The ALMA Helpdesk – Staff Guide

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in cooperation with the Republic of Chile.

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Revision History:

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ABSTRACT

This document describes the ALMA helpdesk from a staff perspective. A brief overview of the workflow and roles is followed by instructions for setting up email alerts and for responding to tickets, both as triage personnel and as user support specialists. Details of how to use the staff interface to perform common tasks are then described. Management and service rules are also discussed.

1) Introduction and concepts

The ALMA helpdesk provides a mechanism for keeping track of user queries, thus ensuring that user queries are answered in a timely and professional manner. The helpdesk also provides a knowledgebase, which can be used to find answers to common queries without the need to send in a helpdesk ticket or without the user actually logging into the helpdesk system.

The helpdesk system is accessed for users under the ALMA Single sign-on mechanism. Staff with responsibility for answering tickets (User Support Specialists [USS]) will have separate "staff" helpdesk accounts to log into the helpdesk.

The helpdesk setup consists of a single instance of Kayako, but staff at each ARC sees only their own ARC's departments and tickets. There is a mechanism for transferring tickets between ARCs.

The helpdesk software is a product of Kayako Infotech Ltd., and is in use in a number of other astronomical environments such as Spitzer, Herschel, ESA, Euro-VO and NRAO. It is highly configurable and customizable, and a detailed description of what is available is given in the Kayako manual. This guide is intended as a reference for ALMA staff, providing an overview of key features of our particular implementation of the Kayako helpdesk.

1.1 User and staff roles

Kayako keeps user and staff roles separate. USS should not usually need to submit tickets as users except under special circumstances. To submit a ticket as a user, a staff member would login to the user portal using their ALMA user ID and password (obtained through self-registration on the science portal) and click on the "Helpdesk" tab to obtain the user interface to the helpdesk.

Note that there is currently no relation between the ALMA user ID and the Kayako staff ID. A staff member is free to set up the same username and password for both, but any change in the accounts (for example, a password change) will not be transferred to the other account.

Staff can request a username and password through their helpdesk manager or helpdesk administrator; else they will be assigned a username and password as well as default alerts specific to their helpdesk role. The password for the staff role can be changed under the preferences tab in the Kayako environment. Recovery of the username and password for USER accounts are to be handled the ALMA Science Portal support team.

1.2 Workflow

We have a specific workflow in mind based on feedback from other US observatories such as Spitzer and HST (Figure 1). Full details are given in the ALMA Helpdesk requirements document, but an overview is given below:

1.2.1 Triage role

Triage will usually be performed by a USS or the helpdesk Manager. Triage can perform one of four tasks when a helpdesk ticket is submitted (See Figure 1). Triage can:

1. Assign the ticket to themselves, post a reply and resolve to the ticket.
2. Assign the ticket to another USS if they do not have the requisite expertise.
3. Assign the ticket to another ARC as described in Section 3
4. Request more information from the user who submitted the ticket and change the status of the ticket to "Pending" (Sections 1.2.4.2 and 4.1)

Triage can see all departments within the ARC in their view; in addition they can see the "Transfer to XX ARC" departments, which enable them to transfer tickets between ARCs. However, as the goal is to "transfer knowledge and not tickets", the transfer of tickets between ARCs should be done sparingly and be contained to only those tickets that require specialized expertise from a particular USS from another ARC.

1.2.2 USS role

A USS will, in general, be able to answer any ticket based on his/her expertise. A USS can perform one of four tasks when assigned a ticket (See Figure 1). They may:

1. resolve the ticket
2. request more information from the user who submitted the ticket and change the status of the ticket to "Pending" (Sections 1.2.4.2 and 4.1)
3. return a ticket to triage if they are (Section 6.2):
    a. unavailable to answer the ticket in a timely fashion
    b. believe it should be assigned to another ARC
    c. find that the ticket requires a level of expertise that they themselves do not possess.
4. File a JIRA ticket based on the submitted helpdesk ticket and change the status of the ticket to "On Hold" or "Resolved" (Sections 1.2.4.3 & 1.2.4.4)

As such, USSs are set up to see all of the departments that users can submit tickets, and an additional "Return to Triage" department. They cannot see the "Transfer to XX ARC" departments, which are only visible to triage and managers.

1.2.3 Manager role

We have also included a description of the role of helpdesk manager (Section 4.2). The manager will have oversight over the helpdesk, and overall responsibility for tracking tickets. In addition, the helpdesk manager will be responsible for ensuring adequate coverage from all USS in their ARC to guarantee a timely response of all submissions to that ARC from the user community. The manner in which this coverage is recorded and tracked is left to the manager of each ARC.

1.2.4 Ticket life-cycle

Our instance of Kayako allows the ticket to be assigned a particular status. The description of each status is below and illustrated in Figure 1.

1.2.4.1 Open

A ticket is considered open while work is being performed on it. In this status, if no action is taken by either Triage or the assigned USS within 2 business days, the ticket status becomes "Response Overdue" (Section 1.2.4.6).

1.2.4.2 Pending
Resolution is awaiting response to a follow-up question addressed to the user. A ticket in the pending status will never default to a status of "Response Overdue".

1.2.4.3 On hold
A ticket may be placed on hold if there is no short term solution to the issue raised in the ticket (for example, it is a software bug for which a JIRA ticket has been filed by the ARC cognizant lead for that software subsystem.). In this case, the user should be informed that their ticket has been placed "On Hold". Note that "On Hold" tickets do not show up in the default ticket views; to view them, change the view to "all tickets" or create a new view (Section 5.4.1). A ticket in the "On Hold" status will never default to a status of "Response Overdue".

1.2.4.4 Resolved
A reply to the ticket has been posted by a USS, which they believe solves the problem. Also, if the user has submitted an enhancement request to a software subsystem, e.g. a new feature in SIMDATA or new VAO access to Splatalogue, that ticket should also be posted as "Resolved" and the ARC cognizant lead should file the appropriate JIRA ticket. The reply will include a request to the user to close the ticket if they are satisfied with the response. This will be generated automatically when the ticket status is set to "Resolved". If no action is taken by the user, the ticket is closed after 14 days. The user will then be informed that their ticket has been closed.

NOTE: Following standard commercial helpdesk practice, a USS does not close tickets. This is left to the user. The resolved status is necessary so that tickets are not constantly closed and re-opened by users or a USS in the process of answering the ticket. As such, the ticket remains in the "Resolved" status until the user is satisfied with the response.

It is also possible that a user can reply to a "Closed" ticket essentially re-opening the dialog and the helpdesk. This is not the appropriate action a user should take but in this rare case, triage should see the reply to this closed ticket and then request from the user they either:

- re-open the ticket if the response they received did not adequately resolve their issue or
- open a new ticket if this is a new issue.

In general, Triage should discourage the closing and re-opening of tickets.

1.2.4.5 Response overdue
The ticket has not been addressed by a USS from a user within the time window described in Section 4.1. Note that this status is set automatically if no response is sent out within a preset time (currently 2 working days) (See Figure 1).

Also, if a USS replies to a ticket but does NOT set the status to "Resolved" the ticket will remain "Open" indefinitely if no reply is posted by the user or the user changes the status of the ticket. Because of this, it is important for the USS to set the ticket status to "Resolved" before posting a reply (Section 1.2.5.4).

1.2.4.6 Closed
A ticket will be set to the "Closed" status by:

1) the user has reviewed the response to the resolved ticket, has agreed the answer is satisfactory and closed the ticket

2) the ticket is closed implicitly through the user not responding within 14 days of the ticket entering the “Resolved” status
3) the ticket subject is inappropriate for resolution by ARC staff (such tickets may be closed directly by Triage or another USS).

Note that Closed tickets do not show up in the default ticket views; to view them, change the view to “all tickets” or create a new view (Section 5.4.1). A ticket in the “Closed” status will never default to a status of “Response Overdue”.

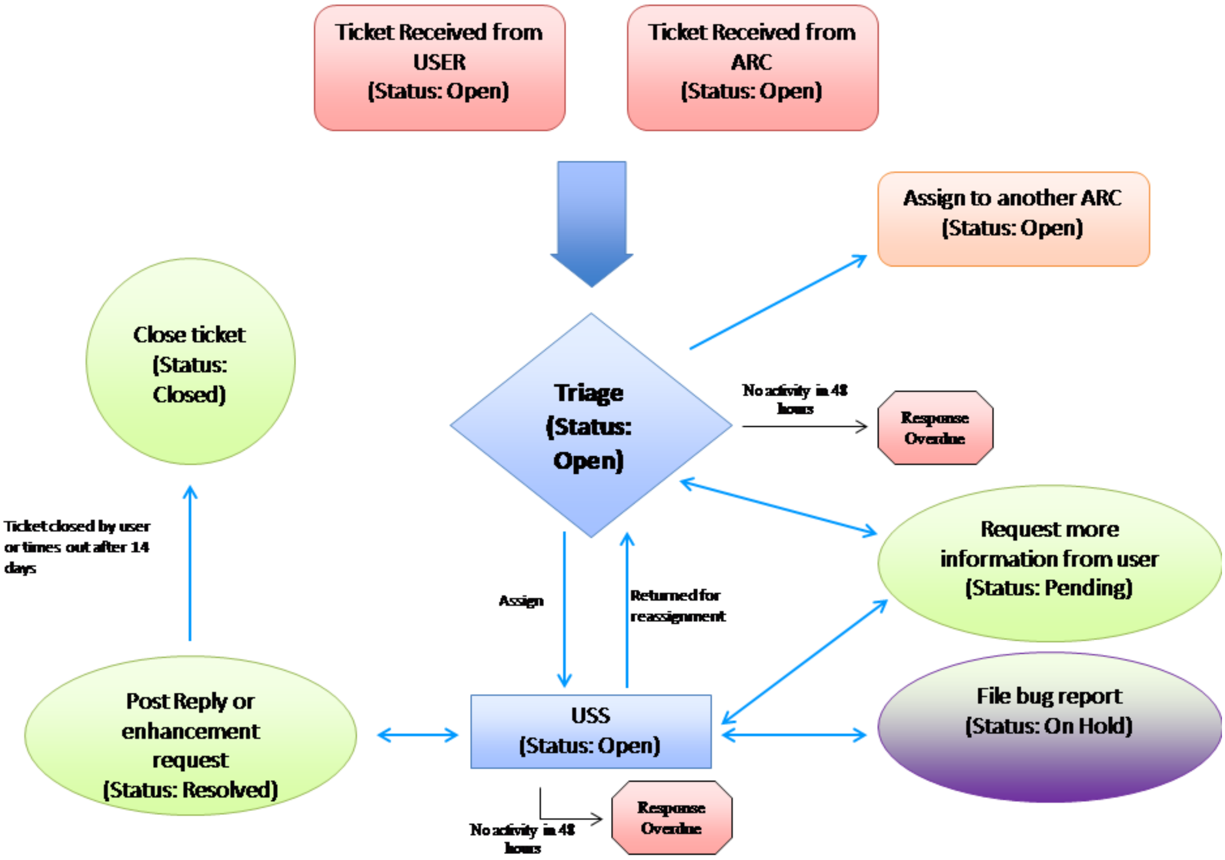


Figure 1: Helpdesk workflow

1.3 Relevant documentation

Much of the relevant helpdesk documentation can be found at:

https://safe.nrao.edu/wiki/bin/view/ALMA/HelpdeskWG

Additional locations for supplemental helpdesk documentation include:

1) ALMA Helpdesk: Requirements and Workflow, Version A5, AEDM# TBD; Author: J. Hibbard.
2) The NRAO Helpdesk: a guide for NRAO staff (available at https://staff.nrao.edu/ Author: C. Chandler)
3) The Kayako SupportSuite manual (http://www.kayako.com/manuals/)

2) ALMA Helpdesk Arrangement

The ALMA helpdesk has the following departments set up to send tickets to the user's affiliated ARC:

- General Queries (Science Portal/Registration, Documentation, Webpages, Proposal reviews and assessment, Project tracking, other)
- Project Planning (Available Capabilities, Call for Proposals, Sensitivity Calculator, Simulators, Splatalogue, other)
- Observing Tool (Proposal Preparation, Proposal Submission (general), Phase 2 process)
- Data Reduction (CASA, pipeline processing, etc...)
- Archive and Data Retrieval (archive access and queries, obtaining your ALMA data)
- Face to Face Support (Data reduction, sabbatical, science, short term, other)

All three ARCs share a single database, so departments can be set up such that all tickets get sent to a single ARC or to all three ARCs. The single database also allows transfer of tickets between ARCs whilst retaining the ticket ID and work logged on that ticket. A JIRA system will be set up so that ARC personnel can submit tickets to the DSO in cases where a user ticket finds a bug or requests an enhancement to one of the ALMA software tools, systems or subsystems. Similarly, access will be given to the JIRA system at NRAO or ALMA for reporting bugs and enhancement requests to CASA (including `simdata` and Pipeline), Splatalogue and Archive.

