



Informatica® PowerExchange for Netezza  
10.0

# User Guide

© Copyright Informatica LLC 2015, 2018

This software and documentation contain proprietary information of Informatica LLC and are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright law. Reverse engineering of the software is prohibited. 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. This Software may be protected by U.S. and/or international Patents and other Patents Pending.

Use, duplication, or disclosure of the Software by the U.S. Government is subject to the restrictions set forth in the applicable software license agreement and as provided in DFARS 227.7202-1(a) and 227.7702-3(a) (1995), DFARS 252.227-7013(1)(ii) (OCT 1988), FAR 12.212(a) (1995), FAR 52.227-19, or FAR 52.227-14 (ALT III), as applicable.

The information in this product or documentation is subject to change without notice. If you find any problems in this product or documentation, please report them to us in writing.

Informatica, Informatica Platform, Informatica Data Services, PowerCenter, PowerCenterRT, PowerCenter Connect, PowerCenter Data Analyzer, PowerExchange, PowerMart, Metadata Manager, Informatica Data Quality, Informatica Data Explorer, Informatica B2B Data Transformation, Informatica B2B Data Exchange Informatica On Demand, Informatica Identity Resolution, Informatica Application Information Lifecycle Management, Informatica Complex Event Processing, Ultra Messaging and Informatica Master Data Management are trademarks or registered trademarks of Informatica LLC in the United States and in jurisdictions throughout the world. All 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 (c) 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>.

The product includes software copyright © 2004-2007, The Dojo Foundation. All Rights Reserved. Permissions and limitations regarding this software are subject to terms available at <http://dojotoolkit.org/license>.

This product includes ICU software which is copyright International Business Machines Corporation and others. All rights reserved. Permissions and limitations regarding this software are subject to terms available at <http://source.icu-project.org/repos/icu/icu/trunk/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](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/hsqldbLicense.html>, <http://httpunit.sourceforge.net/doc/license.html>, <http://jung.sourceforge.net/license.txt>, [http://www.gzip.org/zlib/zlib\\_license.html](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://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://www.php.net/license/3_01.txt), <http://srp.stanford.edu/license.txt>, <http://www.schneider.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/ssl/>, <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.

Publication Date: 2018-09-28

# Table of Contents

<b>Preface .....</b>	<b>6</b>
Informatica Resources. ....	6
Informatica My Support Portal. ....	6
Informatica Documentation. ....	6
Informatica Product Availability Matrixes. ....	7
Informatica Web Site. ....	7
Informatica How-To Library. ....	7
Informatica Knowledge Base. ....	7
Informatica Support YouTube Channel. ....	7
Informatica Marketplace. ....	7
Informatica Velocity. ....	7
Informatica Global Customer Support. ....	8
 <b>Chapter 1: Introduction to PowerExchange for Netezza.....</b>	<b>9</b>
PowerExchange for Netezza Overview. ....	9
Introduction to Netezza. ....	9
 <b>Chapter 2: PowerExchange for Netezza Configuration.....</b>	<b>10</b>
PowerExchange for Netezza Configuration Overview. ....	10
Prerequisites. ....	10
 <b>Chapter 3: Netezza Connections.....</b>	<b>12</b>
Netezza Connection Overview. ....	12
Netezza Connection Properties. ....	12
infacmd Connection Properties. ....	13
Creating a Netezza Connection. ....	14
SSL Configuration. ....	14
Configuring SSL Authentication on Linux. ....	15
Configuring SSL Authentication on Windows. ....	15
 <b>Chapter 4: Netezza Data Objects and Mappings.....</b>	<b>16</b>
Netezza Data Object and Mapping Overview. ....	16
Netezza Data Object Properties. ....	17
Netezza Data Object Read Operation Properties. ....	17
Output Properties of a Netezza Data Object Read Operation. ....	17
Ports Properties. ....	18
Sources Properties. ....	18
Query Properties. ....	18
Run-time Properties. ....	19
Advanced Properties. ....	19

Parameterization for Netezza Sources. . . . .	21
Netezza Data Object Write Operation Properties. . . . .	21
Target Properties of a Netezza Data Object Write Operation. . . . .	21
Input Properties of a Netezza Data Object Write Operation. . . . .	22
Ports Properties. . . . .	22
Run-time Properties. . . . .	22
Advanced Properties. . . . .	22
Parameterization for Netezza Targets. . . . .	26
Importing a Netezza Data Object. . . . .	27
Creating a Netezza Data Object Operation. . . . .	27
<b>Appendix A: Data Type Reference. . . . .</b>	<b>28</b>
Data Type Reference Overview. . . . .	28
Netezza and Transformation Data Types. . . . .	28
<b>Index. . . . .</b>	<b>31</b>

# Preface

The *Informatica PowerExchange for Netezza User Guide* provides information about reading data from Netezza sources and writing data to Netezza targets. It is written for database administrators and developers who create mappings to read data from Netezza or write data to Netezza. This book assumes you have knowledge of Netezza, Informatica Developer, and the database engines and systems in your environment.

