





D33.1

Project website and internal and external IT communication infrastructure

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	This deliverable briefly describes the website
Abstract:	and its functionality. Further it describes the
	tools provided within the IT infrastructure to
	facilitate cooperation and coordination.
Konworden	Collaborative tools, infrastructure, website,
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Editor

Marion Buchacher (TEC)

Contributors (ordered according to beneficiary numbers)

Mario Münzer (TEC) Martin Deutschmann (TEC) Martina Truskaller (TEC) Felix Storing (TEC) Marko Joemets (CYBER) Riivo Talviste (CYBER)

Disclaimer

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Executive Summary

This deliverable provides an overview of the PRACTICE project internal and external IT infrastructure and consists of two main parts. It includes the project website which has been designed to provide a user-friendly and informative environment (see Chapter 2) and the collaborative tools to facilitate the cooperation within the project and to assist in the coordination work (see Chapter 3).

A protected workspace, including a set of collaboration services has been set up for the PRACTICE project. The project partners log in to the workspace and have then access to all information regarding the project (see Chapter 3.1). A very important tool in this project is the Subversion server (SVN). The SVN allows easy synchronization of documents between the server and a participant's local file storage for sharing documents within a project. It is a central file repository where all project partners can get access to the required documents (see Chapter 3.2).

In all projects, communication is one of the most essential points. For that reason a communication network was build. This includes chat and mailing list servers (see Chapter 3.3 and 3.4) and telephone conference systems (see Chapter 3.5). Further an internal project handbook is available. This is a collection of instructions for all tools, procedures and important contacts regarding the PRACTICE project (see Chapter 3.6).

This established environment with all its tools will help to maximize the benefit to participants and the impact of the project.

Disclaimer

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Chapter 1 Introduction

This deliverable provides an overview of the PRACTICE project internal and external IT infrastructure. It includes 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 prize¹ for its security and completeness. The toolbox was incorporated into the architecture which was initiated and configured for PRACTICE.

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

- Content Management System incl. Public Website and internal areas (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 (SSL²). The versioning tool requires a client side program (SVN client) for uploading data but all other functions are directly accessible using a browser with java-script support.

The following figure presents the overall architecture of the IT infrastructure in PRACTICE:



Figure 1: IT infrastructure

http://www.technikon.com/index.php?option=com_content&view=article&id=76&Itemid=79

² Secure Sockets Layer – Protocol for a secure connection



Chapter 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: documentation & tutorials, calendar, mailing lists, Mailing list archives and SVN repository.

The PRACTICE project website is available on the following link:

http://www.practice-project.eu/

The design of the website is based on the colours of the PRACTICE Logo.



Figure 2: PRACTICE Logo

2.1 Frontend

If a member of the consortium or a third party visits the PRACTICE website, he or she will only see the frontend of the website. The purpose of the frontend is that the visitors cannot change the content of the website like the admin.

For users who have an account for the PRACTICE website, it is also possible to log in with their username and password to unlock special features.





Welcome to Practice

Mission

The mission of PRACTICE is to design cloud computing technologies that allow computations in the cloud thus enabling new business processes while keeping the used data secret. Unlike today - where insiders can access sensitive data - PRACTICE will prevent cloud providers and other unauthorized parties from obtaining secret or sensitive information.

Motivation

Information processed by businesses, government organizations and individuals often comes with confidentiality and integrity requirements that the processing party must adhere to. As a result, data processors must deploy security controls for their ICT infrastructure, protecting it against external as well as internal attackers. This is relatively easy when this infrastructure is local and controlled by the processing party, but much harder when it is provided by an external service provider. Cloud services promise great benefits in terms of financial savings, easy and convenient access to data and services, as well as business agility. Organizations and individuals therefore choose to outsource their data to the cloud, where an untrusted party is in charge of storage and computation. A major concern for the adoption of cloud computing is the inability of the cloud to build user trust in the information security measures deployed in cloud services. Common computing techniques cannot be applied on encrypted data, and therefore the data and the programs that compute on the data must be decrypted before being run on the cloud infrastructure. A comprehensive solution for securing the cloud computation of arbitrary functions of private (secret) inputs, while hiding any information about the inputs to the functions. Put differently, these mechanisms support computation on encrypted data. We identify several settings where secure computation in the cloud is needed. PRACTICE will address all of these settings:

