tivoli Workload Scheduler version 8.4.0.

This readme file is the most current information for the fix pack and takes precedence overall other documentation for Tivoli Workload Scheduler version 8.4.0 Fix Pack 02.

It is divided into the following sections:

- “About this fix pack”
- “Fix pack structure” on page 26
- “Installing the fix pack” on page 28
- “Documentation updates” on page 36

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

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 only be applied on top of Tivoli Workload Scheduler 8.4.0 and Fix Pack 01.

This section includes the following subsections:

- “New features introduced with this fix pack” on page 2
- “Features introduced with Fix Pack 01” on page 7
- “Problems fixed” on page 8
- “Additional information” on page 14
- “Known limitations and workarounds” on page 16
- “Internationalization notes” on page 24

New features introduced with this fix pack

This section describes the new features in Tivoli Workload Scheduler Version 8.4.0 Fix Pack 02:

Enabling full Secure Sockets Layer (SSL) connection security

This feature provides the option to set a higher degree of SSL-based connection security on Tivoli Workload Scheduler networks in addition to the already available level of SSL security.

If you require a more complete degree of SSL protection, this enhancement supplies new configuration options to set up advanced connection security.

If you do not require more SSL security than Tivoli Workload Scheduler provided prior to the release of this feature, you can use the settings described in the *Planning and Installation Guide*. For more information see <http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.itws.doc/igmst182.htm#wq373>.

Full SSL security enhancements

Full SSL security support provides the following enhancements:

- TCP/IP ports that can become security breaches are no longer left open.
- Travelling data, including communication headers and trailers, is now *totally* encrypted.

Compatibility between SSL support levels

Both the non-full and the full SSL support levels are mutually exclusive, that is, they cannot be configured simultaneously and cannot be enabled at the same time. If you enable full SSL support for a Tivoli Workload Scheduler network, any connection attempts by agents that are not configured for full SSL are rejected by agents with full SSL support enabled. Agents configured for full SSL support, instead, cannot communicate with the rest of a network set up for non-full SSL support.

Setting up full SSL security

To set full SSL connection security for your network, you must configure the following options:

enSSLFullConnection (or sf)

Use `optman` on the master domain manager to set this global option to Yes to enable full SSL support for the network.

nm SSL full port

Edit the `localopts` file on every agent in the network (including the master domain manager) to set this local option to the port number used to listen for incoming SSL connections. Take note of the following:

- This port number must be defined also for the `SECUREADDR` parameter in the workstation definition of the agent.
- In a full SSL security setup, the `nm SSL port` and `nm port` local options must be set to zero.

Other than the changed value for `secureaddr`, no other changes are required in the workstation definitions to set up this feature.

Migrating a network to full SSL connection security

Run the following steps to migrate your Tivoli Workload Scheduler version 8.4 production environment to full SSL connection security support. The scenario assumes that the network already runs on non-full SSL; that is, that the master and all the agents have:

- The `securitylevel` attribute set to `enabled`, `on`, or `force` in their workstation definition. On the master it is set to `enabled`.
- Either the `nm` port or the `nm SSL` port local option configured and the port number set as the value of the `secureaddr` attribute in their workstation definition.
- Group or individual private keys and certificates.

Proceed as follows:

1. Upgrade all the agents to Tivoli Workload Scheduler version 8.4 Fix Pack 02. The objective is to upgrade locally every agent in the network (including the master domain manager). You can perform this step over several days. On the master and on every agent:
 - a. Install the fix containing the full SSL support feature.
 - b. Add the `nm SSL full` port local option and set it to a port number.

At this stage, the network is still operating on non-full SSL connection security.

2. Enable full SSL support in the network. Perform this step in one single time slot. To do this:
 - a. Check that no firewall blocks the connection between the agents and their domain manager (and, optionally, the master domain manager).
 - b. In the workstation definition of the master and of every agent, set the value of the `secureaddr` attribute to the port number you configured for the `nm SSL full` port local option.
 - c. Use **Optman** to set the `enSSLFullConnection` global option to `yes` in the database.
 - d. Ensure that the `CarryForward` option is set to `ALL`, by running the following command: `optman chg cf=ALL`
 - e. Run `JnextPlan -for 0000` to make these settings operational.
 - f. Reset the `CarryForward` option to the value you assigned before running Step d.

At this stage, the network is operating on full SSL connection security. Any agents left on SSL security can no longer communicate with the rest of the full SSL security network.

The upgraded workstations still have the old SSL and TCP/IP ports open in listening mode. The aim of the next step is to close them down.

3. Disable the old SSL and TCP/IP ports on the master and on every agent. You can perform this step over several days. To do this, edit the local options file of every workstation as follows:
 - On the workstations that have the `securitylevel` attribute set to `enabled` or `on`, set the `nm SSL` port local option to `0`.

- On the workstations that have the `securitylevel` attribute set to `force`, set both `nm port` and `nm SSL port` local options to `0`.

At this stage, all the agents operate with the new SSL connections and all agents set on `securitylevel=force` listen only on the new SSL full port. From now on:

- No bytes are sent in plain text.
- No active services are left in plain text.
- No TCP/IP ports are left in listening mode on agents with `securitylevel=force`.

Configuring full SSL support for internetwork dependencies

The network agent that resolves internetwork dependencies requires a particular setup for full SSL support.

To enable a network agent for full SSL support:

1. Configure both the hosting and the remote fault-tolerant agents for full SSL support.
2. On the hosting fault-tolerant agent, copy or move the `netmth.opts` file from the `twshome/config` to the `twshome/methods` directories and add (and configure) the following options:

SSL remote CPU

The workstation name of the remote master or fault-tolerant agent.

SSL remote full port

The port number defined for full SSL support on the remote master or fault-tolerant agent.

The local options that specify the private key and certificate on the hosting fault-tolerant agent

These are described in the *Planning and Installation Guide* (see <http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.itws.doc/igmst170.htm#c04opts523611>).

Note:

If the hosting fault-tolerant agent hosts more than one network agent, the `twshome/methods` directory contains one `netmth.opts` file for every defined network agent. In this case the complete name of each `netmth.opts` file becomes:

`network-agent-name_netmth.opts`

If the `twshome/methods` directory contains both `network-agent-name_netmth.opts` and `netmth.opts` files, only `network-agent-name_netmth.opts` is used. If multiple agents are defined and the directory contains only `netmth.opts`, this file is used for all the network agents.

The following example adds full SSL support to the example described in "A sample network agent definition" in the *Reference*

Guide (see http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.itws.doc/srf_mst320.htm#wq574):

- This is the workstation definition for the NETAGT network agent:

```
CPUNAME NETAGT
DESCRIPTION "NETWORK AGENT"
OS OTHER
NODE MASTERA.ROME.TIVOLI.COM
TCPADDR 31117
FOR maestro
HOST MASTERB
ACCESS NETMTH
END
```

- These are the full SSL security options in the netmeth.opts file of NETAGT:

```
#####
# Remote cpu parameters
#####

SSL remote full port = 31119
SSL remote CPU = MASTERA

#####
# Configuration Certificate
#####

SSL key           = "C:\TWS\installations\SSL\XA.key"
SSL certificate   = "C:\TWS\installations\SSL\XA.crt"
SSL CA certificate = "C:\TWS\installations\SSL\VeriSte.crt"
SSL key pwd      = "C:\TWS\installations\SSL\XA.sth"
SSL certificate chain = "C:\TWS\installations\SSL\
                        \TWSCertificateChain.crt"
SSL random seed   = "C:\TWS\installations\SSL\random_file.rnd"
SSL auth mode     = cpu
SSL auth string   = tws
```

Note: The SSL configuration certificate options must refer to the private key and certificate defined on the hosting fault-tolerant agent.

- This is the workstation definition for MASTERA (the remote workstation):

```
CPUNAME MASTERA
OS WNT
NODE 9.168.68.55 TCPADDR 31117
SECUREADDR 31119
DOMAIN NTWKA
FOR MAESTRO
TYPE MANAGER
AUTOLINK ON
BEHINDFIREWALL OFF
SECURITYLEVEL enabled
FULLSTATUS ON
SERVER H
END
```

Tivoli Dynamic Workload Console with Tivoli Workload Scheduler in SSL full connection mode (42326)

When you have a Tivoli Workload Scheduler engine in SSL full connection mode, the WebUI certificate must be imported into the Tivoli Workload Scheduler trusted keystore of its WebSphere Application Server.

Here is an example (but for this type of configuration refer to the WebSphere Application Server official documentation).

Open the graphical *keyman* tool under TDWC_HOME/AppServer/java/jre/bin, and perform these steps:

1. Open the keystore with the menu
"Key Database file -->Open": TDWC_HOME/AppServer/profiles/tdwcprofile/config/cells/<cellName>/nodes/<nodeName>/key.p12 selecting the "key database type" as "PKCS12", providing the password "WebAS"
2. Select **Extract Certificate** as Base 64 Encoded ASCII data.
3. Copy this file extracted to the Tivoli Workload Scheduler engine host.
4. On the Tivoli Workload Scheduler engine host, open *keyman* under TWS_HOME/appserver/java/jre/bin
5. Open the keystore with the menu
"Key Database file -->Open": TWS_HOME/appServer/profiles/twsprofile/etc/TWSServerTrustFile.jks selecting the "key database type" as "JKS", providing the password "default"
6. Select **Add** to extract the certificate.
7. Restart the WebSphere Application Server of Tivoli Dynamic Workload Console and of Tivoli Workload Scheduler.

Feature 40244 - Extend the maximum number of concurrent holders to 60

A job or job stream can request a maximum of 1024 units of a resource in a needs statement. At run time, each needs statement is converted into holders, each holding a maximum of 32 units of a specific resource.

Before the feature: Independently from the amount of available units of the resource, for a single resource there can be a maximum of 32 holders. If 32 holders are already defined for a resource, the next job or job stream waiting for that resource waits until one of the current holder ends and the needed amount of resource becomes available.

After the feature: The maximum number of concurrent holders for a resource is 60.

The feature by default is not active, you can activate the feature as follows:

- Activate the feature only when Tivoli Workload Scheduler version 8.4 Fix Pack 02 has been installed on the entire Tivoli Workload Scheduler network
- Activate the feature running the following command on **optman** command line:
optman chg enExpandedResources=YES
- Run JnextPlan for version 8.4
- To confirm that the feature is active you can see the following messages in the TWSMERGE log file at batchman startup:
BATCHMAN:EXPANDED RESOURCES : ON

Feature 42044 - Add progress to Logman

UPDATESTATS has 2 main goals:

1. Update the statistics of jobs
2. Update the pre-production plan reporting which job streams has been completed

UPDATESTATS usually runs for a long time during Logman activity. The time it takes to update statistics depends on several factors including number of jobs, CPUs, Disks.

Starting from Tivoli Workload Scheduler 8.4 Fix Pack 02, Logman process has a new information message that shows the progress of statistics updates:

Locale LANG set to the following: "en"

17:04/AWSBHX028I Updating statistics. Percentage complete: 3%.

