

**XSEDE**

Extreme Science and Engineering  
Discovery Environment

# **XRAS Client Administrator's Guide**

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## A. Document History

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Relevant Sections	Version	Date	Changes	Author
Entire Document	1.0	5/21/2020	Initial version	XSEDE Resource Allocation Service

## B. Introduction

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Welcome to current and future users of the XSEDE Resource Allocation Service, better known as XRAS (pronounced “EX-raz”)! We have compiled this documentation to help the allocation administrators at XRAS client sites understand the features provided by the system.

Let’s start by quickly defining what XRAS is and is not. XRAS *is* a suite of tools for managing an allocation process, which includes users submitting requests, panel members (or staff) reviewing those requests, and allocation administrators finalizing project awards based on those requests and reviews. Many aspects of XRAS are similar to systems you may have used to submit papers for review by a technical program committee to determine which papers are accepted at a conference. Where XRAS offers added value for sites operating an allocation process is (a) incorporating your resources and resource information into the request and review process, (b) providing an integrated history of users and their requests at your site, and (c) allowing XRAS to integrate with your local systems. XRAS *is not* a management tool for your local research computing resources; your site will still use your existing systems for managing user accounts and access to your resources.

Following this introduction, we next give a brief overview of the XRAS architecture, then introduce some key terminology that pervades any discussion of XRAS (and allocations more generally). With that terminology under our belts, we include a brief description of a general high level workflow that you will likely follow or adapt while using XRAS to manage your allocations process. This workflow discussion points to sections later in this document to help you find the detailed instructions for each feature.

From here, we move into sections that proceed methodically through the various aspects of XRAS. First, we cover setting up and customizing XRAS to your needs and also how you can integrate XRAS with your local systems and services. Next, we’ll talk briefly about the XRAS Submit and Review components, paying particular attention to features of interest to allocation administrators. Finally, we’ll move into the XRAS Admin application, discussing the features accessible from the main navigation menu, the key functions of reviewing and processing requests, and finally the detailed settings and configuration options at your disposal.

Note that XRAS is under current development and some features may have been changed or added since the latest version of this guide was published. Subscribe to our XRAS clients admins mailing list for the latest features, monthly calls, or simply to exchange questions and answers with other XRAS users. To do so, contact [help@xsede.org](mailto:help@xsede.org).

## C. XRAS Architecture Overview

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XRAS was designed to be a flexible system that XSEDE could offer as a service to other research infrastructure providers to support their unique allocation process needs. Starting from a common understanding of the core needs of most allocations processes, XRAS built on XSEDE's prior allocation system, adapted the system to support separate clients, and turned many of XSEDE's idiosyncrasies into customization options for its base functionality.

The simplest way to think of XRAS is as three core components, each with a user interface and a backend application. The three components are Submit, Review, and Admin, and we refer to their user interfaces as Submit UI, Review UI, and Admin UI. All three components leverage a common underlying database schema, and they present three distinct views into your allocations activities.

The XRAS Submit UI communicates with the Submit backend via a RESTful API, a key technical feature that allows XRAS clients to build and deploy fully custom Submit UIs within their local administrative domains. If you don't have the time or staff skills to build your own Submit UI, XRAS can provide and host a default interface for your site.

Unlike Submit, the interfaces for Review and Admin are tightly coupled to the backend components. You will be using a distinct instance of the same Review and Admin interfaces used by all other XRAS clients, including the XSEDE team, and these are the interfaces we describe in this document.

You can further (optionally) integrate XRAS with your local site by leveraging two API capabilities. The Identity Service API connects XRAS with your local user database and lets your users, reviewers, and staff access XRAS with your local user accounts and authentication. (Or you can use XSEDE user accounts and authentication.) If your institution has a local accounting system, the Accounting Service API lets XRAS present local usage details within XRAS, based on information from your accounting system, and post allocation award information directly to your local management systems.

With that high-level introduction to XRAS and its architecture, we can now move on to helping you use XRAS to manage your allocations process.

## D. Core XRAS Concepts and Terms

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To effectively use XRAS, you must understand the six core concepts described in this section. The workflow assumptions built into XRAS are based on the concepts of Projects, Allocations, Requests, Roles, Transactions, and Opportunities. We define and describe them here since they affect the rest of this document.



## **D.1. Projects**

The concept of a Project is central to the value XRAS provides to your allocations process. A Project, assigned a unique identifier (in a format of your choosing), encompasses all the Requests, Allocations, Reviews, and Transactions spanning the history of a line of work supported by your institution's resources. Projects may be short and consist of a single Request (e.g., a Project to support a single training course or workshop) or long and encompassing many Requests (e.g., a Project spanning many years of research by the same lead investigator). The linkages provided by Projects let you easily see the history of a project and allow reviewers to look at prior Requests and reviews to see if progress has been made or if previous reviewers' concerns have been addressed in the latest submission.

## **D.2. Allocations**

It would be difficult to have any discussion about XRAS without defining "allocations." In casual conversation, the term allocation can refer to different concepts, so we must define it clearly for the purposes of this document.

In XRAS, an Allocation is defined as an amount of consumable units on (or approved access to) a specific resource for a defined time period bounded by start and end dates. XRAS allows you to track the amounts requested by users, recommended by reviewers, and awarded by your site for every allocation.

Significantly, XRAS does not allow Allocations for the same resource on the same Project to overlap in time. Such Allocations may be contiguous or have gaps, but they cannot overlap. The various transactions defined later in this section can be used to manage most scenarios without the need for overlapping allocations.

## **D.3. Requests**

The allocations process model embodied within XRAS revolves around the notion of Requests. A Request is a fully detailed submission to be reviewed and processed to initiate or re-initiate an allocation or set of allocations. In most cases, you can think of a Request in its non-technical sense: a person is asking for an Allocation or Allocations for their Project.

XRAS recognizes two types of allocation Requests: New and Renewal. A New request will cause a new Project to be created and indicates that there is no prior history to the proposed line of work. A Renewal can only be submitted for an existing Project. A Renewal typically requires the same or similar detail as a New request and is intended to create a fresh set of allocations (i.e., covering a new time period) that begin after the current or prior set of allocations associated with the Project. You can customize XRAS rules to define when New and Renewal requests are permissible.

## D.4. Allocation Management Actions

While the allocations awarded as the result of processing a New or Renewal Request are active, XRAS supports a range of transactions that can be used to manage or modify the active allocations for a project.

As an administrator, you can specify which Actions are permitted during your organization's resource allocations, when they happen, and which rules apply to each of them. If your process needs an Action that doesn't already exist in XRAS, you can request a new Action type by contacting the XRAS team via [help@xsede.org](mailto:help@xsede.org). XRAS currently supports seven defined transactions:

- **Extension.** An Extension will move the end date for all of a Project's current Allocations on active resources. No additional allocation amounts can be added as part of an Extension.
- **Supplement.** With a Supplement, a user can ask for additional allocation amounts to be added to all or some of their current allocations. A Supplement does not change the end dates for any allocation.
- **Appeal.** An Appeal is a special case of a Supplement that allows a user to contest the results of an Allocation decision, often by correcting a reviewers' misinterpretation or by providing missing details requested by the reviewer. XRAS allows you to define a window during which Appeals may be submitted (e.g., within 30 days of an award being made).
- **Transfer.** Within a given Project, a user can ask for allocated units to be moved from one resource to another. Typically, some amount is subtracted from one allocation and added to another allocation.
- **Advance.** Another special case of a Supplement, in which additional allocation amounts are sought immediately, in anticipation of a *future* allocation award. Typically, the approved Advance is added to a current allocation. Later, when the future allocation is made, it is reduced by all or some of the advanced amount.
- **Adjustment.** An Adjustment may be entered by admins to make changes to a Project's Allocations, for any reason, usually to accommodate unusual situations that may arise. Users cannot request Adjustments via the Submit UI.
- **Progress Report.** This transaction allows a user to submit a statement of progress on a Project. A Progress Report requires no processing and does not affect a Project's allocations.
- **Final Report.** This transaction allows a user to formally close out a project by attaching a final report without asking for any additional allocations. This allows you to capture outcomes from users who have completed a project but who are not planning to submit a Renewal request for that line of work.

XRAS allows you to [configure rules](#) to control if and when users are allowed to submit the different transactions. For example, you may not want to allow a transfer to be requested within

one week of a Project's current allocations ending. You can control if and when Actions are permitted based on the dates and the status of their original allocation Requests.

## D.5. Users and Roles

The persons involved with an allocation request play a key part in the process. XRAS has a number of roles for persons who can view and edit a request, as well as additional individuals whose names may be part of the request's data fields.

For the most part, XRAS is concerned with individuals insofar as they are assigned one of three specific roles associated with allocation requests. Once a person is added to a request in any of these roles, the request will be visible to (and modifiable by, per your rules) that person when they authenticate to XRAS Submit. Below, the role name used by XSEDE is presented first; alternate names are shown in parentheses. You can customize the visible role names using the XRAS Client Settings.

- **Principal Investigator, or PI (Project Lead)**. This individual has primary responsibility for the submission and ultimate use of any allocation awards. *A request must have one and only one PI.* Note that the PI on an allocation request need not be the PI on any supporting grant.
- **Allocation Manager (Project Admin)**. A request may have zero or more Allocation Managers; you can configure the maximum number of Allocation Managers allowed. Allocation Managers submit actions against that request.
- **Co-PI**. A request may have zero or more Co-PIs; you can configure the maximum number of Co-PIs allowed. Co-PIs on a request can submit transactions against that request. Within XRAS, Co-PIs and Allocation Managers are functionally the same; however, these roles may be used to designate different levels of policy or intellectual responsibility for allocated projects within your process or local systems.

Note that the person submitting an allocation request is automatically added as an Allocation Manager on that request. If the submitter removes themselves (or is removed by another person) from that role and is not given another role, they will no longer be able to view or edit the submission.

Besides the designated roles above, the following individuals can be associated with various request fields. However, these individuals will not be able to view or edit the request.

- **Supporting Grant PI**. The PI for each supporting grant is entered into free-text fields along with their email address. These fields can be used in XRAS email notifications about the request.
- **Program Officer**. The Program Officer for each supporting grant is entered into free-text fields, along with their email address. These fields can be used in XRAS email notifications about the request.
- **Collaborators**. A free-text Collaborators field allows submitters to enter any number of individuals who might be associated with the request in some way. This information is

visible to XRAS admins and reviewers and can be used for determining possible conflicts of interest, for example.

