

ANSIBLE (2.9.1) for AIX

Contributed by Michael Felt

As part of an ongoing project to have AIX support properly tagged wheels - and to support some requests for recent ANSIBLE on AIX - I am publishing my current state.

Before getting into the technical details - just a reminder about why wheels (aka bdist - for binary distribution) are important.

- No compiler needed
- Create as non-root, a virtualenv (virtual environment) and install stuff, such as "bdist" wheels!

ANSIBLE (currently version 2.9.1) for AIX with wheels.

Needed: PYTHON with wheel tagging support

See: <http://www.aixtools.net/index.php/python3-3.6>

PYTHON3-32bit : Will run on AIX 5.3 TL7 and later:

PYTHON3-64bit : Will run on AIX 6.1 TL6 and later:

Wheels are located in aixtools test area: See http://download.aixtools.net/test/wheels/*

Process - from nothing to ANSIBLE installed

Starting point - no python...

```
# lspp -L | grep python
```

```
#
```

```
Install aixtools.python3
```

```
...
```

Installation Summary

| Name | Level | Part | Event | Result |
|----------------------------|---------|------|-------|---------|
| aixtools.python3.rte | 3.6.9.0 | USR | APPLY | SUCCESS |
| aixtools.python3.man.en_US | 3.6.9.0 | USR | APPLY | SUCCESS |
| aixtools.python3.adt | 3.6.9.0 | USR | APPLY | SUCCESS |

pip3 list

| Package | Version |
|------------|---------|
| ----- | ----- |
| pip | 18.1 |
| setuptools | 40.6.2 |

You are using pip version 18.1, however version 19.3.1 is available.

You should consider upgrading via the 'pip install --upgrade pip' command.

Download the wheels from AIXTools

ls -l

total 11344

```
-rw-r--r-- 2 199 1954 125326 Oct 31 13:18 Jinja2-2.10.3-py2.py3-none-any.whl
-rw-r--r-- 2 root system 17081 Nov 15 15:02 MarkupSafe-1.1.1-cp36-cp36m-AIX_5307_0747_32.whl
-rw-r--r-- 2 root system 44107 Nov 15 14:49 PyYAML-5.1.2-cp36-cp36m-AIX_5307_0747_32.whl
-rw-r--r-- 2 root system 199034 Nov 15 14:24 cffi-1.13.2-cp36-cp36m-AIX_5307_0747_32.whl
-rw-r--r-- 2 root system 476864 Nov 15 14:30 cryptography-2.8-cp36-cp36m-AIX_5307_0747_32.whl
-rw-r--r-- 2 199 1954 1415262 Nov 05 10:15 pip-19.3.1-py2.py3-none-any.whl
-rw-r--r-- 2 199 1954 111029 Nov 15 10:12 pycparser-2.19-py2.py3-none-any.whl
-rw-r--r-- 2 root system 10747 Nov 15 14:33 six-1.13.0-py2.py3-none-any.whl
-rw-r--r-- 2 204 staff 3351318 Nov 15 10:07 virtualenv-16.7.7-py2.py3-none-any.whl
-rw-r--r-- 2 204 staff 21556 Nov 15 10:05 wheel-0.33.6-py2.py3-none-any.whl
```

You can just install them all using "pip install *.whl", or you can be a bit more experimental.

1. Upgrade pip ## Note you must use pip3 for the moment!

```
# pip3 install --upgrade pip-19.3.1-py2.py3-none-any.whl
```

...

```
Successfully uninstalled pip-18.1
```

```
Successfully installed pip-19.3.1
```

2. Install wheel and virtualenv - to the system installation

```
# pip install wheel-0.33.6-py2.py3-none-any.whl virtualenv-16.7.7-py2.py3-none-any.whl
```

```
Processing ./wheel-0.33.6-py2.py3-none-any.whl
```

```
Processing ./virtualenv-16.7.7-py2.py3-none-any.whl
```

```
Installing collected packages: wheel, virtualenv
```

```
Successfully installed virtualenv-16.7.7 wheel-0.33.6
```

3. Now, switch to a regular user account and create a virtual environment

```
michael@x065:[/home/michael]virtualenv ansible
```

```
Using base prefix '/opt'
```

```
New python executable in /home/michael/ansible/bin/python3.6
```

```
Also creating executable in /home/michael/ansible/bin/python
```

```
Installing setuptools, pip, wheel...
```

```
done.
```

