Informatica® Test Data Management
10.5

Upgrade Guide

Informatica Test Data Management Upgrade Guide
10.5
March 2021

© Copyright Informatica LLC 2013, 2021

This software and documentation are provided only under a separate license agreement containing restrictions on use and disclosure. No part of this document may be reproduced or transmitted in any form, by any means (electronic, photocopying, recording or otherwise) without prior consent of Informatica LLC.

Informatica, and the Informatica logo are trademarks or registered trademarks of Informatica LLC in the United States and many jurisdictions throughout the world. A current list of Informatica trademarks is available on the web at https://www.informatica.com/trademarks.html. Other company and product names may be trade names or trademarks of their respective owners.

Portions of this software and/or documentation are subject to copyright held by third parties, including without limitation: Copyright DataDirect Technologies. All rights reserved. Copyright © Sun Microsystems. All rights reserved. Copyright © RSA Security Inc. All Rights Reserved. Copyright © Ordinal Technology Corp. All rights reserved. Copyright © Aandacht c.v. All rights reserved. Copyright Genivia, Inc. All rights reserved. Copyright Isomorphic Software. All rights reserved. Copyright © Meta Integration Technology, Inc. All rights reserved. Copyright © Intalio. All rights reserved. Copyright © Oracle. All rights reserved. Copyright © Adobe Systems Incorporated. All rights reserved. Copyright © DataArt, Inc. All rights reserved. Copyright © ComponentSource. All rights reserved. Copyright © Microsoft Corporation. All rights reserved. Copyright © Rogue Wave Software, Inc. All rights reserved. Copyright © Teradata Corporation. All rights reserved. Copyright © Yahoo! Inc. All rights reserved. Copyright © Glyph & Cog, LLC. All rights reserved. Copyright © Thinkmap, Inc. All rights reserved. Copyright © Clearpace Software Limited. All rights reserved. Copyright © Information Builders, Inc. All rights reserved. Copyright © OSS Nokalva, Inc. All rights reserved. Copyright Edifecs, Inc. All rights reserved. Copyright Cleo Communications, Inc. All rights reserved. Copyright © International Organization for Standardization 1986. All rights reserved. Copyright © ej-technologies GmbH. All rights reserved. Copyright © Jaspersoft Corporation. All rights reserved. Copyright © International Business Machines Corporation. All rights reserved. Copyright © yWorks GmbH. All rights reserved. Copyright © Lucent Technologies. All rights reserved. Copyright © University of Toronto. All rights reserved. Copyright © Daniel Veillard. All rights reserved. Copyright © Unicode, Inc. Copyright IBM Corp. All rights reserved. Copyright © MicroQuill Software Publishing, Inc. All rights reserved. Copyright © PassMark Software Pty Ltd. All rights reserved. Copyright © LogiXML, Inc. All rights reserved. Copyright © 2003-2010 Lorenzi Davide, All rights reserved. Copyright © Red Hat, Inc. All rights reserved. Copyright © The Board of Trustees of the Leland Stanford Junior University. All rights reserved. Copyright © EMC Corporation. All rights reserved. Copyright © Flexera Software. All rights reserved. Copyright © Jinfonet Software. All rights reserved. Copyright © Apple Inc. All rights reserved. Copyright © Telerik Inc. All rights reserved. Copyright © BEA Systems. All rights reserved. Copyright © PDFlib GmbH. All rights reserved. Copyright © Orientation in Objects GmbH. All rights reserved. Copyright © Tanuki Software, Ltd. All rights reserved. Copyright © Ricebridge. All rights reserved. Copyright © Sencha, Inc. All rights reserved. Copyright © Scalable Systems, Inc. All rights reserved. Copyright © jQWidgets. All rights reserved. Copyright © Tableau Software, Inc. All rights reserved. Copyright© MaxMind, Inc. All Rights Reserved. Copyright © TMate Software s.r.o. All rights reserved. Copyright © MapR Technologies Inc. All rights reserved. Copyright © Amazon Corporate LLC. All rights reserved. Copyright © Highsoft. All rights reserved. Copyright © Python Software Foundation. All rights reserved. Copyright © BeOpen.com. All rights reserved. Copyright © CNRI. All rights reserved.

This product includes software developed by the Apache Software Foundation (http://www.apache.org/), and/or other software which is licensed under various versions of the Apache License (the "License"). You may obtain a copy of these Licenses at http://www.apache.org/licenses/. Unless required by applicable law or agreed to in writing, software distributed under these Licenses is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the Licenses for the specific language governing permissions and limitations under the Licenses.

