

#### Version 5.3



# **Review Supported Technologies**



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For a listing of open source software used by each Pentaho component, navigate to the folder that contains the Pentaho component. Within that folder, locate a folder named licenses. The licenses folder contains HTML.files that list the names of open source software, their licenses, and required attributions.

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## **Components Reference**

Pentaho aims to accommodate diverse computing environments. This list provides details about the environment components and versions we support. If you have questions about your particular computing environment, please contact Pentaho support.

#### Server

Pentaho server software is hardware-independent and runs on server-class computers that comply with these specifications for minimum hardware and required operation systems.

- Pentaho Business Analysis Server
- Pentaho Data Integration Server

Hardware—64 bit	Operating System—64 bit
Processor:  • Apple Macintosh Pro Quad-Core or Macintosh Mini Quad-Core • Intel EM64T or AMD64 Dual-Core  RAM: 8 GB with 4 GB dedicated to Pentaho servers  Disk Space: 20 GB free after installation	<ul> <li>Apple Macintosh OS X Server 10.9 &amp; 10.10</li> <li>CentOS Linux 5 &amp; 6</li> <li>Microsoft Windows 2008 Server R2, 2012 Server</li> <li>Red Hat Enterprise Linux 5 &amp; 6</li> <li>Solaris 10</li> <li>Ubuntu Server 12.4 LTS &amp; 14.4 LTS</li> </ul>

#### Workstation

These Pentaho design tools are hardware-independent and run on client-class computers that comply with these specifications for minimum hardware and required operation systems.

- Pentaho Aggregation Designer
- Pentaho Data Integration
- Pentaho Metadata Editor
- Pentaho Report Designer
- Pentaho Schema Workbench
- Pentaho Mobile

Hardware—32 or 64 bit	Operating System—32 or 64 bit
Processors:  • Apple Macintosh Dual-Core, 64 bit only • Intel EM64T or AMD64 Dual-Core  RAM: 2 GB RAM for most of the design tools, PDI requires 2 GB dedicated  Disk Space: 2 GB free after installation  Minimum Screen Size: 1280 x 960	<ul> <li>Apple Macintosh OS 10.9 &amp; 10.10, 64 bit only</li> <li>Microsoft Windows 7 &amp; 8</li> <li>Ubuntu Desktop 12.4 LTS &amp; 14.4 LTS</li> <li>iPad 2, 3, &amp; Air (iOS 7.x &amp; 8.x)</li> </ul>

#### **Embedded Software**

When embedding Pentaho software into other applications, the computing environment should comply with these specifications for minimum hardware and required operation systems.

- Embedded Pentaho Reporting
- Embedded Pentaho Analysis
- Embedded Pentaho Data Integration

Hardware—64 bit	Operating System—64 bit
Processors:  • Apple Macintosh Pro Quad-Core or Macintosh Mini Quad-Core • Intel EM64T or AMD64 Dual-Core  RAM: 8 GB with 4 GB dedicated to Pentaho servers  Disk Space: 20 GB free after installation	<ul> <li>Apple Macintosh OS X Server 10.9 &amp; 10.10</li> <li>CentOS Linux 5 &amp; 6</li> <li>Microsoft Windows 2008 Server R2, 2012</li> <li>Microsoft Windows 7 &amp; 8</li> <li>Red Hat Enterprise Linux 5 &amp; 6</li> <li>Solaris 10</li> <li>Ubuntu Server 12.4 LTS &amp; 14.4 LTS</li> </ul>

#### **Application Servers**

Servers to which you deploy Pentaho software must run one of these application servers.

Pentaho Software	Application Server
Pentaho Business Analysis Server Pentaho Data Integration Server	<ul><li>JBoss EAP 6.1.x and 6.2.x</li><li>Tomcat 6.0.x (shipped)</li><li>Tomcat 7.0</li></ul>

#### **Solution Database Repositories**

Pentaho software stores processing artifacts in these solution database repositories.

#### NOTE:

If you are accessing RedShift as a data source using the Postgres JDBC driver, you will need to change the solution repository to another supported vendor or technology due to a JDBC driver version conflict.

Pentaho Software	Database Repository
Pentaho Business Analysis Server Pentaho Data Integration Server	<ul> <li>MySQL 5.5, 5.6</li> <li>Oracle 10/11</li> <li>PostgreSQL 9.1*, 9.2</li> <li>MS SQL Server 2008, 2012</li> </ul>

<sup>\*</sup>Default installed solution database

#### **Data Sources**

Pentaho software connects to these relational and non-relational data sources.

Pentaho Software	Data Source
Pentaho Reporting	<ul> <li>JDBC 3**</li> <li>ODBC</li> <li>OLAP4J</li> <li>XML</li> <li>Pentaho Analysis</li> <li>Pentaho Data Integration</li> <li>Pentaho Metadata</li> <li>Scriptable</li> </ul>
Pentaho Business Analysis Server, Action Sequences	<ul> <li>Relational (JDBC)</li> <li>Hibernate</li> <li>Javascript</li> <li>Metadata (MQL)</li> <li>Mondrian (MDX)</li> <li>XML (XQuery)</li> <li>Security User/Role List Provider</li> <li>Data Integration Steps (PDI)</li> <li>Other Action Sequences</li> <li>Web Services</li> </ul>

Pentaho Software	Data Source
	• XMLA
Pentaho Data Integration	<ul> <li>JDBC 3**</li> <li>OLAP4J</li> <li>Salesforce</li> <li>XML</li> <li>CSV</li> <li>Microsoft Excel</li> </ul>

<sup>\*\*</sup>Use a JDBC 3.x compliant driver that is compatible with SQL-92 standards when communicating with relational data sources. For your convenience, we provide a <u>list of drivers</u> used to get data from relational JDBC databases.