2.1 Proposal Submission Emergency Department

During the last week before the Call for Proposals, a single department called "Proposal Submission Emergency" across ARCs will be set up that will answer urgent tickets concerning proposal submission. Triage for this department will be visible 3 days before deadline (and 24 coverage by EU, NA and EA will be done). In addition, a representative from the JAO will also be "on call" 24 hours per day starting 36 hours before the proposal submission deadline. Triage will have the appropriate information available (phone numbers and email addresses) via:

http://wikis.alma.cl/bin/view/DSO/JAO_On_Call_wiki

of who to contact at the JAO to immediately solve urgent problems with proposal submission. After the JAO has resolved the problem they will report back to the Triage who reported the problem and the solution. Finally, Triage will contact the users directly by posting replies to the submitted tickets.

The Knowledgebase is also common to all three ARCs and will be described in more detail in Sections 6.5 and 8.

3) Policy for the Transfer of Tickets between ARCs

As discussed in Section 1.2.2, Triage has the ability to transfer tickets between ARCs. This mechanism is intended to allow the helpdesk to leverage the worldwide expertise available to ALMA. However, this process should not be done lightly and the mechanism should be used only in the following circumstance:

- A ticket is submitted and assigned to a USS at one ARC. The USS knows specific expertise exists in another ARC. In general, we prefer that the USS contact the person with expertise at the other ARC directly (on the basis that exchanging knowledge is preferable to exchanging tickets). The solution sent by this other USS should then be contained in the ticket response and in these cases especially, a Knowledgebase article should be published. Failing this, however (for example, if the query is unusually complicated), the ticket can be returned to Triage with a note (Section 6.3) from the USS in the originating ARC explaining the reassignment.

When a request for a ticket to be transferred is sent by a USS back to triage:

- The USS must include a note (Section 6.3) in the ticket as to explain why the ticket is better suited to be reassigned to another ARC instead of the USS contacting the relevant expert themselves.
- Triage should send a reply to the ticket user explaining that it has been transferred to another ARC.
- Upon receipt by the receiving ARC, the ticket should be treated as a new ticket and assigned to the appropriate USS.

3.1 Transfer of a Japanese Translated Ticket to another ARC

In the case where a ticket is submitted in Japanese and the EA ARC needs the assistance and expertise from either the EU or NA ARC, the following procedure should take place:

1. The EA ARC Triage translates the ticket into English and then transfers the ticket to either the EU or NA ARC (Section 1.2.1) with a note (Section 6.3) that this is a Japanese language ticket. Triage at the EA ARC should NOT assign it to a USS at either the NA or EU ARC.
2. Triage at the receiving ARC should then assign the ticket to the appropriate USS with a note that the ticket should NOT be replied too, i.e., do not “Post Reply” but rather a note should be added with the resolution.
3. The USS should add a note to the ticket with the appropriate resolution and return the ticket to triage.
4. Triage then transfers the ticket back to the EA ARC with the resolution.
5. The EA ARC then translates the resolution back to Japanese and posts the reply to the ticket.

4) Service Rules and Management

4.1 Service Rules

The ALMA helpdesk will need to have a uniform service level between the ARCs (so far as practical). In general, replies should be courteous and professional in tone. In addition, direct emails between the USS and the user (not through the helpdesk) should be avoided so far as possible.

1) Users will receive a customized reply to their ticket within 2 working days of receipt by the ARC. Ideally, this would be a resolution of the ticket, but could simply be a statement that the ticket is being worked on and, if possible, with an anticipated timescale for resolution. Ticket replies will be “signed” by the sender of the reply, but any updates to the tickets will be through the helpdesk rather than in the form of a personal email (Kayako facilitates this by sending out emails with staff names, but a “no-reply” address).

2) When a ticket is passed to another ARC, the triage at the initial ARC will send a reply to the user through Kayako stating that the ticket has been transferred. When the ticket is received by the recipient ARC, it is treated as a new ticket, with a customized reply being sent within two working days. Responsibility for that ticket is considered to have been transferred to the receiving ARC.

3) Open tickets that require clarification or technical details from the user will be set to "Pending" until the appropriate information is received by either Triage or a USS from the user. At the same time, a reply will be posted to the user stating the ticket status and giving a reason why the ticket has not been resolved.

4) If a user ticket reports a bug to one of the existing ALMA software tools, systems or subsystems, then the appropriate USS at each ARC designated as the cognizant lead of that subsystem should submit a JIRA or similar ticket to the appropriate agency (typically JAO/DSO or obsCIPT), reply to the user with the JIRA ticket reference, and place the ticket "On Hold" until the resolution can be tested in the next software release or patch.

5) If a ticket is a request for an enhancement to one of the existing ALMA software tools, systems or subsystems, then the appropriate USS at each ARC designated as the cognizant lead of that subsystem should submit a JIRA ticket or similar to the appropriate agency, and "Resolve" the helpdesk ticket stating that a JIRA ticket has been filed and with the appropriate reference to the submitted JIRA.

6) Ticket resolutions that are likely to be of interest to more users than the ticket submitter alone, and which are not already in the knowledgebase, should be added to the knowledgebase by the USS as a "DRAFT" when they resolve the ticket. Specific information which could identify the ticket submitter and any information which could be considered proprietary (such as target coordinates) should be removed from the article prior to publication in the knowledgebase (Section 8). This draft article will then be submitted for publication after it has been given the appropriate review.

4.2 Management

The Helpdesk manager at each ARC is responsible for ensuring that the agreed to service expectations are met, and for scheduling triage personnel to ensure service coverage. He/she is also responsible for providing reports to the ARC management on Helpdesk usage and statistics on the response times and distribution of tickets by status ("Open", "On Hold", "Pending", "Resolved", "Closed").

5) Staff interface details

5.1 Staff view: logging in

Currently, to login and access tickets as a staff member, staff should visit the following site appropriate to their ARC:

https://alma-help.nrao.edu/staff/ (NA)

https://alma-help.eso.org/staff/ (EU)

https://alma-help.naoj.edu/staff/ (EA)

and login with their staff account provided to them by their local helpdesk administrator (Section 1.1). The login window for staff is shown in Figure 2. Upon login, staff will be directed to the helpdesk staff dashboard appropriate for their parent ARC. This will show the departments of which the staff is a member, and notifications of new, updated and overdue tickets (see Figure 3).

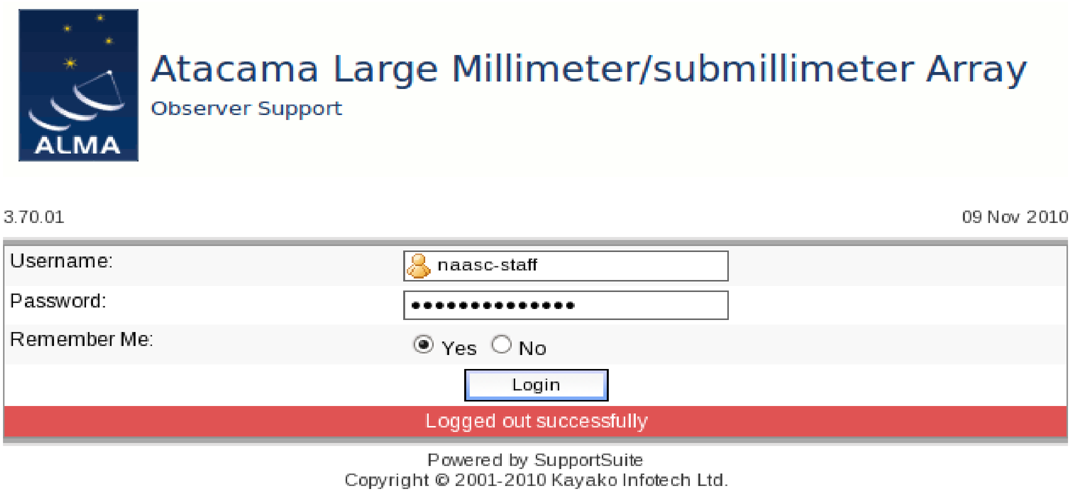


Figure 2: The staff login view

5.2 "Home" tab

The view under the "Home" tab is illustrated in Figure 4. In the staff view, you can see all the departments in that ARC (bottom left) as well as the status of any new tickets or updates to resolved tickets (middle). From this tab, staff may also use the "Preferences" menu to control settings, set their calendar view(s) and change their password. For example to change your notification email, follow: **Home -> Preferences -> Settings -> *<change email address>* -> Update Details.** (Figure 4)

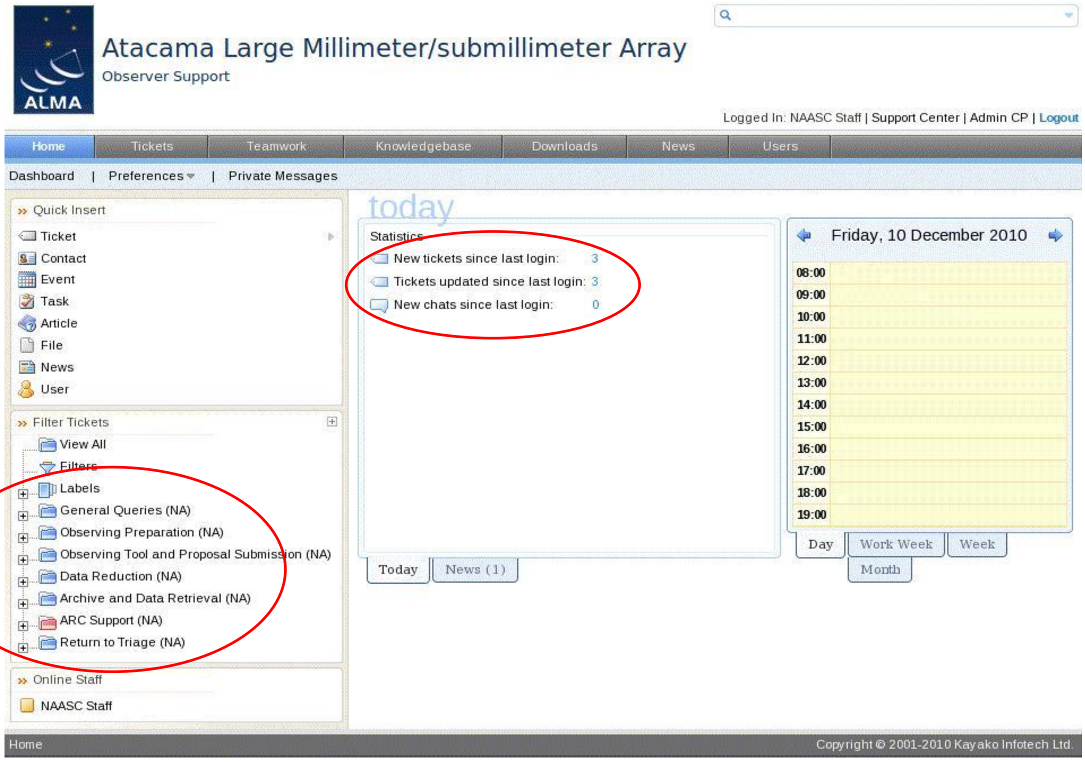


Figure 3: Default dashboard view under the "Home" tab showing all departments associated with that ARC and recent helpdesk activity.

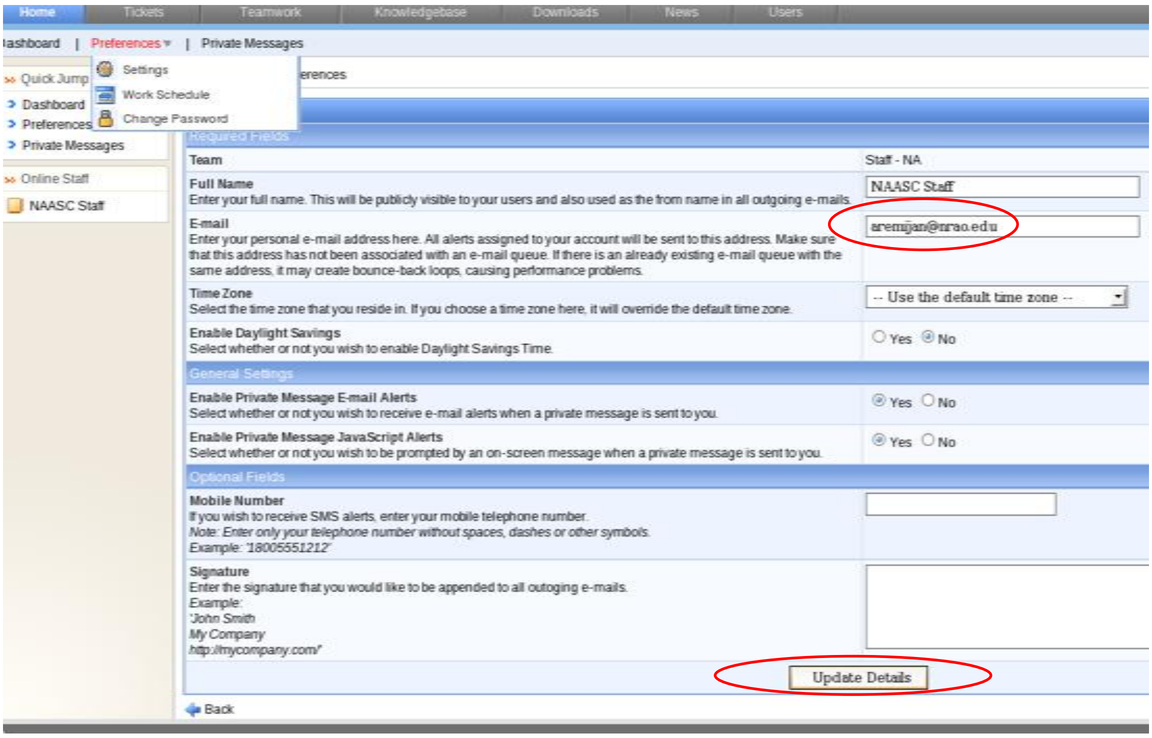


Figure 4: Changing your notification email address

5.3 Alerts

An alert is sent as an email (or Short Message Service - SMS) so a staff member gets notified of changes in a ticket status or if a new ticket has been submitted and assigned to them. By default, a staff account is set up by the helpdesk administrator to receive email alerts as specified by their helpdesk role. (triage, USS, or manager). Figure 5 shows the Alert Events that can be selected.