This product includes software which was developed by Mozilla (http://www.mozilla.org/), software copyright The JBoss Group, LLC, all rights reserved; software copyright © 1999-2006 by Bruno Lowagie and Paulo Soares and other software which is licensed under various versions of the GNU Lesser General Public License Agreement, which may be found at http:// www.gnu.org/licenses/lgpl.html. The materials are provided free of charge by Informatica, "as-is", without warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

The product includes ACE(TM) and TAO(TM) software copyrighted by Douglas C. Schmidt and his research group at Washington University, University of California, Irvine, and Vanderbilt University, Copyright (©) 1993-2006, all rights reserved.

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (copyright The OpenSSL Project. All Rights Reserved) and redistribution of this software is subject to terms available at http://www.openssl.org and http://www.openssl.org/source/license.html.

This product includes Curl software which is Copyright 1996-2013, Daniel Stenberg, <daniel@haxx.se>. All Rights Reserved. Permissions and limitations regarding this software are subject to terms available at http://curl.haxx.se/docs/copyright.html. Permission to use, copy, modify, and distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies.

The product includes software copyright 2001-2005 (©) MetaStuff, Ltd. All Rights Reserved. Permissions and limitations regarding this software are subject to terms available at http://www.dom4j.org/ license.html.

This product includes software copyright © 1996-2006 Per Bothner. All rights reserved. Your right to use such materials is set forth in the license which may be found at http:// www.gnu.org/software/ kawa/Software-License.html.

This product includes OSSP UUID software which is Copyright © 2002 Ralf S. Engelschall, Copyright © 2002 The OSSP Project Copyright © 2002 Cable & Wireless Deutschland. Permissions and limitations regarding this software are subject to terms available at http://www.opensource.org/licenses/mit-license.php.

This product includes software developed by Boost (http://www.boost.org/) or under the Boost software license. Permissions and limitations regarding this software are subject to terms available at http:/ /www.boost.org/LICENSE_1_0.txt.

This product includes software copyright © 1997-2007 University of Cambridge. Permissions and limitations regarding this software are subject to terms available at http:// www.pcre.org/license.txt.

This product includes software copyright © 2007 The Eclipse Foundation. All Rights Reserved. Permissions and limitations regarding this software are subject to terms available at http:// www.eclipse.org/org/documents/epl-v10.php and at http://www.eclipse.org/org/documents/edl-v10.php.

This product includes software licensed under the terms at http://www.tcl.tk/software/tcltk/license.html, http://www.bosrup.com/web/overlib/?License, http:// www.stlport.org/doc/ license.html, http://asm.ow2.org/license.html, http://www.cryptix.org/LICENSE.TXT, http://hsqldb.org/web/hsqlLicense.html, http:// httpunit.sourceforge.net/doc/ license.html, http://jung.sourceforge.net/license.txt , http://www.gzip.org/zlib/zlib_license.html, http://www.openldap.org/software/ release/license.html, http://www.libssh2.org, http://slf4j.org/license.html, http://www.sente.ch/software/OpenSourceLicense.html, http://fusesource.com/downloads/ license-agreements/fuse-message-broker-v-5-3- license-agreement; http://antlr.org/license.html; http://aopalliance.sourceforge.net/; http://www.bouncycastle.org/ licence.html; http://www.jgraph.com/jgraphdownload.html; http://www.jcraft.com/jsch/LICENSE.txt; http://jotm.objectweb.org/bsd_license.html; . http://www.w3.org/ Consortium/Legal/2002/copyright-software-20021231; http://www.slf4j.org/license.html; http://nanoxml.sourceforge.net/orig/copyright.html; http://www.json.org/ license.html; http://forge.ow2.org/projects/javaservice/, http://www.postgresql.org/about/licence.html, http://www.sqlite.org/copyright.html, http://www.tcl.tk/ software/tcltk/license.html, http://www.jaxen.org/faq.html, http://www.jdom.org/docs/faq.html, http://www.slf4j.org/license.html; http://www.iodbc.org/dataspace/ iodbc/wiki/iODBC/License; http://www.keplerproject.org/md5/license.html; http://www.toedter.com/en/jcalendar/license.html; http://www.edankert.com/bounce/ index.html; http://www.net-snmp.org/about/license.html; http://www.openmdx.org/#FAQ; http://www.php.net/license/3_01.txt; http://srp.stanford.edu/license.txt; http://www.schneier.com/blowfish.html; http://www.jmock.org/license.html; http://xsom.java.net; http://benalman.com/about/license/; https://github.com/CreateJS/ EaselJS/blob/master/src/easeljs/display/Bitmap.js; http://www.h2database.com/html/license.html#summary; http://jsoncpp.sourceforge.net/LICENSE; http:// jdbc.postgresql.org/license.html; http://protobuf.googlecode.com/svn/trunk/src/google/protobuf/descriptor.proto; https://github.com/rantav/hector/blob/master/ LICENSE; http://web.mit.edu/Kerberos/krb5-current/doc/mitK5license.html; http://jibx.sourceforge.net/jibx-license.html; https://github.com/lyokato/libgeohash/blob/ master/LICENSE; https://github.com/hjiang/jsonxx/blob/master/LICENSE; https://code.google.com/p/lz4/; https://github.com/jedisct1/libsodium/blob/master/

