IBM® Tivoli® Workload Scheduler for Applications

Readme File for Fix Pack 3 - PTF U499054

Version 8.1.1

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Version 8.1.1

First Edition (November 2004)

This edition applies to fix pack 3 (PTF U499054) for version 8, release 1, modification level 1 of IBM Tivoli
Workload Scheduler for Applications.

Contents

Chapter 1. IBM Tivoli Workload Scheduler for Applications, Version 8.1.1 Readme File for Fix Pack 3 (PTF U499054)

Date 30 November 2004

Fix Pack
 8.1.1-TIV-TWSWSE-FP0003

PTF Number
 U499054

Product
 IBM Tivoli Workload Scheduler for Applications, Version 8.1.1

General Description
 IBM Tivoli Workload Scheduler for Applications, Version 8.1.1 Fix Pack 3

This readme file provides important information about Fix Pack 3 (PTF U499054) for IBM Tivoli Workload Scheduler for Applications, Version 8.1.1. This readme file is the most current information for the fix pack and takes precedence over all other documentation for IBM Tivoli Workload Scheduler for Applications, Version 8.1.1. This fix pack fixes a variety of defects on the following access methods:
- Oracle E-business Suite
- PeopleSoft
- R/3

 Note: R/3 access method has not been updated since Fix Pack 2
- z/OS

Please review this section thoroughly before installing or using this fix pack.

About this release

This section includes the following topics:

Fix pack structure

IBM Tivoli Workload Scheduler for Applications, Version 8.1.1 Fix Pack 3 has the following structure:

```
  /
  │   8.1.1-TIV-TWSWSE-FP0003.README (this file)
  │   8.1.1-TIV-TWSWSE-FP0003.VSR
  │
+---MCMAGENT_AIX
  │       ORACLE.TAR
  │
+---MCMAGENT_HPUX
  │       ORACLE.TAR
  │
+---MCMAGENT_SOLARIS
  │       ORACLE.TAR
  │
+---MVS_AIX
  │       MVS.TAR
  │
+---MVS_HPUX
  │       MVS.TAR
  │
+---MVS_I386NT
  │       MVS.TAR
  │
+---MVS_IRIX
  │       MVS.TAR
  │
+---MVS_OSF
  │       MVS.TAR
  │
+---MVS_SOLARIS
  │       MVS.TAR
  │
+---PSAGENT_I386NT
  │       setup.exe
  │
+---R3BATCH_AIX
  │       R3BATCH.TAR
  │
+---R3BATCH_HPUX
  │       R3BATCH.TAR
  │
+---R3BATCH_I386NT
  │       r3batch.zip
  │
+---R3BATCH_OSF
  │       R3BATCH.TAR
  │
+---R3BATCH_SOLARIS
  │       R3BATCH.TAR
  │
\---ZOS
          LOADLIB_811_FP3
```

Features introduced with Fix Pack 2

The following features have been introduced with fix pack 2 for PeopleSoft:

Internal CMVC Feature: 11128

The Fix Pack provides the ability to use the data already present in the database to resolve in-line bind variable values by taking data from the database and substituting it with variable definitions. It then allows job submission regardless of

the use of in-line variable definitions in the jobs. The submission activity from the Tivoli Workload Scheduler perspective does not depend on the types of jobs that are being submitted. There are limitations, when the data used for PeopleSoft jobs is volatile (never stored in the database).

In these cases the data ends its life when a PeopleSoft GUI transaction is complete. When these types of process are used, the "runcontrol data record" is referred to as the "Work record". The resolution of the work record data used in in-line bind variables is not possible, as it is for other kinds of control records, and requires special management. This case is currently out of the scope of this fix pack.

When you submit Tivoli Workload Scheduler using a process that has in line bind variables, the process type in the PeopleSoft GUI will be called ITWS_<process type> For example, ITWS_Crystal instead of Crystal.

APARs and defects fixed in IBM Tivoli Workload Scheduler for Applications, Version 8.1.1 fix pack 3

This section lists the APARs and defects fixed in IBM Tivoli Workload Scheduler for Applications, Version 8.1.1 Fix Pack 3 by access methods. It is divided into the following sub-sections:
- "z/OS"
- "Oracle Applications"
- "PeopleSoft" on page 4

z/OS
The following APARs and Defects were fixed for z/OS:
- APAR PQ92957: Jes job ended with RC=0 incorrectly reported to TWS as User Abend value is higher than the maximum allowed.
- APAR PQ83225: z/OS access method not recognized event ID 2004 as an abend for submitted QJ requests.
- APAR PQ77450: Error in routing of module TSITCPL7 as modified by fix F12
- APAR PQ89268: CheckInterval not taken into account when receiving '9' as QJR
- APAR PQ95242: CA-7 ignores command if TSSERVER is sending them too close together in time.
- APAR PQ97437: MVSCA7 - Invalid transaction syntax when '9' is returned after a LJ
- Internal CMVC Defect 12037: Garbage in the transaction buffer sent to the Gateway
- Internal CMVC Defect 13238: QJ is sent when checking an ext dep on an OPC Application
- Internal CMVC Defect 13342: mvsca7 - INVALID TRANS SYNT when '9' is returned after a LJ

Oracle Applications
The following APARs and Defects were fixed for Oracle Applications:
- APAR IY53985: Problem when the encrypted password generated by enigma has shell control characters.
- Internal CMVC Defect 11547: No tag added in mcmoptions to require the oracle db instance
- Internal CMVC Defect 13393: If .profile of user has '!/bin/ksh' then "sh mcminstall" fails

- Internal CMVC Defect 13395: MCMAGENT search mcmoptions file under home of job user
- Internal CMVC Defect 13391: MCMAGENT doesn't work in 3-tier connectivity