17:05/AWSBHX029I Updating statistics. Percentage complete: 94%

- estimated completion at: 17.05.20.17:05/AWSBHX031I

The statistics update is completed.

AWSJCL066I The job statistics have been successfully collected.

Features introduced with Fix Pack 01

The following features have been added with this fix pack:

Integration with Tivoli Change and Configuration Management Database

The aim of the integration is to generate information that could be imported within the Tivoli Change and Configuration Management Database and to be presented to the end user on the Tivoli Dynamic Workload Console.

Note: The level of Tivoli Change and Configuration Management Database that supports the integration are Version 1, Release 1, Modification 1 or later, and Version 7, Release 1, Modification 0 with the interim fix for APAR IZ12719. If you need follow these steps to get the interim fix:

1. Access the IBM Software Support web site at <http://www.ibm.com/software/support>
2. Click **Products A to Z**.
3. Click **C** and then select in the list **Tivoli Change and Configuration Management Database**.
4. Search for the maintenance package that contains APAR IZ12719 and follow the instructions for download and install it.
5. If that maintenance package does not exist yet than you can call IBM Help at 800-426-7378 and open a PMR under component ID 5724R58IA.
6. Ask to have the hotfix for APAR IZ12719

Event persistence

The capability for the Event Driven Workload Automation feature to persist the status of the received events when a planned server shutdown is run. When the user stops the server, all the events received up to that time will be automatically stored. When the server is restarted, the events processing will continue in a fully restored environment before the shutdown happened.

Prerequisite checking scripts

A new set of script whose aim is to verify, before running a fresh install, that all the system prerequisites for DB2[®] and Oracle are satisfied for every supported platform. The end user can run these scripts before starting the installation.

Metronome Script available in VB Script

The **metronome** script available is now available also in VB Script, so that

it can be run on Windows® operating systems without asking the user install a Perl interpreter in their environment to run the script.

Tivoli Workload Scheduler Integration Workbench

A new Eclipse feature and a set of source code samples are provided to help customers, IBM Services and business partners to develop their own Tivoli Workload Scheduler Event Driven Workload Automation Events and Actions plug-ins and applications using Tivoli Workload Scheduler API and Web Services.

Problems fixed

Tivoli Workload Scheduler Fix Pack 02 for version 8.4.0 supersedes all the fixes released previously for the product. The following section includes all the APARs and defects shipped for Tivoli Workload Scheduler Fix Pack 02 for version 8.4.0.

This section is divided into the following subsections:

- “APARs and Defects Fixed in Tivoli Workload Scheduler Fix Pack 02 for version 8.4.0”
- “APARs and Defects Fixed in Tivoli Workload Scheduler Fix Pack 01 for version 8.4.0” on page 11

APARs and Defects Fixed in Tivoli Workload Scheduler Fix Pack 02 for version 8.4.0

This section lists all APARs and internal defects solved by this fix pack. For additional information about documentation APARs and internal defects refer to subsection “Documentation updates” on page 36.

List of APARs fixed:

- **IZ05159:** On w2k3 running an upgrade from Tivoli Workload Scheduler v8.2.1 to v8.3 does not update the System Registry.
- **IZ11522:** Makesec error updating user.
- **IZ12472:** On Tivoli Workload Scheduler 8.3 Fix Pack 04 security errors connecting JSC without a Symphony file can occur.
- **IZ14290:** FTA is unlinked even after issuing link commands.
- **IZ15392:** Cannot kill two jobs with same jobname in userjobs from JSC.
- **IZ15782:** AWSBHT156E batchman could not open the mailbox file.
- **IZ16020:** An explicit “%%” conman prompt is removed by fixpack installation.
- **IZ16421:** The default cpu in a follows dependency of a sbs command” is the cpu where the conman command is executed.
- **IZ16601:** Duplicated job streams during migration are submitted.
- **IZ16832:** Tec event management when FTA is not reachable.
- **IZ16857:** Unixlocl xa stops if bdm is stopped when “enswfaultool”=yes.
- **IZ17294:** Xa is shown as unlinked on JSC, although it is linked.
- **IZ17475:** Elapsed time is reported in seconds, not minutes.
- **IZ17479:** Jobmon terminates after applying fp04.
- **IZ17565:** Xref -u does not list the -when option.
- **IZ17655:** Installing Tivoli Workload Scheduler on Windows 2003 64bit domain controller causes “application error ...” running makesec.exe.
- **IZ17806:** Garbled mbcs in a joblog header, if mbcs characters are passed.
- **IZ18196:** Logical OR missing in the TWS84metafile.mdl file.

- **IZ18938:** When a dependency is deleted in tws, it can cause all Windows and Solaris ftas to unlink and go down.
- **IZ19308:** Final job stream not scheduled during dst change.
- **IZ19459:** Audit plan wrong data displayed.
- **IZ19740:** Cancelled jobs are not removed from jhr_job_history_runs table.
- **IZ20328:** Last runtime information not displayed in all job definition.
- **IZ21378:** Incorrect output when running "reptr" and outputting to text file.
- **IZ21379:** "Set alternate plan" gives wrong times in "plan start & end".
- **IZ21464:** Free disk space does not increase by removing a schedlog file.
- **IZ21879:** Special characters in passwords are not allowed during install.
- **IZ21941:** ITM scripts not working properly on AIX.
- **IZ22085:** Quit event in the master queue not discarded after the terminate signal.
- **IZ22263:** Standard Agent job output header showing wrong date (02/07/70).
- **IZ22417:** Wdinstsp fails during the installation of Tivoli Workload Scheduler 8.4.
- **IZ22712:** Tivoli Workload Scheduler 8.4 child workstation link changed event rule does not work.
- **IZ22904:** Ssm 4.0 in Tivoli Workload Scheduler 8.4 logs windows events about missing pcamp50.sys.
- **IZ22949:** Tivoli Workload Scheduler 8.3 rmstdlist did not work properly when launched outside.
- **IZ22954:** Xrtrct does not work properly after applying Fix Pack 4, not alljobs show in the 'x' files.
- **IZ23253:** "Datamigrate -topology" does not handle DBCS correctly.
- **IZ23442:** After rerunning multiple jobs from same step name, JSC browse joblog of last job, shows log of first job rerun with that step.
- **IZ24025:** Batchman down when job stream was canceled by onuntil canc.
- **IZ24042:** Reptr.cmd does not on windows does not clean up temporary file.
- **IZ24047:** Twscclusteradm.exe -uninst with hosts=<target> fails to uninstall.
- **IZ24747:** For a chain of repetitive job stageman should consider the latest job in the chain instead it is considering the first job.
- **IZ24748:** Sendmail action done by event driven function sets different.
- **IZ25226:** After switchmgr to bdm, starting mdm results in unlink fta.
- **IZ26291:** Reptr shows incorrect value in total job streams number.
- **IZ26739:** Job stream that has a pending predecessor incorrectly goes into.
- **IZ27478:** Tivoli Workload Scheduler jobs fail or do not execute properly when the system path.
- **IZ27977:** Twsxx temp file is created and not being removed immediately.
- **IZ28114:** When Logmansmoothpolicy is set to -1 (default value).
- **IZ28131:** Job stream with onuntil cont is not carried forward.
- **IZ28400:** Specifying "SCHEDID" without job stream id should return a syntax error.

List of defects fixed:

This list contains the defects that fixed some of the limitations reported in the Tivoli Workload Scheduler version 8.4.0 Release Notes:

- 29532: Wrong behaviour when submitting a job adhoc with 'onuntil' key.
- 39666: Australia 2008 DST : Olson table from tzdata2007k.
- 39799: R3evmon crash and memory leaks.
- 39851: FileMonitorPlugin: wrong Linetext in the cds file.
- 39923: Sample run scripts doesn't work.
- 40049: Application deadlock submitting > 15 jobs at the same time.
- 40057: Bad error message The operating system error is: No error.
- 40067: Memory leaks found on long run envs.
- 40244: MR0212074722 -60 concurrents holders of a TWS resources.
- 40372: Sbs incorrect manage needs res inside js on plan (enlegId=y/n).
- 40445: Null pointer exception when browsing job logs.
- 40490: Connector thread hang when running the REP11 report.
- 40516: External follows with li=yes are improperly resolve.
- 40521: LongRun: engine memory leak.
- 40563: Follows dep. ignored if schedid specified.
- 40633: Memory leak 2nd part: cpu record, local opts caching.
- 40722: EnLegacyStartofday: nullpointerExcpetion if making a JS submit.
- 40729: EnLegacyID: wrong management of pending preds.
- 40799: Prompts not present in plan with enLegacyId=YES.
- 41129: CVS file not created if activating the traces with WAS tool.
- 41218: EnlegacyID: wrong set of follow deps when submitting a JS.
- 41390: Pbl with ad hoc submit using internetwork dep (36913, 379, 000).
- 41401: TWS 8.4 installation failed with japanese locale on windows.
- 41516: Conman ddj did not prompt any error when follows=SCHED. @.
- 41598: Plugin parser must be forward compatible.
- 41788: Modify the 8.4 PF2 installation to change the LPA token timeout.
- 41985: Ddj is not allowed as ddj xx.xx;follow.
- 42030: Xrxtrct doesn't work PROPERLY.
- 42374: R3evmon memory leaks.
- 42385: TWS batchman went down when ONUNTIL cancel expires.
- 42407: EDWA ReplyPrompt action casesensitive problem.
- 42427: Sbs lost Follows is use sbs "jobstreamname"@;noask.
- 42466: Twscuadmkin Option "-force" ask for input.
- 42509: Upgrade from TWS8.3FP1 to TWS 8.4 on Windows doesn't check Oracle.
- 42533: Negative ss_rec->ss_num_jobs.
- 42567: Cannot create preproduction plan with 45K jobs.
- 42568: FP2 installation doesn't apply fp2 on 8.4FP1(uncommitted).
- 42596: Rollback from fp2 to fp1 remove fp1 line in TWSRegistry.dat.
- 42608: ExecuteCMD.sh not working properly on AIX.
- 42632: EDWA "application server status changed" event not matched.
- 42657: Xref -when did not appears on usage.

- **42777:** The command: "sbd @#...;follows" does not work fine.
- **42779:** The command:"sbj ..;needs ..." does not work fine.
- **42856:** Concurrent use of not synchronized Maps.
- **42866:** If I use group in security file, JSC does not work (no connect).
- **42954:** Java exceptions about TWSconfig.properties.
- **43343:** ITMCreateSituations.cmd and ITM_TWS_84metafile_win.mdl miss.
- **43288:** After applied the TWS Fixpack 02 on TWS AGENT it is showing the.
- **43299:** If monman is down - ssm dir is not substituted on W2k3 .
- **43422:** TwsClusterAdm.exe doesn't contain new -update options.
- **43443:** Unable to get r3batch pick list when output < 1029 bytes.
- **43479:** An error occured from JSC working in the plan.
- **43555:** Rept does not clean up temporary file on Unix.
- **43644:** Shutdown -appsrv does not work (WNT).
- **43657:** WAS crash on a Linux multicore computer during JS sub/JSC Quer.
- **43773:** APR IZ26291 failed reptr-pre|-pro shows incorrect value.
- **43954:** Temp files not deleted after coman deploy.

