stonebranch

Universal Task Documentation

Universal Automation Center support for scheduling Informatica Power Center V9.6.x

ut-inf-pc-v9-6-startworkflow-win

Associated Activities:

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Author: Nils Buer

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CONFIDENTIALITY INFORMATION

Distribution list: Lennox, Stonebranch SE

Revision	Date	Author	Changes
00	20180109	Nils Buer	Initial Document (WIP)
01	20180109	Nils Buer	Error handling added
02	20180111	Nils Buer	Support for https connections
03	20180307	Nils Buer	Disclaimer added

Abstract:

This Universal Task allows to schedule an Informatica Power Center Workflow by calling the Power Center Webservices Hub SOAP command "*startWorkflow*".

Contents

1 Disclaimer

No support and no warranty are provided by Stonebranch GmbH for this document and the related Universal Task. The use of this document and the related Universal Task is on your own risk.

Before using this task in a production system, please perform extensive testing.

Stonebranch GmbH assumes no liability for damage caused by the performance of the Universal Tasks

2 Introduction

Informatica Power Center provides a Web Services Hub to schedule Power Center Workflows using the SOAP communications protocol for web services.

The here described Universal Task calls the "*startWorkflow*" SOAP Webservice to run a Workflow in Power Center.

Details on the Power Center Web Services Hub can be found here [1]:

Some details about the universal task for Power Center:

- It is based on the standard Power Center (PC) Web Services Hub using SOAP protocol
- The PC Web Services Hub Interface is called from a Universal Agent running on a Windows Server or a Linux Server – Note: This document focuses on the Windows Version
- The Windows Server needs to have Python 2.7.x or 3.6.x installed
- Any Additional Web Services Hub SOAP command as listed in [1] can also be implemented using the same approach.
- An extract of the Python script, which is called as part of the Universal template can be found here [3] or can be looked up in the controller under the Universal template
- Exit code processing has been added to the universal task script:
    - In case a workflow fails E.g. If you provide a wrong workflow name, it will fail, and you can re-start the job with the correct ID.
    - In case of a connection error the task will fail e.g. wrong IP address or Port of the Power Center Web services HOST
    - In case a wrong password has been entered the instance will fail
- You can configure all connection Parameters via the Universal Task
- You can select different log-levels e.g. Info and debug
- Http and Https connections are support (Note: the host certificate is not verified)

3 Installation

3.1 Software Requirements

Universal Task name: *Informatica startWorkflow_Windows*

Related UAC XML Files for template and task: [2]

Software used:

For the set-up you need:

1. Python 3.6.3 (or 2.7.x) for Windows installed on a server where an Universal Agent is installed.
2. For Python the following modules are required:
    - *requests, to perform the REST connection towards the PC SOAP API*
    - *argparse, to allow testing of the Universal Template script on the command line*
    - *sys, for output re-direct processing*
    - *datetime, date and time stamps for messages*
    - logging, to provide logging capabilities for debug, info etc.
    - xml.dom.minidom import parse, parseString, to parse XML results

    Note: Only the module requests need to be added to python 3.6.3
3. Universal Controller 6.4.2.x or higher
4. Universal Agent 6.3.0.3 or higher installed on a Windows Server
5. Power Center 9.6.x with Web Service Hub enabled

3.2 Installation Steps

The following describes the installation steps:

1. **Install Python 3.6.3 for Windows on the Universal Controller server or any Windows Server running a Universal Agent.**

   Official Download link: https://www.python.org/downloads/

   Note:

   Install python with the options:

   - add python to windows path
   - Install for all users

2. **Add the request module to your python installation**

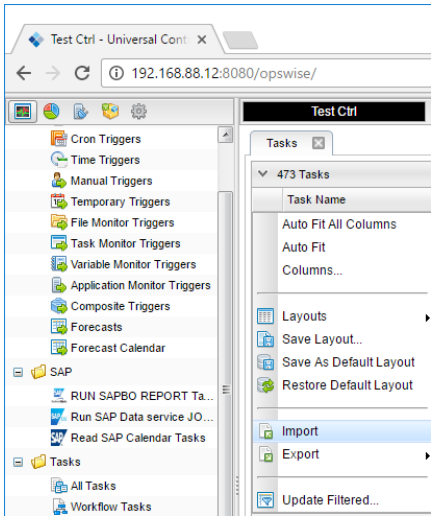
   In a dos command shell run as Administrator:

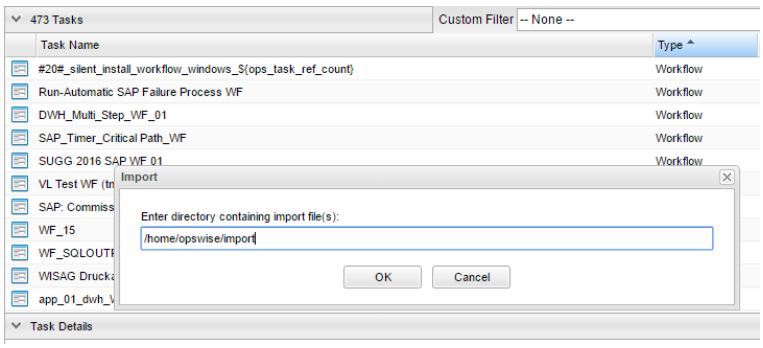
   pip install requests

   Note: The module *requests* contain the commands to perform the SOAP commands towards the Power Center Webservice Hub.
   It is assumed that the modules argparse, sys, datetime, logging, xml.dom.minidom are already available. If not install them via pip.

3. **Import the Universal Task including the Universal Template to your Controller**

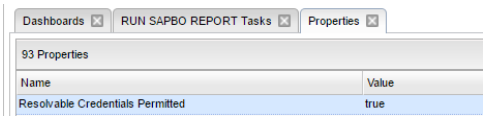
Go to “All Tasks” and load via the Import functionality the Universal Task configuration into the Controller.



