A Practical Conceptual Design of Cyberinfrastructure for Earth Sciences [1]

Submitted by cyang3 on Mon, 2014-12-22 14:42 **Event:** Winter Meeting 2015 [2]

Abstract:
The poster reports the findings and dcouments developed from our NSF EarthCube project, which takes an agile/cyclic process to develop a conceptual architecture for EarthCube. We first analyzed the community needs by sorting through ~30 workshop reports to filter out the capability needs and categorize them into three parts as resource capability, enabling capability, and end user capabilities. Each of them includes a number of popular capability modules and are specififed in the poster. After this analyses, we refer to 5 popular enterprise architectures to come up with a comprehensive enterprise architecture includes four volumes: volume 1 is an introduction of the overall design and includes the background, process, how to read and use the entire document sets. Volume 2 includes the details of a conceptual architecture design with use cases added. Most architecture related elements are elaborated in this volume and specific users can refer to the parts of their interest. Volume 3 is the dictionary and vocabulary structure. Volume 4 is an example about how to use the conceptual design to come up with a specific architecture for polar CI portal.

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Keywords: EarthCube [16]
Architecture [17]
interoperability [18]
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