## Informatica Resources

### Informatica My Support Portal

As an Informatica customer, the first step in reaching out to Informatica is through the Informatica My Support Portal at <https://mysupport.informatica.com>. The My Support Portal is the largest online data integration collaboration platform with over 100,000 Informatica customers and partners worldwide.

As a member, you can:

- Access all of your Informatica resources in one place.
- Review your support cases.
- Search the Knowledge Base, find product documentation, access how-to documents, and watch support videos.
- Find your local Informatica User Group Network and collaborate with your peers.

As a member, you can:

- Access all of your Informatica resources in one place.
- Search the Knowledge Base, find product documentation, access how-to documents, and watch support videos.
- Find your local Informatica User Group Network and collaborate with your peers.

### Informatica Documentation

The Informatica Documentation team makes every effort to create accurate, usable documentation. If you have questions, comments, or ideas about this documentation, contact the Informatica Documentation team through email at [infa\\_documentation@informatica.com](mailto:infa_documentation@informatica.com). We will use your feedback to improve our documentation. Let us know if we can contact you regarding your comments.

The Documentation team updates documentation as needed. To get the latest documentation for your product, navigate to Product Documentation from <https://mysupport.informatica.com>.

## Informatica Product Availability Matrixes

Product Availability Matrixes (PAMs) indicate the versions of operating systems, databases, and other types of data sources and targets that a product release supports. You can access the PAMs on the Informatica My Support Portal at <https://mysupport.informatica.com>.

## Informatica Web Site

You can access the Informatica corporate web site at <https://www.informatica.com>. The site contains information about Informatica, its background, upcoming events, and sales offices. You will also find product and partner information. The services area of the site includes important information about technical support, training and education, and implementation services.

## Informatica How-To Library

As an Informatica customer, you can access the Informatica How-To Library at <https://mysupport.informatica.com>. The How-To Library is a collection of resources to help you learn more about Informatica products and features. It includes articles and interactive demonstrations that provide solutions to common problems, compare features and behaviors, and guide you through performing specific real-world tasks.

## Informatica Knowledge Base

As an Informatica customer, you can access the Informatica Knowledge Base at <https://mysupport.informatica.com>. Use the Knowledge Base to search for documented solutions to known technical issues about Informatica products. You can also find answers to frequently asked questions, technical white papers, and technical tips. If you have questions, comments, or ideas about the Knowledge Base, contact the Informatica Knowledge Base team through email at [KB\\_Feedback@informatica.com](mailto:KB_Feedback@informatica.com).

## Informatica Support YouTube Channel

You can access the Informatica Support YouTube channel at <http://www.youtube.com/user/INFASupport>. The Informatica Support YouTube channel includes videos about solutions that guide you through performing specific tasks. If you have questions, comments, or ideas about the Informatica Support YouTube channel, contact the Support YouTube team through email at [supportvideos@informatica.com](mailto:supportvideos@informatica.com) or send a tweet to @INFASupport.

## Informatica Marketplace

The Informatica Marketplace is a forum where developers and partners can share solutions that augment, extend, or enhance data integration implementations. By leveraging any of the hundreds of solutions available on the Marketplace, you can improve your productivity and speed up time to implementation on your projects. You can access Informatica Marketplace at <http://www.informaticamarketplace.com>.

## Informatica Velocity

You can access Informatica Velocity at <https://mysupport.informatica.com>. Developed from the real-world experience of hundreds of data management projects, Informatica Velocity represents the collective knowledge of our consultants who have worked with organizations from around the world to plan, develop, deploy, and maintain successful data management solutions. If you have questions, comments, or ideas about Informatica Velocity, contact Informatica Professional Services at [ips@informatica.com](mailto:ips@informatica.com).

## Informatica Global Customer Support

You can contact a Customer Support Center by telephone or through the Online Support.

Online Support requires a user name and password. You can request a user name and password at <http://mysupport.informatica.com>.

The telephone numbers for Informatica Global Customer Support are available from the Informatica web site at <http://www.informatica.com/us/services-and-training/support-services/global-support-centers/>.



## CHAPTER 1

# Introduction to PowerExchange for Netezza

This chapter includes the following topics:

- [PowerExchange for Netezza Overview, 9](#)
- [Introduction to Netezza, 9](#)

## PowerExchange for Netezza Overview

You can use PowerExchange for Netezza to read data from and write data to a Netezza database. You can use PowerExchange for Netezza to process large volumes of data.

The Data Integration Service reads and writes Netezza data through a Netezza external table. An external table definition is stored within the Netezza database but the data is saved externally in a location that is accessible to the Netezza host or the client system.

To read data from a Netezza database, the Data Integration Service creates an external table and named pipe in the pipe directory path that you specify for data extraction. It then reads the data from the named pipe.

To write data to a Netezza database, the Data Integration Service creates an external table in the pipe directory path that you specify for data loading. It writes the data first to the external table and then to a staging table. The Data Integration Service then writes the data from the staging table to the Netezza target.

### Example

Your organization is a retail chain with sales outlets across multiple countries. You store the historical sales information in a Netezza database. You can use PowerExchange for Netezza to read sales information from the Netezza database and use it for business analysis and decision making.