- Hiding user data from other users of the same cloud service.
- Hiding user data from the cloud provider
- Securing computation between several servers
 Securing computation between untrusting parties

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PRACTICE is co-funded by the European Union under EU Framework Programme 7

Figure 3: The frontpage of the website

Figure 3 shows the front page of the PRACTICE website. The front page contains general information about the PRACTICE project such as the mission, motivation and the project data. Further there are separate menus to list the latest NEWS and PUBLICATIONS & DELIVERABLES. In addition a dedicated PRACTICE Blog has been foreseen, where project relevant information can be posted by consortium members.

Below you find a screenshot of the first official PRACTICE project blog post (Figure 4). The blog is the discussion or informational site that should be used in PRACTICE to publish news, workshops, conferences, publications, presentations etc to the public. All partners are

asked to exchange relevant information via the project blog on the website (<u>http://www.practice-project.eu/blog</u>).



For further project information, please have a look at the announcement letter:

http://www.practice-project.eu/downloads/announcement-letter/PRACTICE_Announcement-Letter_nov2013.pdf

Figure 4: Practice Blog

Each page of the PRACTICE website links to the disclaimer, the legal notice and the privacy policy of the website at the bottom.

The website can be best viewed with a standard web browser and will be kept alive throughout the project period and a few years afterwards.



2.2 Backend

This is the interface to manage the frontend and is only accessible for administrators of the PRACTICE website. You can use it to create contents like new articles or to install new modules, manage your Joomla! extensions or apply regular system updates.

Ø	System - Users -	Menus Content Components Extensions Help	PRACTICE 🖉 🌣 •
	Control Panel		🌠 Joomla!'
cc	INTENT		
0	Add New Article	LOGGED-IN USERS	
0	Article Manager	Super User Administration 📰 2013-12-04	
-	Category Manager		
5	Media Manager	POPULAR ARTICLES	
ST	RUCTURE	(616) Welcome to Practice	
:=	Menu Manager	108 News 🔄 2013-11-14	
ŵ	Module Manager	102 Publications & Deliverables 🔤 2013-11-14	
US	ERS	(2) Partners 😨 2013-11-14	
£	User Manager	Blog 2013-11-14	
cc	NFIGURATION		
Φ	Global Configuration	RECENTLY ADDED ARTICLES	
۲	Template Manager	Privacy Super User 🗟 2013-11-28	
R Language Manager		Legal Notice Super User 🖉 2013-11-28	
EX	TENSIONS	Disclaimer Super User 2013-11-25	
+	Install Extensions	Real-Time Chat Super User	
M	INTENANCE	Project Handbook Super User	
×	Joomla! is up-to-date		
	All extensions are up-to-o	date	

Figure 5: Backend



Chapter 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. These tools are:

- A protected online workspace (CMS \rightarrow Joomla! 3.2),
- 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.

All Users have provided a registration link via email at the beginning of the project. This link allowed them to set their password, which works for all tools. Further members can at any time retrieve a new link to reset their password (e.g. periodically update of password due to security issues).

3.1 Protected workspace

The collaborative workspace is using the same 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 calendar or the SVN-Repository. The menu item "Documentation & Tutorials" provides helpful links and documentation concerning the internal IT infrastructure and SVN. Figure 6 illustrates the content of the restricted area.

User Menu
Documentation & Tutorials
Calendar
Mailing lists
Mailing list archives
SVN Repository
Figure 6: Content of restricted area

3.1.1 Documentation & Tutorials

In this section every registered user can download or view some documentation regarding the project. For example:

- IT-Infrastructure Tutorial
- SVN-Relocate

3.1.2 Calendar

The calendar shows every user upcoming events separated in 4 categories:

1. Meetings



- 2. Teleconferences
- 3. Deliverable Submission
- 4. Conferences and Workshops

The standard settings are the monthly overview but the user can view the calendar by year, month, week or by day and eventually search for an event.

Further there is an overview with upcoming events in the right navigation bar which shows the next five events.