APARs and Defects Fixed in Tivoli Workload Scheduler Fix Pack 01 for version 8.4.0

This section lists all APARs and internal defects solved by this fix pack. For additional information about documentation APARs and internal defects refer to subsection "Documentation updates" on page 36.

List of APARs fixed:

Code APARs:

- **IY96454:** Database lists - all job definitions: last runtime is not being filled in.
- **porting-IY99785:** Jobmon crash when running job with docommand "4095" length.
- **IZ00999:** Job streams that are for ignored workstations are incorrectly added to the plan.
- **IZ01804:** Follows dependency removed when doing a conman "SBS".
- **IZ01849:** Runcycle with (AT) and/or (UNTIL) are not scheduled correctly in symphony by jnextplan.
- **IZ02719:** The rcondsuc keyword for the centralized scripts leads to error messages AWSBDW057E and AWSBDW005E.
- **porting-IZ02785:** Jobmon corrupts mailbox.msg file on handling xa jobs.
- **IZ03261:** Event 155 in event.log does not match with fmt file.
- **IZ03267:** Tivoli Workload Scheduler truncates \$logname to 8 characters no matter how long \$logname is.
- **IZ03330:** On pa_risc archetecture machines when browsing job stdlist file only the first 2000 lines are returned to the JSC.
- **porting-IZ03693:** A late job event is not generated if a deadline time occurs while an extended agent job is in "WAIT" status.
- **IZ04183:** The master is not recognized as master on "Status of all workstations", if the master domain name is not masterdm.

- **IZ04437:** "CONMAN SC" on master shows "FTI J" without "W" FOR FTA, although "WRITER" is running on master.
- **IZ04808:** Maestro.rls tries to run framework tasks which do not exist.
- **IZ05172:** Until keyword with +days never runs.
- **IZ05403:** Conman not working tws 8.3 with group setting in security file.
- **IZ05957:** Conman showcpu command should order workstations alphabetically.
- **IZ06257:** Unison_sched_id of carried forward job stream holds the original value, if enlegacyid=yes.
- **IZ06575:** Rcondsucc/twsrmap information missing from 8.3 FP 03 recovery jobs.
- **IZ07038:** Access check for scripts defined without full qualified path.
- **IZ08155:** JSC allows to perform not allowed actions on the current distributed plan in e2e environment.
- **IZ08936:** If a job has "recovery rerun", submitting a job stream logs to AWSBHT023E to twsmerge.log.
- **IZ08937:** Tivoli Workload Scheduler 8.3 rep7 -s not working.
- **IZ09083:** Terminology for "exclusive run cycle" on japanese JSC is wrong.
- **IZ09666:** Job priorities are wrongly calculated.
- **IZ10009:** WebSphere Application Server goes down when a job is submitted with the alias.
- **IZ10297:** Adhoc submit job stream containing until dependency after midnight +1 day is incorrectly added to until time.
- **IZ10349:** Wrong date in "last start time" and "scheduled start" is set by jnextplan.
- **IZ10685:** Loggedmessagewritten event does not match MBCS characters.
- **IZ10896:** JSC - Zero values on dependencies columns for job/job streams in the plan.
- **IZ10997:** Conman sbs with alias returns AWSJPL528E.
- **IZ10998:** Conman sbs failed with AWSJPL506E.
- **IZ11553:** R3BATCH does not capture conman error during job submission.
- **IZ11637:** JNEXTPLAN with -FROM -FOR does not work.
- **IZ12125:** Job streams loses the follows dependency in the case of cross plan dependency.
- **IZ12255:** Unixrsh xagent job fails on DBCS environment.
- **IZ12256:** Mailman writing events to monbox.msg when monman is stopped.
- **IZ12322:** Job_stream_deps_v contains no job names for dep_job_name.
- **IZ12504:** Schedule not found error when sap r/3 xa interception collector attempts to put interception job into a non existent job stream.
- **IZ12845:** AWSJPL528E error occurs on "conman sbs" with alias, if it is performed between makeplan and switchplan.
- **IZ13008:** Composer add/replace memory leak.
- **IZ13027:** Tivoli Workload Scheduler 8.3 fix pack installation overwrites the maestrohome jobmanrc.
- **IZ13145:** Conman showcpus getmon.

- **IZ13668:** Rcondsucc condition defined on a recovery job is ignored if job is adhoc submitted using the JSC.
- **IZ13672:** Scheduled time shows the next day.
- **IZ13822:** A schedule with a valid from date is never submitted.
- **IZ13934:** Event 101 120 121 122 in event.log does not match with FMT file.

To apply this fix you must substitute the `maestro.fmt` file on the machine where your Tivoli Enterprise Console® adapter is installed with the one provided in this fix pack. These are the steps to follow:

1. Copy the `TEC\TecAdapter\maestro.fmt` file from the Fix pack 01 to the `tecadhome` directory on the system where the Tivoli Enterprise Console adapter is installed.
2. Generate the CDS file. For example, on Windows use the following command:

```
set tecadhome=C:/Tivoli/Nontmeadapter win_gencds
%tecadhome%\etc\ja\tecad_win.fmt >
%tecadhome%\etc\tecad_win.cds
```

3. Start the logfile adapter

- **IZ14618:** Schedule selected to run for current date has schedule start of next day.
- **IZ14657:** Rep7 -f not working.
- **IZ14746:** After final unison_sched_id of schedules matches the carried forward final's sched_id.
- **IZ15414:** Conman submit with ;follows does not behave as expected.
- **IZ15985:** Submitting stream with ext. Dependencies and alias results in symphony error.
- **IZ16002:** Multiple users browsing joblog at same time, cause WebSphere Application Server hang.
- **IZ07038:** Access check for scripts defined without full qualifier

Documentation APARs:

- **IZ10959:** Every jobs belonging to a cancel job stream.
- **IZ11421:** Necessary to document about explanation of "[P]" flag in "CONMAN SS" output.
- **IZ15598:** If you submit the job/job stream from a workstation other than the master domain manager documentation needs clarification.
- **IZ17386:** The manual does not explain a behavior of jobs if the job stream has a priority of high.

List of defects fixed:

This list contains the defects that fixed some of the limitations reported in the Tivoli Workload Scheduler version 8.4.0 Release Notes®:

- **22485:** Writer does not download the Symphony.
- **22826:** Wrong error message in sbf
- **36588:** TZ not enabled: wrong Schedtime from FTA CLI.
- **38077:** Venezuela : Dst Changes on 9 december 2007
- **38216:** Argentina DST changes 2007 -2008.tzdata2007K
- **38887:** Tec Events displayed in wrong way because of "+++" in event.log changes for events: 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 204 151 152 153 154 155 156 157 158 159 160 161 162 202 203

Additional information

The following product information applies to the Tivoli Workload Scheduler version 8.4.0 fix pack 02. These are not limitations.

- ***enLegacyStartOfDayEvaluation* and *enTimeZone* options set to yes**

If the master domain manager of your network runs with the *enLegacyStartOfDayEvaluation* and *enTimeZone* options set to yes to convert the *startOfDay* time set on the master domain manager to the local time zone set on each workstation across the network, and you submit a job or job stream with the **at** keyword, you must add also the **absolute** keyword to make sure that the submission times are resolved correctly.

The **absolute** keyword specifies that the start date is based on the calendar day rather than on the production day.

- ***enLegacyId* option set to yes**

Note that when a Tivoli Workload Scheduler network includes agents running on versions older than 8.3 managed by a version 8.3 or later master domain manager with the *enLegacyId* option set to yes, having multiple instances of a job stream as pending predecessors produces errors caused by identification problems at submission time.

- **Installing Tivoli Workload Scheduler on Windows 64 bit, domain controller causes "APPLICATION ERROR..." running makesec.exe (APAR IZ17655)**

To avoid this error, run the following procedure:

1. Install Tivoli Workload Scheduler version 8.4
2. Under `windows\cli` of the fix pack, launch the following command:
`swd_env.cmd`
3. To install Tivoli Workload Scheduler version 8.4 Fix Pack 02 launch the following commands:

```
wdinstsp -f -uy -D tws_user="luigi840"  
-D install_dir="c:\win32app\TWS\luigi840"  
-D ft_agent="true" -D master="false"  
-D bkm_agent="false" -D execActionTools="false"  
-D domain="ANTDOM" -D dbcs="false" -n "FP_TWS_WINDOWS_luigi840.8.4.0.02"  
"C:\840fp2\WINDOWS\FP_TWS_WINDOWS.SPB"
```

and

```
wdinstsp -f -uy -D install_dir="c:\win32app\TWS\luigi840"  
-D tws_user="luigi840" -D ALL_LANG="true"  
-n "TWS_LP_luigi840.8.4.0.02" "C:\840fp2\Tivoli_TWS_LP.SPB"
```

where `luigi840` is the username of your installation and `ANTDOM` is the domain of your installation.

4. Under Tivoli Workload Scheduler version 8.4 installation run
`-resume -put`

on ready steps 2.3.4.5 (configure, start, commit, remove).

5. Run all.

- **On Windows 2003, running an upgrade from Tivoli Workload Scheduler 8.2.1 to Tivoli Workload Scheduler 8.4 does not update the system registry (APAR IZ05159)**

To upgrade Cluster Pack to version 8.4 Fix Pack 02 or later follow these steps:

1. Install Tivoli Workload Scheduler version 8.4 Fix Pack 02 or later
2. Upgrade Cluster Pack from version 8.x to version 8.4, and run the following command:

```
<TWS_HOME>\cluster\twsClusterAdm.exe
-update resource=<TWS instance resource name> -twsupd
```

- **Duplicated Job Streams are submitted during migration (APAR IZ16601)**

Job streams defined as "at + n days" keyword are included in the plan twice if they are migrated from a Tivoli Workload Scheduler V8.1 (or V8.2 or V8.2.1) master to a Tivoli Workload Scheduler V8.3 (or V8.4) master. The first job stream is carried forward when you migrate from V8.1 (or V8.2 or V8.2.1), and the second one is created when you run **JnextPlan** on a master version V8.3 (or V8.4).

The problem occurs because in Tivoli Workload Scheduler version 8.1 (or 8.2 or 8.2.1) job stream defined with the "at +n days" keyword are included in the current plan and carried forward until the day scheduled to run the job arrives, while in Tivoli Workload Scheduler V8.3 (or V8.4) the actual scheduled start date is calculated by considering both the "On" keyword and also the "at" keyword. So in version 8.3 the job stream defined with the "at + n days" keyword are not included in the current plan, but they are included in the plan of the day when the job stream is scheduled to run.

