OE RESOURCE REQUEST APPLICATION

University of California, Berkeley

I. SPONSORSHIP

A. Initiative

Initiative	IT Infrastructure		
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A. Sponsorship

Sponsor Name	Shel Waggener		
Sponsor Signature		Date	
Sponsor Name			
Sponsor Signature		Date	
OE Program Office Signature		Date	

B. Give the title of the resource

Central Group Management System

II. PROBLEM STATEMENT/CASE FOR CHANGE

A. Identify and describe what needs the proposed solution is seeking to address.

1. Central group management is a critical foundation to all applications wishes to restrict access to individuals based on membership in a pre-existing group (such as course enrollment), a dynamic group (such as all Freshmen in the English department), and ad-hoc groups created by users around communities of interest or specific projects. Group management can be implemented independently of access management systems and provide departmental applications information to greatly improve services to students, faculty, and staff. Coupled with access management tools, group management can provide a powerful mechanism for controlling access to applications and systems.
2. Several proposed OE initiatives, such as all the Sakai 3 based portal projects (student, faculty, staff portals, advising toolkit, etc) depend on central group management services which do not currently exist. . In addition, the ITLC has charted a system-wide project to promote the use of middleware across

the system. This "User Provisioning" project calls explicitly for the deployment of group management functionality at all UC campuses.

3. Centralized group management at Berkeley is currently minimal. Some group information is stored in the campus directory. This provides an opportunity for a clean sheet design without excessive transition costs.

A. Describe the solution that is being proposed to meet the identified need(s).

The clear option for implementation: Grouper, a project of the Internet2 Middleware Initiative. Developed by and for higher education, Grouper is a full-featured open-source product with the ability to integrate with existing group data sets (such as course enrollment) via standard interfaces, allow direct web-based administrative management of groups, and allow departmental applications the ability to build group management capability in their own application interfaces and update central group data via programmatic interface.

B. Describe the alternate approaches you evaluated in the process of developing this proposal and why those alternatives were not selected.

A less desirable alternative would be a custom, homegrown solution, however significantly unusual requirements would need to be identified to justify this approach. Group management functionality can also be implemented via commercial identity management products, but the campus is currently migrating off of its existing commercial identity management solution (Oracle Waveset) and group management would be far cheaper and easier to implement in Grouper than in a new commercial identity management product. Given the wide deployment of Grouper in higher ed and the benefits of choosing a standard tool across UC campuses, Grouper is the clear choice for central group management.

III. IMPACT AND STRATEGIC ALIGNMENT

A. Describe how the proposed solution aligns with the OE goals:

- Reduce administrative costs and enable the campus to direct more resources to teaching and research
- Advance an effective and efficient operating environment
- Instill a culture of continuous improvement that leads to high quality performance and outcomes

A Group Management System (GMS) will allow multiple applications to easily create access control by utilizing both centrally created groups as well as ad hoc groups. Since administrative staff will no longer need to create group lists for each system, less work is involved in keeping records of which users are supposed to be included/removed from various systems. When a person joins/leaves a department, automatic changes will occur to their access to various systems across campus.

Manage from One Location:

A GMS keeps the group membership decisions in the hands of the business/group owners, access control in the hands of the application owners, and the technology management in the hands of the technologists. Individuals can use the system to review their group memberships. IT administrators are relieved from the burden of keeping up with the day-to-day group changes and a GMS increases the overall integrity of the policy and technology interaction.

Help Collaboration Happen:

With GMS, an owner sets up a group in one spot, feeding membership information to applications like email lists and calendars. The owner needs no technical skills to create, change, or delete groups or members. A researcher might create a group and enable members to participate on an email list or view a web site. Students use GMS to set up and manage groups for similar applications as they work together on shared projects and class work.

GMS enables group management institution-wide and on an individual level, providing more secure, robust, and responsive methods to control access to resources.

Ease Staff Support Load:

GMS separates the management of group memberships from the supporting technology. This reduces the end-user support calls associated with underlying infrastructure changes. Removing IT from the middle of managing groups will help ease helpdesk headaches, as well.