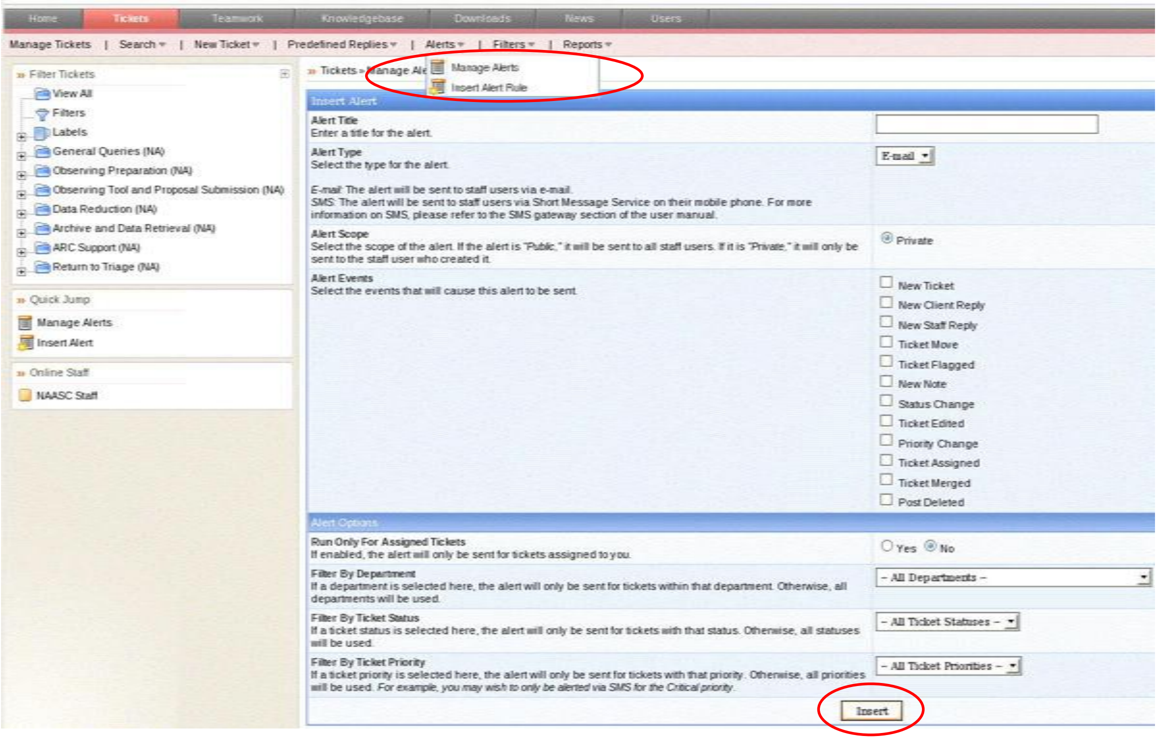


Figure 5. Alert events that can be set up by a user via email or SMS notification.

To set up an alert, login to the helpdesk (Section 5.1) and hit the "Tickets" tab on the top row of tabs, then the "Alerts" tab on the second row down, and select "Manage Alerts" from the drop-down menu to see which alerts are currently set up. To set up new alerts, hit the "Alerts" tab and select "Insert Alert Rule" (see Figure 5). To finish inserting the rule hit the "Insert" button at the bottom of the page.

The default email alerts for the following roles should be:

USS:

- New Client Reply
- New Note
- Status Change
- Ticket Assigned

Triage:

- New Ticket
- New Client Reply
- Ticket Move – will get notification if the ticket is transferred, moved or returned to triage
- New Note
- Status change – will get notification if the response is overdue
- Ticket Assigned

Manager:

- Same as triage but add Ticket Closed.

In general, for the USS, the alert options should be set to run only for those tickets assigned to the USS, for all departments, all ticket status and all ticket priorities (See "Alert Options" in Figure 5).

For Triage, the alert options for Ticket Assigned, New Client Reply and New Note should be set only to run for those tickets already assigned to Triage, for all departments, all ticket status and all ticket priorities. However, for New Tickets, Ticket Move and Ticket Status, the Triage should view all tickets, not just those assigned. That is, "Run Only for Assigned Tickets" should be "No" in the Alert Options menu (Figure 5). Finally, the manager should track all tickets so the "Run Only for Assigned Tickets" alert option should be set to "No" for the manager for all ticket alerts.

5.4 "Tickets" tab

Under the "Tickets" tab are the options for servicing tickets, including viewing them, and setting up alerts (section 5.3) and filters.

5.4.1 Viewing tickets

To view tickets: **Tickets -> Manage Tickets -> Views.**

From "Views" a staff member may choose from one of the pre-defined "public" views (Figure 6), or define their own "private" view. A number of preset views are available. The "Default View" shows all "Open" tickets assigned to the staff member; the "All Tickets" view shows all tickets in the departments of which the staff may be a member which have not yet been closed. The "Department Manager" view and "Triage" view show all unassigned tickets and tickets not yet closed assigned to any staff member. The "Staff" view shows only those tickets that are assigned to the staff member. Public views should not, in general, be edited except by the helpdesk administrator.

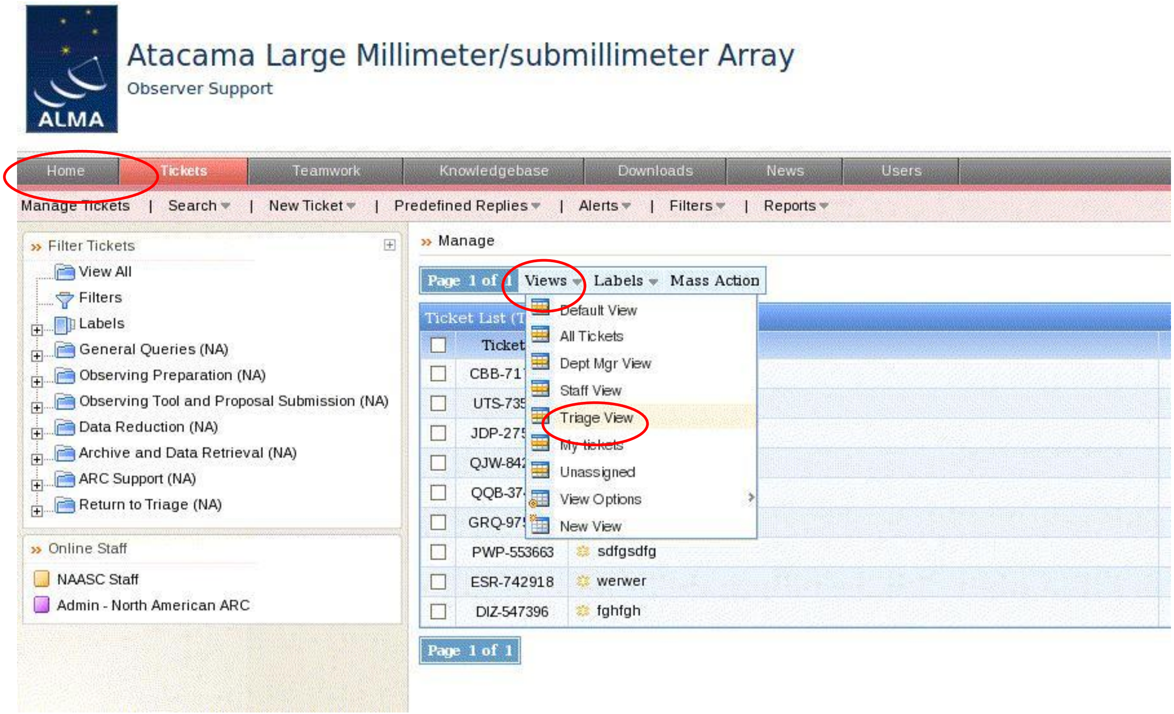


Figure 6: Selecting a view.

To create a new private view: **Tickets -> Manage Tickets -> Views -> New View**

Once a list of tickets is shown, clicking on either the ticket ID or the subject will allow the ticket text to be viewed.

It is also important to follow the "department breadcrumbs" when viewing tickets (Figure 7). If you are in a helpdesk department and change your view, it will display that view for that department only. Therefore, if you are actively searching for a ticket using views, it is best to return to "View All" tickets to test that view.

5.4.2 Filters and ticket searches

On the right-hand side of the Kayako interface web page is an area headed "Filter tickets". This allows the user to display tickets by department and status. In addition, under the "Tickets" tab is an option to search tickets via a quick or advanced search. Filters can be created publicly or privately. A private ticket filter is only accessible by the staff user who created it, meaning that staff members can create and manage their own ticket filters.

5.4.2.1 User created filters

To add a filter: **Tickets -> Manage Tickets -> Filters -> Insert Filter.** (Figure 8). Tickets can be filtered on many properties such as subject, status, owner, time since creation, last activity etc. In particular, a filter selecting "pending", "on hold" or "closed" tickets can be useful as the views display only open tickets. The new filters appear on the left-hand "filter" area of the interface and may be applied simply by clicking on them. For more information about how to set up a specific filter using all the available logic inside the Kayako system, a full description can be found on pages 132-136 of the Kayako manual (Version 3.6, revision 13).

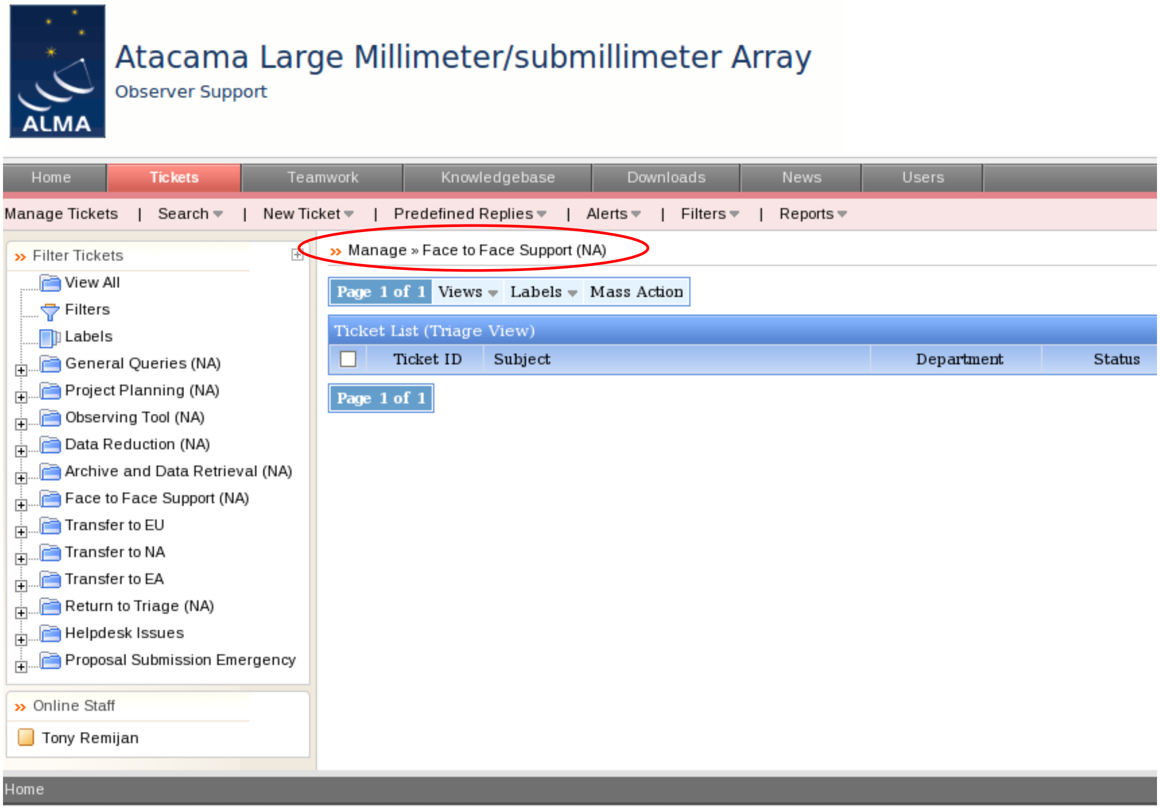


Figure 7. Illustration of the Department "breadcrumbs". If you are switching views, the view will only change for that department where you are currently viewing.

