NCPHI

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National Center for Public Health Informatics | Coordinating Office for Terrorism Preparedness & Emergency Response

Integrated Surveillance Seminar Series

The Public Health Grid (PHGrid): Overview and Value Proposition

Speaker: Tom Savel, MD (CDC/CCHIS/NCPHI)

Moderator: Mike St. Louis, MD (CDC/COGH/OD)

Thursday, 03/26/2009, 1:00 pm—2:30 pm, EST

Roybal, Bldg. 19, Aud. A

Also available via Envision, IPTV, & webinar. Presentation will be archived on Integrated Surveillance Seminar Series website.
http://www2.cdc.gov/ncphi/disss/seminars | integratedsurveillance@cdc.gov

Presentation Synopsis: The public health system faces many challenges today: Wide geographic distribution of public health data; cultural, social and political impediments to data sharing; a dynamic and complex environment—global in scale; rapid growth of public health data, an environment containing many redundant application and data silos; a wide variety of complex requirements (e.g., disease surveillance, alerting, event detection); and of course significant and chronic financial constraints. Given these challenges as well as recent federal recommendations, CDC's National Center for Public health Informatics (NCPHI) believes that innovative approaches to solving this information exchange challenge be strongly considered, and is focusing public health informatics research activity on a technology known as distributed or Grid computing. Grid computing is a paradigm that proposes aggregating geographically-distributed, heterogeneous computing, storage and network resources to provide unified, secure and pervasive access to their combined capabilities. Grid technology provides a secure software infrastructure for federating databases and services utilizing a service-oriented architecture (SOA). The Grid is "distinguished from conventional distributed computing by its focus on large scale resource sharing, innovative applications, and in some cases, high performance orientation" (Foster & Kesselman 2002). NCPHI and its partners believe that grid-based research with a goal of developing a "Public Health Grid" will ultimately afford public health a low-cost and highly flexible and scalable environment facilitating robust collaboration, seamless and timely exchange of health-related data, information, and knowledge, as well as the transparent sharing of computational and application resources. This presentation will provide an overview of grid computing, the value of data and service federation, the value of a public health grid, as well as a demonstration of grid technologies in action.

Objectives

- To understand what is meant by "Grid Computing"
- To understand the differences between data grids and computational grids
- To understand the relationship between service-oriented architecture (SOA) and grid computing
- To understand the value of leveraging grid computing in the domain of public health

About the Speaker: Dr. Savel is currently the Lead for Grid Computing Research and the director of the Informatics R&D Laboratory at NCPHI. After completing CDC's Public Health Informatics Fellowship in 2003, he became the informatics lead at the National Center for Birth Defects and Developmental Disabilities (NCBDDD). In 2006, he joined NCPHI, where he became involved in a wide variety of activities, including assuming the role of Acting Associate Director for Science (ADS). In 2008, he stepped down as acting ADS to focus on NCPHI's cutting edge distributed computing research activities.

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About the Integrated Surveillance Seminar Series

Purpose: Public health professionals must make decisions based upon information residing in multiple informational silos. Many challenges exist for taking data from separate systems and combining it, providing information to inform critical decision making. This series is intended to provide: an interactive forum for discussion of issues and approaches to integrated surveillance; a mechanism for discussing best practices; education on integrated surveillance; a means to solicit feedback on issues and approaches from critical stakeholders.

Target Audience: Public health professionals and information technology support staff involved in health monitoring (surveillance) and epidemiological response activities.

Prerequisite Skills or Knowledge: Participants should have a basic understanding of surveillance and epidemiology. Previous knowledge of informatics or information technology is not required.

Objectives:
(1) Present information on the identified topic
(2) Identify unresolved issues or challenges related to the topic
(3) Discuss potential approaches or solutions to identified issues/challenges