LICENSE; http://one-jar.sourceforge.net/index.php?page=documents&file=license; https://github.com/EsotericSoftware/kryo/blob/master/license.txt; http://www.scala-lang.org/license.html; https://github.com/tinkerpop/blueprints/blob/master/LICENSE.txt; http://gee.cs.oswego.edu/dl/classes/EDU/oswego/cs/dl/util/concurrent/intro.html; https://aws.amazon.com/asl/; https://github.com/twbs/bootstrap/blob/master/LICENSE; https://sourceforge.net/p/xmlunit/code/HEAD/tree/trunk/LICENSE.txt; https://github.com/documentcloud/underscore-contrib/blob/master/LICENSE, and https://github.com/apache/hbase/blob/master/LICENSE.txt.

This product includes software licensed under the Academic Free License (http://www.opensource.org/licenses/afl-3.0.php), the Common Development and Distribution License (http://www.opensource.org/licenses/cddl1.php) the Common Public License (http://www.opensource.org/licenses/cpl1.0.php), the Sun Binary Code License Agreement Supplemental License Terms, the BSD License (http:// www.opensource.org/licenses/bsd-license.php), the new BSD License (http://opensource.org/licenses/BSD-3-Clause), the MIT License (http://www.opensource.org/licenses/mit-license.php), the Artistic License (http://www.opensource.org/licenses/artistic-license-1.0) and the Initial Developer's Public License Version 1.0 (http://www.firebirdsql.org/en/initial-developer-s-public-license-version-1-0/).

This product includes software copyright © 2003-2006 Joe Walnes, 2006-2007 XStream Committers. All rights reserved. Permissions and limitations regarding this software are subject to terms available at http://xstream.codehaus.org/license.html. This product includes software developed by the Indiana University Extreme! Lab. For further information please visit http://www.extreme.indiana.edu/.

This product includes software Copyright (c) 2013 Frank Balluffi and Markus Moeller. All rights reserved. Permissions and limitations regarding this software are subject to terms of the MIT license.

See patents at https://www.informatica.com/legal/patents.html.

DISCLAIMER: Informatica LLC provides this documentation "as is" without warranty of any kind, either express or implied, including, but not limited to, the implied warranties of noninfringement, merchantability, or use for a particular purpose. Informatica LLC does not warrant that this software or documentation is error free. The information provided in this software or documentation may include technical inaccuracies or typographical errors. The information in this software and documentation is subject to change at any time without notice.

NOTICES

This Informatica product (the "Software") includes certain drivers (the "DataDirect Drivers") from DataDirect Technologies, an operating company of Progress Software Corporation ("DataDirect") which are subject to the following terms and conditions:

1. THE DATADIRECT DRIVERS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.
2. IN NO EVENT WILL DATADIRECT OR ITS THIRD PARTY SUPPLIERS BE LIABLE TO THE END-USER CUSTOMER FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES ARISING OUT OF THE USE OF THE ODBC DRIVERS, WHETHER OR NOT INFORMED OF THE POSSIBILITIES OF DAMAGES IN ADVANCE. THESE LIMITATIONS APPLY TO ALL CAUSES OF ACTION, INCLUDING, WITHOUT LIMITATION, BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, STRICT LIABILITY, MISREPRESENTATION AND OTHER TORTS.

The information in this documentation is subject to change without notice. If you find any problems in this documentation, report them to us at infa_documentation@informatica.com.

