

# Grid Developers: Recommended Grid Reading List

Level: Introductory

Edna Nerona ([edna@legacystudios.biz](mailto:edna@legacystudios.biz)), Consultant, Legacy Studios

29 Nov 2006

Learn more about the grid computing community through workshops, conferences and other valuable resources with this reading list compiled for new users, programmers and administrators.

## Overview

The term “Grid computing” was coined in the late 1990’s and meant to define a new type of distributed computing paradigm and infrastructure. Think of a power grid. Electricity generation stations are interconnected to enable the sharing and optimization of power. In the event of a failure or natural disaster, electricity in one state can be sent to customers in another state.

Expanding on that concept, grid computing is meant as a new field that distinguishes itself from conventional distributed computing by focusing on enabling applications to benefit from sharing high throughput and high performance resources, data and storage, visualization systems, and instruments.

Here are two resources that offer a valuable overview of grid computing concepts and ideas:

### Introduction to Grid Computing

<http://www.redbooks.ibm.com/abstracts/sg246778.html?Open>

The IBM Redbook describes a general view of grid computing concepts, standards, and ways grid computing can provide value.

### Fundamentals of Grid Computing

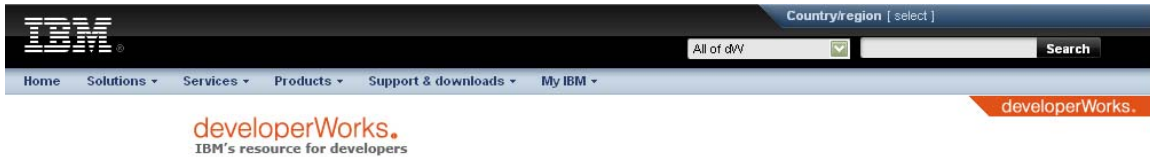
<http://www.redbooks.ibm.com/redpapers/pdfs/redp3613.pdf>

Even though this was published a few years ago but this IBM Redbook offers a solid overview of grid computing concepts and architecture.

## Communities and News

If you want to be the first to learn about research breakthroughs or other news on grid computing, then stay informed with updates from the following communities and news groups:

### News



Below are a few valuable news items, subscribe to the mailing list or RSS feeds to keep up to date on new items:

### **GridToday**

<http://www.gridtoday.com/>

A global source of news, information and events on Grid and Service-Oriented IT.

### **International Science Grid This Week (iSGTW)**

<http://www.isgtw.org/>

International Science Grid This Week is a weekly publication reporting news and information about grid computing projects and collaborations, and the scientific research that uses grid computing technology.

### **Grid Meter by InfoWorld**

<http://weblog.infoworld.com/gridmeter/>

Grid Meter provides readers with ongoing commentary about exciting Grid projects, industry debates, and educational resources that will help enterprise IT pros make sense of this emerging technology.

### **Blogs**

The following is a partial list of blogs of Grid Computing projects, leaders, and developers. Through blogs, you can get a chance to meet professional developers and even novices, providing a first hand look into the grid world. Most of these are fairly new but can still offer useful information. Blogs can provide great support and insight to some of the leading projects and people in grid computing.

#### **CI Topics Blog, <http://web.mac.com/deatkins/iWeb/CI%20Topics/Blog/Blog.html>**

Dan Atkins, National Science Foundation Director of the Office of Cyberinfrastructure (CI) has a blog for sharing news and resources in CI.

#### **Ian Foster's Blog, <http://ianfoster.typepad.com/>**

One of the grid pioneers and a leader in grid middleware and instrumental to the Globus Toolkit offers insights and ideas.

#### **TeraGrid Whiteboard, <http://teragrid.typepad.com/>**

Charlie Catlett, Director of the National Science Foundation TeraGrid project shares his ideas and updates about the TeraGrid project.

### **Other Resources**

There are many opportunities to network, observe the latest research innovations, or take courses on developing technologies through organizations and conferences. Here's some that you should consider:

#### **IBM Downloads and Products**

<http://www-128.ibm.com/developerworks/views/grid/downloads.jsp>



There are a variety of open source and licensed soft tools that can help you cost-effectively manage workload distribution and job scheduling in addition to accessing, processing, and storing data from a diverse range of resources. IBM offers an up to date list of tools and downloads page at so check back often.

## **Organizations**

Organizations provide access to a variety of resources including but not limited to event calendars, white papers, case studies, presentations, and webcasts.

## **Open Grid Forum**

<http://www.ogf.org>

The Open Grid Forum (OGF), previously known as Global Grid Forum, is a community of users, developers, and vendors leading the worldwide adoption of the grid computing. They are comprised of thousands of individuals in industry and research, representing over 400 organizations in more than 50 countries.

## **Conferences**

To learn what is up and coming in grid computing, attending conferences can be a useful experience. Conferences also provide opportunities to submit papers, contribute and present your work.

## **Supercomputing**

<http://supercomputing.org/>

Supercomputing explores how high performance computing, networking, storage and analysis lead to advances in research, education and commerce. According to many it is considered one of the leading conferences to attend. In addition, the conference has technical tracks that cover a diverse curriculum.

