Requirements engineering

Sebastian Müller, Leonie Pelle, Jan Kessler, Sven Bamberger und Gero Büßing

Anonymous User:

Anonymous User: may be invited to sessions

Anonymous User: may be invited to sessions shall be able to use plugins

Anonymous User: may be invited to sessions shall be able to use plugins shall be able to register on servers that allow registration

A regular User:

A regular User: must register with a valid email address.

A regular User: must register with a valid email address. shall be able to login with his email address and password.

A regular User: must register with a valid email address. shall be able to login with his email address and password. shall be able to change his password and/or Alias.

A regular User: must register with a valid email address. shall be able to login with his email address and password. shall be able to change his password and/or Alias. shall be able to delete his own Account.

A regular User: must register with a valid email address. shall be able to login with his email address and password. shall be able to change his password and/or Alias. shall be able to delete his own Account. shall be able to open Sessions.

A regular User: must register with a valid email address. shall be able to login with his email address and password. shall be able to change his password and/or Alias. shall be able to delete his own Account. shall be able to open Sessions. shall be able to join any Session he is invited to.

A regular User: must register with a valid email address. shall be able to login with his email address and password. shall be able to change his password and/or Alias. shall be able to delete his own Account. shall be able to open Sessions. shall be able to join any Session he is invited to. shall be able to close Sessions he has the rights to.

A regular User:
must register with a valid email address.
shall be able to login with his email address and password.
shall be able to change his password and/or Alias.
shall be able to delete his own Account.
shall be able to open Sessions.
shall be able to join any Session he is invited to.
shall be able to close Sessions he has the rights to.
shall be able to create and distribute Keys and send Invitations to every Session he has the rights to.

```
A regular User:
```

must register with a valid email address.

shall be able to login with his email address and password.

shall be able to change his password and/or Alias.

shall be able to delete his own Account.

shall be able to open Sessions.

shall be able to join any Session he is invited to.

shall be able to close Sessions he has the rights to.

shall be able to create and distribute Keys and send Invitations to every Session he has the rights to.

may activate or deactivate Installed Plugins.

```
A regular User:
```

must register with a valid email address.

shall be able to login with his email address and password.

shall be able to change his password and/or Alias.

shall be able to delete his own Account.

shall be able to open Sessions.

shall be able to join any Session he is invited to.

shall be able to close Sessions he has the rights to.

shall be able to create and distribute Keys and send Invitations to every Session he has the rights to.

may activate or deactivate Installed Plugins.

shall be able to request installation of new Plugins.

A Moderator shall be able to restrict privileges of Regular Users, if a Regular User misbehaves like insulting others, uploading inappropriate content or harming the system.

A Moderator shall be able to restrict privileges of Regular Users, if a Regular User misbehaves like insulting others, uploading inappropriate content or harming the system.

A Moderator shall be able to restore privileges of Regular Users.

A Moderator shall be able to restrict privileges of Regular Users, if a Regular User misbehaves like insulting others, uploading inappropriate content or harming the system.

A Moderator shall be able to restore privileges of Regular Users.

A Moderator shall be able to suspend Accounts of Regular Users for a certain amount of time.

An Admin User shall be able to test Plugins requested by a Regular User.

An Admin User shall be able to test Plugins requested by a Regular User. An Admin User shall be able to install tested Plugins.

An Admin User shall be able to test Plugins requested by a Regular User. An Admin User shall be able to install tested Plugins.

An Admin User shall be able to remove previously Installed Plugins.

An Admin User shall be able to test Plugins requested by a Regular User.

An Admin User shall be able to install tested Plugins.

An Admin User shall be able to remove previously Installed Plugins.

An Admin User shall be able to add Plugins to a Blacklist, if they may harm the system.

An Admin User shall be able to test Plugins requested by a Regular User. An Admin User shall be able to install tested Plugins.

An Admin User shall be able to remove previously Installed Plugins.

An Admin User shall be able to add Plugins to a Blacklist, if they may harm the system.

