



**SEVENTH FRAMEWORK PROGRAMME  
Research Infrastructure**

**FP7-INFRASTRUCTURES-2010-2 – INFRA-2010-1.2.3:  
Virtual Research Communities**

**Combination of Collaborative Project and Coordination and Support  
Actions (CP/CSA)**



**LinkSCEEM-2  
Linking Scientific Computing in Europe and the Eastern  
Mediterranean – Phase 2**

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**D5.6  
Project Website**

***Final***

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## Project and Deliverable Information Sheet

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## Document Control Sheet

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## References and Applicable Documents

[1] <http://www.linksceem.eu>

## List of Acronyms and Abbreviations

<Below is an extensive the List of Acronyms used in previous deliverables. Please add additional ones specific to this deliverable and delete unrelated ones. >

ACF	Advanced Computing Facility
API	Application Programming Interface
CaSToRC	Computation-based Science and Technology Research Centre of the Cyl
CPU	Central Processing Unit
CUDA	Compute Unified Device Architecture (NVIDIA)
Cyl	The Cyprus Institute
CyNet	The Cyprus NREN
DEISA	Distributed European Infrastructure for Supercomputing Applications. EU project by leading national HPC centres.
EC	European Community
Eol	Expression of Interest

ESFRI	European Strategy Forum on Research Infrastructures; created roadmap for pan-European Research Infrastructure.
FP	Floating-Point
FPU	Floating-Point Unit
FZJ	Forschungszentrum Jülich (Germany)
GB	Giga (= $2^{30} \sim 10^9$ ) Bytes (= 8 bits), also GByte
Gb/s	Giga (= $10^9$ ) bits per second, also Gbit/s
GB/s	Giga (= $10^9$ ) Bytes (= 8 bits) per second, also GByte/s
GÉANT	Collaboration between National Research and Education Networks to build a multi-gigabit pan-European network, managed by DANTE. GÉANT2 is the follow-up as of 2004.
GFlop/s	Giga (= $10^9$ ) Floating point operations (usually in 64-bit, i.e. DP) per second, also GF/s
GHz	Giga (= $10^9$ ) Hertz, frequency = $10^9$ periods or clock cycles per second
GigE	Gigabit Ethernet, also GbE
GNU	GNU's not Unix, a free OS
GPGPU	General Purpose GPU
GPU	Graphic Processing Unit
HDD	Hard Disk Drive
HE	High Efficiency
HET	High Performance Computing in Europe Taskforce. Taskforce by representatives from European HPC community to shape the European HPC Research Infrastructure. Produced the scientific case and valuable groundwork for the PRACE project.
HPC	High Performance Computing; Computing at a high performance level at any given time; often used synonym with Supercomputing
HPCC	HPC Challenge benchmark, <a href="http://icl.cs.utk.edu/hpcc/">http://icl.cs.utk.edu/hpcc/</a>
HPL	High Performance LINPACK
HWA	HardWare accelerator
IB	InfiniBand
IBA	IB Architecture
IBM	Formerly known as International Business Machines
IEEE	Institute of Electrical and Electronic Engineers
I/O	Input/Output
ISC	International Supercomputing Conference; European equivalent to the US based SC0x conference. Held annually in Germany.
JSC	Jülich Supercomputing Centre (FZJ, Germany)
KB	Kilo (= $2^{10} \sim 10^3$ ) Bytes (= 8 bits), also KByte
LQCD	Lattice QCD
LinkSCEEM	Linking Scientific Computing in Europe and the Eastern Mediterranean
LinkSCEEM-2	Linking Scientific Computing in Europe and the Eastern Mediterranean – Phase 2
LS	Local Store memory (in a Cell processor)
MB	Mega (= $2^{20} \sim 10^6$ ) Bytes (= 8 bits), also MByte
MB/s	Mega (= $10^6$ ) Bytes (= 8 bits) per second, also MByte/s
MFlop/s	Mega (= $10^6$ ) Floating point operations (usually in 64-bit, i.e. DP) per second, also MF/s
MHz	Mega (= $10^6$ ) Hertz, frequency = $10^6$ periods or clock cycles per second
MIPS	Originally Microprocessor without Interlocked Pipeline Stages; a RISC processor architecture developed by MIPS Technology
Mop/s	Mega (= $10^6$ ) operations per second (usually integer or logic operations)
MoU	Memorandum of Understanding.
MPI	Message Passing Interface
MPP	Massively Parallel Processing (or Processor)
NDA	Non-Disclosure Agreement. Typically signed between vendors and customers working together on products prior to their general availability or announcement.
NoC	Network-on-a-Chip
NFS	Network File System
NIC	Network Interface Controller
OpenCL	Open Computing Language
OpenGL	Open Graphic Library
Open MP	Open Multi-Processing
OS	Operating System
pNFS	Parallel Network File System

