



Virtualizing Lifemapper for PRAGMA: Step 2 - The Computational Tier

By

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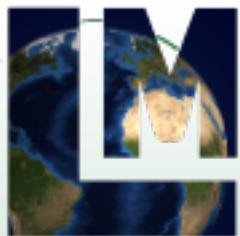
<http://www.lifemapper.org>



Lifemapper

- Data
 - Climate Data
 - Species Archive
 - Input: points
 - Output: potential habitat maps
- Tools
 - LmSDM: Species Distribution Modeling
 - LmRAD: Range and Diversity

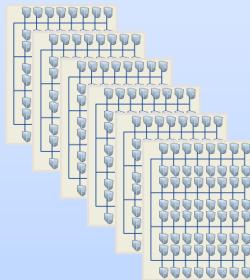




Lifemapper Tiers

Compute Tier

Species Distribution Modeling
Range and Diversity Analysis



Virtual clusters request Jobs

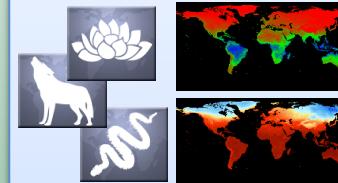
Management Tier

Pipeline

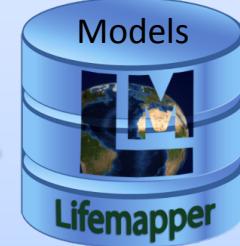


Data updater
Job generator
Job tracker
Metadata manager

Data Tier



Species Sensors



Models
Lifemapper
Result archives

Web Tier

Lm Web site
REST Web Services



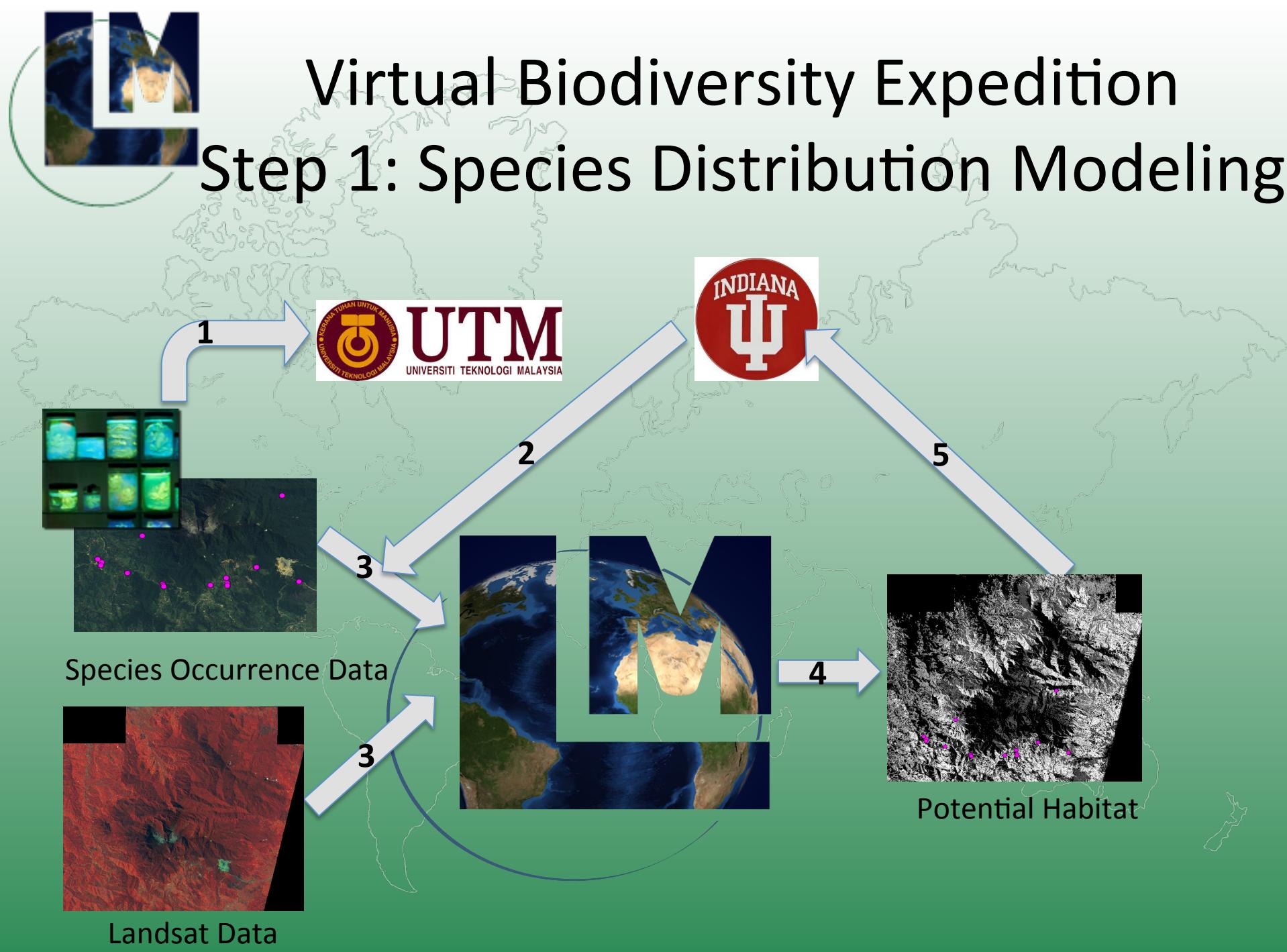
Job submission
Data request
Result request

