



D4.1: Documentation & Help Desk (Including guide for end-users/organizations)

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Executive summary

All software developed through LoCloud has extensive technical API documentation as well as end-user documentation for applications with an end-user interface including the ingestion and mapping tool MINT, the metadata repository MORE, the lightweight digital library service LoCloud Collections and the Geocoding Application. Documentation is continuously being made available on the LoCloud support portal where it is edited in a Wiki.

The LoCloud help-desk is a contact point where LoCloud partners can submit questions and receive answers related to the services and applications that are being modified or created in the project. The help-desk is accessible through the support portal at the URL <http://support.locloud.eu> or can be entered directly through the URL <http://support.locloud.eu/osticket>

Practically, all technical partners in LoCloud staff the help-desk on a shared basis. PSNC, Athena RC/DCU and AVINET will be responsible for first-line support, i.e. quick response to questions related to usage of services and applications. The developers or owners of the various software packages will be responsible for responding to questions of a technical nature such as bug-reports, modification requests and similar.

Technically, the help-desk has been implemented as one of three components that together form the LoCloud support portal (D4.2). While the two are described as different deliverables in the LoCloud Description of Work, it was the joint assessment of the technical partners that it would give the best and most unambiguous result if all support-related materials were accessible through a single portal.

The help-desk software is osTicket, a popular and widely used open source product that is easy to implement and suitable to support the task. The software offers two user-interface perspectives. The first is for end-users who submit questions (called 'tickets'), check the status of tickets they have raised and receive feedback. The second perspective is for the technical partners (called 'agents') who are to respond to incoming tickets.

This deliverable describes the details related to the software, business process, and operation of the help-desk. It also includes a user-guide explaining how end-users and agents can perform their tasks.

The appendices include technical documentation for osTicket.

1. Introduction

All software and processes that are created, adapted or used during the execution of the LoCloud project, has extensive technical API documentation associated with it. Software applications that have an end-user interface also have end-user documentation showing how they may be used within the context of the LoCloud project.

In order to make it easy for partners to access this documentation, it is available through a Wiki that constitute the content publishing framework of the LoCloud support portal. The support portal itself with its various functions is described in D4.2 “Live Support Portal”. D4.2 also provides a simple overview of the documentation that is available as well as the project strategy to maintain and evolve it alongside the continuous improvement cycle of the software.

The LoCloud help-desk is part of the support mechanism in the LoCloud project that is operated by LoCloud partners: PSNC (Poland), Athena RC (Greece) and AVINET (Norway). According to the DoW, the help-desk was to be hosted by AVINET while the rest of the support services were to be hosted by DCU. The LoCloud technical partners assessed the benefits of an integrated environment to be preferable and decided that the entire platform would be hosted from WP4-leader PSNCs data centre.

The purpose of the help-desk is to help LoCloud partners to carry out their responsibilities towards the project in terms of executing the tasks involved in:

- Extraction of metadata
- Mapping to intermediate or target schemas using LoCloud MINT
- Ingesting into the LoCloud MORE repository
- Enriching metadata using the services and applications implemented in Work Package 3

Establishing a help-desk involves three important considerations:

1. Choosing and implementing a suitable software package to support information exchange and data-flow
2. Establishing a business process that is dimensioned to both the expected influx of support tickets as well as the resources available to staff the help-desk
3. Planning the staffing and operation plan for the help-desk to ensure that questions are responded to in accordance with an acceptable service level agreement (SLA)

The LoCloud help-desk forms part of the LoCloud support portal, which is described separately in deliverable D4.2, “Live Support Portal”.

2. Overview of LoCloud documentation

This section provides information on the software documentation sets that are available to LoCloud partners through the LoCloud support portal. The portal itself is described in greater detail in D4.2 and is publicly accessible via the Internet at the URL: <http://support.locloud.eu/>

Formal documentation is of course only part of the support mechanism; in addition to reading documents it is possible to ask private questions through the help-desk (described in sections 3-6 below) or interact with the LoCloud community via a publicly accessible frequently asked questions module (described in D4.2).

Interactive documentation

In a project like LoCloud with seven different services and applications being developed or customized in parallel, it is challenging to keep the end-user documentation current at all times.

API documents may sometimes be auto-generated based on systematic commenting of source code and is therefore easier to keep up to date but it is a recurring issue in the software development community that documentation is not kept current, resulting in undocumented or wrongly documented API functions.

With these two observations in mind, the technical partners found it important to make documentation available in a manner that permits end-users to interact with it. This is done by putting all the documentation sets into a Wiki where it may be edited and contributed to by the collective effort of technicians and end-users alike.

This will secure that the overall quality of the documentation gets better and that any issues are quickly identified and can be corrected accordingly.

Currently available documentation sets

There are seven key services and applications described in the LoCloud Description of Work. This section briefly describes each service, provides a URL to the relevant page at the support portal where detailed documentation and support options are described. Each service or application is also cross-referenced to the corresponding WP3 deliverable that includes a snapshot of the documentation at time of submission as well as an explanation of the rationale and development methodology employed.

