

## D4.2.1

### Project website and internal IT communication infrastructure

<b>Project number:</b>	257243
<b>Project acronym:</b>	TClouds
<b>Project title:</b>	Trustworthy Clouds - Privacy and Resilience for Internet-scale Critical Infrastructure
<b>Start date of the project:</b>	October 1 <sup>st</sup> , 2010
<b>Duration:</b>	36 months
<b>Programme:</b>	FP7 IP

<b>Deliverable type:</b>	Report
<b>Deliverable reference number:</b>	ICT-257243 / D4.2.1 / 1.0
<b>Activity and Work package contributing to the deliverable:</b>	Activity 4/ WP4.2
<b>Due date:</b>	December 2010 – M03
<b>Actual submission date:</b>	23 <sup>rd</sup> December 2010

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<b>Dissemination level:</b>	Public
<b>Revision:</b>	1.0

<b>Abstract:</b>	This deliverable briefly describes the tools provided within the IT infrastructure to facilitate cooperation and coordination
<b>Keywords:</b>	Collaborative tools, infrastructure, internal communication

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# 1 Introduction

This deliverable provides an overview of the TClouds project IT infrastructure: the project website as well as the whole set of tools that foster cooperation within the project, coordination and dissemination to the public. Technikon has developed this system for distributed project collaboration in recent years. This trusted collaborative toolbox was awarded an Austrian ICT innovation prize for its security and completeness. The toolbox was incorporated into the architecture which was initiated and configured for TClouds.

The main components of the knowledge management infrastructure include the following:

- Content Management System incl. Public Website and internal area (CMS server - based on Joomla)
- A file versioning server (Subversion server)
- Jabber chat server
- Mailing list server

All four tools use encrypted communication paths and can be configured to work through corporate firewalls that allow encrypted web traffic (SSL). The versioning tool requires a client side program (SVN client) or WebDAV functionality for uploading data but all other functions are directly accessible using a browser with java-script support.

The following picture presents the overall architecture of the IT infrastructure in TClouds:

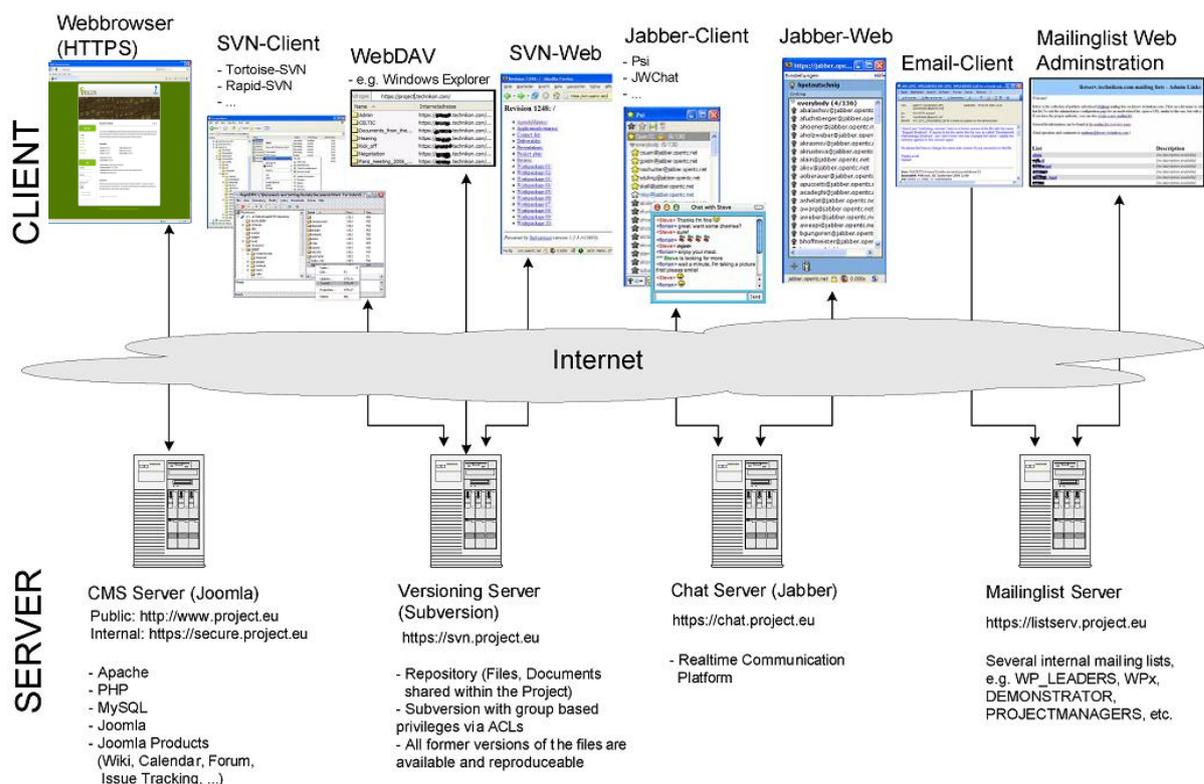


Figure 1: TClouds project IT infrastructure

All the features explained in the subsequent document facilitate the collaboration work within the TClouds project consortium. The IT infrastructure aims to support the communication among the partners while offering an open and accessible infrastructure to allow continuing and progressive work.

## 2 The project website

The project website has been designed to provide a user-friendly and informative environment. It is based on the Joomla! Content Management System which has been adapted to divide the site in to an open area for the public and a closed area for the project partners.

Additional to the information spreading platform, plug-ins and other services are available for the website on request. In detail we provide the following preinstalled functionality: A calendar, wiki, real time chat service, mailing lists and archives, SVN repository and a discussion forum. Using a readily available open source solution greatly reduces the overhead connected with maintaining the website as it integrates with the workspace. The chosen solution also includes a number of tools for online WYSIWYG editing and provides templates for publishing news and events.

