

# Oracle Autonomous Health Framework Licensing Information User Manual



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Oracle Autonomous Health Framework Licensing Information User Manual ,  
F96352-01

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# 1

## Oracle Autonomous Health Framework

- [Introduction](#)
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### 1.1 Introduction

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- [Oracle Autonomous Health Framework 24.4.0.0.0](#)

#### 1.2.1 Oracle Autonomous Health Framework 24.4.0.0.0

- [pexpect](#)  
Interacts with command-line scripts from a python program.
- [Pytz](#)  
Timezone support for python.
- [Lucene](#)  
Lucene provides Java-based indexing and search technology, as well as spell checking, hit highlighting, and advanced analysis/tokenization capabilities.
- [requests](#)  
Requests provides higher level API for HTTP/s requests.

- [beautifulsoup4](#)  
Beautiful Soup is a library that makes it easy to scrape information from web pages. It sits atop an HTML or XML parser, providing Pythonic idioms for iterating, searching, and modifying the parse tree.
- [Jackson Core](#)  
Jackson is a suite of data-processing tools for Java (and JVM platform).
- [Paramiko](#)  
Pure python SSH v2 implementation.
- [Python](#)  
The python language.
- [Python](#)  
The python language.
- [ipykernel](#)  
This 3rd party provides the IPython kernel for Jupyter notebook processing.
- [traitlets](#)  
Traitlets is a framework that lets Python classes have attributes with type checking, dynamically calculated default values, and 'on change' callbacks.
- [ptyprocess](#)  
pexpect is a python version of expect utility from operating system to automate answering the prompts
- [ipython](#)  
This is the Jupyter notebook kernel.
- [pywin32](#)  
Access to Windows specific APIs to provide better functionality than generic Python APIs can for certain operations.
- [Papermill](#)  
Batch processing of Jupyter notebooks.
- [Commons IO](#)  
The Apache Commons IO library contains utility classes, stream implementations, file filters, file comparators, endian transformation classes, and much more.
- [pyarrow](#)  
Parquet file format support.
- [picocli](#)  
Command line authoring for Java
- [nbconvert](#)  
This package is used to convert an executed Jupyter notebook to static HTML.
- [log4j-core](#)  
API for Apache Log4J, a highly configurable logging tool that focuses on performance and low garbage generation.
- [Log4j-API](#)  
API for Apache Log4J, a highly configurable logging tool that focuses on performance and low garbage generation.
- [Jakarta Mail](#)  
The Jakarta Mail library is the newly renamed version of the Java Mail standard implementation of the SMTP protocol. Basically, sending emails using Java API.

- [Jakarta Json Processing API \(JSON-P\)](#)  
The Jakarta Mail library is the newly renamed version of the Java Mail standard implementation of the SMTP protocol. Basically, sending emails using Java API.
- [OCI SDK for Python](#)  
Python API to access OCI
- [Jackson Databind](#)  
Data Binding API is used to convert JSON to and from POJO (Plain Old Java Object) using property accessor or using annotations.
- [Commons CSV](#)  
Provides support for manipulating CSV files.
- [Jakarta Activation API \(JAF\)](#)  
Jakarta Activation lets you take advantage of standard services to: determine the type of an arbitrary piece of data; encapsulate access to it; discover the operations available on it; and instantiate the appropriate bean to perform the operation(s).
- [Plotly](#)  
Plotly's Python graphing library makes interactive, publication-quality graphs. Examples of how to make line plots, scatter plots, area charts, bar charts, error bars, box plots, histograms, heatmaps, subplots, multiple-axes, polar charts, and bubble charts.
- [NumPy](#)  
NumPy is a Python library used for working with arrays and linear algebra.
- [Jackson Annotations](#)  
JSON processor (JSON parser + JSON generator) written in Java. Beyond basic JSON reading/writing (parsing, generating), it also offers full node-based Tree Model, as well as full OJM (Object/Json Mapper) data binding functionality.
- [xarray](#)  
This package contains Core utilities for Python packages including: version handling, specifiers, markers, requirements and tags.
- [python-oracledb](#)  
Oracle database driver for Python.
- [Eclipse Parsson](#)  
Implementation of Jakarta JSON Processing Specification.
- [angus-activation](#)  
AHF uses Jakarta/Angus Mail and this dependent on Angus Activation.
- [Pandas](#)  
pandas is a Python package that provides fast, flexible, and expressive data structures designed to make working with "relational" or "labeled" data both easy and intuitive. It aims to be the fundamental high-level building block for doing practical, real world data analysis in Python.
- [Angus Mail](#)  
Implementation of Jakarta Mail

### 1.2.1.1 pexpect

Interacts with command-line scripts from a python program.

