



Implementing Mconf web conferencing at the South African National Research and Education Network (SA NREN)

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4 Types of Video Conference systems

- Telepresence
- Desktop
- Room
- Web





Why web conferencing?

- Browser based application – No download required for basic participation in a meeting
- The participant simply clicks on the “url” to enter the meeting
- WebRTC audio technology (latest video conferencing technology craze)
- Existing users on Adobe Connect web conferencing trial



Technology Selection

Criteria for Selection:

- Proven in Use: By trial, Success of other NRENs, Functionality
- Maintenance and Support
- Ease of Use
- Ease to take into production
- Cost
- Ease of migration from Adobe Connect trial



Solutions explored

Many...

- Adobe connect
- Jamvee
- Blackboard collaborate
- Skype
- Google hangouts
- Commercial products were not a viable solution.
- **Open source:** BigBlueButton and Mconf



What is Mconf?

- Open source multi-conferencing system that is web based
- Can be set up as a room based video conferencing system
- Distance education, Remote meetings, Broadcasting events
- Based on Big Blue Button web conferencing
- Began as a research project at PRAV: Projects in Audio and Video, Brazil
- Development funded by Brazilian NREN, RNP



Why Mconf web conferencing?

- Open source – No licensing cost for use, opportunity to contribute to development
- Excellent support from Mconf Development team
- Integration with newly created identity federation for SA NREN, SAFIRE



Why Mconf web conferencing? (continued)

- Compares well with Adobe connect use and features
- R&D Project investment and modified for R&E and by Brazilian NREN, RNP
- Opportunity available to collaborate RNP



Mconf's System Architecture

1. Mconf's web portal

- Easy to use front end of the web conferencing system
- Allows users to create 'spaces' (communities) with unique web conference rooms
- Provides user authentication through federated identity management



SA NREN Mconf: The South African National Research and Education Network web conferencing service

Create a new account

Email

Full name

Username

Password

Password confirmation

[Register](#)

Sign in to your account

Email or username

Password

Remember me

[Login](#)

[Login via SAFIRE](#)

[Lost your password?](#)

Spaces

Search for communities of users that share the same interests

All spaces

My spaces















Thumbnails

List

Order by: Relevance Name

[Create a new space](#)

Select a space in the list to see its description here

 Weekly SA NREN project meet... Private 2 members	 TENSANT Private 4 members
 Mconf testing and planning ... Public 2 members	 TUT_ICT Private 2 members
 Simeon MSc Private 2 members	 UL Tlaweng Private 1 member
 AAROC Public 1 member	 ASAUDIT Private 1 member
 Eldridge@NMMU Private 1 member	 Jansen@WSU Private 1 member
 SKA Gang Of N plus M Private 1 member	 SANBI IT Private 2 members
 ePortfolio Private 1 member	 Le Roux Franken Public 1 member



Concept of spaces vs rooms

- A web conferencing room is a tool within a collaboration space
- The concept of spaces is useful for an NREN community as it can represent:
 - National projects
 - Teams/communities across national/international boundaries
 - It can also represent a specific course/lecture



Mconf's system architecture

2. Mconf-Live Servers

- Back-end of the web conferencing system
- Global pool of Mconf-Live servers are available for use
- Global Scalability and monitoring



Mconf-Live Servers in Global Academic Network





Mconf Global Academic Network

- Open to any academic institution
- Creates a possibility for global resource sharing that is unique in the web conferencing and video conferencing world
- Win-win situation for everyone involved
- Network gets stronger when grown
- Protection against temporary failure of a local server or a traffic surge
- Multiple servers supporting the system as a whole



Mconf's system architecture

3. Mconf Recording Server

- Global pool of shared Mconf recording servers is available for use



Tools within Mconf

- A web conference room that its members/non-members can use to interact
- List of recordings for meetings in that room
- Document repository
- A message wall
- Publishing of news items
- Various customisation and permission control settings



Mconf testing and planning space

Public space
You are a member of this space

- Home
- Web Conference
- Wall
- Users
- Documents
- Admin

Space Description

Test space between Patrick and Kasandra

Latest news

Mconf launch events *11 minutes ago*

These events will take place in Pretoria CSIR ICC on 22 July 2015 and Cape Town, CPUT on 23 July 2015.

Latest messages

Reminder: by Kasandra *28 minutes ago*
One week till Mconf launch events!

[Read more](#)

Recent users joined

Patrick Holahan

Kasandra

[Read more](#)

Webconference

There is no meeting running.