- **User.** XRAS allows a New or Renewal submission to indicate if other individuals should be given standard user accounts on allocated resources. The user information is passed to your site's local accounting system along with the allocation award information. These users cannot view, edit, or submit actions for the project in XRAS.

## D.6. Opportunities

The notion of Opportunity helps organize the XRAS workflow and can generally be thought of as “a chance to submit Requests of a certain type.” The types are defined by your allocations policies and entered into XRAS as part of your initial configuration. Each Opportunity requires an associated Panel to review the requests, although the Panel may be composed only of you and your allocations staff.

Opportunities come in two flavors: Terminating and Continuous. *Terminating opportunities* have fixed submission deadlines and are typically associated with larger-scale requests that are sent to a review panel and meeting. XRAS also supports multi-phase review processes involving more than one panel. *Continuous opportunities* allow users to submit requests at any time and incoming requests are typically reviewed and processed as they arrive, often with minimal review by your allocations staff.

## E. General XRAS Workflow

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Before we move on to describing XRAS in terms of the various menu options, tools, and configuration screens, we first describe how the system is designed to allow an allocation administrator to use XRAS to manage the requests submitted ahead of a deadline to be reviewed by a panel and posted to your site's internal resource management system. We keep this description at a high level; you should refer to the cross-referenced sections throughout for more detail on each part of the workflow.

This section assumes you have completed the [initial setup](#) (including allocation types and their supporting review processes), defined appropriate [notification templates](#), [created a panel](#) and added panel members, and implemented the API routes, if desired, to allow [integration with your local resource management system](#).

### E.1. Preparing for and Accepting Submissions

The first step in the general allocation workflow is to create the Opportunity to which users will submit their requests. You can do this by either creating a New Opportunity from scratch or by cloning an existing one. In XRAS Admin, select the Opportunity menu option, then “All Opportunities,” then select the green “New Opportunity” button. You will enter a name (which will be visible to users) and, for this example, select “Terminating” and an appropriate allocation type. You should have previously defined required fields and required/optional documents for this opportunity type using the Rules interfaces. You will also need to select a Primary Panel for

reviewing the request. See the [Opportunities section](#) for details on the various Opportunity data fields.

Starting on the Opportunity Announcement date (if used), information about the upcoming Opportunity, including the Submission Notes, will be visible to users in the XRAS Submit UI, but users will not yet be able to submit their requests. The Opportunity will also appear on the XRAS Admin Opportunity menu as an Open Opportunity at this time.

From the Submission begin date through the Submission end date, the Opportunity will be visible in the Submit UI and users will be able to enter their requests. During the grace period (if any), the Opportunity will be displayed as closed, but submissions will still be accepted. After the grace period, submissions will no longer be possible (unless, of course, you edit the Opportunity to extend the grace period).

During the submission window, you can help users troubleshoot problems or complete requests on a user's behalf by impersonating them in the [XRAS Submit UI](#). You can configure XRAS to send notifications to appropriate staff as submissions come in.

In most cases, you will check requests for correctness as they come in or soon after the submission deadline. You may find ineligible submissions, unusual allocation amounts being requested, or typographic errors in key fields (such as Program Officer email addresses). Most data entry errors can be corrected using the [edit capabilities in XRAS Admin](#). You can also upload documents to a user's submission on their behalf; you may find this helpful if you want to allow an exception to posted page limits or document size limits.

Once you have completed the correctness check of the Requests, you can now begin the panel review process.

## **E.2. Managing Review of Requests**

XRAS supports an extensive suite of features supporting comprehensive, multi-phase review processes; however, you can also implement a very minimalist review process, if that best matches your normal practice.

For a Terminating opportunity, you manage the review process from the [main page for that opportunity](#), which displays a sortable list of all submissions. For submissions to one or more Continuous opportunities, you will likely find the [XRAS Dashboard](#) a more convenient way of tracking incoming requests and management actions.

First, you will prepare the submissions for review. In addition to the administrative correctness check, XRAS allows you to [group requests into categories](#) you specify and [manage conflicts of interest](#) (COIs) between reviewers and requests. XRAS automatically catches some common COIs—such as a reviewer being one of the persons associated with the request or a reviewer being from the same institution as the request personnel—and you can also manually enter or remove COIs. Panel members can also [self-report a COI](#) during the review process.

To help you assign reviewers, XRAS provides an optional [request rating tool](#), through which reviewers can express their interest (or lack thereof) in reviewing a particular request.

Next, you will [assign reviewers](#) to each request. Here, you must work your way through each request in the Opportunity and assign reviewers. The XRAS review assignment interface helps you by identifying panel members with appropriate expertise, incorporating each panel member's rating input, and tracking how many assignments each panel member has been given within the requests submitted. XRAS will only [display the assignments in the Review UI](#) when you're ready.

Now, the reviewers complete their reviews. Through the Review UI, they can find their assignments, download documents for offline reading, and [submit their reviews](#) into a review template you define.

After you've given the panel the appropriate time to complete their reviews, you conduct the panel meeting. The XRAS Review UI can serve as a basic "agenda" that [sorts and displays the requests](#), or you can define and generate a custom report to manage the discussion. You can use XRAS to track the panel's consensus recommended amounts during the meeting (or enter these later). Note that XRAS allows you to record panel recommendations separately from the final awards. If your process requires it, you can also [enter or upload a consensus final review](#).

### **E.3. Finalizing and Processing Awards**

Following the panel meeting (or the end of your review phase, if you don't use a meeting), you use XRAS to finalize and process the awards.

For each request, you enter the final recommended (optional) and award amounts and add optional comments about the reason for the final awards, such as a [summary of the panel discussion](#). You can also [add global comments](#), such as a summary of the meeting as a whole, to be viewed by all submitters.

Before sending the notifications, you must [finalize and process each award](#). Depending on how you integrated XRAS with your local site, this may be as simple as saving the final award information, or you can have XRAS post each allocation award to your local accounting system. And if your site is an ORCID member, XRAS can also [post allocation awards to your users' ORCID profiles](#), if they've given you permission.

You will probably want to review the email notification templates for the Opportunity, making sure the default text is current and that the appropriate data fields are included. XRAS allows different templates for awarded versus rejected requests. Essentially, XRAS performs an Opportunity-wide "mail merge," allowing you to [tailor a unique message for each request](#). For example, you can have XRAS insert the anonymized reviewer comments into the notification email for each request. (Users can also view reviewer comments via the XRAS Submit UI.)

If you prefer all the email notifications to go out at once, XRAS provides a shortcut that will process (post) and send notifications for all the requests in the Opportunity at the same time.

With that, you are now ready to move onto the next Opportunity, unless your policies allow for an “Appeal” phase, supported by XRAS, in which users make their case for additional resources.

#### E.4. Continuous Requests and Transactions

Besides submission-deadline, panel-review types of Opportunities and requests, XRAS supports the ongoing requests for “management actions” after allocation awards have been made. During their allocation period for example, a user may want to ask for additional award amounts, that is, a supplement to their original award, or an extension to their project’s end date. Users can make these requests through the XRAS interface, and these requests can then be reviewed and awarded, to help you document the full range of allocation activities.

Finally, not all opportunities have a submission deadline or panel meeting. XRAS also supports continuous opportunities, which are always open for submissions. Submissions to a continuous opportunity are generally handled as they come in, perhaps by assigning reviewers (XRAS can automatically assign reviewers to such requests) or by internal-only review. The [XRAS Dashboard](#) helps you keep track of both the incoming management actions and continuous requests that are awaiting your attention.

We have now covered the range of XRAS functionality from a high-level perspective. The following sections provide greater detail for the XRAS specifics.

### F. Initial Setup & Customization

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To manage your resource allocation processes, there is a minimum set of data that XRAS needs to know. At the moment, you will need to provide some of this information to the XRAS team, but we are working to provide interfaces that will allow you to enter and edit these values. You will find most of these interfaces by selecting “[Client Settings](#)” under the XRAS gear menu.

#### F.1. Data Provided via the XRAS Team

The following data must be provided to the XRAS team to spin up your instance of XRAS. You can customize these aspects of XRAS for your site, or you may choose to use the values used by XSEDE.

- **Initial Allocation Administrator** (*required*). When first configuring XRAS, you must designate someone from your organization to be an Allocation Admin. Once that person has been given administrative access to XRAS Admin, they can grant admin access to others.
- **Allocations Process and Client information** (*required*). Your institution’s name; your preferred abbreviation for your institution; your institution’s logo; your institution’s contact help email. The abbreviation is displayed on the Submit, Review, and Admin interfaces and used in the default URLs (<https://orgAbbrev-submit.xras.xsede.org>, <https://orgAbbrev-review.xras.xsede.org>, <https://orgAbbrev-admin.xras.xsede.org>). Even if hosting your own submit interface, we will still create Review and Admin sites for you.

- **Action Types.** The [set of transactions](#) with which users make requests or manage their allocations. XRAS currently recognizes New and Renewal requests as well as Transfer, Extension, Supplement, Appeal, and Advance actions, as well as Progress Reports and Final Reports.
- **Review Form Fields.** You can define the template and field types (text area, calendar, etc.) that your reviewers need to complete when entering a review. You can customize the form per allocation type and action type. You will likely provide these details once you've customized XRAS with your allocation types and other details.
- **Fields of Science.** If your institution requires selecting a primary and, optionally, a secondary field of science when submitting a project allocation request, you can provide a custom list and their abbreviations.
- **Default resource reviewers.** You can configure XRAS to speed up the review process of an allocation request by defining default reviewers for requests asking for a given resource. If you are interested in this feature, please contact [help@xsede.org](mailto:help@xsede.org). After a final submission, designated resource default reviewers are automatically assigned to those submissions that requested those particular resources. These reviewers are notified by email when they receive assignments.

## F.2. Client Settings

The following settings can be customized to your site's preferences by you or another XRAS Admin. These features are available under the XRAS gear menu by selecting "Client Settings." Further customization can be managed via the [Rules interfaces](#).

### F.2.1. Request Number Format

You can customize the format that XRAS uses to generate project numbers for successive submissions. It must at a minimum include a number sequence field. The template may include letters, numbers, underscores '\_', dashes '-', and dynamic template fields enclosed by vertical bars '|'. Currently, XRAS allows dynamic prefixes based on the field of science value associated with a submission.