The TClouds project website is available on the following link:

<http://www.tclouds-project.eu/>



**TClouds**  
Trustworthy Clouds  
Privacy and  
Resilience for  
Internet-scale Critical  
Infrastructure

## Welcome to TClouds

**Mission of TClouds:**

- ▶ To develop an advanced cloud infrastructure that can deliver computing and storage that achieves a new level of security, privacy, and resilience yet is cost-efficient, simple, and scalable.
- ▶ To change the perceptions of cloud computing by demonstrating the prototype infrastructure in socially significant application areas: energy and healthcare.

**Motivation:**

State-of-the-art cloud computing enables seamless access to services and global availability of information, but inherent risks severely limit the application of this technology.

In a cloud environment, pertinent data is accessed via information and communications technology (ICT) using remote hardware instead of being stored only on a local server or computer. The benefits of increased storage at reduced cost allow information to be made readily available.

However, the current cloud computing model comes with perceived risks concerning resilience and privacy. There are three fundamental trends in ICT whose risks mutually reinforce each other:

- ▶ the push towards an Internet of Services - most services are provided on the web as a platform;
- ▶ cost pressures drive a migration of ICT into so-called Infrastructure clouds;
- ▶ growing importance of ICT as the critical "nervous system" for socially relevant "smart" infrastructures – such as healthcare, energy, environmental monitoring, or mobility.

Protecting data and services in the cloud is important to governments, organizations and enterprises across all industries, including healthcare, energy utilities, and banking. Thus, the perceived security and dependability risks of cloud computing are limiting its application.

The TClouds project targets cloud computing security and minimization of the widespread concerns about the security of personal data by putting its focus on privacy protection in cross-border infrastructures and on ensuring resilience against failures and attacks.

[HOME](#)  
[Project](#)  
[Objectives](#)  
[Strategy](#)  
[News](#)  
[Publications](#)  
[Partners](#)  
[Feedback](#)  
[Restricted Area](#)

  
 TClouds is co-financed by the European Commission under EU Framework Programme 7  


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Figure 2: FrontPage of the TClouds website

Figure 2 shows the actual first page of the TClouds website. The right side has a navigation slot, while on the left side the content of the respective section is given. Each page of the TClouds website links to the disclaimer, the legal notice and the privacy policy of the website. The website can be best viewed with a standard web browser. The website will be kept alive throughout the project period and a few years afterwards.

### 3 Collaborative tools

A set of collaborative tools are provided by the coordinator to facilitate the cooperation within the project and to assist in the coordination work. The tools are:

- A protected online workspace (CMS),
- A private instant messaging server, with the possibility of encrypted communication,
- A versioning system for keeping track of documents, and
- A mailing list system for information exchange.

#### 3.1 Protected workspace

The collaborative workspace is using the same Joomla! platform as the website. The users log in to the workspace from the website and are then presented with the additional protected information accessible through a separated user menu. Once logged in, the users have read and write access to several useful and practical features such as a Wiki, calendar, discussion forum or a real-time chat system. The “Change my details” functionality allows the user to change their email address and password. Moreover, the menu item “Documentation” provides helpful links and documentation concerning the internal IT infrastructure and SVN. With the mailing list connector in the protected workspace it is also possible for each user to subscribe to the different mailing lists online. Figure 3 illustrates the content of the restricted area.

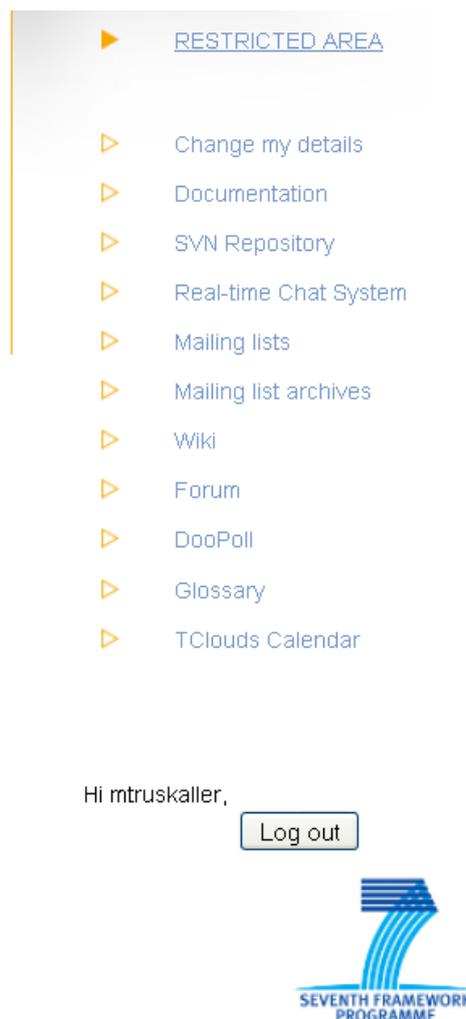


Figure 3: Content of restricted area

### **3.1.1 WIKI**

The Wiki is meant as an additional knowledge base for the project members, which can be used to share specialized knowledge between all partners if needed.

### **3.1.2 Forum**

Additionally to the mailing lists project partners can launch discussions on general project-related or on WP-related topics here.

### **3.1.3 DooPoll**

Doodle helps finding suitable dates and times for group events, e.g., an appointment, a conference call, etc. In addition to scheduling events, Doodle also supports polls in general. That is, groups can conveniently decide on options other than dates. Because of this bunch of nice features, TEC decided to build their own doodle-like poll. It can be accessed via the restricted area of the website and allows scheduling all different types of meetings, or appointments.

