IBM Dynamic Workload Console

Readme File for Fix Pack 6

Version 9.4.0

IBM

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Note

Before using this information and the product it supports, read the information in "Notices" on page 35.

This edition applies to Fix Pack 6 for version 9, release 4, modification level 0 of IBM Dynamic Workload Console.

Contents

Chapter 1. IBM Dynamic Workload Console Readme File Fix Pack 6 for Version 9.4.0

Date   16 July 2019

Fix Pack Name
> 9.4.0-IBM-DWC-FP0006

Product
> IBM Dynamic Workload Console version 9.4.0

General Description
> IBM Dynamic Workload Console 9.4.0 Fix Pack 6

This readme file provides important information about Fix Pack 6 for IBM Dynamic Workload Console version 9.4.0.

This readme file is the most current information for the fix pack and takes precedence over all other documentation for Dynamic Workload Console version 9.4.0.

The most up-to-date version of this readme can be accessed at the following URL: http://www.ibm.com/support/docview.wss?uid=ibm10887337

It is divided into the following sections:
- "About this Fix Pack"
- "Fix Pack structure" on page 23
- "Installing the Fix Pack" on page 23
- Documentation updates for IBM Dynamic Workload Console Fix Pack 6, version 9.4.0

IBM Dynamic Workload Console version 9.4.0 Fix Pack 6 supports all product versions indicated in the IBM Workload Scheduler version 9.4 Release Notes which can be accessed at the following link: .

For the most up-to-date information about supported operating systems, software and hardware requirements, see the Detailed system requirements document at the following URL: http://www-01.ibm.com/support/docview.wss?rs=672 &uid=swg27048858.

Review the following sections 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 Dynamic Workload Console version 9.4, 9.4.0.1, 9.4.0.2, 9.4.0.3, 9.4.0.4, 9.4.0.5 and 9.4.0.6.

This section includes the following subsections:
- "Features introduced with Fix Pack 6" on page 2

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Features introduced with Fix Pack 6

The following new product features, enhancements, and changes are introduced with this Fix Pack:

Extend the AS400 jobs user interface to allow LDA specification
Dynamic Agent ISERIES is now able to manage :CHILDS and :NOCHILDS ending tokens in case of SBMJOB command. It is now possible to include or exclude the child jobs monitoring also with the SBMJOB command. To define if monitoring or not the child jobs you can use the :CHILDS or :NOCHILDS ending token or the "Child job options" field on the Dynamic Workload Console. Moreover, on the Dynamic Workload Console, it has been added a new field where it is possible to specify the Local Data Area (LDA) source from which data are automatically extracted.

Support for updated versions of JazzSM
Fix Pack FP3 has been tested with 9.4 FP6

Updated version of WebSphere Application Server (WAS)
Fix Pack 6 has been tested using WAS version 8.5.5.15

Updated version of Cognos Analytics
Fix Pack 6 has been tested using Cognos Analytics 11.0.13. Same scenarios of Cognos 10.2.0.1 are supported.

Updated OpenSSL libraries IBM Workload Scheduler has been updated with OpenSSL
- OpenSSL 1.0.2r 26 February 2019 (1.0.2.18)

- JRE 8.0.5.35

GSKIT
Updated version of GSKIT Fix Pack 6 has been updated with GSKIT version 8.0.55.6.

IBM SDK for Java

Fix Pack 6 has been updated with Java version 8.0.5.20.

Updated version of Informatica
Fix Pack 6 has been tested using Informatica 10.1.1. Same scenarios of Informatica 9.x are supported.

Features introduced with Fix Pack 5

The following new product features, enhancements (RFE), and changes are introduced with this Fix Pack:

Updated version of Installation Manager (IM)
Fix Pack 5 has been tested using IM 1.8.9

Updated version of WebSphere Application Server (WAS)
Fix Pack 5 has been tested using WAS version 8.5.5.14

Features introduced with Fix Pack 4

The following new product features, enhancements, and changes are introduced with this Fix Pack:

The context-root URL of some Dynamic Workload Console pages have changed:
/ibm/TWSWebUI has changed to **/dwc**. This change impacts the URL to access the IBM Workload Scheduler Mobile interfaces as well as Application Lab interface. An automatic redirect has been added. **There are no changes to the default URL to log into the Dynamic Workload Console**.

DevOps made easier with workload applications

If you have a few use cases where the workload application templates replicated in your workload environment are a little too rigid, then this new enhancement will add the flexibility you are looking for.

After a workload application is exported into a workload environment, the contents such as, job streams, jobs, and other objects, are created in the environment and an association to the workload application is maintained. This allows for easy subsequent updates and synchronization between the workload application template exported from the source environment and the workload application in the target environment. The workload application can be easily replaced and updated. However, there might be certain circumstances where you prefer not to have an association to the workload application so that the imported objects can be freely updated or deleted.

When importing a workload application template, you can now specify whether you prefer to import only the objects contained in the template, without any ties to the workload application, or to import the objects maintaining their association to the workload application. Even after you have imported the contents of a workload application template into a target environment, removing the association to the original workload application template, you still have some options through the `wappman` command line that enable you to manage the objects as a whole, such as deleting all of the objects or replacing all of the objects.

These workload application template enhancements are supported when connected to an engine with version 9.4.0.4 or later For details about importing a workload application template, see:

Importing a workload application template . For information about the new options available for wappman see wappman

Support for Dashboard Application Services Hub (DASH)

Fix Pack 4 has been tested using DASH version 3.1.3.0 Cumulative Patch-6.

Additional support for agents

Support for fault-tolerant agents, dynamic agents, and z/OS agents has been extended on Sun Solaris SPARC 64-bit.

Satisfying Requests for Enhancements (RFEs)

IBM Workload Scheduler satisfies Requests for Enhancements (RFEs).

Requests for Enhancements (RFEs) give customers the opportunity to collaborate directly with the product development team and other users. The team prioritizes and develops new product features based on proposals made by customers.

IBM Workload Scheduler V9.4 Fix Pack 4 delivers the following RFE:

RFE 117399: Windows 2016 WSCF cluster support

Support has been extended to Microsoft Windows Server 2016 Failover Clustering (WSCF) on agents.

Managing pools and agent connectivity

Starting from IBM Workload Scheduler version 9.4 Fix Pack 4, you can automatically register dynamic agents in pools by editing a file.

Starting from version 9.4 Fix Pack 1, you can automatically register dynamic agents in pools by editing the pools.properties file located in **<TWS_home>/ITA/cpa/config**.

The file is composed by a series of lines with a list of pools to which the agent will be automatically registered. To make the changes in this file effective on the agent, you must stop and start the agent.

Because an agent can encounter problems and is not able to register and go online, for example, if it does not find a pool defined in the system, there are options that can be used in the pools.properties file to allow the agent to go online even if some pools are not defined.

This alternative way of registering dynamic agents to a pool can be useful when you need to quickly add more than one agent to a pool, or when you want to associate multiple pools to a dynamic agent.

Features introduced with Fix Pack 3

The following new product features, enhancements, and changes are introduced with this Fix Pack:

Extra opportunities for modifying job definitions already in the plan

Modify a job instance in the plan before it runs or modify an instance of a job in the plan that has already run and rerun the modified job.

You can modify a job definition in the database whenever and as many times as you want. However, there are times when you need to make changes to the job definition, but it has already been submitted into the plan and runs as is. This results in extra work and lost time in updating the definition in the database and then getting it into the plan to run.

This feature adds the flexibility you need so that you can now make changes to the definition even after it has already been submitted into the plan, maintaining the original definition in the database. With this additional flexibility, you can edit the job definition on-the-fly before it

runs or rerun a job with a different definition. This can be done from either the Job Stream Graphical View, the job monitoring view, or from the conman command line.

Maybe you want to substitute the command or script executed by the job with a different one? Maybe you just need to tweak an argument? Maybe you need to rerun a job updating the logon name, priority, or connection server? Whatever the change, this enhancement allows you to quickly react and avoid possible disasters, and increase your productivity by addressing additional scenarios in your workload that were not contemplated at the time you modeled or planned your workload.

- For details about how to modify the job definition in the plan using the conman command line, see the commands https://www.ibm.com/support/knowledgecenter/SSGSPN_9.4.0/com.ibm.tivoli.itws.doc_9.4/distr/src_ref/awsrgaltjob.htm#altjob and https://www.ibm.com/support/knowledgecenter/en/SSGSPN_9.4.0/com.ibm.tivoli.itws.doc_9.4/distr/src_tsweb/General_Help/ctrl_job_js_c.htm#editjobinstance. For details about how to modify the job definition in the plan from the Dynamic Workload Console see Modifying job instances in the plan to control job processing (https://www.ibm.com/support/knowledgecenter/en/SSGSPN_9.4.0/com.ibm.tivoli.itws.doc_9.4/distr/src_tsweb/General_Help/ctrl_job_js_c.htm#editjobinstance). See an introduction to this feature in the video: New opportunities to react and recover (https://www.youtube.com/watch?v=KW2Mzvtwjwo&feature=youtu.be).