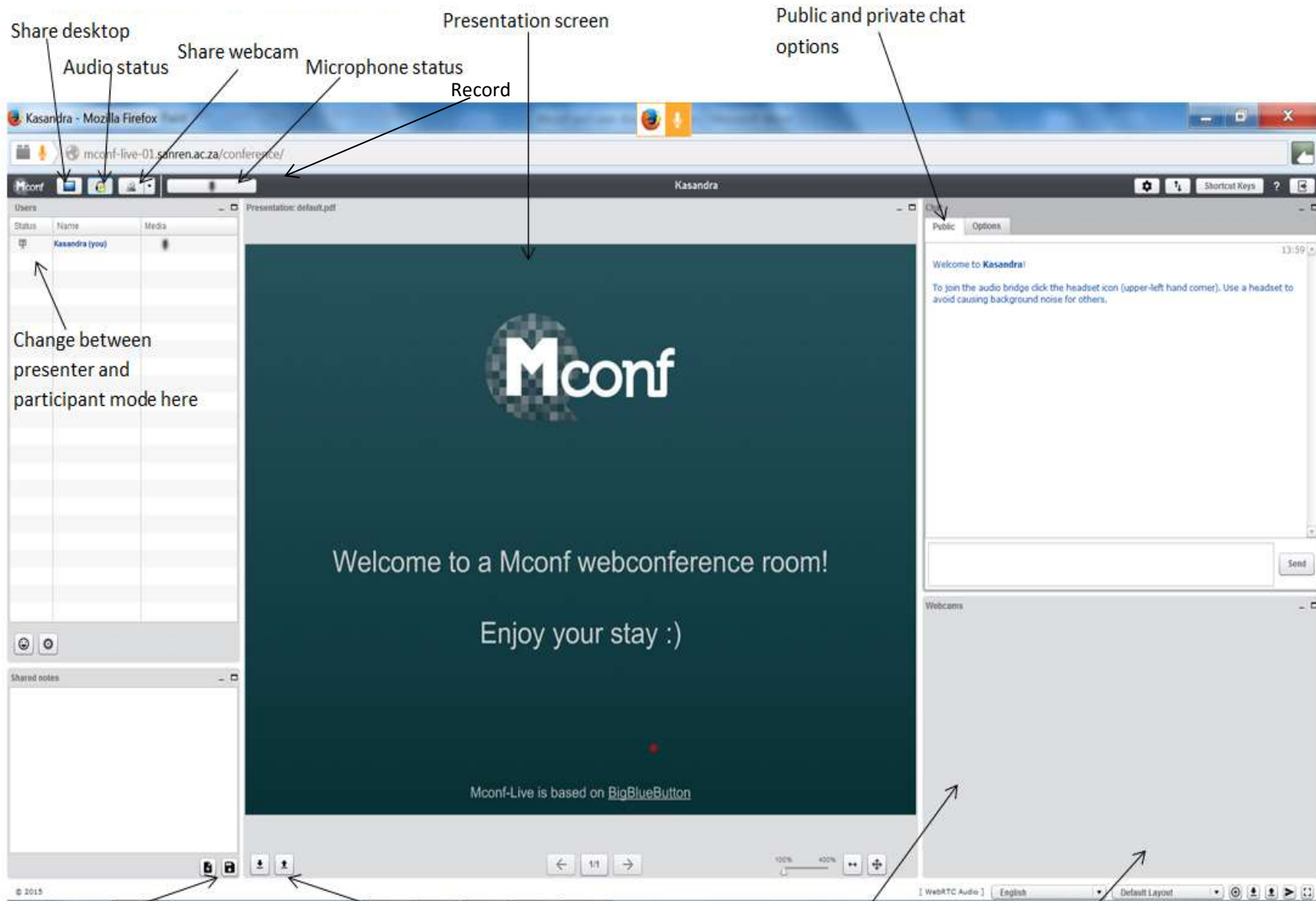
[View more](#)

Administrators

Kasandra

Patrick Holahan

[Leave this space](#)



Take notes during the session and save them with these icons

Upload and download presentations for viewing/editing

Webcam views

Change layout of meeting

Installation test space - Mozilla Firefox

Installation test space

Webcams

Kassandra (you)

Felipe Cocagno

Patrick Holahan

Chat

Public Options

Welcome to **Installation test space!** 14:12

Kassandra 14:31

Hi Felipe, 14:31

Felipe Cocagno

Hi Kassandra 14:31

just joined :)

one sec

Send

Presentation: Screenshot from 2015-05-29 09:23:58.png

Mconf

SAFIRE

Mconf: An Open Source Multiconference System

Summary of paper by Helen Touss, Felipe Cocagno, Lawrence O'Connell and Paul Davis

Help for users on
[Screens & Presentations](#)

Powered by Yassine Ouss
 (Github: YassineOuss)

SPARREN
 South African Research Network

TENET

© 2015

[WebRTC Audio] English Webcam Meeting

15:06
29/05/2015

File Edit View History Bookmarks Tools Tabs sharing devices Help

https://mconf.sanren.ac.za... Meeting with RNP Help guides | Mconf Web ...

mconf-live-01.sanren.ac.za/conference/ Search

Mconf Meeting with RNP Muted Shortcut Keys ?