#### Available template fields

<b> N </b>	A number sequence incremented when the rest of the template has been used previously. This is the required field. Multiple Ns may be used to specify padding.  N  would give 1,2,3,4,...  NNNN  would give 0001,0002,...,0123, ... <i>If the year field is used, the number sequence restarts when the year changes.</i>
<b> YY  or  YYYY </b>	The year the request was submitted  YYYY  is the full four-digit year,  YY  is the last two digits.
<b> FOS </b>	The Field of Science abbreviation specified for the request. Only use FOS if Primary Field of Science is a required field for your requests.



## Examples of Request Number Templates

Template	Request number examples
ABC N	ABC1, ABC2, ABC3, ABC4, ...
ap YY  NNN	ap18001, ap18002, ... ap19001, ap19002
FOS  YY  NNNN	CHE180001, PHY180001, CHE180002, PHY190001, etc.

### F.2.2. ORCID Configuration

If your organization is an ORCID member, you can use XRAS to post allocation award information to your users' ORCID profiles.<sup>1</sup> Using this feature requires several settings to be managed. In addition, you must separately allow your users to link their local usernames at your site to their ORCID identifiers. At present, this must happen outside of XRAS. You must also send the ORCID tokens to XRAS via the [Identity Service API](#).

Here, under the Client Settings menu, you must enter information about your organization that is required by ORCID. The information must include a [GRID](#) or [RINGGOLD](#) identifier as well as basic geographic information.

Next, you must also use the Rules UI to "[Enable Public Request Pages](#)." You can only post to ORCID allocated projects that have a public page, which XRAS can provide.

Finally, you should also ensure that [your resources in XSEDE's Resource Description Repository](#) (RDR) have a public page or other persistent identifier associated with them.

### F.2.3. Allocation Types

The Allocation Types interface is where you define types of allocations or projects; these are typically described in your allocation policies. Using this interface, you can create a new allocation type by giving it a name, a description to help users understand the type of project you are offering, and the relative ordering for this type within the Submit UI. By default, XRAS makes this new allocation type available for creating new Opportunities immediately. You can inactivate allocation types and create new ones if your policies evolve over time.

Once you have created an allocation type, you must select it from the list of available allocation types and finish defining the rules, review phases, and associated resources.

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<sup>1</sup> See "[ORCID for Research Resources](#)" for details.

**Opportunities.** The first tab on the Allocation Type page lists all Opportunities of that type and lets you create a New Opportunity of that type.

**Rules.** For each allocation type, you can specify rules that XRAS can help enforce. Click on the relevant allocation type name to go to its page, then click on “Allocation Type Rules” tab to see what different rules you can establish. In general, XRAS will work with no additional rules, but you can use rules to more closely match your allocation policies and practices. For example, you can define which fields you would like to be required during the submission of an allocation request, or set page limits on required and optional documents.

**Review Phases.** XRAS has full support for multi-phase review processes. An allocation type will have one review phase by default; no further action is needed if your organization does not use multiple review phases. But if you have, for example, a Technical Review and a Scientific Review in your process, you can define a separate review phase for each. Each phase can have its own panel and review form template. When creating an Opportunity that has a multi-phase review, the details related to creating an Opportunity will change slightly to allow you to configure each review phase.

**Available Resources.** For each allocation type, you must specify which of your resources can be requested in opportunities of that type. At any time, you can check which resources are being offered as part of an allocation type/project opportunity by using the Available Resources tab on the Allocation Type page.

To associate resources with a given allocation type, you must configure those settings in the XSEDE Resource Description Repository (RDR). See the [RDR appendix](#) for instructions.

*IMPORTANT: The various interfaces for XRAS may behave unexpectedly if there are no resources associated with an allocation type.*

#### **F.2.4. Category Types**

XRAS allows you to manage requests submitted to an opportunity by assigning each request to a category. This optional feature is most useful for opportunities with large numbers of requests; for example, you might categorize requests as part of assigning them to different parallel review sessions. The Category Types interface allows you to create, edit, or inactivate the categories appropriate for your allocations process.

#### **F.2.5. Conflict Types**

XRAS provides a user interface to define conflicts of interest (COIs) types that a reviewer may have with a request. Once a request is submitted, XRAS can automatically identify COIs, based on request roles, institutions, and other factors, for panel members assigned to review that particular request. All conflict types that are defined may also be self-reported by reviewers through the XRAS Review UI.

## **F.2.6. Document Types**

You can customize the document types associated with your allocations policies and define which documents are required or optional for each allocation type. The XRAS interface allows the administrator to add and remove document types that can be assigned to various allocation types. The “Display Name” entered for the document will be shown in Submit, Review, and Admin components. (Set documents to be required or optional via the Rules interface for [Required/Optional Documents](#).)

## **F.2.7. Person Status Types**

When creating new users to be associated with an allocation request, a user’s status type (Graduate Student, Faculty, ...) can be selected. You can use these person status types in XRAS rules to define, for example, who is eligible to submit an allocation request. XRAS allows admins to create a comprehensive list of categories a user may fall under, such as “Faculty,” “University Research Staff,” and “Graduate Student.” These values should match those used in your local account management system and passed via the Identity Service endpoints to XRAS.

## **F.2.8. Request Role Types**

The different personnel roles associated with an allocation request. Examples include Principal Investigator (PI) or Project Lead, User, and Instrumentation PI. These are typically individuals who have responsibilities or privileges different from other individuals associated with the work. XRAS requires the “PI” role type, but you can customize the displayed name for that role.

## **F.2.9. Allocations Documentation**

You can specify an optional allocations policy documentation page that you would like to be visible to your allocation reviewers in the XRAS Review UI.

## **G. Site Integration Options**

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With XRAS, you can decide the degree to which you want to integrate XRAS with your local systems. With this flexibility, you can often deploy XRAS quickly and enhance its integration with your local systems over time.

### **G.1. “Stand-alone” XRAS**

In the simplest case, you can use XRAS in a “stand-alone” mode with essentially no integration with your site. In this mode, you can ask your users and reviewers to create XSEDE user accounts and use those accounts to log into the default Submit and Review UIs. This option may be advantageous for organizations that do not have a user account management system that supports their external users.

After submissions are reviewed and approved, you can manually copy award information into your local system from the XRAS Admin interface or from a report containing the necessary details.

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*IMPORTANT: If you choose to use XSEDE's Identity Service and user accounts, you will not be able to take advantage of XRAS ORCID integration features at this time.*

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## **G.2. Identity Service Integration**

To let your user community use the accounts and authentication methods from your site, you can integrate XRAS with your user identity service. In this case, XRAS needs to communicate with your database of user account information, which it does via an Identity Service API that you build and host. You provide your Identity Service API URL, to the XRAS team.

For documentation on the Identity Service API and its two endpoints, visit

<https://xras-identity-service.xsede.org/apidoc>

The data fields provided by the API have been selected to help your site's Admins and Reviewers disambiguate users that may have the same or similar names. Not all values are required, however, if you prefer to share less information.

XRAS currently supports several different authentication mechanisms: Kerberos, Radius, and Shibboleth. If your site has other authentication needs, please contact [help@xsede.org](mailto:help@xsede.org).

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*IMPORTANT: Transitioning from "stand-alone" XRAS, using XSEDE user accounts, to later using your own Identity Service may present challenges due to inconsistencies between the name spaces. Please contact us to discuss the pros and cons.*

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## **G.3. Accounting Service Integration**

If your site has a local Accounting Service to create projects and track usage, XRAS can integrate with that service to post award and action information. XRAS can also get usage data from your Accounting Service to display to your panels via the Review interface.

You must build and host a local Accounting Service API to support XRAS calls. To provide your Accounting Service API URL, please contact [help@xsede.org](mailto:help@xsede.org).

For documentation on the Accounting Service API and its endpoints, visit

<https://xras-accounting-service.xsede.org/apidoc>.

Please note that it is possible to build your API support over time. As long as the endpoints return valid responses, you can increase your integration with XRAS by adding these features over time. For example, the GET endpoints can return empty results, and the POST endpoints could simply email the raw JSON to your allocations team for manual entry.

The XRAS team will be developing a "default" Accounting Service API to help clients jumpstart the integration of their local accounting systems.

## G.4. Client-Hosted Submit UI

To integrate XRAS into your existing environment for user-facing services, you can deploy and host your own Submit UI. The Submit UI communicates with the XRAS backend via a Submit API, so you can build your custom Submit UI in any language or platform.

For documentation on the Submit API and its endpoints, visit <https://xras-submit-api.xsede.org>.

You can easily start your use of XRAS with the default Submit UI and later decide to deploy your own self-hosted, custom Submit UI. XSEDE and the XRAS team make the code for the default Submit UI available to help you get started in developing your own XRAS submission interface.

If hosting your own submit UI, we will need to work together to share an API key so that you can access the XRAS submit API.

If you want to host your own submit UI and have chosen to authenticate your users with XSEDE authentication, please be aware that XSEDE policies prevent hosts outside the xsede.org domain from directly asking for Kerberos passwords. In such a case, XSEDE offers a proxy service that you can use. And if you are using an xsede.org domain, a keytab for a service principal needs to be generated. For more information, contact [help@xsede.org](mailto:help@xsede.org).

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*IMPORTANT: Be sure to properly configure the web server for your Submit UI to allow sufficient sized payloads for expected document attachments!*

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## H. XRAS Submit

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If your organization is not hosting its own submission interface, XRAS provides a default Submit UI hosted at a URL typically of the form <https://client-submit.xras.xsede.org>, where “client” is replaced with an abbreviation for your entity.

### H.1. Guest Users

The Submit UI can be configured to allow guest users to submit requests. This can be useful if you tend to create local user accounts only after they have an approved allocation. If the user continues as a Guest, they will not be able to save partial submissions nor will they have access to previously submitted requests. (See also [Reconciling Guest Users](#).)

### H.2. Impersonating Users

As an Admin, you can impersonate a user in the XRAS Submit UI. This feature is useful for assisting users with their submissions. You must first log in as yourself, then click on your username at the top right of the page. Enter the username of the user you wish to impersonate and hit return. The impersonated username is now displayed at the top of the page. At this

point, you will see exactly what that user sees, including Opportunities to which the user can submit and their previously submitted allocation requests.

While impersonating a user, you can also complete actions on behalf of the user. You can submit actions (such as an Extension) related to a particular request; edit and submit an incomplete request; or view a summary of an approved request. While you can [edit some parts of a completed submission](#) directly from the XRAS Admin interface, you must use the Submit UI to finalize a submission.

To stop impersonating a user, click on their username at the top right of the page and select “Stop Impersonating.”

