

PRAGMA 27 Student Challenge: Install Lifemapper Components



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PRAGMA 27 Student Challenge

Lifemapper is:

- Software infrastructure for biodiversity research
- Previously tied to Kansas installation and data
- Goal: Deployable infrastructure
- Process: Create automated install and configure process

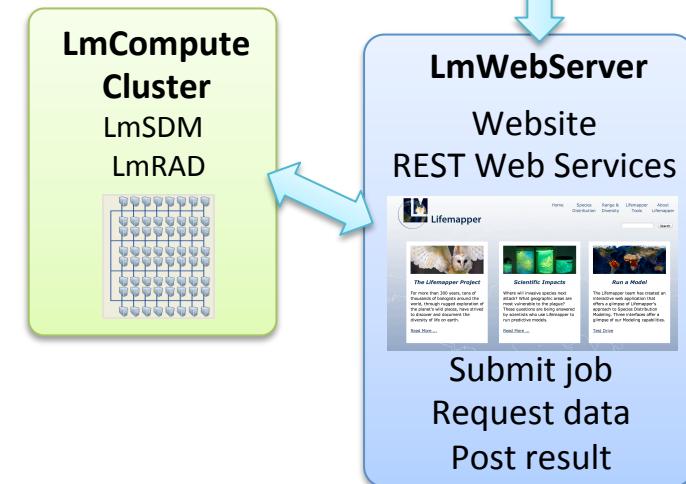
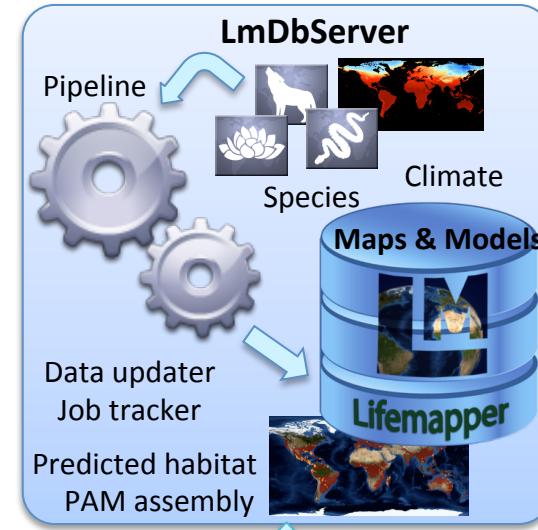
Methods:

- Use Rocks Cluster Management System to leverage 'roll' technology
- Add configuration files and scripts for localization
- Bootstrap database and metadata seeding

Your Challenge:

- Install VirtualBox on laptop
- Install and configure Lifemapper components (Servers only)
- Start data pipeline
- Examine scripts and logfiles
 - To understand virtualization and deployment processes
 - To identify areas for improvement

Lifemapper server cluster



Virtualization Technologies



VirtualBox

- Runs on Linux, Windows, OSX
- Ideal for laptops but instance size is limited by hardware
- Advantages in VBE
 - Can special-purpose or short-lived instance
 - Ideal for:
 - Testing
 - Field work (with no network connection)
 - Teaching tool

Virtual Box Image

Install
VBox instance
with Rocks frontend

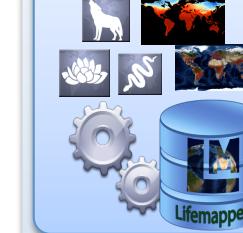
Add
2 LM components

LmDbServer



LmWebServer

LmDbServer



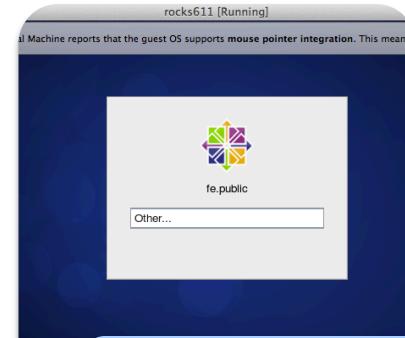
LmWebServer



Lifemapper in VirtualBox on a laptop



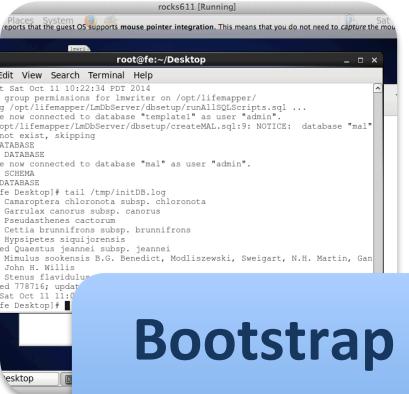
Import VM
• 5 min



Start VM
• 3 min



Install roll
• 15 min



Bootstrap database
• 50 min

Setup

Use

Challenge Steps:

1. Install VirtualBox, import VM, start VM
2. Install lifemapper-server roll
3. Bootstrap database
4. Run data pipeline application
5. Examine process



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PRAGMA

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Rocks

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Lifemapper

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Questions?

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Lifemapper

<http://lifemapper.org>
<https://github.com/lifemapper/>

Rocks

<http://www.rocksclusters.org>

Pragmagrid GitHub

<https://github.com/pragmagrid/lifemapper>
<https://github.com/pragmagrid/lifemapper-server>