Informatica products are warranted according to the terms and conditions of the agreements under which they are provided. INFORMATICA PROVIDES THE INFORMATION IN THIS DOCUMENT "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT.

Publication Date: 2021-04-07

Table of Contents

Preface 5

Informatica Resources 5

- Informatica Network 5
- Informatica Knowledge Base 5
- Informatica Documentation 5
- Informatica Product Availability Matrices 6
- Informatica Velocity 6
- Informatica Marketplace 6
- Informatica Global Customer Support 6

Chapter 1: Test Data Management Upgrade 7

Overview 7

Upgrade Paths 8

Back Up the Test Data Management Repository 9

Upgrade the Informatica Domain 9

After You Upgrade 10

- Upgrade the Application Services 10
- Run the Upgrade Commands for Workflows 11
- Update the Cache File Location in Test Data Manager 11
- Copy JSON and XML Files 12
- Configure the PowerCenter Integration Service for Kerberos-Enabled Hadoop HDFS Connections 12
- Update Cluster Configuration Information 13
- Configure Format Preserving Encryption Masking 13
- Configure Format Preserving Encryption Masking in a Hadoop Environment 13
- Regenerate Masking Plans with Format Preserving Encryption 14

Preface

Follow the instructions in the Informatica *Test Data Management Upgrade Guide* to upgrade Test Data Management. The guide also includes information on prerequisite tasks and post upgrade tasks that you need to perform to complete the upgrade.

Informatica Resources

Informatica provides you with a range of product resources through the Informatica Network and other online portals. Use the resources to get the most from your Informatica products and solutions and to learn from other Informatica users and subject matter experts.

Informatica Network

The Informatica Network is the gateway to many resources, including the Informatica Knowledge Base and Informatica Global Customer Support. To enter the Informatica Network, visit https://network.informatica.com.

As an Informatica Network member, you have the following options:

- Search the Knowledge Base for product resources.
- View product availability information.
- Create and review your support cases.
- Find your local Informatica User Group Network and collaborate with your peers.

Informatica Knowledge Base

Use the Informatica Knowledge Base to find product resources such as how-to articles, best practices, video tutorials, and answers to frequently asked questions.

To search the Knowledge Base, visit https://search.informatica.com. If you have questions, comments, or ideas about the Knowledge Base, contact the Informatica Knowledge Base team at KB_Feedback@informatica.com.

Informatica Documentation

Use the Informatica Documentation Portal to explore an extensive library of documentation for current and recent product releases. To explore the Documentation Portal, visit https://docs.informatica.com.

If you have questions, comments, or ideas about the product documentation, contact the Informatica Documentation team at infa_documentation@informatica.com.

Informatica Product Availability Matrices

Product Availability Matrices (PAMs) indicate the versions of the operating systems, databases, and types of data sources and targets that a product release supports. You can browse the Informatica PAMs at https://network.informatica.com/community/informatica-network/product-availability-matrices.

Informatica Velocity

Informatica Velocity is a collection of tips and best practices developed by Informatica Professional Services and based on real-world experiences from hundreds of data management projects. Informatica Velocity represents the collective knowledge of Informatica consultants who work with organizations around the world to plan, develop, deploy, and maintain successful data management solutions.

You can find Informatica Velocity resources at http://velocity.informatica.com. If you have questions, comments, or ideas about Informatica Velocity, contact Informatica Professional Services at ips@informatica.com.

Informatica Marketplace

The Informatica Marketplace is a forum where you can find solutions that extend and enhance your Informatica implementations. Leverage any of the hundreds of solutions from Informatica developers and partners on the Marketplace to improve your productivity and speed up time to implementation on your projects. You can find the Informatica Marketplace at https://marketplace.informatica.com.

Informatica Global Customer Support

You can contact a Global Support Center by telephone or through the Informatica Network.

To find your local Informatica Global Customer Support telephone number, visit the Informatica website at the following link:
https://www.informatica.com/services-and-training/customer-success-services/contact-us.html.

To find online support resources on the Informatica Network, visit https://network.informatica.com and select the eSupport option.

CHAPTER 1

Test Data Management Upgrade

This chapter includes the following topics:

- Overview, 7
- Upgrade Paths, 8
- Back Up the Test Data Management Repository, 9
- Upgrade the Informatica Domain, 9
- After You Upgrade, 10

Overview

You can upgrade to Test Data Management 10.5 from versions 10.2.0 Hotfix 2, 10.4.0, and 10.4.1.