## Introduction to Netezza

Netezza is a data warehousing appliance that organizations use to store large volumes of data. Netezza provides high-performance analytics and fast querying capabilities.

## CHAPTER 2

# PowerExchange for Netezza Configuration

This chapter includes the following topics:

- [PowerExchange for Netezza Configuration Overview, 10](#)
- [Prerequisites, 10](#)

## PowerExchange for Netezza Configuration Overview

PowerExchange for Netezza installs with the Informatica services and clients.

To configure PowerExchange for Netezza, complete the prerequisites.

## Prerequisites

Before you use PowerExchange for Netezza, perform the following tasks:

1. Install the Informatica services.
2. Install the Informatica clients. When you install the Informatica clients, the Developer tool is installed.
3. Create a Data Integration Service and a Model Repository Service in the Informatica domain.
4. Download the Netezza JDBC driver from the IBM website and install the driver. The Developer tool uses the Netezza JDBC driver to connect to the Netezza database.
5. On the Windows machine where you installed the Developer tool, copy the JAR files of the Netezza JDBC driver to the following location:  
`<Informatica installation directory>/clients/externaljdbcjars`
6. Download the Netezza ODBC driver from the IBM website and install the driver. Create an ODBC data source for the Netezza database that you want to connect to. The ODBC data source name is the connection string that you must enter while creating a Netezza connection. The Data Integration Service uses the Netezza ODBC driver to run Netezza mappings.
7. On the machine where you installed the Informatica services, install the Netezza client drivers.

8. Verify that the Netezza database user has the following privileges on the database:

- CREATE EXTERNAL TABLE
- CREATE TABLE
- DELETE
- DROP
- INSERT
- LIST
- SELECT
- TRUNCATE
- UPDATE

## CHAPTER 3

# Netezza Connections

This chapter includes the following topics:

- [Netezza Connection Overview, 12](#)
- [Netezza Connection Properties, 12](#)
- [infacmd Connection Properties, 13](#)
- [Creating a Netezza Connection, 14](#)
- [SSL Configuration, 14](#)

## Netezza Connection Overview

Use a Netezza connection to access a Netezza database.

Create a Netezza connection to import Netezza table metadata, create Netezza data objects, preview data, and run mappings. When you create a Netezza connection, you define the connection attributes that the Developer tool uses to connect to the Netezza database.

Use the Developer tool, Administrator tool, or infacmd to create a Netezza connection.

## Netezza Connection Properties

Use a Netezza connection to access a Netezza database. The Netezza connection is a database connection. You can create and manage a Netezza connection in the Administrator tool or the Developer tool.

**Note:** The order of the connection properties might vary depending on the tool where you view them.

The following table describes the Netezza connection properties:

Property	Description
Name	Name of the connection. The name is not case sensitive and must be unique within the domain. The name cannot exceed 128 characters, contain spaces, or contain the following special characters: ~ ` ! \$ % ^ & * ( ) - + = { [ ] }   \ : ; " ' < , > . ? /
ID	String that the Data Integration Service uses to identify the connection. The ID is not case sensitive. It must be 255 characters or less and must be unique in the domain. You cannot change this property after you create the connection. Default value is the connection name.
Description	Description of the connection. The description cannot exceed 765 characters.
Location	Domain where you want to create the connection.
Type	Connection type. Select <b>Netezza</b> .
User name	User name with the appropriate permissions to access the Netezza database.
Password	Password for the database user name.
JDBC Url	JDBC URL that the Developer tool must use when it connects to the Netezza database. Use the following format: jdbc:netezza://<hostname>:<port>/<database name>
Connection String	Name of the ODBC data source that you want to use to connect to the Netezza database.
Timeout	Number of seconds that the Developer tool waits for a response from the Netezza database before it closes the connection.

## infacmd Connection Properties

You can create a Netezza connection with the infacmd isp CreateConnection command. You can update a Netezza connection with the infacmd isp UpdateConnection command.

To create a Netezza connection, enter the connection options in the following format:

... -o option\_name=value option\_name=value ...

To enter multiple options, separate them with a space. To enter a value that contains a space or nonalphanumeric character, enclose the value in quotation marks.

For example, enter the following command:

```
infacmd.sh createConnection -dn InfaDomain -un Administrator -pd Administrator -cn NZConn -
cid NZcmdline -ct NETEZZA -o "connectionString=nz_db jdbcUrl=jdbc:netezza://
adaptersnz2:5480/nz_db username=infa password=infa timeout=30"
```

The following table describes the Netezza connection options for the infacmd isp CreateConnection and UpdateConnection commands:

Property	Description
connectionString	Required. Name of the ODBC data source that you create to connect to the Netezza database.
jdbcUrl	Required. JDBC URL that the Developer tool must use when it connects to the Netezza database. Use the following format: <code>jdbc:netezza://&lt;hostname&gt;:&lt;port&gt;/&lt;database name&gt;</code>
username	Required. User name with the appropriate permissions to access the Netezza database.
password	Required. Password for the database user name.
timeout	Required. Number of seconds that the Developer tool waits for a response from the Netezza database before it closes the connection.

## Creating a Netezza Connection

Before you import Netezza data objects or run mappings, create a Netezza connection.