### **3.1.4 Glossary**

A glossary, also known as a vocabulary, is an alphabetical list of terms in a particular domain of knowledge with the definitions for those terms. Traditionally, a glossary appears at the end of a book and includes terms within that book which are newly introduced, uncommon or specialized. In TClouds we use a centrally maintained glossary as a reference for documenting the terminology used within the project. The goal of this terminology is to minimize misunderstanding due to unclear meaning of the terms used.

### **3.1.5 TClouds Calendar**

The calendar can be used to announce important project-related dates, such as conferences, meetings, telephone conferences or deadlines.

The calendar is represented by an ical file that is shared with subversion. To allow the whole consortium to have a look at the single dates, the calendar can be displayed via a web browser under the following URL: <https://calendar.tclouds-project.eu>. The access is restricted to members of the TClouds consortium only. To display the latest version of the calendar a cronjob was implemented, which synchronises the data between subversion and the web calendar every hour.

The following Figure 4 shows the “Calendar” section of the restricted area of the TClouds website.

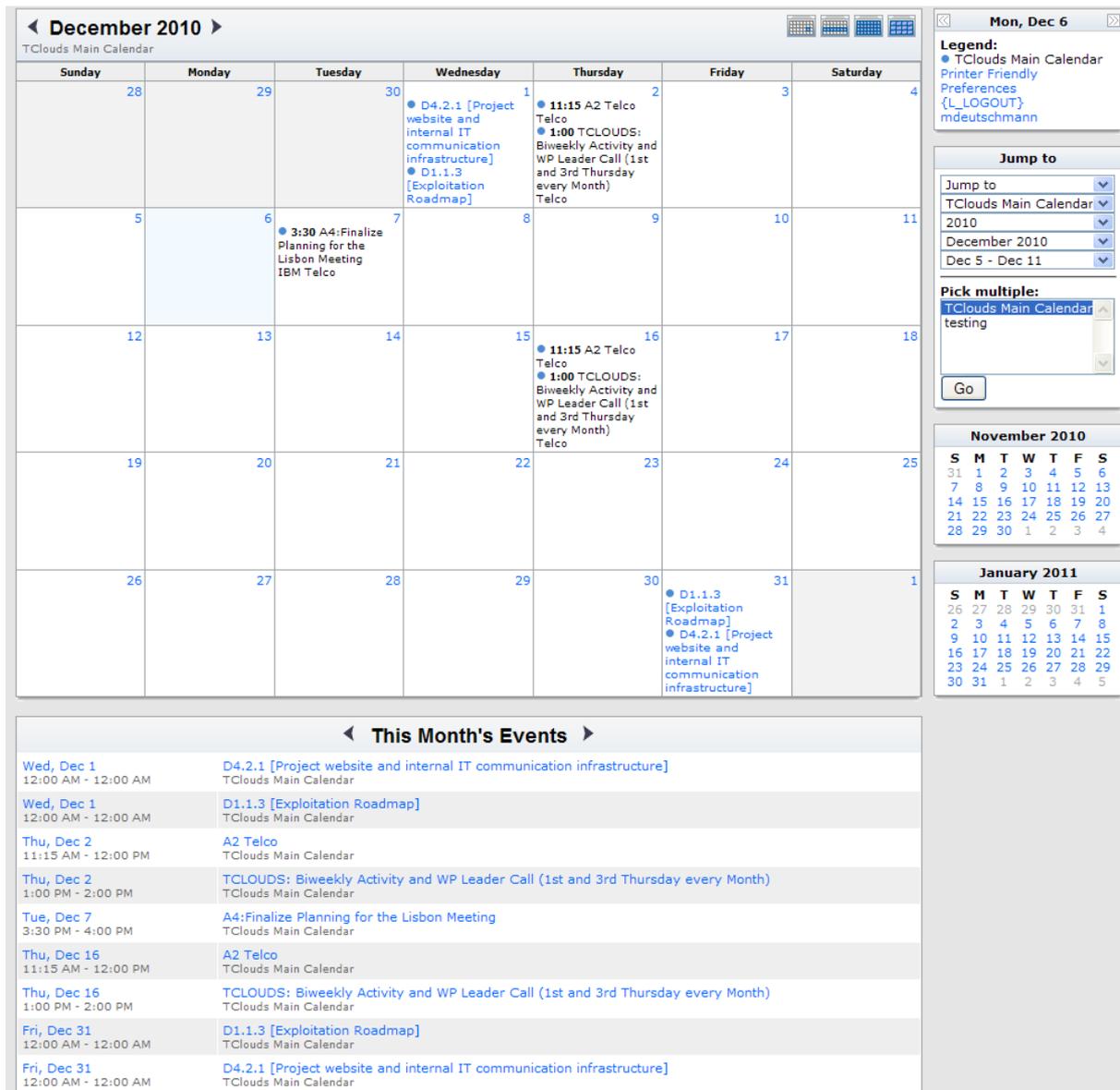


Figure 4: TClouds Calendar

### 3.2 SVN Server

The Subversion server allows easy synchronization of documents between the server and a participant's local file storage. The system includes tools for retrieving older versions of a particular file, resolving conflicts between different versions of the same file and locking files for local editing. A versioning file server is provided for easy synchronization of project information and for use as a code repository.

This is a very useful software tool for sharing documents within a project. It is a central file repository where all project partners can get access to the required documents.