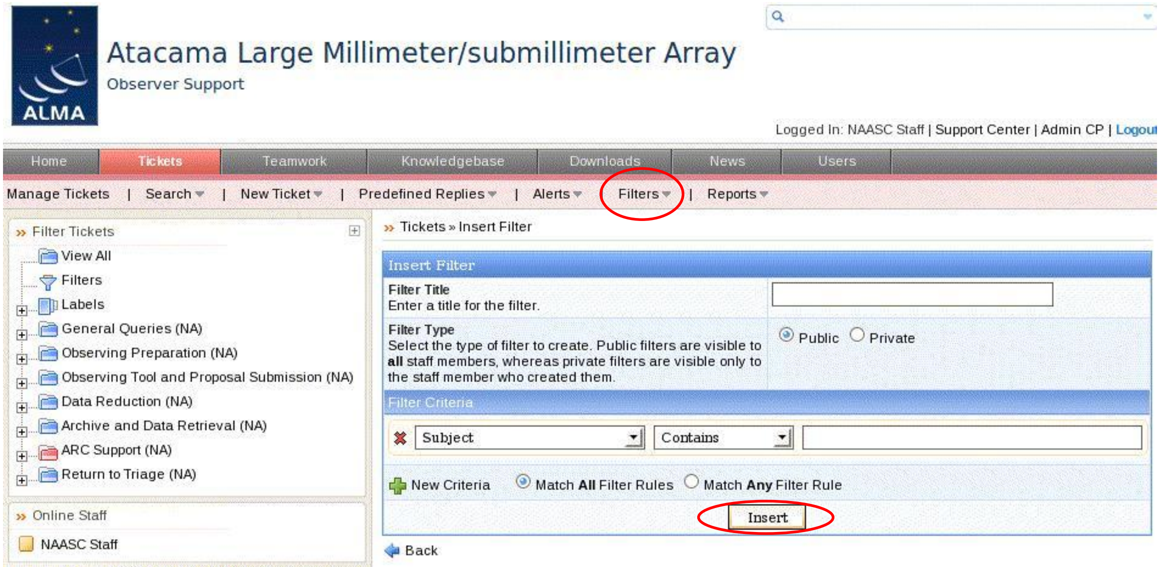


Figure 8: Managing and setting up a search filter.

6) Procedure for responding to tickets – Triage

By default, as described in setting up the alerts in section 5.3, Triage personnel at the ARC will receive email notification that:

- a new ticket has been received
- a ticket has been assigned from another ARC, or
- a ticket has been returned to triage

NOTE: If in your role as Triage, you do NOT get an email notification, your alerts may not have been set up properly or may have returned to their default values. In this case, refer to section 5.3 on what alerts should be set up for a triage staff member. The on-duty triage USS will then login to the helpdesk (Section 5.1) view tickets to find the ticket in question (Section 5.4.1) (or click on the "new tickets since last login" link on the dashboard).

6.1 Examining a ticket

Once the USS has located the ticket they wish to work on, clicking on the ticket ID or Subject will open the ticket (Figure 9). Tickets opened in this window may have a number of actions performed, including assignment, change of status and posting a reply.

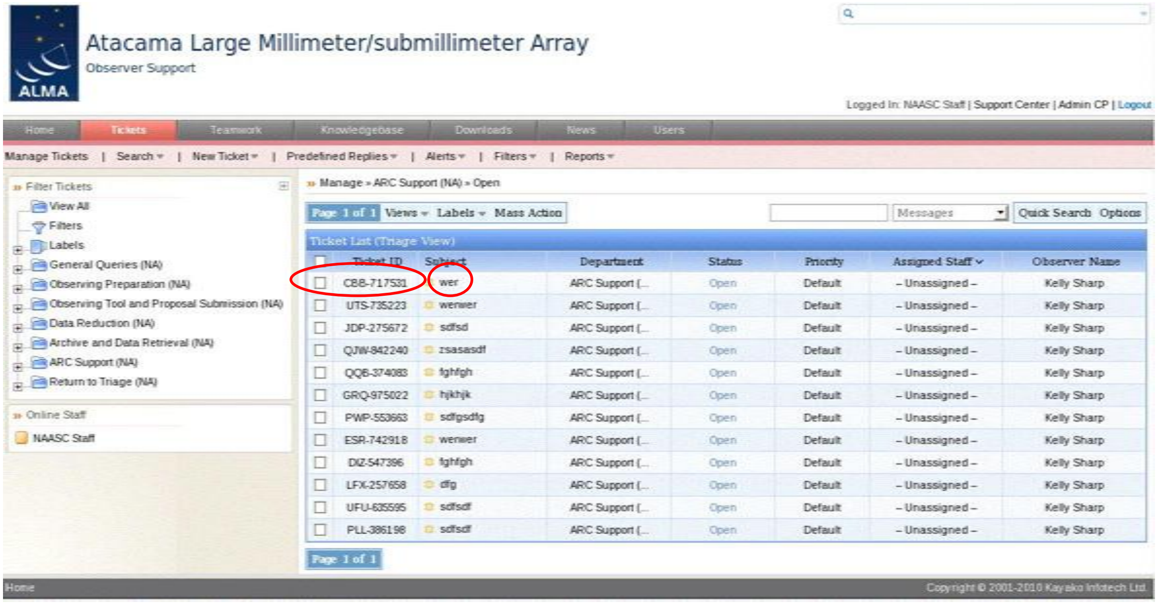


Figure 9: Selecting a Ticket. Click on either the ticket ID or Subject to open a ticket.

6.1.1 Assigning a ticket

If Triage believes this ticket requires USS expertise, they will assign the ticket to the appropriate USS. The "General" tab allows (re)assignment of a ticket through clicking on "-Unassigned-" in the "Assigned Staff" field in the ticket header (Figures 10 and 11).

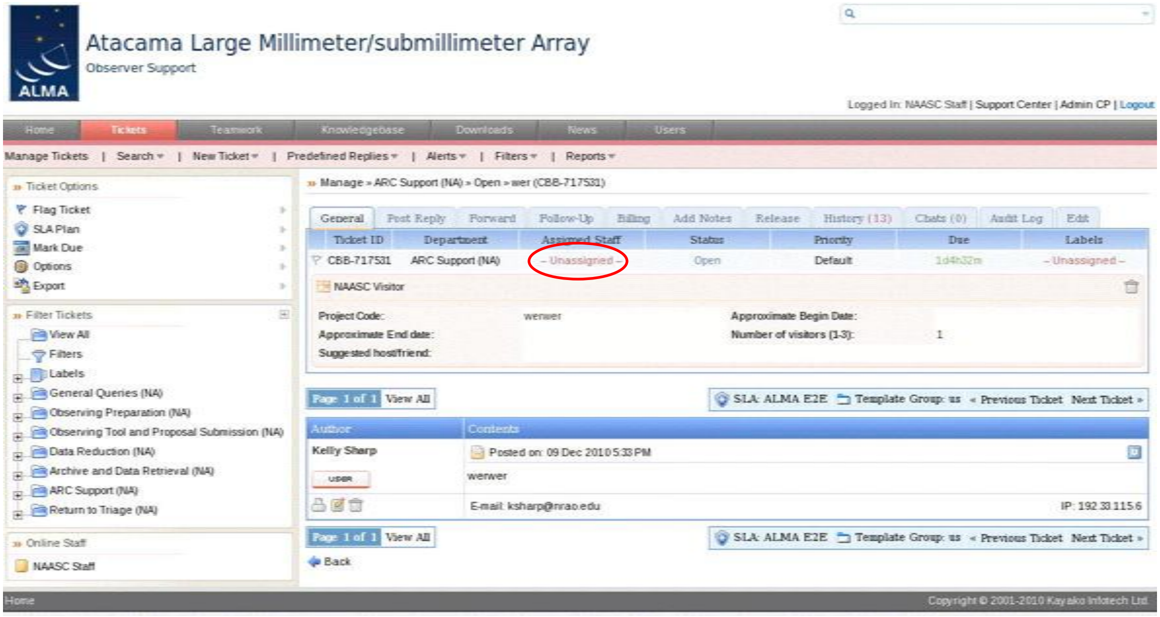


Figure 10: The "General" tab after a ticket has been opened. Click on -Unassigned- to (re)assign that ticket to a USS

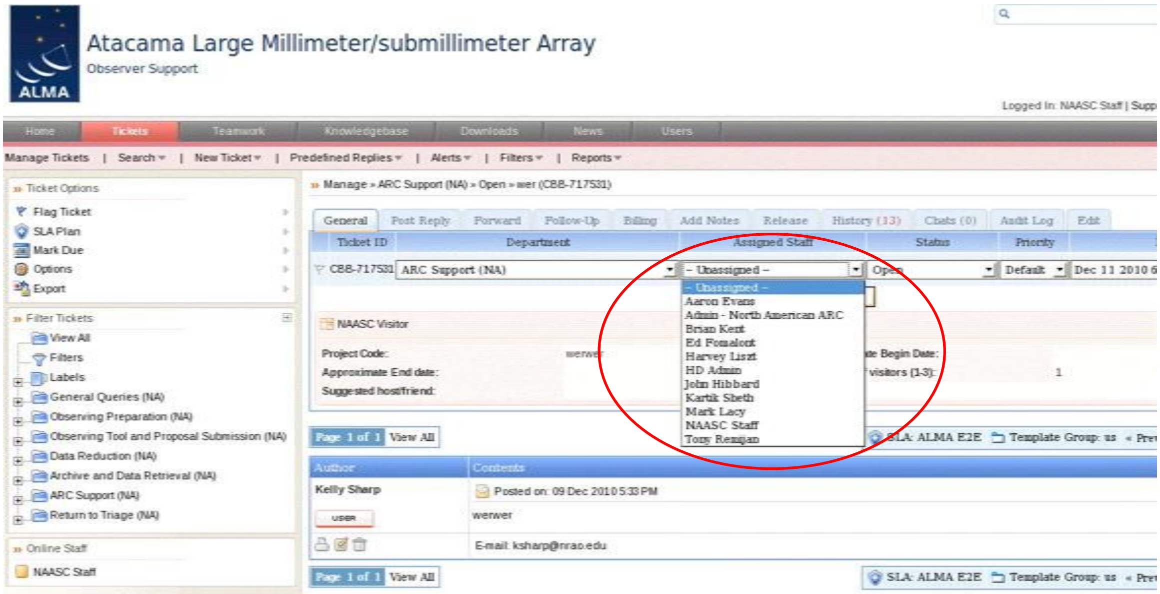


Figure 11: View after -Unassigned- has been selected. Triage can now select an owner for that ticket.

NOTE: While it is possible for a USS to reassign a ticket to another USS, this is not the recommended workflow (See Section 7) and should be avoided.

6.1.2 Posting a reply to a ticket

If Triage believes they can answer the ticket or requests more input from the user or a USS, the "Post Reply" tab allows a reply to be made to the ticket. In this case, Triage should assign the ticket to themselves before posting a reply or requesting more information from the user. In addition to the large text box where a reply can be written (Figure 12), there are also options to place pre-defined replies or knowledgebase articles into the reply by clicking on the “+Predefined Reply” or “+Knowledgebase” menus above the reply box (Figure 12). Hit “Send” to send the reply to the user.

If you want to capture the resolution of the ticket into the knowledgebase, check the “+Knowledgebase” box to the lower right before hitting “Send”. (Section 6.5).

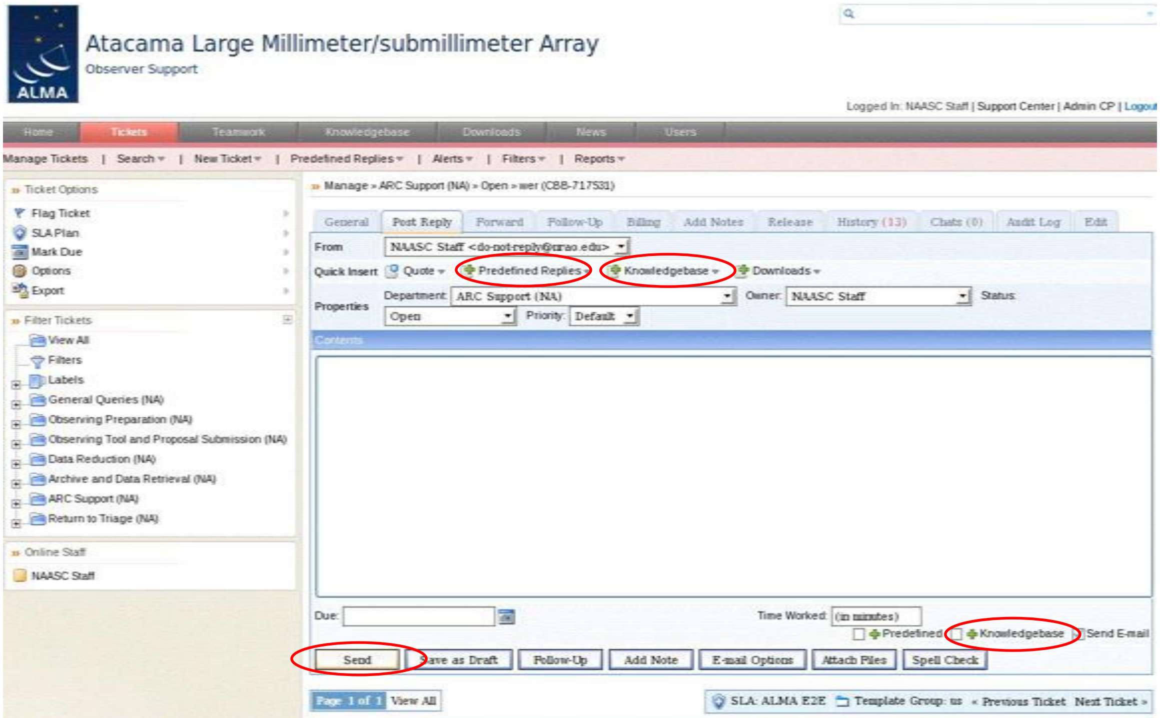


Figure 12: The “Post Reply” tab view. A USS can either select from a predefined set of replies or knowledgebase article. In addition, it is possible to capture the reply to the KB by selecting the “+Knowledgebase” checkbox.