PeopleSoft

The following APARs and Defects were fixed for PeopleSoft:
- APAR IY52805: Job cancelled in PeopleSoft does not cancel in TWS correctly.
- APAR IY58262: PeopleTools version 8.44 is not supported
- Internal CMVC Defect 11751: Process and process type exchanged if processtype is wrong
- Internal CMVC Defect 11962: On win2K, if classpath has a short size, psagent traps
- Internal CMVC Defect 11975: nVisionReport Process recreated,if stop start the Appl Server
- Internal CMVC Defect 13353: If Path has a short size the psagent traps

APARs and defects fixed in IBM Tivoli Workload Scheduler for Applications, Version 8.1.1 fix pack 2

This section lists the APARs and defects fixed in IBM Tivoli Workload Scheduler for Applications, Version 8.1.1 Fix Pack 2 by access methods. It is divided into the following sub-sections:
- "Oracle Applications"
- "R/3"
- "z/OS"

Oracle Applications

Internal CMVC Defect 11255: In OraApps 3-tier connect parm is taken as part of password.

R/3

APAR IY39442: SAP jobs created via the JSC abend when run.

Internal CMVC Defect 11057: Incorrect message prompted when installing r3batch on UNIX.

z/OS
Distributed

Internal CMVC Defect 10278: Event number 2004 is treated incorrectly.

Internal CMVC Defect 11124: Events 2003, 2007, and 2008 are mapped onto ABEND.

Mainframe

APAR PQ74695: Awaiting hardcopy not accepted as complete by TSSERVER.

APAR PQ78332: MVS X-Agent does not recognize JCL errors on the mainframe.

APARs and defects fixed in IBM Tivoli Workload Scheduler for Applications, Version 8.1.1 fix pack 1

This section lists the APARs and defects fixed in IBM Tivoli Workload Scheduler for Applications, Version 8.1.1 Fix Pack 1. It is divided into the following sub-sections:
- "Oracle Applications"
- "PeopleSoft"
- "R/3"
- "z/OS"

Oracle Applications
APAR IY42944: MCMAGENT generating error - Application or responsibility not proper, error when ARGS are correct.

PeopleSoft
Internal CMVC Defect 151326: After PSOFT 8.4 job submission, job messages in JOBLOG are not correctly displayed.

Internal CMVC Defect 151471: No messages in JOBLOG with PS84x if JVMPATH not specified.

Internal CMVC Defect 153213: False abend with return code 259 when TVPUPSFT closes abnormally

Internal CMVC Defect 154847: Backend retry interval wrongly set to 3

Internal CMVC Defect 157152: Output control keyword for folder not implemented in PSAGENT 8

R/3
APAR IY39433: ABAP Program name is truncated to 8 characters. Job abends.

APAR IY39501: R3BATCH occupied high percentage of CPU on windows FTA when attempting to edit existing jobs.

APAR IY41886: SAP jobs via R3BATCH not synchronizing to free batch processes on SAP not synchronizing to free batch processes on SAP applications servers.

APAR IY41089: R3BATCH jobs that use the BDC and RUN a long time finished with abend.

APAR IY39112: SAP 4.0B and TWS 8.1.1 SAP XA R3BATCH. ABAP program name is truncated to 8 CHARS. Job abends.

Internal CMVC Defect 10276: R3BATCH Usable to use different clients with -client option

Internal CMVC Defect 10740: SAP has changed the logic for the function module RFC_ABAP_INSTALL_AND_RUN and is going to dismiss this function in future releases.

Internal CMVC Defect 10962: R3Batch files are not installed on Windows XP

z/OS
APAR PQ75648: TWS engine does not handle status 2004 correctly.

Installation

This section describes how to install IBM Tivoli Workload Scheduler for Applications, Version 8.1.1 fix pack 3. This Fix pack upgrades all the extended agents associated to the selected Tivoli Workload Scheduler for Application, Version 8.1.1 instances. The R/3 feature distributed with this fix pack is the same as the one present in fix pack 2. Fix packs are cumulative: so you can apply them directly to the general availability version of the product without having to install previous fix packs. Before you install the fix pack, ensure that the following prerequisites are met:

- Tivoli® Workload Scheduler processes are stopped.
- No extended agent method is running.

Hardware and software requirements

This section is divided into the following topics:

- "Supported platforms"
- "System requirements"

Supported platforms

Supported platforms at the time of the release are detailed in the *IBM Tivoli Workload Scheduler for Applications: Release Notes*. For the most recent information, consult the supported platforms matrix on the IBM® software support Web site: http:/www.ibm.com/software/support

1. From the Web site, select **Tivoli support** from the **Other support sites** list.
2. When the page displays, select **IBM Tivoli Workload Scheduler for Applications** from the **Choose a product** pull-down list.
3. Click the **Supported Platforms** in the Related Links section.
4. Click the **Tivoli Platform and Database Support Matrix** link
5. Enter your IBM registration ID and password.

System requirements

Hardware and software prerequisites are detailed in the *IBM Tivoli Workload Scheduler for Applications: Release Notes*. There are currently no changes to the information included in the *Release Notes*.

Applying the Fix Pack

This section provides information about applying the Fix Pack depending on the environment you are working on. This section is divided into the following sub-sections:

- "Applying the Fix Pack in a UNIX Environment"
- "Applying the Fix Pack in a Windows NT/2000 Environment" on page 7
- "Applying the Fix Pack in a Mainframe Environment" on page 8

Note: Always verify that you have a viable backup before installing any software.