Some major advantages are for example:

- Offline availability of the data via SVN clients (stored on your local hard disc)
- Read-only access via HTTPS (Webbrowser)
- Read-Write Access via WebDAV Connection
- Synchronizing the data between Client/Server
- all former versions of the file are available and reproducible
- User authentication with group based privileges via ACLs (Access Control Lists)
- Email notification on activity (e.g. "commit" action)

To get a feeling how to handle the connection to the SVN Server the following chapter shows a short introduction on installing and using the software tool:

#### a) Create and download the repository:

- Download and install the subversion client.

The rest of this instruction will assume that you have installed the TortoiseSVN client, which can be downloaded from <http://tortoisesvn.net/downloads>. For the installation of the client please follow the instructions written on the homepage.

- Create a folder on a local disk. For example C:\svn.tclouds-project.eu:

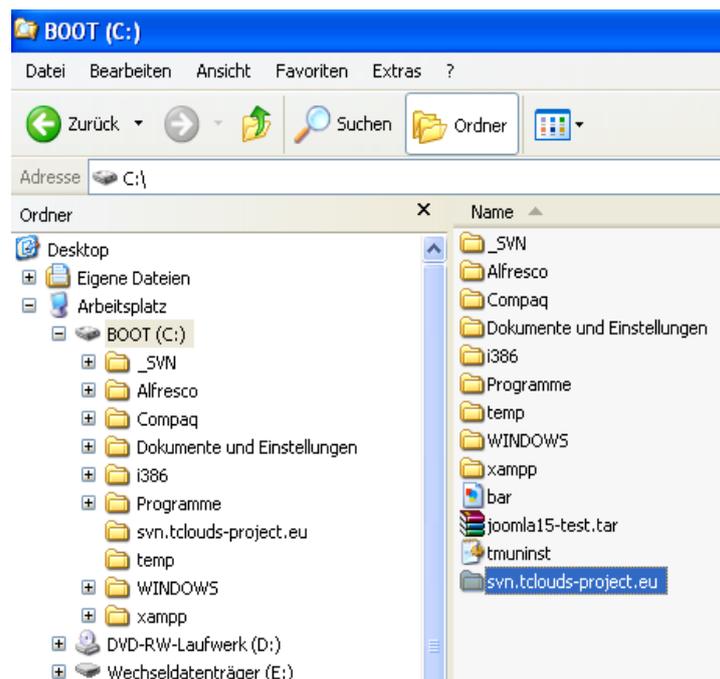


Figure 5: TClouds SVN folder on local disk

- Right click on the folder and choose "SVN Checkout".

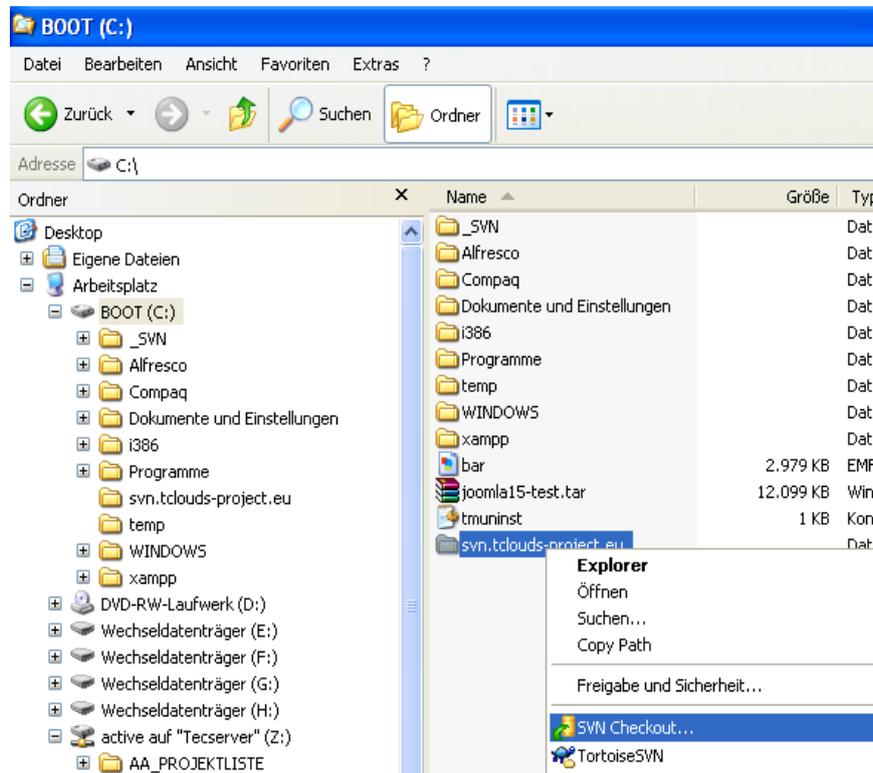


Figure 6: SVN Checkout (a)

- Use <https://svn.tclouds-project.eu> as the URL of the repository. Everything else can be left as it is. Make sure that "HEAD revision" is checked.

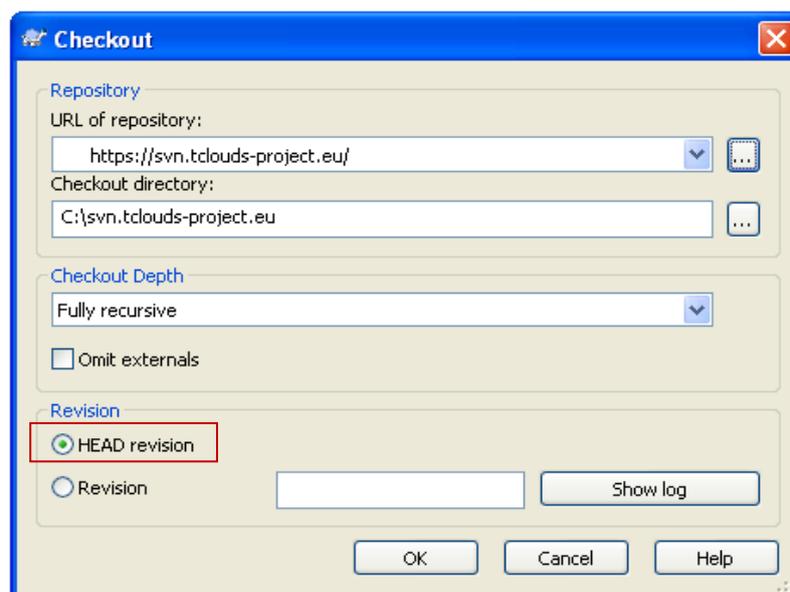


Figure 7: SVN Checkout (b)

- Authorization for TClouds SVN is required: Insert your username and password.