Perform the following high-level tasks to complete the Test Data Managament upgrade:

1. Back up the repository to prepare for the Test Data Management upgrade.
2. Upgrade the Informatica domain and products that you require to work with Test Data Management.
3. Perform Test Data Management post upgrade tasks.

If you are on a different Test Data Management version, you must first upgrade to 10.2.0 Hotfix 2, 10.4.0, or 10.4.1 before you can upgrade to 10.5.

See the *Test Data Management Upgrade Guide* of the corresponding version for instructions about how to upgrade to the version.

Upgrade Paths

The upgrade paths that you take depend on the products that you upgrade. If you are on a version that does not support a direct upgrade, you must first upgrade to a supported version.

The following table lists the upgrade paths for each product that the installer supports.

Product	Versions
PowerCenter	You can upgrade to version 10.5 from the following versions including any hotfix and service pack: - 10.1.1 - 10.2 - 10.4 - 10.4.1
Informatica Data Quality	You can upgrade to version 10.5 from the following versions including any hotfix and service pack: - 10.1.1 - 10.2 - 10.4 - 10.4.1
Data Engineering Integration Data Engineering Quality	You can upgrade to version 10.5 from the following versions including any hotfix and service pack: - 10.1.1 - 10.2 - 10.2.1 - 10.2.2 - 10.4 - 10.4.1 **Important:** If Data Engineering is in the same domain as any other product supported by the Informatica installer, verify that all products are upgraded to the same supported upgrade version before you upgrade to 10.5.
Data Engineering Streaming	You can upgrade to version 10.5 from the following versions including any hotfix and service pack: - 10.2.2 - 10.4 - 10.4.1
Data Privacy Management	You can upgrade to version 10.5 from the following versions including any service packs: - 10.4 - 10.4.1 **Important:** If Data Engineering, Enterprise Data Catalog, Data Privacy Managementand are in the same domain of a version earlier than 10.4, upgrade them all to version 10.4 before you upgrade to 10.5.
Enterprise Data Catalog	You can upgrade to version 10.5 from the following versions including any service packs: - 10.4 - 10.4.1 **Important:** If Enterprise Data Catalog and Data Engineering are in the same domain of a version earlier than 10.4, upgrade them both to version 10.4 or 10.4.1 before you upgrade to 10.5.

Product	Versions
Enterprise Data Preparation	You can upgrade to version 10.5 from the following versions including any service packs: - 10.4 - 10.4.1 **Important:** If Data Engineering, Enterprise Data Catalog, and Enterprise Data Preparation are in the same domain of a version earlier than 10.4, upgrade them all to version 10.4 or 10.4.1 before you upgrade to 10.5.
Test Data Management	You can upgrade to version 10.5 from the following versions: - 10.2.0 Hotfix 2 - 10.4 and all service packs - 10.4.1 and all service packs

Back Up the Test Data Management Repository

Back up the Test Data Management repository to ensure that you can revert to the previous version of the repository if you encounter problems with the upgrade. Use the backup utility provided by the database that contains the repository.

Upgrade the Informatica Domain

Upgrade the Informatica domain, services, and clients required to work with Test Data Management.

When you run the installer to upgrade Informatica services, the installer upgrades the Test Data Management binaries. The binaries are installed with both traditional and Data Engineering products.

See the Informatica services upgrade documentation for information about how to upgrade Informatica services.

Perform all pre-upgrade, upgrade, and post upgrade tasks for Informatica services. Upgrade prerequisites and steps might differ based on how you plan to use Test Data Management.

Refer to the appropriate document to ensure you upgrade the domain as required:

- If you use Test Data Management to run mappings only with PowerCenter, see the Informatica Upgrade for PowerCenter documentation.
- If you use Test Data Management to run mappings with PowerCenter and Data Engineering, see the upgrade documentation for Data Engineering.

After you perform the required domain post upgrade tasks, complete the post upgrade tasks for Test Data Management included in this document.

After You Upgrade

After you complete domain upgrade and post upgrade tasks, you must complete upgrade configuration tasks specific to Test Data Management.

Upgrade the Application Services

Upgrade the services that Test Data Manager requires.