1. Click **Window > Preferences**.
2. Select **Informatica > Connections**.
3. Expand the domain in the **Available Connections** list.
4. Select **Database > Netezza** and then click **Add**.
5. Enter a connection name.
6. Optionally, enter a connection ID and description.
7. Select the domain where you want to create the connection.
8. Select the connection type as **Netezza**.
9. Click **Next**.
10. Configure the connection properties.
11. Click **Test Connection** to verify the connection to the Netezza database.
12. Click **OK**.

## SSL Configuration

You can use the Secure Sockets Layer (SSL) protocol to configure a secure connection between Netezza clients and the Netezza server.

The Data Integration Service uses a trust certificate file to establish a secure connection with the Netezza server over SSL. To establish a secure connection with the Netezza server over SSL, define the security type in the ODBC settings and specify the path to the cacert file.

## Configuring SSL Authentication on Linux

You can configure SSL authentication for the Netezza server through ODBC by using the cacert trust certificate file.

1. Open the `odbc.ini` file and add entries for the security level and cacert file in the NetezzaSQL ODBC section.
2. Add the `securityLevel=onlySecured` attribute. The `securityLevel` determines the method that the driver uses to encrypt the data sent between the driver and the database server.
3. Add the `caCertFile=<file path>` attribute. The `caCertFile` is the location and name of the trust certificate file.

## Configuring SSL Authentication on Windows

1. Open the **Administrative Tools** from the Windows Control Panel.
2. Open the **Data Sources (ODBC)** shortcut.  
The ODBC Data Source Administrator appears.
3. Click the **System DSN** tab.
4. Select **IBM Netezza ODBC Driver** and click **Configure**.
5. Click the **SSL DSN Options** tab.
6. Under **Security Level**, select **Only Secured**.
7. In the **CA Certificate File** field, specify the path to the cacert trust certificate and click **OK**.

## CHAPTER 4

# Netezza Data Objects and Mappings

This chapter includes the following topics:

- [Netezza Data Object and Mapping Overview, 16](#)
- [Netezza Data Object Properties, 17](#)
- [Netezza Data Object Read Operation Properties, 17](#)
- [Output Properties of a Netezza Data Object Read Operation, 17](#)
- [Parameterization for Netezza Sources, 21](#)
- [Netezza Data Object Write Operation Properties, 21](#)
- [Target Properties of a Netezza Data Object Write Operation, 21](#)
- [Input Properties of a Netezza Data Object Write Operation, 22](#)
- [Parameterization for Netezza Targets, 26](#)
- [Importing a Netezza Data Object, 27](#)
- [Creating a Netezza Data Object Operation, 27](#)

## Netezza Data Object and Mapping Overview

A Netezza data object is a physical data object that uses a Netezza table as a source or target. A Netezza data object is the representation of data that is based on a Netezza table.

To create a Netezza data object, import metadata from a Netezza table into the Developer tool. Create a data object read operation or a data object write operation based on the Netezza data object.

To read data from the Netezza table, create a data object read operation based on the Netezza data object. Configure the read operation properties to determine how the Data Integration Service must read data from the Netezza table. Add the read operation as a source in a mapping.

To write data to the Netezza table, create a data object write operation based on the Netezza data object. Configure the write operation properties to determine how the Data Integration Service must write data to the Netezza table. Add the write operation as a target in a mapping.

Validate and run the mapping. You can also add the mapping to a Mapping task in a workflow and run the workflow.



# Netezza Data Object Properties

The Netezza **Overview** view displays general information about the Netezza data object and the object properties that apply to the Netezza table that you import.

You can configure the following properties for a Netezza data object:

## General Properties

You can configure the following general properties for a Netezza data object:

- Name. Name of the Netezza data object.
- Description. Description of the Netezza data object.
- Connection. Name of the Netezza connection.

## Object Properties

You can configure the following general properties and column properties for the Netezza table that you add in the data object:

- Name. Business name of the Netezza table.
- Description. Description of the Netezza table.
- Native name. Native name of the Netezza table including the entity in which the table exists.
- Path Information. Path to the Netezza table.
- Column Properties. Name, native name, data type, precision, scale, and description of the columns in the Netezza table. You can also define the primary key and specify if a column can contain null values.

# Netezza Data Object Read Operation Properties

The Data Integration Service reads data from a Netezza table based on the data object read operation properties that you specify.

When you create a data object read operation, the Developer tool creates a Source transformation and an Output transformation.

The Source transformation represents the data that the Data Integration Service reads from the Netezza table. You can configure the Source transformation to select distinct rows from the Netezza table and sort data.

The Output transformation represents the data that the Data Integration Service passes into the mapping pipeline. Select the Output transformation to edit the ports, sources, query, run-time, and advanced properties.

# Output Properties of a Netezza Data Object Read Operation

The Output transformation defines the run-time properties that the Data Integration Service uses to read data from the Netezza table.

You can configure the Output transformation to perform the following tasks:

- Edit the ports properties.
- Add or remove sources.
- Define a filter or sort condition.
- Change or parameterize the Netezza connection.
- Define the advanced properties that the Data Integration Service must use to read data.

