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ENERGY

US NITRD LSN-MAGIC

Coordinating Team – Organization and Goals

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Workshop on Science Agency Uses of Clouds and Grids

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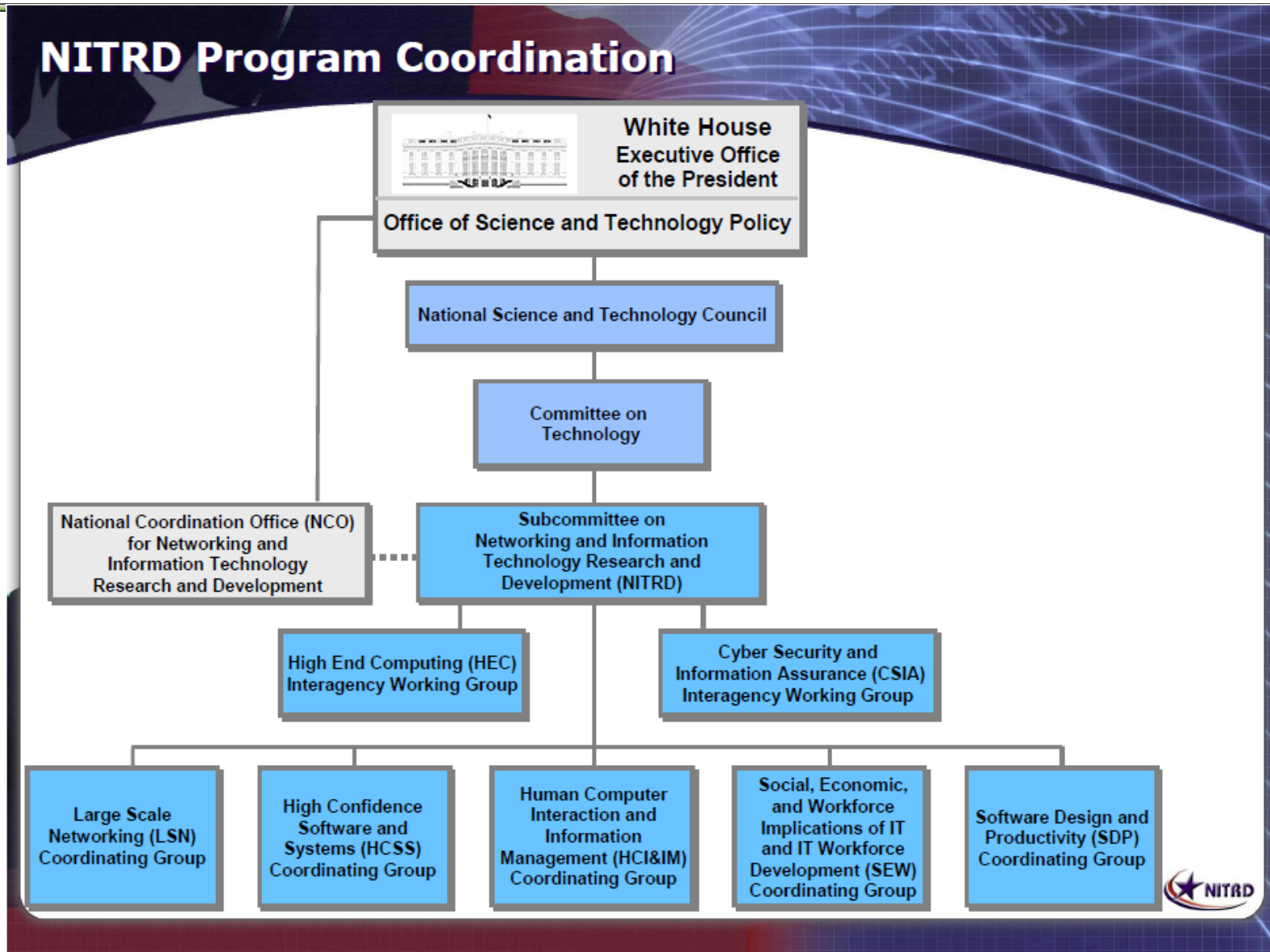
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Talk Outline

- **NITRD and LSN**
- **LSN Subcommittees – JET & MAGIC**
- **Revitalization efforts**
- **Conclusions**



NITRD Organization chart





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LSN Subcommittee Tasks and Leadership

- **Coordinate Federal agency networking R&D in leading-edge networking technologies, services, and advanced network components; grid, cloud, and collaboration networking tools and services.**
 - Robert Bonneau – USAF & Daniel Hitchcock DOE-SC
 - JET (Joint Engineering Team)
 - Vince Dattoria – DOE-SC & Kevin Thompson – NSF-OCI
 - MAGIC (Middleware and Grid Infrastructure Coordination)
 - Gabrielle Allan – NSF-OCI & Richard Carlson – DOE-SC



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MAGIC goals and objectives

- **The MAGIC subcommittee was established in 2002 to improve coordination activities between Federal Agencies, Academic researchers, Industry providers and Scientific user communities.**
- **A key objective of MAGIC is to promote cross-agency information sharing and interactions to ensure coordinated programs and directions.**



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MAGIC Meeting Structure

- Meets via phone/web-ex the 1st Wednesday of every month from 2:00 – 4:00 ET.
- Open/public meeting – no confidential information discussed during the meeting
- Agenda and presentations posted on web and/or Wiki before meeting starts
- Objective is to foster community discussions on topics of interest



- **Middleware services and tools.**

- This element deals with the architecture, interfaces and principles of individual tools or services that can be used to simplify access to or use of the network and computers.