## **Big Data Sources**

Pentaho software connects to these big data sources.

Data Source	Versions	Analyzer	PIR &	PR	DSW	DI Server/ Spoon	PRD	PSW	PME
Apache	0.20.2*	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ
	4.7, 5.2	N	N	N	N	Υ	N	N	N
Cloudera	via Impala 1.4.x	Υ	Υ	Υ	Υ	Υ	Υ	Y	Υ
Datastax	4.0, 4.5	N	N	N	N	Υ	N	N	N
	1.3.3, 2.1	N	N	N	N	Υ	N	N	N
Hortonworks	via Hive2 Stinger 0.13	N	Υ	Υ	Υ	Υ	Υ	N	Υ
	3.1.1, 4.0.1	N	N	N	N	Υ	N	N	N
MapR	via Hive2 0.13	N	Υ	Υ	Υ	Υ	Υ	N	Υ
Greenplum	4.2, 4.3	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ
MongoDB	2.4, 2.6	Υ	N	Υ	N	Υ	Υ	N	N

Data Source	Versions	Analyzer	PIR & PDD	PR	DSW	DI Server/ Spoon	PRD	PSW	PME
Netezza	7.0.3, 7.1.0	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ
Teradata	14.0, 14.10	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ
Vertica	7.0, 7.1	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ

<sup>\*</sup> Pentaho is pre-configured for Apache Hadoop 0.20.2.

#### NOTE:

Acronyms: PIR - Pentaho Interactive Reporting, PDD - Pentaho Dashboard Designer, PR - Published Reports, DSW - Data Source Wizard, PRD - Pentaho Report Designer, PSW - Pentaho Schema Workbench, PME - Pentaho Metadata Editor

#### **SQL Dialect-Specific**

Pentaho software generates dialect-specific SQL when communicating with these data sources.

Pentaho Software	Data Source		
entaho Analysis	• Access		
	Amazon Redshift		
	• DB2		
	• Derby		
	• Firebird		
	Greenplum		
	• Hsqldb		
	• Impala		
	<ul> <li>Infobright</li> </ul>		
	• Informix		
	• Ingres		
	<ul> <li>Interbase</li> </ul>		
	<ul> <li>LucidDb</li> </ul>		
	<ul> <li>MicrosoftSqlServer</li> </ul>		
	<ul> <li>MonetDB</li> </ul>		
	<ul> <li>MySql</li> </ul>		
	<ul> <li>Neoview</li> </ul>		
	<ul> <li>Netezza</li> </ul>		
	• Oracle		
	<ul> <li>PostgreSQL</li> </ul>		
	• SqlStream		

Pentaho Software	Data Source
	<ul> <li>Sybase</li> <li>Teradata</li> <li>Vectorwise</li> <li>Vertica</li> <li>Other SQL-89 compliant****</li> </ul>
Pentaho Metadata	<ul> <li>Amazon Redshift</li> <li>DB2</li> <li>Firebird</li> <li>H2</li> <li>Hive 2</li> <li>Hypersonic</li> <li>Impala</li> <li>Ingres</li> <li>MS Access</li> <li>ASSQL</li> <li>MSSQLNative</li> <li>MySQL</li> <li>Netezza</li> <li>Oracle</li> <li>PostgresSQL</li> <li>Sybase</li> <li>Vertica</li> <li>Other SQL-92 compliant****</li> </ul>
Pentaho Data Integration	<ul> <li>Apache Derby</li> <li>AS/400</li> <li>InfiniDB</li> <li>Exasol 4</li> <li>Firebird SQL</li> <li>Greenplum</li> <li>H2</li> <li>Hive</li> <li>Hive 2</li> <li>Hypersonic</li> <li>IBM DB2</li> <li>Impala</li> <li>Infobright</li> <li>Informix</li> <li>Ingres</li> </ul>

Pentaho Software	Data Source
	<ul> <li>Ingres VectorWise</li> <li>LucidDB</li> <li>MaxDB (SAP DB)</li> <li>MonetDB</li> <li>MySQL</li> <li>Neoview</li> <li>Netezza</li> <li>Oracle</li> <li>Oracle RDB</li> <li>PostgreSQL</li> <li>SQLite</li> <li>Teradata</li> <li>UniVerse database</li> <li>Vertica</li> <li>Other SQL-92 compliant****</li> </ul>

\*\*\*\*If your data source is not in this list and is compatible with SQL-92, Pentaho software uses a generic SQL dialect.

#### **Security**

Pentaho software integrates with these third-party security authentication systems.

Pentaho Software	Authentication System
Pentaho Business Analysis Server Pentaho Data Integration Server	<ul> <li>Active Directory</li> <li>CAS</li> <li>Integrated Microsoft Windows Authentication</li> <li>LDAP</li> <li>RDBMS</li> </ul>

## Java Virtual Machine

Pentaho software requirements for Java Runtime Environment (JRE).

Pentaho Software	Java Runtime Environment
All Pentaho software, except Pentaho Mobile App	<ul><li>Oracle Java 7</li><li>Oracle Java 6 (build targets).</li></ul>

#### **Web Browsers**

Pentaho supports these major versions of Web browsers that are publicly available six weeks prior to when Pentaho begins to finalize a release. We also support the preceding major version.