Workaround:

To avoid this problem, after migrating from old releases to this fix pack, run the following commands:

1. Ensure that the CarryForward option is set to ALL, by running the following command:

```
optman chg cf=ALL
```

2. Run

```
JnextPlan -from start_date -for 0000 -noPrevDays
```

where Start_date is the date and time when the current plan ends. For example:

```
JnextPlan -from 03/06/2008 0600 -for 0000 -noPrevDays
```

3. Reset the CarryForward option to the value you assigned before running Step 1.

- **DB2 procedure after DB2 8.1 Fix Pack 9 installation**

This feature of Tivoli Workload Scheduler automatically runs database statistics on pre-production tables at appropriate points of the procedure that creates the production plan. This causes significant performance improvements for large databases.

If you installed Tivoli Workload Scheduler version 8.3 and you are currently using DB2 8.1 fix pack 7 (also known as 8.2), you might want to upgrade to the DB2 fix pack level that is delivered with the fresh installation of Tivoli Workload Scheduler version 8.3 Fix Pack 01. If you decide to upgrade you will enable a Tivoli Workload Scheduler feature that speeds up **JnextPlan**.

To enable this feature, after upgrading DB2 to 8.1 Fix Pack 9 or higher, the Tivoli Workload Scheduler database must be upgraded performing the following steps:

On Windows operating systems:

1. Log on to the DB2 server using the DB2 administrative user (for example, db2admin)
2. Open a DB2 CLP: **Start > Programs > IBM DB2 > Command Line Tools > Command Line Processor**
3. Connect to the Tivoli Workload Scheduler database using the following command:

```
connect to TWS
```

where TWS is the name of the database.

4. Run the following command:

```
call sysinstallroutines()
```

On UNIX operating systems:

1. Log on to the DB2 server using the DB2 administrative user (for example, db2inst1), or switch user as follows:

```
su - db2inst1
```

2. Launch the DB2 Command Line Processor using the following command:

```
db2
```

3. Connect to the Tivoli Workload Schedule database using the following command:

```
connect to TWS
```

where TWS is the name of the database.

4. Run the following command:

```
call sysinstallroutines()
```

New stored procedures are created within the existing Tivoli Workload Schedule database, and the database is upgraded to the new DB2 level.

If DB2 is not upgraded or if it is upgraded but the procedure described is not performed, you do not lose any Tivoli Workload Schedule functions but do not benefit from the performance improvements that use new DB2 features when running **JnextPlan**.

Known limitations and workarounds

The following are software limitations and workarounds that affect Tivoli Workload Scheduler version 8.4.0 Fix Pack 02, they include the known limitations listed in the Release Notes for version 8.4.0 and Tivoli Workload Scheduler version 8.4.0 Fix Pack 01, if not fixed by this fix pack:

General known limitations and workarounds:

Time zones not resolving correctly with enLegacyStartOfDayEvaluation set (41192)

You are using Tivoli Workload Scheduler with the enLegacyStartOfDayEvaluation and enTimeZone options set to *yes* to convert the startOfDay time set on the master domain manager to the local time zone set on each workstation across the network. You submit a job or a job stream with the **at** keyword, but the job or a job stream does not start when expected.

Workaround

Add the **absolute** keyword to make sure that the submission times are resolved correctly. The **absolute** keyword specifies that the start date is based on the calendar day rather than on the production day.

After fix pack installation a directory _ssm exists on W2k3 (43402)

After applying successfully the Tivoli Workload Scheduler 8.4 Fix Pack 02, a directory _ssm is present under tws_home directory on Windows 2003.

The Tivoli Workload Scheduler 8.4 Fix Pack 02 installation was unable to remove the old copy of ssm agent, before copying the new one, for one of the following reasons:

- Some ssm binaries are locked by external application (non-Tivoli Workload Scheduler)

- The ssm agent Windows service was not started by **monman** process, and therefore it was not stopped by **monman** during the fix pack installation, before patching the ssm agent

In the fix pack installation log, a warning message is logged for this problem.**Workaround:**

The directory `twshome\ssm` contains the new version of ssm agent installed from Tivoli Workload Scheduler 8.4 Fix Pack 02. To correctly install it, unlock the ssm binaries contained in the `twshome\ssm` directory (manually stopping ssm agent Windows service or killing the applications that lock the binaries), remove the content of the `twshome\ssm` directory replacing it with the content of the `twshome_ssm` directory.

If you have replaced the content of `twshome\ssm` with the content of `twshome_ssm`, then the directory `twshome_ssm` can be removed.

How to avoid the problem before applying the Tivoli Workload Scheduler 8.4 Fix Pack 02:

- Check that ssm binaries are not locked by external non-Tivoli Workload Scheduler applications.
- Start and stop ssm agent using exclusively **monman** start and stop commands. Do not use the Windows Services console to start and stop the ssm agent service manually.

Install fails when DB2 administrator password contains an exclamation point (!) (41322)

If you try to install a master domain manager when the DB2 administrator password contains an exclamation point (!), the installation fails.

Workaround

You can use the following workaround if you obtain the latest fix pack for version 8.4:

1. Copy the Tivoli Workload Scheduler version 8.4 CD image to disk
2. Make the Tivoli Workload Scheduler, version 8.4 Fix Pack 02 (or higher) CD image available to the system
3. Copy the following files from the `<TWS_FIX_PACK_IMAGES_CD_4>/GA_fixes` directory to the `<TWS_GA_IMAGES_CD_X>/<platform>/twstools` directory:
 - `_checkdbclient.sh(bat)`
 - `dbmigrate.sh(bat)`
 - `dbquery.sh(bat)`
 - `dbsetup.sh(bat)`
 - `dbupgrade.sh(bat)`
4. Install the product by running the `SETUP.bin(exe)` from the `<TWS_GA_IMAGES_CD_X>/<platform>` directory

Deploy (D) flag not set after ResetPlan command used (36924 and 37851)

The deploy (D) flag is not set on workstations after the **ResetPlan** command is used.

This is not a problem that affects the processing of events but just the visualization of the flag which indicates that the event configuration file has been received at the workstation.

You can choose to do nothing, because the situation will be normalized the next time that the event processor sends an event configuration file to the workstation.**Workaround:**

Alternatively, if you want to take a positive action to resolve the problem, do the following:

- Create a dummy event rule that applies only to the affected workstations
- Perform a **planman deploy** to send the configuration file
- Monitor the receipt of the file on the agent
- When it is received, delete the dummy rule at the event processor

Completed job or job stream not found (38998)

A job or job stream that uses an alias has completed but when you define a query or report to include it, the job or job stream is not included.

Cause and solution

Jobs and job streams in *final* status are stored in the archive with their *original* names, not their aliases, so any search or reporting of completed jobs must ignore the aliases.

Missing or empty event monitoring configuration file (38265 and 38253)

You have received a MONMAN trace message on a workstation, similar to this:

```
MONMAN:INFO:=== DEPLOY ==> ERROR reading the zip file
                /home/f_edwa3/monconf/deployconf.zip.
                It is empty or does not exist".
```

The Tivoli Workload Scheduler agent on a workstation monitors for events using a configuration file. This file is created on the event processor, compressed, and sent to the agent. If a **switcheventprocessor** action is performed between the creation of the file on the old event processor and the receipt on the new event processor of the request for download from the agent, the file is not found on the new event processor, and this message is issued. **Workaround:**

To resolve the problem, do the following:

- Create a dummy event rule that applies only to the affected workstation
- Perform a **planman deploy** to send the configuration file
- Monitor the receipt of the file on the agent
- When it is received, delete the dummy rule at the event processor

Some data not migrated when you migrate database from DB2 to Oracle, or vice versa (38017)

Neither of the two migration procedures migrate the following information from the source database:

- The pre-production plan
- The history of job runs and job statistics
- The state of running event rule instances. This means that any complex event rules, where part of the rule has been satisfied prior to the database migration, are generated after the migration as new rules. Even if the subsequent conditions of the event rule are satisfied, the record that the first part of the rule was satisfied is no longer available, so the rule will never be completely satisfied.

Incorrect time-related status displayed when time zone not enabled

You are using Tivoli Workload Scheduler in an environment where nodes are in different time zones, but the time zone feature is not enabled. The time-related status of a job (for example, "Late") is not reported correctly on workstations other than that where the job is being run.

Cause and solution:

Enable the time zone feature to resolve this problem. See *Reference Guide* to learn more about the time zone feature. See *Administration Guide* for instructions about how to enable it in the global options file.

Event *LogMessageWritten* is not triggered (33723)

You are monitoring a log file for a specific log message, using the *LogMessageWritten* event. The message is written to the file but the event is not triggered.

Cause and solution

The ssm agent monitors the log file. It sends an event when a new message is written to the log file that matches the string in the event rule. However, there is a limitation. It cannot detect the very latest message to be written to the file, but only messages prior to the latest. Thus, when message line "n" is written containing the string that the event rule is configured to search for, the agent does not detect that a message has been written, because the message is the last one in the file. When any other message line is written, whether or not it contains the monitored string, the agent is now able to read the message line containing the string it is monitoring, and sends an event for it.

There is no workaround to resolve this problem. However, it should be noted that in a typical log file, messages are being written by one or other processes frequently, perhaps every few seconds, and the writing of a subsequent message line will trigger the event in question. If you have log files where few messages are written, you might want to attempt to write a dummy blank message after every message, in order to ensure that the message is never the last in the file for any length of time.

Known limitations and workarounds about installation:

- Tivoli Workload Scheduler version 8.4.0 installation fails on Windows if the installation path contains parenthesis. (37101)
- On Windows 2003 64bit Fault-Tolerant Agent the distributed connector installation fails on the "Configure the Tivoli Workload Scheduler property files" step because the command run by the system is not enclosed in double quotes. (38305)
- If you start the launchpad from the CDR00T directory, the CD drive is locked (Tivoli Workload Scheduler installation path). (37122)

Workaround: To avoid locking the CD drive start the launchpad in the background as follows:

```
./!launchpad.sh&
```

If the CD drive is locked and during the installation you are asked to insert a new CD to continue with the installation, simply close the launchpad to unlock the drive and proceed with the interactive installation.

- No password validation is performed in the interactive InstallShield wizard on UNIX[®] and Linux[®] platforms at data input. If you have made an error in the password, it will only be discovered when the installation wizard attempts to use the password during the performance of an installation step.

Workaround: To resume the installation, locate every step that includes the indicated password (Chapter 11, *Troubleshooting installation, migration, and uninstallation of Tivoli Workload Scheduler: Administration and*

Troubleshooting helps you do this) and change it to the correct value. Then resume the wizard at the first step that failed. Otherwise, rerun the installation, using the correct value for the password.

- During the interactive installation, UNIX users are required to supply the *TWS_user* password, even though the user already exists on UNIX. (20512)
- Two installations cannot coexist on the same workstation if they have the same *TWS_user* name

Workaround: Install two instances of a Tivoli Workload Scheduler with different *TWS_user* names.