Troubleshooting stalled jobs

Quickly identify what is holding back jobs that are ready to run but, for some unknown reason, do not run.

Sometimes your jobs are all ready to go, but for some anomalous reason, they do not start. A job can sometimes encounter specific circumstances where, although everything seems to be in check, there is still something that needs to be done before the job can start. You know that any dependencies it might have on predecessors have been resolved, you also know that the start time has come and gone, but something else is holding it back.

A new action is available when monitoring jobs that helps you identify what those circumstances might be. In addition to problem determination, it also helps you in resolving the problem. Sometimes it is as simple as tweaking the limit, other times a workstation needs to be linked, or maybe the jobman process is down. Whatever the reason might be, you can save time in determining the problem and identifying the solution with a new action available from the Dynamic Workload Console, "**Why a job does not start**".

Enhancements to IBM I job monitoring and control

Monitoring and control facilities for IBM i jobs have been enhanced to simplify the management of IBM i inquiry messages.

Automated reply to inquiry messages

For the most frequent IBM i inquiry messages, you can define standard rules to automate the reply to the waiting messages. When defining an IBM i job, by using the Workload Designer of the Dynamic Workload Console or the composer command line, you can specify the list of messages for which you want to set up

an automated reply. When specifying the automated replies, a new parameter has been added to the job definition: the **Message Max Replies** parameter. It represents the maximum number of automated replies accepted for a specific message. This new parameter optimizes the management of IBM i inquiry messages.

For example, when you set a wrong reply to a message in the job definition, IBM i system keeps on sending out the same inquiry message repeatedly, while waiting for the correct reply. To avoid this issue, IBM Workload Scheduler has now the capability to intercept and disable the wrong reply and require, with a prompt, a direct reply from the Dynamic Workload Console. The job remains in SUSP (suspended) status until the correct reply is provided.

Reliable monitoring of IBM i job status changes

As an inquiry message receives an automated reply, the IBM i job status changes from SUSP (suspended) to EXEC (executing) and vice versa. All the job status changes are monitored and tracked. This is useful, for example, when you want to create an event rule definition to send an email every time a job status change occurs.

Improved trace facilities
Trace facilities for IBM i jobs have been improved. To specify the desired tracking level, customize your IBM i agent by setting the required parameters in the JobManager.ini file, in accordance with the settings on the IBM i system.

New Plug-ins for Cloud Automation

Amazon EC2, IBM SoftLayer, and Microsoft Azure plug-ins are available to manage the provisioning and de-provisioning of virtual machines in the cloud, on as-needed basis.

Customers choose to move their application to the cloud to focus on business optimization. Once in the cloud, applications rely on systems provisioned and de-provisioned to run defined business workflows but unpredictable workload volumes. Customers face a new question: Is it better to over-provision cloud resources with the risk of wasting them, or under-provision with the risk of degrading performance and delay the business process?

How about provisioning just the right amount of resources for only the time-period you need them? Exactly what you need, when you need it, and rather than incur extra costs and waste, de-provision when you're done, all automatically.

To succeed in this challenge, a new approach is required, that strictly ties business workflows with cloud resource management. While managing a business application, IT organizations need to be able to orchestrate provisioning and de-provisioning of the infrastructure needed by the business application in the cloud.

IBM Workload Scheduler provides three Cloud Automation plug-ins, for different cloud providers, to manage the provisioning and de-provisioning of virtual machines in the cloud, on as-needed basis. By orchestrating the application workflow and the workflow that manages the entire lifecycle of the virtual machines needed by the applications (including the actions: start, stop, snapshot, etc...), IBM Workload Scheduler can increase both business and infrastructure agility. The plug-ins are:

- Plug-in for **Amazon Web Services (EC2)**
- Plug-in for **IBM SoftLayer**
- Plug-in for **Microsoft Azure**

Select your cloud provider, and add one or more jobs in the job stream that automates your business process flow to provide a flexible and dynamic allocation of cloud resources to your workload.

See the video: Workload Scheduler for Cloud Automation on the Workload Automation YouTube channel. More videos are available for the features released with V9.4 Fix Pack 3 on this dedicated playlist: Workload Scheduler V9.4, Fix Pack 3.

Apache Spark Plug-in

With the new IBM Workload Scheduler plug-in for Apache Spark, you can schedule, monitor and control Apache Spark jobs.

Apache Spark a lightning-fast cluster computing technology, designed for fast computation. It is based on Hadoop Map Reduce and extends the MapReduce model to efficiently use it for more types of computations, which includes interactive queries and stream processing. The main feature of Apache Spark is its in-memory cluster computing that increases the processing speed of an application. IBM Workload Scheduler provides a plug-in for Apache Spark that helps you manage your big data processing and analytics. With the plug-in for Apache Spark, you can define, schedule, monitor, and control Apache Spark jobs. Add one or more Apache Spark jobs in the job stream that automates your business process flow to obtain an end-to-end workload management solution.

For details, see Scheduling Applications with IBM Workload Scheduler

Restarting JSR 352 Java Batch jobs from the point of failure

You can restart JSR 352 Java Batch jobs from the point of failure.

During the execution of a JSR 352 Java Batch job, when monitoring the job from the Dynamic Workload Console

Features introduced with Fix Pack 2

Mixed pricing models

Easily define different pricing models on workstations in your environment.

According to your IBMIBM® Workload Scheduler license, IBM® License Metric Tool helps you maintain your license compliance. By using License Metric Tool, you can generate reports that summarize your license consumption. The generated reports are maintained on the License Metric Tool server and should be periodically reviewed and signed, creating a history for audit purposes in the process. If you are contacted by a third-party software compliance auditor who plans to visit your enterprise to carry out a software audit, ensure that all reports are up-to-date and signed, and then supply copies of reports that cover the time periods that the auditor requests.

You can now take advantage of improved flexibility when defining your pricing model. For each single workstation in your environment, you can define the pricing model to be applied.

When you set the license Type keyword to by Workstation in optman, you can define for each single workstation the pricing model to be applied to it at the workstation creation time.

Replying to messages for IBM i child jobs

Support for replying to messages for an IBM i parent job was introduced in a previous release. With this release, the same support is extended to IBM i child jobs. When an IBM i job is in SUSP (suspended) status, waiting for a reply to a message, you can reply to the message for parent and child jobs from the Dynamic Workload Console when monitoring the parent job.

Specifying dependencies that link a job to a job stream or a job stream to a job

Dynamic Workload Console enhanced for z/OS users with application dependencies support.

Setting the Manually Hold, NOP, and Critical options in the AD database

You can now set the Manually Hold, NOP, and Critical options for a job directly in the Application Description database, from either the Options or Variable Duration and Deadline section.

REST API for z/OS users

Already available in the distributed environment and now available in a z/OS environment, a set of fully functional APIs that are implemented based on Representational State Transfer (REST) services. The REST API helps you easily integrate workload scheduling capabilities with external products and solutions.

The following are requests for enhancements (RFEs) introduced in Fix Pack 2:

RFE 179819: Database job executor handles stored procedure errors

Enhance the database job executor to handle stored procedure errors.

RFE 109287: Rerun multiple jobs with a single confirmation prompt

Rerun multiple jobs without having to confirm the rerun action for each individual job.

You can now select multiple jobs from the Dynamic Workload Console and rerun all of them in a single action. Previously, a confirmation dialog prompted you to confirm the rerun for each job selected. When rerunning a large number of jobs this can be time consuming. With this enhancement, a confirmation dialog lists the jobs you want to rerun and prompts you a single time to confirm the rerun on all of the jobs.

A side effect of this new feature is a more responsive user interface with improved response times. The more frequently used actions such as, setting the priority or limit from the Dynamic Workload Console monitoring portlet, have been updated so that they run more smoothly.

RFE 102143: Lengthen text field for script path

Lengthen the size of the field related to a script to be run. When defining a job that runs a script as the task, the text field specifying the path to the script can now accommodate a much longer string. For example, if the path is quite long or if it contains numerous variables, they are now displayed in the text field when you view the job definition from both the Workload Designer and from the List Workload Definitions portlet.

RFE 15616: Actual workstation displayed when monitoring jobs

The name of the workstation where a job, scheduled to run on a pool or dynamic pool, actually ran.