	November		20 D)ecember	2013	Jan	uary
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
48	November	November	November	November	November	November	1
49	2	3	4	5	6	7	8
50	9	10	11	12 01:00pm monthly EB Telc	13	14	15
51	16	17	18	19	monthly EB Te Thursday 12 Dec 01:00pm - 02:00p Repeating Event	elco ember 2013 om	22
52	23	24	25	26	Click to open event	:	29
1	30	31	January	January	January	January	January



3.1.3 Mailing lists and Mailing list archives

This menu allows users to have a look at the set of available mailing lists, as well as on the mailing list archives. This is helpful to quickly check if emails have been send out to one of the dedicated mailing lists, when a user has no immediate access to an email client. Further the archives help to follow up email conversations and implicitly act as backup service.

3.1.4 SVN Repository

In this menu, registered users are forwarded to the subversion repository <u>https://practice.technikon.com</u> (see Chapter 3.2). As the repository is in this case accessed via browser, only read-access is given.



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. Two main tools are provided by the server. On the one hand there is the client access which provides the user reading and editing rights. On the other hand there is the browser access on which the user only has read-access to the data.

3.2.1 TORTOISE Client access

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 HTTPS³ (Web Browser)
- 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 <u>http://tortoisesvn.tigris.org</u>. 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\PRACTICE
- Right click on the folder and choose "SVN Checkout"



Figure 8: SVN Checkout (a)

³ Hypertext Transfer Protocol Secure – used for a secure connection between Browser and Web server



• Use https://practice.technikon.com as the URL of the repository. Everything else can be left as it is. Make sure that "HEAD revision" is checked.

S* Checkout	
Repository URL of repository:	
https://practice.technikon.com	▼
Checkout directory:	
C:\SVN\practice.technikon.com	
Multiple, independent working copies	
Checkout Depth	
Fully recursive	-
Omit externals	Choose items
HEAD revision	
© Revision	Show log
<u>O</u> K	Cancel Help

Figure 9: SVN Checkout (b)

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

🧬 Checkout	Finished!	- O X
Action	Path	Mime type
Command Updating Added Added Completed	Checkout from https://practice.technikon.com, revision HEAD, Fully recursive, Externals included C:\\$VN\practice.technikon.com C:\\$VN\practice.technikon.com\IT-Infrastructure C:\\$VN\practice.technikon.com\IT-Infrastructure\PRACTICE_IT_Infrastructure.pdf At revision: 2	application/octet
•	III.	Þ
Added:2	<u>OK</u>	Cancel

Figure 10: Download content from repository

b.) Keeping up to date:

• Right click on the folder and choose "SVN Update".





Figure 11: 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 12: SVN Commit (a)

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



s://practice.technikon.com/Infrastrue	ture.txt			
ssage:				
Recent messages				
'ut your message here!				
anges made (double-click on file for diff):				
anges made (double-click on file for diff): ieck: All None Non-versioned Versi ath	oned Added Deleted	Modified Extension	Files Dir	ectories Property status
anges made (double-click on file for diff): neck: All None Non-versioned Versi Yath I infrastructure.bt	oned Added Deleted	Modified Extension .bd	Files Dir Status added	ectories Property status
anges made (double-click on file for diff): neck: All None Non-versioned Versi Path Infrastructure.txt	oned Added Deleted	Modified Extension .bxt	Files Dir Status added	ectories Property status

Figure 13: SVN Commit (b)

3.2.2 Browser access

It's also possible to access the data through your Web Browser. NOTE: With the Web Browser you only have read-access to the data.



Figure 14: Browser access



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. Figure 15 shows the PSI-view.



Figure 15: Jabber – PSI view

Jabber is a real-time communication tool, which allows chatting with online partners.

