Satellite-6: Plugins & Hooks

Plugins explained / Hooks revealed

Thomas McKay
Principal Software Engineer
3/5/2017
Satellite-6 equals plugins!

The Satellite-6 product is a collection of supported plugins

Core Ruby on Rails application
- Foreman

Shipped plugins
- Katello, Access Insights, Ansible, OpenSCAP, Discovery, Hooks and more!

Unsupported upstream plugins*
- Salt, Chef and others

* Warning: May be asked to uninstall when reporting support cases
What are plugins?

Written in Ruby on Rails (RoR)
- Ruby - programming language
- Rails - server-side web application framework
- Plugin - extension or modification to the core framework

Details
- Loaded at server startup
- Full access to database and data relations
- Able to extend all areas of an application
Can I write my own plugin?

Q: Two Virtual Datacenter (VDC) subscriptions, how are they used?
A: Create report of usage over time

Requires specialized knowledge of Ruby on Rails
- How to debug
- Data relations
- Performance implications

Not supported
- Support of Satellite-6 itself may require removal of plugin
- Bring server down to modify, remove
What are my choices then?

Q: Two Virtual Datacenter (VDC) subscriptions, how are they used?
A: Create report of usage over time

Other possible solutions

- `hammer --csv subscriptions with cron`
- Custom API script with `cron`
- Use the `foreman-hooks` plugin!
The foreman-hooks plugin runs scripts

A database object change will trigger a call to a custom executable

Benefits

● Write executable or script in any language
● Triggered only when needed with low burden on server
● Hooks for data validation, before and after save, and create-update-delete actions
● Modifications to script do not require server restart
● *foreman-hooks* plugin is supported (but debug your own scripts, please!)
How it works

A database object change will trigger a call to a custom executable

Benefits

- Write executable or script in any language
- Triggered only when needed with low burden on server
- Hooks for data validation, before and after save, and create-update-delete actions
- Modifications to script do not require server restart
- `foreman-hooks` plugin is supported (but debug your own scripts, please!)
How it works

A database object change will trigger a call to a custom executable
Using foreman-hooks like a plugin

Q: Two Virtual Datacenter (VDC) subscriptions, how are they used?
A: Write a `foreman-hooks` script to report usage as CSV

```ruby
File.open(filename, "a") do |file|
  json = JSON.parse(STDIN.read)
  quantity = json['quantity']
  consumed = json['consumed']
  updated_at = DateTime.now.strftime('%F %T')
  file.puts "#{json['id']},#{json['subscription_id']},”
          "#{updated_at},#{quantity},#{consumed}"
end
...
Using foreman-hooks like a plugin

Q: Two Virtual Datacenter (VDC) subscriptions, how are they used?
A: Write a `foreman-hooks` script to report usage as CSV

<table>
<thead>
<tr>
<th>ID,Subscription ID,Update Time,Quantity,Consumed</th>
</tr>
</thead>
<tbody>
<tr>
<td>117,53,2017-04-25 14:41:25,-1,0</td>
</tr>
<tr>
<td>117,53,2017-04-25 14:41:25,-1,0</td>
</tr>
<tr>
<td>100,53,2017-04-25 14:41:27,4,1</td>
</tr>
<tr>
<td>100,53,2017-04-25 14:41:27,4,1</td>
</tr>
<tr>
<td>93,49,2017-04-25 14:41:29,200,3</td>
</tr>
<tr>
<td>93,49,2017-04-25 14:41:29,200,3</td>
</tr>
<tr>
<td>100,53,2017-04-25 14:41:35,4,0</td>
</tr>
<tr>
<td>100,53,2017-04-25 14:41:35,4,0</td>
</tr>
</tbody>
</table>
Using foreman-hooks like a plugin
Using foreman-hooks like a plugin
Interested in learning more?
Freenode IRC #satellite6 and #theforeman

References
- Satellite-6 Documentation - Using Foreman Hooks
- Foreman Website - How to Create a Plugin
THANK YOU

plus.google.com/+RedHat
linkedin.com/company/red-hat
youtube.com/user/RedHatVideos
facebook.com/redhatinc
twitter.com/RedHatNews
LEARN. NETWORK. EXPERIENCE OPEN SOURCE.