## Ports Properties

The **Ports** tab lists the name, data type, precision, scale, and description for all the ports that the data object read operation contains.

You can configure the following ports properties in the data object read operation:

Property	Description
Name	Name of the port.
Type	Data type of the port.
Precision	Maximum number of digits for numeric data types or maximum number of characters for string data types. The precision includes the scale for numeric data types.
Scale	Maximum number of digits after the decimal point for numeric values.
Description	Description of the port.

## Sources Properties

Use the **Sources** tab to update the list of Netezza tables from which you want to read data. You can read data from multiple Netezza tables by using the same data object.

## Query Properties

Use the **Query** tab to specify join, filter, and sort conditions.

The following table describes the query properties that you can configure for Netezza sources:

Property	Description
Select Distinct	Selects unique values from the source. The Data Integration Service filters out unnecessary data when you use the Netezza data object in a mapping.
Join	User-defined join in a Netezza data object. A user-defined join specifies the condition used to join data from multiple sources in the same Netezza data object.
Filter	Filter value in a read operation. The filter specifies the WHERE clause of the SELECT statement. Use a filter to reduce the number of rows that the Data Integration Service reads from the Netezza source. When you enter a source filter, the Developer tool adds a WHERE clause to the default query.
Sort	Sorts the rows queried from the Netezza source. The Data Integration Service adds the ports to the ORDER BY clause in the default query.

## Platform Expression

You can use the platform filter expression to select specific records from Netezza sources based on the filter condition that you specify.

The following table describes the properties that you can specify when you use the platform expression filter:

Property	Description
Expression Type	Type of filter expression that you want to use to filter records. Default is Platform Expression.
Left Field	Column on which you want to apply the filter condition.
Operator	Simple operators that you can use to filter records. You can select one of the following operators: =, !=, <, <=, >, >=
Right Field	Value based on which you want to filter the records.

## Run-time Properties

The **Run-time** tab displays the name of the connection that the Data Integration Service uses to read data from the Netezza table. You can select a different connection or parameterize the connection.

## Advanced Properties

The **Advanced** tab displays the advanced properties that the Data Integration Service uses to read data from the Netezza table.

You can configure the following advanced properties in the data object read operation:

### Socket Buffer Size

Buffer size that the Data Integration Service uses to read data.

Enter a value between 4096 and 2147483648 bytes.

Default is 8388608 bytes.

You can set the socket buffer size to 25% to 50% of the DTM buffer size to increase performance. You might need to test different settings for optimal performance.

### Pipe Directory Path

Path where the Data Integration Service creates a named pipe for the external table. The Data Integration Service reads data from the named pipe.

Enter a path that does not use an NFS mount.

If you do not specify the path, the Data Integration Service creates the pipe in the following directory:

```
<Informatica installation directory>/server/bin
```

This property is required if the machine that hosts the Data Integration Service is on HP-UX and the following directory is on an NFS-mounted directory:

```
<Informatica installation directory>/server/bin
```

**Delimiter**

Character that separates successive input fields.

Set the delimiter to any value that the Netezza Performance Server supports. The value can be a part of the data that the Netezza source contains.

Default is |.

**Escape Character**

Escape character of the external table.

If the data contains NULL, CR, and LF characters in the Char or Varchar fields, you must add the escape character in the source data before reading data. Enter the escape character before the data.

Enter a backslash (\) as the escape character.

**Null Value**

NullValue parameter of the external table.

The string that represents a null value for the column. If you set this parameter as 'a', the Data Integration Service treats 'a' data as NULL.

Maximum value is one character.

Default is "".

**Synchronize Netezza Null**

Select this option if you want the Data Integration Service to treat null values from the Netezza source as null values in Informatica Developer.

Default is not selected.

**SQL Query**

Overrides the default query.

Enter the SQL query that the Data Integration Service must use to query data from the Netezza source.

**Pre SQL**

SQL query that the Data Integration Service must run before it reads data from the Netezza source.

**Post SQL**

SQL query that the Data Integration Service must run after it reads data from the Netezza source.

**Netezza Custom Properties**

Custom properties that you want to pass to the external table.

Enter any parameter that the external table supports along with the parameter value

Use the following format:

```
<parameter name> <value>
```

To enter multiple parameter name and value pairs, separate them with a space character.

**Source Table Name**

Overrides the source table name.

For example, you can parameterize the source table name to override the table name in the mapping.

### Source Table Prefix

Name of the schema from which the Data Integration Service must read data.

## Parameterization for Netezza Sources

You can parameterize the Netezza connection and data object read operation properties to override the mapping properties at run time. All the properties support full parameterization.

For example, you want to read data from a customers table. The customers table has multiple schemas that contain customer information for different countries. You want to use one mapping to read data from multiple schemas based on the country name instead of creating different mappings for different schemas. In this case, you can parameterize the owner name and source table name in the read operation properties, and use the same mapping to read data from multiple schemas.