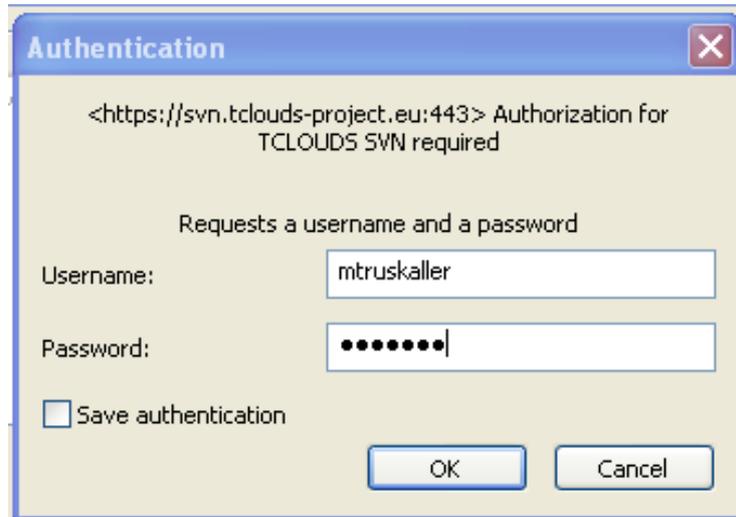


Figure 8: SVN Authentication

- Download the content of the repository to the newly created folder. This might take a while, depending on the bandwidth and the size of the repository.

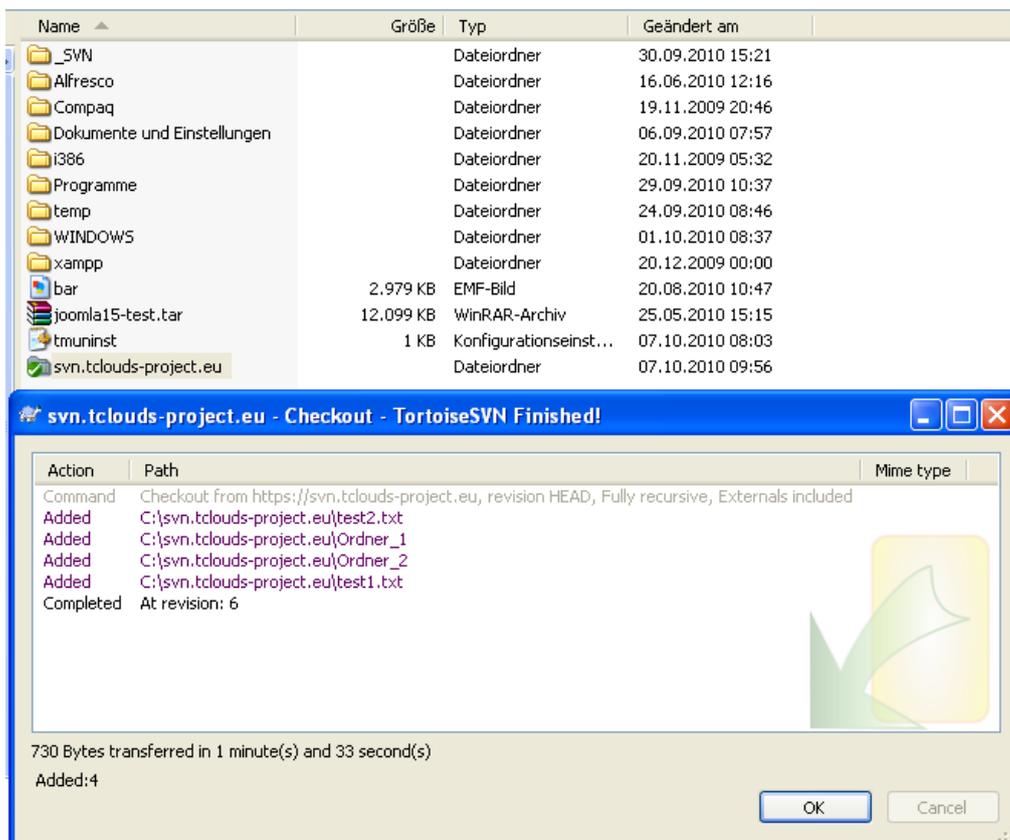


Figure 9: Download content from repository

**b) Keeping up to date:**

- Right click on the folder and choose “SVN Update”.

