NCAR Scientific Data

Data Analysis Web Application

Project Overview

Build a web application that runs analysis on a subset of climate model data and outputs a script for re-running the workflow.

Team

Seongmin Choi - Deployment Lead

Bobby Crimi - Architect/Research Lead

Connor Guerrieri - Source Control Lead

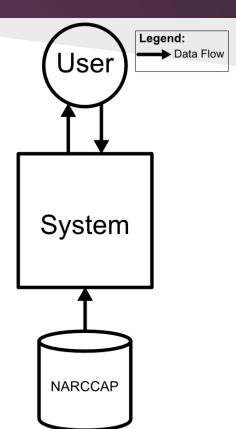
Bo Han - Test Lead

Hannah Keller - Team Lead

Hannah Thomas - Documentation Lead

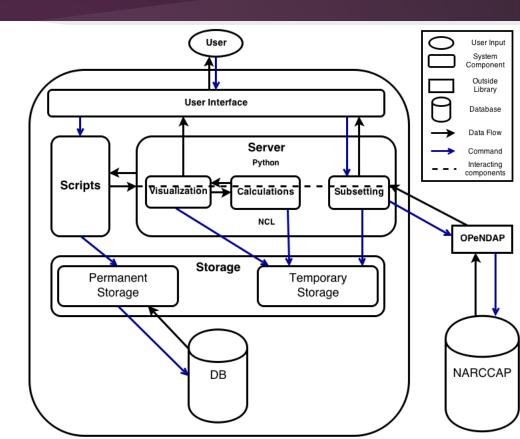
System Context Diagram

- User: impact users or climate scientists
- NARCCAP: climate model database



Conceptual Architecture

- User Interface
- Server: Python/NCL
 - Visualization
 - Calculations
 - Subsetting
- Script building
- OPeNDAP subset NARCCAP data
- Storage



DSM/DMM

		Subset Data	Analyze Data	Save Steps Via Script	Save Subset Of Data	Load Analysis	Data Visualization	Interactive UI		
Capabilities	Subset Data		x		x				2	DSM
	Analyze Data			x			x		2	
	Save Steps Via Script					x			1	
	Save Subset Of Data								0	
	Load Analysis		×				x		2	
	Data Visualization								0	
	Interactive UI	x	×						2	
Architecture	UI							x	1	- ОММ
	Scripting Service			x		x			2	
	NCL	x	×		x		x		4	
	OpenDAP	x							1	
	NARCCAP	x							1	
	Temp Storage	x	x				x		3	
	Permanent Storage			x					1	
	Our Database			x					1	
		5	5	4	2	2	4	1		
				Legend						
					Largest Priorities					
				X in DSM	Capability in row provides information for capability in column					
				X in DMM	Architecture element in row implements aspect of capability in column					

Risks

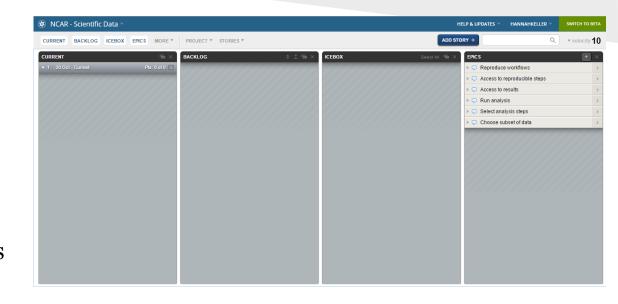
- Estimation and scheduling
- Integration of tools
- Workflow reproducibility
- Breakdown of specification
- Resource availability

Next Steps

- Set up infrastructure
- Choose APIs
- Breakdown user stories
- Prototype workflow

Progress Tracking

- Pivotal Tracker
 - User stories
 - Velocity
 - Burndown
- Iterations of 2 weeks
 - Sponsor also workson 2 week iterations



Questions?