The user will receive an email that contains both a link to the ticket as well as the resolution submitted in the text of the email. It is also necessary that the USS change the status of ticket to “Resolved” (Section 6.1.3).

It is possible by changing the views, that a USS can see tickets that they have not been assigned. A USS should NOT reply to a ticket that they have been not assigned too.

In addition, it is also possible that triage may receive a reply from a user that is not directed to the USS assigned to their ticket. In this case, triage should post the contents from the user in a note attached to the ticket and in the future try to discourage this correspondence.

6.1.3 Changing the status of a ticket

All USS should remember to change the status of a ticket as necessary after posting a reply.

In addition, the status should be based on the action required/needed for that ticket (Section 1.2.5). To do this, hit the “General” tab, click on the status of the ticket and use the pull-down menu to select the new status OR change the status of the ticket while posting a reply in the “Post Reply” tab (Figures 13 & 14). **REMEMBER, a USS should not close a ticket (Section 1.2.5.4).**

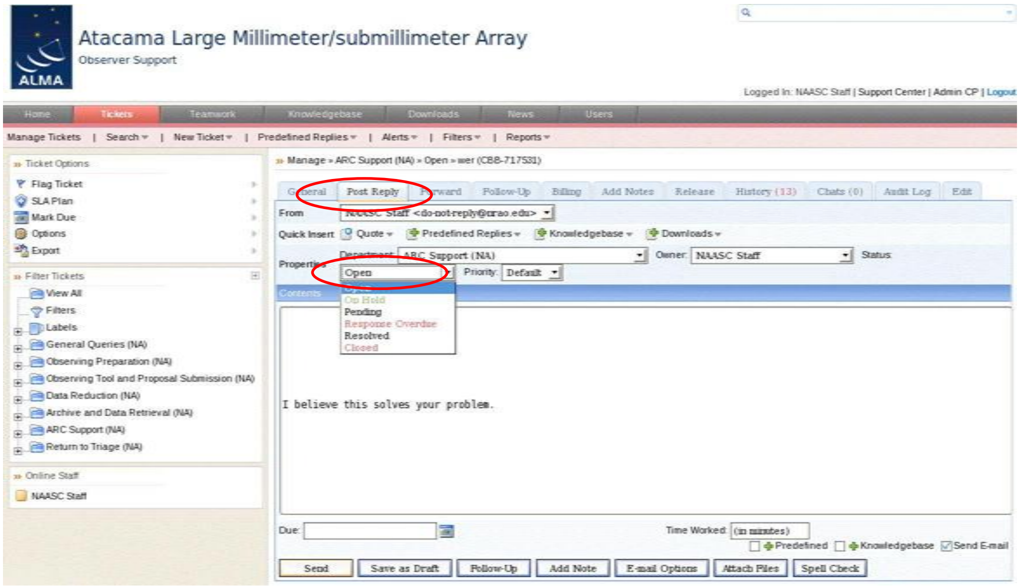


Figure 13: Changing the status of a ticket inside the "Post Reply" tab.

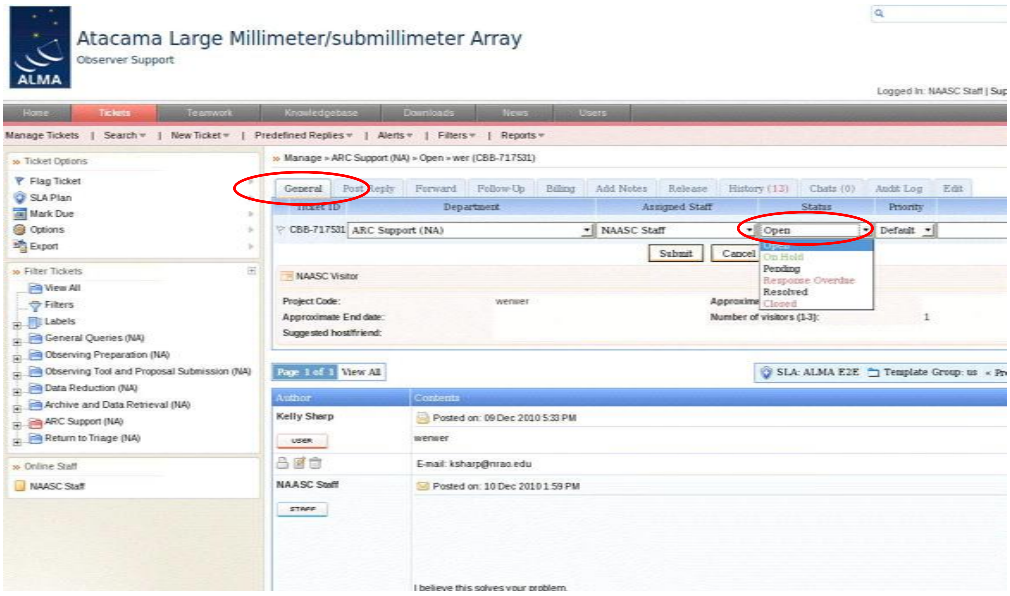


Figure 14: Changing the status of a ticket inside the "General" tab.

6.2 Changing the department of a ticket

Occasionally a USS will need to change the department of a ticket (for example, to Return to Triage). Clicking on the "General" tab allows the department of a ticket to be changed through clicking on the Department field in the ticket header (Figure 15).

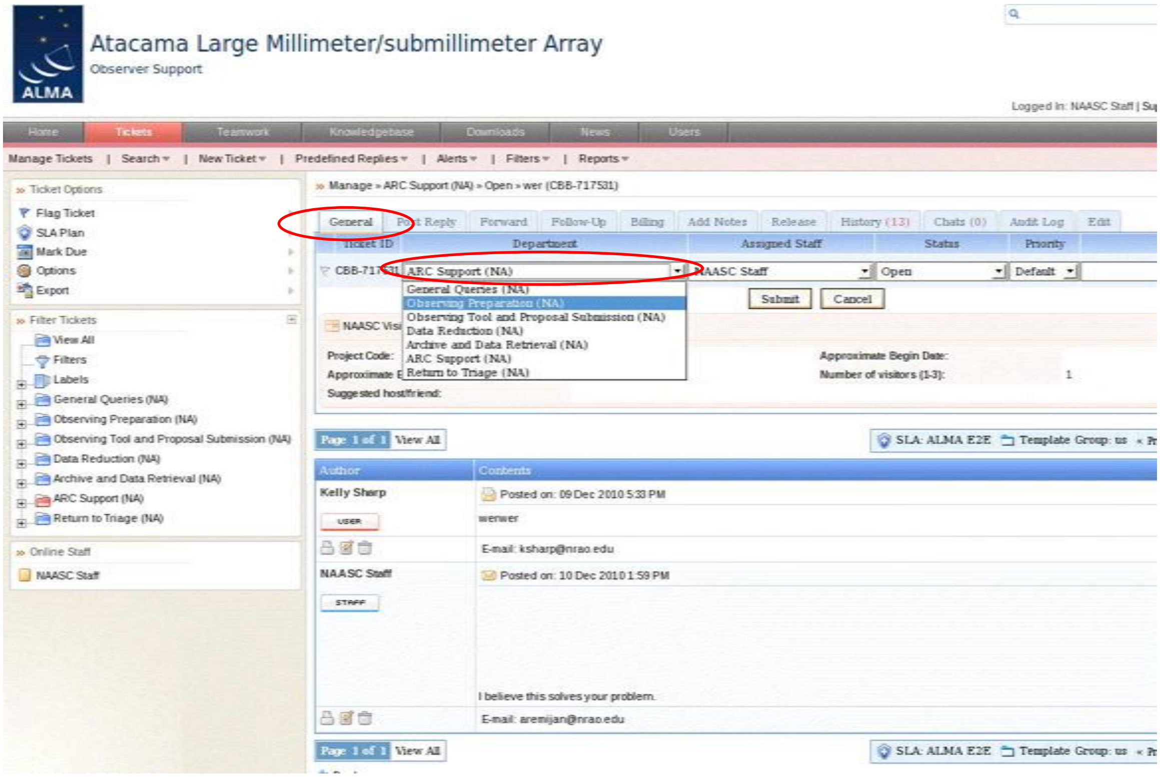


Figure 15: Changing the Department of a ticket inside the “General” tab.

6.3 Adding notes to tickets

Tickets may be annotated by a USS without these notes being visible to the user. Notes can be applied on a per-ticket basis (for example, to request the Triage USS to transfer to another ARC), or on a User basis (for example, to inform USS about issues with a particular user, e.g. a poor internet connection). The USS can also control whether the note is visible to all USS, or only a specific USS (for example, the helpdesk manager). To add a note to a ticket, select the ticket and click the “Add Notes” tab above the ticket header (Figure 16).

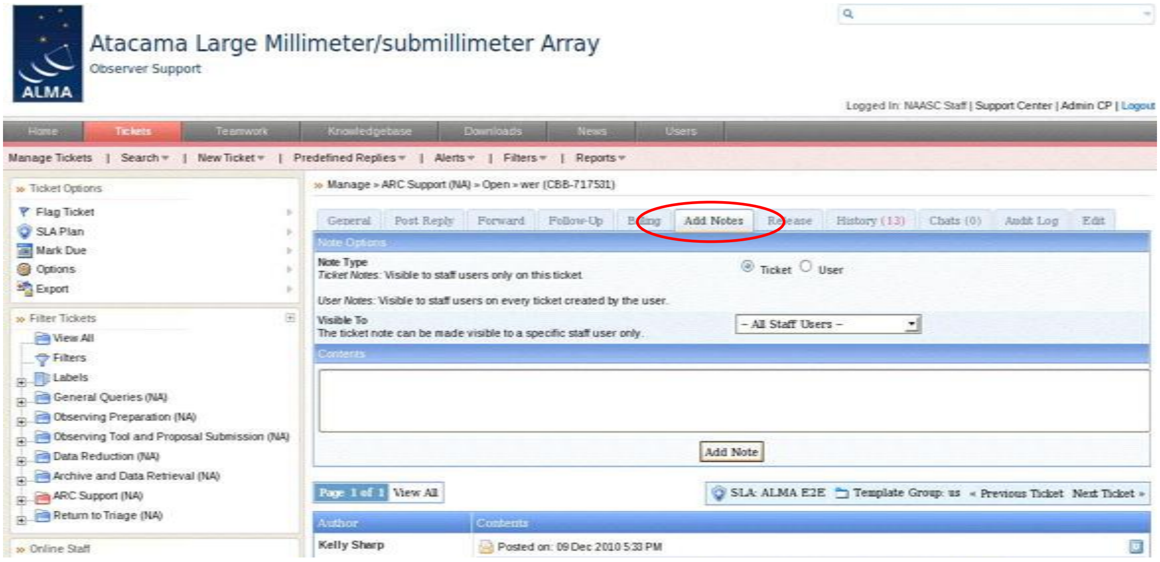


Figure 16: Adding a note to a ticket inside the "Add Notes" tab.

6.4 Forwarding tickets

Sometimes it is useful to be able to forward a ticket via email out of the Kayako system, for example, to solicit the help of an expert who does not have a Kayako account. To do this:

- click on the ticket subject and hit "Forward"
- Enter the email address of the intended recipient.
- The USS will probably also want to change their email address from the "do-not-reply" default to their actual address, which can be achieved by selecting their address on the pull-down menu on the "From" line.
- To place the body of the ticket in the email, plus any subsequent correspondence, click "Quote" and select "Quote all posts".
- The USS can then add any of their own comments and then hit "Send" to forward the ticket (Figure 17).