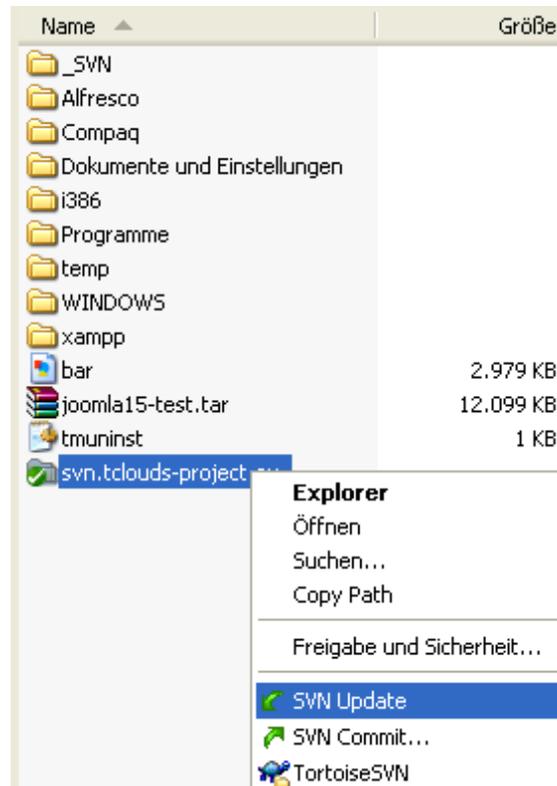


Figure 10: SVN Update

**c) Committing new documents (uploading)**

- Save the document in an appropriate location within the folder created in the chapter above.
- Right click on the new file and choose TortoiseSVN → Add. (A small + will be added to the icon of the file)
- Right click on the file again and choose "SVN Commit..."

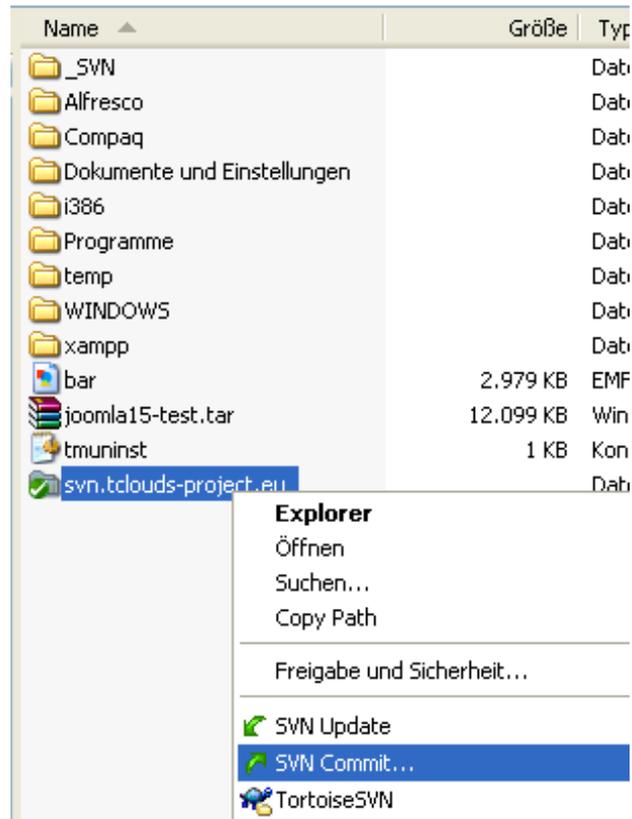


Figure 11: SVN Commit

- Enter a comment about the document and the updates you made.

### 3.3 Jabber chat server

An instant messaging server, based on the open Jabber protocol is maintained by the coordinator. The server provides a quick way to exchange a few words or transfer a file. It also supports multi-user conferences and has a built in User Directory. The service has been adapted to support access through corporate firewalls and a web client that will run on any recent java-script capable browser. Figure 12 shows the browser-based client (on the left), the login screen (center) and a native Windows client called Psi (on the right).