**Copyright Holder:** Noah Spurrier

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**Licensed Technology Version:** 4

## Fourth-party dependency names and versions: ptyprocess

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\*\*\*\*\*  
4P Dependencies:  
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## 1.2.1.2 Pytz

Timezone support for python.

**Copyright Holder:** Stuart Bishop

**Licensed Technology:** Pytz

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#### **Fourth-party dependency names and versions: None**

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License: MIT

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----- Separator -----

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Lucene provides Java-based indexing and search technology, as well as spell checking, hit highlighting, and advanced analysis/tokenization capabilities.

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**Licensed Technology Version:** 8

**Fourth-party dependency names and versions:**

- Spatial4j
- Carrotsearch hppc
- Antlr4
- Asm
- Commons-codec
- Commons-compress
- Commons logging
- Elegant-icon-font
- httpclient
- httpcore

- Icu4j
- Slf4j
- Jetty
- JTS
- Log4j
- Morfologik
- Nekohtml
- Opennlp
- S2-geometry-library

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analysis/common/src/resources/org/apache/lucene/analysis/hi/stopwords.txt,  
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analysis/common/src/java/org/apache/lucene/analysis/fi/  
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JTS

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The JTS tests module contains source from JDOM Contrib 1.1.3 which is available under the Jdom License [1]. The two files are `LineNumberElement.java` and `LineNumberSAXHandler.java`.



Typical users of this library will not need to depend on this module.

[1] <https://github.com/hunterhacker/jdom/blob/master/LICENSE.txt>

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Apache Log4j

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Morfologik - Fourth party dependency for lucene-analyzers-morfologik

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Nekohtml - Fourth party dependency for lucene-benchmark

CyberNeko HTML Parser

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NekoHTML is a simple HTML scanner and tag balancer that enables application programmers to parse HTML documents and access the information using standard XML interfaces. The parser can scan HTML files and "fix up" many common mistakes that human (and computer) authors make in writing HTML documents. NekoHTML adds missing parent elements; automatically closes elements with optional end tags; and can handle mismatched inline element tags.

NekoHTML is written using the Xerces Native Interface (XNI) that is the foundation of the Xerces2 implementation. This enables you to use the NekoHTML parser with existing XNI tools without modification or rewriting code.

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Opennlp - Fourth party dependency for lucene-analyzers-opennlp

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S2-geometry-library - Fourth party dependency for lucene-spatial-extras

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Xercesimpl - Fourth party optional XML parser implementation to some lucene libraries, not required when platform provides its own implementation

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## 1.2.1.4 requests

Requests provides higher level API for HTTP/s requests.

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**Fourth-party dependency names and versions:**

- charset-normalizer
- certifi
- idna
- urllib3

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```

ca-bundle.crt -- Bundle of CA Root Certificates

Certificate data from Mozilla as of: Thu Nov 3 19:04:19 2011#



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```
-----  
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```

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Certificate data from Mozilla as of: Thu Nov 3 19:04:19 2011#  
This is a bundle of X.509 certificates of public Certificate Authorities (CA). These were automatically extracted from Mozilla's root certificates file (certdata.txt). This file can be found in the mozilla source tree:  
<https://hg.mozilla.org/mozilla-central/file/tip/security/nss/lib/ckfw/builtins/certdata.txt>

It contains the certificates in PEM format and therefore can be directly used with curl / libcurl / php\_curl, or with an Apache+mod\_ssl webserver for SSL client authentication.  
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## 1.2.1.6 Jackson Core

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## Fourth-party dependency names and versions:

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# Jackson JSON processor

Jackson is a high-performance, Free/Open Source JSON processing library. It was originally written by Tatu Saloranta (tatu.saloranta@iki.fi), and has been in development since 2007. It is currently developed by a community of developers.