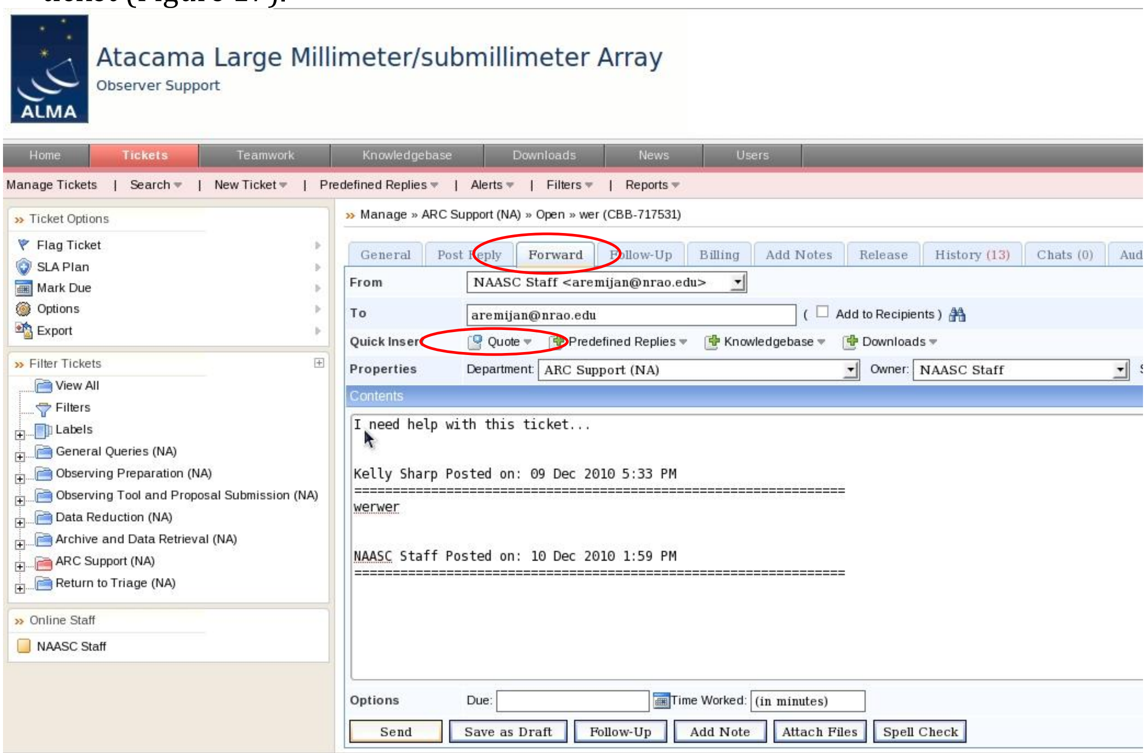


Figure 17: Forwarding a ticket to a user without a Kayako account inside the "Forward" tab.

6.5 Adding a knowledgebase article

If the resolution of a ticket is likely to be of general interest to the ALMA community, a knowledgebase article should be filed (Section 4.1, item 6). To do this, check the "+Knowledgebase" box to the lower right of the reply box (Section 6.1.2) before sending the reply to the user. This will take the USS to the Knowledgebase article editor directly, with the body of the ticket reply included. The article should be edited to remove any information that would identify the user, and should not include any information that the user might consider proprietary, for example, on specific astronomical sources. The subject and category of the article should also be entered before the article is inserted and before submission.

The USS should set the "Article Status" to DRAFT (Figure 18). Designated representatives from each ARC will then review the draft KB articles before they are published.

A knowledgebase article may also be added independently of the ticket reply by hitting the "Knowledgebase" tab on the top row of tabs, then "Insert Article" on the second row. For more specifics on the displaying the content of Knowledgebase articles, refer to Section 8.

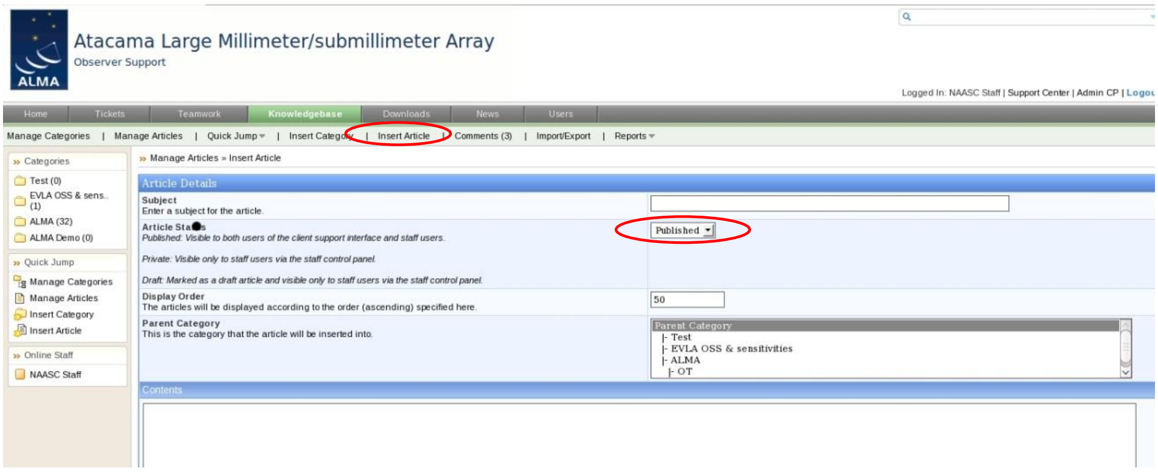


Figure 18: Adding a Knowledgebase article. The above view will be the same if you enter through the "Post Reply" tab and select the "+Knowledgebase" option.

6.6 Summary of Triage Workflow

In summary, the appropriate workflow for a Triage USS is the following:

1. Determine whether the ticket has been filed under the correct department and if not, change the department (Section 6.2).

2. Determine whether you are capable of resolving the ticket without further help from another USS or further input from the user. If so, assign the ticket to yourself (Section 6.1.2), respond to the user (Section 6.1.2) and change the ticket status to "Resolved" (Section 6.1.3). File a knowledgebase article if appropriate (Section 6.4).

3. If the ticket requires further information from the user (for example, operating system details), triage should assign the ticket to themselves, and send a response to the user requesting more details. The ticket status should be set to "Pending" while waiting for the reply from the user.

4. If triage does not believe they can resolve the ticket, the ticket should be assigned to another USS with the appropriate expertise. Triage should also assign tickets that report bug or enhancement requests to the appropriate USS who is the cognizant lead for that software subsystem.

5. If the ticket is best suited to a cross-ARC Department belonging to another ARC (Section 3), or returned to triage by the USS with a note (Section 6.3) requesting to send the ticket to another ARC, triage USS should set the department to "Transfer to ...." and send a reply to the user stating that the ticket is being forwarded to the new ARC in question. However, recall that the goal is to "transfer knowledge and not tickets", so the transfer of tickets between ARCs should be done sparingly and be contained to only tickets that require specialized expertise from a particular USS from another ARC (Section 1.2.2).

7) Procedure for responding to tickets - USS

By default, the USS will receive email notification of a ticket being assigned to them. NOTE: If you do NOT get an email notification, your alerts may not have been set up properly or may have returned to their default values. In this case, refer to Section 5.3 on what alerts should be set up for a USS.

The USS will login to the helpdesk (Section 5.1) (or click on the "new tickets since last login" link on the dashboard), view the ticket (Section 5.4.1), examine it (Section 6.1), and take the following actions:

1. Determine whether they are capable of resolving the ticket without further help from another ARC, or further input from the user. Respond to the user (Section 6.1.2) and change the ticket status to "resolved". They should file a knowledgebase article if appropriate (Section 6.5).

2. If the ticket requires further information from the user (for example, operating system details), a response should be sent to the user requesting this, and the ticket status set to "Pending" while the reply is being awaited (Section 6.1.3).

3. If the USS believes the ticket needs to be sent to another ARC (Section 3), they should change the department to "Return to Triage" (Section 6.2) and add a note to the ticket (Section 6.3) describing which ARC it should be sent and why.

4. If the USS is unable to respond to the ticket (for example, because they lack the specialized knowledge to do so, or because they are unavailable) the ticket should be returned to Triage (Section 6.2) with a note explaining why it was not answered, and recommending another USS to assign the ticket. This should only happen in exceptional circumstances, in general a USS should always attempt to answer the ticket themselves, if necessary by asking appropriate experts.

5. If the USS is the cognizant lead for a particular software subsystem, they should follow the workflow described in Section 4 and change the ticket status to either "Resolved" or "On Hold" depending on whether it is an enhancement request or bug fix, respectively.

8) Knowledgebase articles

Since the posts to individual tickets cannot be seen by users, the goal is to publish most of the non-trivial solutions to individual ticket solutions as Knowledgebase (KB) articles. KB articles can be searched by anyone at any time and do not require login to the helpdesk to be searched. The goal is that most queries could be answered if the KB articles are written appropriately.

In the process of submitting a helpdesk ticket, the user is dynamically searching KB articles as they are typing a question. As such, the subject line of the article should be indicative of the solution or in the form of a question and text of a KB article should be descriptive, including as many key words as possible that may be relevant to the article solution. The KB article also must be published in English and there should be no identifying information that a user may consider proprietary. Therefore, answers to tickets specific to individual sources may have to be made more general to be published as a KB article.

To ensure uniformity among KB articles, all USS should submit their KB articles with the "Article Status" option set to DRAFT (Section 6.5, Figure 18). This will post the article to the KB database but will NOT make it visible for general public viewing. These articles will be visible to other USS, Triage, the helpdesk manager and administrator. Each ARC is responsible for selecting a group of USS from their staff to moderate the submission of all KB articles before publication. These designated staff members will review the articles for clarity, scope and content ensuring that no proprietary or personal information is conveyed in the article. If there is any question to the information contained in the article, the USS should contact the initial user who submitted the ticket if the requisite information may be posted for public viewing. Once the designated KB staff member(s) agree the article is ready for public viewing, the "Article Status" option should be set to PUBLISHED at which point it will appear in the general KB article search off the main helpdesk page.

Finally, the helpdesk is set up to make all Knowledgebase articles public and visible to all ARCs. This should not be changed except in exceptional circumstances. Should it be required, however, to have a knowledgebase category only visible to a single ARC (perhaps for language reasons), it is possible to make new categories **(Knowledgebase →Insert Category)** and to adjust the visibility of this to the other ARCs by hitting "Customize" in the "Template Groups" item.

APPENDIX A:

In this section, we added screenshots for the user interface and entry forms for all departments in the ALMA helpdesk.

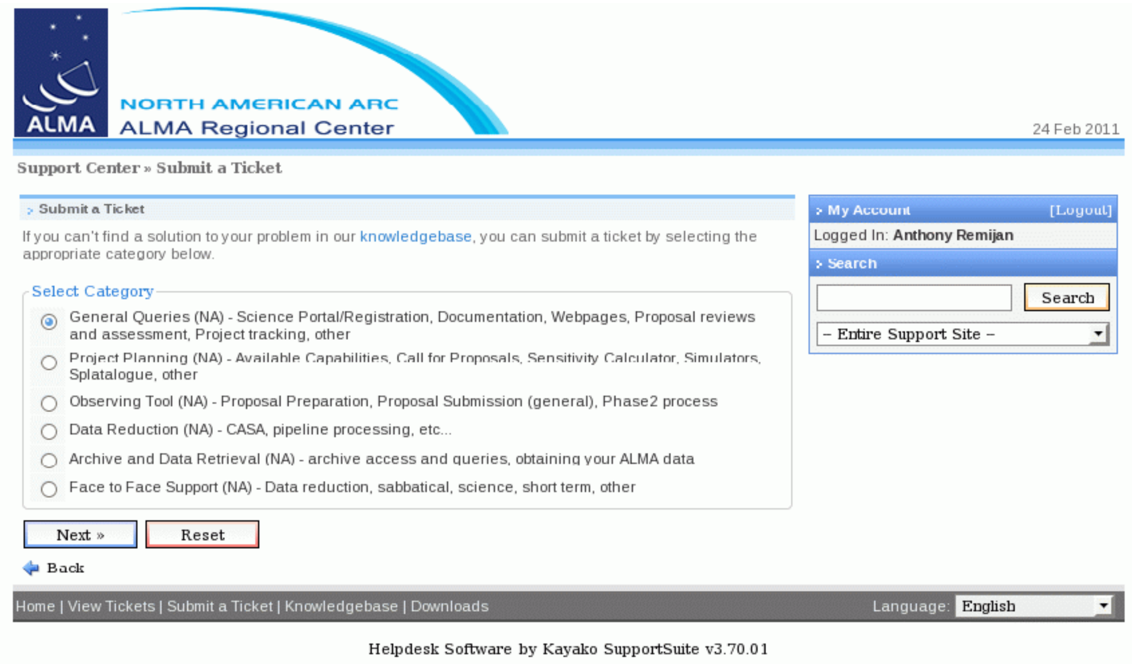


Figure A1. Logged in view of the departments of the helpdesk.