Webcams

Kassandra Isaac, Patrick Holahan and Ajay Makan (SANReN & TENET): SANReN boardroom, CSIR, Pretoria, South Africa

Leandro Guimaraes and Thiago Oliveira (Brazilian NREN - RNP): Rio de Janeiro, Brazil

Felipe Cecagno (Mconf Technology): Florianopolis, Brazil

Rob Bristow (TENET): TENET Engineering office, Cape Town, South Africa

Valter Roesler (Federal University of Rio Grande do Sul - UFRGS): Porto Alegre, Brazil

Simeon Miteff (SANReN): SANReN office, CSIR, Pretoria, South Africa

Chat

Public Options

Felipe Cecagno 15:02
your microphone is working - it's a bit soft, but it's working :)

Simeon Miteff 15:03
Rob: mic gain?

Felipe Cecagno 15:04
much better

Send

Desktop Sharing: Presenter's Preview

Presentation: Agenda for meeting with RNP.pdf

2/2 100% 400%

© 2015 http://www.mconf.org [WebRTC Audio] English Webcam Meeting

Windows taskbar: Internet Explorer, Google Chrome, PowerPoint, Skype, Mail, Word, Adobe Reader, System tray: 15:08 03/06/2015

Current Usage at SA NREN

- Two Mconf launch events 22/23rd July 2015 using Mconf
- Mconf Tecnologia participated from Brazil via Mconf
- +/- 137 users registered since
- Few key users making use of the service on a regular basis
- Institutions are busy testing
- Good experiences using Mconf have been reported thus far
- Current use cases: Teaching and Learning, National projects and General meetings

Monitoring

Usage report from 2015-10-01 to 2015-11-04

[View filters](#)

[Printable version](#)

Number of users and meetings in the selected period (Daily sampling)



Number of meetings: 23

Number of users: 69

Average meeting duration: 121.73 minutes

Maximum number of simultaneous meetings: 2

Average number of users: 3

Maximum number of simultaneous users: 16

Number of recordings: 0

Average recording duration: 0 minutes

Number of meetings per server



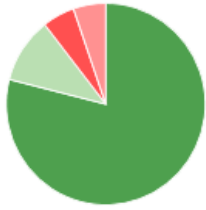
Server name	Number of meetings	Percentage
mconf-live-01.sanren.ac.za	21	91.3043 %
mconf-live-02.sanren.ac.za	2	8.6957 %

Number of meetings per institution



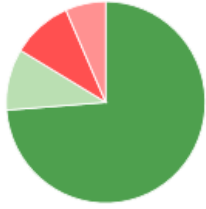
Institution name	Number of meetings	Percentage
SANReN mconf.sanren.ac.za	19	100 %

Room distribution



Room size (number of users)	Number of meetings	Percentage
2	15	78.9474 %
4	2	10.5263 %
3	1	5.2632 %
5	1	5.2632 %

Joins per operating system (OS)



OS	Number of joins	Percentage
Windows 7	45	73.7705 %
Windows XP	6	9.8361 %
Mac OS X	6	9.8361 %
Windows	4	6.5574 %

Top 5 rooms

Meeting ID	Created # times	Max unique users	Total users
POX project discussion: Polyus	5	5	13
Melanie Robertson	2	4	6
Lorna van der Merwe	2	2	4
Ruan	2	2	4
eSkills Meetings	2	4	6

Top 5 users

User name	Joined # times
Lorna van der Merwe	11
Deon Loretan	10
Kasandra	6
Jansen van Rensburg	5
Melanie Robertson	4



