

Custom Hiera

Satellite 6.4, 6.5 and 6.6

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Satellite Configuration Tuning / custom-hiera

SUPPORT POLICY:

*Utilizing the values specified in this document is considered an advanced feature of the **satellite-installer**. These values are only ensured to work for the version this document is published for but may change in future versions. Upgrades to future versions of Satellite 6 may require adjustments to your **custom-hiera.yaml** settings to maintain compatibility and tuning.*

HTTPD

We are able to define some Apache/prefork values following the steps according to below. First, let us show the content of a basic prefork (*/etc/httpd/conf.modules.d/prefork.conf*) configuration on a fresh Satellite server.

```
<IfModule mpm_prefork_module>
  StartServers      8
  MinSpareServers   5
  MaxSpareServers   20
  ServerLimit       256
  MaxClients        256
  MaxRequestsPerChild 4000
  ListenBacklog      511
</IfModule>
```

Available Parameters

```
apache::mod::prefork::serverlimit: 256
apache::mod::prefork::startservers: 8
apache::mod::prefork::minspareservers: 5
apache::mod::prefork::maxspareservers: 20
apache::mod::prefork::maxclients: 256
apache::mod::prefork::maxrequestworkers: undef
apache::mod::prefork::maxrequestsperschild: 4000
apache::mod::prefork::maxconnectionsperchild: undef
apache::mod::prefork::listenbacklog: 511
```

Passenger

We are able to define some passenger values following the steps according to below. First, let us show the content of a basic passenger_extra (*/etc/httpd/conf.modules.d/passenger_extra.conf*) configuration on a fresh Satellite server

```
# The Passenger Apache module configuration file is being
# managed by Puppet and changes will be overwritten.
<IfModule mod_passenger.c>
  PassengerMaxInstancesPerApp 6
  PassengerMaxPoolSize 12
  PassengerMaxPreloaderIdleTime 0
  PassengerMaxRequestQueueSize 250
  PassengerMaxRequests 10000
  PassengerMinInstances 1
  PassengerStatThrottleRate 120
</IfModule>
```

Available Parameters

```
apache::mod::passenger::passenger_max_instances_per_app: undef
apache::mod::passenger::passenger_max_pool_size: undef
apache::mod::passenger::passenger_max_preloader_idle_time: undef
apache::mod::passenger::passenger_max_request_queue_size: undef
apache::mod::passenger::passenger_max_requests: undef
apache::mod::passenger::passenger_stat_throttle_rate: undef
```

Postgres

We are able to define some PG values following the steps according to below. First, let us show the content of a basic PG configuration (*/var/lib/pgsql/data/postgresql.conf*) on a fresh Satellite server

```
max_connections = 500 # (change requires restart)
shared_buffers = 512MB # min 128kB
logging_collector = on # Enable capturing of stderr and csvlog
log_filename = 'postgresql-%a.log' # log file name pattern,
log_truncate_on_rotation = on # If on, an existing log file with the
log_rotation_age = 1d # Automatic rotation of logfiles will
log_rotation_size = 0 # Automatic rotation of logfiles will
client_min_messages = debug2
log_min_messages = debug2
log_min_error_statement = debug2
log_timezone = 'US/Eastern'
datestyle = 'iso, mdy'
timezone = 'US/Eastern'
lc_messages = 'en_US.UTF-8' # locale for system error message
lc_monetary = 'en_US.UTF-8' # locale for monetary formatting
lc_numeric = 'en_US.UTF-8' # locale for number formatting
lc_time = 'en_US.UTF-8' # locale for time formatting
default_text_search_config = 'pg_catalog.english'
port = 5432
data_directory = '/var/lib/pgsql/data'
checkpoint_completion_target = 0.9
work_mem = 4MB
log_line_prefix = '%t '
```

Let's edit the */etc/foreman-installer/custom-hiera.yaml* and add the content according to the example in sequence.

```
postgresql::server::config_entries:
  max_connections: 1000
  shared_buffers: 2GB
  work_mem: 8MB
  checkpoint_segments: 32
  autovacuum_vacuum_cost_limit: 2000
```

NOTE

Once the value is added on the **custom-hiera.yaml** file, the entry will be available on the postgres configuration file. If you comment or remove the entry on custom-hiera.yaml, the same will persist on the postgres conf file. This will happen once we don't use a template for postgres conf file (**postgresql.conf**).