## **GridWorld**

<http://www.gridworldhome.com/>

Central to the international GridWorld™ conference is the commercial benefits of grid computing for Enterprise IT professionals. The 2006 conference has passed but keep your eyes peeled for the 2007 conference.

## **Challenges of Large Applications in Distributed Environments**

<http://www-unix.mcs.anl.gov/~bair/CLADE2006/>

This workshop addresses the complex issues that arise in large-scale applications of distributed computation and promotes the development of innovative applications that effectively use distributed resources. The 2006 workshop has already passed but it is a useful conference to keep track of.

## **International Parallel and Distributed Processing Symposium**

<http://www.ipdps.org/>

IPDPS is an international gathering of computer scientists sharing their latest research findings in all aspects of parallel computation.

### **International Symposium on High Performance Distributed Computing**

<http://www.hpdc.org/>

In this symposium, researchers present new ideas, technical insights and future developments of performance applications.

### **International Symposium on Cluster Computing and the Grid**

<http://pdcc.ntu.edu.sg/ccgrid2006/>

This meeting covers the tremendous challenges coming from the convergence of Web Services and Grid Technology.

### **TeraGrid Conference**

<http://teragrid.org/events/teragrid07/>

The TeraGrid conference is for individuals and institutions who are interested in developing and using cyberinfrastructure on TeraGrid. The conference offers parallel session and tutorials useful in learning how to run and develop on TeraGrid. The next TeraGrid conference will take place in Madison, WI from June 4 -7.

### **EGEE Conference**

<http://public.eu-egee.org/conferences/3rd/>

Bringing together experts from over 27 countries, the EGEE Conference focuses on building the EGEE Grid on the EU Research Network . The EGEE conferences regularly attract a considerable number of experts from the international Grid community. With a large turnout and diverse program it can be useful conference to attend. The Sixth EGEE Conference - EGEE'07- will take place 1-5 October 2007 at the Europe Congress Center (ECC), Budapest, Hungary.

### **Books**

This section gives you some higher level and lower level practical books useful in learning about grid concepts in general and developing on a grid.

#### **Grid Computing: The Savvy Manager's Guide**

[http://savvygrid.com/?page\\_id=2](http://savvygrid.com/?page_id=2)

This book walks readers through the fundamentals of grid computing as well as illustrating the benefits of grid technology in business. Drawing from real world examples, the authors also examine the advantages and challenges of grid computing.

#### **The Grid: Blueprint for a New Computing Infrastructure**

<http://www.amazon.com/exec/obidos/ASIN/1558604758/fusion0e/ref=nosim>

Published in 1998, this book provides a vision of the Grid and how it will allow users to share computing power. In addition to programming tools, services and infrastructure are also covered. More than 30 experts in high speed computing field talk about the Grid's benefits to science, government and commercial world.

#### **The Grid 2: Blueprint for a New Computing Infrastructure**

[http://www.amazon.com/Grid-Blueprint-Computing-Infrastructure-Elsevier/dp/1558609334/sr=1-1/qid=1163630213/ref=sr\\_1\\_1/002-0201852-](http://www.amazon.com/Grid-Blueprint-Computing-Infrastructure-Elsevier/dp/1558609334/sr=1-1/qid=1163630213/ref=sr_1_1/002-0201852-)

[6404804?ie=UTF8&s=books](http://www.ibm.com/developerWorks/6404804?ie=UTF8&s=books)

Providing an up to date treatment of the Grid and its challenges, the book describes what hardware, software, and applications are required to create a successful Grid. The editors also examine how they can convince consumers, academicians, and businesses to use the Grid in their work environments.

### **Grid Computing: Making The Global Infrastructure a Reality**

[http://www.amazon.com/Grid-Computing-Making-Infrastructure-Reality/dp/0470853190/sr=1-1/qid=1163630234/ref=sr\\_1\\_1/002-0201852-6404804?ie=UTF8&s=books](http://www.amazon.com/Grid-Computing-Making-Infrastructure-Reality/dp/0470853190/sr=1-1/qid=1163630234/ref=sr_1_1/002-0201852-6404804?ie=UTF8&s=books)

Readers will learn about the pioneers and major projects that are influencing the emerging global Grid.

### **Grid Computing For Developers**

<http://www.amazon.com/Computing-Developers-Programming-Vladimir-Silva/dp/1584504242>

This is an ideal resource for computer scientists and researchers, graduate students, and IT experts looking to expand their grid computing skills. The authors also explore the evolution of grid computing.

### **Globus® Toolkit 4,: Programming Java Services**

<http://www.globus.org/alliance/publications/books/>

Based on the online guide, “The Globus Toolkit 4 Programmer's Tutorial,” this book provides useful information for new users or experienced developers.

## **Conclusion**

From here, we strongly suggest that you get involved -- sign up for newsletters, monitor the blogs and attend your first symposium. That way, you will get the help and support you need throughout the various phases of your grid project.

This article will updated quarterly so please check back again for the latest resources.

### **About the author**

Edna Nerona is the owner of Legacy Studios, Inc, a creative services firm located in San Diego, CA. She has BA in Journalism from San Diego State University and has previously worked for the San Diego Supercomputer Center and Entropia, Inc. Edna is also an accomplished speaker with Toastmasters International.