When jobs are scheduled to run on pools or dynamic pools, you might want to monitor the job or the workstation where the job ran. Previously, this information was available only in the job log. With this enhancement, the name of the actual workstation where the job ran is also available in a new column in the monitor job query. This detail is available if the job has started or has already run. This information can also be output in reports.

This information can also be useful when you need to determine your license consumption and therefore need to know on which workstation in the pool the job actually ran.

For details about the actual workstation see the columns that can be defined when monitoring jobs in the Dynamic Workload Console. The runtime information contained in the composer **showjobs** command also contains this information.

RFE 108425: File monitor support for already created files

Normally the **filemonitor** utility runs an initial scan and then runs subsequent scans to detect any new or changed files since the initial scan that match specific criteria. This means that if there are any existing files matching the criteria when the initial scan runs, they are not considered. The utility has been updated with a new parameter to be able to discover existing files during the initial scan that match the criteria and can therefore generate an event.For more information see the **-generateEventsOnFirstScan** argument for the Filemonitor command.

RFE 106345: RUN PJP and PVU License Networks in the SAME Network

Easily define different pricing models on workstations in your environment.

For more information about new features introduced with this Fix Pack, see Summary of enhancements.

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

Features introduced with Fix Pack 1

Dynamic Workload Console upgrade support for version 8.6

Fix Pack 1 now supports the upgrade for version 8.6 instances. For details, see "Upgrading Dynamic Workload Console version 8.6" on page 28.

Extended support for the following product releases
- Windows 2016.
- WebSphere Application Server 8.5.5 FP 11. For a fresh installation of the Dynamic Workload Console version 9.4.0 Fix Pack 1 with WebSphere Application Server 8.5.5 FP 11, see the section about Known limitations and workarounds.
- Jazz for Service Management 1.1.3 CP2.
- Installation Manager 1.1.8.6.

Enhancements to What-if Analysis

Fix Pack 1 delivers a number of enhancements in the What-if Analysis Gantt view.

What-if analysis available from non-critical jobs in a z/OS environment

In addition to launching the What-if analysis from any critical job in a z/OS environment, you can now also launch it from any non-critical job that is part of the critical network.

Assess impact on critical jobs quickly by narrowing the display of successors to only critical jobs

Show the impact only on critical jobs, excluding all other successor jobs. Viewing the impact in this way narrows the results to display only the most critical and also improves performance when there is a high number of successor jobs to display.

Optimizing performance with the capability of excluding predecessors from the view

An new option has been added to the Tdwcglobalsettings.xml file, **whatIfAutoLoadPreds**, that enables you to manage whether or not you want to automatically load predecessors in the view. The default setting is to avoid loading predecessors which, in the case of hundreds of predecessors, results in optimized performance.

Setting the Earliest Start Time to the Estimated Start Time calculated by the server

Even if all predecessors are not displayed in the view, you can still consider the impact of predecessors on a job's earliest start time. The server calculates an estimated start time for the job and through a new action named "Set Earliest Start Time to Server Estimation", you can set the job's earliest start time, to the time calculated by the server as the estimated start time.

For information about What-if analysis capabilities see Analyzing the impact of changes on your environment.

Customizable Dashboard

The following Dashboard filters are now available in a Dynamic Workload Console connected to a z/OS engine:

- Job name
- Owner
- Job stream name
- Workstation name

Higher level of control over the What-If Analysis

A new **optman** global option is available to administrators, to make the What-If Analysis feature optional in your environment.

Administrator's level of control over the What-If Analysis has increased with the introduction of a new **optman** global option. By setting the **optman enWhatIf | wi** global option to no, administrators can centrally disable the What-If Analysis feature, which is enabled by default in your environment to simulate and evaluate the impact of changes on the current plan. You have to run "JnextPlan" to make the change effective. For information about What-if analysis capabilities see Analyzing the impact of changes on your environment.

For information about the interaction of the **enWhatIf | wi** global option with the **enWorkloadServiceAssurance | wa** global option, which enables or disables privileged processing of mission-critical jobs and their predecessors, see Disable the What-if Analysis

Revamped Graphical Views

Enhancements made to the graphical view of your database objects has been extended to the plan to provide a consistent view and user experience.

Consistent views and revamped user experience across graphical views: Job Stream View, Preproduction Plan View, Show Plan View, Modelling Graphical View

Simple shapes to easily identify objects have been used, new icons to improve the interaction and quickly identify actions have been created, new colors and background to better visualize the objects have been applied.

Merge Impact View with the Job Stream View to provide a more comprehensive view for monitoring and recovery actions

In previous releases the Impact View and Job Stream View were provided as separate views to monitor the progress of your job streams in the plan. With this release, the Impact View has been merged with the Job Stream View to provide a single view from where you can analyze one or more job streams, jobs, dependencies and also analyze the impact a job stream and its jobs can have on the rest of the plan. This view is available in both distributed and z/OS environments.

Automatic refresh in Job Stream View

In previous releases, any actions performed in this view that affect the plan required a manual refresh of the view using the Refresh option. With this release, the view is automatically refreshed so that the information is always up-to-date. The automatic refresh is supported only on connections to engines at the Version 9.4 Fix Pack 1 level or later.

Persistent layout

The flexibility of the layout of the graphical view from the Workload Designer in distributed environments enables you to reposition objects in whichever way is most useful or meaningful for you. If you save your layout in the Workload Designer, the same layout or positioning is maintained when you open the same job stream in the Job Stream View.

Some tips to optimize the performance of the new Graphical Views

When working with job streams with more than 500 objects (jobs, job streams and dependencies), to optimize the application performance of the new Graphical Views it is recommended that you follow some tips:

Choose Google Chrome

Chrome has better performance compared to other browsers. In some cases, it is 4 times faster than other browsers to open Graphical Views containing complex objects. Also, using Mozilla Firefox is preferable to Microsoft Internet Explorer or Microsoft Edge.

Customize and save the job stream layout

When viewing job streams in the Job Stream View, first customize and save the job stream layout in the Workload Designer modelling graphical view and then open it in the Job Stream View where the same layout is reused to achieve better performance.

Use Graphical Views on a powerful client in terms of CPU and RAM

Adequately set the hardware configuration of the client machine from which the Dynamic Workload Console is accessed.

For more information see Graphical Views in the plan.

Advanced rerun flexibility

The new advanced rerun options help you orchestrate your workflows seamlessly, building recovery logic into the job definition itself and rerunning job successors directly from the Monitor Workload view.

When you create a job definition, you can now specify that you want the job to rerun for a specific number of times and after a specific interval, in case of failure. This ensures that fewer alerts are generated and the workflow continues smoothly. For example, if you have a job that needs to connect to a server which is periodically restarted, you can specify in the job definition that you want the job to rerun for a specific number of times and after a specified interval.

If the parent job ran on a workstation that is part of a pool or a dynamic pool, you can decide whether it must rerun on the same workstation or on a different one. This is because the workload on pools and dynamic pools is assigned dynamically based on a number of criteria and the job might be rerun on a different workstation.

Also, if a job fails, you can identify all its successors at a glance and decide whether you want to rerun the job with its successors. You can rerun either all successors in the same job stream, or all successors overall, both in the same job stream and in other job streams, if any.

For more information about how to specify the rerun options in the job definition from the Dynamic Workload Console, see Controlling job and job stream processing.

New automation utilities

IBM Workload Scheduler Job Management Plug-in

The new Job Management plug-in is available in the Automation Utilities plug-in category. Automation Utilities are plug-ins that facilitate specific operations. Use the Job Management plug-in, to run one of the following actions on any job in the job stream where the Job Management job is running:

- Rerun
- Rerun the job and all its successor jobs
- Rerun the job and its successor jobs in the same job stream
- Release
- Release Dependencies
- Cancel
- Cancel Pending
- Hold
- Kill
- Confirm ABEND
- Confirm SUCC

The Job Management plug-in simplifies recovery scenarios and enables the automation of iterative workflows. For example, in a recovery scenario, you can insert a Job Management job in your

workflow. This causes the original job to rerun automatically when the relevant recovery job completes successfully, reducing effort and time consumption.

For more information see Job Management jobs.

Job Stream Submission Plug-in

The new Job Stream Submission plug-in is available in the Automation Utilities plug-in category. Automation Utilities are plug-ins that facilitate specific operations. Use the Job Stream Submission plug-in, to submit a job stream for processing.

By adding the Job Stream Submission plug-in to your workflow, you can automate the submission of a specific job stream, minimizing code scripts and manual effort. Also, you can specify the earliest start time for the job stream and define the variable table associated to the job stream.

For more information see Job Stream Submission jobs.

Condition-based workload automation

Condition-based workload automation provides a simple and immediate way to have your workflows start at just the right time. You can define in your job stream a condition that, when met, releases the job stream to run as scheduled.