Applying the Fix Pack in a UNIX Environment

To apply the Fix Pack in a UNIX environment perform the following steps:

1. Set the limit of the Oracle Extended Agent Workstation(s), whose method you want to uninstall, to 0.
2. Wait for the running Oracle Extended Agent Jobs to terminate, if any.
3. Move the following files into a backup directory:
   - TWS_HOME/methods/MCMAGENT

- $MCM_TOP/bin/MCMLJ
- $MCM_TOP/bin/MCMTJ
- $MCM_TOP/bin/MCMSTAT
- $APPL_TOP/admin/MCMprod.txt

(being MCM_TOP=$APPL_TOP/mcm/integration)

The $APPL_TOP is a folder where the Oracle Application is installed.

Copy the ORACLE.TAR file from ORACLE_<platform> folder corresponding to your platform into a tmp directory. Apply the installation steps as described in the Installation Paragraph of Chapter one of the "IBM Tivoli Workload Scheduler for Applications User's Guide for Oracle E-Business Suite Access Method Version 8.1.1.

4. For R3BATCH, follow the installation instructions described in the official User's Guide.

5. For z/OS agent, remove the old installed files:
   - Stop Tivoli Workload Scheduler on the local node where you are installing the method.
   - Log on as root, and change your directory to <TWSHOME>.
   - Copy the MVS.TAR from MVS_<platform> folder corresponding to your platform into <TWS_HOME> directory and run tar xvf MVS.TAR. For more details see the Installation section in Chapter 1 of the IBM Tivoli Workload Scheduler for Applications User's Guide for z/OS Access Method, Version 8.1.1.
   - Run customize as follows: /bin/sh customize -update -uname <twsuser>. TWSUSER is the owner of the TWS installation.

Applying the Fix Pack in a Windows NT/2000 Environment

To apply the Fix Pack in a Windows NT/2000 environment perform the following steps:

1. Uninstall any existing IBM Tivoli Workload Scheduler for Applications version 8.1.1 installation (R3BATCH and/or PSAGENT).

2. For R3BATCH, follow the installation instructions described in the official User's Guide.

3. For PSAGENT, refer to the installation section in the IBM Tivoli Workload Scheduler for Applications Version 8.1.1 User's Guide.

4. For z/OS agent, remove the old installed files:
   - Stop Tivoli Workload Scheduler.
   - Log on as a user in the local administrator group.
   - Close any open Windows applications, including File Manager.
   - Make a backup of the content of the methods directory.
   - Extract the content of the MVS.zip archive into the Tivoli Workload Scheduler home directory, overwriting the existing files and keeping the directory structure.
   - Run the Tivoli Workload Scheduler setup.exe program located in <TWS_HOME>\setup:
   - On the Account Information screen, enter the Tivoli Workload Scheduler user and the password and click next.
   - On the Setup Information screen verify the information you entered and click next.
   - Start Tivoli Workload Scheduler and resume scheduling activities.

Applying the Fix Pack in a Mainframe Environment

To apply the Fix Pack in a Mainframe environment perform the following steps:

To install fix pack 3, download the LOADLIB_811_FP3 file contained in the ZOS directory of the fix pack to the z/OS system according to the following instructions:

1. From your TSO session emulator, select the ISPF command shell (TSO command) and use the File Transfer utility (Send to Host) to transfer the LOADLIB_811_FP3 library from the CD-Rom to the z/OS system, setting the transfer for a logical record length of 80 and a fixed record format.
2. Receive the members in output datasets using the INDSN option. This will unload 11 load modules into the output library. These load modules represent the executable part of the product Tivoli Workload Scheduler for Applications for z/OS Access Method on the mainframe side.

Notes for the User

This section contains new information and documentation corrections contained in this fix pack. It is divided in the following sub-sections:

- "PeopleSoft"
- "Oracle Applications" on page 14
- "R/3" on page 14

PeopleSoft

This Section contains information related to PeopleSoft. It is divided in the following sub-sections:

- "Configuration"
- "Special Considerations and Known Limitations" on page 10
- "Troubleshooting" on page 11
- "Documentation Problems and Corrections" on page 18

Configuration: The backend shipped with the new package invokes by default the new Component Interface (CI) ITWS_PROCESSREQUEST. It is possible to force the invocation of the original CI (or any compatible CI) by defining the following new configuration options. A new configuration option may be used to invoke the original component interface (PROCESSREQUEST). The new options are as follows:

```
TWSXA_INLINE_CI=<CI name>
TWSXA_SCHED_METH=<methname>
TWSXA_SKEDM_TYPE= [ i | f | b ]
```

Where:

```
<CI name>=Component Interface Name.
```

If this is not set the default value will be set as:
ITWS_PROCESSREQUEST<methname>=name of the PeopleSoft method invoked by the Component Interface.

Make sure that the TWSXA_SCHED_METH method is used by the TWSXA_INLINE_CI Component Interface (for example: ITWS_PROCESSREQUEST uses Schedule).

If you want to use the PeopleSoft component interface PROCESSREQUEST to submit processes without in-line bind variables, you must set TWSXA_INLINE_CI=PROCESSREQUEST.

TWSXA_SKEDM_TYPE is the return value type of the method: where (i= [integer], f= [float],and b=[boolean]). The last option is used only for PeopleTools version 8.1x.