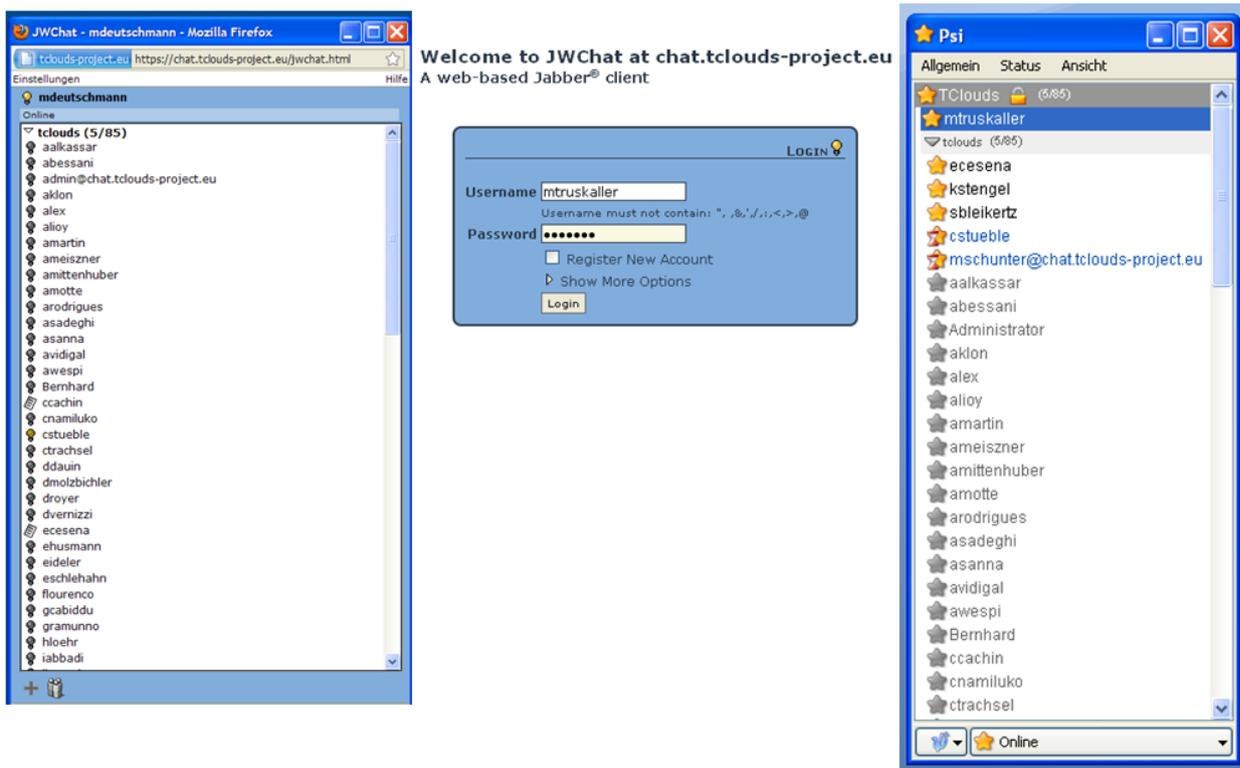


Figure 12: Jabber - browser-based Client vs. Windows client

The Jabber tool is reachable at the link <https://chat.tclouds-project.eu>. Jabber is a real-time communication tool that allows chatting with online partners.

There are two different kinds of communication available:

- One-to-one chat: A group called "Everybody" will automatically appear on your roster when you connect to the service. This group contains all registered users. Simply doubleclick on a name to chat with that user.
- Group chat: choose join group chat in the PSI menu.
  - Host: chat.tclouds-project.eu
  - Room: this can be almost anything – if it does not exist it will be created

If you would like to use this communication tool with a client, it requires the following steps:

- Download and install a client
 

A list of clients is available at [jabber.org](http://jabber.org) - PSI is known to work in windows and Pidgin is a cross platform solution used by some members of the consortium.

When choosing something else, it is important to make sure that it supports encrypted connections.

- Username and password  
The username is the same as for the other TClouds IT services.
- Connection to the server chat.tclouds-project.eu

### 3.4 Mailing list server

A number of mailing lists are available to the project members for easy communication with a set of participants. Each Activity has its own mailing list and there are lists for the activity and work package leaders, legal personnel, activities etc. Subscriptions and other management tasks are done either via email commands or through the web interface in the protected workspace. Access is controlled by the coordinator to ensure the integrity of the lists.

Technikon has set up a mailing server with a wide range of different mailing lists, where all the people who are responsible for the various sections are subscribed.

Following mailing lists are available:

Table 1: Mailing lists

<a href="mailto:all@lists.tclouds-project.eu">all@lists.tclouds-project.eu</a>	All active team members
<a href="mailto:general-assembly@lists.tclouds-project.eu">general-assembly@lists.tclouds-project.eu</a>	Members and deputies of the general assembly
<a href="mailto:legal@lists.tclouds-project.eu">legal@lists.tclouds-project.eu</a>	Legal experts/contacts of all partners
<a href="mailto:executive-board@lists.tclouds-project.eu">executive-board@lists.tclouds-project.eu</a>	The activity and workpackage leaders and deputies (Executive Board)
<a href="mailto:svn-log-messages@lists.tclouds-project.eu">svn-log-messages@lists.tclouds-project.eu</a>	Notifications for SVN activities
<a href="mailto:a1@lists.tclouds-project.eu">a1@lists.tclouds-project.eu</a>	Mailing list for Activity 1
<a href="mailto:a2@lists.tclouds-project.eu">a2@lists.tclouds-project.eu</a>	Mailing list for Activity 2
<a href="mailto:a3@lists.tclouds-project.eu">a3@lists.tclouds-project.eu</a>	Mailing list for Activity 3
<a href="mailto:a4@lists.tclouds-project.eu">a4@lists.tclouds-project.eu</a>	Mailing list for Activity 4
<a href="mailto:publication-notice@lists.tclouds-project.eu">publication-notice@lists.tclouds-project.eu</a>	Mailing list for publication clearings

### 3.5 Telephone Conference Systems

There are several telephone conferences (telcos) within the TClouds project. Therefore the following three telephone conference systems are available for all partners:

**a) IBM telephone conference system:**

A few administrators have the ADMIN passcode which is needed to initiate a telco via the IBM telephone conference system. Also the clients get a passcode and dial a toll or a toll free number to get access to this telephone conference tool.

**b) GotoMeeting:**

This web conferencing tool allows you to host an online meeting with up to 15 people. With GoToMeeting you can hold unlimited meetings for one flat fee and there is the possibility to share any application on your computer in real time.

