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PCF Operations Workshop - Platform & Application Scaling

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Operations Workshop Agenda

- PCF Introduction
- Services Overview
- Platform Installation & Setup
- Role Based Access Control
- **Platform & Application Scaling**
- Platform & Application Health
- Patching & Updates
- Security
- Advanced BOSH

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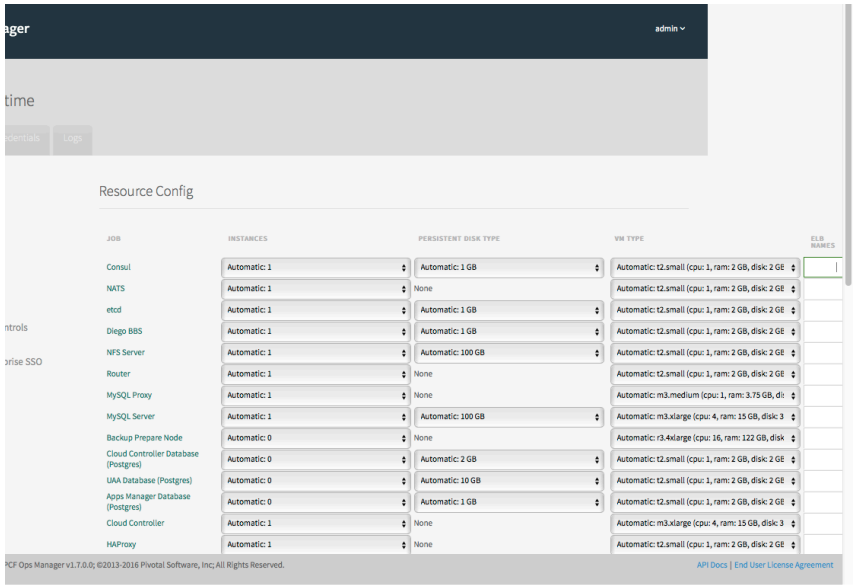
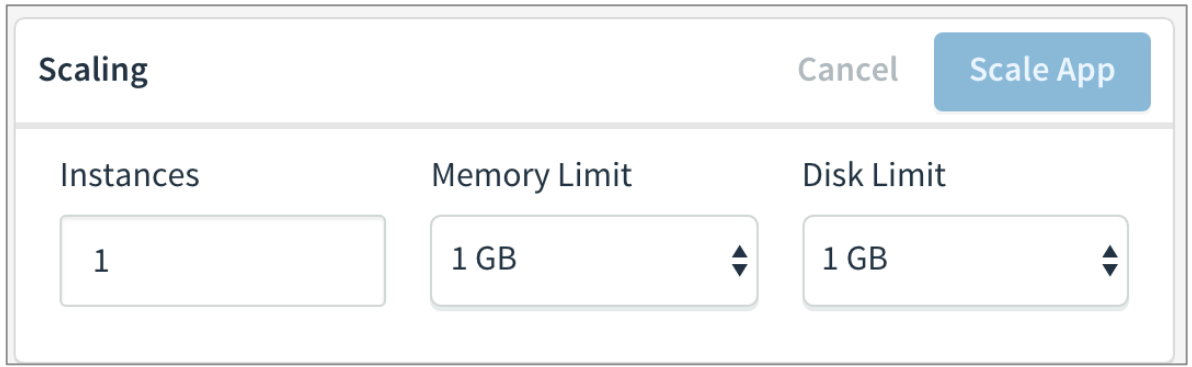
Platform Scaling

- Ops Manager allows administrators to quickly and easily scale PCF components using the “Resource Config” workflow of the Elastic Runtime tile
- Administrators can select machine sizes for their components
- Additional information can be located at the following URL: http://docs.pivotal.io/pivotalcf/1-7/concepts/high-availability.html#availability



Applications - Vertical Scaling

- Cloud Foundry enables vertical scaling of instances
- Users can modify Memory and Disk limits via:
  - Apps Manager console
  - cf CLI
  - manifest.yml

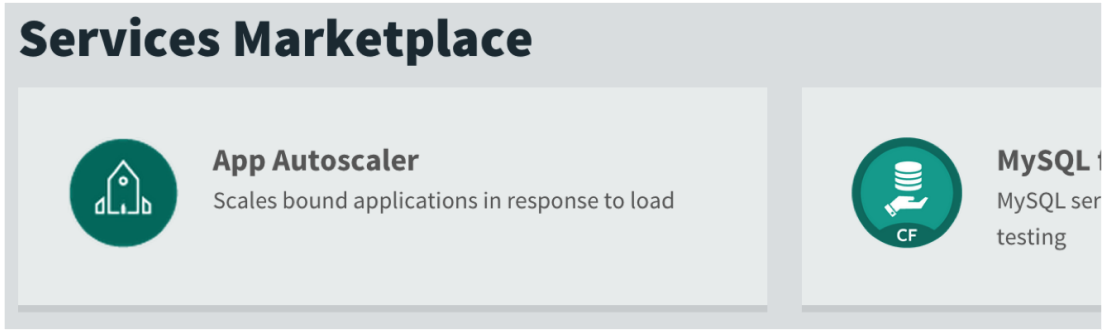


Applications - Horizontal Scaling

- Cloud Foundry enables rapid horizontal scaling of applications via containers
- Users can modify the number of instances via:
  - App Autoscaler tile
  - Apps Manager console
  - cf CLI
  - manifest.yml