You can parameterize the following read operation properties for a Netezza source:

- Socket Buffer Size
- Pipe Directory Path
- Delimiter
- Escape Character
- Null Value
- SQL Query
- Pre SQL
- Post SQL
- Netezza Custom Properties
- Source Table Name
- Source Table Prefix

## Netezza Data Object Write Operation Properties

The Data Integration Service writes data to a Netezza table based on the data object write operation properties that you specify.

## Target Properties of a Netezza Data Object Write Operation

The target properties represent the data that the Data Integration Service writes to the Netezza table. Select the target properties to view data such as the name and description of the Netezza table, and the column properties.

# Input Properties of a Netezza Data Object Write Operation

The Input transformation defines the run-time properties that the Data Integration Service uses to write data to the Netezza table.

In the Input transformation, you can also edit the port properties, and change or parameterize the Netezza connection.

## Ports Properties

The **Ports** tab lists the name, data type, precision, scale, and description for all the ports that the data object write operation contains.

You can configure the following ports properties in the data object write operation:

Property	Description
Name	Name of the port.
Type	Data type of the port.
Precision	Maximum number of digits for numeric data types or maximum number of characters for string data types. The precision includes the scale for numeric data types.
Scale	Maximum number of digits after the decimal point for numeric values.
Description	Description of the port.

## Run-time Properties

The **Run-time** tab displays the name of the connection that the Data Integration Service uses to write data to the Netezza table. You can select a different connection or parameterize the connection.

## Advanced Properties

The **Advanced** tab displays the advanced properties that the Data Integration Service uses to write data to the Netezza table.

You can configure the following advanced properties in the data object write operation:

### Pre SQL

SQL query that the Data Integration Service must run before it writes data to the Netezza target.

For example, you can run an SQL query to drop indexes before the Data Integration Service writes data to the Netezza target.

### Post SQL

SQL query that the Data Integration Service must run after it writes data to the Netezza target.

For example, you can run an SQL query to re-create indexes after the Data Integration Service writes data to the Netezza target.

**Table Name Prefix**

Prefix that the Data Integration Service must add to the target table name.

For example, you can enter a target owner name to override the table name prefix in the mapping.

**Target Table Name**

Overrides the target table name.

For example, you can parameterize the target table name to override the table name in the mapping.

**Insert**

The Data Integration Service inserts rows into the target table and enforces key constraints.

Default is selected.

**Delete**

The Data Integration Service deletes rows from the target table.

Default is selected.

**Update**

The Data Integration Service updates the rows based on the update strategy option that you specify.

Select one of the following values:

- Update as Update. The Data Integration Service updates all rows flagged for update.
- Update as Insert. The Data Integration Service inserts all rows flagged for update.
- Update else Insert. The Data Integration Service first updates all rows flagged for update if they exist in the target. It then inserts the remaining rows marked for insert.
- None. The Data Integration Service does not update any row.

Default is None.

When you use the Update property, the Data Integration Service does not enforce key constraints and writes duplicate rows with the same primary key into the target table.

**Truncate Target Table Option**

The Data Integration Service truncates the target before it writes data to the target.

Default is selected.

If you specify an SQL statement in the **Pre SQL** property, the Data Integration Service runs the SQL statement before it truncates the table.

**Delimiter**

Character that separates successive input fields.

Set the delimiter to any value that the Netezza Performance Server supports. The value must not be a part of the input data.

Default is |.

**Null Value**

NullValue parameter of the external table. The string that represents a null value for the column. If you set this parameter as 'a', the Data Integration Service treats 'a' data as NULL.

Maximum value is one character.

Default is ".

### **Synchronize Platform Null**

Select this option if you want the Data Integration Service to write null values from Informatica Developer as null values into the Netezza target.

Default is not selected.

### **Escape Character**

Escape character of the external table. If the data contains NULL, CR, and LF characters in the Char or Varchar fields, you must add an escape character for these fields before writing data to the target.

Enter a backslash (\) as the escape character.

### **Quoted Value**

QUOTEDVALUE parameter of the external table. The quoted value is not a part of the data.

Select one of the following values:

- NO. Select this option to omit the quotes.
- SINGLE. Select this option to enclose the column value in single quotes.
- DOUBLE. Select this option to enclose the column value in double quotes.

Default is NO.

### **Enable Key Constraint**

This option is applicable only when you want to insert rows. When you select this option, the Data Integration Service enforces key constraints and does not write duplicate rows into the target table.

If you clear this option, the Data Integration Service does not enforce key constraints and writes duplicate rows with the same primary key to the target.

Default is not selected.

### **Enable Advanced Statistics**

Select this option to write advanced statistics in the workflow log such as the number of duplicate rows and the actual number of rows that the Data Integration Service wrote to the target.

For example, a Netezza target contains 1000 rows and there are 100 duplicate rows. You configure the Data Integration Service to enforce key constraints. When you run a mapping to write data to the target, the Data Integration Service writes only 900 rows to the target and rejects 100 rows. When you select the **Enable Advanced Statistics** option, the workflow log indicates that there were 100 duplicate rows and the Data Integration Service wrote only 900 rows to the target.

Default is not selected.

### **Duplicate Row Handling**

Determines how the Data Integration Service handles duplicate rows.