Metadata enrichment services

The enrichment service is a Web Service API that

1. Process input records in standard metadata formats and outputs links to relevant background resources from Wikipedia. This API may be implemented by applications that loop through metadata records for existing collections in order to look up additional contextual resources.
2. Process input records and match them to entries in a provided vocabulary – making it possible to link heterogeneous content to a common semantic structure that will facilitate exploratory browsing.

There is no end-user interface for these two services. They are implemented as REST Web Services. The technical documentation is suitable for parties who would like to implement the services in their own applications.

Documentation URL: <http://support.locloud.eu/LoCloud%20Enrichment%20Microservice>

Deliverable: D3.3 «Metadata Enrichment Services»

Geolocation enrichment tools

The geolocation enrichment tools consist of two parts: (1) a geolocation API (LoGeo) that provides geographical names search capabilities towards a variety of internal and external sources via a REST API and (2) a geocoding application that permits end-users to add high-resolution geolocations to non-spatial metadata records in a web based crowd-sourcing environment.

The API documentation is suitable for implementing the geolocation API in 3rd party applications whereas the geocoding application documentation is suitable for accessing and using the application to execute geocoding projects.

Documentation URL: <http://support.locloud.eu/Geolocation%20Enrichment%20Tools>

Deliverable: D3.2 «Geolocation enrichment tools»

Historical placenames service

The historical placenames service (HPN) is a complete system for collecting and managing placenames that are no longer “valid” forms of names - but that are widely referenced in cultural heritage sources. The HPN also includes an API for looking up names and locations based on historical geographical references.

Documentation URL:

<http://support.locloud.eu/LoCloud%20Historical%20Placenames%20Microservice>

Deliverable: D3.5 “Historic place names service”

LoCloud Collections (lightweight digital library service)

This Software as a Service application is a modified and customized version of the open source CMS Omeka that permits small institutions to build their own interactive digital libraries “in the cloud” without the necessity for locally installed software or hardware beyond a PC and an internet connection.

Documentation URL:

<http://support.locloud.eu/LoCloud%20Lightweight%20Digital%20Library%20Service>

Deliverable: D2.5 (forthcoming, due month 21)

MINT (ingestion tool)

MINT is a tool that has been developed over time through a number of Europeana projects and that has been brought into LoCloud for:

1. further refinement and;
2. to support the content provider partners’ metadata mapping and ingestion process.

MINT is two things: it is an end-user application with a graphical user interface that simplifies complex cross-mapping tasks between different metadata schemas. MINT also exposes an API that permits a remote client to execute data and mapping functions via REST Web Services.

Both the end-user application and the API are documented on the support portal.

Documentation URL: <http://support.locloud.eu/MINT>

Deliverable: D2.2 “Modified MINT prototype”

MORE (repository)

MoRe is the LoCloud repository and has been developed as a cloud-based system in LoCloud following experience gained in several Europeana projects. The majority of LoCloud content will be ingested into Europeana via MoRe.

In addition to being a repository management application, MoRe also exposes a variety of useful API functions for data-access. It exposes harvesting interfaces that permit Europeana to ingest content from it – and it exposes methods that permit read/write access to metadata resources that are (temporarily) stored in the repository. This is one of the key integration points between the micro services and the content-flow from provider to Europeana.

Both the end-user application and the API are documented in detail at the URL below and in the referenced deliverable from WP2.

Documentation URL: <http://support.locloud.eu/MORE>

Deliverable: D2.3 “Modified MoRe (LoCloud) Aggregator Prototype”

Vocabulary service

The LoCloud vocabulary service is a customization of the software TremaTres, an open source vocabulary server and web application that handles both vocabularies, thesauri, taxonomies and other formal representation of knowledge classification systems.

The vocabulary services expose an API that can be used for the integration of the vocabularies into remote 3rd party systems. Similarly, the API permits integrate of remotely stored concepts into the vocabulary tool. The webservice API has been extended for the express purpose of LoCloud and detailed documentation about the service can be found at the link below.

Documentation URL: <http://support.locloud.eu/LoCloud%20Vocabulary%20Microservice>

Deliverable: D3.4 «Vocabulary services»

Additional documentation resources

As the project gathers experience from the user-testing activities, additional information will be added to the Wiki continuously. Examples of documentation types that will be added include, but is not limited to, the following:

- Modification and extension of existing documentation
- Documentation for additional (3rd party) supporting tools and utilities
- Workflows and business process documentation

3. Help-desk software

The Help-desk provides a support mechanism for partners to complement the documentation. As described in the introduction implementing such a mechanism requires three different considerations. This section describes the software package chosen to support the operation of the help-desk and to serve as the gateway for asking questions and receiving answers: osTicket.

osTicket is a popular and widely used open-source support-ticket software that is powerful, robust and easy to setup and use. In osTicket, users are divided into two groups:

- External end-*users* who raises support tickets
- Help-desk staff *agents* who respond to support tickets

This deliverable employs the same terminology to distinguish between those who ask questions via the help-desk and those who respond to the questions.

Key features of osTicket includes:

Custom fields

Fields in the ticket reporting system can be customized to include metadata that are relevant to LoCloud. Metadata can be optional and can be specific to a help topic. I.e. a support ticket for the Geolocation Enrichment Tools can have different metadata than a support ticket for metadata mapping.