4. Activate the virtualenv

```
michael@x065:[/home/michael]. ansible/bin/activate
```

```
(ansible) michael@x065:[/home/michael]
```

5. Go back to the collected wheels - now you can just install *.whl

into your virtual environment - and NOT as root!!!

```
(ansible) michael@x065:[/data/prj/python/wheels/AIX-5307]pip install *.whl
```

```
(ansible) michael@x065:[/data/prj/python/wheels/AIX-5307]pip install *.whl
```

```
Processing ./Jinja2-2.10.3-py2.py3-none-any.whl
```

```
Processing ./MarkupSafe-1.1.1-cp36-cp36m-AIX_5307_0747_32.whl
```

```
Processing ./PyYAML-5.1.2-cp36-cp36m-AIX_5307_0747_32.whl
```

```
Processing ./cffi-1.13.2-cp36-cp36m-AIX_5307_0747_32.whl
```

```
Processing ./cryptography-2.8-cp36-cp36m-AIX_5307_0747_32.whl
```

```
Requirement already satisfied: pip==19.3.1 from file:///data/prj/python/wheels/AIX-5307/pip-19.3.1-py2.py3-none-any.whl in /home/michael/ansible/lib/python3.6/site-packages (19.3.1)
```

```
Processing ./pycparser-2.19-py2.py3-none-any.whl
```

```
Processing ./six-1.13.0-py2.py3-none-any.whl
```

```
Processing ./virtualenv-16.7.7-py2.py3-none-any.whl
```

```
Requirement already satisfied: wheel==0.33.6 from file:///data/prj/python/wheels/AIX-5307/wheel-0.33.6-py2.py3-none-any.whl in /home/michael/ansible/lib/python3.6/site-packages (0.33.6)
```

```
Installing collected packages: MarkupSafe, Jinja2, PyYAML, pycparser, cffi, six, cryptography, virtualenv
```

```
Successfully installed Jinja2-2.10.3 MarkupSafe-1.1.1 PyYAML-5.1.2 cffi-1.13.2 cryptography-2.8 pycparser-2.19 six-1.13.0 virtualenv-16.7.7
```

6. And now ansible is installed - time to experiment

7. Later, when you are satisfied

as root, go back and install the wheels into the "SYSTEM" python libraries.

TROUBLESHOOTING:

I get the following error:

```
MarkupSafe-1.1.1-cp36-cp36m-AIX_5307_0747_32.whl is not a supported wheel on this platform.
```

Actions: make sure you have pip upgraded to at least 19.3.1, and run the command "pip3 debug"

In the output you will see something such as:

Compatible tags: 18

cp36-cp36m-AIX_6106_1043_64

Note: here there is NO compatibility because the "5307" wheels are 32-bit (_32) while the current version is 64-bit (ends in _64).

However, if the endings are both _32 or both _64 you can link or move the files to a name that pip will accept.

Let's assume the message was:

MarkupSafe-1.1.1-cp36-cp36m-AIX_5307_0747_32.whl is not a supported wheel on this platform.

After linking the the file to a new name:

In MarkupSafe-1.1.1-cp36-cp36m-AIX_5307_0747_64.whl MarkupSafe-1.1.1-cp36-cp36m-AIX_6106_1043_64.whl

You can install MarkupSafe using:

```
root@x066:[/data/prj/python/wheels/AIX-5307]ln MarkupSafe-1.1.1-cp36-cp36m-AIX_5307_0747_64.whl MarkupSafe-1.1.1-cp36-cp36m-AIX_6106_1043_64.whl
```

```
root@x066:[/data/prj/python/wheels/AIX-5307]pip install Mark*6106*.whl
```

```
Processing ./MarkupSafe-1.1.1-cp36-cp36m-AIX_6106_1043_64.whl
```

```
Installing collected packages: MarkupSafe
```

```
Successfully installed MarkupSafe-1.1.1
```

Important - pip install accepts a 32-bit wheel LABELED as a 64-bit wheel. The module will not work however, because only a 32-bit shared library is installed while a 64-bit is needed by the python3 binary.