For example, if you have a job stream containing jobs which analyze one or more files, you can have the job stream start only after the file or files have been modified or created. Also, if the job stream contains jobs which process the data in a database, you might want to have the job stream start after enough rows have been written into the database. You can also have IBM Workload Scheduler check repeatedly whether the condition is met.

You can start your workflow based on one of the following conditions:
- One or more files being created.
- One or more files being modified.
- A job completing with its output condition satisfied. You can apply this logic to the job stream or to specific jobs in the job stream.

For more information, see Condition-based workflow automation.

New option for defining the latest start time in job streams

The **Apply to each job** check box defines the latest start time of a job stream. It also determines the behavior of the jobs in the job stream when the job stream is approaching its latest start time. Select the **Apply to each job** check box to avoid your job stream being suppressed if it starts right before its latest start time and the duration of one or more jobs in it exceeds the latest start time.

For more information, see the online help for the job stream properties panel in the Workload Designer.

New option for defining actions on late jobs

The **Kill if deadline expires** check box defines the action to be taken on a job in job stream when the job's deadline expires. If the job is running when the deadline expires, it is killed. Killed jobs end in the ABEND state. Any jobs or job streams that are dependent on a killed job are not released. If the dependency on the job is a conditional dependency on the job completing in ABEND state, that dependency is released.

For more information, see the online help for the job properties panel in the Workload Designer.

New options in managing workload applications
The following new options are available:

Export a job stream definition as a workload application template
From the Workload Designer, you can export a job stream definition and save it as a workload application template in a compressed file. The job stream definition can then be imported in another environment.

For more information, see Exporting a job stream definition as a workload application template.

Rename a workload application during the import process
A new parameter **-workloadApplicationName <workload_application_name>** is available for the **wappman -import** command to rename the workload application during the import process.

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

RFE 17980
Restart the job stream from the given job of a job stream. (Internal ID 57221)

RFE 25295
Rerun a specific job and all of it successors, both in the same job stream and in other job streams (see the Condition-based Workload Automation feature). (Internal ID 65671).

RFE 33200
Create external dependency from the graphical Plan View. (Internal ID 79752)

RFE 44226
Need a copy button on the Monitor Jobs panel EDIT JCL. (Internal ID 99136)

RFE 46521
Improve recovery options for a job. (Internal ID 103418)

RFE 65873
Changed behavior of selections in tables in the Dynamic Workload Console. When performing an action on a selected item in the table, either by right-clicking or from the toolbar, after the action is performed the selection is cleared so that you can perform a different action on a different selection. You can also multi-select items in a table and perform an action on all selected items. (Internal ID 125267)

RFE 69212
When rerunning a job in a pool, you can optionally rerun the job on the same workstation where it previously ran (see the Condition-based Workload Automation feature). (Internal ID 130343)

RFE 78682
Additional columns are now available when monitoring jobs on multiple engines. (Internal ID 144976)

RFE 80759

Hyperlinked properties when updated should auto-refresh automatically in DWC. (Internal ID 146988)

RFE 101904

Search option improvements in the Dynamic Workload Console Workload Designer allows for object selection before inputting keyword so that the search is run against the object selected. (Internal ID 172565)

RFE 101905

The search field in the Dynamic Workload Console Workload Designer now provides user assistance with examples of the syntax that can be used in the field. (Internal ID 172564)

RFE 104082

Dynamic Workload Console - Disable IE Compatibility View. (Internal ID 175746)

For more information about new features introduced with this Fix Pack, see Summary of enhancements.

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

APARs and defects fixed in IBM Dynamic Workload Console Fix Pack 6 for version 9.4.0

This section lists APARs and internal defects solved by Fix Pack 6.

This Fix Pack includes a number of fixes for internal defects found by the verification team that mainly cover the following product capabilities: installation, auditing, and mirroring.

APAR	ABSTRACT
IJ07389:	DWC MODIFY PRIORITY PANEL DOES NOT OPEN FROM MONITOR JOBSTREAMS IF USING IE:
IJ07887:	NOT SELECTED JOB STREAMS ARE TO BE CANCELLED IF JOBSTERAMS ARE ALREADY CANCELLED FROM OTHER JOBSTREAM MONITOR
IJ07891:	ON DWC ON REPLY TO LOCAL PROMPT : GETTING ERROR AWSJDB101E AWSJDB817E AWSUI697W BUT THE REPLY IS PERFORMED CORRECTLY ANYWAY
IJ10798:	DEADLINE TIME SHOWS AS GMT IN JOBSTREAM VIEW
IJ11152:	"HOW-MANY=0" RETURNS BLANK RESULT ON THE PLAN OBJECT QUERY REST API.
IJ11153:	ERROR OCCURS WHEN DISPLAYING JOBSTREAM PROPERTIES WITH JAPANESE ENGINE CONNECTION NAME
IJ11508:	DWC WITH IE 11 IN COMPATIBILITY VIEW DOES NOT SHOW CALENDARS
IJ11905:	IN DWC 9.4.X, IF WEBUI TIMEZONE AND ENGINE TIMEZONE ARE DIFFERENT, JOB TIME IN JOB HISTORY REPORT IS INCORRECT.

IJ20447:	WHEN USER RIGHT-CLICKS ON THE JOB TO RUN HISTORY, IT RETURNS A BLANK PAGE. THE SAME HAPPENS WHEN USER USES "MORE ACTIONS" OPTION IN THE TOOLBAR: http://www.ibm.com/support/fixcentral/swg/ quickorder?parent=ibm%7ETivoli&product=ibm/Tivoli/ Tivoli+Workload+Scheduler&release=9.4.0&platform=All &function=fixId&fixids=9.4.0-TIV-TWS-FP0006-IJ20447 &includeRequisites=1&includeSupersedes=0 &downloadMethod=http&source=fc
IJ12138:	RUN CYCLE "YEARLY" LAYOUT IS COLLAPSED WITH IE11.
IJ12645:	DWC 9.4 PERFORMANCE DEGRADED AFTER UPGRADE 9.1 => 9.4
IJ12783:	DWC 9.4-FP05 RECEIVING AWSUI4064E AND AWSJCO005E WAS ERRORS WHEN ATTEMPTING TO WORK WITH TWSZ PLAN ACTIONS.
IJ12956:	SEARCH" DOES NOT RETURN ANY JOB DEFINITIONS ON "RERUN JOB" JOB DEFINITION SEARCH ON IE11 IF JAPANESE ENGINE NAME USED.
IJ13299:	JOB DEPENDENCY NOT WORKING PROPERLY IN TDWC
IJ13394:	SEARCH BUTTON DOES NOT WARK ON THE "SHARE TASK" WINDOW
IJ13569:	ERROR MESSAGE IS RETURNED RUNNING THE WAPL PYTHON SAMPLE FROM RESTAPI
IJ13912:	UNABLE TO IMPORT SELF SERVICE CATALOGS WHEN THERE IS NO ASSOCIATE.
IJ15080:	DWC 9.4-FP04 SYSTEMOUT.LOG MESSAGES @ "COM.IBM.TWS.WEBUI.APPSERVICES.COMANDS.EXECUTIONRESULT@XXXX"
IJ16233:	EXTRA BACKWARD SLASH "\" ARE GETTING ADDED EACH TIME CUSTOMER EDIT THE EVENT RULE
IJ16431:	DWC 9.4 FP05 "SUBMIT PREDEFINED JOSBTREAM" PANEL THE selected variable from VARTAB IS OVERRIDEN BY THE DEFAULT MAIN_TABLE VAR
IJ16453:	ADDING MULTIPLE WORKSTATIONS TO AN EVENT RULE IS IGNORED WHEN EDITING IN DWC
DEFECT:	**ABSTRACT:**
WA-78181:	CLONE - JOB STREAM VIEW LIVE UPDATE IS RETURNING ALWAYS THE FULL LIST OF JOBS
WA-79082:	DWCz: INVALID IDENTIFIER WHEN EDIT JCL IN MONITOR WORKLOAD - JOBS
WA-79360:	94FP6: APPSCAN FOUND CROSS-SITE SCRIPTING ON AjaxServiceDispatcherServlet
WA-80847:	SPECIAL CHARACTER ON EVENT RULE WHEN USING THE FILE MONITOR
WA-80911:	94FP6: WHITESOURCE SHOWS VULNERABILITY ON SWAGGER-UI-v2.2.9

APARs and defects fixed in IBM Dynamic Workload Console Fix Pack 5 for version 9.4.0

This section lists APARs and internal defects solved by Fix Pack 5.

This Fix Pack includes a number of fixes for internal defects found by the verification team that mainly cover the following product capabilities: installation, auditing, and mirroring.