After installing the patch you must follow the steps as shown below:

1. A new PeopleSoft project called ITWS must be manually uploaded into the PeopleSoft Database. Start the Application Designer and from the signon window select to start the Application Designer in tier two mode as follows:
   - Connection Type: <Database used> for example : Oracle
   - Database Name: <Database Name>
   - User ID: <operator PS> for example: PS
   - Password of User ID
   - The Application Designer starts.
2. Using the Application Designer:
   - Copy Project from the file
   - Using the browser, edit the full path to specify the folder where the project that you want to load is located.
   - The project is contained in the <TWSHOME>/methods/PeopleSoft/project-version> subdirectories under the specific PeopleTools version directories, where: project-version = PT844 | PT84x | PT81x.
   - After you have chosen the folder of project, a list of projects appears in the Project Name Field of the "Copy Project From File" window. Choose ITWS_PSXA and click on the copy Button.
   - A Copy "window" appears showing a list of Object Types.
   - To set the new settings, click the "Options" button
   - Click on "Report Filter" tab
   - Click on "Select All" button
   - Click on the "OK" button
   - Click on "select All"
   - Click on "Copy", a copy progress bar appears. After loading the project, the PeopleSoft Database contains the following objects:
   - ITWS ProcessType Definition
   - ITWS Permission List
   - ITWS Cls
3. To create the new Security Role ITWS_ROLE you can use the PeopleSoft Web GUI or the Application Designer. Follow the steps below:
   From the menu of the PeopleSoft Web GUI:
   - People tools -> Security -> Permission and Roles -> Roles
   - From the Tabs select "Add a new value"
   - Edit ITWS_ROLE in the Role Name Field
   - Select the permission lists tab, select ITWS from the list, and Save.
     From the Application Designer GUI:
   - Using Maintain Security, edit the ITWS_ROLE window
   - Select the Permissions list tab, select ITWS from the list, and save.

To grant the ITWS_ROLE to all users who need to schedule jobs from Tivoli Workload Scheduler, you can use the PeopleSoft Web GUI or the Application Designer, following the steps below:

From the Application Designer GUI:

- Using Maintain Security, edit the user name.
- Select the Roles tab
- Add the ITWS_ROLE and Save.

From the PeopleSoft WEB GUI:

- People Tools -> Security -> User Profiles ->
- Edit the User Name
- Select the Roles Tab
- Add the ITWS_ROLE and Save

4. To add the ITWS process Types Definitions to the required Process Scheduler you can use the PeopleSoft Web GUI or the Application Designer. Follow the steps below: From the Application Designer GUI:

- Using Process Scheduler Manager
- Select the Server and add the ITWS_* Type definitions
- Process Type definitions
- Type definition

From the PeopleSoft WEB GUI:

- PeopleTools -> Process Scheduler -> Servers -> Search your server -> Add the ITWS_*Process Types -> Save.

   Note:

   From the SQL interactive command line, the same task can be performed by the following sample statement, customized for your database environment:

   INSERT INTO PS_SERVERCLASS SELECT o.SERVERNAME, o.OPSYS,'ITWS_'||o.PRCSTYPE,o.PRCSPRIORITY,o.MAXCONCURRENT FROM PS_SERVERCLASS o WHERE (SELECT count(*) FROM PS_SERVERCLASS i WHERE i.SERVERNAME=o.SERVERNAME AND i.OPSYS=o.OPSYS AND i.PRCSTYPE='ITWS_'||o.PRCSTYPE) = 0 AND (select count(*) from PS_PRCSTYPEDEFN a where a.PRCSTYPE='ITWS_'||o.PRCSTYPE AND a.OPSYS=o.OPSYS) > 0

5. Restart the process servers.

   You do not need to make any changes to the existing Tivoli Workload Scheduler job definitions, except for the scheduling nVision process, where the runcontrol ID must be specified using the <BUSINESS_UNIT>.<REPORT_ID>convention.

   An example related to Job Definition for the scheduling nVision process is shown below:

```
-process <process-name>-type nVision-Report -runcontrol
<BUSINESS_UNIT>.<REPORT_ID>
-process 'NVSRUN' -type nVision-Report -runcontrol AUS01.VARIABLE
```

Special Considerations and Known Limitations: For PeopleTools version 8.4x, three new keywords are recognized in the job definition to exploit a better output of jobs running under the PeopleSoft Process scheduler. The new keywords are as follows:

- outputtype (accepts PeopleSoft keywords: that is FILE, WEB, EMAIL....)
- outputformat (accepts PeopleSoft keywords: that is PDF, HTML,....)
- outputdest (accepts PeopleSoft recognized destinations corresponding to the output type)

No syntax check is performed on the values provided. If the values are not recognized, defaults are used. During the Upload of the project a basic set of Process Types starting with "ITWS_" are loaded (approximately 145 for PT84x and PT844, approximately 96 for PT81x). If you submit a process with in-line bind variables belonging to a Process Type <PT> that has no corresponding ITWS_ <PT>, then you should create it manually by using the PeopleSoft GUI.

Troubleshooting:

1. With PeopleTools Versions 8.x: CheckFile syntax is not supported.
2. With PeopleTools Versions 8.x: The -operator keyword is ignored: if you need to use many different operator IDs, as a workaround, you can define multiple XA workstations (one per OperatorID), and configure the options file with the correct connection string.
3. No defect number: During method execution with PeopleTools version 8.41 servers, the following message may appear in the stdlist one or more times:

```
"PSProperties not yet initialized
      java.lang.Throwable
      at psft.pt8.util.PSProperties.getProperties(PSProperties.java:49)
      at psft.pt8.definitions.Locale10Util.setLocale(Locale10Util.java:50)
      at psft.pt8.net.LoginInfo.setLocaleObj(LoginInfo.java:258)
      at psft.pt8.net.LoginInfo.setLocaleObj(LoginInfo.java:334)
      at psft.pt8.net.LoginInfo.setLanguageCd(LoginInfo.java:249)
      at psft.pt8.net.NetSession.deserializeUserContextDelta(NetSession.java:623)
      at psft.pt8.net.CertificateService.deserializeReply(CertificateService.java:133)
      at psft.pt8.net.NetService.requestService(NetService.java:147)
      at psft.pt8.net.NetReqRepSvc.requestService(NetReqRepSvc.java:264)
      at psft.pt8.net.NetSession.connect(NetSession.java:211)
      at psft.pt8.net.NetSession.init(NetSession.java:125)
      at psft.pt8.joa.Session.connectWithBlob(Session.java:232)
      at psft.pt8.joa.Session.connect(Session.java:28)
      at java.lang.reflect.Method.invoke(Native Method)
      at psft.pt8.joa.JOAObject.invokeMethodHelper(JOAObject.java:137)
      at psft.pt8.joa.JOAObject.invokeMethod(JOAObject.java:84)"
```

   This is a minor problem that does not affect the regular running of the job. It is also reported by PeopleSoft Support, but the resolution proposed is not working for version 8.4x.