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

- Download and install Psi-Software: http://psi-im.org/
- Have your username and password for PRACTICE IT collaboration tools ready
- Add a new user account by using *Account Setup > Add*; enter a name for your account (preferably your username) and click *Add*
- In the Account Properties window enter your XMPP address which has the form: <your-username>@chat.technikon.com (see Figure 16)
- Enter your password and click Save
- Connect to the server by changing your account's status to 'Online' and publish personal information you want

Now you can communicate with other users in the dedicated subgroup
'PRACTICE'

Service Properties	
Name: mmustermann	
Account Details Privacy Connection Misc.	
Account	
XMPP Address: mmustermann@chat.technikon.com	
Example: juliet@capulet.com	
Password: Change	
Settings	
Automatically connect on startup	
Automatically connect after sleep	
Automatically reconnect if disconnected	
Log message history	
Save Cancel	

Figure 16: Jabber – Account Properties window



3.4 Mailing list server

A number of mailing lists are available to the project members for easy communication with a set of participants. For subscriptions and other management tasks it is necessary to write an email to <u>coordination@practice-project.eu</u>. 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 people who are responsible for the various sections are subscribed.

The different PRACTICE mailing lists can be seen in the following table.

Mailing List Name	Members
practice-all@lists.technikon.com	All personnel actively involved in the project
practice-legal@lists.technikon.com	Personnel with legal/contractual responsibilities
practice-general- assembly@lists.technikon.com	General Assembly members and deputies
practice-executive- board@lists.technikon.com	members (representatives and deputies) of the Executive Board, plus persons who would like to follow the EB discussion
practice-a1a2@lists.technikon.com	Combined mailing list for Activity 1 and Activity 2
practice-wp31@lists.technikon.com	Personnel involved in WP31
practice-wp32@lists.technikon.com	Personnel involved in WP32
practice-financial@lists.technikon.com	Personnel responsible for financial questions and tasks, e.g. financial reporting
practice-publications@lists.technikon.com	Mailing list to be used to inform about publications – written notice about planned publications
practice-svnlog@lists.technikon.com	Email notification on SVN commits

Table 1: Mailing lists

3.5 Telephone conference System

In addition to the planned physical meetings, we will perform regular telephone conferences within the PRACTICE project. Therefore the following telephone conference systems are available for all partners:

a.) GoTo Meeting:

This web conferencing tool allows you to host an online meeting with up to 25 people. Users can dial in either via a Local client (VoIP) or use the dedicated country code, which is provided by the organizer. GoTo Meeting provides the possibility to share any application on your computer in real time. The tool is provided by the coordinator TEC.



b.) <u>PowWowNow:</u>

All clients have to dial a premium rate number (there are no installation costs for the initiator of the PowWowNow telephone conference). The costs of local charges for the dial-in numbers range from 7 to 77 EUR cents per minute. On average one should expect around 20 EUR per hour. The most recent Enhanced Access international dial-in numbers including the cost breakdown can be downloaded from the PowWowNow website: http://www.powwownow.com/Conference-Calls/EnhancedAccessNumbers/.

3.6 **Project Handbook**

We created an internal project handbook which is a collection of instructions and is intended to provide ready reference. The goal of the Project Handbook is to gather all important rules and procedures of the PRACTICE project such as initial registration, project infrastructure and structure, the hierarchy of bodies, the policy for meetings, information to submitting deliverables and the procedure for publishing scientific papers. The handbook is designed to easily consult and provides quick answers in the project area. The project handbook is available on the SVN.

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.



Chapter 4 Conclusion

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

The website was reviewed by two PRACTICE partners (CYBER and SAP) and very useful feedback has been received. Special attention was paid to the privacy. Now only logged in users have the possibility to have a look at the documents, tutorials and the calendar.

Through publishing all relevant public information of the project on the official PRACTICE website, the website will be kept lively and external visitors will immediately see the current news and activities. Further this allows more interaction and communication within and outside the PRACTICE Consortium.

The PRACTICE IT infrastructure provides an essential benefit for all project partners. One of the most important points is the Subversion Repository (SVN). All project partners are able to access all project relevant information and documents. Further the communication environment, including, Jabber Server, different mailing lists, conference call systems, create transparent efficient working conditions.

During the creation of this deliverable, new challenges and perspectives have been identified for all persons involved.



Chapter 5 List of Abbreviations

The following table shows the list of abbreviations.

ACL	Access Control List
CMS	Content Management System
HTTPS	Hypertext Transfer Protocol Secure
SSL	Secure Sockets Layer
SVN	Subversion
URL	Uniform Resource Locator
VoIP	Voice over Internet Protocol

Table 2: List of Abbreviations