Pentaho Software	Web Browser
Pentaho User Console  Pentaho Report Designer****	<ul> <li>Apple Safari 7.x &amp; 8.x on OSX and iOS only</li> <li>Google Chrome 36 - 37</li> <li>Microsoft Internet Explorer 8 - 11</li> <li>Mozilla Firefox 31 - 32</li> </ul>

\*\*\*\*\*Requires a web browser to preview exported HTML reports.

## **Mobile Apps**

The Pentaho mobile app runs on the Apple iPad 2 and later, with iOS 7.x & 8.x using Safari mobile.



#### Support Statement for Analyzer on Impala

#### **Using Analyzer on Impala**

These are the minimum requirements for Analyzer to work with Impala.

- 1. Use minimum Pentaho BA Suite EE 5.1 or later.
- 2. Use minimum Cloudera CDH5.x, Impala 1.3.x or later.
- 3. Recommend using Parquet compressed file format for tables in Impala.
- 4. Recommend that you use Simba JDBC driver, OEM'd by Cloudera.
- 5. Make sure that the <u>JDBC driver</u> is dropped into the BA Server and Schema Workbench directories.
- 6. Turn off connection pooling in Pentaho BA Server.
- 7. Set global order by limit in Cloudera manager.
- 8. In Mondrian schemas, divide dimension tables with high cardinality into several levels.

There are some compiled Mondrian automated test suite results for Analyzer on Impala with OEM Simba, as well as the community Apache Hive driver.

- · Analyzer on Impala with OEM Simba
- Analyzer on Impala with community Apache Hive driver



## **JDBC Drivers Reference**

This reference is a continuous work in progress. If you see something that is not correct, know of a driver that is not listed here, or have a tip you want to share, please let us know by using the comments fields found at the bottom of this article.

Database	Vendor	URL
Apache Derby	IBM	http://db.apache.org/derby/derby_downloads.html
Cache <sup>4</sup>	InterSystems	http://www.cachemonitor.de/ intersystems-documentation/cache- jdbc-driver
CUBRID	CUBRID	http://www.cubrid.org/?mid=downloadsit
Daffodil DB	Daffodil Software	http://sourceforge.net/projects/daffodildb/
DB2 AS/400	IBM	http://www-03.ibm.com/systems/i/software/toolbox/
DB2 Universal Database	IBM	http://www-306.ibm.com/software/data/db2/java
<u>Firebird</u>	Firebird Foundation	http://www.firebirdsql.org/en/jdbc-driver/
FrontBase	FrontBase	http://www.frontbase.com/cgi-bin/ WebObjects/FBWebSite
Greenplum	EMC2	http://jdbc.postgresql.org/ download.html
H2 Database	H2	http://www.h2database.com
<u>Hive</u>	Apache	http://hive.apache.org/
<u>Hive2</u>	Apache	
HSQLDB	HyperSQL	http://sourceforge.net/projects/ hsqldb/
<u>Impala</u>	Cloudera	http://www.cloudera.com/
		<pre>content/cloudera-content/ cloudera-docs/Impala/latest/</pre>

Database	Vendor	URL
		Installing-and-Using-Impala/ ciiu_impala_jdbc.html
Informix	IBM	http://www-01.ibm.com/software/
<u>Ingres</u>	Actian	http://esd.actian.com/product/ drivers/JDBC/java
InterBase	Embarcadero	http://edn.embarcadero.com
jTDS Free MS Sybase	jTDS	http://jtds.sourceforge.net/
<u>LucidDB</u>	LucidDB	http://sourceforge.net/projects/ luciddb
<u>MaxDB</u>	SAP	http://maxdb.sap.com
<u>Mckoi</u>	Mckoi SQL Database	http://www.mckoi.com/ originalmckoisql/index.html
Mimer	Mimer Information Technology	http://www.mimer.com
<u>MonetDB</u>	MonetDB	http://www.monetdb.org/
MySQL	Oracle	http://dev.mysql.com/downloads/connector/j/
Neoview	НР	https://h20392.www2.hp.com/portal/ swdepot/ displayProductInfo.do?productNumber=NEO1
<u>Netezza</u>	IBM	http://www.netezza.com
OpenBase SQL	OpenBase International	http://www.openbase.com/ index.php/products/downloads
<u>Oracle</u>	Oracle	http://www.oracle.com/technetwork/database/features/jdbc/index.html
Pervasive	Pervasive	http://www.pervasivedb.com/ download/Pages/PDBDownloads. aspx
<u>PostgreSQL</u>	PostgreSQL Global Development Group	http://jdbc.postgresql.org/
SAP DB	SAP DB	http://www.sapdb.org/ sap_db_jdbc.htm
<u>SQLite</u>	Xerial	http://www.xerial.org/trac/Xerial/wiki/ SQLiteJDBC
SQL Server	Microsoft	http://msdn.microsoft.com/en-us/ sqlserver/aa937724.aspx

Database	Vendor	URL
Sybase ASE	SAP	http://www.sybase.com/products/ allproductsa-z/softwaredeveloperkit/ jconnect
Sybase SQL Anywhere	SAP	http://www.sybase.com/products/ allproductsa-z/softwaredeveloperkit/ jconnect
<u>SmallSQL</u>	SmallSQL	http://www.smallsql.de/ download.html
<u>Teradata</u>	Teradata	http://downloads.teradata.com/ download/connectivity/jdbc-driver
<u>Vertica</u>	НР	http://www.vertica.com