An Admin User shall be able to remove Plugins from a Blacklist, if they were accidentally added.

Devices

The Service should be Touchscreen Compatible.

Devices

The Service should be Touchscreen Compatible.
The Service should run on the most popular Browsers.

Connection/Encoding

The Service should use tunneling if Certain Ports are unavailable

Connection/Encoding

The Service should use tunneling if Certain Ports are unavailable The Website should use UTF-8 encoding

Performance

The Service should work on Michael's Smartphone

Performance

The Service should work on Michael's Smartphone Sessions Should work with limited bandwith

Performance

The Service should work on Michael's Smartphone Sessions Should work with limited bandwith The Service should provide automatic scaling of the size/quality of streams based on bandwidth

Space

The service should uselossless Codecs to reduce filesize

Space

The service should uselossless Codecs to reduce filesize The service mustn't use more than 20Mb Cache on Mobile Devices.

Dependability

Login Data and available plugins should be redundant on multiple servers

Dependability

Login Data and available plugins should be redundant on multiple servers Client side Caching shold be used to minimize bandwidth consumption

Security

The service must always use encryption to transmit credetials to the server.

Security

The service must always use encryption to transmit credetials to the server. The service must save the password as a salted hash on the server.

Security

The service must always use encryption to transmit credetials to the server.

The service must save the password as a salted hash on the server.

The service must provide encryption for transmission of Session data to ensure privacy and to prevent Man-in-the-middle attacks.

Environmentals

User Accounts are verified through the users email address and password.

Account data and Installed Plugins should be backed up frequently to prevent data loss during a server failure

Account data and Installed Plugins should be backed up frequently to prevent data loss during a server failure

The service itself, its dependencies (like web server software) and the operating system of the server should be kept up to date. Security holes will be closed by updates.

Account data and Installed Plugins should be backed up frequently to prevent data loss during a server failure

The service itself, its dependencies (like web server software) and the operating system of the server should be kept up to date. Security holes will be closed by updates. The services should have a logfile that lists status messages and errors (server side only). This helps to find/solve problems.

Account data and Installed Plugins should be backed up frequently to prevent data loss during a server failure

The service itself, its dependencies (like web server software) and the operating system of the server should be kept up to date. Security holes will be closed by updates. The services should have a logfile that lists status messages and errors (server side

only). This helps to find/solve problems.

The services should offer a test mode to test requested Plugins, without harming the system.

Regulatory Ethical Legislative

Open source

Regulatory Ethical Legislative

Open source Documented and public available API

No Service side gathering of user data.

No Service side gathering of user data. Voluntary data gets Saved but not distributed.

Software License

Only use of GPL libraries

Software License

Only use of GPL libraries Distibution of code under GPL

The user shall be able to compose and configure Window setups to save them and load them at later points in time

The service should provide the functionality to split a conference into multiple conferences. The service should provide the functionality to merge multiple conferences into a single one.

The service should provide the functionaly to set a reminder for appointments and has the option of notifying every user/email that he associates with that appointment

The service should provide the functionality to insert preinstalled and customized emoticons in the chatting plugins

The service should provide the functionality to use a Doodle like plugin to find times for appointments and have the option to set a re- minder.



The service should provide the functionality to use a whiteboard like plugin to freely draw in a session



The service should provide the functionality to create and edit con- tact lists.



The service should provide the functionality to create Business Cards/Profiles other users can see.

The service should provide the functionality to edit Files online and see edits from other users instantly

The Whiteboard Plugin should have the capability to im- port pictures to edit and, if the user allows it, give every listener the option of downloading/saving the picture



The service should provide the functionality to mute/disable streams at the will of the user.



The service should provide the functionality to call for a quick vote or simple choice.

The service should provide the functionality to search the web and display the search results to every one who watches the session

The service should provide the functionality to recognize and exe- cute voice commands



The service should provide the functionality for remote desktop recording/viewing.



The service should provide the functionality for client side desktop recording.



The service should provide the functionality to open a chat with at least one other user.



The service should provide the functionality to start audio/video calls with at least one other user.