### H.3. Default Submit UI

A user can submit an allocation request by logging into XRAS Submit or by continuing as a Guest user.

**Start New Submission.** Once they have logged in, the user is presented with the “Start New Submission” panel, which shows the list of current open opportunities to which they can submit an allocation request. The user will also see any [Submission Notes](#) that have been entered for each visible Opportunity.

After selecting an Opportunity, the user is presented with the main submission form. If you are using the default XRAS Submit user interface, the required fields are indicated by a red asterisk near the field label or by the section header (Fields of Science, for example). You can define the required fields using the XRAS Admin [Rules interface](#). Required fields are enforced only when the user selects “Submit”; the user is presented with error messages indicating which fields need to be completed. The user can save a partial submission without completing all required fields.

**My Allocation Requests.** In addition to starting a new submission, the user can also select the “My Allocation Requests” tab, which displays their prior requests, including incomplete submissions. Users can also use this tab to see the anonymized reviewer comments for one of their requests.

Users submit other allocation actions (Extensions, Transfers, and so on) from this panel. You can control when different action types are permitted via Rules. For example, if your allocations process supports Extensions, you can restrict submission of an Extension action to be allowed only within 30 days of the current allocation period ending.

## I. XRAS Review

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All XRAS clients use a similar review interface. XRAS Review, typically found at URL similar to <https://client-review.xras.xsede.org/>, allows reviewers to view submissions and enter their

reviews. The site can also be used to support panel meetings by providing a sortable listing of submissions that can serve as an agenda.

The Help item in the top navigation bar provides detailed instructions to help reviewers with the various XRAS Review components. In this section, we summarize the features and highlight aspects of particular interest to Administrators.

### **I.1. Accessing XRAS Review**

XRAS Review is accessible only to persons you have made a member of one or more of your review panels.

*IMPORTANT: This applies even to Admins. Before they can log into XRAS Review, Admins must be [added to an active panel](#).*

### **I.2. Impersonating Reviewers**

A powerful aspect of XRAS is allowing an Admin to impersonate a reviewer in XRAS Review. By impersonating a reviewer, you can see that reviewer's assignments, submit a review (e.g., if the reviewer is unable to access the review site), or report a conflict of interest on behalf of a reviewer.

This feature works much like the user impersonation feature in XRAS Submit and is only available if the "[XRAS Review impersonator](#)" permission has been specifically granted in XRAS Admin. At the right of the top navigation bar, click on your Admin username and enter the username of the reviewer you wish to impersonate. To stop impersonating, click on the reviewer username at top right and select "Stop Impersonating."

### **I.3. Assignments**

Upon logging into XRAS Review, reviewers are presented with their list of current review assignments and status, if any. Clicking on a row in the assignments table takes you to the review page for that submission.

If you are using XRAS's multi-phase review capability, the Assignments table will show the review phase associated with each assignment.

### **I.4. Opportunities**

The Opportunities menu allows the reviewer to select a current or recent Opportunity (within the last six months). Selecting an Opportunity takes you to a page with the list of submissions and meeting information, including associated documents, if any. Click on the provided PDF link to download a document. You can enter the meeting information and upload documents in the [Edit Opportunity interface](#).

The list of submissions has been designed to serve as a basic agenda for a review panel meeting. The list can be sorted by clicking on the table headers and filtered by using the fields in

the second row. Sort and filter options remain in effect if you click away from and later return to the table. Clicking anywhere in any other row will take you to the summary and review page for that submission. In the COIs column, hovering over a number will pop up a list of the reviewers who have a COI with that request.

XRAS uses color and text cues to indicate special situations for each reviewer:

- Purple shading and “(A)” in the Last Name column indicates the reviewer is assigned to a submission.
- Gray shading and “(C)” in the Last Name column indicate that the reviewer has a conflict of interest (COI) with the submission. XRAS does not allow a reviewer to click through to such submissions.

## **I.5. Rate Requests**

The Rate Requests feature in XRAS allows reviewers to express their level of interest in rating the submissions for a given opportunity. You can control this optional feature on the [Create/Edit Opportunity screen](#).

Reviewers are presented with basic information about each request and allowed to select from a menu of options ranging from “Do not give it to me” to “Very interested in reviewing.” These preference ratings are visible to Admins via the [Assign Reviewers interface](#).

If you are using multi-phase reviews, the Rate Requests listing will indicate for which phase a reviewer is rating their interests in reviewing allocations requests.

## **I.6. Your Review Documentation**

You can configure XRAS Review to display a link to guidance for reviewers specific to your site’s allocations process, for example, your review criteria, rubrics, or policies. You can provide this link in the [Client Settings](#).

## **I.7. Entering Reviews and Viewing Requests**

The most detailed portion of XRAS Review is the set of information available for each request, including the form for entering reviews. Clicking on any submission in the list of requests for an Opportunity or from your list of review assignments will take you to the Review/View page for that request. All panel members without a conflict of interest can view this page; if a panel member is assigned to review the submission, they will also see the review entry form below the Summary.

The Request information page has a number of tabs that provide additional information, particularly if you have configured XRAS to [integrate with your site’s local accounting service](#). The “XRAS Help” page describes the information displayed under each of the tabs.



## I.8. Seeing Others' Reviews

In XRAS, an assigned reviewer is able to see reviews by other panel members only *after* they have entered their own review. However, a reviewer may continue to edit their review as long as the Opportunity or submission remains "Under Review." Panel members not assigned to review a submission can always see the reviews.

## I.9. Report COI

The Report COI tab lets a reviewer report a conflict of interest (COI) with a particular submission. While XRAS tries to automatically identify several common COIs, a reviewer may discover that they have a less common conflict type only after seeing the request details. Conflicts of interest are typically defined in the policies for your allocation process.

From the Review/View page for a submission, a reviewer can select the "Report COI" tab, select the type of COI and provide a comment, then click the Submit COI button.

When a COI is reported, XRAS records the COI, clears the reviewer's assignment (if applicable), and sends the reviewer back to their home Assignments screen. You can also configure XRAS to [send an email notification](#) to your Admin(s) that a COI was reported and review assignment was removed.

## J. XRAS Admin

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All XRAS clients use a similar administrative interface. XRAS Admin, typically found at a URL similar to <https://client-admin.xras.xsede.org/>, allows administrators to manage the panel review process, make allocation awards, extract reports from XRAS, and configure XRAS features.

In this section, we summarize the menu options and features on the main XRAS Admin page. We discuss how these options and features can be woven together to support your allocations process in the "[General XRAS Workflow](#)" section.

### J.1. Opportunities

You need to set up at least one Opportunity to allow your user community to submit allocation requests. And to create an Opportunity, you must have already defined at least one [Allocation Type](#). If you are elsewhere in the XRAS Admin application, you can click on the "Opportunities" option in the top menu and then select "All Opportunities."

#### J.1.1. Create New Opportunity

To create a new opportunity, click on the green "New Opportunity" button at the upper right of the main Opportunities page. You will be directed to the "New Opportunity" form, with the fields you need to fill in to set up an opportunity.

If you create an Opportunity for an Allocation Type that has multiple review phases, the form changes slightly to allow you to configure each review phase.

- **Opportunity Name** (*required*). This is the user- and reviewer-visible name for the opportunity that will appear in the Submit and Review interfaces.
- **Opportunity Type** (*required*). “Terminating” opportunities are those that have a set schedule, notably a submission deadline and often a review panel meeting. “Continuous” opportunities allow users to submit requests any time; typically you process such requests as they come in. You can set a Continuous opportunity to close by entering an end date.
- **Allocation Type** (*required*). Select one of the Allocation Types you defined during your initial setup of XRAS; typically these types are defined in your allocation policies.
- **By invitation only** (*optional*). You can limit which users can submit to the opportunity by making it invitation only. Use “[Manage Invitations to Opportunities](#)” under the Rules list to add to the list of users who can submit to an invitation-only opportunity.
- **Default allocation award period** (*optional*). Enter a number of months. This will set the default time period for allocation awards in this opportunity. You can still edit the end dates when you process requests.
- **Announcement date** (*optional*). The date the Opportunity will appear in the Submit interface as a future opportunity. Submissions will not be permitted, but the Submission Notes will be displayed.
- **Submission begin date** (*required*). The date on which users can begin to submit requests. This value is required for both Terminating and Continuous opportunities.
- **Submission end date** (*required for Terminating opportunities*). The submission deadline for the opportunity—i.e., the last calendar day that the opportunity will officially accept request submissions. *Important: Dates end at midnight U.S. Central Time (GMT-6).* To avoid cutting off submissions before midnight your local time, you may want to set the Grace Period to 1.
- **Grace period** (*optional*). The number of days after the submission end date during which submission requests will be accepted. The Opportunity will show as closed on the Submit interface, but will still allow submissions during the grace period.
- **Award date** (*optional*). The default start date for allocation awards made within this opportunity. XRAS pre-populates the award information with this date, but you can still edit the award start dates when you process individual requests.
- **Location** (*optional*). The location of the panel meeting (if any) associated with the Opportunity.
- **Submission notes** (*optional*). The text entered here will be displayed for users in the default Submit interface next to the button to begin a submission to this opportunity. You can, for example, remind users about changes to the available resources.
- **Admin comments** (*optional*). Typically entered after a panel meeting, Admin comments can be included in notification emails for allocation awards. These comments are visible to and should apply to all submissions in the Opportunity. You can enter comments specific to a given request when you process each request.
- **Primary review panel** (*required*). Select an existing review panel to be the primary review panel for the Opportunity. The members of this panel will be visible in the review assignment tool.

- **Additional Review panels** (*optional*). You can associate other review panels with this Opportunity. The members of these panels will also be visible in the review assignment tool. You can use this feature to help organize panels with many members or perhaps manage a set of part-time or external reviewers. You can add additional panels after the Opportunity has been created.
- **Reviews due by date** (*optional*). The date by which reviews need to be completed for this opportunity. This date is displayed in the Review interface.
- **Review date** (*optional*). Typically, you would enter the date of a panel meeting (if any) in this field. This date is also shown in the Review interface.
- **Opportunity or phase controls** (*optional*). These toggles are used to control the workflow of the allocation review process. They are described in detail in the next section.

### J.1.2. Opportunity and Phase Controls

The Opportunity (or Phase) Controls that can be set on the New/Edit opportunity form are key controls for managing the basic XRAS workflow. For an opportunity with multiple review phases, a separate set of “Phase Controls” will apply to each phase, with effects as described here but limited to a particular phase.