- After uninstalling an instance of Tivoli Workload Scheduler on Windows, the reinstall fails if you use the same path. (39190)

You have uninstalled Tivoli Workload Scheduler on Windows, but if you try and reinstall the instance in the same path, the reinstall fails because the ssm agent, which is part of Tivoli Workload Scheduler, has locked some of its libraries, even though it has been stopped.

When the ssm agent is stopped as part of the uninstall, a child process could remain active, locking the ssm agent libraries. When you try and reinstall in the same location, the installation of the ssm agent fails, while trying to overwrite the libraries, because they are locked.

Workaround: The workaround is to reinstall on another path. Alternatively, either use an unlocking utility to unlock the files or reboot the system. Then reinstall in the required path.

- Installing Tivoli Workload Scheduler on Windows 2003 64bit domain controller causes "application error..." running makesec.exe (IZ176551)

Workaround: Follow these steps when installing:

1. Install Tivoli Workload Scheduler version 8.4.0.
2. Access the Tivoli Workload Scheduler version 8.4.0 Fix Pack 01 CD.
3. Move to directory windows\cli and launch **swd_env.cmd**.
4. Install Fix Pack 01 by launching:

```
wdinstsp -f -uy -D tws_user="TWSUser"  
-D install_dir="c:\win32app\TWS\TWSUser"  
-D ft_agent="true" -D master="false" -D bkm_agent="false"  
-D execActionTools="false" -D domain="my_domain"  
-D ducs="false"  
-n "FP_TWS_WINDOWS_TWSUser.8.4.0.01"  
"C:\840fp1\WINDOWS\FP_TWS_WINDOWS.SPB"
```

and then:

```
wdinstsp -f -uy -D install_dir="c:\win32app\TWS\TWSUser"  
-D tws_user="TWSUser" -D ALL_LANG="true"  
-n "TWS_LP_TWSUser.8.4.0.01"  
"C:\840fp1\Tivoli_TWS_LP.SPB"
```

where:

TWSUser

Is the user who runs the installation.

my_domain

Is the domain of the installation.

5. Return to the Tivoli Workload Scheduler version 8.4.0 installation and run **resume**.
6. Put on ready steps 2.3.4.5 (configure, start, commit, remove).

7. Run all.

Known limitations and workarounds at run time:

- Planman showinfo displays inconsistent times. (IZ05400)

The plan time displayed by the planman showinfo command might not match with the time set in the operating system of the workstation. For example, the time zone set for the workstation is GMT+2 but planman showinfo displays plan times according to the GMT+1 time zone.

This situation occurs when the WebSphere® Application Server Java™ virtual machine does not recognize the time zone set on the operating system.

Workaround: Set the time zone defined in the server.xml file equal to the time zone defined for the workstation in the Tivoli Workload Scheduler database. Proceed as follows:

1. Stop WebSphere Application Server.
2. Create a backup copy of this file:
`appserver/profiles/twsprofile/config/cells/DefaultNode/nodes/DefaultNode/servers/server1`
3. Open server1.xml with an editor.
4. Find the **genericJvmArguments** string and add:
`genericJvmArguments="-Duser.timezone=time zone"`

where time zone is the time zone defined for the workstation in the Tivoli Workload Scheduler database.

5. Restart WebSphere Application Server.
- Websphere Application Server limitations in a pure IPv6 environment when using the Job Scheduling Console or the Tivoli Dynamic Workload Console. (35681)

When you install Tivoli Workload Scheduler, the WebSphere Application Server variables are initialized as follows to allow communication in a mixed IPv4-IPv6 environment:

```
java.net.preferIPv6Addresses=false  
java.net.preferIPv4Stack=false
```

If your configuration requires the use of a pure IPv6 environment or you have specific firewall configuration settings that block IPv4 packets, the connection between the Tivoli Workload Scheduler master domain manager and the Dynamic Workload console or the Job Scheduling Console fails.

Workaround: To establish a connection in IPv6 environment, you must initialize the variable as follows:

```
java.net.preferIPv6Addresses=true
```

by editing the server.xml file in the following path:

```
$TWS_HOME/appserver/profiles/twsprofile/config/cells/DefaultNode/nodes/DefaultNode/servers/server
```

If, instead, you want to use IPv4 communication exclusively, set:

```
java.net.preferIPv4Stack=true
```

- If you use the Microsoft® Remote Desktop Connection to operate Tivoli Workload Scheduler, you must use it always with the **/console** parameter, otherwise Tivoli Workload Scheduler gives inconsistent results. (37869)

- Websphere Application Server Limitations for LDAP users.
When you share the same LDAP user registry between Tivoli Dynamic Workload Console version 8.4 and Tivoli Workload Scheduler version 8.4, or between two engines, if you do not want use the Single Sign-On (SSO) method, you must use different notations when specifying the LDAP host name (for example the short host name and the fully qualified host name, or the IP address and the host name, and so on). Otherwise, if you use the same notation, the SSO is automatically enabled.
- Different behavior of UNIX and Windows operating systems at springtime daylight savings. (94279)

For example:

On Windows operating systems:

The command:
conman submit job at=02xx

is set to 01xx.

On HP-UX operating systems:

The command:
conman submit job at=02xx

is set to 03xx.

Workaround: Avoid creating jobs that have a start time in the "lost" hour and are due to run on the night of the daylight savings change (a Saturday night in spring).

- Using NetView®, a spurious error might be given for each command issued. (159849)

Using NetView, the following error might be written to the stdlist every time you issue a command using the command-line interface.

```
AWSBDC001E Error in map_set_links_status,
           calling 0VwSetStatusOnObjects, >
           for, error: Object not on map
```

The issued command in each case is not impacted by the message or the circumstances that caused it.

Workaround: None. Ignore the message - it has no impact on the functioning of the product.

- Integration with Tivoli Monitoring: Support for limited number of events.

Due to a limitation found in the Tivoli Universal Agent component of Tivoli Monitoring version 6.1.05, only the following Tivoli Workload Scheduler events can be processed by Tivoli Monitoring:

- Job events:

Table 1. Job events

Event Number	Event Class
101	TWS_Job_Abend
102	TWS_Job_Failed
103	TWS_Job_Launched
104	TWS_Job_Done

Table 1. Job events (continued)

Event Number	Event Class
105	TWS_Job_Suspended
106	TWS_Job_Submitted
107	TWS_Job_Cancel
108	TWS_Job_Ready
109	TWS_Job_Hold
110	TWS_Job_Restart

– Job stream events

Table 2. Job stream events

Event Number	Event Class
151	TWS_Schedule_Abend
152	TWS_Schedule_Stuck
153	TWS_Schedule_Started
154	TWS_Schedule_Done
155	TWS_Schedule_Susp
156	TWS_Schedule_Submit
157	TWS_Schedule_Cancel
158	TWS_Schedule_Ready
159	TWS_Schedule_Hold
160	TWS_Schedule_Extern

Note: Defect 42393 was opened to Tivoli Monitoring will address the limitation.

- File monitor provider events: older event configurations may stay active on workstations after rule redeployment. (34103)

If you deployed rules containing event types from the FileMonitor event provider, and then you redeploy rules that no longer include these file monitoring events, you might find that, despite the new configurations, the local monitoring agents still forward the file monitoring events to the event processor. The event processor rightly ignores these events, accordingly with the new configuration specifications deployed on the server; however, a certain amount of CPU time and bandwidth are misused.

The status of the local monitoring configuration on the agent will be corrected when one of the following occurs:

- The **planman deploy -scratch** command is issued.
- The event processing server is restarted.
- Another rule containing an event condition involving the FileMonitor provider is deployed to the agents.
- Event rule management: Deploy flag is not maintained in renewed symphony. (36924)

The deploy flag (D) indicates that a workstation is using an up-to-date package monitoring configuration and can be displayed by running the **conman showcpus** command. Testing has revealed that the flag is lost

from the symphony file when the file is renewed after a **JnextPlan** or **ResetPlan** command. Although the event monitoring configuration deployed to the agents is the latest one, and event management works properly, an incorrect monitoring agent status is shown on the workstations.

- Slow performance when deploying a large amount of rules. (37011)
The rule deployment process (run either automatically or with the **planman** deploy command) was found to perform somewhat slowly when you deploy high numbers of new and changed rules (2000 and more).
To deploy large numbers of rules collectively in an acceptable time limit, use **planman** deploy with the **-scratch** option.
- Tivoli Workload Scheduler engine CPU at 100% (37105)
When you run from the Tivoli Dynamic Workload Console a Production Plan report on a master domain manager installed on a Windows operating system, you might experience an heavy load on the CPU of the master domain manager with 100% load. In fact, running a Production Plan report is an high intensive CPU operation because it requires intensive I/O operation and CPU usage. This means that during this processing time frame, you might notice a performance slow down on the system but nevertheless the system continues to process operations.

Internationalization notes

The following are software limitations and workarounds that affect the international versions of Tivoli Workload Scheduler version 8.4.0 Fix Pack 02, they include the known limitations listed in the Release Notes for version 8.4.0, and in the Tivoli Workload Scheduler version 8.4.0 Fix Pack 01 if not fixed by this fix pack:

- If you run, on a machine not set to use English, the **optman show tz** command to see the description of the *Enable Time Zones* option (**enTimeZone**), the indicated default value of "no" is incorrect. The correct value is "yes" (40614).
- Tivoli Workload Scheduler components installed with DBCS characters in path cannot be uninstalled

If you install a Tivoli Workload Scheduler component with a DBCS character in the installation path, the uninstall of the component fails.

Workaround:

None.

- The **twsClusterAdm.exe** program produces garbled messages in a Japanese environment (IZ08648)
If you have implemented the support for the Microsoft Cluster Service On Windows 2003 Server in a Japanese environment, the messages produced by the **twsClusterAdm.exe** program are garbled.

This is because the messages are being written in UTF-8 and not the local code page.

Workaround: Set the **TISDIR** environment variable to the *TWSHOME* directory.

- The InstallShield wizard installation fails if DBCS characters are used in the **-is:tempdir** path. (36979)

If you are installing using the **-is:tempdir** option and you specify DBCS characters in the path, the installation fails.

Workaround: Do not specify DBCS characters when using this option.