As part of the domain post upgrade steps, you must have upgraded the following services before you perform this task:

- PowerCenter Repository Service
- Model Repository Service
- Data Integration Service

1. Log in to Informatica Administrator and click the **Services and Nodes** tab.
2. Select the PowerCenter Repository Service in the **Domain Navigator** panel and on the **Repository Properties** tab, change the operating mode to Normal.
3. Select the PowerCenter Integration Service in the **Domain Navigator** panel and perform the following tasks:
   a. Click the **Processes** tab.
   b. Click **Edit** on the **General Properties** tab.
   c. In the **Edit General Properties** window, update the **$PMRootDir** path to the latest path.
   d. Click **OK**.
   e. Recycle the service.
4. If you use a test data warehouse, select the Test Data Warehouse Service in the **Domain Navigator** panel and perform the following tasks:
   a. Click **Actions** > **Upgrade Contents** to upgrade the content.

      The content upgrade updates the table structures and schema of the test data warehouse repository.
   b. Recycle the service.
5. Select the Test Data Manager Service in the **Domain Navigator** panel and perform the following tasks:
   a. Click **Actions** > **Upgrade Contents** to upgrade the content. The content upgrade updates the schema and table structures of the Test Data Management repository.

      If you delete the Test Data Manager Service before you upgrade and create the service with a different name after you upgrade, you must enter the previous service name.
   b. Click the **Processes** tab.
   c. Click **Edit** on the **Execution Options** tab.
   d. Update the path to the Informatica installation directory in the **Hadoop Distribution Directory** property and click **OK**.

      You cannot test the connection if you do not update the property.
   e. Recycle the service.
   f. Enable the service.

Run the Upgrade Commands for Workflows

Run the following commands to run workflows created before upgrade without generating the workflows again.

Ensure that you stop the domain and set environment variables before you run the upgrade commands.

1. Update the following properties in the `<Informatica installation directory>/TDM/utilities/ilmcli/conf` configuration file and save the changes:

   HTTP Mode

   ```
   user=<Test Data Management user name>
   password=<Password>
   securityDomain=<Type of security domain>
   isUserPasswordEncrypted=<Specify whether the password is encrypted with true or false>
   TDMHostName=<host name of the machine where Test Data Management is installed>
   TDMPort=<Test Data Management port number>
   isHTTPS=<Specify whether HTTPS is enabled with true or false>
   ```

   HTTPS Mode

   ```
   user=<Test Data Management user name>
   password=<Password>
   securityDomain=<Type of security domain>
   isUserPasswordEncrypted=<Specify whether the password is encrypted with true or false>
   TDMHostName=<host name of the machine where Test Data Management is installed>
   TDMPort=<Test Data Management port number>
   isHTTPS=<Specify whether HTTPS is enabled with true or false>
   javax.net.ssl.trustStore=<enter the complete path to the keystore file>
   javax.net.ssl.trustStorePassword=<password of the keystore file>
   ```

2. Browse to the following location: `<Informatica installation directory>/TDM/utilities/ilmcli/bin`
3. Run the following commands:

   ```
   sh ilmcmd -uec -ut upgrade -ct tdmcache
   ```

   ```
   sh ilmcmd -uec -ut upgrade -ct <PowerCenter repository user name> -rdl "<JDBC connection string>" -rdu <PowerCenter repository user name> -rdp <password> -rdt <database type>
   ```

You can now run workflows that you generated before upgrade.

Update the Cache File Location in Test Data Manager

If you configured the location of the cache file directory in the existing Test Data Management setup, you must update the location after you upgrade.

1. Log in to Test Data Manager as an Administrator.
2. Open the **Administrator** view and click **Actions** > **Edit** > **Workflow Generation**.
3. Update the location in the **Cache Location** field.

   On a multinode setup you must:

   - Update the cache file directory on all Test Data Management nodes.
   - Update the mount or mlink for the cache file directory on all Test Data Management nodes.
4. Click **OK**.

Copy JSON and XML Files

The upgrade does not copy the `ResetObject.json` and XML files from the `TDM/utilities/ilmcli/Bin` folder and the `TDM/utilities/ilmcli/Conf` folder.

If your setup contains the files in the default location, you can copy the files from the `TDM` folder that is backed up when you upgrade. Copy the files to the same location in the current `TDM` folder.

If you store the files outside the `TDM` folder, you do not need to copy the files.

Configure the PowerCenter Integration Service for Kerberos-Enabled Hadoop HDFS Connections

If you use a Hadoop cluster with Kerberos authentication, you must configure the PowerCenter Integration Service before you can create and use a Hadoop HDFS connection in Test Data Manager.