- **Show Proposal Rating Tool.** Checking this box will make the requests from this Opportunity visible to the review panels via the [“Rate Requests”](#) tool in XRAS Review. You are not required to use this tool in your process. Uncheck this box to remove this Opportunity’s requests from the Rate Requests tool.
- **Show Reviewer Assignments.** Checking this box will tell XRAS to present review assignments from this opportunity to panel members when they log into XRAS Review. For a Continuous opportunity, you will typically check this box when creating the opportunity. For a Terminating opportunity, you will typically check this box only after you have finished making review assignments for all of the submitted requests.
- **Display Anonymized Reviews.** Checking this box will allow XRAS to present users with anonymized review comments via the XRAS Submit UI and to include reviews in email notifications. For a Continuous opportunity, you will typically check this box when creating the opportunity. For a Terminating opportunity, you will typically check this box only after you have finished processing all of the submitted requests.

### J.1.3. Opportunity Information and Processing

From the full list of Opportunities, click on the Opportunity name to be taken to the primary working page for that Opportunity. You will find a set of tabs to view Opportunity details and manage the submissions.

#### J.1.3.1. Summary and Edit

The Summary tab displays the Opportunity data fields and panel information. You can edit most Opportunity fields after an Opportunity has been created. This may be useful to extend a

submission deadline, for example. Editing an Opportunity is also the way to manage your workflow, by checking and unchecking the Opportunity (or Phase) Controls.

At the upper right of the page, choose the “Edit” button to make changes. You will be taken to a page with the heading, “Editing <name of the opportunity being edited>”. All of the Opportunity fields are editable with one exception: If requests have been submitted to this Opportunity, you can no longer edit the Allocation Type. See “[Create a new opportunity](#)” for detailed field definitions.

Instead of creating every opportunity from scratch, XRAS lets you create a new Opportunity by “cloning” (duplicating) an existing Opportunity. You may find this useful to create opportunities of the same type that happen on a schedule. From the list of all opportunities, select the Opportunity that you want to clone, and you will be taken to the Opportunity details. At the upper right, select the green “Clone” button. You will be directed to the “New Opportunity” page, and the form will be pre-populated with data from the original opportunity. At this point, you can edit any of the fields to reflect the new opportunity you are creating. Click on “Create opportunity” to save and create the new opportunity. Click on “Cancel” to cancel the clone operation and return to the page listing all opportunities.

When cloning an Opportunity, only the details pertaining to the original Opportunity are copied over and a new Opportunity is created with no requests. All submissions remain associated with the original Opportunity.

#### *J.1.3.2. Submissions*

The Submissions tab is where you will find all the submissions to date, divided into sub-tabs for completed and incomplete (partial) submissions. The sub-tabs show the number of entries of each kind.

The listing of completed submissions is provided as a sortable table—click on a column heading to sort the list in ascending or descending order. The Categorize Requests button at the upper right will let you apply optional custom categories to the requests. In the table, the following fields are shown:

- **Submitted on.** When the submission was finalized.
- **Status.** One of Submitted, Under Review, Approved, or Rejected.
- **Categories.** This column only appears if you have added category information to at least one request. You can sort requests according to your custom-defined categories.
- **Reviews completed.** This column displays two numbers, “*a / b*,” where *a* is the number of reviews completed and *b* is the number of reviews assigned. Sorting for this column is based on the percentage of reviews completed, with the case of “0 / 0” defined to be zero so you can easily find requests that have not had any assignments made. *Hovering your cursor over this info will display a pop-up with a summary of the submitted reviews.*
- **PI.** The name and institution of the person in the lead role on the submission. The column heading may vary depending on the name you give to the lead role on a submission.

- **Number.** The submission number and type (usually New or Renewal).
- **Title.** The title of the request, along with three key shortcut links for managing the request:
  - *View request*—Takes you to the main page for the request information.
  - *Assign reviews*—Takes you directly to the screen for assigning reviewers.
  - *Process request*—Takes you directly to the screen for finalizing the award information for the request.

The Incomplete Requests sub-tab is provided to avoid cluttering the list of completed submissions and to help you identify any partial submissions that may require you to contact the submitter.

#### *J.1.3.3. Process Opportunity*

This option is only available to you if your organization has an accounting service implemented.

When working with terminating opportunities, XRAS allows administrators to process ALL Approved and Rejected Requests in an Opportunity by using the “Process Opportunity” tab.

The “Initiate and Send Notifications” button will create projects and user accounts on approved allocation requests. For those allocation requests that were rejected, this button will only send out Email notifications to the personnel related to those requests. XRAS will also post allocation awards to users’ ORCID profiles at this time if you are using this feature.

Clicking on the “Refresh” button will refresh the page and show any errors that may have occurred when contacting your accounting service or when sending notifications.

#### *J.1.3.4. Available Resource Numbers*

You can record the available amounts of allocation units that can be distributed at an opportunity. Entering available resource units is **optional**. As an admin, you can enter these data for reports and to help maintain a record of your allocation process and how much you targeted for allocation.

Selecting the tab labeled “Available Resource Numbers” takes you to a page that lists all resources associated with this Opportunity, grouped by type.

Each listed resource shows the following information: Resource Name, Units used to allocate the resource, a link to the history of amounts for this resource for Opportunities of the same type, and the resource status. You can fill in a value for the number of allocable units for each resource and a begin date, i.e., the date when the resource will become available for use in this opportunity. The state that the resource is in can be any one of the following: Pre-production, Unavailable, Post Production, Production, Decommissioned. Resource status is set in XSEDE’s [Resource Description Repository](#).

Click on the “Save Opportunity Resource Numbers” button to save information; you will be redirected to the opportunity details page. If you wish to edit or remove any saved values, you

can click the “Available Resource Numbers” tab, and use the “remove” checkbox next to the saved resource value. Click on “Save Opportunity Resource Numbers” again to record changes.

#### *J.1.3.5. Submission Questions*

Under this tab, you can add custom questions to be asked when submitting a request to this Opportunity. The Submit UI your organization uses must support the display of these custom questions, if you want to use them.

Follow the provided link to add one or more custom questions for the relevant opportunity on the “Add Opportunity Question” page. You’ll be able to enter text for the question, choose the type of answer you would like the submitter to use: text field, calendar, selection list, radio buttons, etc., and the order in which these questions will appear on the submit UI.

#### *J.1.3.6. Recent Deleted Requests*

This tab lists all deleted Requests associated with this Opportunity, with buttons to undelete each such Request. Once you do so, the Request will be viewable to work with again in the list of Requests for an opportunity, dashboard, or any other feature in Admin. This allows you to help a user recover a submission that they accidentally deleted.

## **J.2. Panels**

Within XRAS, a “panel” is a group of individuals that can be assigned to review allocation requests. Admins can create any number of panels in XRAS to discuss and review different types of allocation requests. The Panel menu option in the top navigation bar displays a list of active and inactive panels for your organization.

To create a new panel, an admin clicks on the green “New Panel” button on the Panels page. Panel name, abbreviation, type and description fields need to be entered for the new Panel.

After selecting an existing Panel, you can edit its details by clicking the “Edit Panel” button. On the Edit Panel screen you can also “retire” (i.e., inactivate) a panel so that it cannot be associated with new opportunities.

Once a Panel is created, members can be added by clicking the Panel name. Search for a user by typing their first, last or user names, and select the one you would like to add. *Note that a user must already have an account in your Identity Service to be added as a Panel member.* A start date needs to be provided; the end date and fields of science are optional. Entering at least a primary field of science is highly recommended, because XRAS uses this information to help you match panel members to requests for making review assignments. On this page, admins can also indicate if the newly added member is a Panel leader or not; currently, there are no special features available to Panel leaders.

Panel members are considered active if their end date is not set or is in the future; you can also immediately inactivate a panel member by selecting the inactivate button for that individual in the panel listing.

Admins can modify a panel member's begin and end dates, whether they are the panel leader or not, and their fields of expertise by clicking on the name of the member and editing the desired fields on the "Editing Panel Member" screen. To add a new field of science, you can start typing the field of science name that you would like to add and choose it from the list provided. To remove fields of science or expertise related to a panel member, use the "remove" button near the field of science.

### J.3. Requests (Search)

The Requests menu option allows you to search for requests according to a number of criteria. You can use this form to search for Requests associated with a specific person, with a specific resource, or of a specific type. For example, you might search for Incomplete Renewal requests from Dr. Smith where Resource Z was part of the submission. The search results will appear below the form.

You might use this "power search" when you are answering questions for a user to avoid having to hunt through the list of opportunities and find the submission being discussed.

### J.4. Reports

XRAS provides a set of database reports for your convenience. Admins can display the list of current reports using the "Reports" top navigation bar option.

The following reports are some of those that XRAS supports; other existing reports can be added to your reports page upon request. Additional reports can be requested via XSEDE Help Desk at [help@xsede.org](mailto:help@xsede.org). Most reports can be displayed on screen or downloaded in either CSV or Microsoft Excel format.

- **Meeting Booklet.** Useful for face-to-face meetings with your reviewers. It generates a PDF with all submitted and under review allocation requests, or proposals for an opportunity. The downloaded zip file also contains Excel files for an index and reviewer/proposal matrix.
- **Meeting Summary Report.** Generates a report with the total amounts for all resources for relevant opportunity: requested, suggested by reviewers, and approved. It also includes information on supporting grants: total funding, NSF funding, and other non-NSF funding amounts.
- **Request List Report.** This report lists all the submitted requests' metadata for a particular opportunity.
- **Resource Summary Request Report.** Generates counts and sums of requested and approved for each resource for a given opportunity.
- **Reviewer-Request Matrix Report.** This report provides a matrix of requests and reviewers indicating which reviewers are assigned to or have a conflict of interest with each submission.

## J.5. People and Project Search

The search box at the top of the XRAS Admin UI lets you search for users and projects from a single field. Simply enter a username, user's name, or request number (or some portion of any of these) in the provided search bar. Depending on the search results, XRAS will either show you lists of possible user or project matches from which you can make a selection, or take you directly to the main information page for the unique request or person that was found.

To search for Projects or Requests by criteria other than request number, use the more powerful Requests search form.

## J.6. Managing XRAS Users

After your search finds a unique person or you select an individual from the list returned by a search, XRAS will take you to a page with basic information on this user, including name, organization, position, and username. The data available depends on what your Identity Service API returns.