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== FastDoubleParser Notice

# FastDoubleParser

This is a Java port of Daniel Lemire's fast\_float project. This project provides parsers for double, float, BigDecimal and BigInteger



```
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Pure python SSH v2 implementation.

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#### Fourth-party dependency names and versions:

- bcrypt
- cffi
- cryptography
- pycparser
- PyNaCl

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Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum (CWI, see <https://www.cwi.nl/>) in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from others.

In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <https://www.cnri.reston.va.us/>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations (now Zope Corporation; see <https://www.zope.org/>). In 2001, the Python Software Foundation (PSF, see <https://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation is a sponsoring member of the PSF.

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2.1	2.0+1.6.1	2001	PSF	no

2.0.1	2.0+1.6.1	2001	PSF	yes	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
2.1.1	2.1+2.0.1	2001	PSF	yes	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
2.1.2	2.1.1	2002	PSF	yes	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
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Mersenne Twister  
The `_random` module includes code based on a download from <http://www.math.sci.hiroshima-u.ac.jp/~m-mat/MT/MT2002/emt19937ar.html>. The following are the verbatim comments from the original code:

A C-program for MT19937, with initialization improved 2002/1/26.  
Coded by Takuji Nishimura and Makoto Matsumoto.

Before using, initialize the state by using `init_genrand(seed)`  
or `init_by_array(init_key, key_length)`.

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<http://www.math.sci.hiroshima-u.ac.jp/~m-mat/MT/emt.html>

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Sockets

The socket module uses the functions, `getaddrinfo()`, and `getnameinfo()`, which  
are coded in separate source files from the WIDE Project, [https://  
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Modified by Jack Jansen, CWI, July 1995:

- Use binascii module to do the actual line-by-line conversion between ascii and binary. This results in a 1000-fold speedup. The C version is still 5 times faster, though.
- Arguments more compliant with Python standard

XML Remote Procedure Calls

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Original location:

<https://github.com/majek/csiphash/>

Solution inspired by code from:

Samuel Neves (supercop/crypto\_auth/siphash24/little)

djb (supercop/crypto\_auth/siphash24/little2)

Jean-Philippe Aumasson (<https://131002.net/siphash/siphash24.c>)

strtod and dtoa

The file Python/dtoa.c, which supplies C functions dtoa and strtod for  
conversion of C doubles to and from strings, is derived from the file of the  
same name by David M. Gay, currently available from <https://>

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libmpdec

The `_decimal` module is built using an included copy of the libmpdec library unless the build is configured `--with-system-libmpdec`:

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W3C C14N test suite

The C14N 2.0 test suite in the test package (Lib/test/xmltestdata/c14n-20/) was retrieved from the W3C website at <https://www.w3.org/TR/xml-c14n2-testcases/> and is distributed under the 3-clause BSD license:

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Audioop

The audioop module uses the code base in g771.c file of the SoX project:

Programming the AdLib/Sound Blaster

FM Music Chips

Version 2.0 (24 Feb 1992)

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jlee@smylex.uucp

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OpenBLAS==0.3.20

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cryptography 41.0.2

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## 1.2.1.9 Python

The python language.

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**Fourth-party dependency names and versions:**

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- libffi
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In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <https://www.cnri.reston.va.us/>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations (now Zope Corporation; see <https://www.zope.org/>). In 2001, the Python Software Foundation (PSF, see <https://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation is

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2.1.1	2.1+2.0.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
2.1.3	2.1.2	2002	PSF	yes
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-----

The `_random` C extension underlying the `random` module includes code based on a download from <http://www.math.sci.hiroshima-u.ac.jp/~m-mat/MT/MT2002/emt19937ar.html>. The following are the verbatim comments from the original code:

A C-program for MT19937, with initialization improved 2002/1/26.  
Coded by Takuji Nishimura and Makoto Matsumoto.

Before using, initialize the state by using `init_genrand(seed)`  
or `init_by_array(init_key, key_length)`.

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<http://www.math.sci.hiroshima-u.ac.jp/~m-mat/MT/emt.html>

email: m-mat @ math.sci.hiroshima-u.ac.jp (remove space)

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-----

The socket module uses the functions, `getaddrinfo()`, and `getnameinfo()`, which are coded in separate source files from the WIDE Project, <https://www.wide.ad.jp/>.

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Modified by Jack Jansen, CWI, July 1995:

- Use binascii module to do the actual line-by-line conversion between ascii and binary. This results in a 1000-fold speedup. The C version is still 5 times faster, though.
- Arguments more compliant with Python standard

XML Remote Procedure Calls

-----

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SipHash24  
-----

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Original location:

<https://github.com/majek/csiphash/>



Solution inspired by code from:

Samuel Neves (supercop/crypto\_auth/siphash24/little)  
djb (supercop/crypto\_auth/siphash24/little2)  
Jean-Philippe Aumasson (<https://131002.net/siphash/siphash24.c>)

strtod and dtoa  
-----

The file Python/dtoa.c, which supplies C functions dtoa and strtod for conversion of C doubles to and from strings, is derived from the file of the same name by David M. Gay, currently available from <https://web.archive.org/web/20220517033456/http://www.netlib.org/fp/dtoa.c>. The original file, as retrieved on March 16, 2009, contains the following copyright and licensing notice:

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-----

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#### Audioop

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The audioop module uses the code base in g771.c file of the SoX project:  
Programming the AdLib/Sound Blaster  
FM Music Chips  
Version 2.0 (24 Feb 1992)  
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#### asyncio

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## 1.2.1.10 ipykernel

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**Fourth-party dependency names and versions:**

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- backcall
- comm
- debugpy
- decorator
- entrypoints
- executing
- ipykernel
- ipython
- jedi
- jupyter\_client
- jupyter\_core
- matplotlib-inline
- nest-asyncio
- packaging
- parso
- pexpect
- pickleshare
- platformdirs
- prompt-toolkit
- psutil

- `ptyprocess`
- `pure-eval`
- `pyparsing`
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debugpy

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pure-eval

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python-dateutil

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entrypoints

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Traitlets is a framework that lets Python classes have attributes with type checking, dynamically calculated default values, and 'on change' callbacks.

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**Fourth-party dependency names and versions:** None

traitlets

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## 1.2.1.12 ptyprocess

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**Fourth-party dependency names and versions:**

- backcall
- colorama
- decorator
- ipython-genutils
- jedi
- matplotlib-inline
- parso
- pickleshare
- prompt-toolkit
- Pygments
- stack\_data
- traitlets
- wcwidth

====Third Party Info====

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### 1.2.1.14 pywin32

Access to Windows specific APIs to provide better functionality than generic Python APIs can for certain operations.

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```