Select one of the following values:

- FIRST. The Data Integration Service passes the first row to the target and rejects the rows that follow with the same primary key.
- LAST. The Data Integration Service passes the last duplicate row to the target and discards the rest of the rows.

Default is FIRST.

### **Socket Buffer Size**

Buffer size that the Data Integration Service uses to write data.



Enter a value between 4096 and 2147483648 bytes.

Default is 8388608 bytes.

Set the socket buffer size to 25% to 50% of the DTM buffer size to increase session performance. You might need to test different settings for optimal performance.

#### **Control Character**

CTRLCHARS parameter of the external table to transfer data that contains control characters. You can enter control characters for Char and Varchar fields. If you enter a control character, you must add an escape character for the NULL, CR, and LF fields.

Default is TRUE.

#### **Crinstring**

CRINSTRING parameter to transfer data that contains carriage returns (CR). You can enter a non escape CR in Char or Varchar fields. To write the control characters present in the Char and Varchar fields, set the CTRLCHARS and CRINSTRING parameters to TRUE in the Netezza table properties.

Default is TRUE.

#### **Pipe Directory Path**

Path where the Data Integration Service creates the pipe for the external table.

Enter a path that does not use an NFS mount.

If you do not specify the path, the Data Integration Service uses the following directory to create the pipe for the external table:

```
<Informatica installation directory>/server/bin
```

Required if the machine hosting the Data Integration Service is on HP-UX and the following directory is on an NFS-mounted directory:

```
<Informatica installation directory>/server/bin
```

#### **Error Log Directory Name**

Directory where Netezza creates an error log if there are data errors. The error log contains the error messages.

By default, Netezza creates the error log in the following directory on the machine that hosts the Netezza Performance Server:

```
/tmp
```

#### **Bad File Name**

Directory where the Data Integration Service creates a bad file. The bad file contains the rejected records.

By default, the Data Integration Service creates a bad file in the following directory:

```
$PMBadFileDir
```

#### **Error Threshold**

Number of non-fatal errors that the Data Integration Service can encounter before it fails the mapping.

If you specify 0, non-fatal errors do not cause the mapping to fail.

Default is 1.

### Custom Properties

Custom properties that you want to pass to the external table.

Enter any parameter that the external table supports along with the parameter value.

Use the following format:

```
<parameter name> <value>
```

To enter multiple parameter name and value pairs, separate them with a space character.

## Parameterization for Netezza Targets

You can parameterize the Netezza connection and data object write operation properties to override the mapping properties at run time. All the properties support full parameterization.

For example, you want to write data to a sales table. The sales table has multiple schemas to store sales information for different countries. You want to use one mapping to write data to multiple schemas based on the country name instead of creating different mappings for different schemas. In this case, you can parameterize the target table name and table name prefix in the write operation properties, and use the same mapping to write data to multiple schemas.

You can parameterize the following write operation properties for a Netezza target:

- Pre SQL
- Post SQL
- Table Name Prefix
- Target Table Name
- Update
- Delimiter
- Null Value
- Escape Character
- Quoted Value
- Duplicate Row Handling
- Socket Buffer Size
- Control Character
- Crinstring
- Pipe Directory Path
- Error Log Directory Name
- Bad File Name
- Netezza Custom Properties

# Importing a Netezza Data Object

Import a Netezza data object to specify the Netezza table from which you want to read data or write data to. You can then create a data object operation based on the data object.

1. Select a project or folder in the **Object Explorer** view.
2. Click **File > New > Data Object**.
3. Select **Netezza Data Object** and click **Next**.  
The **New Netezza Data Object** dialog box appears.
4. Enter a name for the data object.
5. Click **Browse** next to the **Location** option and select the target project or folder.
6. Click **Browse** next to the **Connection** option and select the Netezza connection from which you want to import the Netezza table metadata.
7. To add a Netezza table, click **Add** next to the **Selected Resources** option.  
The **Add Resource** dialog box appears.
8. Select the Netezza table that you want to add.  
You can also search for a table by entering the table name in the **Name Filter** field.
9. Click **Finish**.  
The data object appears under Physical Data Objects in the project or folder in the **Object Explorer** view.

# Creating a Netezza Data Object Operation

Create a Netezza data object operation from a Netezza data object. You can create a read operation or a write operation. You can then add the read operation as a source in a mapping and add the write operation as a target in a mapping.

1. Select the Netezza data object in the **Object Explorer** view.
2. Right-click the data object and select **New > Data Object Operation**.  
The **Data Object Operation** dialog box appears.
3. Enter a name for the data object operation.
4. Specify the type of data object operation that you want to create.
  - To create a data object read operation, select **Read** from the **Capabilities** list.
  - To create a data object write operation, select **Write** from the **Capabilities** list.
5. Click **Add**.  
The **Select Resources** dialog box appears.
6. Select the Netezza table for which you want to create the data object operation and click **OK**.
7. Click **Finish**.

The Developer tool creates the data object operation for the selected Netezza data object.