# **Apache Derby**

Vendor Name	Details	
Recommended Native Driver		
IBM	Company URL  http://www.ibm.com  Driver URL  http://db.apache.org/derby/derby_downloads.html	
	JDBC URL Syntax by Type  Server—jdbc:derby:// <server>[:<por attribute="">=&gt;value&gt;]</por></server>	Default Port rt≯β2 <b>d</b> atabaseName>[; <url< td=""></url<>
	Embedded—jdbc:derby: <databasen< td=""><td>lame&gt;[;create=true]</td></databasen<>	lame>[;create=true]
	JDBC Class  org.apache.derby.jdbc.ClientDriver  org.apache.derby.jdbc.EmbeddedD	
	Shipped with Pentaho Products Pentaho Data Integration	

Vendor Name	Details
	Comments Open source database

#### Caché

Vendor Name	Details		
Recommended Native Driver			
InterSystems	Company URL http://www.cachemonitor.de  Driver URL http://www.cachemonitor.de/intersystems-documentation/cache-jdbc-driver		
	JDBC URL Syntax by Type  Server—jdbc:Cache:// <server>[:<po< td=""><td>Default Port rtֆያැ2namespace&gt;</td></po<></server>	Default Port rtֆያැ2namespace>	
	JDBC Class com.intersys.jdbc.CacheDriver	JDBC JAR File Name cachedb.jar	

#### **CUBRID**

Vendor Name	Details	
Recommended Native Driver		
CUBRID	Company URL <a href="http://www.cubrid.org">http://www.cubrid.org</a>	
	Driver URL <a href="http://www.cubrid.org/?mid=downloads&amp;item=jdbc_driver">http://www.cubrid.org/?mid=downloads&amp;item=jdbc_driver</a>	

Vendor Name	Details	
	JDBC URL Syntax by Type  Server—jdbc:cubrid: <server>:<port> <databasename>:<username>: <password>:[?<url attribute="">=<value> [&amp;<url attribute="">=<value>] ]</value></url></value></url></password></username></databasename></port></server>	Default Port :33000
	JDBC Class cubrid.jdbc.driver.CUBRIDDriver	JDBC JAR File Name N/A
	Comments  Open source database highly optim	ized for Web applications.

## **Daffodil DB**

Vendor Name	Details		
Recommended Native Driver	Recommended Native Driver		
Daffodil Software	Company URL <a href="http://db.daffodilsw.com">http://db.daffodilsw.com</a>		
	Driver URL  http://sourceforge.net/projects/daffodildb/		
	JDBC URL Syntax by Type  Default Port  Server—jdbc:daffodilDB:// <server>[:<pre>[:<pre>Specific&gt;]/<databasename>  Embedded—jdbc:daffodilDB_embedd*</databasename></pre></pre></server>		
	JDBC Class in.co.daffodil.db.rmi.RmiDaffodilDB in.co.daffodil.db.jdbc.DaffodilDBDriv	-	

Vendor Name	Details
	Comments Open source database

#### **DB2 AS/400**

Vendor Name	Det	ails
Recommended Native Driver		
IBM	Company URL <a href="http://www.ibm.com">http://www.ibm.com</a>	
	Driver URL  http://www-01.ibm.com/support/do	ocview.wss?uid=swg21363866
	JDBC URL Syntax by Type Server—jdbc:as400:// <server>nami</server>	<b>Default Port</b> ng=sql;errors=full N/A
	JDBC Class com.ibm.as400.access.AS400JDBCD	JDBC JAR File Name rijtel00.jar

## **DB2 Universal Database**

Vendor Name	Details
Recommended Native Driver	
IBM	Company URL <a href="http://www.ibm.com">http://www.ibm.com</a>
	Driver URL <a href="http://www-306.ibm.com/software/data/db2/java">http://www-306.ibm.com/software/data/db2/java</a>

Vendor Name	Details	
	JDBC URL Syntax by Type  Server—jdbc:db2:// <server>[:<port> attribute&gt;=<value>]</value></port></server>	<b>Default Port</b> :] <i>5</i> <b>0000</b> baseName>[; <url< th=""></url<>
	JDBC Class com.frontbase.jdbc.FBJDriver	JDBC JAR File Name frontbasejdbc.jar

## **Firebird**

Vendor Name	Deta	ails
Recommended Native Driver		
Firebird Foundation	Company URL  http://www.firebirdsql.org	
	Driver URL  http://www.firebirdsql.org/en/jdbc-c	driver/
	JDBC URL Syntax by Type  Server—jdbc:firebirdsql: <server>[/&lt; file&gt;  (JDBC Type 4, official format)  Server—jdbc:firebirdsql://<server>[: file&gt;  (JDBC Type 4, compatibility format)</server></server>	3050 3050
	Server—jdbc:firebirdsql:native// <ser file&gt; (JDBC Type 2, compatibility format) Server—jdbc:firebirdsql:native://<se file&gt;</se </ser 	

Vendor Name	Det	ails
	JDBC Type 2, compatibility format. Requires libraries) Embedded—jdbc:firebirdsql:embeddatabase-file> (JDBC Type 2, compatibility format. Requires libraries)	ded:/ <local-< th=""></local-<>
	JDBC Class org.firebirdsql.jdbc.FBDriver	JDBC JAR File Name jaybird-full-xxx.jar
	Shipped with Pentaho Products Pentaho Data Integration	

#### **FrontBase**

Vendor Name	Det	rails
Recommended Native Driver		
FrontBase	Company URL  http://www.frontbase.com  Driver URL	
	http://www.frontbase.com/cgi-bin/v	VebObjects/FBWebSite
	JDBC URL Syntax by Type Server— jdbc:FrontBase:// <host>[:<port>]/<c< td=""><td><b>Default Port</b> databaseName&gt; N/A</td></c<></port></host>	<b>Default Port</b> databaseName> N/A
	JDBC Class com.frontbase.jdbc.FBJDriver	JDBC JAR File Name frontbasejdbc.jar

