PROGRAMME: Hands-on Workshop on Design, installation and management of HPC Data Centers for academic institutions.

	8/04/2019	**9/04/2019**	**10/04/2019**	**11/04/2019**	**12/04/2019**	**15/04/2019**	**16/04/2019**
	Planning	**Layout/spacing**	**Cooling**	**Electrical**	**Data Handling**	**Operational**	
9:30-10:45		Introduction; layout, spacing and types of RACK equipment *(M. Ratosa)*	Cooling system basic overview; Types; indoor & outdoor, etc. *(M. Ratosa)*	Single or 3-phase phase power, types of loads and equipment: pdu, mdf, etc *(M. Ratosa)*	Centralized data handling: servers, storage, network, switches & hardware characteristics IPMI/ BMC, dual power-supply *(Onime & Verina)*	Documentation, labeling, monitoring maintenance & troubleshooting; Spares & support contracts *(Verina & Ratosa)*	Final Feedback discussion & evaluation session
10:45-11:15	*Interactive break*						Closing
11:15-12:30	Welcome Ceremony and Introductions	Access control & safety systems (fire, etc) *(M. Ratosa)*	Redundancy and Special considerations for Tropical climates *(M. Ratosa & C. Onime)*	Redundancy:UPS and generators) distribution/ switch-over of single or 3 phase electrical supply *(M. Ratosa)*	Cabling, uplinks, redundancy, high availability & backups *(M. Verina & C. Onime)*	HPC scientific user support. *(I. Girotto)*	
12:30-14:00	**LUNCH BREAK**						
14:00-15:15	Data Centre Planning: Capacity, Environment & Growth) *(M. Ratosa)*	**DEMO:** *introduction to managing a HPC cluster.* *(Verina & Onime)*	**DEMO:** *Install of OpenStack based Cloud infrastructure & services* *(Verina & Onime)*	**DEMO:** *Configuring a ROCKS cluster for UPS monitoring.* *(C. Onime)*	General user support & RT Trouble Ticket system *(J. Grassberger & C. Onime)*	Purchasing/ procurement practices and strategies *(U. Singe)*	
15:15-15:45	*Interactive break*						
15:45-16:30	**DEMO:** *install of a HPC cluster using ROCKS* *(M. Verina)*	**DEMO:** *using a HPC cluster, submitting jobs, etc* *(Onime & Verina)*	**DEMO:** *Services from the Cloud infrastructure: nextcloud, web & tomcat, etc* *(Onime & Verina)*	*Some notes on ROCKS clusters: upgrade, integration, etc* *(C. Onime)*	*HPC and the Elastic Data Centre: virtualisations and clouds* *(C. Onime)*	Greening the data center: *(C. Onime)*	
16:30-17:00	**Group exercises; hands-on, problem solving & brain storming sessions**						