Rich Text HTML

Rich text or HTML email is supported. This allows for rich text markup in staff replies as well as in internal notes posted to the ticket thread. It is easy to author feature-rich replies including screenshots explaining how to execute a specific task.

Ticket Filters

It is possible to define rules that permits incoming tickets to be routed to the appropriate help-desk support staff, i.e. support tickets for the vocabulary service will be routed to AIT who are responsible for this service whereas support tickets for the enrichment service will be routed to UPV/EHU who is responsible for the development of that service.

Help Topics

Support tickets can be associated to help topics. This means that incoming support requests do not end up in a “single bag” but can be pre-sorted and distributed according to the ticket filters described, above.

Agent Collision Avoidance

Ticket can be locked so that once one help-desk staff member has started to prepare a response another staff member does not start working on the same ticket. If a lock by accident is left in, an expiry time will elapse and it will again be open for other agents to respond.

Assign and Transfer

If a ticket has been routed to a specific organization but another would be better suited to reply to it, tickets can be transferred. A ticket does not have to be assigned to a specific user – it can also be assigned to a group or team.

The assignment and re-assignment history of a support ticket is maintained and can be audited so that this facility does not become a way to delay or avoid complicated support requests.

Auto-Responder

Whenever a support ticket is raised, an automatic reply will be issued that informs the end-user that the ticket has been received and will be picked up by a help-desk agent within a given period of time.

Internal Notes

It is possible to add incremental, internal notes to support tickets that add context to the requests. This is useful when several agents are required to partake to provide a resolution to the support issue.

Service Level Agreements

It is possible to configure service level agreements into the system and use this as an automatic monitoring mechanism to aid in prioritization and processing order for received support tickets.

Customer Portal

A simple user interface exists whereby a user can verify the status of his or her support request by providing the ticket-number.

Dashboard Reports

For help-desk agents and the task-leader (AVINET), a dashboard exists where the status of the help-desk operation may be monitored. Based on the information derived from this dashboard it is possible to instigate corrective action if necessary.

Implementation in LoCloud

The osTicket support ticket management system has been installed and linked as part of the LoCloud Live Support Portal

- Link: <http://support.locloud.eu>

4. Help-desk business process

Having implemented the software solution for the help-desk, the next step is to identify and describe a business process for the operation of it. The chosen process is shown in Figure 1: LoCloud help-desk business process:

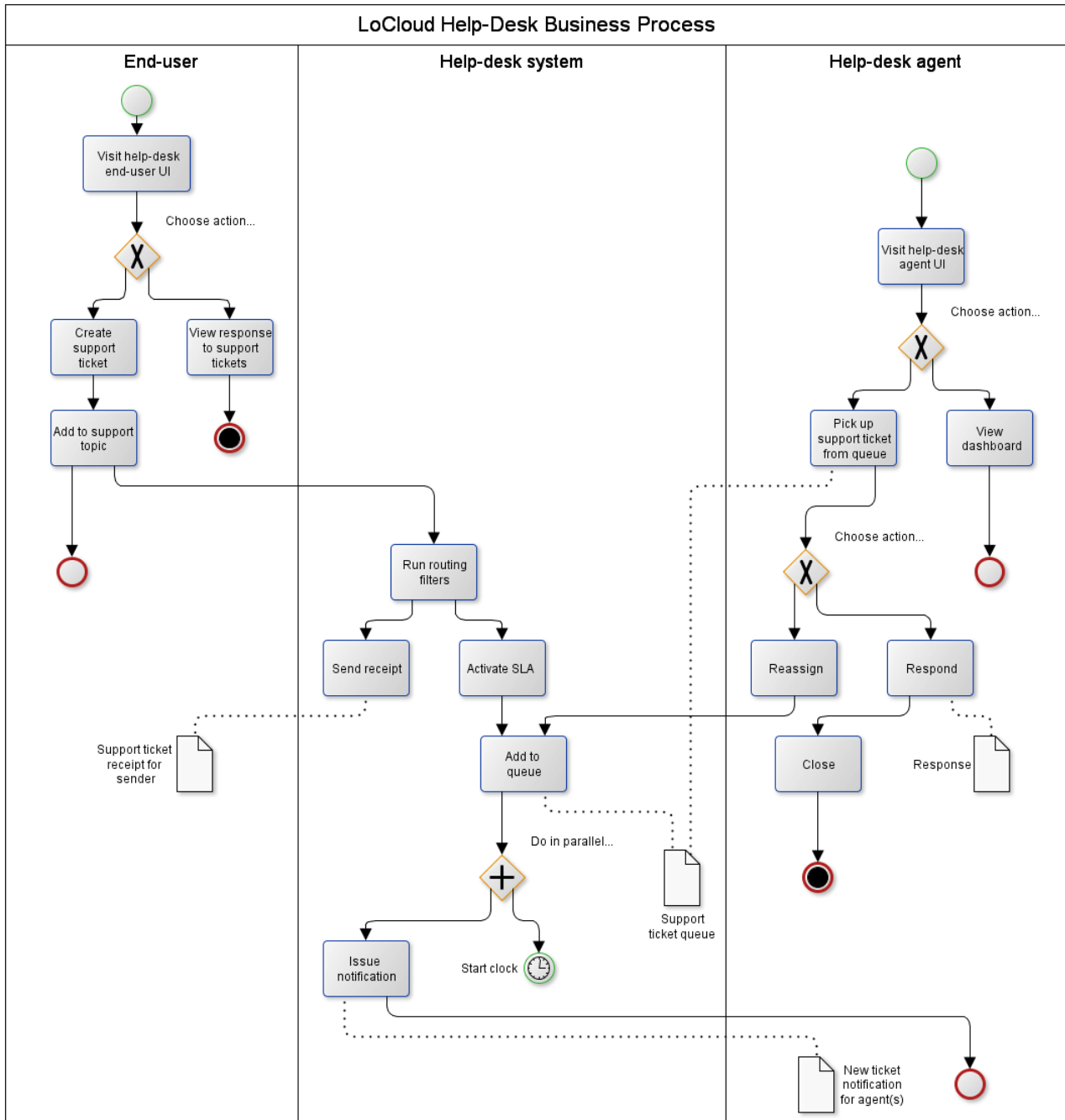


Figure 1: LoCloud help-desk business process

In the diagram above, each of columns is a swim-lane and represents the actions/tasks that are to be executed by a specific group of actors or systems. The left swim-lane is for end-users, the middle swim-lane is for system-level functions whereas the right swim-lane is for help-desk agents.

End-user activities

From the perspective of the end-user, the process is very simple.

- Visit the help-desk portal at <http://support.locloud.eu/osticket>
 - Submit a support ticket or...
 - See response to or status for existing support tickets

The end-user will receive a receipt by email whenever he or she submits a support ticket. Likewise, the user will receive an email whenever the status of the support ticket is updated and when a response is available.

System level activities

Using all the features of the osTicket software as described in Chapter 2, the system will manage the flow of information from the end-user to the ticketing system and among the help-desk agents until the support ticket has been resolved.

The system will manage the SLA considerations and queues as well as taking care of sending notifications at the appropriate event triggers.

Help-desk agent activities

From the perspective of the help-desk agents, things are also quite simple, albeit a few more choices are available than for end-users.

The help-desk agents are notified of incoming support tickets by email and do not have to visit the help-desk system very frequently unless they have received prior notice to do so. Agents use a different login screen and a different user interface than end-users and once logged in have several options.

The two most important options are outlined in the diagram:

1. Picking up and processing a support request from the ticket queue
 - a. A ticket can either be responded to;
 - b. It can be rejected;
 - c. It can be reassigned to another user
2. Studying reports in the help-desk dashboard
 - a. It is possible to see the status of all support operations quantified into various reports
 - b. It is possible to see overdue requests that need to be given particular priority
 - c. It is possible to see productivity numbers for help-desk staff

5. Help desk operation

Having determined both the software system to power the help-desk as well as the business process by which it will be operated the remaining step of establishing the help-desk was to make the necessary arrangements for the operation. Six main considerations were taken into account for the operation of the help desk; these are described and explained in detail below.

The help-desk must appear to be part of the live support portal

While big in terms of project partners, LoCloud is small in terms of users. The volume of users versus the number of services and applications is very low and it is therefore necessary to make the help-desk and support mechanism as compact as possible.

The easiest way to do this was perceived to be to integrate the help-desk as part of the main navigation toolbar in the support portal (see D4.2 “Live Support Portal”) and to co-brand the tools so that they appear to belong to the same system for end-users.

Only questions of a specific nature shall be handled through the help-desk

In the technical partners’ experience, many questions are of a generic and recurring nature. Instead of handling these questions only within the help-desk such questions will be transferred to the Question and Answer section of the support portal: <https://support.locloud.eu/qna/>.

This way should mean that answers do not need to be give to the same questions repeatedly, reducing the workload for help-desk staff and freeing up resources for new support tickets about specific issues. Answers in the Q&A system will be indexed by search engines; this may yield direct hits from regular mainstream search engines.

First-line support is the responsibility of technical partners

All technical partners will follow the training workshops in the fall of 2014 and will be able to use all LoCloud services and applications on a basic level. It is therefore envisaged that the technical partners who on a shared basis staff the support portal will be able to provide first-line support to users who have basic problems with services or applications.

Service and application support is the responsibility of the technology providers/developers

When support tickets require specific insight into the inner workings of services and applications, i.e. intimate knowledge of program code etc., it is the responsibility of the individual technology provider to answer support tickets.

In these events, help-desk agents will forward the support requests to the relevant partners and these will have to pick up and respond to the tickets using the agent user interface.

Content related support requires the involvement of heritage professionals from the consortium

If support requests are related to issues that require deep insight into source-schemas and interpretation that require experience from heritage professionals, it is the collective responsibility of all LoCloud partners to share their knowledge on such matters.

In these events, help-desk agents will forward the support requests to the relevant partners, collect feedback and respond to the ticket – or put the end-user who raised the ticket in direct contact with the LoCloud partner(s) who have knowledge to share.