APAR	ABSTRACT

IJ07104:	THE JOB RUN HISTORY'S 'ACTUAL START' AND 'ACTUAL END' TIME ARE REVERSED
IJ07470:	UNABLE TO IMPORT A CRONTAB FILE USING THE IMPORT DEFINITIONS OPTIONS FROM THE DWC
IJ08138:	DWC 9.4 FP4: REFRESH MONITOR DOES NOT WORK WITH MDM 9.3 FP3 OR EARLIER
IJ08739:	JOB MONITOR IS NOT LOADING JOBS IN DWC
IJ09120:	JOBS THAT ARE IN HOLD, ARE SHOWING THE ACTUAL START WITH THEDATE 12/31/1969
IJ09742:	UNABLE TO INCLUDE A '/' (SLASH) IN THE SEARCH STRING WHEN FILTERING ON 'SCHEDULED TIME' AFTER UPGRADE TO DWC 9.4.X

DEFECT	ABSTRACT
WA-74258	WITH INTERNET EXPLORER, IN RERUR WITH SUCCESSORS, THE RERUN DOES NOT WORK
WA-76204	APPLAB: WEBAPP/01 - CROSS SITE SCRIPTING (INPUT VALIDATION)
WA-76205	APPLAB: WEBAPP/02 - HTML & IFRAME INJECTION (INPUT VALIDATION)
WA-76587	FROM LIST WORKLOAD DEFINITION, JOB AND JS TABLE, THE ACTION CREATE LINK DOES NOT WORK
WA-76589	INCORRECT JOB STATUSES FROM DWC AFTER SUPPRESSION OF A JOB CHAIN

APARs and defects fixed in IBM Dynamic Workload Console Fix Pack 4 for version 9.4.0

This section lists APARs and internal defects solved by Fix Pack 4.

This Fix Pack includes a number of fixes for internal defects found by the verification team that mainly cover the following product capabilities: installation, auditing, and mirroring.

APAR	ABSTRACT
IJ00423:	GETTING AWSJCO005E WHEN CHANGING USER PASSWORD FOR PLAN FROM DWC
IJ05207:	DWC 9.4-FP02 NO LONGER HAS AN OPTION TO EDIT THE CARRY FORWARD FLAG WITHIN THE PLAN
IJ05247:	DWC FREEZE FOR A PERFORMANCE DEGRADATION CAUSED BY EXCESSIVE CALLS TO MDM GET ENGINE INFO
IJ06555:	WHEN MODYFYING (EARLIEST START TIME), YOU CANNOT SELECT PM TIME ON JOB PROPERTIES

DEFECT	ABSTRACT
WA-71559:	WA is wrongly deleted by DWC after AWSJCO016E message
WA-71861:	Incorrect job status shown by DWC after suppression of a job stream
WA-71875:	WAT:connector error while importing a wat on dwc with contents option
WA-71928:	DWC job status out of sync with conman
WA-71990:	Dynamic Agent unlinked after job stream submission with dependencies
WA-72142:	Incorrect documentation for DWC filter button

APARs and defects fixed in IBM Dynamic Workload Console Fix Pack 3 for version 9.4.0

This section lists APARs and internal defects solved by Fix Pack 3.

This Fix Pack includes a number of fixes for internal defects found by the verification team that mainly cover the following product capabilities: installation, auditing, and mirroring.

APAR	ABSTRACT
IV82812	TWS PLUG-INS DO NOT PERFORM A QUIT ACTION FOR FTP JOBS RUN THROUGH TWS UPON LOGOUT OR DISCONNECT OF THE SESSION
IV87759	DWC UNABLE TO EDIT A JOB THAT RUNS A SCRIPT IN WORKLOAD DESIGNER IN IE11, MESSAGE AWSUI6158W
IV99439	INCORRECT DATE INTO "ACTUAL START" ON LISTING JOBS ON ZOSENGINES
IV91109	WHEN CREATING A WINDOWS JOB, CAN NOT PASTE CONTENT TO THE SCRIPTFIELD.
IJ01984	PLAN VIEW DOES NOT REFRESH AUTOMATICALLY IF BROWSER AND TWS ENGINE TIME ARE NOT SYNCHRONZIED
IJ02081	JOB RERUN FROM IMPACT VIEW FAILS WITH AWSUI6401E
IJ00780	DWC 9.4.0.1 ERROR AWSUI0791E WHEN SELECTING JOB HISTORY
IJ00778	BAD BEHAVIOR OF CONDITIONAL DEPENDENCIES
IJ02171	STREAM IN DWC IN HOLD WHILE IN CONMAN IS SUCC
IV92451	WHEN AD HOC SUBMITTING JOB STREAMS USING DWC RETRUNED LIST OF
IJ02494	JOB EVENT CODES 123-127 NEED TO BE ADDED TO THE DOCUMENTATION
IJ04583	JSVIEW AUTOREFRESH IS SLOW DUE TO AN INCORRECT SQL
IJ03889	TDWCGLOBALSETTINGS MONITOR PARAMETERS ARE NOT TAKING EFFECT ON TDWC
IJ04085	CREATE EVENT RULES DOES RUN ONLY IN ENGLISH.
IJ04102	DWC DISPLAYS NEGATIVE PROMPT NUMBERS

APARs and defects fixed in IBM Dynamic Workload Console Fix Pack 2 for version 9.4.0

This Fix Pack includes a number of **fixes for internal defects** found by the verification team that mainly cover the following product capabilities: installation, auditing, and mirroring.

This section lists APARs solved by Fix Pack 2.

APAR	ABSTRACT
IV99644	Job status mismatch between DWC & conman
IV94014	ERROR: AWSUI6172E IS DISPLAYED WHEN TRYING TO OPEN THE JOB DEFINITION INTO JOBSTREAM
IJ00450	CHECKSYNC ABENDS WITH ERROR: "NULL" ON MASTER WITH TZ=NO
IV95090	APPLICATIONS TEMPLATES CONTAINING VARTABLE WITH "\" ARE WRONGLY IMPORTED VIA TDWC

IV96661	INCORRECT FRENCH TRANSLATION FOR THE WORD "BLOCKED" WHEN VIEWINGMONITOR JOSBTREAMS. IT BADLY SHOWS GROUPé, SHOULD BE BLOQUé.
IV94432	ONOVERLAP DONOSTART AND ONOVERLAP ENQUEUE DOES NOT WORK IN CROSSDAY SCENARIO
IV98210	DEADLOCKS WITH CANCEL JS

APARs and defects fixed in IBM Dynamic Workload Console Fix Pack 1 for version 9.4.0

This Fix Pack includes a number of **fixes for internal defects** found by the verification team that mainly cover the following product capabilities: installation, auditing, and mirroring.

This section lists APARs solved by Fix Pack 1.

List of APARs fixed:

IV60757
> AFTER SWITCHING MANAGER CANNOT BROWSE JOBLOGS FOR ALL DYNAMIC JOBS RUN ON THE MASTER

IV72221
> CUSTOMIZE THE SEARCH NUMBER OF ELEMENTS IN THE WORKLOAD DESIGNER

IV84906
> SELF-SERVICE CATALOG LINK ON MOBILE IS NOT WORKING FROM MAIN PAGE

IV90870
> ESTIMATED DURATION WRONG ON MONITOR JOBS IN DYNAMIC WORKLOAD CONSOLE AND CONMAN

IV92221
> MANY ENGINE DEFINITIONS CAUSE PROBLEMs FOR MONITOR WORKLOAD

IV92374
> JOB STREAMS STAY IN READY WHEN VIEWED FROM THE DYNAMIC WORKLOAD CONSOLE IN A NOP SCENARIO

IV93052
> unable to view joblog from DWC/conman when job defined on XA hosted by DWB using jsdl and with resources

IV93638
> DWC HISTORICAL REPORT SHOWING THE ACTUAL START TIME INCORRECTLYFOR JOBS THAT STARTED PRIOR TO DST

IV94433
> LIST WORKLOAD DEFINTIONS DOES NOT DISPLAY

IV95222
> JOB LOG TRUNCATED AFTER 100 LINES

Known limitations and workarounds

The following are software limitations and workarounds that affect Dynamic Workload Console version 9.4.0 Fix Pack 1, 2, 3, 4 and 5. For a list of known

problems and limitations documented for the V9.4 General Availability release, refer to the http://www-01.ibm.com/support/docview.wss .

9.4 Fix Pack 6:

No known software limitations
> There are no known limitations for this Fix Pack.

9.4 Fix Pack 5:

No known software limitations
> There are no known limitations for this Fix Pack.