# Greenplum

Vendor Name	Det	ails
Recommended Native Driver		
Greenplum	Company URL <a href="http://www.greenplum.com">http://www.greenplum.com</a>	
	Driver URL <a href="http://jdbc.postgresql.org/download.html">http://jdbc.postgresql.org/download.html</a>	
	JDBC URL Syntax by Type  Server—jdbc:postgresql:// <server>[</server>	Default Port :<፟፟፟፟፩4⊉>]/ <databasename></databasename>
	JDBC Class org.postgresql.Driver	JDBC JAR File Name postgresql-8.x-xxx.jdbc4.jar
	Comments Greenplum uses the Postgresql JDBC dr	iver

#### **H2 Database**

Vendor Name	Det	ails
Recommended Native Driver		
H2	Company URL  http://www.h2database.com  Driver URL  http://www.h2database.com	
	JDBC URL Syntax by Type  Server—jdbc:h2:tcp://server[:port]/fpath  Embedded—jdbc:h2:file-name	Default Port fil <del>0</del> 092 N/A

Vendor Name	Det	ails
	JDBC Class jdbc:h2:tcp://server[:port]/file- path org.h2.Driver	JDBC JAR File Name h2-x.x.xxx.jar
	<ul> <li>Shipped with Pentaho Products</li> <li>Pentaho Business Analysis Ser</li> <li>Pentaho Data Integration</li> <li>Pentaho Metadata-Editor</li> <li>Pentaho Report-Designer</li> </ul>	ver
	Comments  Open source Java SQL database	

#### Hive

Vendor Name	Det	ails
Recommended Native Driver		
Apache	Company URL  http://hive.apache.org/ Driver URL Puilt in	
	JDBC URL Syntax by Type  Server—jdbc:hive:// <server>[:<port:< td=""><td>Default Port &gt;]<b>/ർ</b>മ്മൂ</td></port:<></server>	Default Port >] <b>/ർ</b> മ്മൂ
	JDBC Class  org.apache.hadoop.hive.jdbc.  HiveDriver	JDBC JAR File Name  pentaho-hadoop-hive-jdbc-shim- x.x.x.jar

Vendor Name	Details
	<ul> <li>Shipped with Pentaho Products</li> <li>Pentaho Business Analysis Server</li> <li>Pentaho Data Integration</li> <li>Pentaho Metadata-Editor</li> <li>Pentaho Report-Designer</li> </ul>
	Comments  The pentaho-hadoop-hive-jdbc-shim-xxx.jar library is a proxy driver.  The actual Hive JDBC implementation for the specific distribution and version of Hadoop is located in the Pentaho Configuration (shim) for that distro. See <a href="Hadoop Configuration">Hadoop Configuration</a> for more information.  Hive does not support the full SQL capabilities. It uses a subset and is more accurately referred to as HiveQL.

#### Hive2

Vendor Name	Details		
Recommended Native Driver	Recommended Native Driver		
Apache	Company URL <a href="http://hive.apache.org/">http://hive.apache.org/</a> Driver URL  Built in		
	JDBC URL Syntax by Type  Server—jdbc:hive2:// <server>[:<por< td=""><td>Default Port t&gt;୩<b>୬୧</b>୬ ଅଟେ</td></por<></server>	Default Port t>୩ <b>୬୧</b> ୬ ଅଟେ	
	JDBC Class org.apache.hive.jdbc. HiveDriver	JDBC JAR File Name pentaho-hadoop-hive-jdbc-shim- x.x.x.jar	

Vendor Name	Details
	<ul> <li>Shipped with Pentaho Products</li> <li>Pentaho Business Analysis Server</li> <li>Pentaho Data Integration</li> <li>Pentaho Metadata-Editor</li> <li>Pentaho Report-Designer</li> </ul>
	Comments  The pentaho-hadoop-hive-jdbc-shim-xxx.jar library is a proxy driver.  The actual Hive JDBC implementation for the specific distribution and version of Hadoop is located in the Pentaho Configuration (shim) for that distro. See <a href="Hadoop Configuration">Hadoop Configuration</a> for more information.  Hive2 does not support the full SQL capabilities. It uses a subset and is more accurately referred to as HiveQL.

# **HSQLDB**

Vendor Name	Details	
Recommended Native Driver		
HyperSQL	Company URL  http://www.hsqldb.org	
	Driver URL  http://sourceforge.net/projects/hsq	ldb/
	JDBC URL Syntax by Type  Server—jdbc:hsqldb:hsql:// <server> Embedded  Memory—jdbc:hsqldb:mem:<datab embedded="" file="" —jdbc:hsqldb:file:<database-file=""></datab></server>	9001
	JDBC Class	JDBC JAR File Name

Vendor Name	Details	
	org.hsqldb.jdbcDriver	hsqldb.jar
	Shipped with Pentaho Products  Pentaho Enterprise-Console Pentaho Business Analysis Serve Pentaho Aggregation-Designer Pentaho Data Integration Pentaho Metadata-Editor Pentaho Report-Designer	r

## Impala

Vendor Name	Details		
Recommended Native Driver			
Cloudera	Company URL  http://cloudera.com		
	Driver URL Built in		
	JDBC URL Syntax by Type jdbc:hive2:// <server>[<port>]/;auth=</port></server>	Default Port =ମଧ୍ୟୟୁଷ	
	JDBC Class  org.apache.hadoop.hive.jdbc.  HiveDriver	JDBC JAR File Name pentaho-hadoop-hive-jdbc-shim- x.x.x.jar	
	<ul> <li>Shipped with Pentaho Products</li> <li>Pentaho Business Analysis Ser</li> <li>Pentaho Data Integration</li> <li>Pentaho Metadata-Editor</li> </ul>	ver	

Vendor Name	Details
	• Pentaho Report-Designer
	Comments
	The pentaho-hadoop-hive-jdbc-shim-xxx.jar library is a proxy driver.
	The actual Hive JDBC implementation for the specific distribution and
	version of Hadoop is located in the Pentaho Configuration (shim) for
	that distro. See <u>Hadoop Configuration</u> for more information.
	Hive does not support the full SQL capabilities. It uses a subset and is more accurately referred to as HiveQL.