Available Parameters

```
autovacuum_max_workers: 3
autovacuum_naptime: 1min
autovacuum_vacuum_threshold: 50
```

```
autovacuum_analyze_threshold: 50
autovacuum_vacuum_scale_factor: 0.2
autovacuum_analyze_scale_factor: 0.1
autovacuum_freeze_max_age: 200000000
autovacuum_vacuum_cost_delay: 20ms
autovacuum_vacuum_cost_limit: -1
vacuum_freeze_min_age: 50000000
vacuum_freeze_table_age: 150000000
deadlock_timeout: 1s
max_locks_per_transaction: 64
max_pred_locks_per_transaction: 64
```

Candlepin

We are able to define some Candlepin values following the steps according to below. The change below will affect the tomcat conf file (***/etc/tomcat/tomcat.conf***).

```
candlepin::java_opts: '-Xms1024m -Xmx8192m'
```

MongoDB

We are able to define some MongoDB values following the steps according to below. The change below will affect the mongo conf file (***/etc/opt/rh/rh-mongodb34/mongod.conf***).

```
mongodb::server::config_data:
  storage.wiredTiger.engineConfig.cacheSizeGB: 1
```

NOTE

The configuration above will update the file ***/etc/opt/rh/rh-mongodb34/mongod.conf***, if you comment on custom-hiera.yaml and rerun satellite-installer, the value will come back to the original/default state.

UNSUPPORTED HEIRA SETTINGS

If you have to define the MinInstances, don't do that via custom-hiera, instead, use the satellite-installer flag accordingly

```
# satellite-installer --foreman-passenger-min-instances 12
```

NOTE

The satellite-installer with flag will change the file conf.d/05-foreman.conf and conf.d/05-foreman-ssl.conf.

Foreman Proxy

```
foreman_proxy::tls_disabled_versions: ['1.1']
--foreman-proxy-tls-disabled-versions 1.1
foreman_proxy::ssl_disabled_ciphers: ['TLS_RSA_WITH_RC4_128_MD5','TLS_RSA_WITH_RC4_128_SHA']
foreman_proxy_content::qpid_router_ssl_protocols: [ '-ALL', 'TLSv1.2' ]
foreman_proxy::plugin::remote_execution::ssh::remote_working_dir: ' /var/sat/foreman'
```

Dynflow

Some examples

```
foreman_proxy::plugin::dynflow::ssl_disabled_ciphers: ['TLS_RSA_WITH_RC4_128_MD5',
'TLS_RSA_WITH_RC4_128_SHA']
foreman_proxy::plugin::dynflow::tls_disabled_versions: ['1.1']
```

NOTE

About **Foreman-Proxy** and **Dynflow**, you are able to define those values above using satellite-installer with a set of arguments instead use custom-hiera. Near those options will be removed from hiera and once the information still on the custom-hiera file, will break functionality on update/upgrade. To get the complete list, you can run **# *satellite-installer --full-help | grep <what you are looking for here>***

HTTPD

Some examples

```
apache::max_keepalive_requests: 100
apache::keepalive_timeout: 15
apache::timeout: '120'
```

NOTE

About **HTTPD**, you are able to define those values above using satellite-installer with a set of arguments instead use custom-hiera. Near those options will be removed from hiera and once the information still on the custom-hiera file, will break functionality on update/upgrade. To get the complete list, you can run:

*satellite-installer --full-help | grep <what you are looking for here>*


```
# satellite-installer --full-help | grep -E '(keepalive)'
```

```
--foreman-keepalive          Enable KeepAlive setting of Apache? (current: true)
```

```
--reset-foreman-keepalive    Reset keepalive to the default value (true)
```

```
--foreman-keepalive-timeout  KeepAliveTimeout setting of Apache
```

```
--reset-foreman-keepalive-timeout Reset keepalive_timeout to the default value (5)
```

```
--foreman-max-keepalive-requests MaxKeepAliveRequests setting of Apache
```

```
--reset-foreman-max-keepalive-requests Reset max_keepalive_requests to the default value (100)
```