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# A Community Networking Cloud in a Box - CLOMMUNITY

**The aim of the CLOMMUNITY project is to provide the means to communities of citizens for bootstrapping, running and expanding community services organised as community clouds in community-owned networks.**

## AT A GLANCE

### Project:

A Community Networking Cloud in a Box – CLOMMUNITY

### Project coordinator

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### Partners from:

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### Duration:

From January 2013 to December 2014

### Total cost:

1.45 Million Euro

### Programme:

ICT-2011.1.6 Future Internet Research and Experimentation (FIRE)

### Further information:

<http://clommunity-project.eu/>

## The model for community networks and services

Community networking is an emerging communication infrastructure in which communities of citizens build, operate and own IP-based networks, open for individual and collective participation.

In these networks the stakeholders established in a geographic area or community, e.g. individuals, schools, SMEs, professional associations, and municipalities, team up to create, invest, plan and run an open telecommunication infrastructure based on self-service and self-management by the users. These efforts are directed towards satisfying that community's demands such as access to the Internet and many other user-oriented services, helping digital inclusion in domains outside the commercial interest of traditional ISP and Telecom service providers.

Community networks and services are part of the Internet but differ in several key aspects due to their nature: they are open and transparent, self-owned since the community members own the resources, self-managed with a decentralized structure, and self-growing in topology and resource capacity.

## A Community Networking Cloud in a Box

The CLOMMUNITY project aims at providing the means to communities of citizens for bootstrapping, running and expanding community clouds: Cloud infrastructures built on community networks, hosted on community-owned computing and communication resources to provide services of local interest.

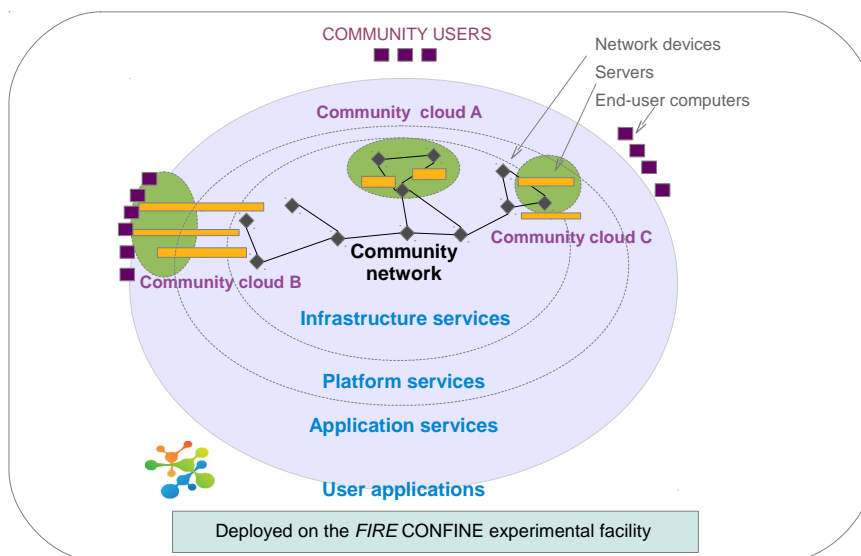
Towards this objective, specific research challenges need to be solved, while taking into account the sustainability of the community cloud model:

- Self-managing and scalable (decentralized) infrastructure services for the management and aggregation of resources from a large number of widespread low-cost unreliable devices for networking, storage and processing.
- Distributed and persistent computation and communication platform services to support and facilitate the design and operation of applications in community clouds.
- Elastic, resilient and scalable service overlays and user-oriented services built over these underlying services, providing a good quality of experience to users at the lowest economic and environmental cost.

## Results

The main results of this project will be 1) a network and service architecture for community clouds and 2) a prototype open-source implementation of a community cloud toolkit suitable for community-owned networks.

These results will be achieved through research and validation of the prototyped components and evaluations that include the deployment of pilot experiments involving end users.



Extensive experiments under realistic conditions will be conducted using the Community-Lab testbed provided by the FIRE CONFINE experimental facility.

## Impact

The project results will enable community networks adding through community clouds a significant value to their infrastructures, being able to create a digital ecosystem of community services, and thus offer new opportunities for community-owned networks in the future Internet.

### For further information:

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