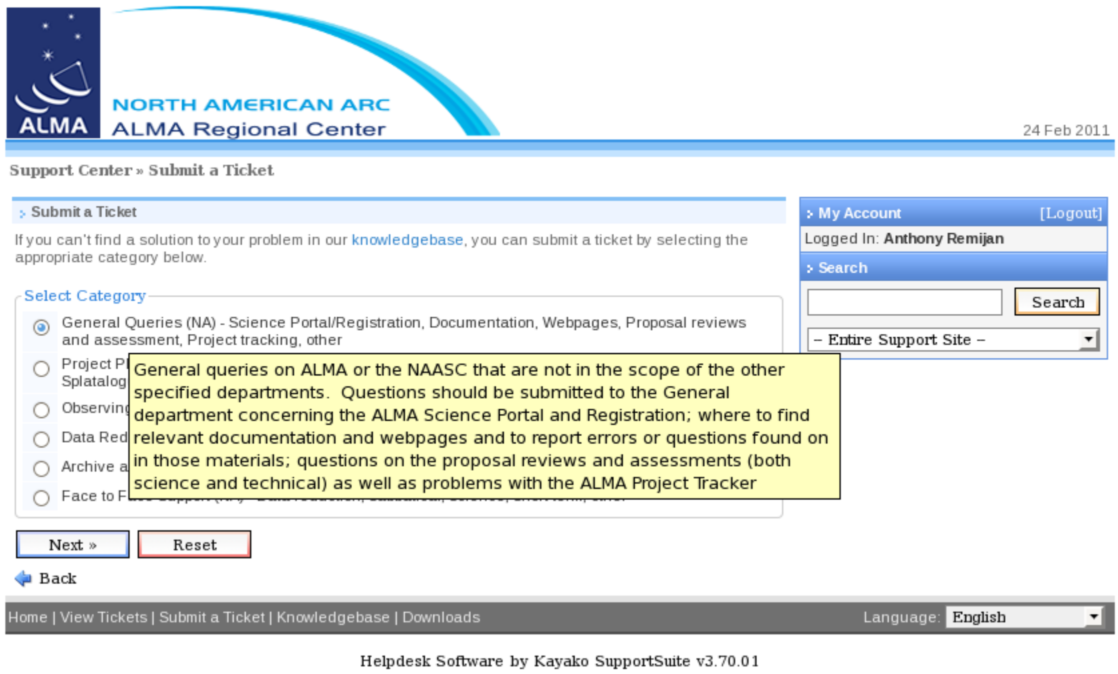


Figure A2. Mouseover “tool tip” view with the scope of the department.

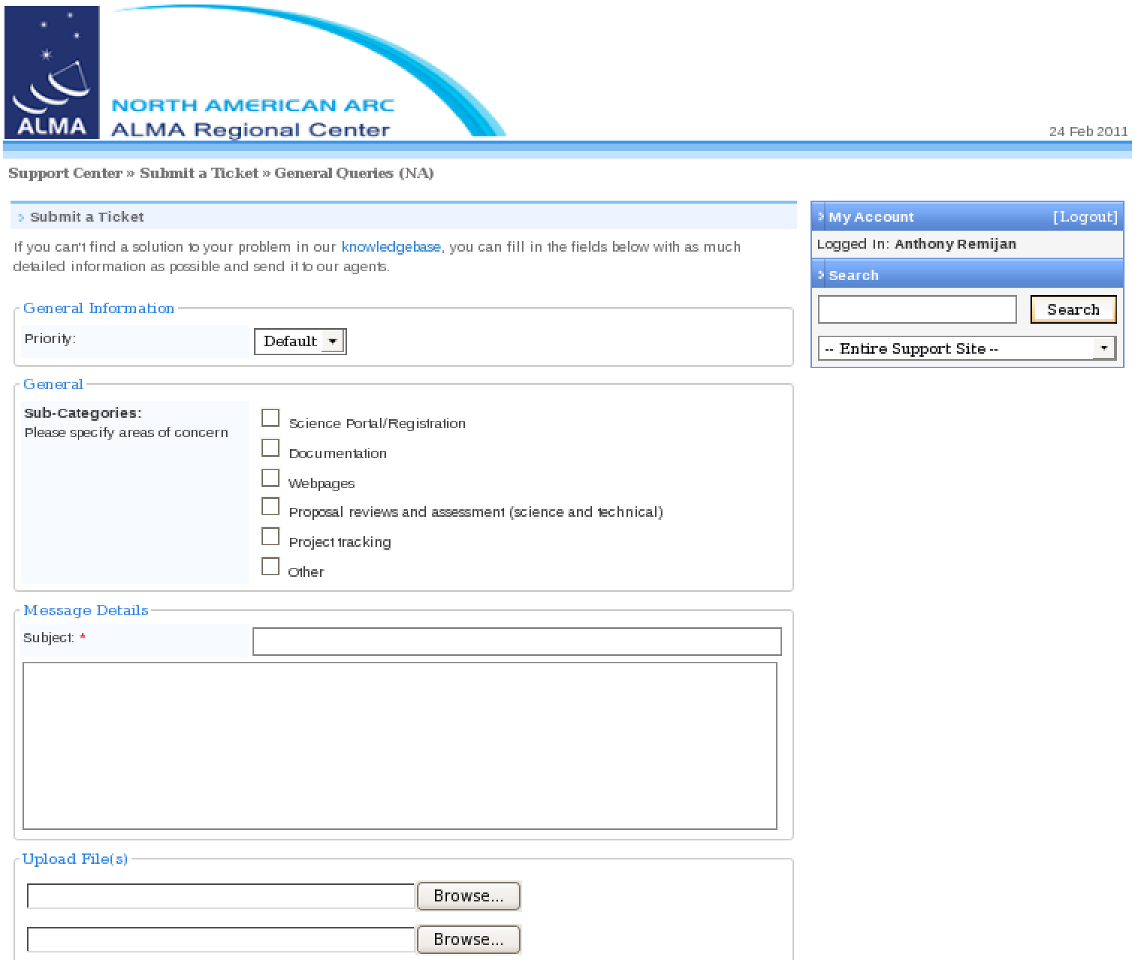


Figure A3. Entry form for the General Queries Department.

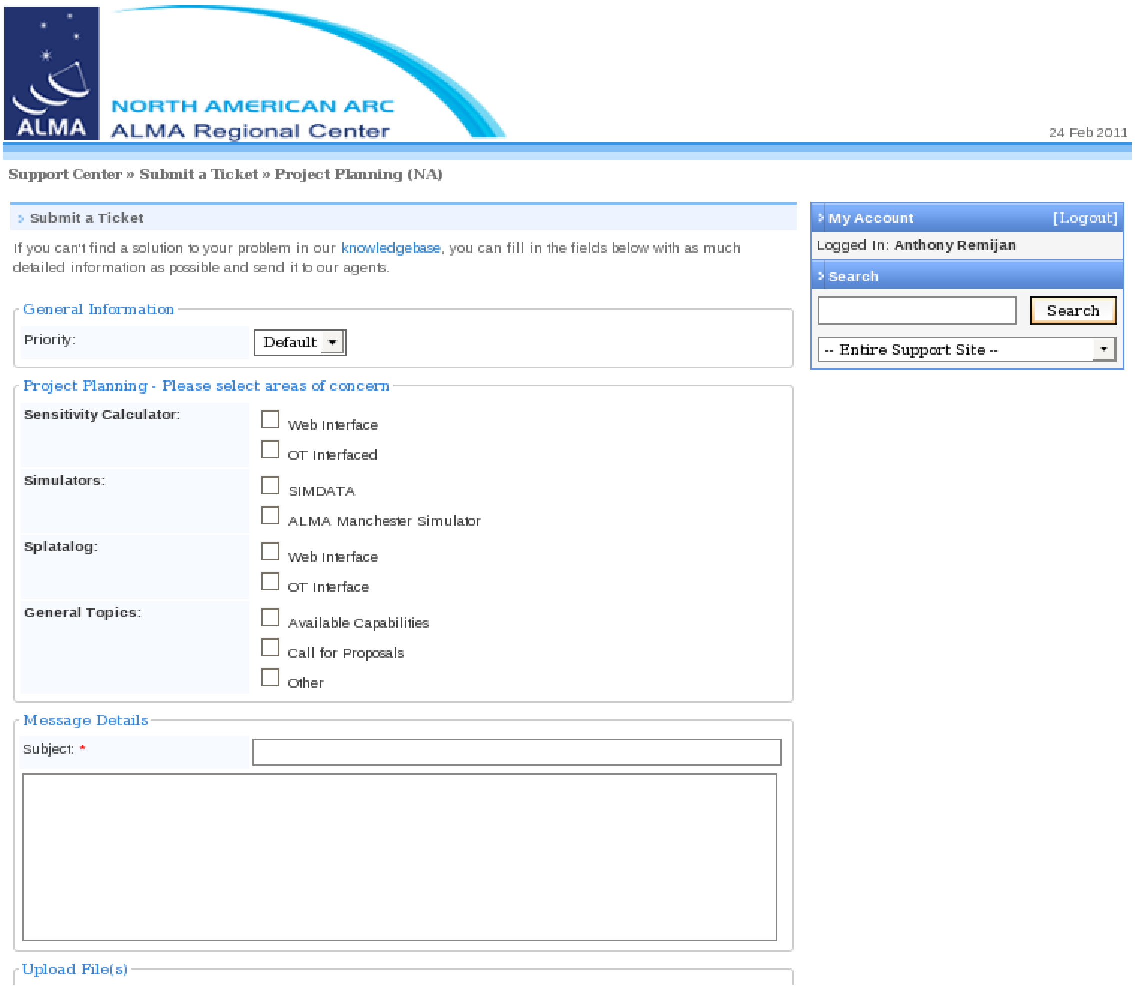


Figure A4. Entry form for the Project Planning Department.

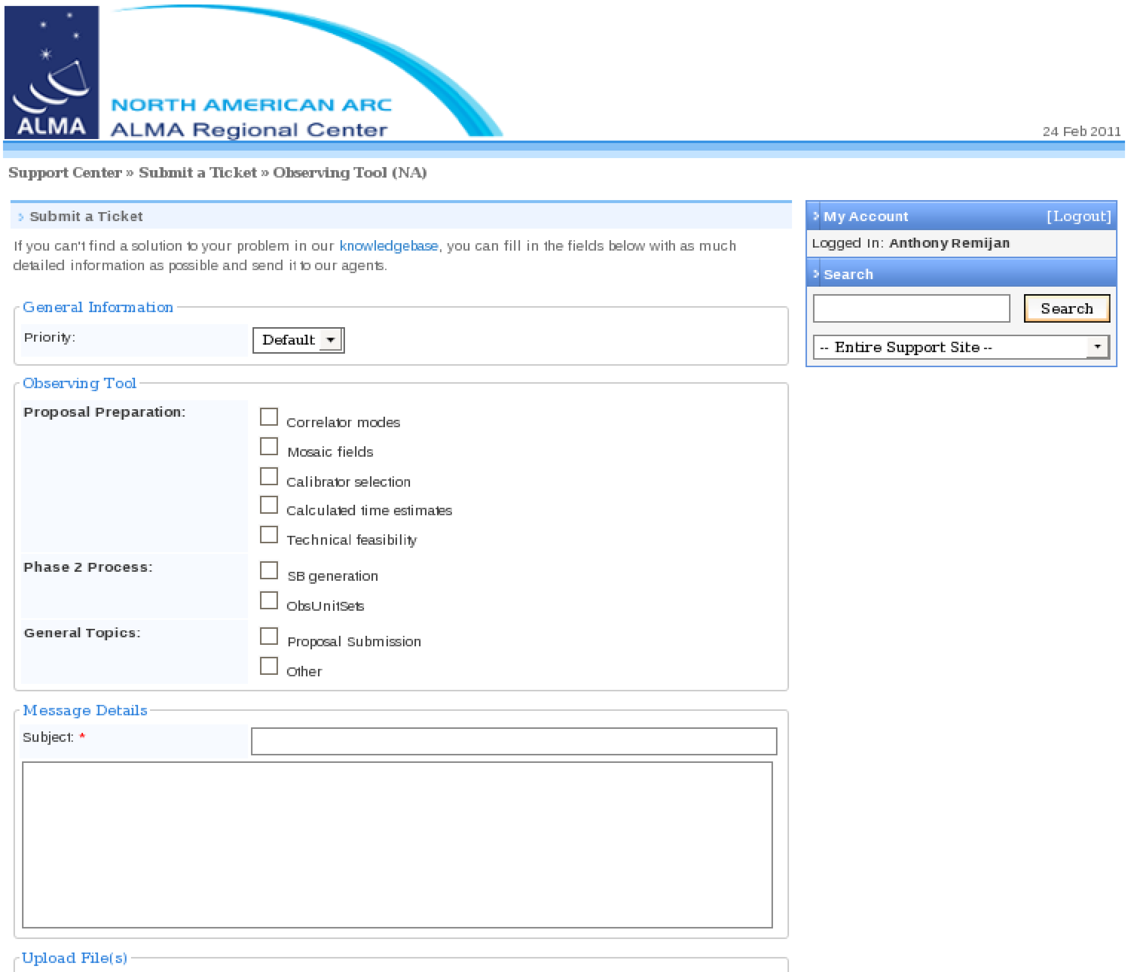
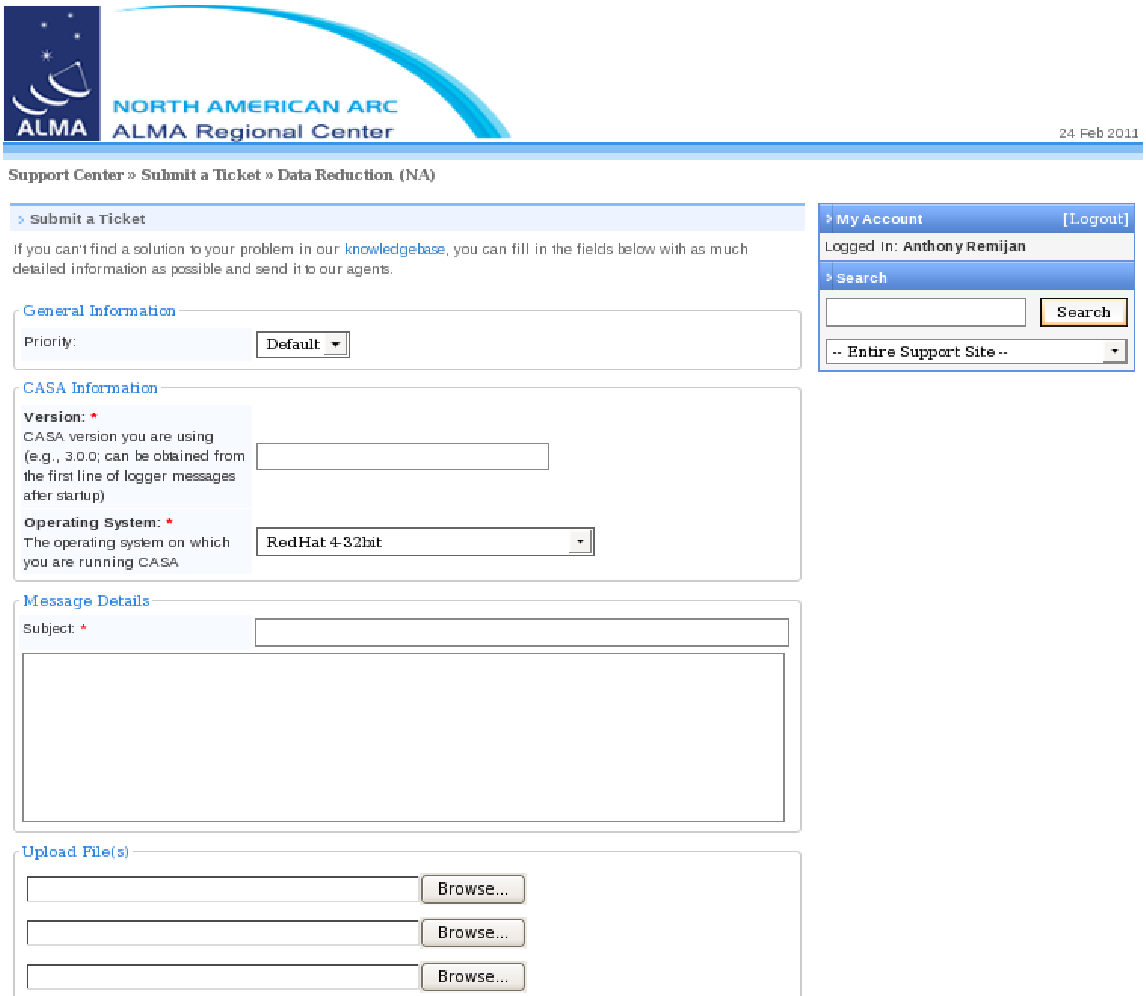


