

SMALL HPC SYSTEM MANAGEMENT

Project Information

Project Team Leads: Ben Rogers, Sai Ramadugu

Project Manager: Kris Halter

TeamDynamix Project Number: 241118

Project Overview

Investigate opportunities for shared staffing in High Performance Computing systems management across campus to improve effectiveness and decrease cost. This will include the development of new services for managing high-performance computing systems and may also include improvements to the existing central cluster model. Staff will continue to encourage the use of the standardized central cluster systems where possible. Where not possible, encourage the use of standardized management practices when feasible.

Project Purpose and Benefits to Campus

There may be opportunity for campus cost savings in pooled staffing. Building a larger cohort of individuals focused on HPC management will also improve the level of knowledge on the campus and begin to allow better development of staffing over time in an area that is difficult to recruit talent in.

Project Scope Statement

Management of applicable campus high performance computing clusters is within scope of examination for this project. Management of standalone high performance Linux servers was not intended to be included in this project but it has been raised several times so it may be examined but is not the primary focus.

High-Level Requirements

Time and expertise in managing small to medium size HPC systems being pooled is required (likely two FTE needed). There must be enough disparate individuals managing distributed clusters in different ways for the savings to be realizable.

Buy in from stakeholders that this model will be effective is needed.

High-Level Risks

There are not a large number of individuals on campus with HPC system management experience. Training is possible but this is a fairly complicated area and can take time to come up to speed in.

The project may be perceived as an attempt to consolidate all HPC systems into central clusters. Where this makes sense it will be encouraged but it is recognized that this is not possible.

Assumptions and Constraints

We are assuming that some infrastructure will need to be purchased to support this project at \$50k/year for the first three years of the project.

The project assumed that there are collectively 5 FTE (fractional and whole FTE combined) supporting HPC systems across campus and that the average salary plus benefits for these individuals is \$100k/year. If not the case then this will impact the opportunity for savings.

We have assumed that graduate students are managing some clusters and that it is desirable to most labs that their students instead focus on their disciplinary activities.

Project Governance

Any changes to the existing central HPC systems model will be brought to the existing Faculty HPC Policy Committee for review. Much of the work falls outside this area. The existing policy committee will be kept informed but an advisory group composed of interested faculty and staff will be formed. We will also work to include important faculty stakeholders as project team members if they are interested. The Research Computing community will also be kept informed and asked for feedback throughout the process.

Anticipated Cost Savings Categories

Steady state staffing savings of \$50k-\$100k/year

Sub Projects

None

OneIT@Iowa

Project Charter



Preliminary Milestones

Project Kickoff	10 July 2015
Initial Feedback Collection Complete	11 Sept. 2015
Initial Plan Presented for Feedback	25 Sept. 2015
Complete Plan Implementation	1 January 2016

Project Team

Ben Rogers	Project Leader
Sai Ramadugu	Project Lead
Kris Halter	Project Manager

Stakeholders:

Refer to Stakeholder Registry

Key Dates

Target Start Date:	July 2015
Target Go-live Date:	January 2015
Charter Ratification Date	07/01/2015