- In the output of the composer list and display commands the list and report headers are in English (22301, 22621, 22654).
This has been done to avoid a misalignment of the column headers in DBCS versions that was making it difficult to understand the information.
- In the output of the product reports, the report headers are in English.
This has been done to avoid a misalignment of the column headers in DBCS versions that was making it difficult to understand the information.
- Data input is shorter in DBCS languages (IY82553, 93843).
All information is stored and passed between modules as UTF8, and some characters occupy more than one byte in UTF8. For DBCS languages, each character is three bytes long. Western European national characters are two bytes long. Other Western European characters are one byte long.
- On Windows operating systems, you cannot create a calendar with a name containing Japanese characters using the **makecal** command. (123653)
Workaround: Enclose the calendar name in double quotes.
- On Windows operating systems, the Tivoli Workload Scheduler joblog is created with incorrect characters (IY81171).
You are working in a non-English language environment and you have correctly set the LANG and TWS_TISDIR environment variables. However, the Tivoli Workload Scheduler joblog is created with incorrect characters in the body of the log (the headers and footers of the log are correct).
Workaround: The problem is caused by the codepage in use. Windows editors and applications use codepage 1252 which is correct for writing text files. However, the DOS shell uses the default codepage 850. This can cause some problems while displaying particular characters.
To resolve this problem for Tivoli Workload Scheduler jobs, add the following line to the beginning of the file `jobmanrc.cmd` on the workstation:

```
chcp 1252
```


For further details about the `jobmanrc.cmd` file, see the section on customizing job processing on a workstation in the *Tivoli Workload Scheduler: Reference Manual*.
It is possible to resolve this problem for all applications on the workstation, by using **regedit** to set the DOS codepage globally in the following registry keyword:

```
HKEY_LOCAL_MACHINE/system/current Control set/  
Control/Nls/Codepage/OEMCP =1252
```


You will need to reboot the workstation to implement the change.
Note: Microsoft warns you to take particular precautions when changing registry entries. Ensure you follow all instructions in Microsoft documentation when performing this activity.
- If the command line interface install path contains national characters, you need to open and save on that system the `tws_env.cmd` file before using it to set up the environment (38891).
This limitation applies only Windows operating systems.
- Cannot link FTA if 'cpuname' contains DBCS chars on Simplified Chinese Windows Server 2003 (38880).
- `tws_env.cmd` script does not work on Remote CLI on Simplified Chinese Windows Server 2003 (38867).

Fix pack structure

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

It is divided into the following topics:

- “Fix pack structure in the installation CDs”
- “Fix pack files available via FTP” on page 27

Fix pack structure in the installation CDs

Table 3 lists the CDs contained in this fix packs and the operating systems they relate to:

Table 3. List of fix pack CDs

CD	Operating System
CD_1	AIX®
CD_2	HP-UX on PA-RISC
CD_3	Solaris SPARC
CD_4	Microsoft Windows
CD_5	Linux on x86
CD_6	Linux on POWER™
CD_7	Linux on System z9™™ and zSeries®®
CD_8	Solaris x64
CD_9	HP-UX on Itanium®
CD_10	Linux on x86-64
CD_11	Microsoft Windows x64

The structure of the image contained in the CD for UNIX operating systems is the following:

```
+---UNIX_Operating_System
|
|   +---CLI
|   |
|   +---bin
|   |
|   +---codeset
|   |
|   +---ACTIONTOOLS
|   |
|   +---WCONVCAT
|   |
|   +---tws_tools
|   |
|   +---catalog
|   |
|       FP_TWS_UNIX_Operating_System.SPB
|       SETUP.bin
|       twspatch
|
+---API
|
|   +---doc
|   |
|   |   +---Wsd1
|   |   |
|   |   +---Javadoc
|   |
+---TWS4ITM
```



```

|
+---License
|
+---RESPONSEFILES
|   patchInstall.txt
|
+---DOC
|   8.4.0-TIV-TWS-FP0002.pdf
|
|   remCliL10n.zip
|   Tivoli_TWS_LP.SPB
|   README.U820098
|   8.4.0-TIV-TWS-FP0002.VSR

```

The structure of the image contained in the CD for Windows operating systems is the following:

```

+---Windows_Operating_System
|   +---CLI
|   |
|   +---bin
|   |
|   +---ACTIONTOOLS
|   |
|   +---WCONVCAT
|   |
|   +---tws_tools
|   |
|   +---catalog
|   |
|   +---VISTA
|   |
|   |   FP_TWS_Windows_Operating_System.SPB
|   |   SETUP.exe
|
+---API
|   +---doc
|   |   +---Wsd1
|   |   |
|   |   +---Javadoc
|
+---TWS4ITM
|
+---License
|
+---RESPONSEFILES
|   patchInstall.txt
|
+---DOC
|   8.4.0-TIV-TWS-FP0002.pdf
|
|   remCliL10n.zip
|   Tivoli_TWS_LP.SPB
|   README.U820098
|   8.4.0-TIV-TWS-FP0002.VSR

```

Fix pack files available via FTP

This is the structure of the fix pack available via FTP:

```

+---8.4.0-TIV-TWS-FP0002.README (this file)
|
+---8.4.0-TIV-TWS-FP0002.VSR
|
+---AIX
|   8.4.0-TIV-TWS-FP0002.TAR

```

```

+---HPUX
|      8.4.0-TIV-TWS-FP0002.TAR
+---HPIA64
|      8.4.0-TIV-TWS-FP0002.TAR
+---LINUX_I386
|      8.4.0-TIV-TWS-FP0002.TAR
+---LINUX_PPC
|      8.4.0-TIV-TWS-FP0002.TAR
+---LINUX_S390
|      8.4.0-TIV-TWS-FP0002.TAR
+---LINUX_X64
|      8.4.0-TIV-TWS-FP0002.TAR
+---SOLARIS
|      8.4.0-TIV-TWS-FP0002.TAR
+---SOLARIS_I386
|      8.4.0-TIV-TWS-FP0002.TAR
+---WINDOWS
|      8.4.0-TIV-TWS-FP0002.zip
+---WINDOWS_64
|      8.4.0-TIV-TWS-FP0002.zip

```

Installing the fix pack

This section describes how to upgrade Tivoli Workload Scheduler version 8.4.0 to Fix Pack 02. Fix packs are cumulative, so you can apply them directly to the general availability version of the product.

The section is divided into the following subsections:

- “Installation notes”
- “Interoperability table” on page 30
- “Disk space requirements” on page 30
- “Fix pack installation steps” on page 31
- “Installation methods” on page 31
- “Installing using the ISMP wizard” on page 32
- “Installing using the ISMP silent installation” on page 33
- “Installing on UNIX - using the twspatch script” on page 34
- “Installing using Software Distribution” on page 34
- “Uninstalling the fix pack” on page 35
- “Installation log files” on page 35

Installation notes

When installing, follow these recommendations:

- Use the same installation method (ISMP, **twspatch**, CM) to install, undo, commit the fix pack.

Note: If you want to APPLY the fix pack using **twspatch**, the uninstall of the fix pack must be performed using the command **twspatch -remove**. (38158)

- Do not install from a Samba disk on the Windows platform.

- On HP-UX set the kernel parameter *max_thread_proc* to, at least, 128 otherwise the installation can fail. By default it is 64. A core dump is generated by Java.

After the fix pack installation completes take into account the following information:

- After installing the fix pack the last line of the *TWShome/version/patch.info* file will contain: 8.4.0-TIV-TWS-FP0002.

- During this fix pack installation the following file:

TWShome/appserver/profiles/twsprofile/temp/TWS/EIFListener/eif.temp1

is removed and a new one is created when the WebSphere Application Server is restarted.

If you previously modified the property *BuffEvtmaxSize*, after having installed the fix pack you have to set it again in the new file as it is described in the *IBM Tivoli Workload Scheduler Administrator's Guide, Chapter 2, Managing the event processor*. (38192)

- Only if the following conditions are satisfied:
 - the database used by Tivoli Workload Scheduler is DB2.
 - the **dbgrant** script had already been run before installing this fix pack
 you need to run again the **dbgrant** script after the fix pack installation to grant permissions to users on the updated database views. (38487)
- On systems running on Red Hat Enterprise Linux 3.0 install GLIBC version 2.3.4 to enable the ssm Agent (used in Event-driven workload automation rules with FileMonitor plug-in-related events) to start properly. With the default GLIBC version 2.3.2, the ssm Agent might not start. (38697)

Before running a repair of the fix pack installation make sure that:

- The following processes are inactive:

On Windows operating systems:

netman
monman
ssmagent
tokensrv
writer
batchman
batchup
JOBMAN
JOBMON
scribner

On UNIX operating systems:

netman
monman
ssmagent
tokensrv
writer
batchman
batchup
JOBMAN
scribner

- The following files are available and not corrupted (40042):

On Windows under *TWS_home\bin*:

conman
setown.cmd
setown.exe
oslayer.dll
icudt*.dll

HTTPChannel.dll
 HTTPSSLChannel.dll
 HTTPTransport.dll
 libatrc.dll
 msv*.dll

On UNIX under *TWS_home/bin*:

conman
 libatrc.so
 libicu*.so
 libHTTP*.soinstmecho
 mecho

Interoperability table

The following tables show what associations are possible among component versions for:

- Tivoli Workload Scheduler
- Tivoli Workload Scheduler Job Scheduling Console
- Tivoli Workload Scheduler for Applications
- Tivoli Dynamic Workload Console

Table 4 shows which versions of Tivoli Workload Scheduler, Tivoli Workload Scheduler Job Scheduling Console, Dynamic Workload Console, and Tivoli Workload Scheduler for Applications can work together:

Table 4. Interoperability table for Tivoli Workload Scheduler

Tivoli Workload Scheduler	Tivoli Workload Scheduler Job Scheduling Console	Distributed connector	Tivoli Workload Scheduler for Applications	Tivoli Dynamic Workload Console
8.4.0.xx	8.3.0.xx and 8.4.0.xx	8.3.0.02 and later	8.3.0.xx, 8.4.0.xx	8.4.0.xx

Note: Tivoli Workload Scheduler 8.4.0.xx cannot work together Tivoli Dynamic Workload Console 8.3.0.xx.

Disk space requirements

Before starting the fix pack installation in undoable mode, make sure your system met the following requirements:

Table 5. Disk space requirements

Operating System	Unix root Filesystem	Local temp directory	TWSuser home directory
AIX	160 MB	400 MB	400 MB
HP-UX	160 MB	400 MB	400 MB
Solaris	160 MB	400 MB	400 MB
Microsoft Windows	N.A.	400 MB	400 MB
Linux	160 MB	400 MB	400 MB

Note: On HP and Solaris operating systems the 400[®] MB required in the temporary directory are divided as follows:

- 250 MB available under /var/tmp

- 150 MB available under `$TMPDIR`. If the variable `$TMPDIR` is not defined, the default directory `/tmp`.