SLA must be determined based on project need and help-desk staff capacity alike

Revisiting the first consideration, the LoCloud help desk operationalized bearing in mind that we have:

- A small quantity of organizations: ~30
- A large quantity of services and applications: ~7
- A small quantity of (part-time) staff resources: ~6

The conclusion from looking at the above facts is that it is not possible to offer a service level agreement (SLA) that promises instant responses to questions.

Technical partners assess 2 working days for initial response as a manageable, yet ambitious, time-target for addressing incoming support tickets.

6. User guide

The following section includes a user-guide for end-users and help-desk agents.

Support Ticket System

Introduction

A fundamental part of the LoCloud Help Desk is a support ticket system. This ticket system is based on a popular open source ticket system osTicket¹ with many features. In the ticket system users can submit questions and requests for support. Each request is automatically directed to the most appropriate person to answer and is assigned with a unique ticket number, which can be used to further track the progress or the request. Requests are private and can be viewed only by the user that submitted them and the support staff. The complete request archive is also available to the user for future reference. The support ticket system can be accessed through the following URL "<http://support.locloud.eu/osticket/>".

For end-users

Registration

The first step to using the support ticket system is to register for a new account. This can be done by clicking the "Sign In" link on the top right side of the screen and then clicking the "Create an account" link, or by following this URL

["http://support.locloud.eu/osticket/account.php?do=create"](http://support.locloud.eu/osticket/account.php?do=create) (See Figure 2: Registration form).

In the registration form the user must fill in a valid email address, state their full name and time zone preference and finally a password. A confirmation email is sent to the email address the user defined upon submission, containing a link to activate the new user account. As soon as the confirmation link is followed the user account is confirmed and activated and the user may start using the support ticket system.

¹ <http://osticket.com/>

Account Registration

Use the forms below to create or update the information we have on file for your account

Contact Information

Email Address: *

Full Name: *

Phone Number: Ext:

Preferences

Time Zone: ▼

Daylight Saving: Observe daylight saving (Current Time: 28.08.2014 01:10)

Access Credentials

Create a Password:

Confirm New Password:

Figure 2: Registration form

Support Tickets

The main functionality a user can perform in the support ticket system is to create new tickets or view the development of older ones. There are two main actions a user can perform inside the support ticket system: (1) open a new ticket and; (2) check ticket status. The general workflow is the following:

1. A user creates a new ticket
2. The ticket is automatically assigned to a staff member
3. The staff member posts a reply
 - a. If the reply is a request for more explanations regarding the issue the ticket remains open
 - b. If the reply is addressing the issue and no further action is needed the staff member may close the ticket
4. All tickets are available to the user for future reference

In general a new ticket is a support request and contains a detailed description of a problem. This ticket is automatically assigned to a specific staff group or staff member that is appropriate to address it. A support request may be a thread of responses as the staff may need clarifications about the issue. The ticket remains open until the support request is successfully addressed.

Open New Ticket

In order to open a new ticket the user may follow the “Open A New Ticket” link from the support ticket system homepage or from the navigation menu or follow this URL

“<http://support.locloud.eu/osticket/open.php>” (Figure 3: Open New Ticket Form).

In order to submit a new ticket the user must provide the following information:

Help Topic: In this field the user must choose from a drop down list of possible help topics. This selection is really important as based on it the ticket will be directed to the appropriate support staff.

Issue Summary: Contains a short description about the support request.

Issue Details: Contains the full description of the issue that lead to the support request. It is important to complete this field with as much and as clear information as possible, as this will help the support staff to address the user’s issue better.

Attachments: A user may also upload an attachment for this issue, e.g. a screenshot showing when the problem occurred.

When this form is submitted the new ticket is created and assigned to the appropriate staff member for review.

Open a New Ticket

Please fill in the form below to open a new ticket.

Help Topic: *

Email: s.angelis@dcu.gr
Client: Stavros Angelis

Ticket Details

Please Describe Your Issue

Issue Summary: *

Issue Details:

Rich text editor toolbar: <> Bold Italic Underline Undo Redo Bulleted List Numbered List Decrease Indent Increase Indent Image Video Table Link Unlink Text Color Background Color

Details on the reason(s) for opening the ticket.

Attachments: No file chosen

Figure 3: Open New Ticket Form

Check Ticket Status

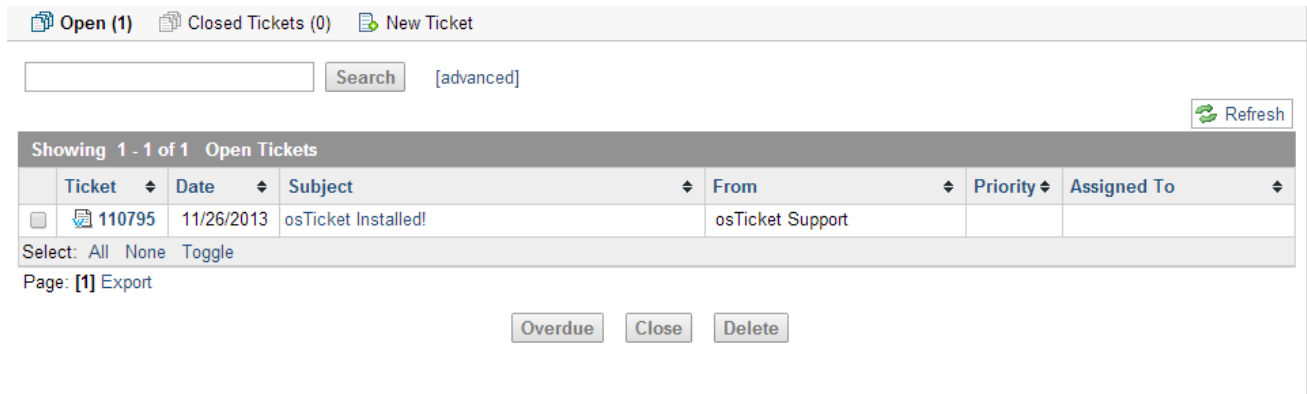
This functionality may be accessed by the “Check Ticket Status” from the homepage or through the following URL “<http://support.locloud.eu/osticket/view.php>”. In this case the user may supply (1) the email address used on registration and; (2) the ticket number and an email will be sent to the user containing a link to the appropriate ticket.