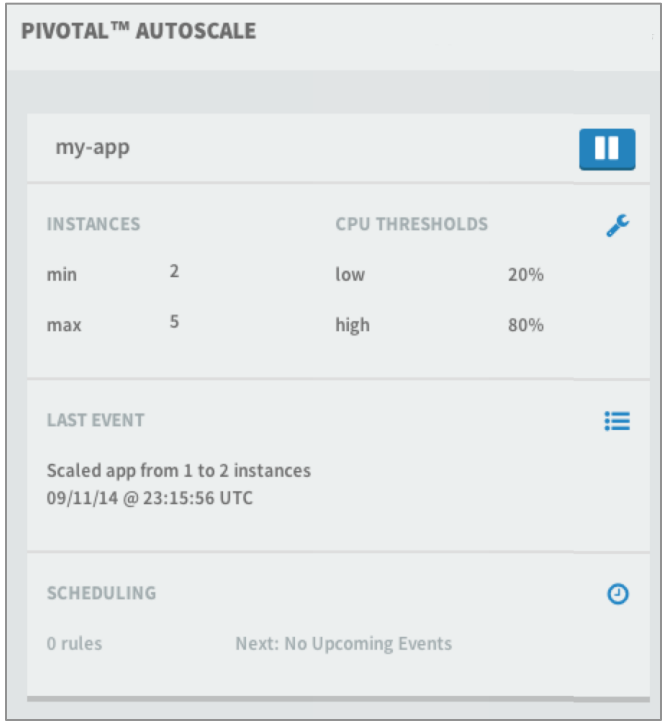
App Autoscaler

- CPU usage or time-based schedule can be used to scale application instances
- It is a service in the marketplace



App Autoscaler Service – Steps

1) Create a service instance in for the space (if necessary)
2) Bind to an application
3) Set the desired scaling parameters
    a) Add instance whenever high CPU threshold is reached
    b) Subtract instance whenever low threshold is reached



