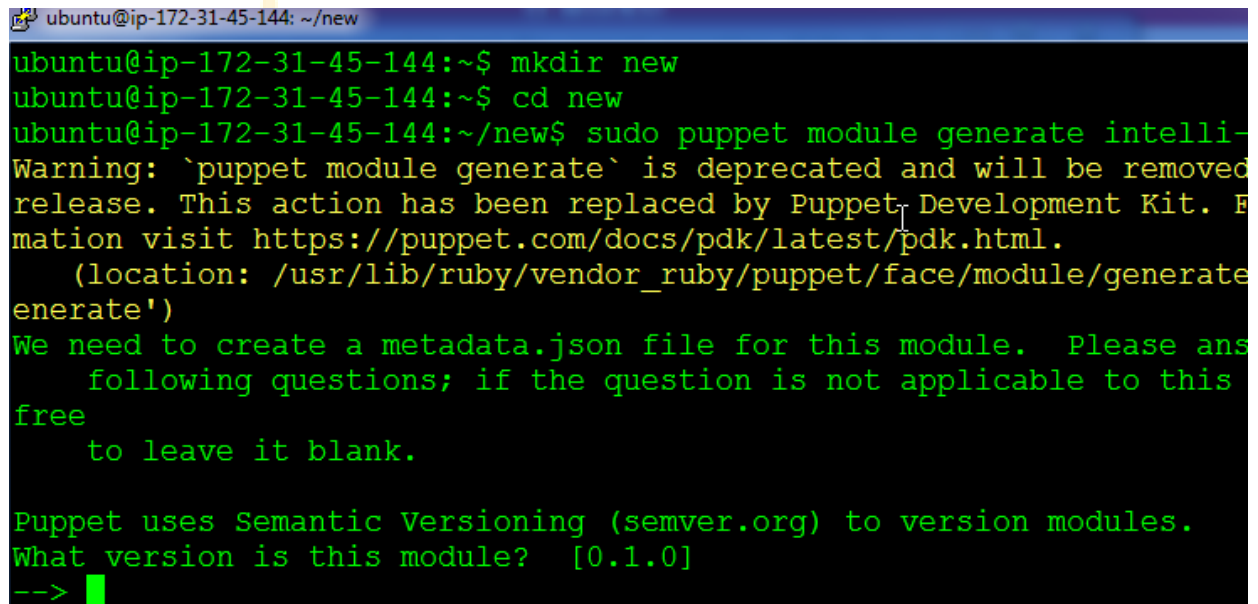


CREATING MODULES IN PUPPET

Steps for Puppet Master

Step 1: Create a new directory “new”, followed by the below command. Enter the required values and proceed

```
$ mkdir new  
$ cd new  
$ sudo puppet module generate intelli-new
```