4. No defect number: During method execution with PeopleTools version 8.17. There is a Date Format problem with the PeopleCode with versions of PeopleTools earlier than 8.18. This is a known PeopleSoft issue which has been referenced as the incident T-KRITZM-FR6JH "Component Interface PROCESSREQUEST PeopleCode needs to be updated for 8.1X". For PeopleTools versions before 8.18, you need to change the PeopleCode manually.

5. If a job remains in INTRO state after you have submitted it you will see the following message in the log:

   Unable to set Processinstance to <xxx>

   - TRC - Getting error message(s) from PSMessages:
   - TRC - Number of Psoft Messages: 3

- TRC - PeopleSoftMessage:'Built-in function DatePart parameter 1 is invalid. (2,195) At PRCSRQSTBC_WRK.REQUESTTYPE.FieldFormula GetPrcsRqst PCPC:6975 Statement:111'
- TRC - PeopleSoftMessage:'Error changing value. {PROCESSREQUEST.PROCESSINSTANCE} (91,34)'
- TRC - PeopleSoftMessage:'Failed to execute PSBusComp request'

6. The GetPrcsRqst Function in the PRCSRQSTBC_WRK.REQUESTTYPE.FieldFormula PeopleCode has to be modified with these changes for the 8.1X codeline:

   a. From your PeopleSoft Development Workstation open the "Application Designer" application.

   b. Select Insert, Objects into Project (or press the shortcut "Control-F7"). The "Insert into Project" dialog appears. (Control-F7)

   c. Open an Object Type of "Component Interfaces".

   d. In the Selection Criteria control group, in the"Name" input field, type "PROCESSREQUEST" and press the ENTER key to select the records.

   e. Click on the "Select All " button and then the "Insert" button.

   f. Close the "Insert into Project" before continuing.

   g. The PROCESSREQUEST Component Interface is shown in the tree view of the Application Designer window. You may need to expand the Component Interface folder to see it.

   h. Double click on the PROCESSREQUEST (or right click and select "View Definition"). You are shown the definition on the right window. Expand the "Scroll - Level 0" item.

   i. Right click on the "PRCSRQSTBC_WRK" record and select "View Definition"

   j. On the new window you see the record format of PRCSRQSTBC_WRK. Go to the field named "REQUESTTYPE" (it should be in bold typeface). Right click on it and select "View PeopleCode".

   k. The "PRCSRQSTBC_WRK. REQUESTTYPE.FieldFormula (Record PeopleCode)" window is the active window on the right side of your screen.

   l. Select "Edit->Find" (or press Contol-F) to search on the PeopleCode for the string "GetPrcsRqst".

   m. In the first lines of the PeopleCode Function "GetPrcsRqst" there is an SQLExec statement:

```
SQLExec("SELECT A.RUNCNTLID, A.PRCSTYPE, A.PRCSNAME, A.PRCSJOBNAME, A.RUNLOCATION,
A.SERVERNAMERQST,
A.SERVERNAMERUN, A.RECURNAME, A.RUNDTTM, A.OUTDESTTYPE, A.OUTDESTFORMAT, B.OUTDEST,
A.RUNSTATUS,
C.XLATSHORTNAME FROM PSPRCSRQST A, PSPRCSPARMS B, XLATTABLE C, WHERE A.PRCSINSTANCE =
B.PRCSINSTANCE
AND A.PRCSINSTANCE = :1 AND C.FIELDNAME = 'RUNSTATUS' AND C.FIELDVALUE = A.RUNSTATUS
AND C.EFF_STATUS
= 'A'", &ProcessInstance, RUNCONTROLID, PRCSTYPE, PROCESSNAME, JOBNAME, &RunLocation,
&SERVERNAMERQST,
&SERVERNAMERUN, RUNRECURRANCE, &RUNDTTM, &OutDestType, &OutDestFormat, OUTDEST,
RUNSTATUS, RUNSTATUSDESCR);
```

   n. You need to update it as shown in the following line:

```
SQLExec("SELECT A.RUNCNTLID, A.PRCSTYPE, A.PRCSNAME, A.PRCSJOBNAME, A.RUNLOCATION,
A.SERVERNAMERQST, A.SERVERNAMERUN, A.RECURNAME,%DateTimeOut(A.RUNDTTM), A.OUTDESTTYPE,
A.OUTDESTFORMAT, B.OUTDEST,A.RUNSTATUS, C.XLATSHORTNAME FROM PSPRCSRQST A, PSPRCSPARMS
B, XLATTABLE C, PSOPTIONS D WHERE A.PRCSINSTANCE = B.PRCSINSTANCE AND A.PRCSINSTANCE
= :1AND C.FIELDNAME = 'RUNSTATUS' AND C.FIELDVALUE = A.RUNSTATUS AND C.EFF_STATUS
```

```
         = 'A' AND C.LANGUAGE_CD = D.LANGUAGE_CD", &ProcessInstance, RUNCONTROLID, PRCSTYPE,
         PROCESSNAME, JOBNAME, &RunLocation, &SERVERNAMERQST, &SERVERNAMERUN, RUNRECURRANCE,
         &RUNDTTM, &OutDestType, &OutDestFormat, OUTDEST, RUNSTATUS, RUNSTATUSDESCR);
```

> **Note:** You are advised to duplicate the line before making the correction, and then to comment out the original statement by using the block comment characters "/*" <lines to comment> */)

   o. Select "File->Save" (or Control-S) to save your changes.

   p. Select "File->Exit" (or Control-Q) to close the Application Designer. If you are prompted to save your project, select "No".