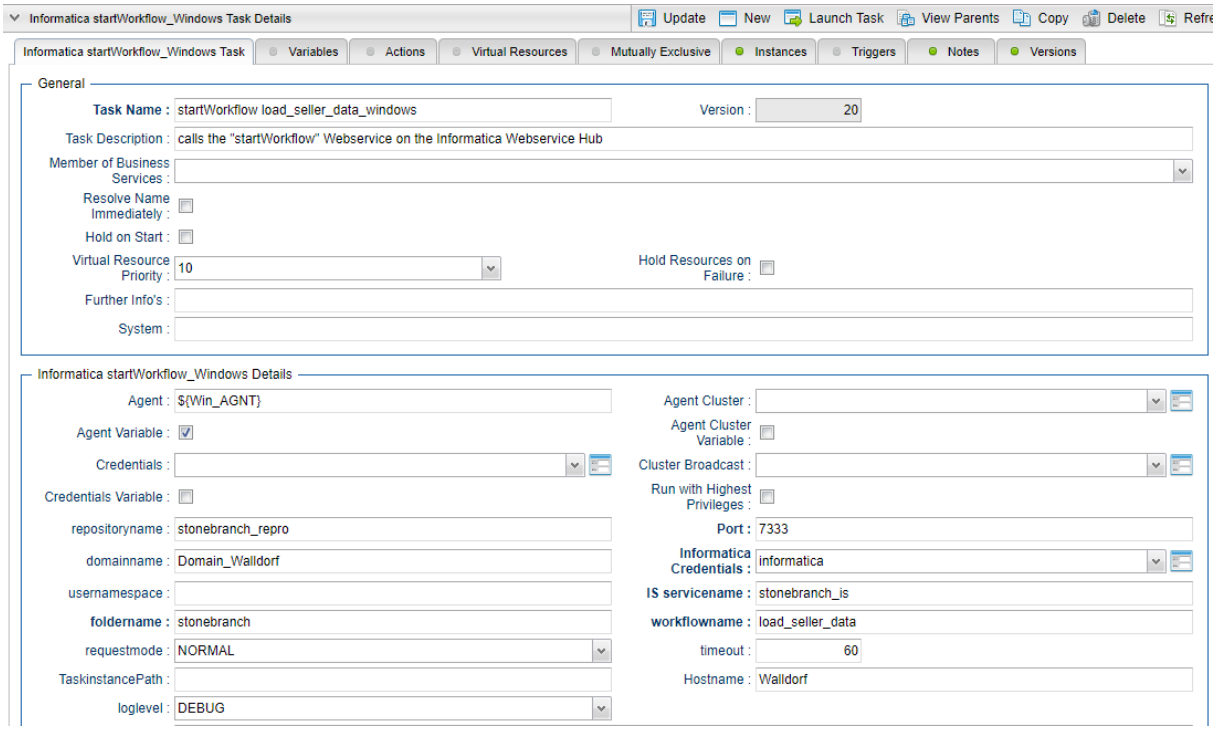


4 Universal Task Configuration

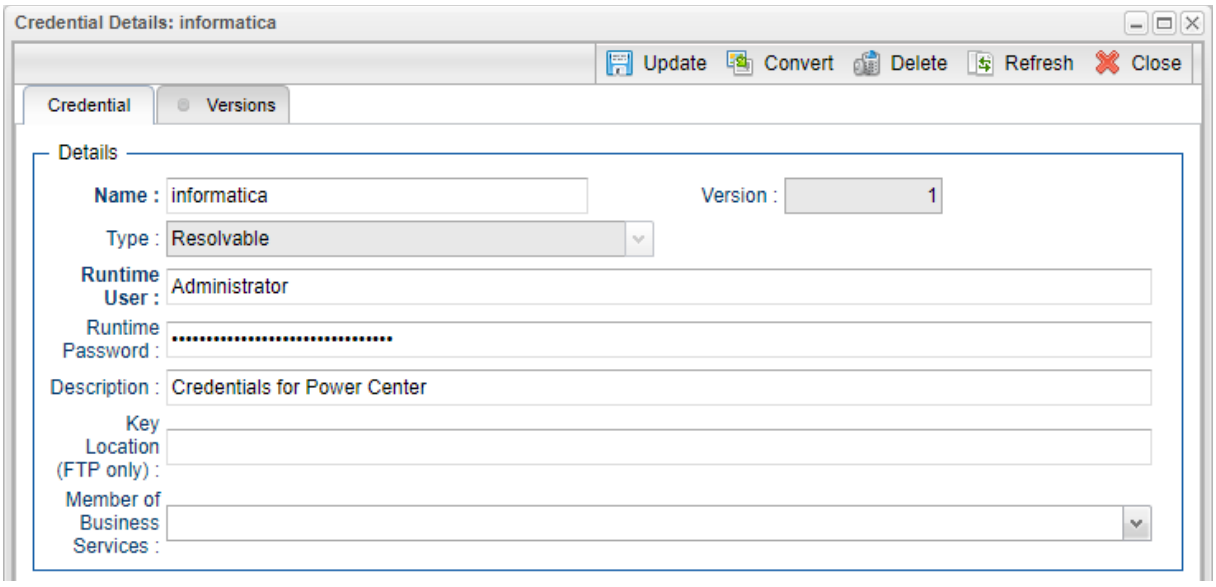
1. Activate: Resolvable Credentials in Universal Automation Center:



2. Fill Out the Universal Task for each Power Center Workflow to be scheduled:



Power Center Credential for Universal Task:



Description:

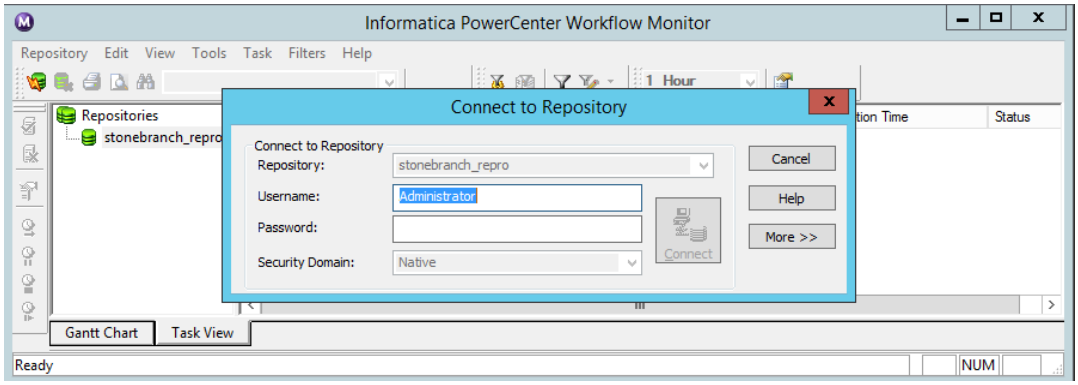
Field	Required	Description
Agent	Mandatory	The windows Universal Agent, which runs the Python request module to call the PC “startWorkflow” SOAP Webservice
Repositoryname	Mandatory	Name of the repository to log in to.
usernamespace	Optional	The security domain of the user account used to log in to the repository. Required if there is more than one security domain in the PowerCenter domain.
Domainname	Mandatory	Domain name for the Integration Service.
Foldername	Mandatory	Name of the folder containing the workflow.
requestmode	Mandatory	Indicates the recovery strategy for the session task: - NORMAL. Restarts a session without recovery. - RECOVERY. Recovers a session.
loglevel	Mandatory	logging settings DEBUG, INFO, WARNING, ERROR, CRITICAL
Informatica Credentials	Mandatory	Credentials for Power Center
IS Servicename	Mandatory	Name of the Integration Service that runs the workflow.
workflowname	Mandatory	Name of the workflow to run.
Timeout	Mandatory	Maximum amount of time the Web Services Hub can take to process a request and generate a SOAP response before the request times out. If the Web Services Hub is unable to generate a response within the timeout period, it sends a fault message to the web service client and drops the connection. Default is 60 seconds. Set to 0 to disable the timeout period.
Hostname	Mandatory	Web Services Hub host name
Port	Mandatory	Web Services Hub port number
SSL	Optional	Choose if you want to connect via http or https to your webservice hub. In the Power Center Administration Gui you can look up the configuration by clicking on the webservice hup: e.g. http: http://walldorf:7333/wsh https: https://walldorf:10333/wsh

5 Power Center

The following provides to non-Informatica Consultants an Introduction how to verify that a Workflow, which was started via the Universal Task for Power Center, has been successfully executed in PC.

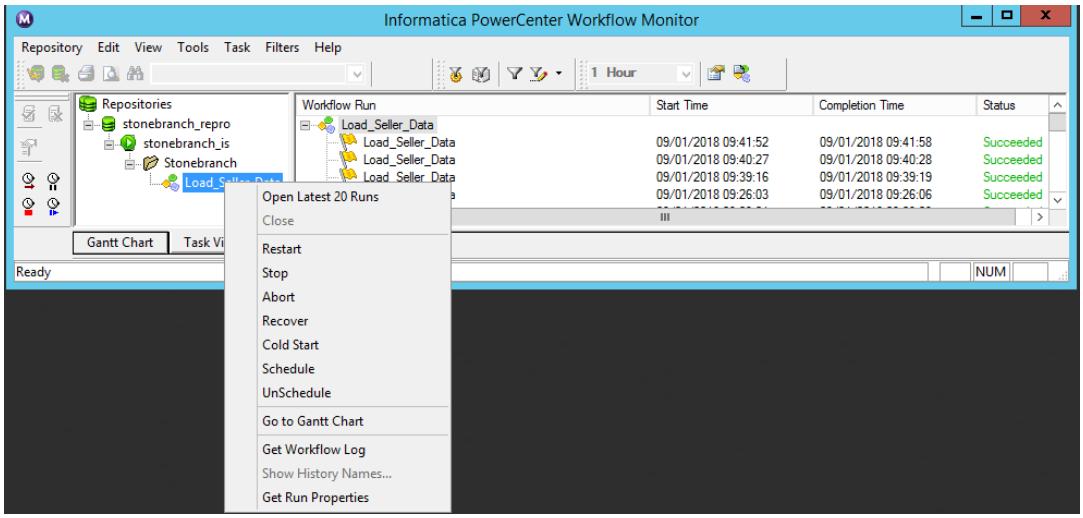
5.1 How to lookup a Workflow instance in PC