#### **Informix**

Vendor Name	Det	ails
Recommended Native Driver		
IBM	Company URL  http://www.ibm.com  Driver URL  http://www14.software.ibm.com/webapp/download/search. jsp?go=y&rs=ifxjdbc	
	JDBC URL Syntax by Type  Server—jdbc:informix- sqli:// <server>[:<port>]/<databasen <dbservername=""></databasen></port></server>	Default Port 1533 ame>:informixserver=
	JDBC Class com.informix.jdbc.lfxDriver	JDBC JAR File Name ifxjdbc.jar

## **Ingres**

Vendor Name	Details		
Recommended Native Driver	Recommended Native Driver		
Actian	Company URL <a href="http://www.actian.com/">http://www.actian.com/</a>		
	Driver URL  http://esd.actian.com/product/drivers/JDBC/java		
	JDBC URL Syntax by Type  Server—jdbc:ingres:// <server>[:<po< td=""><td><b>Default Port</b> rt&gt;]/<databasename> 21071</databasename></td></po<></server>	<b>Default Port</b> rt>]/ <databasename> 21071</databasename>	
	JDBC Class com.ingres.jdbc.IngresDriver	JDBC JAR File Name iijdbc.jar	
	Comments  Open source relational database ma	anagement system	

#### **InterBase**

Vendor Name	Det	tails
Recommended Native Driver		
Embarcadero	Company URL  http://edn.embarcadero.com  Driver URL  N/A	
	JDBC URL Syntax by Type Server—jdbc:interbase:// <server>/&lt;</server>	Default Port

Vendor Name	Details	
	JDBC Class	JDBC JAR File Name
	interbase.interclient.Driver	interclient.jar

# jTDS Free MS SQL Sybase

Vendor Name		Details
Recommended Native Driver		
jTDS	Company URL  http://jtds.sourceforge.net/	
	Driver URL	
	JDBC URL Syntax by Type	Default Port
	SQL	1433
	Server—jdbc:jtds: <server_type></server_type>	// <seryer>[:<port>][/<database>][;<property>=<val< td=""></val<></property></database></port></seryer>
	Sybase—jdbc:jtds: <server_type></server_type>	e:// <server>[:<port>][/<database>]</database></port></server>
	JDBC Class	JDBC JAR File Name
	interbase.interclient.Driver	jtds-x.x.x.jar
	Shipped with Pentaho Products	S
	• Pentaho Enterprise-Conso	le
	• Pentaho Business Analysis	Server
	• Pentaho Aggregation-Designation	gner
	Pentaho Data Integration	
	• Pentaho Metadata-Editor	
	• Pentaho Report-Designer	

## LucidDB

Vendor Name	Det	ails
Recommended Native Driver		
DynamoDB	Company URL <a href="http://www.luciddb.com">http://www.luciddb.com</a>	
	Driver URL http://sourceforge.net/proje	ects/luciddb/
	JDBC URL Syntax by Type Server—jdbc:luciddb:http:// <server< td=""><td>Default Port &gt;[:<port>] 8034</port></td></server<>	Default Port >[: <port>] 8034</port>
	JDBC Class org.luciddb.jdbc.LucidDbClientDrive	JDBC JAR File Name r LucidDbClient-x.x.x.jar
	Shipped with Pentaho Products Pentaho Data Integration	
	Comments Open source BI solution for Big Data	

#### **MaxDB**

Vendor Name	Details	
Recommended Native Driver		
SAP	Company URL  http://www.sap.com  Driver URL  http://maxdb.sap.com	
	JDBC URL Syntax by Type  Server—jdbc:sapdb:// <server>[:<po< td=""><td>Default Port rtኞ<b>ያ</b>/የ<mark>ወ</mark>latabaseName&gt;</td></po<></server>	Default Port rtኞ <b>ያ</b> /የ <mark>ወ</mark> latabaseName>

Vendor Name	Details	
	JDBC Class com.sap.dbtech.jdbc.DriverSapDB	JDBC JAR File Name sapdbc.jar
	Comments  Database management system developed and supported by SAP AG	

## Mckoi SQL Database

Vendor Name	Details	
Recommended Native Driver		
Mckoi	Company URL  http://www.mckoi.com  Driver URL  http://www.mckoi.com/originalmckoisql/index.html  JDBC URL Syntax by Type  Server—jdbc:mckoi:// <server>[:<port>[:<port>][/<schema>]/ 9157</schema></port></port></server>	
	JDBC Class com.mckoi.JDBCDriver	JDBC JAR File Name mckoidb.jar
	Comments  Open source SQL database written in Java	

#### Mimer

Vendor Name	Details
Recommended Native Driver	
Mimer Information Technology	Company URL