Ensure that the KRB5_CONFIG environment variable contains the `krb5.conf` file location and that the `krb5.conf` file contains the correct entries.

1. Copy the `krb5.conf` file to the following location: `<Informatica installation directory>/TDM/datadirect`
2. Create a directory in the Informatica installation directory. For example: `<Informatica installation directory>/hadoophdfs/conf/`

   Ensure that the PowerCenter Integration Service is running so that the Informatica administrator user has read/write access to the directory.
3. Copy the following files from the Hadoop cluster to the directory that you created:
   - `/etc/hadoop/conf/core-site.xml`
   - `/etc/hadoop/conf/mapred-site.xml`
   - `/etc/hadoop/conf/hdfs-site.xml`
   - `/etc/hive/conf/hive-site.xml`
4. Ensure that the Informatica administrator user exists on all Hadoop cluster nodes and has the same UID. To create the Kerberos ticket cache file, run the kinit command on all nodes.
5. To create the Kerberos ticket cache file, run the kinit command on the Informatica node where the PowerCenter Integration Service is created.

   The command creates the ticket cache file with the following name format:
   `/tmp/krb5cc_<UID>`

   Ensure that you have read permission on the ticket cache file.

   Use the kinit command to verify, validate, and renew the tickets.
6. Edit the `core-site.xml` file in the directory and add the following parameters:

```
<property>
<name>hadoop.security.kerberos.ticket.cache.path</name>
<value>/tmp/REPLACE_WITH_CACHE_FILENAME</value>
<description>Path to the Kerberos ticket cache.</description>
</property>
```

7. Log in to the Administrator tool, select the PowerCenter Integration Service, and click the **Processes** tab.
8. Click **Edit** on the **Environment Variables** tab. In the CLASSPATH environment variable, add the directory that you created in step 1.
9. Restart the PowerCenter Integration Service.

Update Cluster Configuration Information

If you created Hadoop, Hive, or HDFS connections in the previous version, you must update the connection information.

Edit the connection properties and select the required cluster configuration from the list of cluster configurations.

You must re-import the cluster configuration in Informatica Administrator before you can update the connections.

Configure Format Preserving Encryption Masking

Before you can use the format preserving encryption masking type in a plan, you must configure Test Data Management.

1. Create a `tokens` folder in any location on the machine where Informatica is installed.
2. Browse to the `<Informatica installation directory>\TDM\configuration` directory.
3. Open the softhsm2.conf file.
4. Set the directories.tokendir property to the `tokens` folder that you create in step 1 and save the change.
5. Set the SOFTHSM2_CONF environment variable to the `<Informatica installation directory>\TDM\configuration\softhsm2.conf` directory.
6. Set the INFA_KEY_LOCATION environment variable to the `<Informatica installation directory>\isp\config\keys` directory.
7. Restart the Informatica domain.

Configure Format Preserving Encryption Masking in a Hadoop Environment

Before you can use the format preserving encryption masking type in a Hadoop plan, you must configure Test Data Management.

1. Create a folder to store tokens on the Hadoop cluster. For example, create a `tokens` folder.
2. Browse to the `softhsm2.conf` file on the `<Informatica installation directory>\TDM\configuration`
3. Copy the `softhsm2.conf` file to the Hadoop cluster.
4. Open the `softhsm2.conf` file on the Hadoop cluster machine and set the `directories.tokendir` property to the directory that you create in step 1 and save the change.
5. Log in to Test Data Manager and click **Administrator** > **Connections**.
6. Open the connection that you use to push mappings to the Hadoop environment.

   You can find the Hadoop pushdown connection name from the **Administrator** > **Preferences** > **Hive Properties** tab.
7. On the **Hadoop Cluster Properties** tab, add the **Cluster Environment Variable** information:
   - Name: SOFTHSM2_CONF
   - Value: Enter the path to the `softhsm2.conf` file on the Hadoop cluster machine. For example, enter `/home/tdmhdp/ENCRYPTION_RELATED_DATA/softhsm2.conf`.

Regenerate Masking Plans with Format Preserving Encryption

Format preserving encryption uses pass phrases to encrypt and decrypt source data. The pass phrases are stored encrypted.

Because version 10.5 uses an updated SiteKey algorithm, you must generate the workflows created before upgrade. The SiteKey algorithm is used to store sensitive information.