This person page includes the following tabs:

- **Permissions.** This tab offers different checkboxes that can be used to grant permission to use XRAS Admin.
  - *Administrator.* Grant administrator permission to this user to use XRAS Admin with all its capabilities, no restrictions.
  - *XRAS Review impersonator.* Grant review impersonating permission to this user so that when using XRAS Review, this user can impersonate another reviewer.
  - *XRAS Admin read permission.* Grant XRAS Admin read-only permission to this user: request editing and the gear menu are disabled for read-only admins.
- **Request Roles.** This tab lists all the Requests with which this user is associated as PI, co-PI, Allocation Manager, or Submitter.
- **Fields of Expertise.** This tab shows the primary and secondary fields of science associated with the user, if they have been added as a member of a Panel.
- **Active Panels.** This tab lists all the active panels on which this user is serving.
- **Conflicts of interest.** This tab lists all the requests with which this user has a conflict of interest.
- **Recent reviews.** This tab shows the recent reviews submitted by this user, if this user happens to be a reviewer.

## K. Processing Requests and Actions

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Processing requests and actions are the steps available to an Administrator to turn a Request or requested action into an approved Project or transaction and communicate the Project information to your local accounting system.



*IMPORTANT: This section is currently documented according to an ongoing re-arrangement of existing tabs and options. The actual as-implemented interface may be slightly different.*

## **K.1. Processing Requests**

After a user submits a New or Renewal request to begin or continue a project, respectively, and after the request has been reviewed (per your site's practice), an Admin must "process" the action to approve the allocations or reject the request. Processing an action is central to the XRAS workflow, and we will walk you carefully through these pages.

To process a request you must first get to the Request page. You can do this by selecting a New or Renewal request from the Dashboard, from the list of submissions to an Opportunity, or using the Requests search options from the top Admin menu.

### **K.1.1. Summary and Edit**

The Summary tab for a request displays most of the data fields from the submission form in collapsible sections; click where directed to expand/collapse the sections. Besides viewing these data, you can also edit many of the data fields directly. Fields that can be edited are underlined and blue. You may do this, for example, to correct data entry errors.

Other fields that require more than simple text editing can often be changed by selecting the appropriate button or "Edit" link. The Request Number and Fields of Science have Edit links to the editing forms, and the following sections of the submission have buttons to make changes.

- **Change PI.** The Change PI button (right of the PI section) allows you to change the PI for the request. If you have renamed the PI role, the name of this button will also change.
- **Add Request Personnel.** This button (right of the Personnel section) allows you to add additional non-PI persons to the request. In the pop-up window, type the username in the search box and select the user from the results. Then select the Role and appropriate dates.
- **Edit Requested Resources.** This button (right of the Resources section) allows you to edit the requested resource amounts. This may prove useful to correct data entry errors, for example, if the user used the wrong units for the number entered leading to values that are orders of magnitude wrong.
- **Add Supporting Grant.** This button allows you to add a Supporting Grant to the submission. The individual fields of an existing Supporting Grant can be edited inline.

**NOTE:** When editing the Request Number, you will be presented with two related options: **Move Request** and **Edit Request Number**. If you Move the Request to a different number, the request will become associated with the other Project as an additional request. You cannot Move a request to a non-existent Project number. Editing the Request number will only change the number for this request. XRAS will not allow you to change a request number to one that is already in use.

### K.1.2. Assign Reviewers

The Assign Reviewers tab is where, obviously, you can assign reviewers to the Request as well as see any Conflicts of Interest. If you are using a multi-phase review, there will be separate sub-tabs to assign reviewers for each phase.

The list of reviewers has information designed to help you efficiently assign reviews, even with a large number of requests. The listing can be sorted by clicking on the column headings; hold down the Shift key to sort by more than one column.

- **Checkbox** (*unlabeled*). Select the checkbox for a panel member to assign them to review the request.
- **Score**. The higher this value, the better fit this reviewer is for the request. The score incorporates the panel member's [preference rating](#), if used, whether the requests primary and secondary fields of science match the reviewer's primary and secondary fields of expertise, whether the reviewer has previously reviewed earlier submissions with this request number, and how many assignments this reviewer already has for this opportunity.
- **Reviewer Name**. The panel member's name and institution.
- **Panel Membership**. Displays the panel of which the person is a member. This is most relevant when you have more than one panel associated with the opportunity.
- **Assignments**. This column displays the number of review assignments for this panel member across all requests in the opportunity. This value helps you balance the workload for the opportunity across the entire panel.
- **Reviewer Rating**. If the panel member has used the Rate Requests tool to express a preference for this request, that value is displayed here.
- **Previously Reviewed**. For Renewal requests, XRAS will display whether this panel member was assigned to review an earlier request for the same project.
- **Field of Science Matches**. For the sub-columns, "p" means "primary," and "s" means secondary. The first letter is for the request, and the second is for the panel member. Thus, "p-p" is checked when the request's primary field of science matches the panel member's primary field of science; "p-s" is checked when the request's primary field of science matches the panel member's secondary field of science; and so on.
- **Conflict**. The orange conflict button expands to a list of the Conflict Types you have configured in XRAS. You can declare a Conflict of Interest between the panel member and the request by selecting the appropriate conflict type.

You can configure XRAS to send notifications to reviewers when they are assigned to review a request, which may prove useful for Continuous opportunities, when assignments happen outside of a scheduled review cycle.

You can also configure XRAS to send *you* a notification when reviews have been completed. You can continue with the workflow after all, some, or no reviews have been completed, as appropriate for your site's practices for different allocation types.

### **K.1.3. Reviews**

As the name implies, the Reviews tab displays the reviews from all assigned reviewers, if submitted. A numeric indicator shows the number of reviews assigned, if any.

**Enter Final Review.** If your process includes a collective, final review synthesizing all the reviewers comments and any panel discussion, for example, that final review can be entered here. You can also upload a PDF document for the Final Review. The Final Review will be displayed as part of the Review Comments via the Submit UI and it can be incorporated into notification templates as well. If you are using a multi-phase review, you can enter or upload a Final Review for each phase.

### **K.1.4. Process (Requests)**

After your review phase(s) are completed, the Process tab is where you finalize the outcomes of the review. You will spend a lot of time on this screen, so we cover the options in some detail.

**Request Workflow.** The first section of the page lets you manage the workflow for this request. The status of a request being processed will normally be Under Review or, in a case where you don't make formal review assignments, Submitted. *Before you use this section, you will want to fill in the award information in the section below.* Once you have finalized the allocation award information and added any comments, you have two choices: "Save & Approve" or "Save & Reject."

By clicking on "Save & Approve," the allocation award information will be saved, the Status will change to Approved, and you will be provided a new button(s) for posting the award. The precise buttons and button labels depend on whether (a) you have integrated XRAS with your local accounting system and (b) this request is eligible for posting to the ORCID service or not. In the most common case, the "Post Award" button will post the award to your local accounting system. If you have not connected XRAS with your local accounting system, you will not see the Post Award button.

After saving and posting, you will be presented with a button to [send notifications](#) associated with the award.

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**IMPORTANT.** *For a Terminating opportunity, you also have the option to initiate the post and notification actions for all requests at the same time. This may be useful if you want to send notifications to all submitters simultaneously. See "[Process Opportunity](#)" in the Opportunity section.*

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By clicking on “Save & Reject,” the Status will change to “Rejected,” and the request workflow bypasses the posting options, and you will be presented with the button to send a notification that the request has been rejected.

Before you post the award, you do have a chance to change your mind or edit the allocation award information. The status button will read “Save & Reset Approve/Reject.” This button will save the allocations award information and reset the Status to “Under Review.”

*Repost to Accounting Service.* After posting an award, you will get the option to re-post the award information. If the original post returns errors, you can use this option after you edit the request to fix the errors. *If the original post was successful, you can still repost the award. In this case, your local accounting service is responsible for handling the duplicate post.*

**Allocation Awards.** You will normally start processing a request in this section by filling in the allocation dates and amounts that have been approved. For allocation dates, XRAS will fill in default begin and end dates based on the Opportunity’s stated Award Start date and Default allocation length, if provided.

For resource allocations, XRAS displays the amounts requested and allows you to enter both the amounts Recommended by the panel and the final approved amounts. Completing the Recommended values is optional; you may find this useful to track panel recommendations if you have a post-review process that makes changes to those recommended amounts.

XRAS provides two shortcut buttons to help you here. “Fill Award with Requested” copies the Requested amounts to the Approved fields; that is, the request has been awarded in full. If you have filled in the Recommended amounts, you can also “Fill Award with Recommended,” if there were no changes to the amounts recommended by the panel.

The Save button lets you save your data entry in this section and return later to finish processing the request.

**Admin Comments.** Here you can record comments, such as a summary of the in-person discussion of the request, about why the request received these outcomes. These comments will be visible to the PI, along with the reviewers’ comments, when they return to the Submit UI. The Admin Comments can also be included in email notifications.

#### *K.1.4.1. Notifications and Accounting Service Posts*

XRAS logs information about posts made to your accounting service and any notifications sent about the Request. You can view these details within the Process tab.

**Notifications.** In some cases, you may need to resend one of the notifications already sent by XRAS. This may happen, for example, if the submission had a bad email address. Once you correct the email address in the submission, you can use this screen to resend a notification associated with the request. Here you will see the previously sent notifications, and you can use

the simple form to resend the notification for a particular event to specific recipient(s). That is, you won't have to resend the email to persons who already received it successfully.

**Accounting Service Posts.** For troubleshooting purposes, you can view the responses from post actions to your local accounting service here. These messages will tell you if the post was successful or show the error message returned.

### **K.1.5. Users**

As a courtesy to Request submitters, XRAS allows the submitter to add users who should be given access to any allocations awarded. These additional users are listed under the Users tab. These users are passed along to your accounting system, but otherwise they have no ability to manage the Project. (By contrast, Co-PIs and Allocation Managers will see the Request when they log into the Submit UI.)

### **K.1.6. Documents**

This tab shows all documents associated with the Request *and any subsequent actions*, such as Supplements, associated with that request. At the upper right, the "Add a document" button allows you to upload a document and associate it with the Request or one of its subsequent actions. This feature may prove useful if, for example, you want to attach a document that exceeds the page limits enforced by the Submit UI. Admins can also upload documents while the Request is under review and not editable by the submitter.

### **K.1.7. Publications**

Through the Submit UI, it is possible for you to allow submissions to be linked to Publications that users have contributed to a separate publications database, perhaps as part of their user profiles at your site. If any Publications have been added to the submission, they are displayed here.

