VMS Software

Python Packages Kit for VSI OpenVMS I64

```
VSI-I64VMS-PYTHWHLS-A0101-6FIX06-1.PCSI (32-bit version)
VSI-I64VMS-PYTHWHLS64-A0101-6FIX06-1.PCSI (64-bit version)
```

02-Mar-2023

Introduction

The Python Packages Kit for VSI OpenVMS includes a substantial collection of commonly used Python packages, including modules for web application development, integration, and testing. Additional packages will be included over time in future releases as identified by customer request or other requirements.

Note that Python users on OpenVMS can readily download and install many Python packages directly from the Python Package Index repository (https://pypi.org/) or elsewhere by using the Python PIP package installer; however, there may be situations where the installation from the Packages Kit is more convenient and/or straightforward.

Changes in this release:

- **New packages added:** `httpx-0.23.3-py3-none-any.whl`, `uvicorn-0.20.0-py3-none-any.whl`, `starlette-0.23.1-py3-none-any.whl`, `pypdf-3.3.0`, `pypdf2-3.0.1`

- All packages included in this release have been updated for the latest compatible versions of Python (both 32-bit and 64-bit)

Requirements

- VSI OpenVMS I64 Version 8.4-1H1 or higher

- Python Packages Kit for VSI OpenVMS I64 must be installed on an ODS-5-enabled disk (the installation will fail if this requirement is not met)

- Python 3.10 for VSI OpenVMS I64 or higher

Installing the packages kit

The Python packages kit is based on Python wheels (see https://pythonwheels.com/), which provides a flexible and efficient means of installing optional Python packages.

The Python packages kit can be installed by a suitably privileged user using the following command:

```
$ PRODUCT INSTALL PYTHWHLS
```

The installation will then proceed as follows (your output may differ slightly):

```
Performing product kit validation of signed kits ...
%PCSI-I-VSIVALPASSED, validation of _DSA84:[KRUPNOVA.kits]VSI-I64VMS-
PYTHWHLS-A0101-6FIX06-1.PCSI$COMPRESSED;2 succeeded
```

```
The following product has been selected:
    VSI I64VMS PYTHWHLS A1.1-6FIX06       Layered Product [Installed]

Do you want to continue? [YES] y

Configuration phase starting ...

You will be asked to choose options, if any, for each selected product
and for
any products that may be installed to satisfy software dependency
requirements.

Configuring VSI I64VMS PYTHWHLS A1.1-6FIX06: Python wheels collection
for OpenVMS Python 3.10

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* This product does not have any configuration options.

Execution phase starting ...

The following product will be installed to destination:
    VSI I64VMS PYTHWHLS A1.1-6FIX06
DISK$I64V842L1S:[VMS$COMMON.]

Portion done: 0%...10%...20%...50%...60%...80%...90%...100%

The following product has been installed:
    VSI I64VMS PYTHWHLS A1.1-6FIX06       Layered Product

VSI I64VMS PYTHWHLS A1.1-6FIX06: Python wheels collection for OpenVMS
Python 3.10

            Post-installation tasks are required.
To define the Wheels for Python runtime at system boot time, add the
        following lines to SYS$MANAGER:SYSTARTUP_VMS.COM:

        $ file := sys$startup:python_wheels$startup.com
        $ if f$search("''file'") .nes. "" then @'file'
```

After the installation is successfully completed, include the command displayed at the end of the installation procedure into `SYSTARTUP_VMS.COM` to ensure that the logical names `PYTHON_WHEELS$ROOT` and `PIP_FIND_LINKS` are defined system-wide at system start-up. The logical name `PYTHON_WHEELS$ROOT` specifies the location of the installable Python wheels packages, and the logical name `PIP_FIND_LINKS` is used by the Python PIP package installer to find these packages.

After installing the packages kit and ensuring the logical names `PYTHON_WHEELS$ROOT` and `PIP_FIND_LINKS` are correctly defined, a suitably privileged user can install individual packages by entering the following command:

`$ python -m pip install --no-index <module-name>`

Note that `<module-name>` is the name of the package that you wish to install.

A complete list of the packages included in the `PYTHWHLS` kit can be found later in this document. The detailed information about the included packages can be found at https://pypi.org/.

Note that when installing the packages from the `PYTHWHLS` kit, the `--no-index` option *must* be specified to prevent the Python PIP package installer from downloading the packages from the Internet instead. As an alternative to specifying the `--no-index` option, you can define the logical name `PIP_NO_INDEX` as shown below:

```
$ define PIP_NO_INDEX 1
```

When installing packages, you should also ensure that the logical name `PYTHONCASEOK` is *not* defined.

Note that the installation of some packages can consume considerable temporary disk space. By default, the logical name `SYS$SCRATCH` will be used to determine the location of this temporary storage; however, you can specify an alternative location by defining the logical name `TMPDIR` to point to the desired location. For similar reasons, it may also be desirable to define the logical name `PIP_CACHE_DIR`, which determines where the Python PIP package installer caches temporary dependency data when installing packages. Values (directory specifications) for these logical names should be specified using UNIX syntax.