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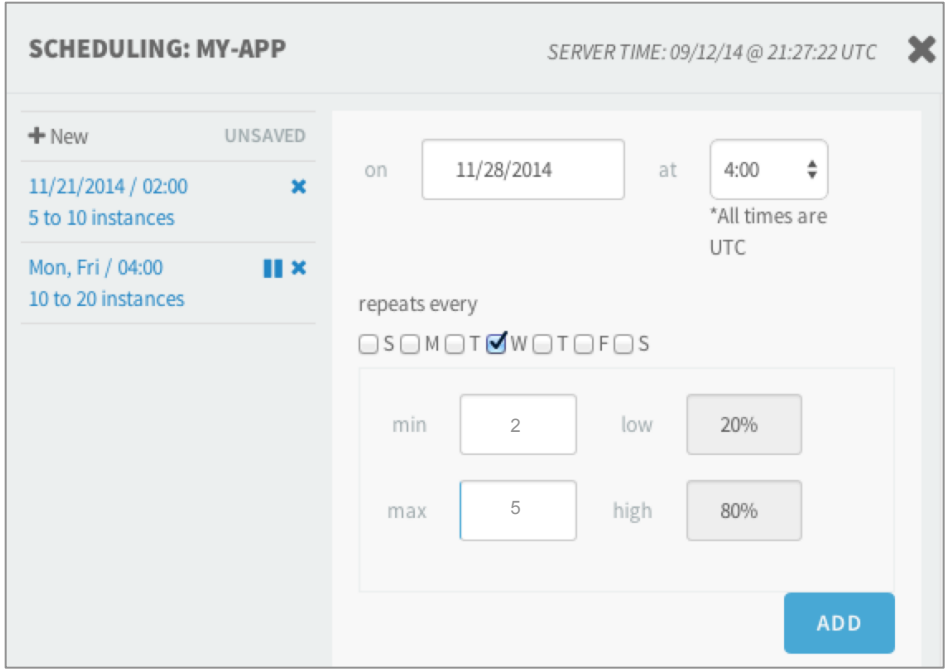
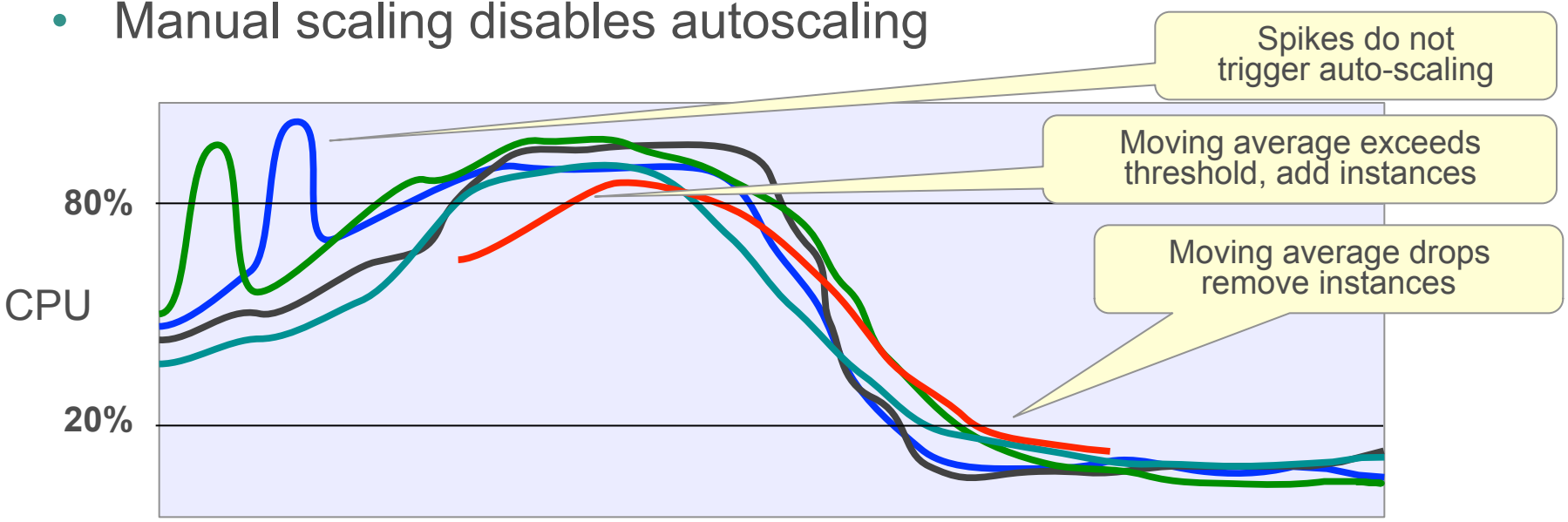
App Autoscaling – Scheduling

- Autoscaling events can be scheduled
- Changes autoscaling behavior on the given date / time
- May be a single or recurring event