For help-desk agents

The support ticket system includes an administration panel for help-desk agents. Through the control panel, help-desk agents can view and respond to incoming support request tickets. The administration panel can be accessed through the following URL “<http://support.locloud.eu/osticket/scp/login.php>”. User accounts for help-desk agents are created by the system administrator. Every help-desk agent is assigned to an appropriate support group in order to receive only tickets relative to their expertise.

Tickets

The main functionality for a help-desk agent is to address tickets. Once help-desk agents log in the administration panel they are presented with a list of all pending tickets (Figure 4: Open Tickets). In this list the help-desk agent may view the ticket number, the date it was submitted, the Subject of the ticket, who submitted the ticket, if the ticket has taken priority and if it is assigned to a specific group. Also the help-desk agent may export this list as a csv file by clicking the “Export” link at the bottom of the page. Also, the help-desk agent can navigate to the closed tickets or open a new one via the navigation menu.



The screenshot shows a web interface for managing tickets. At the top, there are navigation links: "Open (1)", "Closed Tickets (0)", and "New Ticket". Below this is a search bar with a "Search" button and a "[advanced]" link. A "Refresh" button is located in the top right corner. The main content area displays "Showing 1 - 1 of 1 Open Tickets" above a table. The table has columns for "Ticket", "Date", "Subject", "From", "Priority", and "Assigned To". One ticket is listed with ID 110795, dated 11/26/2013, subject "osTicket Installed!", from "osTicket Support", and no priority or assigned to. Below the table are "Select: All None Toggle" and "Page: [1] Export" options. At the bottom, there are "Overdue", "Close", and "Delete" buttons.

Ticket	Date	Subject	From	Priority	Assigned To
110795	11/26/2013	osTicket Installed!	osTicket Support		

Figure 4: Open Tickets

When help-desk agents click on a ticket number they are redirected to a ticket view page (Figure 5: Ticket).

In this page information about the ticket is available, including the ticket’s status, name, priority, email of the person that submitted the ticket, the department responsible for answering etc.

At the top right of the page there is a set of actions a help-desk agent may perform.

Print: The help-desk agent may print the ticket at a desired paper size. The help-desk agent may also include internal notes/comments to the print out.

Claim: The help-desk agent may assign the ticket to their account so that other help-desk agents cannot modify it.

Edit: Editing a Ticket gives allows the help-desk agent to edit the details of the ticket. When the ticket is edited an internal note must be submitted in order to log the reason that lead to the ticket being edited.

Close: Closing the ticket means that the ticket has been addressed and should be closed.

Delete: The help-desk agent may delete a Ticket.

Ban Email: If this ticket is submitted by an unknown or malicious source the help-desk agent may ban the email associated with the account that submitted the ticket.

Below the ticket information is the Ticket Thread. In this tread all actions relative to the ticket, such as responds, closing and reopening actions etc. are presented.

At the bottom of the page are the most important actions for the help-desk agent.

Post Reply: The help-desk agent may post a reply to the sender. This reply can be sent to the sender's email as well. OsTicket allows for creating a list of predefined replies so the help-desk agent may choose from this list or write a new one.

Post Internal Note: The help-desk agent may keep notes about the ticket and relate these notes with the ticket status.

Dept. Transfer: If another department is better suited to reply this ticket the help-desk agent may choose to transfer the ticket over. The reasons for this transfer must be logged.

Reassign Ticket: The ticket may be reassigned to another help-desk agent that is more appropriate to address it. The reasons for this reassignment must be logged.

osTicket #110795

Print Claim Edit Close Delete More

Status: Open	Name: osTicket Support
Priority:	Email: support@osticket.com (1)
Department: Aggregator team	Phone:
Create Date: 11/26/2013 11:10 am	Source: Web
Assigned To: — Unassigned —	Help Topic:
SLA Plan: — none —	Last Message:
Due Date:	Last Response:

osTicket Installed!

Ticket Thread (1)

11/26/2013 11:10 am osTicket Installed

Thank you for choosing osTicket.

Please make sure you join the osTicket forums (<http://osticket.com/forums>) and our mailing list (<http://osticket.com/updates>) to stay up to date on the latest news, security alerts and updates. The osTicket forums are also a great place to get assistance, guidance, tips, and help from other osTicket users. In addition to the forums, the osTicket wiki provides a useful collection of educational materials, documentation, and notes from the community. We welcome your contributions to the osTicket community.