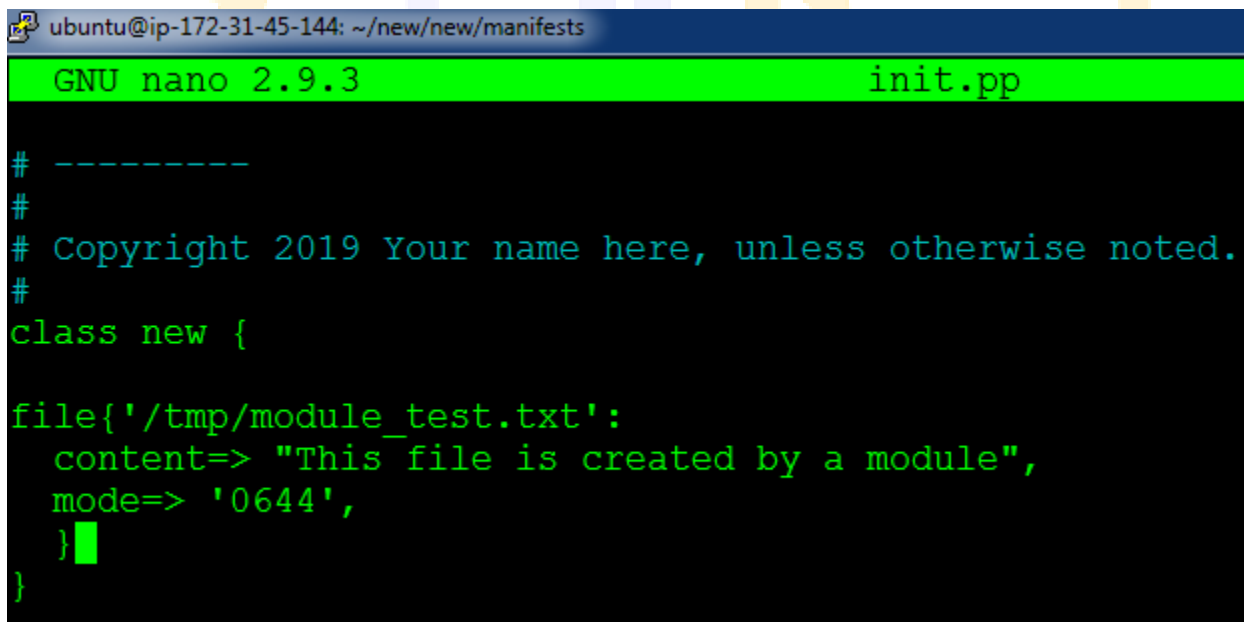
A screenshot of a terminal window showing the execution of the puppet module generate command. The terminal title is 'ubuntu@ip-172-31-45-144: ~/new'. The commands entered are 'mkdir new', 'cd new', and 'sudo puppet module generate intelli-'. The output shows a warning about the deprecated command and a prompt to create a metadata.json file. The user is prompted for the module version, and '0.1.0' is entered.

```
ubuntu@ip-172-31-45-144: ~/new  
ubuntu@ip-172-31-45-144:~$ mkdir new  
ubuntu@ip-172-31-45-144:~$ cd new  
ubuntu@ip-172-31-45-144:~/new$ sudo puppet module generate intelli-  
Warning: `puppet module generate` is deprecated and will be removed  
release. This action has been replaced by Puppet Development Kit. For  
information visit https://puppet.com/docs/pdk/latest/pdk.html.  
  (location: /usr/lib/ruby/vendor_ruby/puppet/face/module/generate  
enerate')  
We need to create a metadata.json file for this module. Please answer  
the following questions; if the question is not applicable to this  
module, type 'no' or leave it blank.  
  
Puppet uses Semantic Versioning (semver.org) to version modules.  
What version is this module?  [0.1.0]  
--> 0.1.0
```

Step 2: You have successfully created the module. Change into the following directory
./new/new/manifests

Enter the following code in init.pp

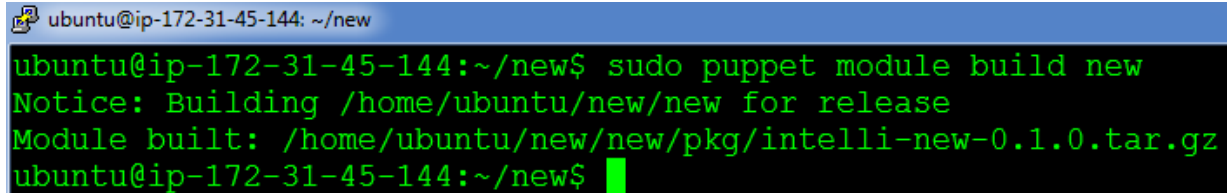
```
class new{  
  
  file{'/tmp/module_test.txt':  
  
    content=> "This file is created by a module",  
  
    mode=> '0644',  
  
  }  
  
}
```

A screenshot of a terminal window. The title bar shows 'ubuntu@ip-172-31-45-144: ~/new/new/manifests'. The terminal content shows the nano 2.9.3 editor editing 'init.pp'. The code in the editor matches the code block above, with a cursor at the end of the last line.

```
ubuntu@ip-172-31-45-144: ~/new/new/manifests  
GNU nano 2.9.3 init.pp  
  
# -----  
#  
# Copyright 2019 Your name here, unless otherwise noted.  
#  
class new {  
  
file{'/tmp/module_test.txt':  
  content=> "This file is created by a module",  
  mode=> '0644',  
}  
}
```

Step 3: Come back to the /new directory, and pass the following command:

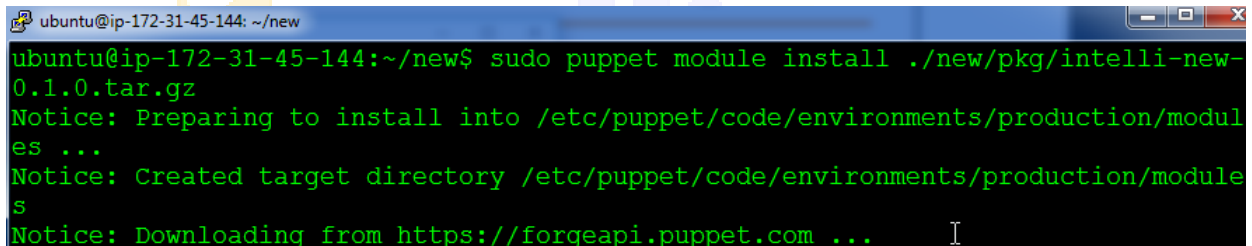
```
$ sudo puppet module build new
```

A terminal window screenshot showing the execution of the 'puppet module build new' command. The prompt is 'ubuntu@ip-172-31-45-144: ~/new'. The output shows a notice about building for release and the resulting tar.gz file path.

```
ubuntu@ip-172-31-45-144: ~/new$ sudo puppet module build new
Notice: Building /home/ubuntu/new/new for release
Module built: /home/ubuntu/new/new/pkg/intelli-new-0.1.0.tar.gz
ubuntu@ip-172-31-45-144: ~/new$
```

Step 4: Next, we will install the module by referring the tar.gz file from the last output:

```
$ sudo puppet module install ./new/pkg/intelli-new-0.1.0.tar.gz
```

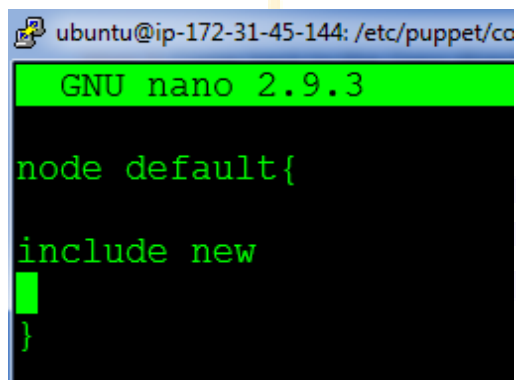
A terminal window screenshot showing the execution of the 'puppet module install' command. The prompt is 'ubuntu@ip-172-31-45-144: ~/new'. The output shows notices about preparing to install, creating a target directory, and downloading from the forge.

```
ubuntu@ip-172-31-45-144: ~/new$ sudo puppet module install ./new/pkg/intelli-new-0.1.0.tar.gz
Notice: Preparing to install into /etc/puppet/code/environments/production/modules ...
Notice: Created target directory /etc/puppet/code/environments/production/modules
Notice: Downloading from https://forgeapi.puppet.com ...
```

Step 5: Finally, go to the main manifest file in
/etc/puppet/code/environments/production/manifest/site.pp

Finally, include the following code:

```
node default{  
  
  include new  
  
}
```

A screenshot of a terminal window showing the nano text editor. The title bar reads "ubuntu@ip-172-31-45-144: /etc/puppet/co". The editor header is "GNU nano 2.9.3". The content of the file is:

```
node default{  
  
include new  
[  
}
```

On Puppet Agent

Step 1: Execute the following command:

```
$ sudo puppet agent --test
```

```
ubuntu@ip-172-31-41-253: ~  
ubuntu@ip-172-31-41-253:~$ sudo puppet agent --test  
Info: Using configured environment 'production'  
Info: Retrieving pluginfacts  
Info: Retrieving plugin  
Info: Retrieving locales  
Info: Loading facts  
Info: Caching catalog for ip-172-31-41-253.us-east-2.compute.internal  
Info: Applying configuration version '1549515466'  
Notice: /Stage[main]/New/File[/tmp/module_test.txt]/ensure: defined con  
{md5}a7e2591d0c44207a76982f3078e5ed70'  
Notice: Applied catalog in 0.02 seconds  
ubuntu@ip-172-31-41-253:~$ █
```

Step 2: Verify the configuration change by checking /tmp/module_test.txt

```
ubuntu@ip-172-31-41-253: ~  
ubuntu@ip-172-31-41-253:~$ cat /tmp/module_test.txt  
This file is created by a moduleubuntu@ip-172-31-41-253:~$ █
```