7. When scheduling jobs to PeopleSoft version 8.20 after you have installed Ext Api 8.20 on the Maestro system, if you follow the procedure: PeopleSoft version 8.1x, an error occurs. The job shows that class bea/jolt/JoltSessionAttributes are not found. This problem occurs because the psjoa.jar is not available locally on the Fault-tolerant Agent where ExtApi 8.20 is installed. The original psjoa.jar is located on the PeopleSoft 8.20 System: The path is as follows: %PS_HOME%\web\PSJOA.

   To work around the problem you must follow the procedure below:

   • Create a folder called "class" in <PS_Ext_Api_HOME> folder. For example, if PeopleSoft ExtApi 8.20 Home is D:\PT820\bin\client\winx86_extapi, then create the folder as follows: D:\PT820\bin\client\winx86_extapi\class folder. Copy the psjoa.jar into the class folder.

   Stop and restart the Tivoli Workload Scheduler services.

   > **Note:** CaseID 3179811 for PeopleSoft has been opened for this problem.

8. When loading the project on the PeopleSoft Application from the Application Designer, a sequence of warning messages may appear as follows:

   ```
   •    e:\pt84310-retail\SRC\PSSYS\pjmupd.cpp
        SQL error:Stmt#:425 Error Position: 12 Return:942-
        ORA-00942 table or view does not exist
   •    SQL Access Manager
        DELETE FROM PSPROJECTWORK WHERE
        PROJECTNAME =:1
   ```

   These popup messages are not error messages, they are only warnings. The ITWS_PSXA is built on the PeopleSoft Dev Environment PT816 and PT841, where the PSPROJECTWORK table exists. If the ITWS_PSXA project is loaded on the PeopleSystem where the PSPROJECTWORK no longer exists, the above popup sequence may appear, warning you that the PSPROJECTWORK table does not exist. Click on the "OK" button, the project will continue loading.

9. When installing PeopleSoft 8.1.1, from the window where you specify the PeopleTools Version and RunTime Environment, you have to start by selecting "Back-end PeopleTools 8.1x or PeopleTools 8.4x" and continue the installation. If you do not select "Back-end PeopleTools 8.1x or PeopleTools 8.4x" and navigate between windows, when you select "Back-end PeopleTools 8.1x or PeopleTools 8.4x" the installation process will not let you specify the Ext Api8.x path. As a result you will be required to restart the installation. The internal defect opened for this problem is d 11351 "Installation does not require the correct back-end path version".

10. The joblog of a job submitted to PeopleSoft 8.4x shows the following message: PeopleSoftMessage: 'Failed to execute PSBusComp request' even if the job ends successfully. This is only a warning message. The internal defect opened for this problem is : d 11462 "Failed to execute PSBusComp request" message always displayed.

11. When submitting a job to PeopleSoft 8.1x the following message may be shown: PeopleSoftMessage: "First operand of . is NULL, so cannot access member Len. (2,236)". This is only a warning message, the execution will not be affected. The internal defect opened for this problem is d 11463 "Error First operand of . is NULL, so cannot access member Len".

Oracle Applications

Defect 13391: Fix has introduced this new behavior: Tivoli Workload Scheduler for Applications Oracle Applications 8.1.1, allows you to submit a job to an Oracle application in a three tier connectivity: In the three tier connection the user may use two Oracle Server UNIX computers, the MCMAGENT will reside on a computer where no APPS DB is present, (or is not used in the configuration file). The DB is located in the second UNIX computer where it can be reached using Oracle Network connectivity. The Oracle configuration file (version 8.1.1) has 13 options instead of 12, the 13th holds the Oracle name (tnsname) where the connection is to be established. The new record format is: <CPU CPU Name>< Oracle_Home><Oracle_SID><Oracle Application Top Directory><FND Top directory><PATH><Environment File To Execute><User Id><Password><Printer Name><Min Time><Max Time>[<Oracle DB instance>] The Oracle DB instance value is not mandatory, it is mandatory only for a 3/tier connectivity.

Example of a new mcmoptions file: "ORA_AIX_XA3T /oracle/DB/TST TST /oracle/Apps11 $APPL_TOP/fnd/11.0.28 $PATH:$FND_TOP/bin:$MCM_TOP/bin $APPL_TOP/APPTST.env apps ##3Y-UGcZ-3Kap-6m prt4b2 1 5 TST".

Where TST is the name of the oracle DB instance where the APPS DB is located. All other parameters are related to the local DB and APPS installation.

For the three tier configuration to work, you must define the TWO_TASK environment variables inside the Oracle environment setup scripts. Remove its definition when performing installation and re-link the steps. If you have set TWO_TASK externally or in the scripts given to mcminstall as an input parameter, you cannot perform the re-link steps successfully.

R/3

In R3BATCH 8.1.1 two important functions have been fixed : the BDC Wait option and the "-client" command line flag.

1. Wait option with the "BDC wait" option, you can specify that an R/3 job launched by IBM Tivoli Workload Scheduler is not to be considered complete until all of its BDC sessions have completed. To make use of the option, an R/3 job must write informational messages in its joblog. This can be done by adding a message statement either to the R/3 provided report BDCREXX (BDCREX1) as described below, using the BDC session name (up to 12 characters), or the BDC queue ID (up to 20 characters).

    Multiple messages can be written to allow monitoring of multiple BDC sessions. Alternatively, if you do not want to make R/3 modifications, you can also copy BDCRECXX to another name, for example ZBDCRECXX, make the changes in the copy and include it in all the programs that generate BDC sessions.

