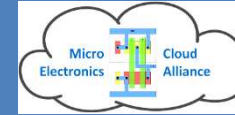


# MECA

MicroElectronics Cloud Alliance

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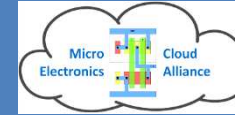
## **Work package 5 (WP5): Development of the mClouds system**

- **What was done after MECA training event at TU Berlin?**
- Almost all Partners have prepared their local CloudStack installations now!
  - And added HTTPS/SSL encrypted connections to the internet accessible GUI endpoint (CloudStack management server)
  - Some have added additional resources like hard disks (storage space) or additional hosts

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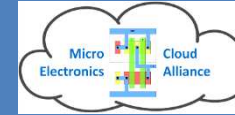
## **Work package 5 (WP5): Development of the mClouds system**

- Partners installations are now connected via CloudStacks region feature
  - An updated region list is maintained in “basecamp”
  - The region settings have been added to almost all local cloud installations
  - Each partner institution has access to the other’s installation by a common “mecaadmin” account

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apachecloudstack

3 Notifications | Martin Klosek

Project: Default view MECA-eWorks

Home > Regions >

Viewing Regions

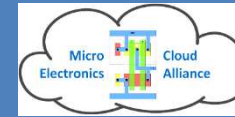
Name	ID	Endpoint	Quickview
MECA-PolITO	1	<a href="https://cloudmanager.visilab.polito.it:6443/client/">https://cloudmanager.visilab.polito.it:6443/client/</a>	+
MECA-eWorks	2	<a href="https://212.60.228.60:6444/client/">https://212.60.228.60:6444/client/</a>	+
MECA-BME	3	<a href="https://152.66.71.179:6444/client/">https://152.66.71.179:6444/client/</a>	+
MECA-TUS	6	<a href="https://81.161.244.45:8000/client/">https://81.161.244.45:8000/client/</a>	+
MECA-UPB-CETTI	7	<a href="http://upb.gigaeletronic.ro:8000/client">http://upb.gigaeletronic.ro:8000/client</a>	+
MECA-UNED	8	<a href="http://62.204.201.84:8080/client/">http://62.204.201.84:8080/client/</a>	+

Dashboard  
Instances  
Affinity Groups  
Storage  
Network  
Templates  
Events  
Projects  
Accounts  
Domains  
**Regions**  
Infrastructure  
Global Settings  
Service Offerings

# MECA

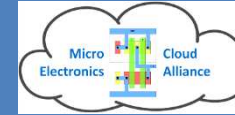
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The screenshot shows the Apache CloudStack web interface. At the top, the "apachecloudstack" logo is visible on the left, and "Notifications" and "Martin Klosek" are on the right. Below the header, the "Project: Default view" dropdown is set to "MECA-eWorks". A "Regions" modal window is open, displaying a list of regions: MECA-PoliTO, MECA-eWorks, MECA-BME, MECA-TUS, and MECA-UPB-CETTI. A "Close" button is at the bottom of the modal. In the background, a table lists the regions with their endpoints and quickview options.

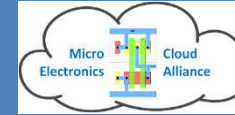
Region	Endpoint	Quickview
MECA-PoliTO	https://cloudmanager.vlsilab.polito.it:6443/client/	+
MECA-eWorks	https://212.60.228.60:6444/client/	+
MECA-BME	https://152.66.71.179:6444/client/	+
MECA-TUS	https://81.161.244.45:8000/client/	+
MECA-UPB-CETTI	http://upb.gigaelectronic.ro:8000/client	+



## Work package 5 (WP5): Development of the mClouds system

How the regions are managed inside of  
CloudStacks MySQL database:

id	name	end_point	portableip_service_enabled	gslb_service_enabled
1	MECA-PolITO	<a href="https://cloudmanager.vlsilab.polito.it:6443/client/">https://cloudmanager.vlsilab.polito.it:6443/client/</a>	0	1
2	MECA-eWorks	<a href="https://212.60.228.60:6444/client/">https://212.60.228.60:6444/client/</a>	0	1
3	MECA-BME	<a href="https://152.66.71.179:6444/client/">https://152.66.71.179:6444/client/</a>	0	1
6	MECA-TUS	<a href="https://81.161.244.45:8000/client/">https://81.161.244.45:8000/client/</a>	0	1
7	MECA-UPB-CETTI	<a href="http://upb.gigaeletronic.ro:8000/client">http://upb.gigaeletronic.ro:8000/client</a>	0	1
8	MECA-UNED	<a href="http://62.204.201.84:8080/client/">http://62.204.201.84:8080/client/</a>	0	1
999	Region1-Local-Test	<a href="http://172.16.18.1:8080/client/">http://172.16.18.1:8080/client/</a>	0	1



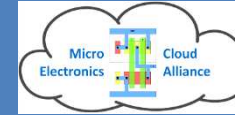
## Work package 5 (WP5): Development of the mClouds system

- Started and still in progress:
- **MECA global template repository = MGTR**
  - Virtual machine templates are stored on a central server
  - Synchronisation script downloads the templates automatically once per day to each local CloudStack installation
  - For reliability, templates can be divided into smaller junks (for example: template of 5 GB is splitted into 10 junks of 500 MB)
  - Templates can have different versions to be updated automatically in local CloudStack installation
- Successfully deployed at TUS and eWorks, BME and UKIM in progress (see in “basecamp”).
  - Some improvements are required for a higher stability (logging, error handling)
  - After some improvements the script can be rolled out to all partners

# MECA

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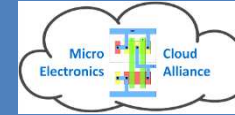
## **Work package 5 (WP5): Development of the mClouds system**

- **Forecast/plans for End of 2017 and 2018**
  - Finish the MECA global template repository (MGTR) to share virtual machine templates across all partner cloud installations
  - Virtual machine template creation
    - Linux + Windows
    - Especially: How to add the right software
  - How to access VM instances over the network for the students?

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## **Work package 5 (WP5): Development of the mClouds system**

- **Forecast/plans for End of 2017 and 2018**
  - Online scheduler for class rooms
  - Dashboard of whole MECA mClouds (similar to single cloud) to see all existing and all available resources update frequently (1x per hour)
  - Security optimization:
    - Maybe IP locks between partner networks
    - Proposal: Application of domain [MECA-project.eu](http://MECA-project.eu) and official SSL certificate (registered by TUS)