POSIX	Portable OS Interface for Unix
PRACE	Partnership for Advanced Computing in Europe; Project Acronym
PRACE-1P	Partnership for Advanced Computing in Europe – First Implementation Phase
PRACE	Partnership for Advanced Computing in Europe – Research Infrastructure
RAM	Random Access Memory
SDK	Software Development Kit
SSD	Solid State Disk or Drive
TB	Tera (= 240 ~ 1012) Bytes (= 8 bits), also TByte
TCO	Total Cost of Ownership. Includes the costs (personnel, power, cooling, ...) in addition to the purchase cost of a system.
TFlop/s	Tera (= 1012) Floating-point operations (usually in 64-bit, i.e. DP) per second, also TF/s
Tier-0	Denotes the apex of a conceptual pyramid of HPC systems. In this context the PRACE Supercomputing Research Infrastructure would host the Tier-0 systems; national or topical HPC centres would constitute Tier-1
UNICORE	Uniform Interface to Computing Resources. Software for seamless access to distributed resources.
VO	Virtual Organization
VRC	Virtual Research Community

## Executive Summary

Within the scope of its dissemination and outreach program, LinkSCEEM-2 has published a project website accessible at [www.linksceem.eu](http://www.linksceem.eu). The website will provide information about the project to interested members of the scientific community and to the wider public throughout the duration of the project. For the LinkSCEEM-2 research (user) community, the website will serve as a portal to essential resources and documentation, including links to training material, to the cyber-platform facilitating communication among researchers in the region, to the helpdesk and support system, and to the project Wiki and collaboration platform. For the general public, the website will provide information on project objectives, partners, important milestones achieved, news and overall progress.

To facilitate the joint contribution and editing of content by project participants while maintaining a common look and feel, the project website utilizes a content management system (CMS) that allows for control of content by registered users. Content will be updated as the project progresses to include a comprehensive set of links to user resources, publicise new events and meetings, and announce key milestones and results.

### 1 Introduction

Work on creating and maintaining the LinkSCEEM-2 project website occurs in the scope of the dissemination and outreach program of the project, under WP5. The main objectives of the website and the work that took place to create it are described in this document. Section 2 elaborates on the LinkSCEEM-2 website task, while section 3 describes the details of the hosting platform. Section 4 describes the website structure, targeted audience and objectives. Finally, Section 5 covers the content management procedure.

### 2 Implementation and Maintenance

The implementation and maintenance of the LinkSCEEM-2 project website is part of WP5: Dissemination and Outreach, Task 2. Involved partners include the CyI (task leader) and SESAME although all consortium members will be providing content for publication. The present deliverable, D5.6 due on Month 3 of the project, refers to the development and deployment of the initial version of the website incorporating key content and features. Work on the LinkSCEEM-2 website will continue throughout the duration of the project via the addition of new content and the linking to upcoming project resources, such as the cyber-platform providing user forum and networking services on Month 10 (D2.5) etc.

The LinkSCEEM-2 website, published at [www.linksceem.eu](http://www.linksceem.eu), utilizes the general LinkSCEEM name and displays the LinkSCEEM logo. The [www.linksceem-2.eu](http://www.linksceem-2.eu) and [www.linksceem2.eu](http://www.linksceem2.eu) URLs have been configured to automatically forward the user to the [www.linksceem.eu](http://www.linksceem.eu) URL.

### 3 Hosting Site and System

The LinkSCEEM-2 website is hosted at CaSToRC and is jointly maintained in-house by CaSToRC and SESAME personnel. The website was created using the Joomla! content management system, which was selected for its capabilities, ease of use and extensibility. The

website is backed up regularly to ensure that all content updates are retrievable in the case of hardware failure.

## 4 Website Structure and Objectives

The LinkSCEEM-2 website serves a two-fold role, as an external communication tool with the general public, and as a repository of information and a portal to resources useful to the LinkSCEEM-2 user community.

Content is structured under categories organized in main subject menus. Figure 1 shows the LinkSCEEM Homepage, with the *Main Menu*, *Activities* and *User Resources* menus shown on the left side of the page.

**LINKSCEEM**

**Main Menu**

- Home
- About Us
- News
- Partners
- HPC Resource Centres

**Activities**

- Events
- Outreach
- Work Organization

**User Resources**

- Training
- Allocations
- User Support
- Links

**Login Form**

Username  
 Password  
 Remember Me   
 Login  
 Forgot your password?  
 Forgot your username?