Figure A5. Entry form for the Observing Tool Department.


NORTH AMERICAN ARC
ALMA Regional Center
24 Feb 2011

Support Center » Submit a Ticket » Data Reduction (NA)

Submit a Ticket

If you can't find a solution to your problem in our knowledgebase, you can fill in the fields below with as much detailed information as possible and send it to our agents.

General Information

Priority: Default

CASA Information

Version: *
CASA version you are using (e.g., 3.0.0; can be obtained from the first line of logger messages after startup)

Operating System: *
The operating system on which you are running CASA
RedHat 4-32bit

Message Details

Subject: *

Upload File(s)

Browse...
Browse...
Browse...

My Account [Logout]
Logged In: **Anthony Remijan**

Search
Search
-- Entire Support Site --

Figure A6. Entry form for the Data Reduction Department.

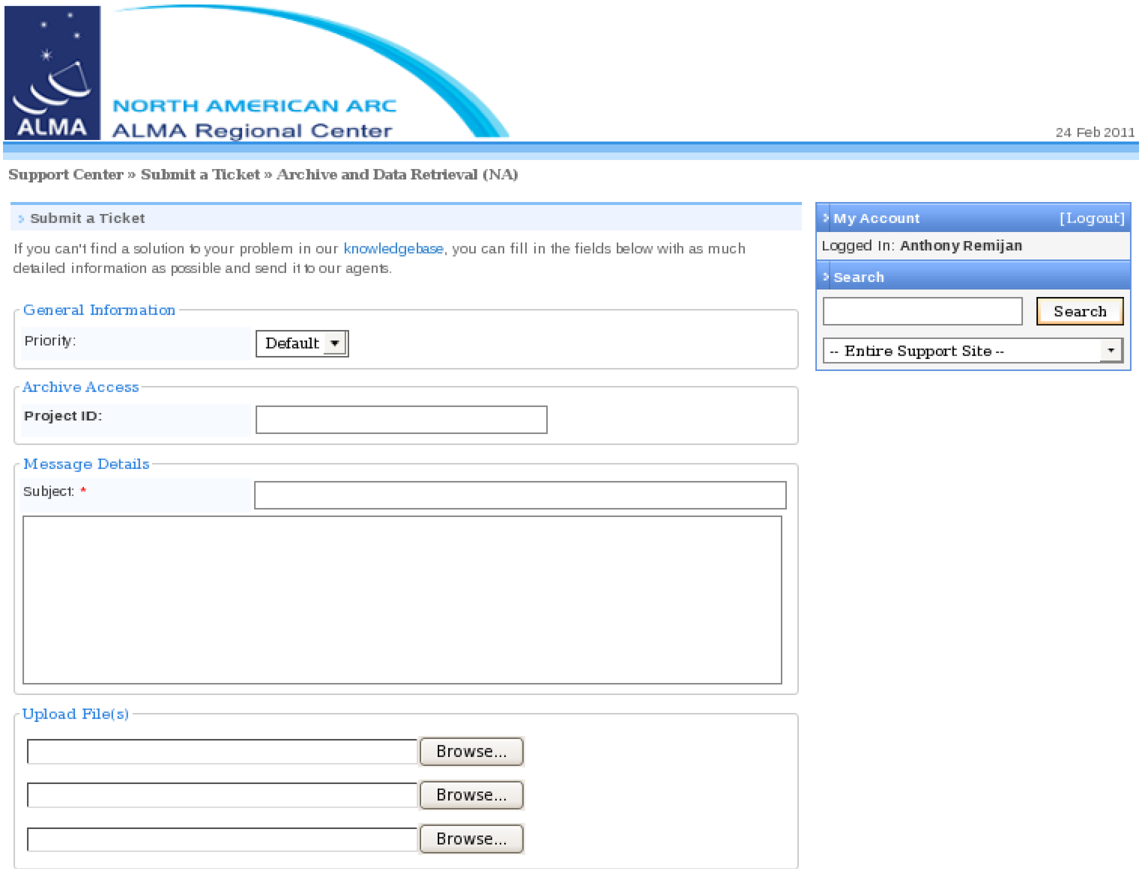


Figure A7. Entry form for the Archive and Data Retrival Department.

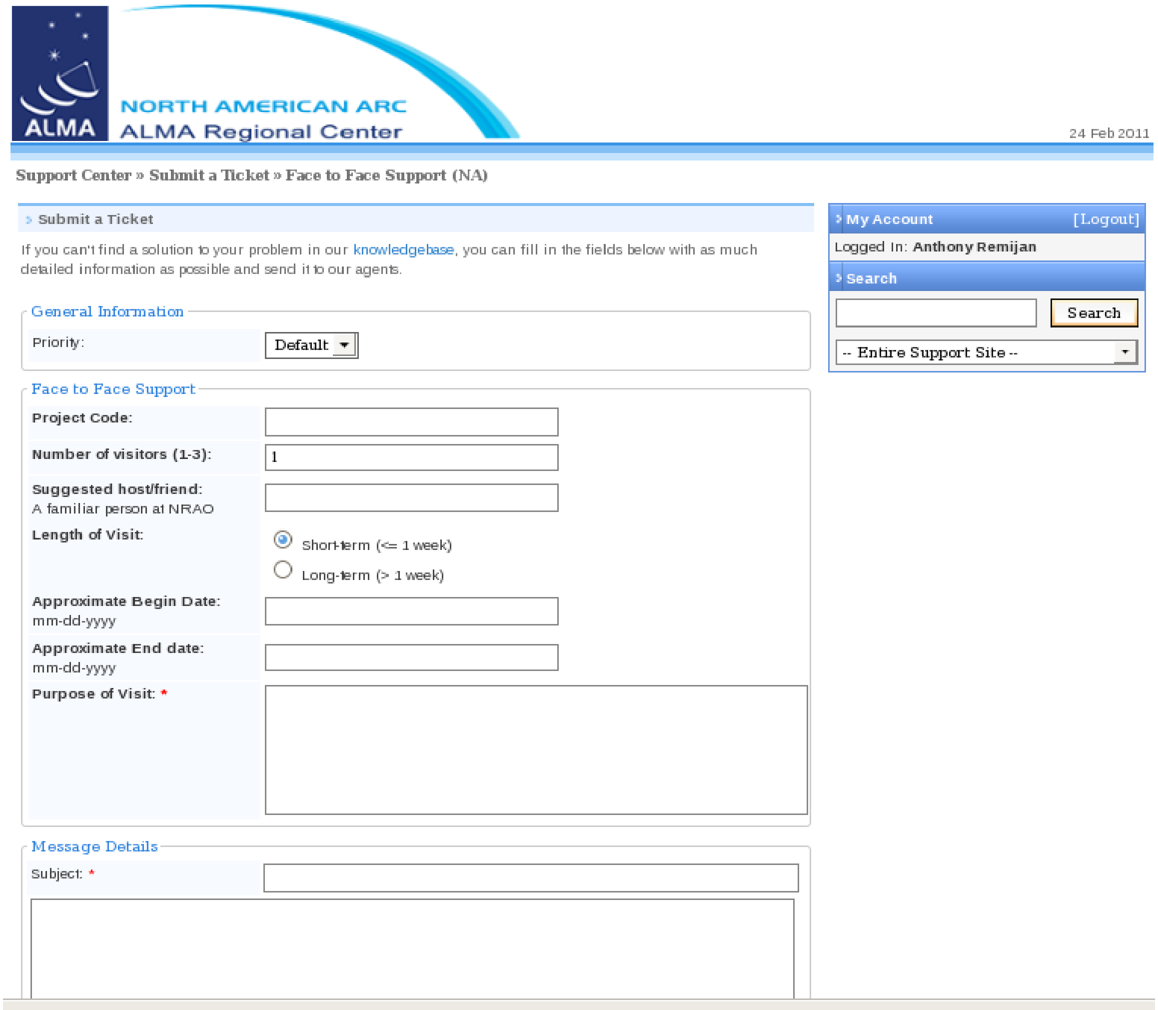


Figure A8. Entry form for the Face – to – Face Support Department.

APPENDIX B:

Checklist for USS in answering a submitted helpdesk ticket:

- ✓ Login to the helpdesk (Section 5.1) after you have received your email notification.
- ✓ View the ticket (Section 5.4.1)
- ✓ Examine it (Section 6.1) and take the following actions:
  - If you have enough information, "Post Reply" to the user (Section 6.1.2) and change the ticket status to "Resolved".
  - If you need more information from the user, change the ticket status to "Pending" when posting your reply (Section 6.1.3). Wait for the user to respond.
  - If you need to forward the ticket to someone outside the Kayako system, follow the procedure in Section 6.4 and make sure to "Quote" the ticket to send the contents of the correspondence.
  - If you believe the ticket needs to be sent to another ARC (Section 3), change the department to "Return to Triage" (Section 6.2) and add a note why.
  - If you are unable to respond to the ticket (for example, because you lack the specialized knowledge, or because you are unavailable) the ticket should be returned to Triage (Section 6.2) with a note explaining why.
  - If this is a Japanese language ticket transferred from the EA ARC, take the action as described in Section 3.1.
- ✓ While posting a reply, determine if the ticket warrants a knowledgebase article (Section 8). If so, post the article with the "Article Status" option set to DRAFT (Section 6.5, Figure 18). DO NOT Publish the ticket.
- ✓ If you are the cognizant lead for a particular software subsystem, you should follow the workflow described in Section 4 and change the ticket status to either "Resolved" or "On Hold" depending on whether it is an enhancement request or bug fix, respectively.
- ✓ Wash, Rinse, Repeat accordingly for all your tickets remembering that you have two working days to reply to an assigned ticket before the status changes to "Response Overdue".
- ✓ When you are finished, log out of the helpdesk and go do some science.

The Atacama Large Millimeter/submillimeter Array (ALMA), an international astronomy facility, is a partnership of Europe, North America and East Asia in cooperation with the Republic of Chile. ALMA is funded in Europe by the European Organization for Astronomical Research in the Southern Hemisphere (ESO), in North America by the U.S. National Science Foundation (NSF) in cooperation with the National Research Council of Canada (NRC) and the National Science Council of Taiwan (NSC) and in East Asia by the National Institutes of Natural Sciences (NINS) of Japan in cooperation with the Academia Sinica (AS) in Taiwan. ALMA construction and operations are led on behalf of Europe by ESO, on behalf of North America by the National Radio Astronomy Observatory (NRAO), which is managed by Associated Universities, Inc. (AUI) and on behalf of East Asia by the National Astronomical Observatory of Japan (NAOJ). The Joint ALMA Observatory (JAO) provides the unified leadership and management of the construction, commissioning and operation of ALMA.