    You have to do this manually for each job. If your BDC sessions are not created using R/3 transaction SM35, but directly by a R/3 component, they may not use the report BDCRECXX. In this case you can make modifications to the SAP provided function module BDC_OPEN_GROUP as described below. Remember that you should either modify the report BDCRECXX (or its copy ZBDCRECXX) or the function module BDC_OPEN_GROUP.

You must not modify both those objects.

Note: The completion status of a IBM Tivoli Workload Scheduler-launched R/3 job, whether SUCC or ABEND, is based entirely on the execution status of the batch job. It is not related to the success or failure of any BDC sessions, which are considered finished regardless of any errors found during BDC processing.

- Using BDC Session Names. In order to use BDC session names, modify the form open_group in the R/3 report BDCRECXX as follows:

  – **For SAP releases prior to 4.6c:**

```
form open group.
if session = 'X'.
  skip.
  write: /(20) 'Create group'(i01), group.
  skip.
* open batchinput group
  call function 'BDC_OPEN_GROUP'
  exporting client = sy-mandt
    group = group
    user = user
    keep = keep
    holddate = holddate.
  message i001(92) with group.
  write: /(30) 'BDC_OPEN_GROUP'(i02), (12) 'returncode:'(i05), sy_subrc.
endif.
endform.
```

  – **For SAP release 4.6c and later:**

```
form open_group.
  skip.
  write: /(20) 'Create group'(i01), group.
  skip.
* open batchinput group
  call function 'BDC_OPEN_GROUP'
  exporting client = sy-mandt
    group = group
    user = user
    keep = keep
    holddate = holddate.
  message i001(92) with group.
write: /(30) 'BDC_OPEN_GROUP'(i02), (12) 'returncode:'(i05), sy_subrc.
    endform.
```

  If BDC sessions are specified by name, IBM Tivoli Workload Scheduler will not wait for the named BDC session to complete if there are other BDC sessions of the same name that have completed.

Example:

An IBM Tivoli Workload Scheduler-launched R/3 job starts three BDC sessions with the name ORD2, then issues one BDCWAIT message: BDCWAIT:ORD2. After the first ORD2 session is complete, the status of the R/3 job is shown as SUCC in IBM Tivoli Workload Scheduler. r3batch cannot recognize non-unique BDCs (that is, named BDCs).

Another problem of using BDC sessions with names is with different system times in a distributed R/3 environment. R3batch scans for BDC sessions with the specified names which are generated during the runtime of the creator job. If the creator job does nothing other than start BDC sessions, the runtime might be very short. If no time synchronization is installed, the system time of different machines usually differs in a distributed R/3 environment. This

time difference might be larger than the job runtime. It is therefore possible that the wrong time interval is scanned and the BDC sessions are never detected.

Therefore it is strongly recommended to use the BDC queue ID method described below.

- Using BDC Session Queue ID with Report BDCRECXX. In addition to the above description, BDC sessions can also be specified by queueid, the 20-digit BDC session identifier. Because each queueid assigned by R/3 is unique, one BDCWAIT message must be issued for each separate queueid to be monitored. To determine the queueid, modify the form open_group in the R/3 report BDCRECXX as follows:

  - **For SAP releases prior to 4.6c:**

    ```
    form open_group.
    if session = 'X'.
      skip.
      write: /(20) 'Create group'(i01), group.
      skip.
    * open batchinput group
     call function 'BDC_OPEN_GROUP'
     exporting client = sy-mandt
       group = group
       user = user
       keep = keep
       holddate = holddate
     importing qid = myquid.
    message i001(92) with myqid.
    write: /(30) 'BDC_OPEN_GROUP'(i02), (12) 'returncode:'(i05), sy_subrc.
    endif.
    endform.
    ```

  - **For SAP release 4.6c and later:**

    ```
    form open_group.
      skip.
      write: /(20) 'Create group'(i01), group.
      skip.
    * open batchinput group
     call function 'BDC_OPEN_GROUP'
     exporting client = sy-mandt
       group = group
       user = user
       keep = keep
       holddate = holddate
     importing qid = myquid.
     message i001(92) with myqid.
    write: /(30) 'BDC_OPEN_GROUP'(i02), (12) 'returncode:'(i05), sy_subrc.
    endform.
    ```

    Do not forget to define the variable myqid in BDCRECXX. With this approach, you have a global change in your R/3 system.

- Using BDC queue ID with FM BDC_OPEN_GROUP BDC, sessions which have not been created by the R/3 transaction SM35, but by a R/3 component, may not use the report BDCREXX. In this case the best solution to track these BDC sessions is to modify the R/3 function module BDC_OPEN_GROUP as follows:

```
FUNCTION BDC_OPEN_GROUP.
...
CALL 'BDC_OPEN_GROUP'  ID 'CLIENT' FIELD CLIENT
        ID 'GROUP' FIELD GROUP
        ID 'USER' FIELD USER
        ID 'KEEP' FIELD KEEP
        ID 'HOLDDATE' FIELD HOLDDATE
        ID 'DESTINATION' FIELD DEST
```

```
                 ID 'QID' FIELD QID
                 ID 'RECORD' FIELD RECORD
                 ID 'PROG' FIELD PROG.
   *
   IF SY-SUBRC EQ 0.
     BQID = QID. " bqid wird beim close gebraucht
     BUSER = SY-MSGV1.
     BGROUP = GROUP .
     * CALL FUNCTION 'DB_COMMIT'.
     CALL FUNCTION 'ENQUEUE_BDC_QID'
     EXPORTING DATATYP = 'BDC '
     GROUPID = BGROUP
   QID = BQID
   EXCEPTIONS FOREIGN_LOCK = 98
   SYSTEM_FAILURE = 99.
   IF SY-SUBRC EQ 0.
   message i001(92) with qid.
   ENDIF.
   ENDIF.
   *
   PERFORM FEHLER_BEHANDLUNG USING SY-SUBRC.
   *
   *
   ENDFUNCTION.
```

> **Note:** Note that the actual parameters of the C function call (CALL 'BDC_OPEN_GROUP' ID ...) may vary depending on the R/3 release number. With this approach, you have a global change in your R/3 system.