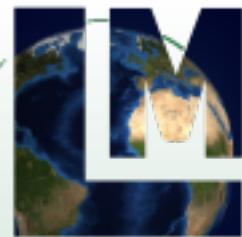
Client Tier

Desktop client
Browser client

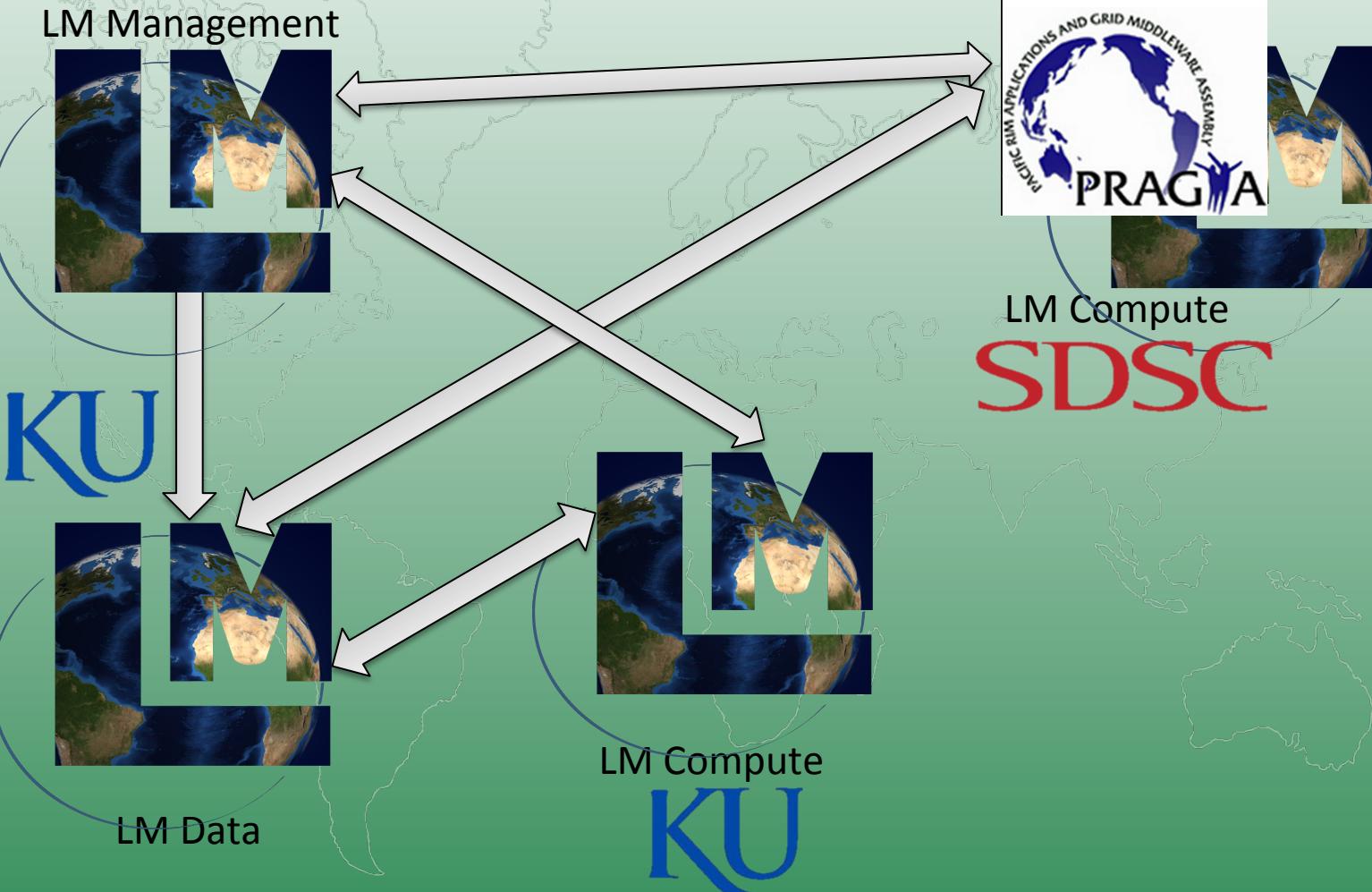


Experiment management,
Result visualization,
exploration, analysis





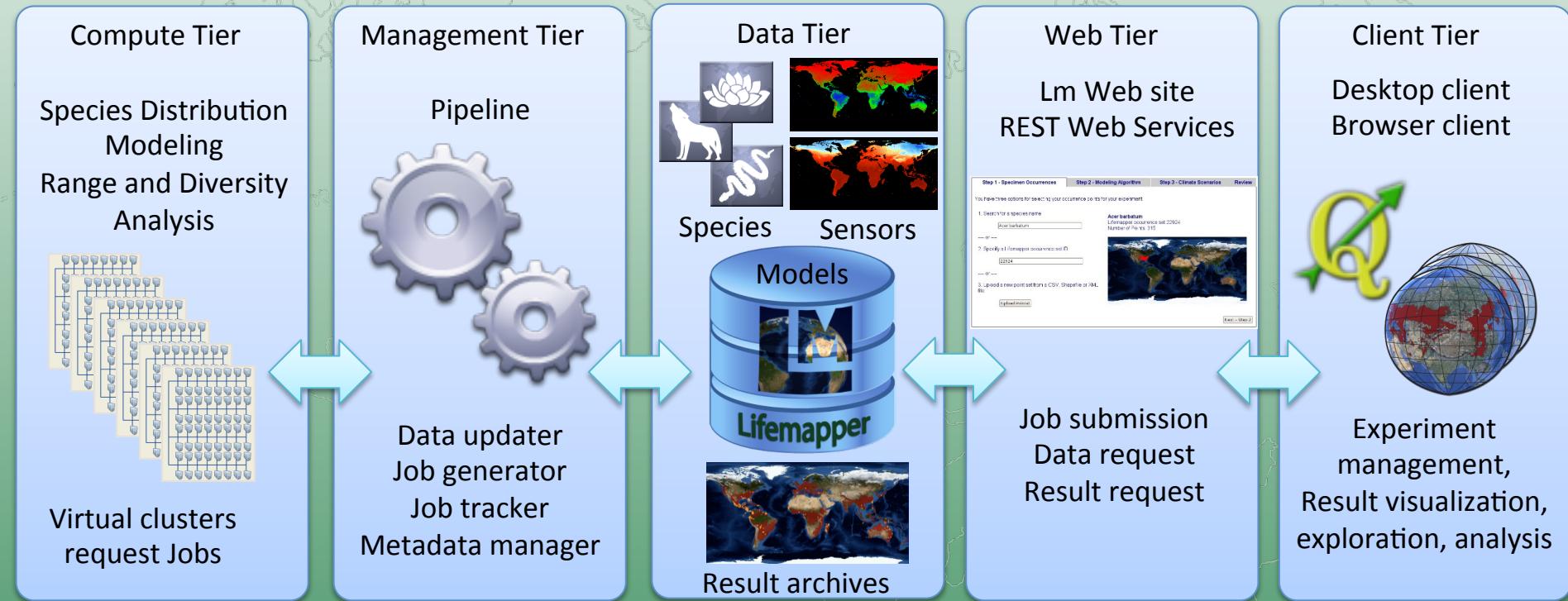
Adding a PRAGMA Compute Tier





DEMO

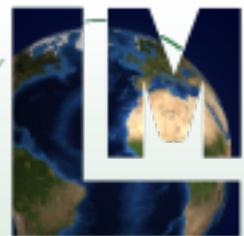
Preparation





Execution

- Specialization
 - Resources request subset of available jobs
 - Based on data, users, computation type
- Scaling
 - Management - Increased job speed
 - Compute – increased data replication



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<http://www.lifemapper.org>

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