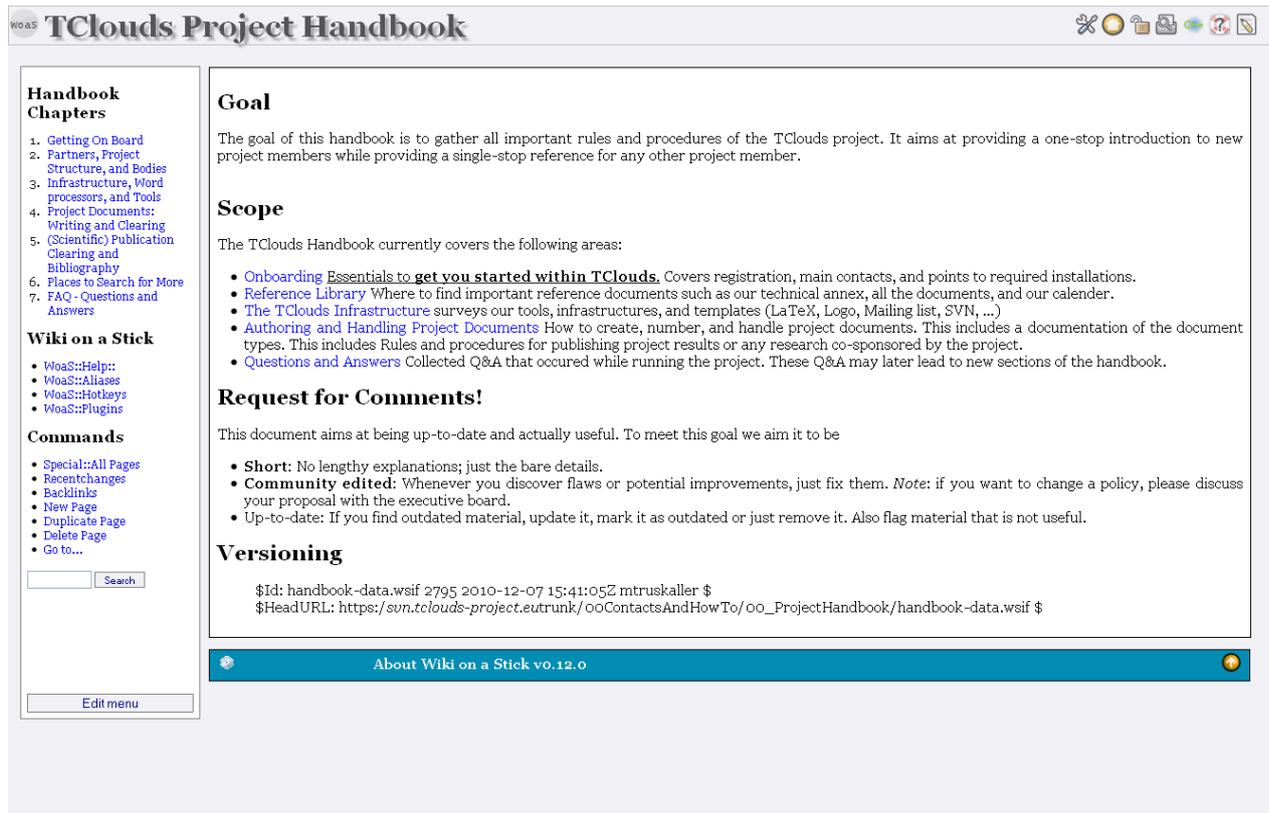
**c) PowWownow:**

All the clients have to dial a premium rate PowWownow number. The PowWownow's enhanced access international dial-in numbers can be downloaded from <http://pdf.powwownow.com/USA/en/enhanced/>. The user will be asked for the PIN (which is the TClouds project number) and his/her name. When there are at least two people on the call the clients are ready to start talking.

### 3.6 Project Handbook

We created an internal project handbook which is a collection of instructions and is intended to provide ready reference. The handbook is designed to be easily consulted and provides quick answers in the project area. The project handbook is available on the SVN as a Wiki on a Stick (WoaS).

In particular for new members of the consortium, the project handbook serves as a one-stop reference that documents all tools, procedures, and important contacts.



**TClouds Project Handbook**

**Handbook Chapters**

1. Getting On Board
2. Partners, Project Structure, and Bodies
3. Infrastructure, Word processors, and Tools
4. Project Documents: Writing and Clearing
5. (Scientific) Publication Clearing and Bibliography
6. Places to Search for More
7. FAQ - Questions and Answers

**Wiki on a Stick**

- WoaS::Help::
- WoaS::Aliases
- WoaS::Hotkeys
- WoaS::Plugins

**Commands**

- Special::All Pages
- Recentchanges
- Backlinks
- New Page
- Duplicate Page
- Delete Page
- Go to...

Search

Edit menu

**Goal**

The goal of this handbook is to gather all important rules and procedures of the TClouds project. It aims at providing a one-stop introduction to new project members while providing a single-stop reference for any other project member.

**Scope**

The TClouds Handbook currently covers the following areas:

- [Onboarding Essentials to get you started within TClouds](#). Covers registration, main contacts, and points to required installations.
- [Reference Library](#) Where to find important reference documents such as our technical annex, all the documents, and our calendar.
- [The TClouds Infrastructure](#) surveys our tools, infrastructures, and templates (LaTeX, Logo, Mailing list, SVN, ...)
- [Authoring and Handling Project Documents](#) How to create, number, and handle project documents. This includes a documentation of the document types. This includes Rules and procedures for publishing project results or any research co-sponsored by the project.
- [Questions and Answers](#) Collected Q&A that occurred while running the project. These Q&A may later lead to new sections of the handbook.

**Request for Comments!**

This document aims at being up-to-date and actually useful. To meet this goal we aim it to be

- **Short:** No lengthy explanations; just the bare details.
- **Community edited:** Whenever you discover flaws or potential improvements, just fix them. *Note:* if you want to change a policy, please discuss your proposal with the executive board.
- **Up-to-date:** If you find outdated material, update it, mark it as outdated or just remove it. Also flag material that is not useful.

**Versioning**

\$Id: handbook-data.wsif 2795 2010-12-07 15:41:05Z mtruskaller \$  
\$HeadURL: https://svn.tclouds-project.eutrunk/ooContactsAndHowTo/oo\_ProjectHandbook/handbook-data.wsif \$

About Wiki on a Stick vo.12.0

Figure 13: TClouds Project Handbook

## **4 Conclusion**

This document provides an initial documentation of the TClouds IT-related infrastructure and will be included into the project handbook for subsequent maintenance.

## 5 List of Abbreviations

The following table shows the list of abbreviations.

Table 2: List of Abbreviations

CMS	Content Management System
SVN	Subversion
SSL	Secure Sockets Layer
HTTPS	Hypertext Transfer Protocol Secure
WebDAV	Web-based Distributed Authoring and Versioning
WoaS	Wiki on a Stick