B. Identify any other anticipated benefits in implementing the proposed solution.

As mentioned above, a central group management service is a key dependency for many other proposed OE initiatives, including all the Sakai 3 "Academic Commons" and new staff/faculty portal proposals. A central, electronic group management system should allow the retirement of many locally managed group systems, including excel spreadsheets and paper-based group assignment processes. Since the larger purpose of a Group Management System is to assign access rights, improved group management also reduces risk and the potential costs associated with security exposures.

C. Identify the risks of not implementing the solution.

The campus will continue needing to create group lists for systems on campus. If group management is not tied to our systems of record so that access is automatically de-provisioned when people leave, this leaves these systems less secure, as already busy administrators may forget to change group memberships and associated access lists on multiple systems.

D. Describe the constituency that is intended to benefit from the proposed solution (e.g. students, faculty, staff, 1-many units)

Adding a GMS to the campus will affect the entire campus constituency as they login to multiple systems on campus.

E. Describe the extent to which this proposed solution is a collaborative effort either within campus or with external partners.

The proposed solution, Grouper, is a Internet2 Middleware project. Multiple campus systems will be able to utilize the group information provided by Grouper. Group information will also be utilized by the ITLC User Provisioning Project which is proposed to be utilized by all campuses.

Data from System of Record systems will be needed. Participation from the groups running those systems, particularly the HR system and student information systems, will be needed.

F. If applicable, describe how the proposed solution may enable additional projects to be considered.

Multiple projects can utilize group information.

G. What is the impact of the proposed solution on the existing systems and processes? Does it eliminate the need for existing systems and processes?

A central GMS can be integrated into the existing Calnet system. Having group information centrally allows individual systems across campus to remove their local group lists. For example, the Student Affairs group

currently undertakes an extremely labor intensive process of creating groups of advisors and students to receive email notifications related to student enrollment. This and many similar processes would be streamlined by a central group management solution.

H. What is the impact on the proposed solution on the workload?

Profile/Impact in hours	Current Workload	1-time workload requirement	Ongoing workload requirement
Student			
Staff		Participation from Student Systems to integrate course enrollment data with Grouper.	Ongoing operating expense associated with PM, BA, technical support, and infrastructure (see attached spreadsheet)
Faculty			

IV. WORK PLAN AND PROPOSED SOLUTION DESIGN

A. Provide a statement of:

- Deliverables — results the solution must deliver to achieve the stated objectives.
- Constraints — factors that may limit the options for providing the solution (*e.g., an inflexible deadline*).

The GMS will be delivered in three phases. 1) Standalone GMS 2) Export GMS groups to central campus authentication and authorization services 3) Dynamic groups memberships from System of record (SOR) data.

B. Provide a work plan for the proposed solution with high-level steps to complete the solution, including timeline. (Try to limit your plan to no more than seven steps.)

	MILESTONE	TIMELINE
1.	Phase 1: Standalone Group Management System (GMS) A standalone GMS serves as a repository of group data and membership management rules independent of any connected systems of record (SOR) or identity management system (IDMS). Applications may use the GMS as a repository to externalize their own group data, allowing their groups to be easily shared across multiple applications (such as course enrollment data)	Fall 2011
2.	Phase 2: Export GMS Groups to central authentication and authorization stores At this point, the group data could be made available to community-wide services such as fle sharing or web sharing to allow end-users to create and manage ad hoc groups for authorization/access management of collaborative services.	Spring 2012
3.	Phase 3: Dynamic Group Memberships From SOR Data The final step is to connect inbound sources from authoritative Systems of Record for the purpose of automatically creating	Spring/Summer 2012

	groups from additional data sources (subject to the approval of the owners of that data, of course). This may include student course memberships, departmental or school affiliation, building location, status (faculty/staff/full-time/part-time/etc), and so on.	

C. What are the data requirements for the proposed solution?

The GMS will need to access person data from Systems of Record like student and HR. For example, many systems will need to determine authorization based on course enrollment. This would require integration between course enrollment data and the GMS, and between the GMS and the access management system. Participation by functional and technical staff with HR and student systems will be necessary.

D. What are the technical requirements for the proposed solution?

The GMS will run on two VM instances provided in the CalNet infrastructure. As mentioned above, a key staffing requirement will be people with the skills and knowledge required to integrate various systems, including systems of record, the GMS, and the identity management system.