Vendor Name	Details	
	http://www.mimer.com	
	Driver URL N/A	
	JDBC URL Syntax by Type  Server—jdbc:mimer: <protocol>://<s< th=""><th>Default Port eftଧିପ୍ରେ:<port>]/<database></database></port></th></s<></protocol>	Default Port eftଧିପ୍ରେ: <port>]/<database></database></port>
	JDBC Class com.mimer.jdbc.Driver	JDBC JAR File Name mimer.jar

#### **MonetDB**

Vendor Name	Details	
Recommended Native Driver		
MonetDB	Company URL  http://www.monetdb.org  Driver URL  N/A	
	JDBC URL Syntax by Type  Server—jdbc:monetdb:// <server>[:&lt;</server>	Default Port ୧୭ <b>୭</b> ୫୧୧୧୯ database>
	JDBC Class nl.cwi.monetdb.jdbc.MonetDriver	JDBC JAR File Name monetdb-jdbc-x.x.jar
	Shipped with Pentaho Products Pentaho Data Integration	
	Comments	

Vendor Name	Details
	An open source database system

## MY SQL

Vendor Name	Det	ails
Recommended Native Driver		
Oracle	Company URL  http://www.mysql.com  Driver URL  http://dev.mysql.com/downloads/connector/j/	
	JDBC URL Syntax by Type  Server—jdbc:mysql:// <hostname>[, /<dbname>[?<url attribute="">=<value>[&amp;<url attribute="">=<value>] ]</value></url></value></url></dbname></hostname>	Default Port <fੇ∄ያዕ©erhost>][:<port>]</port></fੇ∄ያዕ©erhost>
	JDBC Class  com.mysql.jdbc.Driver (official class name)  org.gjt.mm.mysql.Driver (older class name)	JDBC JAR File Name mysql-connector-java-5.x.xx- bin.jar

#### **Neoview**

Vendor Name	Details
Recommended Native Driver	
НР	Company URL

Vendor Name	Details	
	http://www.hp.com	
	Driver URL  https://h20392.www2.hp.com/portal/swdepot/	
	displayProductInfo.do?productNumber=NEO10	
	JDBC URL Syntax by Type	Default Port
	Server—jdbc:hpt4jdbc:// <system>[:attribute&gt;=</system>	<pl><pl><pl><pl><pl><pl><pl><pre><pre><pre><pre><pre><pre><pre><pre< th=""></pre<></pre></pre></pre></pre></pre></pre></pre></pl></pl></pl></pl></pl></pl></pl>
	<value>[;<url attribute="">=<value>]</value></url></value>	
	JDBC Class	JDBC JAR File Name
	com.hp.t4jdbc.HPT4Driver	N/A

#### Netezza

Vendor Name	Details	
Recommended Native Driver		
IBM	Company URL  http://www.netezza.com  Driver URL  N/A	
	JDBC URL Syntax by Type jdbc:netezza:// <server>[:<port>]/<d< td=""><td>Default Port ataltasse&gt;</td></d<></port></server>	Default Port ataltasse>
	JDBC Class org.netezza.Driver	JDBC JAR File Name N/A

## OpenBase SQL

Vendor Name	Details	
Recommended Native Driver		
OpenBase International	Company URL  http://www.openbase.com	
	Driver URL  http://www.openbase.com/index.ph	np/products/downloads
	JDBC URL Syntax by Type Server—jdbc:openbase:// <server>/&lt;</server>	<b>Default Port</b> <databasename> N/A</databasename>
	JDBC Class com.openbase.jdbc.ObDriver	JDBC JAR File Name OpenBaseJDBC.jar

#### Oracle

Vendor Name	Details	
Recommended Native Driver		
Oracle	Company URL  http://www.oracle.com  Driver URL  http://www.oracle.com/technetwork/database/features/jdbc/ index.html	
	JDBC URL Syntax by Type Thin Server—jdbc:oracle:thin:@ <server> <sid></sid></server>	Default Port [: <sup>1521</sup> [: <port>]:</port>

Vendor Name	Details	
	OCI Server —jdbc:oracle:oci:@ <server>[:<port> <sid></sid></port></server>	]:
	JDBC Class oracle.jdbc.driver.OracleDriver oracle.jdbc.OracleDriver	JDBC JAR File Name ojdbcx.jar, ora18n.jar
	Comments  The OCI server requires OCI librarie	S

#### **Pervasive**

Vendor Name	Details	
Recommended Native Driver		
Pervasive	Company URL <a href="http://www.pervasivedb.com/Pages/default.aspx">http://www.pervasivedb.com/Pages/default.aspx</a>	
	Driver URL  http://www.pervasivedb.com/download/Pages/PDBDownloads.aspx	
	JDBC URL Syntax by Type  Server—jdbc:pervasive:// <server>[:</server>	Default Port <ptଅଞ୍ଚଃ] <datasource=""></ptଅଞ୍ଚଃ]>
	JDBC Class com.pervasive.jdbc.v2.Driver	JDBC JAR File Name
	<ul> <li>Shipped with Pentaho Products</li> <li>Pentaho Data Integration</li> <li>Pentaho Report-Designer</li> </ul>	

Vendor Name	Details
	Comments The data source is the ODBC DSN

## **PostgreSQL**

Vendor Name	Details	
Recommended Native Driver		
PostgreSQL Global Development Group	Company URL <a href="http://www.postgresql.org/">http://www.postgresql.org/</a>	
	Driver URL <a href="http://jdbc.postgresql.org/">http://jdbc.postgresql.org/</a>	
	JDBC URL Syntax by Type Server—jdbc:postgresql:// <server>[</server>	<b>Default Port</b> : <port>]/<databasename> 5342</databasename></port>
	JDBC Class org.postgresql.Driver	JDBC JAR File Name postgresql-8.x-xxx.jdbc4.jar
	Shipped with Pentaho Products  • Pentaho Data Integration  • Pentaho Report-Designer	