If you are looking for a greater level of support, we provide professional services and commercial support with guaranteed response times, and access to the core development team. We can also help customize osTicket or even add new features to the system to meet your unique needs.

If the idea of managing and upgrading this osTicket installation is daunting, you can try osTicket as a hosted service at <http://www.supportsystem.com/> -- no installation required and we can import your data! With SupportSystem's turnkey infrastructure, you get osTicket at its best, leaving you free to focus on your customers without the burden of making sure the application is stable, maintained, and secure.

Cheers,

-
osTicket Team
<http://osticket.com/>

PS. Don't just make customers happy, make happy customers!

Post Reply Post Internal Note Dept. Transfer Assign Ticket

TO: osTicket Support <support@osticket.com> Email Reply

Response: Append

Signature: None Dept. Signature (Aggregator team)

Ticket Status: Close on Reply

Post Reply Reset

Figure 5: Ticket-view

7. Glossary

Term	Description
BPMN	Business Process Modelling Notation – a standard for drawing business process flowcharts
osTicket	Popular open source support ticket management system
SLA	Service Level Agreement
Support ticket	A request for help received by the help-desk, typically entered by the end-user through an electronic form

Appendix A: osTicket documentation

Technical installation and configuration documentation for osTicket system

Installation

osTicket comes with its own web-based installer to help guide you through the installation process without the frustration. While the installer provides step by step guide during the installation process, it's important and helpful to have general knowledge about Web servers, PHP and MySQL.

Prerequisites

To install osTicket, your web server must have PHP 5.3 (or better) and MySQL 5 (or better) installed. If you are unsure whether your server meets these requirements, please check with your host or webmaster before proceeding with the installation.

You will need one MySQL database with valid user, password and hostname handy during installation. MySQL user must have FULL privileges on the database. If you are unsure whether you have these details or if the user has sufficient permissions, please consult your host or database admin before proceeding.

- PHP 5.3 for Windows Server via WPM
- MariaDB 5.5 for Windows Server 64-bit | 32-bit
- PHP Manager for IIS (makes managing PHP on IIS much easier) [here](#)

Getting started

At this point you should have downloaded latest version of osTicket. Unzip the files and upload files and directories in upload folder to a directory of your choice on your server. For example /osticket/, /helpdesk/ or /support/ depending on your preference. Basic knowledge of using FTP is a plus at this stage. If you don't know how to use FTP, we would recommend you read the documentation supplied with your FTP client and learn the basics of uploading and setting permissions on files. osTicket installer needs to be able to write and modify ost-config.php found in the include directory. Please follow the instructions given by the installer.

Using installation script

Once all of the above steps are complete, you can complete the installation and basic setup in a web browser. You can invoke the installer by simply browsing the osTicket URL e.g. <http://www.yourdomain.com/support>. Alternatively you can enter the URL to it into your browser address bar e.g. <http://www.yourdomain.com/support/setup/>.

The osTicket installation script will attempt to auto-detect paths and any permission issues. Please follow the instructions to finish up the installation process.

If the script spots any configuration errors then it will not allow you to continue until the errors are corrected.

If everything checks out, you will be presented with a form to fill in the required information.

If any errors occurs, go back and check the data entered.

On valid data the script will create and populate the database plus write a configuration file.

Note that the installer performs basic configuration required to get osTicket up and running.

Further configuration is required, post-install, to make the system fully functional.

Finishing up

If the setup script has finished running with no errors, then congratulations osTicket is now installed. You can now log in with the username and password you created during the install process. After verifying that the installation completed correctly - your next step should be to fully configure your new support ticket system for use. But before you get to it please take a second to cleanup.

- Change permission of include/ost-config.php to remove write access
- Delete setup directory
- Enable the system

Once you have done the above, you can proceed with the next step, Post-Install Setup.

Self-Help Troubleshooting

If you cannot find any solutions to the problem you are having, you can enable the "Show Errors" flags located in /main.inc.php:

```
#don't display errors  
  
ini_set('display_errors',0);  
  
ini_set('display_startup_errors',0);
```

Change this to:

```
ini_set('display_errors',1);  
  
ini_set('display_startup_errors',1);
```

Then errors should be displayed either in your web browser or in your server's error.log file. Moreover, don't forget to check your osTicket Dashboard page and your mail server log.

Post-installation setup

Once osTicket has been installed you need to further configure it via admin panel before it is fully usable. Only staff with admin's privileges can access the admin panel. Please use the username and password created during the install process.

Email setup

Setting up your system to accept emails varies from system to system and your personal preference. osTicket allows you to route unlimited number of emails as incoming tickets. osTicket allows you to setup unlimited number of email addresses to handle all your company's mail accounts and email communication. Incoming emails are converted to support tickets allowing you to easily manage, organize and archive all emailed support requests in one place.

Email templates

osTicket ships with generic email templates used for auto-responses, alerts, notices and replies. osTicket relies on predefined templates when sending out auto responses, notices and alerts. Each template has a set of variable placeholder as shown below.