- **Grid and Cloud computing services.**

- This element deals with the architecture, interfaces and principles of tools and services needed to build, operate, enhance, provision, or use scientific grid/cloud computing systems.

- **Collaboration services.**

- This element deals with the architecture, interfaces and principles of tools and services needed to build, enhance, operate, or use distributed scientific collaboration environments.



Organizational Tasks

- **Research Challenges.**

- Identify, discuss, and prioritize major open research challenges and themes. Members can exchange information and questions about these tasks via monthly MAGIC telecons and the MAGIC Wiki site, Members are also encouraged to join the MAGIC discussion group on LinkedIn. MAGIC may also sponsor federally funded workshops to explore specific topics in depth, and facilitate joint efforts to address identified needs.

- **Standards work.**

- Encourage the development and use of current and future national/international standards for Grid/Cloud computing environments. These standards should describe common approaches and best practices for middleware services, schemes that define how a service works, or protocols that implement a specific schema. Specific topics include, but are not limited to, scientific grid and cloud computing, identity management, and collaboration services.

- **Information sharing.**

- Provide a venue for members and invited guests to share research results, report on agency programs, raise questions, and discuss topics of mutual interest. The results of this information sharing will be captured as small “micro-reports” on the MAGIC wiki site.



Organizational Tasks

- **Planning and outreach.**

- Provide a venue for members to hold in-depth discussions on topics of interest including, but not limited to, adoption and deployment of specific tools and services across federal agencies, mechanisms for testing specific tools and services across agency boundaries, and creating or informing agency policies with respect to scientific cloud computing.

- **Operational infrastructures.**

- Allow high-level interchange of case studies and lessons learned from federal agency projects that operate large-scale infrastructures for science. In this process, MAGIC will identify needs and the potential for common approaches, especially where such exchanges can produce substantial improvements in operational efficiency, cost savings, or increased mission capability for science productivity and support.

- **Interoperability.**

- Discuss and consider recommendations to encourage interoperability between the various large-scale infrastructures that are operated by different agencies, with the goals of: a) working towards a common interface to the infrastructures, possibly through standards, allowing users to more easily use any of them; and b) moving from common approaches towards actual interoperation, to further improve the efficiency and utilization of the infrastructures.



Meeting Structure

- **MAGIC meetings will consist of 2 major parts.**
 - A business section where team members can provide an update on current activities or address issues of general interest to the MAGIC members.
 - The 2nd section will be a guided discussion on a specific topic of interest as defined below.
- **For the 2nd section, the co-chairs will accept and/or propose the topics.**

Examples include:

 - What are the gaps in research for fault tolerance of distributed services?
 - What are the highest priority gaps in CI functionality needs across the members?
 - Discuss a specific cross-agency CI technology initiative that could benefit the broader community
- **For each chosen topic, individuals and agencies will have an opportunity to summarize their position in a short response paper. These response papers will be posted on the MAGIC wiki site along with background information on the topic.**



Meeting Structure

- The co-chairs will lead a guided discussion on this topic, capturing all input from participants. The discussions will be recorded in the meeting minutes.
- The MAGIC wiki will serve as the hub for group events and history. Agendas, minutes, discussion outcomes, and response papers will be posted on the MAGIC wiki site (rather than sent in email), and tagged according to the project they are associated with.
- In general, project/program presentations will be kept short: 5 slides or less. On occasion, a longer presentation may be given on a matter of interest to the MAGIC team members.



- **NITRD Home Page**

- <http://www.nitrd.gov/Index.aspx>

- **LSN Home Page**

- <http://www.nitrd.gov/Subcommittee/lsn.aspx>

- **MAGIC web, wiki, and linkedin discussion group**

- <http://www.nitrd.gov/Subcommittee/lsn/magic/index.aspx>

- [http://connect.nitrd.gov/magicwiki/index.php?
title=MAGICWiki_Homepage](http://connect.nitrd.gov/magicwiki/index.php?title=MAGICWiki_Homepage)

- [http://www.linkedin.com/groups/NITRD-Middleware-Grid-
Infrastructure-Coordination-3896942](http://www.linkedin.com/groups/NITRD-Middleware-Grid-Infrastructure-Coordination-3896942)



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Conclusions

- **MAGIC is an open forum for the discussion of Grid/Cloud activities of interest to the Federal Government science funding agencies.**
- **Contact the MAGIC co-chairs for information on how you can participate in these discussions.**