1. Log-in to the Power Center Workflow Monitor



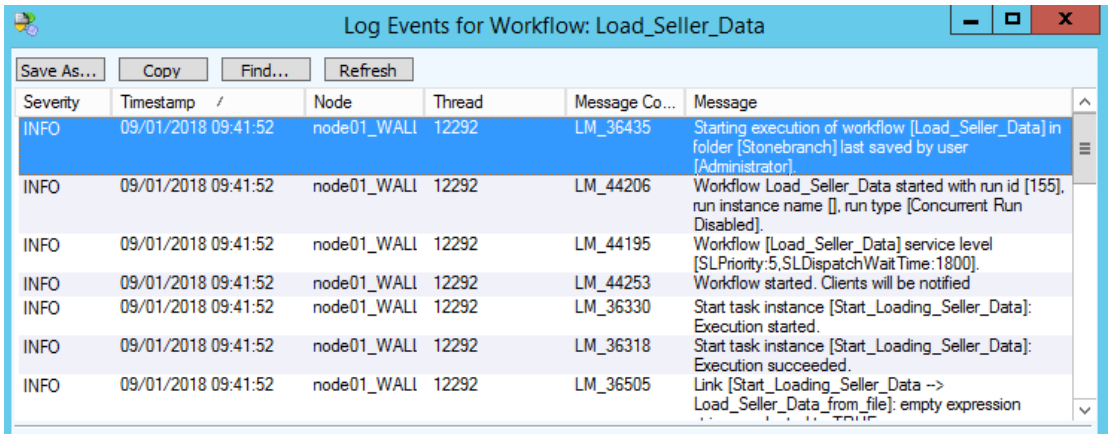
2. Log-in to the Power Center Workflow Monitor

Browse to your Workflowname. In the example the Workflow is called: *Load_Seller_Data*
In the right screen you can see all executed instances including their status e.g. *Succeeded*.