List of packages

The following list identifies the packages and package versions that are included in this release of the kit. Note that if a particular package has one or more dependencies on other packages, those other packages are also included in the kit.

- `anyio-3.6.2`
- `apipkg-3.0.1`
- `apispec_webframeworks-0.5.2`
- `apispec-6.0.2`
- `appdirs-1.4.4`
- `async_generator-1.10`
- `attrs-22.2.0`
- `autocommand-2.2.2`
- `Automat-22.10.0`
- `awscli-1.19.50`
- `backports.entry_points_selectable-1.2.0`
- `behave-1.2.6`
- `betamax-0.8.1`
- `blinker-1.5`
- `botocore-1.20.50`
- `bottle-0.12.23`
- `Brotli-1.0.9`
- `certifi-2022.12.7`
- `cffi-1.14.5`
- `chardet-3.0.4`
- `charset_normalizer-3.0.1`
- `cheroot-9.0.0`
- `CherryPy-18.8.0`
- `click-8.1.3`
- `colorama-0.4.3`
- `constantly-15.1.0`
- `cryptography_vectors-39.0.0`
- `cryptography-3.4.7`
- `Cython-0.29.22`
- `decorator-5.1.1`

- distlib-0.3.6
- docutils-0.15.2
- elementpath-3.0.2
- exceptiongroup-1.1.0
- execnet-1.9.0
- filelock-3.9.0
- flaky-3.7.0
- flasgger-0.9.5
- Flask-2.0.0
- flex-6.14.1
- freezegun-1.2.2
- ftputil-5.0.4
- h11-0.14.0
- httpbin-0.7.0
- httpcore-0.16.3
- httpx-0.23.3
- hypothesis-6.65.1
- idna-2.8
- incremental-22.10.0
- inflect-6.0.2
- iniconfig-2.0.0
- iso8601-1.1.0
- itsdangerous-2.1.2
- jaraco.classes-3.2.3
- jaraco.collections-3.8.0
- jaraco.context-4.3.0
- jaraco.functools-3.5.2
- jaraco.text-3.11.1
- Jinja2-3.1.2
- jmespath-0.10.0
- jsonpointer-2.3
- jsonschema-4.17.3
- MarkupSafe-2.1.2
- marshmallow-3.19.0
- mistune-2.0.4
- mock-5.0.1
- more_itertools-9.0.0
- nose-1.3.7
- numpy-1.20.3
- outcome-1.2.0
- packaging-21.3
- pandas-1.2.4
- parse_type-0.6.0
- parse-1.19.0
- path-16.6.0
- pbr-5.11.1
- perfdat-4.3.1
- pika-1.3.1
- Pillow-8.2.0
- platformdirs-2.6.2
- pluggy-0.13.1
- portend-3.1.0
- prance-0.20.0
- pretend-1.0.9

- psycopg2-2.8.6
- py-1.11.0
- pyasn1_modules-0.2.8
- pyasn1-0.4.8
- pycparser-2.21
- pydantic-1.10.4
- Pygments-2.14.0
- pyOpenSSL-21.0.0
- pyparsing-3.0.9
- pypdf-3.3.0
- pypdf2-3.0.1
- pyrsistent-0.18.0
- pytest_flask-1.2.0
- pytest_forked-1.4.0
- pytest_httpbin-1.0.2
- pytest_httpserver-1.0.6
- pytest_localserver-0.7.0
- pytest_subtests-0.5.0
- pytest_xdist-3.1.0
- pytest-6.2.4
- python_dateutil-2.8.2
- python_interface-1.6.1
- python_magic-0.4.27
- pytz-2022.7.1
- pywebui-0.1
- PyYAML-5.4.1
- raven-6.10.0
- reportlab-3.5.66
- requests-2.22.0
- responses-0.22.0
- rfc3986-1.5.0
- rfc3987-1.3.8
- rsa-4.7.2
- ruamel.yaml-0.17.21
- ruamel.yaml.clib-0.2.7
- s3cmd-2.3.0
- s3transfer-0.3.7
- semantic_version-2.10.0
- semver-2.13.0
- service_identity-21.1.0
- setuptools_rust-0.12.1
- setuptools_scm-7.1.0
- setuptools-49.1.3
- setuptools-57.4.0
- simplejson-3.17.5
- six-1.16.0
- sniffio-1.3.0
- sortedcontainers-2.4.0
- starlette-0.23.1
- strict_rfc3339-0.7
- suds_py3-1.4.5.0
- sure-2.0.0
- tempora-5.2.1
- toml-0.10.2

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- tomli-2.0.1
- trustme-0.9.0
- types_toml-0.10.8.1
- typing_extensions-4.4.0
- urllib3-1.25.11
- uvicorn-0.20.0
- validate_email-1.3
- virtualenv-20.17.1
- wcwidth-0.2.6
- Werkzeug-2.0.3
- wheel-0.38.4
- wsit-1.0.19
- xmlschema-2.1.1
- zc.lockfile-2.0