9.4 Fix Pack 4:

Labels and messages are not translated in all languages (73095 & 73096)
> In the Import Workload Application Template feature, some labels and messages have not been translated.

9.4 Fix Pack 3:

Null Pointer Exception occurs changing the scheduled time from plan (70349)

> When you are monitoring job streams, if you change information about the scheduled time for a job stream and then go back to the list of results containing the job stream, the hyperlink for the job stream might not work.

> **Workaround:** Refresh the page.

Invalid identifier error thrown after saving dependencies for z/OS (70908)
> When monitoring your workload, adding or deleting dependencies between jobs and job streams, or between job streams and job streams, the following error might occur and the operation fails:
>
>  ```
>  AWSUI4064E The following error occurred:
>  AWSJDB101E The object "invalid identifier" was not found
>  ```

Job stream dependencies incorrectly displayed - Only for z/OS engines (71113)
> When viewing a job stream with more than one job stream predecessor dependency in the What-if Analysis view, only one dependency might be visible. If you delete the dependency, both the visible dependency is deleted, as well as the dependency that is not showing in the view.

Text truncated following a copy and paste (71102)
> When editing a job definition, if you copy and paste text into the fields, URL and REST URL, and the number of characters in the text exceed the maximum allowed, then the text actually copied to these fields is truncated and no warning is issued.

Software limitations related to Dashboard Application Services Hub (DASH)

> **[21563,999,000] SHIFT+TAB does not work properly in the header of the Monitor Workload panel**
> > In the header of the Monitor Workload Panel, the navigation from a tab to another does not work with Shift+Tab.
>
> > **Workaround:** Do not use Shift+Tab but only Tab to move from a item to another.

> **The same panel opens multiple times in the same view (70823)**
> > If you go to Submit predefined job streams to select a job stream, every time you enable or disable the check-box of **specify date and time** a new page **Submit job stream into plan** opens.

9.4 Fix Pack 2:

Query parameter transmitted in SSL Request (177529)
> A request, sent over SSL, contains parameters that are transmitted in the Query part of an HTTP request. When sending requests, the browser's history can be used to reveal the URLs that contain the query parameter names and values.

z/OS® engine connection does not work after updating the port number (184418)
> If you run the script updateZosEngine.sh in *DWC_Instdir*/wastools to update the port number of a z/OS engine connection and then install Fix Pack 2, the engine connection from the Dynamic Workload Console fails because the port number has reverted back to the original value before running the updateZosEngine.sh script.
>
> **Workaround:** After the Fix Pack installation, run the updateZosEngine.sh script again and then restart the WebSphere Application Server.

Monitor job properties panel - change date (185006)
> In Monitor job properties panel, if you enter a wrong date format for the start of a job (earliest start - latest start), the system automatically replaces the value specified with the date of the current day without any alert.

From the job stream graphical view with a z/OS engine connection, a job is deleted but remains in the view (185124)
> When monitoring a job stream from the job stream graphical view, if you define a dependency between two jobs (in two different job streams) or between a job stream and a job (in a different job stream), and then try to delete the successor job, the job is not deleted from the view although the dependency has been removed.

REST API z/OS (185139, 185140)
> Queries related to critical jobs and critical path do not work for the REST API in a z/OS environment.

Close selected job streams object does not work after displaying job stream run cycle preview (185169)
> In Workload Designer, if you click on Run Cycle Preview tab, select the job stream object in the Workload Designer Working List and click on Close Selected button, the job stream object does not close.

Software limitations related to Dashboard Application Services Hub (DASH)

> **[DASH 67674] Cross-site request vulnerability (184233)**
> > A defect has been opened against DASH (67674) to address the issue of cross-site request forgery.

> **[Dash 67677] Cached content can be accessed via HTTPS (184403)**
> > Browsers might store a local cached copy of content received from web servers. Few internet browsers, including Internet Explorer, cache content accessed via HTTPS. If sensitive information in application responses is stored in the local cache, then this might be retrieved by other users who have access to the same system in a future time. A defect has been opened against Dash (67677).

9.4 Fix Pack 1:

After a fresh installation of the Dynamic Workload Console version 9.4.0 Fix Pack 1 with WebSphere® Application Server 8.5.5 FP 11, the administrator cannot view or use any of the portlets
> After a fresh installation of the Dynamic Workload Console version 9.4.0

Fix Pack 1 with WebSphere Application Server 8.5.5 FP 11, the administrator cannot view or use any of the portlets. From the Dynamic Workload Console, he can just assign manually one of the following roles to the logged in users:

- TDWBAdministrator
- TWSWEBUIAdministrator
- Administrator
- chartAdministrator
- iscadmins
- samples

To prevent this problem, run the following procedure:

1. Install WebSphere Application Server 8.5.5 FP 11.
2. Apply WebSphere Application Server iFix 30449.999.744.8.5.5.10-WS-WAS-IFPI76481 available on IBM Fix Central.
3. Install Jazz™ for Service Management 1.1.3 CP2.
4. Install the Dynamic Workload Console version 9.4.0 Fix Pack 1.

The iFix enables Jazz for Service Management mapping between Dynamic Workload Console user roles and the administrator role.

If you install the iFix after installing the Dynamic Workload Console, you can manually map user roles and administrator role by running the following commands from the Dashboard Application Services Hub `consolecli` command line:

```
Run [JazzSM_Install_path]/ui/bin/tipcli.sh MapUsersToRole
--username <TDWCadmin>
--password <TDWCadminpassword>
--roleName TWSWEBUIAdministrator
--usersList
uid=admin,o=defaultWIMFileBasedRealm
Run[JazzSM_Install_path]/ui/bin/tipcli.sh
--username <TDWCadmin>
--password <TDWCadminpassword>
--roleName TDWBAdministrator
--usersList
uid=admin,o=defaultWI
```

Job streams graphically overlap in the graphical view (178184)

When loading job stream B in the graphical view, and job stream B has a dependency on job stream A, if job stream B contains a large number of objects, it might happen that opening job stream B it can graphically overlap job stream A.

Workaround: To workaround this problem, click the auto-layout button to rearrange the graphical view, or manually adjust job stream B layout in the view.

In the Job Stream View, a job stream with hundreds of objects (jobs and dependencies) might not be saved in PNG format (179497)

In the Job Stream View, trying to save a job stream with hundreds of objects (jobs and dependencies), the image might look corrupted and might not be possible to save it.

Workaround: To workaround this problem, save the job stream in SVG format and then use the appropriate tool to convert it from SVG to PNG format.

Connecting the Dynamic Workload Console version 9.4.0 Fix Pack 1 to an engine machine running version 9.3.0 Fix Pack 3 or earlier, some functions might be missing.

The product features available from the Dynamic Workload Console are fully supported when connecting to a version 9.4.x engine through the Representation State Transfer Services (REST) programming interface represented by port number 31116 (default port). However, this connection does not ensure a complete functionality when connecting to previous engine versions (version 9.3.0 Fix Pack 3 or earlier).

Workaround: When connecting the Dynamic Workload Console version 9.4.0 Fix Pack 1 to an engine running version 9.3.0 Fix Pack 3 or earlier, modify the port number for your engine connections to the Enterprise JavaBeans (EJB) interface represented by port number 31117.

Disabling the plan mirroring on the engine and submitting a job stream into the current plan, the status of the internal jobs is not updated in the graphical view.

The limitation is due to the fact that, disabling the plan mirroring, the information stored in the database is not available. The same problem happens if the database is down.

How to configure Dynamic Workload Console to use all authenticated portal user roles

For the steps needed to configure the Dynamic Workload Console to use all the authenticated portal user roles see Configuring roles to access the Dynamic Workload Console.

Fix Pack structure

This section describes the structure of the images contained in this Fix Pack.

Fix Pack files available using Fix Central

This is the structure of the Fix Pack in IBM Fix Central:

```
+---9.4.0-IBM-IWS-DWC-README-FP0006.zip
|
+---9.4.0-IBM-DWC-AIX-FP0006.zip
|
+---9.4.0-IBM-DWC-LINUX390-FP0006.zip
|
+---9.4.0-IBM-DWC-LINUX_X86_64-FP0006.zip
|
+---9.4.0-IBM-DWC-WINDOWS_X86_64-FP0006.zip
```

Installing the Fix Pack

This section describes how to apply Fix Pack 6.

Before starting the installation, verify that:
- The Dynamic Workload Console is active.
- No user is connected to the Dynamic Workload Console to prevent the data related to their working session from being lost.

This section is divided into the following subsections:
- "Installation notes" on page 24
- "Interoperability notes" on page 24

Installation notes

Read this section thoroughly before installing this Fix Pack.