**Latest Updates**

- Linking Scientific Computing in Europe and the Eastern Mediterranean – Phase 2
- PRACE Newsletter Issue-1
- PRACE/LinkSCEEM-2 2011 Winter School
- LinkSCEEM-2 Kick-off Meeting
- Bibliotheca Alexandrina - BA
- National Authority for Remote Sensing and Space Sciences - NARSS
- WP-12 Synchrotron data analysis and modelling
- WP-11 Cultural Heritage related research
- WP-10 Climate related research
- WP-9 Cross-disciplinary activities

**Linking Scientific Computing in Europe and the Eastern Mediterranean – Phase 2**

Scientific research in a growing and diverse number of disciplines is becoming increasingly dependent on large-scale computational resources. LinkSCEEM recognizes that to remain competitive, scientists in the Eastern Mediterranean area must be provided with High Performance Computing (HPC) resources sustained by technical expertise and know-how.

The first phase of LinkSCEEM (April 2008-January 2010), an FP7 Support Action, succeeded in raising the general awareness of HPC and computational science in the Eastern Mediterranean and in implementing a network of users from the region who will benefit from the availability of supercomputer systems. LinkSCEEM has also been a catalyst for the development of ties among research organizations in the region.

The current phase of the project, LinkSCEEM-2, aims at further developing a Virtual Research Community in Computational Science in the Eastern Mediterranean region. The objectives of LinkSCEEM-2 are to achieve the following:

- Optimally integrate regional computational resources utilizing expertise and best practices from established leading HPC centres
- Create user support and training programs, and an active networking process to engage research communities and enable scientists in the region to utilize HPC
- Enable research of particular relevance to the region in Climate Science, Cultural Heritage and Synchrotron Applications

LinkSCEEM-2 is a joint collaborative effort of 11 Institutions in Europe, the Eastern Mediterranean and the US, funded in part by the European Commission's 7<sup>th</sup> Framework Programme.

**7 CAPACITIES**

**e-infrastructure**

Feed Entries

Valid XHTML and CSS.

Figure 1: The LinkSCEEM Homepage

### 4.1 Main Menu

Articles posted under the Main Menu are primarily aimed at the general public and include a brief introduction to the project, and news about the project, such as articles describing key milestones reached and main results achieved. Information on the participating partner institutions, including links to the corresponding organizations websites and a more detailed description of the HPC resource centres involved in LinkSCEEM-2 (CaSToRC, BA and NARSS) and their computational and visualization facilities are also included under this menu.



## 4.2 Activities Menu

The *Activities* menu includes information on upcoming events, links to project general outreach and informational material, including presentations and posters relevant to LinkSCEEM-2, and summaries of the project technical objectives and activities, targeted both towards the general public and the HPC and computational science communities. The latter may be informed on project events such as user meetings, training workshops and relevant scientific conferences through information and content posted under this menu. Interested users may be further informed about the project activities and organization by following the work-packages link to access information about each of the twelve LinkSCEEM-2 WPs.

## 4.3 User Resources

The website will be used extensively for the creation of virtual computational science research communities with an Eastern Mediterranean focus. In this context the website will serve as a gateway to essential project resources including HPC and other infrastructure, as well as additional material of interest to prospective users. LinkSCEEM-2 tiered Training and User Support programs will produce course material and documentation that will be posted to the website and accessed by the user community. User guidelines and machine usage data will also be published on the project website.

The website will serve as a central portal providing access to the helpdesk and resource allocation systems that will be made available to the LinkSCEEM-2 user community as the project advances. Additionally, the website will provide access to content on current work and activities by linking to the on-line wiki and collaboration platform used by project participants, via a login mechanism based on user access rights.

The resource allocation procedure is a main activity of the project that will be assisted by the website. The call for proposals will be posted on the project website, such that it receives maximum publicity in the scientific communities of the region. A template proposal together with user guidelines for proposal preparation, documentation on the review process, review criteria and timelines will be posted. Furthermore, the website will be used to collect information from users regarding their resource requirements, through questionnaire forms and user surveys available through the site.

Other useful links, such as links to related projects and initiatives, are also made available under the User Resources menu.

## 5 Content Management Procedure

Content authoring is a joint responsibility shared by all project participants. Work package members may contribute content relevant to the project activities they undertake for publication on the website. All content published on the website will be reviewed for consistency and approved for posting by the PMO.

The Project Management Office (PMO) of LinkSCEEM-2 will also contribute content related to project achievements, project events and meetings. Furthermore, the PMO, assisted by a Webmaster at SESAME will be responsible for collecting ongoing requirements on systems and resources that should be integrated into the website from WP leaders and involved partners.

Administrative tasks, such as improvements to the website's theme and structure, and content control (uploading and keeping content up-to-date) will also be responsibility of the PMO and the Webmaster.