Fix pack installation steps

The installer runs these steps when you are doing an APPLY:

1. Stop the embedded version of WebSphere Application Server, version 6.1.
2. Back up the profile for the embedded version of WebSphere Application Server, version 6.1.
3. Install the Tivoli Workload Scheduler modelling and planning server, version 8.4 for master domain manager or backup master domain manager.
4. Install the Tivoli Workload Scheduler connector, version 8.4 for a Connector.
5. Update the profile for the embedded version of WebSphere Application Server, version 6.1.
6. Configure the Tivoli Workload Scheduler property files.
7. Install with rollback Tivoli Workload Scheduler scheduling engine.
8. Install with rollback Tivoli Workload Scheduler scheduling engine National Language Support.
9. Customize the SQL scripts used to configure the Tivoli Workload Scheduler database.
10. Configure the Tivoli Workload Scheduler database.
11. Start the embedded version of WebSphere Application Server, version 6.1.
12. Create uninstaller.
13. Configure the Tivoli Workload Scheduler instance.
14. Start the Tivoli Workload Scheduler instance.
15. Commit the Tivoli Workload Scheduler instance.
16. Install the Tivoli Workload Scheduler command line client.
17. Install the language pack for the Tivoli Workload Scheduler command line client.

The installer runs these steps when you are doing an UNDO:

1. Stop the Tivoli Workload Scheduler instance.
2. Stop the embedded version of WebSphere Application Server, version 6.1.
3. Undo Tivoli Workload Scheduler scheduling engine National Language Support.
4. Undo Tivoli Workload Scheduler scheduling engine.
5. Restore the profile for the embedded version of WebSphere Application Server, version 6.1 for Conn.
6. Restore the profile for the embedded version of WebSphere Application Server, version 6.1 for master domain manager or backup master domain manager.
7. Start the Tivoli Workload Scheduler instance.
8. Start the embedded version of WebSphere Application Server, version 6.1.

Installation methods

When you install the fix pack you can perform one of the following actions:

Apply Use this action to install the fix pack without making it permanent. If you apply the fix pack in "undoable" mode you can use the roll back action to return to the previous fix pack.

Commit

Use this action to make the fix pack permanent. If you commit the fix pack you cannot roll it back.

Roll back

Use this action to roll back to the previous level.

Repair

Use this action (only after **Commit** action) to restore an existing Tivoli Workload Scheduler instance to the current committed level when a problem arises with a binary files.

Depending on the fix pack installation state, you can perform the action as shown in the table.

Initial state	Action	Final State	Final State GA Pack
-	apply	IU	ICH
IU	commit	IC	-
IU	roll back	-	IC
IC	repair	IC	-

where:

- IU** Installed undoable
- IC** Installed and committed
- ICH** Installed, committed, and hidden

If you have a Tivoli Workload Scheduler fix pack installed in "undoable mode" (IU state) on your machine and you are applying a more recent Tivoli Workload Scheduler fix pack on it, all the changes that you have made when installing the previous Tivoli Workload Scheduler fix pack will be committed before applying the newer ones. Therefore, if you undo the fix pack you last installed, you will restore the previous fix pack changes. These changes are permanent.

The fix pack installation is recorded in the TWSRegistry.dat file adding the following lines:

```
/Tivoli/Workload_Scheduler/ tws_user_DN_FixpackName=  
FP_TWS_$(SWD-OS-NAME)_$(tws_user).8.4.0.$(patch_id)
```

where:

- \$(SWD-OS-NAME) depends on the platform where you are installing.
- \$(tws_user) is the Tivoli Workload Scheduler instance owner.
- \$(patch_id) is the fix pack number.

Installing using the ISMP wizard

Follow these steps to install the fix pack using the wizard:

1. Unlink the host on which you are installing the patch from the IBM Tivoli Workload Scheduler network and shut down Tivoli Workload Scheduler. Use the following commands:

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

If you had jobs scheduled on the computer, make sure they have completed; otherwise some processes, such as `jobmon` or `joblnch`, could still be active.

2. Choose one of the following:
 - Insert the CD that is related to your operating system;
 - Download the specific TAR or ZIP file for the operating system and unpack it. 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:

On Windows:

```
SETUP.exe
```

On UNIX:

```
./SETUP.bin
```

to start the wizard and follow the instructions provided on the screen.

4. The installation starts.
5. Click **Finish** to complete the installation.

Installing using the ISMP silent installation

An alternative way to use the graphical installation is the silent installation. The silent installation requires the customization of a response file. A sample response file is available on all CDs, in the `ResponseFiles` directory.

Run the following command from the path where the `SETUP` file is located to start the installation in silent mode:

- **On Windows:**

```
setup.exe -options patchInstall.txt -silent
```

- **On UNIX:**

```
./setup.bin -options patchInstall.txt -silent
```

where `patchInstall.txt` is the full path name of the response file you customized with your environment settings.

Table 6 lists the keywords you can set the `-W actionPanel.selectedAction` parameter to custom the response file to your needs:

Table 6. Parameters

KEYWORD	SCENARIO
APPLY	Install an undoable fix pack
ROLLBACK	Roll Back an undoable fix pack
COMMIT	Commit an undoable fix pack
APPLY_AND_COMMIT	Install and commit the fix pack Notes: 1. This action is available only when you install a fix pack. It is not available on General Availability (GA) versions.

Installing on UNIX - using the twspatch script

On all UNIX platforms you can use the **twspatch** script file to install the fix pack on Fault-Tolerant Agents (FTAs). The synopsis of **twspatch** is:

```
./twspatch -{install | undo | commit | repair} -uname TWS_user
```

To install, follow these steps:

1. Unlink the host on which you are installing the patch from the IBM Tivoli Workload Scheduler network and shut down IBM Tivoli Workload Scheduler.

Use the following commands:

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

If you had jobs scheduled on the computer, make sure they have completed; otherwise some processes, such as `jobmon` or `joblnch` could still be active.

2. Choose one of the following:
 - Insert the CD that is related to your operating system
 - Download the specific tar file for your operating system
3. Untar it on your system.
4. Run **twspatch**.

Installing using Software Distribution

To install the fix pack using software distribution use the following command:

- `wdinstsp -f -uy -D execActionTools=false`
 - D `tw_user=<TWS_USER>`
 - D `install_dir=<TWS_HOME> <CPU_TYPE_DEF>`
 - n `<INST_PKG_NAME> <SPB_FILE_NAME>`

where:

```
<CPU_TYPE_DEF> = -D st_agent=<true or false>  
                -D ft_agent=<true or false>  
                -D master=<true or false>  
                -D bkm_agent=<true or false>
```

```
<INST_PKG_NAME> = FP_TWS_<INST_INTERP>_<TWS_USER>.8.4.0.<PATCH_NUMBER>
```

```
<INST_INTERP> = AIX | HPIA64 | HPUX | LINUX_I386 | LINUX_S390 |  
                LINUX_PPC | LINUX_X86_64 | SOLARIS_I386 |  
                SOLARIS | WINDOW_X86_64 | WINDOWS
```

```
<PATCH_NUMBER> = fixpack level (e.g. 01)
```

```
<SPB_FILE_NAME> = spb file name with the complete path
```

Error occurs when applying Tivoli Workload Scheduler 8.3.0 fix pack via ITCM - APAR IY94997:

The following problems may occur when applying a Tivoli Workload Scheduler 8.3.0 fix pack via ITCM

- The installation process will fail during **twStopAction.exe**. if the Tivoli Workload Scheduler is stopped before installation, and **winstsp** is launched in a non-transactional way.
- If Tivoli Workload Scheduler is not stopped before installation, and **winstsp** is launched in a non-transactional way, the installation fails as the `Msvcirt.dll` library is locked (by **batchup.exe**)

As a workaround install the fix pack in one of the following ways: transactional and not transactional mode (**winstsp** command).

- Install in transactional mode, adding the '-ty' parameter
- Install the non-transactional mode (default mode) as follows:
 - Stop the Tivoli Workload Scheduler instance manually
 - Install the fix pack by adding the following command to the installation parameters:

```
'-D execTwsStopAction="false"
-D execTwsStartUpAction="false"'
```

Uninstalling the fix pack

You can uninstall the fix pack only if you installed it in undoable mode.

Follow these steps:

1. Launch the installation CD
2. Select the instance you want to remove
3. Select the **UNDO** option
4. Click **Finish**

Installation log files

The following are the installation log files where you can see the details about the status of the fix pack installation for the master domain manager, backup master domain manager, Fault-Tolerant Agent and connector:

- Trace file for ISMP installer

On Windows:

`%TEMP%/tws84fixpack/twsismp.log`

On UNIX:

`$TMPDIR/tws84fixpack/twsismp.log`

- Log file for ISMP installer

On Windows:

`%TEMP%/tws84fixpack/summary.log`

On UNIX:

`$TMPDIR/tws84fixpack/summary.log`

- Log file for Tivoli Workload Scheduler installer.

On Windows:

`%TEMP%/tws84fixpack/twsinst_<INST_INTERP>_<TWSuser>^8.4.0.01.log`

On UNIX:

`$TMPDIR/tws84fixpack/twsinst_<INST_INTERP>_<TWSuser>^8.4.0.01.log`

- Log file for CM installation.

On Windows:

`%TEMP%/FP_TWS_<INST_INTERP>_<TWSuser>^8.4.0.01.log`

On UNIX:

`$TMPDIR/FP_TWS_<INST_INTERP>_<TWSuser>^8.4.0.01.log`

For information on INST_INTERP refer to “Installing using Software Distribution” on page 34.

If the variable `$TMPDIR` is not set on the UNIX system then the default `/tmp` is assumed.

Documentation updates

The following documentation has been refreshed with this fix pack:

Tivoli Workload Scheduler: Planning and installation guide

- All configuration and customization documentation has been moved to the Administration part of the *Administration and Troubleshooting guide* (except where the activity is only ever performed immediately after installation, and never subsequently changed). This is because configuration and customization are activities that you perform during the life of the product as well as just after installation. This includes:
 - General configuring and customizing
 - Global options
 - Localopts
 - Useropts
 - Configuring SSL
 - Security file and authorizations, including **makesec** and **dumpsec** commands
 - Configuring connection parameters (command-line client connection)
- The information about integrating Tivoli Workload Scheduler with other products has been moved to a separate publication.

Tivoli Workload Scheduler: Reference guide

All documentation related to administrative matters has been moved to the Administration part of the *Administration and Troubleshooting guide*. This includes:

- Global options and **optman**
- Tivoli Workload Scheduler console messages and prompts
- Security file and authorizations, including **makesec** and **dumpsec** commands
- Enabling time zones
- Miscellaneous administrative commands: **evtsize**, **StartUp**, **version**

Tivoli Workload Scheduler: Administration and Troubleshooting guide

This publication has been reorganized, and now includes the above-mentioned administration information taken from the *Planning and Installation Guide* and the *Reference Guide*.

Integrating with Other Products

This is a new publication, containing both the material that was previously documented in the *Reference Guide*, and some descriptions of additional integrations possible with Tivoli Workload Scheduler.

Note: Changed or added text with respect to the previous version is marked in the left margin by the number of the fix pack. For example, 1 to refer to Fix Pack 01.