E. What are the greatest risks for the proposed solution and the plan to reduce or eliminate the risks.

	RISK	MITIGATION PLAN
1.	Since other OE initiatives may utilize the product of this initiative, release timing will be important.	Coordinating efforts between OE projects will be necessary.
2.	Staffing resources from systems that need to integrate with the GMS are critical	Align staffing resources as necessary before the project commences.
3.		
4.		
5.		

F. How does the proposed work plan allow for evaluation and course correction to ensure the outcomes meet the campus needs?

Since it is a staged release plan, there will be time for evaluation and course correction along the way.

V. CHANGE MANAGEMENT

A. What is the change management plan to successfully implement the outcomes of the proposed solution?

We will form a implementation team that will include CalNet staff members as well as campus application developers and campus data providers. The project will be led by a project manager with assistance from a business process analyst.

B. What incentives and/or disincentives are proposed to influence behavioral changes necessary for the successful outcome of the proposed solution?

For group management to be successful, both data providers (Systems of Record) and data consumers (applications) will need to participate. The incentive for SOR is that they need to provide data to app (the GMS) rather than many. The applications will benefit by having a standards-based interface to group data. The Educational Technology Services unit has been requesting a central group management system as a critical component to the student portal project and has shared a written letter in support of this OE resource request.

C. Who has been identified as the change leaders and implementers to carry out the changes necessary for the successful outcome of the proposed solution?

The CalNet Identity and Access Management team will serve as primary change leaders, but strong engagement and leadership will also be needed from those systems that currently store group data, like the HCM and course enrollment systems. These groups will be incented to participate given that a one-time integration with Grouper will save them from multiple one-off integrations with campus departments which need access to group data.

VI. FUNDING MODEL AND BUDGET

A. Could the proposed solution move forward with partial funding? If yes, describe the revised scope, including the associated savings impact.

Partial funding will only allow the base system setup, but won't allow for full integration necessary to make the project a success.

B. What is the plan for sustainable funding to support ongoing operations of the proposed solution?

Central group management will require an additional $90,500 in ongoing operating expense beyond existing CalNet operating costs. This could be recovered via integration fees for departments wishing to access group data.

C. Please download and fill out the OE Resource Request Budget Template and follow the instructions on the first worksheet in the workbook to complete the budget ant line descriptions. Include both completed sheets with the Resource Request.

Detailed budget estimates are including in the financial assessment spreadsheets included with this proposal.

VII. ASSESSMENT PLAN

Please use the table below to detail your metrics.

METRIC CATEGORY	SPECIFIC MEASURE	MEASURE BASIS	DATA COLLECTION METHOD	DATA COLLECTION FREQUENCY	FUNCTIONAL OWNER OF DATA COLLECTION	LARGER GOAL TO WHICH METRIC RELATES
EXAMPLES:						
FINANCIAL PERFORMANCE						
1 Reduction in average price of office supplies	*Avg price*	*Per item*	*Look at vendor catalogs*	*Quarterly, first day of each*	*Procurement Director*	*Overall reduction of 15% in average price of*

				quarter		*office supplies*
OPERATIONAL PERFORMANCE						
1 Reduction in average processing time per transaction	*Avg person-hours required*	*Per transaction*	*Survey of transaction processors*	*Semi-annually*	*Director of Billing*	*Reduction of 20% in average transaction processing time*
FINANCIAL PERFORMANCE						
1 Reduction in manual processing of group membership	Updating of group memberships can be automated based on defined criteria	Poll departments for current manual group membership approaches and then work to eliminate them	Survey campus departments	Annual	CalNet team in conjunction with key stakeholders	
2						
OPERATIONAL PERFORMANCE						
1						
2						
PRODUCT / SERVICE QUALITY						
1						
2						
EMPLOYEE SATISFACTION						
1 Easy to share files/directories with specific groups	Staff can more readily collaborate with defined groups without time-consuming maintenance of group lists	Survey employee satisfaction with portal functionality	Survey employees	Annual	HR (with input from CalNet)	
2						
CUSTOMER SATISFACTION						
1 Increase in services that support	Students and staff can	No formal measure	Survey	Annual	ETS, HR	Supporting collaboration for

collaboration across the enterprise	assign people to groups to grant access to resources	exists now, Could poll student/staff satisfaction with new portal services				students, faculty, and staff
2						
PUBLIC RESPONSIBILITY						
1						
2						
SUPPLIER PERFORMANCE						
1						
2						