- Before installing the Fix Pack, ensure you have installed the required prerequisite software. With the Dynamic Workload Console version 9.4 Fix Pack 6, a newer version of Jazz for Service Management is required, version 1.1.2.1.
- Before installing the Fix Pack, ensure you have installed the required prerequisite software. To obtain the latest information about software requirements for IBM Workload Scheduler, run the Software Requirements report and browse to the relevant section.
- **On UNIX systems only**: Before installing either the Dynamic Workload Console version 9.4 or this Fix Pack, make sure that **umask** is set to **022**. To verify that **umask** is set to the correct value, from a command prompt, run the **umask** command. If the value is different from **022**, modify it by running the command:

  umask 022
- If you plan to connect the Dynamic Workload Console version 9.4 Fix Pack 6 to a z/OS engine, ensure the following APAR for the z/OS platform is installed to enable the new support: Application Dependencies in What if Analysis
  - **PI93525**CRITICAL PATH APPLICATION DEPENDENCY SUPPORT

Interoperability notes

Dynamic Workload Console version 9.4.0 Fix Pack 6 supports all product versions indicated in the Dynamic Workload Console version 9.4 Release Notes which can be accessed at the following link: http://www-01.ibm.com/support/docview.wss?uid=swg27048864#interoptable.

Installation methods

When you install the Fix Pack, you can choose one of the following methods:

Disk space requirements

Before starting the Fix Pack installation, ensure that you have the following space available in the file system. The values indicated in the table show the disk space required by the Dynamic Workload Console alone. For the disk space required by other components, see the relevant documentation.

For the most up-to-date information about disk space and memory requirements, generate a dynamic hardware requirements report from the IBM Software Product Compatibility Reports web site at the following URL: http://www-01.ibm.com/support/docview.wss.

Table 1. Disk space requirements for installing a Dynamic Workload Console Fix Pack

Operating System	Installation directory	Temporary directory
AIX®	2 GB	800 MB
Linux s390x	2 GB	800 MB
Linux x86-64	2 GB	800 MB
Windows 64	2,5 GB	1 GB

Note: In addition to the above disk space, the installation requires further 579 MB on /usr file system.

If the installation fails because of lack of free disk space, you must stop the installation, free space on your disk, and start the installation again.

Before Installing

Before installing the Fix Pack using any of the methods described in the following sections, first check your preferences on the DB2 database. To check the preferences, open: **System Configuration > Manage settings > configure settings repository**. If it is set as **use file as settings repository**, then no action is necessary. If it is set as **use database as settings repository**, then carry out the steps shown below:

1. Before starting the upgrade make sure to backup the Dynamic Workload Console database.
2. After upgrading and connecting to the Dynamic Workload Console database, run the following SQL command:

   ```
   ALTER TABLE TDWC.TDWC_Preferenceable ADD isShared integer
   update TDWC.TDWC_Preferenceable set isShared=1 where length(shared)>0
   CREATE INDEX TDWC.INDEX4 ON TDWC.TDWC_PREFERENCEABLE (isShared ASC)
   ```

3. The Dynamic Workload Console 9.4 Fix Pack 6 will start working once the new table is created and populated.

Once you have checked your preferences and taken the appropriate steps shown above, carry out the following steps:

1. Download the appropriate ZIP files for the operating system from IBM Fix Central .
2. Extract the content of the ZIP files into a directory, using one of the extraction tools available on your system or that can be downloaded from the internet. The tool you use must be able to keep the file permissions on the extracted files, for example, infozip. On Windows systems, ensure that you extract the image into a path that is not very long, otherwise, the file name might be

truncated. The maximum length allowed is 255 characters. If you are installing on a UNIX operating system, run the following command:

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

Note: To extract the **.zip** file onto a Windows 64-bit system, ensure that the image is not located on the desktop because the Windows operating system extract tool has a problem. Choose another directory into which to extract the Fix Pack image.

Installing Dynamic Workload Console prerequisites

Before installing this Fix Pack, you must upgrade:
- Jazz for Service Management from 1.1.2.0 to 1.1.2.1
- Dashboard Application Services Hub from 3.1.2.0 to 3.1.2.1

You can run a silent installation of Jazz for Service Management 1.1.2.1 that includes Dashboard Application Services Hub 3.1.2.1:

1. Download the Jazz for Service Management install package.
2. Edit the response file:

   ```
   <JAZZSM_INSTALLATION_MEDIA>/responsefiles/<windows|unix>/
   update_jazzsm_fullprofile_response.xml
   ```
3. In the section:

   ```
   <install modify='false'>
   ```

   remove or comment all the packages with the exception of the following packages:

   ```
   <!-- JazzSM extension for WebSphere Application Server offering
   selected for installation -->
   <offering id='com.ibm.tivoli.tacct.psc.install.was85.extension'
   profile='IBM WebSphere Application Server V8.5' features='main.feature'
   installFixes='none'/>

   <!-- IBM Dashboard Application Services offering
   selected for installation -->
   <offering id='com.ibm.tivoli.tacct.psc.tip.install'
   profile='Core services in Jazz for Service Management'
   features='com.ibm.tivoli.tacct.psc.install.server.feature.tip.install,
   com.ibm.tivoli.tacct.psc.install.server.feature.tip.config'
   installFixes='none'/>
   ```
4. Run the silent installation of Jazz for Service Management.
5. Now, you can proceed with the upgrade of the Dynamic Workload Console.

Installing the Dynamic Workload Console for the first time using the IBM Installation Manager wizard

To install the Dynamic Workload Console for the first time using the interactive wizard, complete the following steps:

1. Perform the actions described in section "Before Installing" on page 25.
2. Download the IBM Workload Scheduler version 9.4 General Availability eImage from Passport Advantage Online from
3. Download the version 9.4 Fix pack 6 TAR or ZIP file specific for the operating system from IBM Fix Central and extract it. To extract the **.tar** file, ensure that you use the GNU version of the TAR command. Otherwise, if you extract the file using a version other than GNU, your Fix Pack installation fails. If you are installing on a UNIX operating system, run the following command:

   ```
   chmod -R 755 <imagesDir>
   ```
4. Depending on the type of operating system, run the following command:

On Windows operating systems:
From the directory where you extracted the files, run `setupDWC.cmd`
`-gapath <extraction_path>`.

On UNIX and Linux operating systems:
From the directory where you extracted the files, run `setupDWC.sh`
`-gapath <extraction_path>`.

where *<extraction_path>* is the path into which you extracted the General
Availability image.

The IBM Installation Manager window opens.

5. Select the packages you want to install and the click **Next** to continue.

6. In the Validating Results page, check that all the prerequisites are fulfilled and
then click **Next** to continue.

7. In the Licenses page, read the license agreement for the selected package. If
you agree to the terms of all the license agreements, click **I accept the terms
in the license agreements** and then click **Next**.

8. In the Install Packages page, type the directory where you want to install the
product and then click **Next** to continue.

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

10. Click **Finish** to complete the installation.

Installing the Fix Pack on the Dynamic Workload Console General Availability version 9.4 using the IBM Installation Manager wizard

To install the Fix Pack using the interactive wizard, complete the following steps:

1. Perform the actions described in section "Before Installing" on page 25.

2. Download the TAR or ZIP file specific for the operating system and extract it.
To extract the **.tar** file, ensure that you use the GNU version of the TAR
command. Otherwise, if you extract the file using a version other than GNU,
your Fix Pack installation fails. If you are installing on a UNIX operating
system, run the following command:

   `chmod -R 755 <imagesDir>`

3. You can start the installation process by using either one of the following
methods:

   IBM Installation Manager program

   a. Start the Installation Manager.

   b. In the menu bar, click **File** > **Preferences**.

   c. The Repositories window opens. Click **Add Repository**.

   d. In the Select a Repository window, in the Filter pane, type the path
   to the directory where the Fix Pack files are located.

   e. In the Directories pane, select the directory containing the Fix Pack
   files and click **OK**.

   The scripts `update.bat` or `update.sh`

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

> **On Windows operating systems:**
>> On Windows platforms, you must use only the 32-bit version of IBM Installation Manager. From the root directory of the eImages, run `update.bat`.
>
> **On UNIX and Linux operating systems:**
>> From the root directory of the eImages, run `update.sh`.
>
> The IBM Installation Manager window opens.

4. Verify that the check box **Search service repositories during installation and updates** is not selected, then click **OK** in the Repositories window.
5. Click `Update`.
6. In the Installation Packages page, select the **"Dynamic Workload Console"** > **"Version 9.4.0.6"** product package. Click **Next** to continue.
7. In the Licenses page, read the license agreement for the selected package. If you agree to the terms of all the license agreements, click **I accept the terms in the license agreements** and then click **Next**.
8. In the Summary page, review your choices before upgrading the product package. To change any choices that you made on previous pages, click **Back** and make the changes. When you are satisfied with your installation choices, click **Update** to install the update packages.
9. Click **Finish** to complete the installation.