This advanced feature is not part of the default Submit UI, but is used by XSEDE in their custom submission interface.

### **K.1.8. History and Usage**

If you have integrated XRAS with your local accounting system, this tab will show any resource usage associated with this Request or any prior Requests from the same Project. The display will also show the transaction history for each prior Request. And if the Project had any prior Requests, you can also navigate to those earlier submissions from this tab.

### **K.1.9. Actions**

The Actions tab shows summary status information for this Request and any subsequent management actions linked to this request. You can navigate to the various management actions from this listing.

The drop-down menu at the left of each row lets you change elements of the Request that you should rarely have to change. In general, these options should always be used with caution. Depending on the status of the request, some of these options may not always be visible.

**Change Action Type.** With this option you can convert a Renewal submission to a New submission (generating a new request number), or convert a New submission to a Renewal for an existing request number.

**Edit Request Status.** With this option, you can change the status of a request. You might for example, change a request from Submitted to Incomplete, or from Under Review to Submitted. Such changes will affect what the user sees in the Submit UI and the workflow for that request. For example, changing a request from Under Review to Submitted will remove that request from the list of requests displayed in the Review UI.

## K.2. Processing Actions

Because allocation management actions can be submitted at any time, XRAS provides several ways to make you aware of these requests as they come in. You can configure XRAS to send you or your team an email Notification that an action has been submitted. And the XRAS Dashboard under the Settings menu also shows submitted actions that may require your attention, along with requests submitted to Continuous opportunities.

How you process an action depends on your allocation policies. You can assign reviewers and seek reviewer input, or bypass the review step and process the action directly. The XRAS Dashboard provides links that take you directly to the screens for assigning reviewers or processing the action.

Alternatively, you can see the submitted actions associated with a Request by selecting the Actions tab for the primary Request. Click on the Action type to go to the page for reviewing and processing the Action. Each Action may also have a drop-down menu at left to make some less common changes, including:

- **Change Action Type.** If the user submitted a request for the wrong allocation management action—for example, they submitted a supplement when they should have submitted a transfer request—XRAS allows you to modify the action type, in some circumstances. Use this menu option to correct the action type.
- **Change Status.** To manually control the workflow for an action, XRAS allows you to edit the action status directly. *Use this feature with caution!* You mark a request incomplete if the request is blocking the user from submitting another action (e.g., due to your rules configuration), or change the status from Under Review to Submitted, so the user can correct errors in their submission. This option is not available after the action has been awarded or rejected.
- **Edit Requested Resources.** To correct data entry errors in the submitted action, you can use this menu option to edit the amounts requested by the user. For example, if the user entered gigabytes instead of terabytes, or entered 10 as shorthand for 10 million,

you can correct those values. This option is not available after the action has been awarded or rejected.

- **Enter Final Review.** A consensus or final review can be entered for a particular Action. If this action is associated with an opportunity that supports multiple review phases, a final review can be entered in the system for each of the phases.

**NOTE:** As part of handling an Action, you can attach documents to or remove documents from that Action via the Admin UI (e.g., if the user forgot to include an optional document or has been requested to provide a revised document). To do so, you must return to the main summary page for the encompassing Request, select the Documents tab, then click on Add a Document (at lower right). The Add a Document form lets you select what type of document to add and whether to attach it to the Request or one of the associated Actions.

### **K.2.1. Summary**

The Summary tab for an Action includes details about the encompassing Request that may be valuable in your handling of the Action. Information submitted as part of the Action itself is also displayed.

### **K.2.2. Assign Reviewers**

XRAS allows you to assign reviewers to an Action using the same interface that you use for assigning reviewers to a New or Renewal request. If your process includes review of allocation management actions, you can do that here. You can configure XRAS to send notifications to reviewers when they are assigned to review these actions, which may prove useful if such assignments happen outside of the normal review cycle.

You can also configure XRAS to send you a notification when such reviews have been completed. You can process the action after reviews have been completed or with no reviews.

### **K.2.3. Reviews**

Under the Reviews tab, you will see the assigned reviewers and their submitted reviews.

### **K.2.4. Process (Action)**

If applicable, you have to “process” the action to award or reject it. The steps to process an action are the same as for processing a New or Renewal request. Please see [the instructions above](#) for complete details.

On this page, you can enter the approved resource amounts and approve or reject the Action. Admin comments can be associated with this Action and seen by the user, or included in the user email notification. You must save any changes to the award information before you approve the Action.

If your institution has an accounting service that XRAS knows about, the POST step will send relevant information about the processed action to your accounting service.

**Notifications.** As with requests, you may need to resend one of the notifications already sent by XTRAS related to this action. This may happen, for example, if the submission had a bad email address. Once you correct the email address in the submission, you can use this screen to resend a notification associated with the request.

**Accounting Service Posts.** For troubleshooting purposes, you can view the responses from post actions to your local accounting service here. These messages will tell you if the post was successful or show the error message returned.

## L. Dashboard: Pending User Requests

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XTRAS supports an extensive range of activities and actions associated with allocation requests. Such actions may not be tied to fixed cycles, and thus may be submitted by users at any time. The XTRAS Dashboard shows a summary of current, recent, and upcoming opportunities, and a sortable list of pending user submissions that may require your attention.

The Dashboard shows New and Renewal requests to continuous opportunities as well as actions (Supplements, Extensions, Transfers, Appeals, and Advances) related to ongoing projects. Within each row of the list, links are provided to take you to the main summary page for the associated request, the Assign Reviewers page for the action, and the appropriate Process Action screen.

The Dashboard is the default home screen for XTRAS Admins. You can return to the Dashboard by clicking on “XTRAS Admin <client>” in the top menu or by clicking on the small Dashboard icon (left of the gear icon).

## M. XTRAS Admin: Settings

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The following configuration features are accessed via the XTRAS Admin settings menu—the gear icon on the top navigation bar. The gear icon menu is also where you’ll find **Client Settings**; those settings are generally required to begin using XTRAS and are discussed as part of the [Initial Setup and Customization](#).

### M.1. Notifications: Managing Email Templates

Notifications are messages that are sent via email to users or groups of users when specific events occur in XTRAS. Such notifications help both administrators and users to track whether users’ submissions of allocations requests are being processed and monitor the current state of requests within the allocations lifecycle.

The Notifications tool allows you to tailor the email messages that XTRAS sends. You can decide to have XTRAS send Notifications when specific event scenarios occur. These scenarios are combinations of the available [Allocation Types](#), [Action Types](#), Event Types, and Recipient Types. XTRAS thus provides a great deal of flexibility in the email messages that the system



sends, but it also requires some time and attention to properly configure XRAS to your site's needs.

**Notification Tags.** Notification tags are used in templates to tell XRAS to substitute submission-specific values into the final email messages, much like the mail merge function found in word processing programs. Such tags are always capitalized and surrounded by a '|' (pipe character) on both sides. These tags are available while templates are edited. Within the Notifications tool, the Tags tab displays the currently available tags.

**Notification Templates.** Notification templates let Admins customize the email messages sent to users or other recipients. These templates can include static text and Notification Tags. A single template can be associated with a number of scenarios.

**Notification Event Type.** The different events on which notifications can be sent out. XRAS currently supports sending notifications when the following events occur:

- Action Approved
- Action Finalized (Submitted)
- Action Rejected
- COI Reported
- Reviewer Assignments
- Reviewer Notify
- Reviews Completed

**Recipient Type.** XRAS distinguishes the following recipients for the purposes of Notifications and templates. Not all recipients may be available for every submission.

- Allocation Manager
- Allocation Process Manager (you, another XRAS admin, or other email address)
- Co-PI
- NSF Program Officer
- PI
- Reviewer
- Service Provider

### **M.1.1. Search for Existing Templates**

The Notifications tool allows you to search for existing templates, which is highly advisable to ensure no template is currently associated with a particular scenario. To find existing templates, select the Templates tab and choose the Allocation, Action, and Event type which you are considering. XRAS will then display any templates you have already created for that combination. *More than one template may exist if you have created different templates for more than one Recipient Type.*

### M.1.2. Creating a New Notification Template

If no template exists for the scenario you are considering (or you want to create a new template for a different Recipient Type), click on the “Create New Template” button to create a new template. Enter the information for the notification you want to send.

- **Sender** (*required*). The email address from which the email appears to be sent. This may be your site’s Help Desk or Allocations Administrator. Only one email address is permitted.
- **Subject** (*required*). The subject line of the email message. The Subject may contain Notification Tags.
- **Body** (*required*). The body of the email message. The body is usually a combination of text created by you interspersed with tags to include details about allocations awarded, dates, PI details, request details such as abstract, the action type, and comments from administrators.
- **Signature**. Additional text that will be placed after the message body. Tags are permitted.
- **CC**. A comma-separated list of email addresses or tags representing email addresses to be copied on the email message.
- **BCC**. A comma-separated list of email addresses or tags representing email addresses to be blind copied on the email message.
- **Reply To**. The reply-to address if users receiving the notifications wish to respond to the notification. This may or may not be the same as the Sender field.
- **Template ID**. The unique ID of the notification template, created by XRAS. Since templates are not associated with descriptive names, the Template ID allows administrators to reference and distinguish between multiple templates.

All tags must be properly formatted. The tag text must be ALL CAPS and delimited by a “|” (pipe character) on both sides with no spaces inside the “|” characters. The “|” character should not be used in the text of any fields, except to demarcate tag names. To insert correctly formatted tags, you can select one from the on-screen list and copy it to the clipboard (with the green button at the top of the list). XRAS performs error checking for validly formed tags in the Subject, Body, and Signature fields.

After editing the template fields, click on the “Create Notification Template” button. If the values entered are not valid, the page will be reloaded and any errors present will show in red, next to the input field with which it is associated. If no errors are present, a new notification template will be created and all the fields shown on the page with the heading “Template with id: <id\_value>.” You can edit the current template by choosing the “Return to notification template” button.

Finally, you must associate the newly created template with a specific scenario. To the right, the page should show “Existing Rule Book notifications:” and, beneath that, the text “None created yet.” Select the green “Create a new Rule Book Notification for this template.” You will be taken

to a page with the heading: “Create Rule Book Notification” and the subheading, “Create a Rule Book notification for the template with id: <id\_value>.”

Select the options from the drop-down menus provided to define the scenario in which you want this template to be used, then click on “Create Rule Book Notification.” On successfully creating a new Rule Book notification, you will be directed to a page that displays the template and the details of the newly created Rule Book notification. From this page, you can now:

- “Create a new Rule Book Notification,” which allows them to map this template to another event scenario;
- “Return to the main notifications page”; or
- “Edit fields for this template,” to make corrections or updates.