## SAP DB

Vendor Name	Details
Recommended Native Driver	
SAP DB	Company URL N/A

Vendor Name	Details	
	Driver URL <a href="http://www.sapdb.org/sap_db_jdbc.htm">http://www.sapdb.org/sap_db_jdbc.htm</a>	
	JDBC URL Syntax by Type  Server—jdbc:sapdb:// <server>/<dat< th=""><th>Default Port a<b>b</b>ର୍ଜ୍ଧe_name&gt;</th></dat<></server>	Default Port a <b>b</b> ର୍ଜ୍ଧe_name>
	JDBC Class com.sap.dbtech.jdbc.DriverSapDB	JDBC JAR File Name sapdbc-x.x.x.jar
	Shipped with Pentaho Products  Pentaho Data Integration	
	Comments  FREE Enterprise Open Source Datab	ase

# **SQLite**

Vendor Name	Details	
Recommended Native Driver		
Xerial	Company URL N/A	
	Driver URL  http://www.xerial.org/trac/Xerial/wiki/SQLiteJDBC	
	JDBC URL Syntax by Type  Server—jdbc:sqlite: <filename.db></filename.db>	Default Port N/A
	JDBC Class org.sqlite.JDBC	JDBC JAR File Name sqlite-jdbc-x.x.x.jar

Vendor Name	Details
	Shipped with Pentaho Products Pentaho Data Integration

## **SQL** Server

Vendor Name	Details	
Recommended Native Driver		
Microsoft	Company URL <a href="http://www.microsoft.com">http://www.microsoft.com</a>	
	Driver URL  http://msdn.microsoft.com/en-us/sqlserver/aa937724.aspx	
	JDBC URL Syntax by Type  Server—jdbc:sqlserver:// <server>[:&lt; <databasename></databasename></server>	Default Port <p<b>ዕ#β፭;DatabaseName=</p<b>
	JDBC Class  com.microsoft.sqlserver.jdbc.  SQLServerDriver	JDBC JAR File Name sqljdbc4.jar
	Comments  The open source jtds driver also wo	rks with MSSQL

## Sybase ASE

Vendor Name	Details
Recommended Native Driver	
SAP	Company URL

Vendor Name	Details	
	http://www.sybase.com	
	Driver URL  http://www.sybase.com/products/allproductsa-z/softwaredeveloperkit/ jconnect	
	JDBC URL Syntax by Type  Server—jdbc:sybase:Tds: <server>[:&lt;</server>	Default Port <p୍ଲେଫ୍ଡ୍ରୀ <databasename=""></p୍ଲେଫ୍ଡ୍ରୀ>
	JDBC Class com.sybase.jdbc4.jdbc.SybDriver	JDBC JAR File Name N/A
	Comments  The open source jTDS driver works with Sybase as well. Note that although you can use jTDS open source JDBC driver, we recommend that you use the Sybase-supplied JDBC driver instead. Connections might not work reliably if you use the jTDS JDBC driver.	

# Sybase SQL Anywhere

Vendor Name	Details	
Recommended Native Driver		
SAP	Company URL  http://www.sybase.com  Driver URL  http://www.sybase.com/products/allproductsa-z/softwaredeveloperkit/jconnect	
	JDBC URL Syntax by Type  Server—jdbc:sybase:Tds: <server>[:-</server>	Default Port <p26ቴሜ <databasename=""></p26ቴሜ>

Vendor Name	Details	
	JDBC Class com.sybase.jdbc4.jdbc.SybDriver	JDBC JAR File Name
	Comments  This open source jTDS driver works with Sybase as well. Note that although you can use jTDS open source JDBC driver, we recommend that you use the Sybase-supplied JDBC driver instead. Connections might not work reliably if you use the jTDS JDBC driver.	

# **SmallSQL**

Vendor Name	Details	
Recommended Native Driver		
SmallSQL	Company URL  http://www.smallsql.de/	
	Driver URL <a href="http://www.smallsql.de/download.html">http://www.smallsql.de/download.html</a>	
	JDBC URL Syntax by Type  Embedded—jdbc:smallsql:database attribute=value[URLattribute=value]	
	JDBC Class smallsql.database.SSDriver	JDBC JAR File Name smallsql.jar
	Comments  Java desktop SQL database engine	

Vendor Name	Details

## **Teradata**

Vendor Name	Details		
Please see the <u>Teradata JDBC Driver Re</u>	Please see the <u>Teradata JDBC Driver Reference</u> for information about required drivers.		
Teradata	Company URL <a href="http://www.teradata.com">http://www.teradata.com</a>		
	Driver URL  http://downloads.teradata.com/download/connectivity/jdbc-driver		
	JDBC URL Syntax by Type  Server—jdbc:teradata:// <dbshost>[.attribute&gt;[;<url attribute="">]]</url></dbshost>	Default Port ∕ <næl< td=""></næl<>	
	JDBC Class com.teradata.jdbc.TeraDriver	JDBC JAR File Name terajdbc4.jar tdgssconfig.jar	

#### Vertica

Vendor Name	Details
Recommended Native Driver	
HP	Company URL <a href="http://www.vertica.com">http://www.vertica.com</a>
	Driver URL TBD

Vendor Name	Details	
	JDBC URL Syntax by Type  Server—jdbc:vertica:// <server>[:<pc< th=""><th>Default Port or6433databaseName&gt;</th></pc<></server>	Default Port or6433databaseName>
	JDBC Class com.vertica.Driver	JDBC JAR File Name