```
<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice
```

```
That's all there is to it!  
----
```

```
pywin32/Pythonwin/License.txt
```

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pywin32/com/win32comext/mapi/src/mapi\_stub\_library/LICENSE

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### 1.2.1.15 Papermill

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- aiosignal
- attrs
- certifi
- charset-normalizer
- click
- entrypoints
- fastjsonschema
- frozenlist
- idna
- jsonschema
- jsonschema-specifications

- jupyter\_client
- jupyter\_core
- multidict
- nbclient
- nbformat
- papermill
- platformdirs
- python-dateutil
- PyYAML
- pyzmq
- referencing
- requests
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- traitlets
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certifi

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python-dateutil

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rpds-py

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[PR #96]: <https://github.com/tqdm/tqdm/pull/96>

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traitlets

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urllib3

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yaml

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## 1.2.1.17 pyarrow

Parquet file format support.

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<https://github.com/numpy/numpy/blob/e1f191c46f2eebd6cb892a4bfe14d9dd43a06c4e/numpy/core/src/multiarray/multiarraymodule.c#L2910>

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- \* Continuum Analytics

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\* `cpp/src/arrow/vendored/ProducerConsumerQueue.h`

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Name: dragon4  
Files: numpy/core/src/multiarray/dragon4.c  
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```

```
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* implementation, obtained from http://www.ryanjuckett.com,  
* which has been ported from C++ to C and which has  
* modifications specific to printing floats in numpy.  
*  
* Ryan Juckett's original code was under the Zlib license; he gave numpy  
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*/
```

----

```
Name: libdivide  
Files: numpy/core/include/numpy/libdivide/*  
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- nbformat
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## 1.2.1.22 Jakarta Mail

The Jakarta Mail library is the newly renamed version of the Java Mail standard implementation of the SMTP protocol. Basically, sending emails using Java API.

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**Fourth-party dependency names and versions:** None

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Python API to access OCI

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- circuitbreaker
- cryptography
- pycparser

- pyOpenSSL
- python-dateutil
- pytz
- six

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## 1.2.1.25 Jackson Databind

Data Binding API is used to convert JSON to and from POJO (Plain Old Java Object) using  
property accessor or using annotations.

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**Licensed Technology Version:** 2

**Fourth-party dependency names and versions:**

- jackson-annotations
- jackson-core

Fourth parties -

com.fasterxml.jackson.core:jackson-annotations:2.16.1  
com.fasterxml.jackson.core:jackson-core:2.16.1

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----- (separator) -----

== FastDoubleParser 1.0.0
   https://github.com/wrandelshofer/FastDoubleParser

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# FastDoubleParser

This is a Java port of Daniel Lemire's fast_float project.
This project provides parsers for double, float, BigDecimal and BigInteger
values.