3. Verify the Workflow Log

Right Click on the workflow will allow to *Get the Workflow Log*

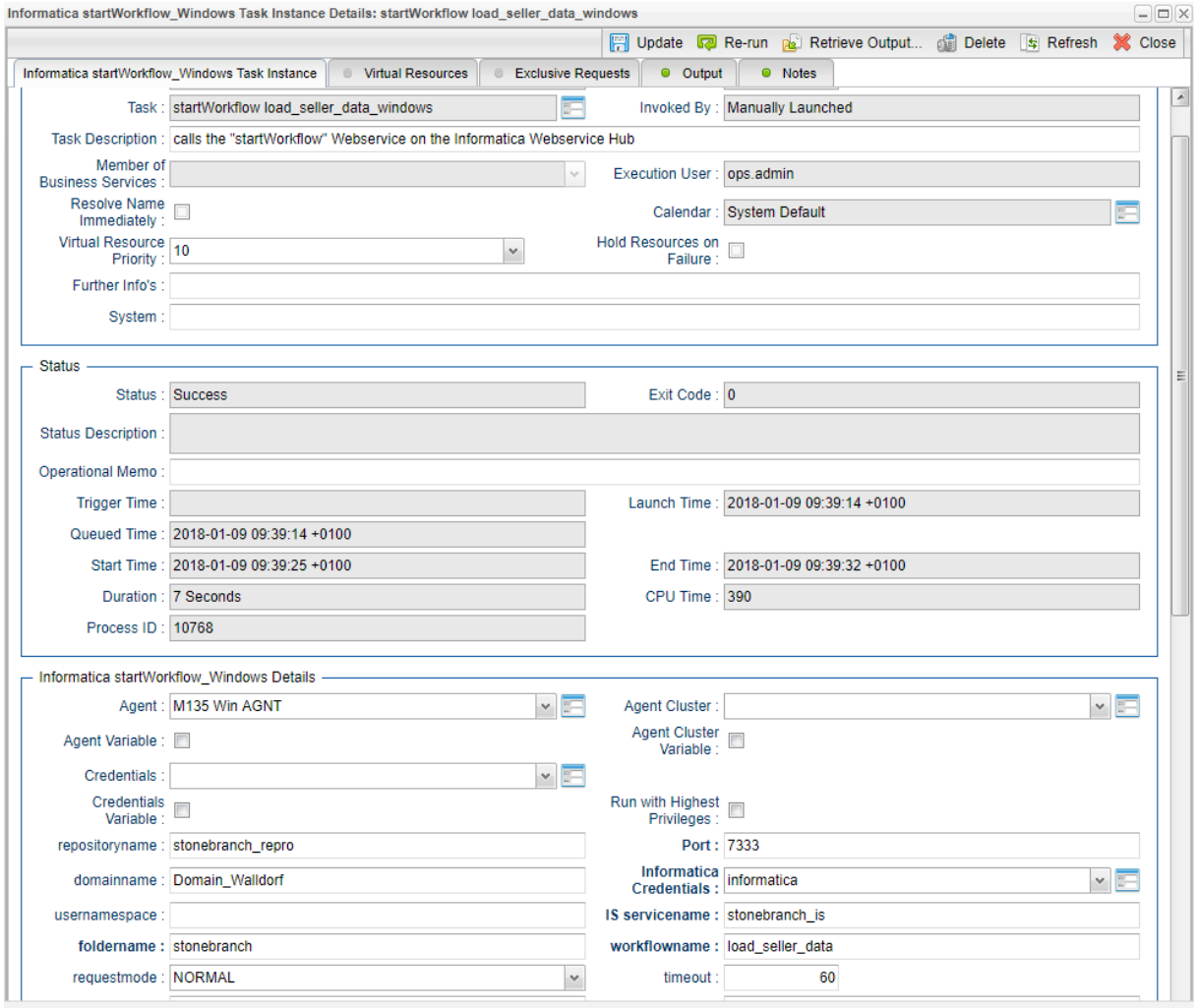


Note: The same Workflow log information is also available in the Universal Task Output.