Base variables

Variable	Description
----------	-------------

%{ticket.id}	Ticket ID (internal ID)
%{ticket.number}	Ticket number (external ID)
%{ticket.email}	Email address
%{ticket.name}	Full name
%{ticket.subject}	Subject
%{ticket.phone}	Phone number ext
%{ticket.status}	Status
%{ticket.priority}	Priority
%{ticket.assigned}	Assigned staff and/or team
%{ticket.create_date}	Date created
%{ticket.due_date}	Due date
%{ticket.close_date}	Date closed
%{ticket.auth_token}	Auth. token used for auto-login
%{ticket.client_link}	Client's ticket view link
%{ticket.staff_link}	Staff's ticket view link

Expandable variables

Variable	Description
%{ticket.topic}	Help topic
%{ticket.dept}	Department
%{ticket.staff}	Assigned/closing staff
%{ticket.team}	Assigned/closing team

Other variables

Variable	Description
%{message}	Incoming message
%{response}	Outgoing response
%{comments}	Assign/transfer comments

%{note}	Internal note (expandable)
%{assignee}	Assigned staff/team
%{assigner}	Staff assigning the ticket
%{signature}	Staff/Dept signature (selection)
%{url}	osTicket's base URL (FQDN)

Variable Contexts

Please note that only known (supported) variables are substituted. Non-base variables depends on the context of template type to which they are used.

- **New Ticket Auto Response:** Auto response sent to user/client on new ticket if enabled. Meant to give the user the ticket ID which can be used to check the status of the ticket.
- **New Message Auto Response:** Confirmation sent to user when a new message is appended to an existing ticket. This can be emailed or web-based replies.
- **Over Limit Notice:** Ticket denied notice. This is a one-time notice sent when the user has reached the max allowed open tickets defined in preference section. Reasonable limit helps control spam and possible email flood loops.
- **Ticket Response/Reply:** Message template used when responding to a ticket or simply alerting the user about a response/answer availability.
- **New Ticket Alert:** Alert sent to staff on new ticket.
- **New Message Alert:** Alert sent to staff when user replies to an existing ticket.
- **New Internal Note Alert:** Alert sent to selected staff (if enabled) when an internal note is appended to a ticket.
- **Assigned Ticket Alert:** Alert sent to staff on ticket assignment.
- **Overdue/Stale Alert:** Alert sent to staff on stale or overdue ticket.

Routing incoming emails

Setting up your system to accept emails varies from system to system and depends on your personal preference. osTicket currently supports piping (aliases) and POP3/IMAP polling methods for routing incoming emails. Tickets are routed to the department and assigned a default priority associated with the email.

Email piping

Piping method allows for real-time email handling. Extra setup is required at mail server level to pipe the raw email message to osTicket pipe handler. Both remote and local piping are supported. See Email Piping Guide.

POP3/IMAP polling

POP3/IMAP account polling method is best suited for individuals with remote mail account(s) and/or with limited access to mail delivery settings. Each email address added to the system can have an account associated to it. See POP3/IMAP Setting Guide.

Outgoing emails

By default osTicket uses native PHP Mail function to send outgoing emails. However, this can be problematic to spam filters depending on your php.ini mail settings. It is highly recommended that you use SMTP instead.

Each of the email accounts can have its own SMTP. You can also setup a default SMTP system wide. See Settings tab in admin panel.

Important note regarding use of external SMTP servers

Some hosting companies (Hostgator.com, for example) do not allow the use of SMTP servers located on a separate server and will block all requests. Trying to connect to a blocked external SMTP server will result in a "login failure" message in osTicket when trying to save the Outgoing Emails settings.

If you have shell access with your hosting account you can manually test a connection to a remote SMTP server from the command line using telnet:

```
<strong>telnet smtp.example.com 25</strong>
```

A blocked connection will result in a message similar to the following:

```
<strong>Trying 192.0.32.10...</strong>
```

```
<strong>telnet: connect to address 192.0.32.10: Connection refused</strong>
```

Outgoing SMTP spoofing

Check "Allow spoofing (No Overwrite)" in Settings => Email Settings

Gmail Configuration

In order to use Gmail, your host must support SSL, so osTicket can negotiate the secure connection.

- First, make sure POP is enabled in your Gmail account.

- Then use the settings Google gives you for logging in to the POP3 server (which should be pop.gmail.com, port 995).
- For outbound mail, use ssl://smtp.gmail.com port 465
- You will need to check "Use SSL" for both POP and SMTP servers.
- Your Gmail account name is your full Gmail address.

Help topics

In addition to emails, clients/users can also use an online form to create tickets. Help topics helps maps online inquiries to a department and assigns priority without the need for the user to select a department or/and ticket priority. This gives you the ability to route inquiries without exposing internal departments.

Departments

Departments are used to categorize incoming tickets and also as access mask for staff members. For example you can restrict staff's tickets access based on departments. To manage departments go to the Departments tab in the Admin Panel.

Staff members

osTicket allows you to add unlimited number of representatives to the system. Each staff member is assigned to a group and a department which determines the level of permission. Every staff account can be of type 'Admin' or 'Staff'.

System preferences

To disable or change system settings, go to Settings Tab in Admin Panel.