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## 1.2.1.26 Commons CSV

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## 1.2.1.27 Jakarta Activation API (JAF)

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**Fourth-party dependency names and versions:** None

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## ## Source Code

The project maintains the following source code repositories:

- \* <https://github.com/jakartaee/jaf-api>
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## 1.2.1.28 Plotly

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**Fourth-party dependency names and versions:**

- OpenBLAS
- lapack-lite
- tempita
- dragon4
- libdivide
- SPLITMIX64
- SFC64
- PHILOX
- PCG64
- MT19937
- Julia
- Random
- nymphy.core.ma

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Name: LAPACK

Files: extra-dll\libopenb\*.dll

Description: bundled in OpenBLAS

Availability: <https://github.com/xianyi/OpenBLAS/>

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tempita

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dragon4

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libdivide

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Name: SFC64

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Adapted from a C++ implementation of Chris Doty-Humphrey's SFC PRNG.

<https://gist.github.com/imneme/flf7821f07cf76504a97f6537c818083>

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Original algorithm for the implementation of `rk_interval` function from Richard J. Wagner's implementation of the Mersenne Twister RNG, optimised by Magnus Jonsson.

Constants used in the `rk_double` implementation by Isaku Wada.

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Name: Julia

The ziggurat methods were derived from Julia.

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### 1.2.1.30 Jackson Annotations

JSON processor (JSON parser + JSON generator) written in Java. Beyond basic JSON reading/writing (parsing, generating), it also offers full node-based Tree Model, as well as full OJM (Object/Json Mapper) data binding functionality.

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**Fourth-party dependency names and versions:** None

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# Jackson JSON processor

Jackson is a high-performance, Free/Open Source JSON processing library. It was originally written by Tatu Saloranta (tatu.saloranta@iki.fi), and has been in development since 2007. It is currently developed by a community of developers.

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## 1.2.1.31 xarray

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A. HISTORY OF THE SOFTWARE  
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Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum (CWI, see <http://www.cwi.nl>) in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from others.

In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <http://www.cnri.reston.va.us>)

in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations (now Zope Corporation, see <http://www.zope.com>). In 2001, the Python Software Foundation (PSF, see <http://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation is a sponsoring member of the PSF.

All Python releases are Open Source (see <http://www.opensource.org> for the Open Source Definition). Historically, most, but not all, Python releases have also been GPL-compatible; the table below summarizes the various releases.

Release	Derived from	Year	Owner	GPL-compatible? (1)
0.9.0 thru 1.2		1991-1995	CWI	yes
1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
1.6	1.5.2	2000	CNRI	no
2.0	1.6	2000	BeOpen.com	no
1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
2.0.1	2.0+1.6.1	2001	PSF	yes
2.1.1	2.1+2.0.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
2.1.3	2.1.2	2002	PSF	yes
2.2 and above	2.1.1	2001-now	PSF	yes

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## 1.2.1.32 python-oracledb

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**Fourth-party dependency names and versions:**

- cffi
- cryptography
- pycparser

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== pycparser

pycparser -- A C parser in Python

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"Jakarta JSON Processing API" (jakarta.json:jakarta.json-api)

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## 1.2.1.34 angus-activation

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**Fourth-party dependency names and versions:** None

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## ## Project description

Eclipse Angus provides implementations of Jakarta Activation, a standard extension to the Java platform that lets you take advantage of standard services to: determine the type of an arbitrary piece of data; encapsulate access to it; discover the operations available on it; and instantiate the appropriate bean to perform the operation(s), and Jakarta Mail, a platform-independent and protocol-independent framework to build mail and messaging applications.

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```

## 1.2.1.35 Pandas

pandas is a Python package that provides fast, flexible, and expressive data structures designed to make working with "relational" or "labeled" data both easy and intuitive. It aims to be the fundamental high-level building block for doing practical, real world data analysis in Python.

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**Fourth-party dependency names and versions:**

- python-dateutil
- six
- pytz
- numpy
- OpenBLAS
- lapack-lite
- tempita
- dragon4
- libdivide
- SPLITMIX64



- SFC64
- PHILOX
- PCG64
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4th party dependency: python-dateutil (Apache 2.0 or the BSD 3-Clause)

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Original algorithm for the implementation of rk\_interval function from Richard J. Wagner's implementation of the Mersenne Twister RNG, optimised by Magnus Jonsson.

Constants used in the rk\_double implementation by Isaku Wada.

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# PCG64

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PCG Random Number Generation for C.

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Adapted from a C++ implementation of Chris Doty-Humphrey's SFC PRNG.

<https://gist.github.com/imneme/flf7821f07cf76504a97f6537c818083>

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Implementation of Jakarta Mail

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**Fourth-party dependency names and versions:**

- jakarta.activation:jakarta.activation-api
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