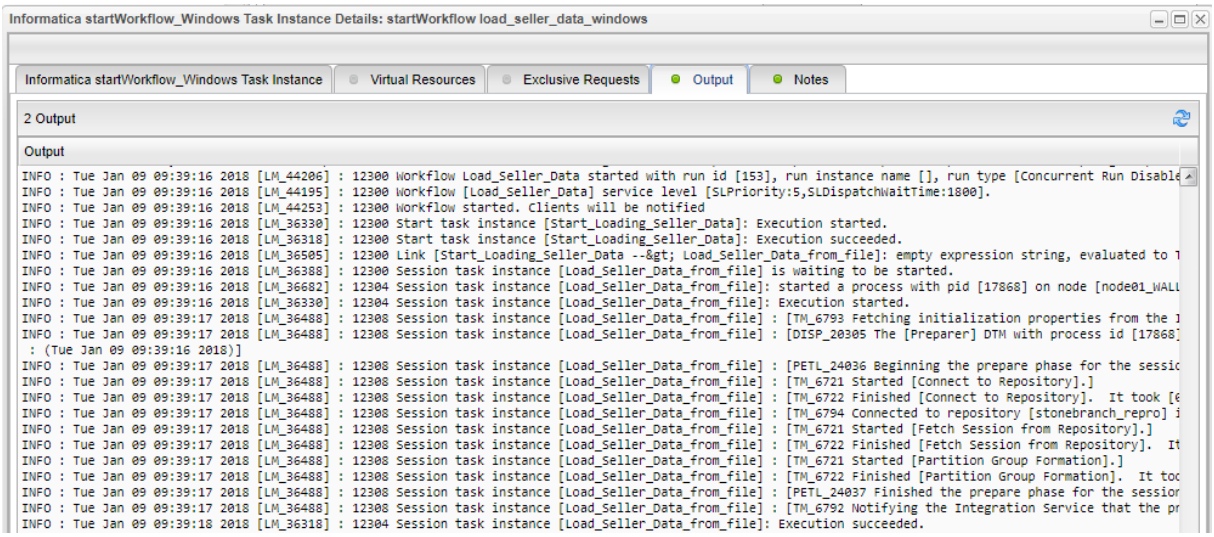
4. Verify the Workflow Log in Universal Automation Center

All Log Information show in the Power Center Workflow Monitor are also available in the Universal Controller Web-Gui in the Task Instance screen and Output.

The following screenshot shows the Task Instance Screen:



The following screenshot shows the Log file in the Task Instance Output Screen:



6 Test Cases

The following basic test cases has been performed:

Case#	Assumed behavior	Result
Start a Job based on a correct Foldername, Servicename and Workflow	Job should finish with status “succeeded” in PC and “success” in the UC Task Instance. The Task Instance output should contain the same log file as in PC.	Correct
Start a Job based on a wrong Foldername	Task should fail with error “500” and message ERROR - Check that the Workflow: [xyz], Foldername: [xyz] and is_servicename: [xyz] are correct	Correct
Start a Job based on a wrong Servicename	Task should fail with error “500” and message ERROR - Check that the Workflow: [xyz], Foldername: [xyz] and is_servicename: [xyz] are correct	Correct
Start a Job based on a wrong Workflowname	Task should fail with error “500” and message ERROR - Check that the Workflow: [xyz], Foldername: [xyz] and is_servicename: [xyz] are correct	Correct
Start a Job on PC providing the wrong server port	Task should fail with error “Http Connection Pool Error 10061”	Correct
Start a Job on PC providing the wrong server hostname	Task should fail with error “Failure: HTTPConnectionPool Error 11001”	Correct

Start a Job on PC with a blocked firewall	Task should fail with error “Failure: HTTPConnectionPool Error 11001”	Correct
Start a Job on PC with the wrong user	Task should fail with error “Failure: 500 ..”	Correct
Start a Job on PC using http connection, but PC Web Service Hub is setup as https host	Task Failure : ('Connection aborted.', error(111, 'Connection refused'))	Correct
Start a Job on PC using https connection (PC Web Service Hub is setup as https host)	Job should finish with status “succeeded” in PC and “success” in the UC Task Instance. The Task Instance output should contain the same log file as in PC.	Correct

7 Document References

This document references the following documents:

Ref#	Description
[1] PC_961_WebServicesProviderGuide_en.pdf	Power Center Webservices Hub description
[2] XML extract of Universal Task	UAC XML extract of the Universal Template and Task • ops_credentials_13ae541df9a84a9fa74c4129d65834df • ops_task_universal_91050ea839594edc8e0c905bce95d3d5 • ops_unv_tmplt_c39bba9112e34156b44aae2d43d24a3e
[3] UT_Informatica_RunWorkflow_v9	Python Script which is used in the Universal template