Upgrading Dynamic Workload Console version 9.1 or later

To upgrade Dynamic Workload Console version 9.1 or later, complete the following steps:

1. Perform the actions described in the section "Installing the Dynamic Workload Console for the first time using the IBM Installation Manager wizard" on page 26. Be sure to install the product in a directory different from the one where the version earlier than 9.4 is installed.
2. Follow the instructions in Upgrading Dynamic Workload Console V9.1 or later, in the *Planning and Installation* guide.

Upgrading Dynamic Workload Console version 8.6

To upgrade Dynamic Workload Console version 8.6, complete the following steps:

1. Complete the actions described in the section "Installing the Dynamic Workload Console for the first time using the IBM Installation Manager wizard" on page 26. Be sure to install the product in a directory different from the one where version 8.6 is installed.
2. Follow the instructions in Upgrading Dynamic Workload Console V8.6 single instance on the same workstation, in the *Planning and Installation* guide.

Installing the Fix Pack using IBM Installation Manager silent installation

Before you begin

After you complete the actions described in the section "Before Installing" on page 25, if you want to install the Fix Pack in silent mode use the silent installation. When you run a silent installation, you must create a response file to use as input to the IBM Installation Manager silent installation commands. The response file includes all the information required to run the installation without user intervention.

As a prerequisite step, specifically for the Dynamic Workload Console silent installation, you can run a script that checks the system against the product system requirements to ensure a successful installation without delays or complications. The prerequisite check script checks requirements such as:

- Supported operating system.
- Sufficient RAM.
- Sufficient swap file space.
- Disk space for the creation of the installation, Jazz for Service Management, and temporary directories passed in input to the script.

For specific details about the product system requirements see "Disk space requirements" on page 25.

To run the prerequisite check script, copy the script `dwcPrereqcheck.bat` or `dwcPrereqCheck.sh` and the `Prerequisites` folder from the Fix Pack image to a folder on the system where you plan to run the installation and ensure you have read, write, and execute permissions on the `Prerequisites` folder. If the Fix Pack image is already on this system then you can run the script directly from the Fix Pack image location. Submit the script to run as follows:

On Windows operating systems:
> Run the following command:
>
> `dwcPrereqCheck.bat -instdir <DWC_HOME> -jazzdir <JAZZDIR> -tmpdir <tmp>`

On UNIX or Linux operating systems:
> Run the following command:
>
> `dwcPrereqCheck.sh -instdir <DWC_HOME> -jazzdir <JAZZDIR> -tmpdir <tmp>`
>
> where,
>
> **<DWC_HOME>**
>> Represents the Dynamic Workload Console installation path, for example, on Windows, this path is `C:\Program Files\IBM\TWAUI`.
>
> **<JAZZDIR>**
>> Represents the directory where the Jazz for Service Management extension for WebSphere is installed.
>
> **<tmp>** Represents the temporary folder on the system where you are running the installation.

The results of the prerequisite check are written to a text file named, `result.txt`, located in the `Prerequisites` folder.

You are provided with several sample response files located in the `\response_files\` directory. Depending on the initial version of your components, select the appropriate response file, determine the eImages you need to download and extract, and then customize the properties in the response file including the settings for the repository location of the eImages before performing the silent installation.

Important: During the silent installation, if the location specified for a repository is not found, then correct the location and before rerunning the installation, clear the repository locations from IBM Installation Manager:

1. Open the **Preferences** panel in Installation Manager.
2. From the **Repositories** page, select and remove the repository location in error.
3. Correct the repository location in the response file.

4. Rerun the silent installation.

Table 2. Response files for Fix Pack installation

Response File Name	Description	Required Images and Repository Location
IWS94_UPDATE_DWC_<os_name>.xml	This response file applies the Fix Pack to a version 9.4 console bringing it to the 9.4 FP6 level.	• 9.4 FP6
IWS94_UPGRADE_DWC_<os_name>.xml	This response file upgrades a version 9.1 or later console to the 9.4 FP6 level.	• 9.4 FP6 • 9.4 GA
IWS94_FRESH_DWC_<os_name>.xml	This response file performs a fresh installation of the version 9.4 GA console plus Fix Pack 6. Use this installation if you have WebSphere Application Server and Installation Manager already installed.	• 9.4 FP6 • 9.4 GA
IWS94_FRESH_FULL_DWC_<os_name>.xml	This response file performs a first time fresh installation of the version 9.4 GA console, Fix Pack 6, WebSphere Application Server, Jazz for Service Management, Dashboard Application Services Hub, and Installation Manager. WebSphere Application Server, Jazz for Service Management, Dashboard Application Services Hub must be purchased separately.	• 9.4 FP6 • 9.4 GA • WebSphere Application Server • Jazz for Service Management extension for IBM WebSphere with Dashboard Application Services • Installation Manager
IWS94_FRESH_IntegrationWorkbench_<os_name>.xml	This response file performs a fresh installation of the version 9.4 GA Integration Workbench plus Fix Pack 6. Use this installation if you have WebSphere Application Server and Installation Manager already installed.	• 9.4 FP6 • 9.4 GA
IWS94_FRESH_FULL_IntegrationWorkbench_<os_name>.xml	This response file performs a first time fresh installation of the version 9.4 GA Integration Workbench, Fix Pack, WebSphere Application Server, and Installation Manager. WebSphere Application Server must be purchased separately.	• 9.4 FP6 • 9.4 GA • WebSphere Application Server • Installation Manager

About this task

Create your own response file or customize a sample response file to include the options required to complete the installation you want to perform. Complete the following steps:

Procedure

1. Copy the relevant response file to a local directory.
2. Edit the Dynamic Workload Console section. For details about the response file properties, see the topic about the Dynamic Workload Console response file properties in the *Planning and Installation* guide.
3. Save the file with your changes.
4. Open a command-line prompt.

5. Change to the Installation Manager `tools` directory. The default path for the `tools` directory is:
   - **On Windows operating systems:**

     `C:\Program Files\IBM\Installation Manager\eclipse\tools`
   - **On UNIX and Linux operating systems:**

     `/opt/IBM/InstallationManager/eclipse/tools`
6. To run the Installation Manager in silent mode, run the following command:
   - **On Windows operating systems:**

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

     `./imcl -c`
7. Type *P* and press the Enter key to access the **Preferences** menu.
8. Type *1* and press the Enter key to access the **Repositories** menu.
9. Remove all the listed repositories by typing the number beside each repository to edit it and then type *2* to remove the repository. Complete these actions for each of the listed repositories.
10. If there is an *X* beside the **S** menu item related to **Search service repositories**, type *S* and press the Enter key to deselect it.
11. Type *A* and press the Enter key to apply the changes.
12. Type *R* and press the Enter key to return to the main menu.
13. Type *X* and press the Enter key to exit.
14. Go to the Installation Manager `tools` directory. The default `tools` directory is:
    - **On Windows operating systems:**

      `C:\Program Files\IBM\Installation Manager\eclipse\tools`
    - **On UNIX and Linux operating systems:**

      `/opt/IBM/InstallationManager/eclipse/tools`
15. Run the following command:
    - **On Windows operating systems:**

      ```
      imcl.exe input <local_dir>\response_file.xml
      -log <local_dir>\log_file.xml
      -acceptLicense -nosplash
      ```
    - **On UNIX and Linux operating systems:**

      ```
       ./imcl input /<local_dir>/response_file.xml
      -log /<local_dir>/log_file.xml
      -acceptLicense -nosplash
      ```

      where *response_file* is the name of the response file to be used for the installation, and *log_file* is the name of the file that records the output of the silent installation. For information about the installation log files see "Installation log files."

Installation log files

This section describes the log files created by the installation process using the IBM Installation Manager wizard.

- Log file for Installation Manager:

  On Windows operating systems:

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

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

On UNIX and Linux operating systems:
```
/var/ibm/InstallationManager/logs/<YYYYMMDD_HHMM>.xml
```

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

Documentation updates for IBM Dynamic Workload Console Fix Pack 6, version 9.4.0

Any additions or changes to the documentation for this version and previous versions have been integrated into the online product documentation available in IBM Workload Automation product information.

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 IBM support, click the IBM support link at the bottom right of the page.

If you want to contact IBM Software Support, see the *IBM Software Support Handbook* at the following Web site: http://techsupport.services.ibm.com/guides/handbook.html

The guide provides information about how to contact IBM Software Support, depending on the severity of your problem, and the following information:
* Registration and eligibility.
* Telephone numbers, depending on the country in which you are located.
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