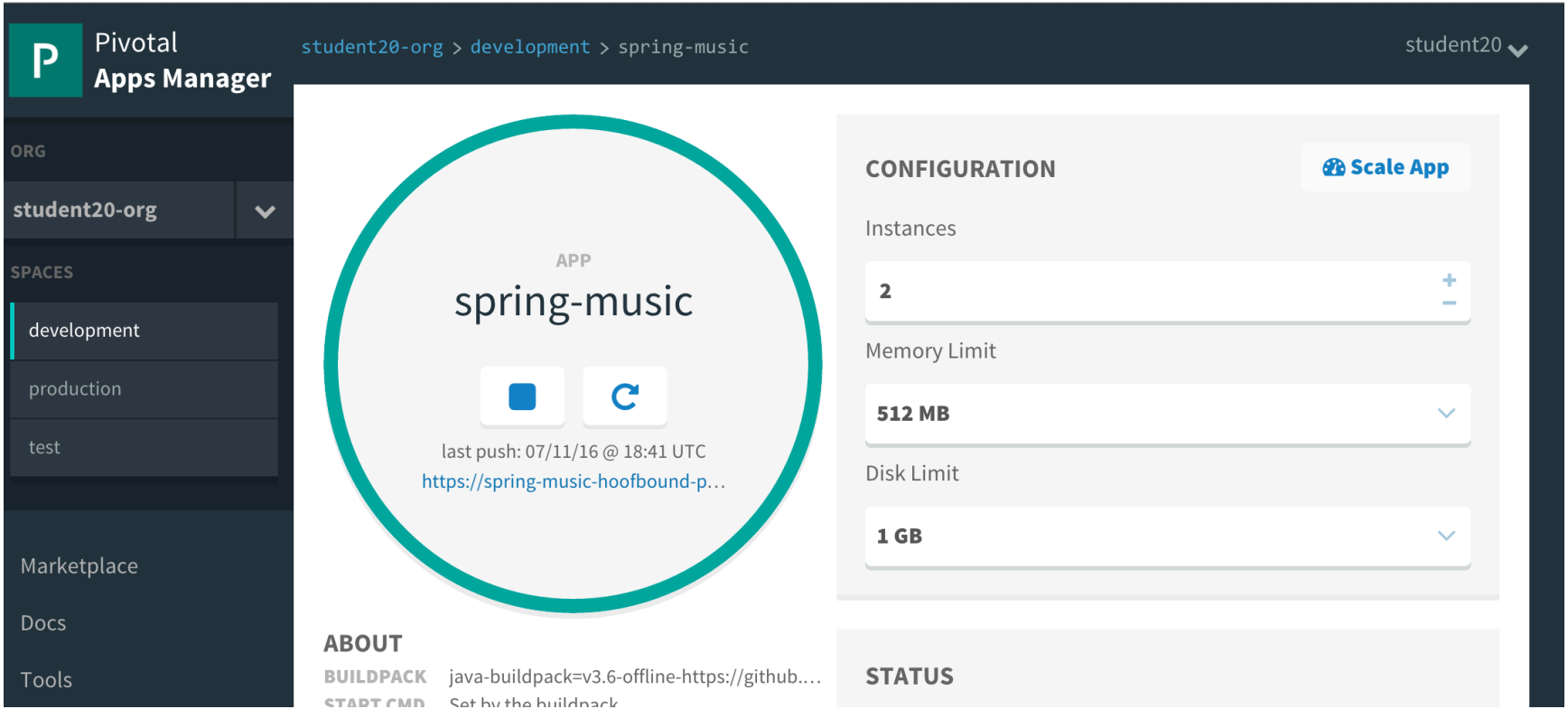


Autoscaling – Moving Average

- Scaling activity based on moving averages
  - Softens effect of temporary spikes
- Manual scaling disables autoscaling



Apps Manager Scaling



CLI Scaling

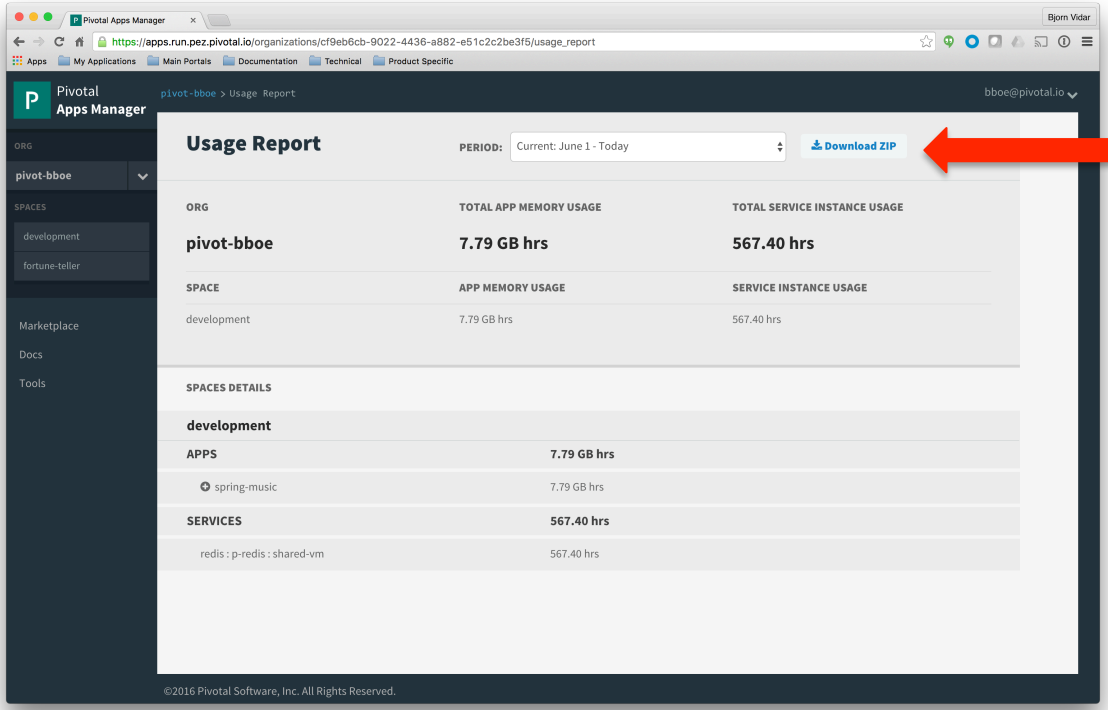
cf scale -i 2 “my-application-name”

Manifest Scaling

```
---
applications:
- name: spring-music
  memory: 64M
  instances: 5 # <-- Increase
  host: myspringmusic
  domain: example.com
  # comment

- name: nextapp
  memory: 256M
  ...
```

Platform Consumption & Chargeback



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