# APPENDIX A

## Data Type Reference

This appendix includes the following topics:

- [Data Type Reference Overview, 28](#)
- [Netezza and Transformation Data Types, 28](#)

### Data Type Reference Overview

Informatica Developer uses the following data types in Netezza mappings:

- Netezza native data types. Netezza data types appear in the column properties of the physical data object.
- Transformation data types. Set of data types that appear in the transformations. They are internal data types based on ANSI SQL-92 generic data types, which the Data Integration Service uses to move data across platforms. Transformation data types appear in all transformations in a mapping.

When the Data Integration Service reads source data, it converts the native data types to the comparable transformation data types before transforming the data. When the Data Integration Service writes to a target, it converts the transformation data types to the comparable native data types.

### Netezza and Transformation Data Types

The following table lists the Netezza data types that the Data Integration Service supports and the corresponding transformation data types:

Netezza Data Type	Transformation Data Type	Range and Description
BigInt	Bigint	-9,223,372,036,854,775,808 to 9,223,372,036,854,775,807 Precision 19, scale 0
Bool	String	1 character
ByteInt	Small Integer	Precision 5, scale 0
Char	String	1 to 104,857,600 characters

Netezza Data Type	Transformation Data Type	Range and Description
Date	Date/Time	Jan. 1, 0001 A.D. to Dec. 31, 9999 A.D. (precision to the nanosecond)
Decimal	Decimal if the precision is 25 or lesser Double if the precision is greater than 25	<p>Precision 1 to 28, scale 0 to 28</p> <p>For transformations that support precision up to 38 digits, the precision is 1 to 38 digits, and the scale is 0 to 38.</p> <p>For transformations that support precision up to 28 digits, the precision is 1 to 28 digits, and the scale is 0 to 28.</p> <p>If you specify the precision greater than the maximum number of digits, the Data Integration Service converts decimal values to double in high precision mode.</p> <p>For transformations that support precision up to 38 digits, the precision is 1 to 38 digits, and the scale is 0 to 38.</p> <p>For transformations that support precision up to 28 digits, the precision is 1 to 28 digits, and the scale is 0 to 28.</p> <p>If you specify the precision greater than the maximum number of digits, the Data Integration Service converts decimal values to double in high precision mode.</p> <p>Double: Precision 15</p>
Float4	Double	Precision 15
Float8	Double	Precision 15
Integer	Integer	-2,147,483,648 to 2,147,483,647 Precision 10, scale 0
NChar(m)	String	1 to 104,857,600 characters
Numeric	Decimal if the precision is 25 or lesser Double if the precision is greater than 25	<p>Precision 1 to 28, scale 0 to 28</p> <p>For transformations that support precision up to 38 digits, the precision is 1 to 38 digits, and the scale is 0 to 38.</p> <p>For transformations that support precision up to 28 digits, the precision is 1 to 28 digits, and the scale is 0 to 28.</p> <p>If you specify the precision greater than the maximum number of digits, the Data Integration Service converts decimal values to double in high precision mode.</p> <p>For transformations that support precision up to 38 digits, the precision is 1 to 38 digits, and the scale is 0 to 38.</p> <p>For transformations that support precision up to 28 digits, the precision is 1 to 28 digits, and the scale is 0 to 28.</p> <p>If you specify the precision greater than the maximum number of digits, the Data Integration Service converts decimal values to double in high precision mode.</p> <p>Double: Precision 15</p>
NVarchar(m)	String	1 to 104,857,600 characters
Real	Real	Double-precision floating-point numeric value Precision 7, scale 0

Netezza Data Type	Transformation Data Type	Range and Description
SmallInt	Small Integer	Precision 5, scale 0
Time	Date/Time	Jan. 1, 0001 A.D. to Dec. 31, 9999 A.D. (precision to the microsecond)
Timestamp	Date/Time	January 1, 0001 00:00:00.000000 to December 31, 9999 23:59:59.999999 (precision to the microsecond)
Varchar	String	1 to 104,857,600 characters

# INDEX

## N

### Netezza connections

- creating [14, 27](#)
- infacmd properties [13](#)
- overview [9, 10, 12, 16, 28](#)
- properties [12, 17](#)

### Netezza data objects

- importing [27](#)
- overview [9, 10, 12, 16, 28](#)
- properties [12, 17](#)

### Netezza data types

- mapping with transformation data types [28](#)
- overview [9, 10, 12, 16, 28](#)

### Netezza database

- overview [9, 10, 12, 16, 28](#)

### Netezza mappings

- overview [9, 10, 12, 16, 28](#)

### Netezza read operation

- creating [14, 27](#)
- output transformation [17](#)
- source transformation [17](#)

### Netezza read operation properties

- advanced [19, 22](#)

### Netezza read operation properties (*continued*)

- configuring filter conditions [18](#)
- configuring join conditions [18](#)
- configuring sort conditions [18](#)
- ports [18, 22](#)
- query [18](#)
- run-time [19, 22](#)
- sources [18](#)

### Netezza write operation

- creating [14, 27](#)

### Netezza write operation properties

- advanced [19, 22](#)
- ports [18, 22](#)
- run-time [19, 22](#)

## P

### PowerExchange for Netezza

- overview [9, 10, 12, 16, 28](#)

### PowerExchange for Netezza configuration

- overview [9, 10, 12, 16, 28](#)
- prerequisites [10](#)