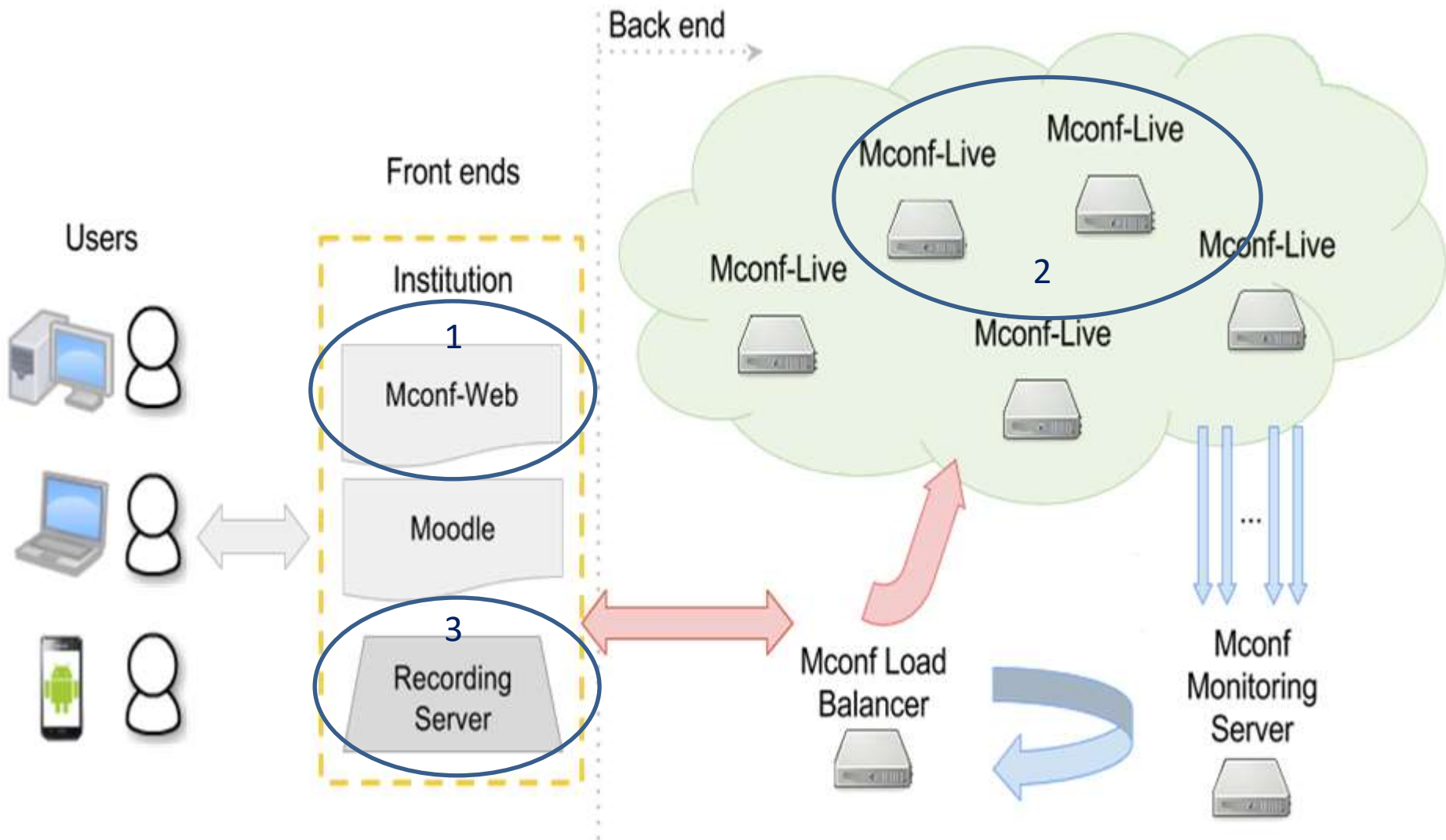
Mconf

Summary

SA NREN's experience with Mconf:

- Excellent technical quality
- Low cost
- Easy to setup
- Well supported
- SAFIRE integration
- Currently available in Portuguese and English
- Mconf web conferencing could help other NREN communities, specifically African NREN's who want to provide value-added services with a low cost to implementation.

Global Academic Network Summary





How to get started

- Learn more about SA NREN instance on the Mconf SA blog at <https://mconfsa.wordpress.com/>
- Test out Mconf at <http://mconf.org/>
- Read about the Mconf Global Academic Network at <http://mconf.org/about/mconf-network/>



How to get started (continued)

- Read the documentation on how to join the Mconf Global Network is available at <https://github.com/mconf/wiki/wiki/Mconf-Network#how-to-join-the-network>
- Read the documentation on how to install the Mconf web portal to access these web conferencing service at <https://github.com/mconf/mconf-web/wiki/Deployment>



Thank you for listening

Questions?



Current Usage at SA NREN (continued)

Meeting spaces have been created under the following project names:

- Technology Innovation Seed Fund Team
- iThemba Laboratory for Accelerator-Based Sciences
- Coastal Systems Advanced Mathematical Modelling
- H3ABioNet Data Management Taskforce
- Directorate of Teaching and Learning, to name a few.