If you now return to the main notifications page and search for the same event scenario, the results returned will include the notification template on the left and show the relevant scenario(s) on the right.

### **M.1.3. Edit an Existing Notification Template**

You can make changes to any part of a notification template and have those changes apply to all of the scenarios to which the template is currently linked or only to some of the scenarios.

First, enter the Notifications tool and select the Templates tab. Then search for a scenario (Allocation Type, Action Type, Event Type) where you know the template is used. Find the template in the results returned.

If you want to change the template for **all** scenarios, select the “Edit template for all notifications.” You will be taken to a page titled: “Edit the following fields for the template with ID: <id\_value>.” Edit the available fields as desired, then select “Save this Notification Template.” Your work here is done.

If you want to change the template for **only some** of the scenarios, select “Change template for select Rule Book Notifications.” You will be taken to the edit screen, and you can edit the fields as desired.

In addition, beneath the Reply To field, you will also see a list of “RuleBook Notifications associated with this template.” All existing Rule Book notifications associated with this notification template are listed here. Uncheck the boxes for those scenarios that you don’t want to change.

To proceed with the changes for the selected scenarios, click on “Change this notification template.” XRAS creates a new template associated only with those selected scenarios and takes you to the edit page for the template.

Click on the “Edit fields for this template” to edit this newly created template, make the necessary changes, and select “Change this Notification Template.”

#### M.1.4. Changing the Template for a Scenario

You may want to change the template associated with a given scenario to use a different, already existing template. That is, you know Template A is associated with Scenario A, Template B is associated with Scenario B, and you want to link Template A with Scenario B.

- From the main Notifications screen, select the Templates tab and search for **Scenario A**.
- Identify **Template A** in the results returned.
- Select the “Edit template for all notifications” button.
- On the editing screen, select the “Save this Notification Template.”
- On the next screen, select the “Create a new Rule Book Notification for this template.”
- Finally, select the menu options to match **Scenario B**, and click on “Create Rule Book Notification.”

*IMPORTANT: If you detach a template from all of its linked scenarios, the template will become inaccessible via the Notifications tool. That is, if Template B in this example was only associated with Scenario B, you will no longer be able to see or access Template B once you have linked Template A to Scenario B. To avoid losing Template B, first associate it with another scenario.*

#### M.2. Reconcile Users: Managing Guest Users

If you have opted to allow Guest Users to submit requests, you may need to later “reconcile” these guest users, once you have created their permanent user account. Reconciling users allows the users to see their requests and reviews, and over time, ensures that a user’s entire history of requests is connected.

Select “Reconcile Users” from the gear menu to see your list of “Unreconciled Users.” For each user, click anywhere in the row to reconcile that user. The left side shows the information about the user from their XRAS submission. The right side has a search box for your Identity Service. Begin typing the user’s first or last name to bring up possible matches and select the correct match from the list.

XRAS will display the corresponding information from your Identity Service on the right. Select “Cancel” to choose a different user or select the “Reconcile User” button to update the XRAS submission with the official user information. That user can now log in with their permanent user account and see the submissions previously associated with the guest account.

#### M.3. Resources: Customized Questions

By default, XRAS allows users to submit only limited details about their resource requests, specifically, a requested amount and general Comments. However, you can customize XRAS to display, in effect, a “mini-survey” about each requested resource. This feature can be useful to quantify their interest in the resource, structure their responses, and better understand their expectations.

From the XRAS gear menu, select “Resources” and select a resource from the list. On the next page, choose the link to add a question. On the following page, enter the question details: The question itself, the answer type, the form element, the relative order, and whether the question is required and optional. Repeat for each of the questions you want to ask.

Note that the resource questions will be displayed for every Allocation Type and Opportunity.

#### **M.4. Rules: Tailoring XRAS to Match Your Policies**

As an Admin, you can describe the allocation operations, definitions, and constraints or policies that apply to your organization by configuring a range of Rules that tailors how XRAS behaves in different situations. To ensure XRAS behaves as you expect, you are strongly encouraged to review all the Rules settings before you start accepting submissions via XRAS. Many of the Rules rely on or refer to values or controlled vocabularies you should have configured as part of your [initial setup](#).

If the following Rules options are not sufficient to match your organization’s allocation policies, requests to enhance the interface can be sent to [help@xsede.org](mailto:help@xsede.org) and we will add them to the XRAS feature roadmap.

**Rule: Request Number Format.** You can define, modify, or view the template XRAS uses to generate request numbers for successful submissions.

**Rule: Ineligible PI/Project Leads.** You can specify the types of persons who are *ineligible* to be PI/Project Lead on allocation requests. For example, you can declare Graduate Students to be ineligible to be PI/Project Lead on certain Allocation Types.

**Rule: Maximum Requests per Allocation Type.** You can restrict a user to a maximum number of requests of different Allocation Types. By default, XRAS will allow a user to submit an unlimited number of requests for each type. The maximum requests is the combined total number of active requests and submitted requests. For example, setting 2 maximum requests and 1 maximum active request allows a user to have 1 current award and 1 renewal request, but does not allow the user to submit a renewal for an opportunity that starts before their "active" award ends.

**Rule: Restrict Cross Type Submissions.** You can prevent a user from submitting a request of one Allocation Type if they already have an awarded project of another Allocation Type. For example, a user who has an awarded project of Type A should not be allowed to submit a request for a project of Type B.

**Rule: Request Action Time Periods.** You can control when XRAS allows users to submit actions related to different Allocation Types. You can add, edit, delete, and view the time periods for actions. For example, you can only allow a Renewal allocation request to be available within 30 days of the current request ending.

**Rule: Required Submission Fields.** You can define which fields are required for different actions for each of your Allocation Types, as well as customize the error message displayed if a required field is missing when a user tries to complete a submission.

**Rule: Required/Optional Documents.** You can define the types of documents required or allowed for the actions associated with different Allocation Types. You can also choose whether one or more than one of each document type should be allowed, and set page limits allowed for each document type. If no rule is defined for a particular document type and action, then that document type will not be available for that action in the default Submit UI.

**Rule: Manage Invitations to Opportunities.** XRAS allows you to declare some Opportunities to be “[invitation-only](#).” This rules interface allows you to manage the lists of invited users. In the “Invitations” section, enter either the first or last name of the user to be invited. From the search results, choose the desired name. Then, select the relevant Opportunity from the drop-down list of all invitation-only opportunities, and click the “Add invitation” button. To un-invite the user, simply click on the “Delete” button for that entry.

**Rule: Enable Public Request Pages.** XRAS can provide a public information page for each of your awarded projects. These pages are created to show users’ awarded allocation resources. Here you can specify which Allocation Types have or may have public pages associated with them. An Admin can choose (a) no public pages are created (Never), (b) public pages are automatically created for all approved requests (Always), or (c) public pages are only created for approved requests that are explicitly posted to ORCID (Only if posted). *You must enable at least the “Only if Posted” option if you want to use XRAS to post allocated projects to your users’ ORCID profiles. A link to a project’s public page is part of the information posted to ORCID about the project.*

## N. Appendix: Using RDR to manage resources

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The XSEDE [Resource Description Repository](#) is used to manage the resources that you make available for allocations. You must have an XSEDE login to access the site and edit your resources, even if you’re using your local user accounts in XRAS. If you don’t already have an XSEDE login you can create one at the [XSEDE User Portal](#). You will also need permission to edit resources for your organization in RDR. The XRAS team will help you get set up to manage resources in RDR as part of your initial setup.

### N.1. Adding a Resource

Before adding a resource make sure your allocations process has been created in XRAS and that at least one allocation type has been entered into XRAS for your allocations process.

1. Log into RDR and click the “Add Resource” button.
2. When filling in the “Add a Resource” form, the fields have tool tips to explain their purpose; hover over each field to see the tip. The most important sections on the page for XRAS are “Resource Project Affiliations” and “Resource Publishing”

- In the “Resource Project Affiliations” section, select your allocations process and provide a unique resource ID. For XSEDE, these IDs have the form machine.service\_provider.xsede.org—e.g., stampede.tacc.xsede.org. Outside of XSEDE, these IDs are not used, but you must provide a value here.
  - The “Resource Publishing” section allows RDR to provide a public page describing your resource. RDR can create a public page for you, or you can enter another persistent, resolvable link (such as a DOI link). *You must permit this option if you are using XRAS to post allocation awards to ORCID.*
3. After successfully submitting the “Add a Resource” form, you are taken to the Edit form for the newly added resource. From here you will enter more specific information about your resource.
    - In the left column, there are links to Add New Compute, Storage, Grid, or Other Resource. Click on the one most appropriate link for how the resource will be allocated. For example, if a resource will be allocated by CPU-hours choose Compute even if the resource likely also includes storage. If both CPU-hours and storage will be allocated, you should have two separate resources, starting from the beginning of this “Adding a resource” section for each.
    - Now you will be on the Add a (Compute, Storage, Grid, Other) Resource form based on the link that you clicked. On this page, fill in the Resource Descriptive Name. This can be the same as the name used on the previous form. The other fields on this page can be filled in appropriately, but none are critical for XRAS operation.
  4. After submitting the “Add a Resource” form you are taken to the Edit type resource form. Note that on this form you can see the XRAS Resource Repository Key which is used to identify resources in the XRAS APIs.
    - In the left column on this page click Allocations. This brings you to the forms that determine how the resource is displayed and available in XRAS.
    - Fill in the form appropriately. If there is not an appropriate allocable resource type or unit type for your resource, contact [help@xsede.org](mailto:help@xsede.org).
  5. Finally after submitting the form, you can scroll down and view links to add/edit allocation type info for your resource. This is where you can associate the resource to your allocation types and actions. You can also declare if other resources must also be requested along with this resource. For example, a compute resource might also require that the submitter request a storage resource.

You have completed adding the resource for XRAS availability

## **N.2. Editing a Resource**

All of the information entered when adding a resource can later be edited.

1. Edit a resource by clicking the edit link next to it in the list of resources on the RDR front page or accessed by clicking the Resources link. If you do not see your resource listed

click the 'View all resources' link. Only resources considered active based on the Resource Status dates are displayed by default.

2. After clicking Edit, return to the specific type data entered by clicking the resource name in the Specific Resources column on the left. Otherwise, everything is the same as when adding a resource.