These are the fixes for the documentation APARs and internal defects that are made available in the refreshed product documentation:

IBM Tivoli Workload Scheduler version 8.4 Planning and Installation (Revised March 2008) SC32-1273-07

40506 Chapter 7 "Uninstalling Tivoli Workload Scheduler", section "Performing a silent uninstallation", replace the content of Step 5 with the following:

- On Windows operating systems, **uninstaller.exe** -options <local_dir>\TWS84_UNINSTALL_Agent.txt -silent
- On UNIX and Linux operating systems, **./uninstall.bin.** -options <local_dir>/TWS84_UNINSTALL_Agent.txt -silent

IBM Tivoli Workload Scheduler version 8.4 Reference Guide (Revised March 2008) SC32-1274-07

42715 In Chapter 5, "Managing the production cycle", section "Understanding carry forward options" add the following statement:

The decision to carry forward a chain of repetitive jobs (defined by the Every option) or a chain of rerun jobs is based on the state of its most recent run. Only the first job and the last job of the chain are carried forward.

40594 In Chapter 6, "Running event-driven workload automation", section "Rule operation notes", add the following notes in the table:

Notes on rule status: Depending on its from and to validity dates, the status of any rule changes as follows upon deployment:

- If you create a rule with already expired from and to validity dates, the rule is saved in activation pending state. When the rule is deployed, it remains in activation pending status.
- If you set the to validity field to a future date, the rule is deployed in the active state. If you reset it to a past date, the rule is redeployed in the no active state.
- Rule activity times (start and end) do not affect rule status. As long as a rule is within the right validity dates, the rule remains in the active state regardless whether it is within its defined activity times. If the scheduler receives a rule's defined events outside its activity time, the events are discarded but the rule stays in the active status.

IZ29757

In Chapter 7, "Defining objects in the database", section "Job stream definition keyword details", add the following paragraphs for the "onuntil" actions:

For *suppr* action

If the until time is passed together with the **onuntil suppr** and the **carryforward** options, the job stream is *carried forward* by JnextPlan only if the until date is equal to the new job stream date. If the until and the new job stream dates are not the same, the job stream is not *carried forward*.

For *cont* action

If the until time is passed together with the **onuntil cont** and the **carryforward** options, the job stream is always *carried forward* by JnextPlan.

For *canc* action

If the until time is passed together with the **onuntil canc** and the **carryforward** options, the job stream is not *carried forward* by JnextPlan because it is already canceled.

IZ29752

In Chapter 7, "Defining objects in the database", section "Job stream definition keyword details", add the following paragraph in the comment sections of the AT and ON job stream keyword descriptions:

If the run cycle and job stream start times are both defined, the run cycle start time takes precedence when the job stream is scheduled with JnextPlan. When the job stream is launched with the submit command, the run cycle start time is not used.

43955

In Chapter 8, "Managing objects in the database - composer", section "Command descriptions", add the following paragraph in the comment sections of RENAME command:

You must have delete access to the object with the old name and add access to the object with the new name.

42939

In Chapter 9, "Managing objects in the plan - conman", in section "Command descriptions", in the **Arguments** section of the commands **Submit docommand**, **Submit file** and **Submit job**, replace:

into=jobstream_instance

Identifies the job stream instance into which the job will be placed for launching. Select the job stream instance as follows:

[workstation#]jobstreamname[hmmm[date]]

or

[workstation#]jobstream_id ;schedid If you do not specify a workstation, the default is the workstation on which conman is running. If into is not used, the job is added to a job stream named JOBS.

with:

into=jobstream_instance

Identifies the job stream instance into which the job will be placed for launching. Select the job stream instance as follows:

[workstation#]jobstreamname[hmmm[date]]

or

[workstation#]jobstream_id ;schedid If into is not used, the job is added to a job stream named JOBS.

In the **Comments** section of the same commands replace:

If you do not specify a workstation with follows, needs, or opens, the default is the workstation of the job.

with:

If you do not specify a workstation with follows, needs, opens or into the default is the workstation of the job.

IZ21968

In Chapter 13, "The auditing feature", change the contents of section "Auditing overview" , to the following:

Auditing overview

Tivoli Workload Scheduler provides you with two types of audit log files:

Plan audit log file

Logs all user action performed against the plan. Actions are logged whether or not they are successful.

Database audit log file

Logs all actions against scheduling objects, even if an object is opened and saved without changing it.

The auditing logs are created once a day at 00:00:00 UTC in the following directories:

TWS_home/audit/plan

TWS_home/audit/database

on each workstation in the Tivoli Workload Scheduler network to minimize the risk of audit failure due to network problems.

Records are written to audit logs using Coordinated Universal Time (UTC), therefore audit logs contain events from 00:00:00 UTC to 23:59:59 UTC regardless of the time zone of the local workstation. Note however, that if the workstation is restarted prior to 00:00:00 UTC on the new calendar day (local time zone), new empty audit files are created, but not written to prior to 00:00:00 UTC.

40787 In Chapter 5, "Customizing plan management using global options" paragraph, add the following to the description of the global option `enCFResourceQuantity`:

Stageman carries forward resource quantities only if the resource is needed by a job or job stream that is also being carried forward. Otherwise the resource quantities are set to the original value.

IZ10959

Chapter 8. Managing objects in the plan - `conman`: in the **Comments** section of the description of the `cancel sched` command, the following information was added:

"If the cancelled job stream contains jobs defined with the **every** option, only the last instance of such jobs is listed as canceled in a **showjobs** display."

IZ11421

In the output of commands `show jobs sj` and `show schedule ss`, it has been specified that pending predecessor are marked with [P] in the **Dependencies** columns.

IZ15598

The following topic was changed from:

If you submit the [job] job stream from a workstation other than the master domain manager you must be connect as a user that is:

- Defined in the user registry used by WebSphere Application Server for authentication
- Authorized to perform submit commands in security file stored on the master domain manager.

The submit schedule command uses the credentials set in the `useropts` file belonging to the `TWS_user` who installed that workstation.

to:If you submit the [job] job stream from a workstation other than the master domain manager you must be:

- connecting as a user that has appropriate rights in the master's Security file;
- a user on an FTA where both users have been set up according to what is stated in Chapter 4, Setting up command-line authentication and user authorizations, Section: Setting up options for using the command-line user interface.

IZ17386:

In the description of the **conman limit cpu** command the content the following note:

Note: If you set **lc** to zero, no jobs, other than **hi** and **go** priority jobs contained in a job stream in **READY** state, are launched on the workstation.

was modified as follows:

Note: For a job stream in the **READY** state, only jobs with **hi** and **go** priority values can be launched on the workstation.
For a job stream with a **hi** priority value, all jobs with a priority value other than 0 can be launched on the workstation.

Change Unison variables

In Chapter 3 "*Configuring the job environment*", section "*Environment variables exported by jobman*", Table 5. *Job environment variables for UNIX* replace the description of **UNISON_HOST** variable from:

The name of the master workstation.with:

The name of the host CPU.Replace also the description of **UNISON_JOBNUM** from:

The job number (parent process identifier, **ppid**).with:

The job number.

- 38188 The documentation of the event processor does not indicate that it reverts to the master domain manager if it is defined for a workstation with the attribute set It should say that if you use the **switcheventprocessor** command and the target workstation has the attribute set, the event processor is switched to the master domain manager. The same action occurs if you set the attribute for the workstation defined for the event processor.

Tivoli Workload Scheduler: Administration and Troubleshooting guide (Revised March 2008) SC32-1275-07

IZ09422

In Administration and Troubleshooting, Chapter 6: Administrative tasks - application server, Modify security settings, replace Notes 1 and 2 at the end of the procedure with the following:

Note: When you supply a password in a text file for **changeSecurityProperties**, there is a small security exposure. When you enter a password in the file, the password is entered in clear (unencrypted). After you have run **changeSecurityProperties**, the password remains in clear in the text file you have edited, but if you run

showSecurityProperties the password is output encrypted, as a row of asterisks. Thus, your potential security exposure is limited to the time from when you entered the password in the text file until when you manually deleted the text file after using **changeSecurityProperties**.

Note that if you want to change other parameters than the password, you do not need to resupply the password in clear. If **changeSecurityProperties** finds the password key commented, or encrypted, it uses the stored value.

IZ21973

In Administration and Troubleshooting, Chapter 6: Administrative tasks - application server, Modify security settings, add this new section:

Modify or display security settings custom user registry

This section describes how to display and modify the security properties when the active user registry is *Custom*.

The *Custom* active user registry provides a single authentication mechanism that is capable of authenticating users no matter how their user registry is implemented: local OS or LDAP.

If you want to modify the security properties of the LocalOS section, when the active user registry value is Custom, you can modify the LocalOS section of the showSecurityProperties.sh/bat output file, and then pass it as an argument to the changeSecurityProperties.sh/bat.

However, if you want to *display* the current LocalOS security properties when the active user registry is "Custom", open the file: &twshome;/appserver/profiles/twsprofile/config/cells/DefaultNode/security.xml and check the xml section

```
<userRegistries
xmi:type="security:CustomUserRegistry"...
```

40721 In Administration and Troubleshooting, in Chapter 14 "Corrupt Symphony file recovery", in the section "Recovery procedure on a master domain manager", there is a sub-section "Alternative procedure for recovering the Symphony file on the master domain manager". The third step of this procedure is inaccurate. It should be "Run **ResetPlan -scratch**".

37091 The documentation of the event processor does not indicate that events are processed in the order they arrive.

If you specify an event rule with two or more events that must arrive in the correct order, using the *sequence* event grouping attribute, it could happen that although the events occurred in the required sequence the rule is not triggered, because the events arrived at the event processor in an order different from their creation order.

Events are processed in the order they arrive, not the order they are created. If they arrive in order different from the creation order, you will not get the expected result.

For example, consider a rule which is triggered if event A defined on workstation AA occurs before event B which is defined on workstation BB. If workstation AA loses its network connection before event A occurs, and does not regain it until after event B has arrived at the event processor, the event rule will not be satisfied, even though the events may have occurred in the correct order.

The solution to this problem is that if you need to define a rule involving more than one event, use the *set* event grouping attribute, unless you can be certain that the events will arrive at the event processor in the order they occur, in which case use the *sequence* event grouping attribute.

Integrating with Other Products (Revised March 2008) SC23-8904-00

43350 In Chapter 1, *"Integrating with IBM Tivoli Monitoring"*, section *"Integrating with IBM Tivoli Monitoring using a script data provider"* replace the following sentence:

ITMCreateSituations.sh for UNIX and ITMCreateSituations.cmd for Windows

This script configures the Tivoli Enterprise Portal Console to create and display the Tivoli Workload Scheduler situations. Copy this script onto the Tivoli Enterprise Monitoring Server and run it using the following syntax.

with

ITMCreateSituations.sh for UNIX and ITMCreateSituations.cmd for Windows

This script configures the Tivoli Enterprise Portal Console to create and display the Tivoli Workload Scheduler situations. Copy this script, the baseNameSituation.xml file, and ITM_TWS_84metafile_win.mdl for Windows or ITM_TWS_84metafile_ux.mdl for UNIX, onto the Tivoli Enterprise Monitoring Server and run it using the following syntax.

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 Guide* 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.
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