2. ″**-client**″ **Command Line Option**

   When R3BATCH is invoked, it reads configuration information from an option file such as the R/3 host, the R/3 RFC used, and so on. It receives information about the R/3 job to run from the IBM Tivoli Workload Scheduler.

   A Tivoli Workload Scheduler job could point to a R/3 job by specifying its job name (with the ″-job″ option) and job ID (with the ″-i″ option) or jobname and user name (with the ″-user″ option) which it belongs to. Once R3BATCH has collected the whole set of information it connects to the R/3 system and makes a copy of the selected job (which is actually a ″template″ job) and marks it in the R/3 as able to run and sets its start time to ″start immediate″.

   The copied job belongs to the RFC user used by R3BATCH to establish the connection and it runs on the R/3 client specified in the option file. By using the ″-client″ command line option it was possible to use a different client from the one specified in the option file. This option was incomplete, because there is an ambiguity between the client used to find the job to run and the client when the selected job should be actually run. With the current R3BATCH it is possible to use the following command line options:

   -client instructs R3BATCH to find a job definition in a specific R/3 client -exec_client instructs R3BATCH to run a job in a specific R/3 client. For example, the following Tivoli Workload Scheduler job definition copies the MYUSER′s MYJOB1 job (defined in the client 555) into the client 888, even if the default client (defined in the options file) is 000:

```
   MYR3CPU#MYTWSJOB
SCRIPTNAME "/ -job MYJOB1 -user MYUSER -client 555 -exec_client 888"
   STREAMLOGON "mytwsuser"
   DESCRIPTION ""
   RECOVERY STOP
```

> **Note:** The picklist function (provided by the JSC) still displays all the jobs defined in the default client.

As default, the JSC saves R/3 related jobs with the R/3 job name and R/3 job ID. For example, once the job MYJOB2 (with id 12345678) has been selected on the picklist panel, the Tivoli Workload Scheduler job in the Tivoli Workload Scheduler database looks like this:

```
MYR3CPU#MYTWSJOB
   SCRIPTNAME "/ -job MYJOB -i 12345678"
   STREAMLOGON "mytwsuser"
   DESCRIPTION ""
   RECOVERY STOP
```

To customize this definition you can:

1. Modify the job definition using the Tivoli Workload Scheduler composer utility,

2. Remove the "JobDef=R3BATCH" line in the r3batch.opts file and access the job definition using the JSC as for any other extended agent access method. In this way all the R/3 specific panels are no longer displayed until the "JobDef=R3BATCH" line is inserted again in r3batch.opts.

With APAR IY39442 fix, the user can define a new JOB SAP, connecting to a Japanese system, specifying Ext.program type JOB. The JOB name is upper cased correctly and it is kicked off.

Documentation Problems and Corrections

This section contains new information and documentation problems corrections contained in this fix pack. It is divided in the following sub-sections:

- "PeopleSoft"
- "z/OS" on page 19

PeopleSoft

APAR IY58262: Before installing this fix pack, the existing PeopleSoft method must be uninstalled. This fix pack installs the PeopleSoft project directories related to PeopleTools Versions 8.1x and 8.4x, as shown in the following structure:

```
TWS_HOME\methods\
\---PeopleSoft
    \---PT81x
    │   \---ITWS_PSXA
    │           BCM.DAT
    │           BCM.KEY
    │           CLM.DAT
    │           CLM.KEY
    │           ITWS_PSXA.ini
    │           MSG.DAT
    │           MSG.KEY
    │           PCM.DAT
    │           PCM.KEY
    │           PJM.DAT
    │           PJM.KEY
    │           SMDL.DAT
    │           SMDL.KEY
    │
    │
    \---PT84x
    │   \---ITWS_PSXA
    │           ITWS_PSXA.ini
    │           ITWS_PSXA.XML
    \---PT844
        \---ITWS_PSXA
                ITWS_PSXA.ini
                ITWS_PSXA.XML
```

The PeopleSoft project in PT81x directory applies to PeopleSoft Version 8.1x, the project in PT84x directory applies to PeopleSoft Version 8.4x with x up to 3 and the project in PT844 directory applies to PeopleSoft Version 8.44.

z/OS

Doc changes introduced for APAR PQ77450: Manual SH19-8504-01 ″User's Guide for z/OS Access Method″ Version 8.1.1 Maintenance Release November 2003.

At page 27 add, at the bottom of the messages: ″TSI031E TASK task MODULE module LAUNCH OF JOB 'jobname' FAILED″

Doc changes introduced for APAR PQ95242: Manual SH19-8504-01 ″User's Guide for z/OS Access Method″ Version 8.1.1 Maintenance Release November 2003.

At page 6, after CA7USER, add a new variable CA7WAIT(0) with the following description: ″The amount of time, in hundredths of a second, that each Gateway task has to wait, after that CA-7 has sent to the console the answer which confirms that the Gateway request to LOGON to it has been successfully processed, before issuing the next command to CA-7 itself. The default is 0, which means that no wait will happen. The maximum value must be in any case lower than half of the value specified by MAXWAIT. Change only in coordination with IBM Technical support.″ At page 27 add, at the bottom of the messages: ″TSI039E CA7WAIT MUST BE LOWER THAN HALF OF MAXWAIT″

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.
- Information you must have before contacting IBM Software Support.

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