

GEC7: I & M Working Group Goals and Issues

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I & M Goals

- **Overall: An infrastructure for gathering, analyzing and archiving measurements in GENI**
 - Support broad range of experiments
 - Tight integration with control framework(s)
 - Efficient, easy to use, broadly deployed, diverse capabilities, secure, privacy-aware, etc.
- **WG: Facilitate communication and coordination between I & M projects toward reaching overall goals quickly and effectively**
 - Architectures, specifications, partnerships



Issues: overview

- **Architectural (v0.1 on wiki)**
 - Use cases*
 - Schema*
 - Sensors, components and protocols*
 - UI and integration
 - Authentication and privacy
 - Storage and analysis
- **Practical**
 - Test and evaluation*
 - Deployment, configuration and support



Use cases

- **What are the short and long term targets for I & M capabilities?**
- **Use cases will help focus projects and resources**
 - Tradeoff between capabilities and effort
- **Research vs. infrastructure operations**
- **Objective for GEC8: define 5 research and 3 operations use cases**
 - Highlight required I & M capabilities, projects and timeframes

Schema

- **Data and meta data formats are key components of I & M architecture**
 - Essential to integration, consistency, analysis and archival
- **Driven by use scenarios**
 - But, experience will enable parallel development
- **Objective for GEC8: define I & M schema framework**
 - DatCat as a strawman

Sensors, components, protocols

- **Sensors:** instrumentation that gathers basic signals (measurement points)
 - In network or on devices
 - Specialized vs. general purpose
- **Components:** systems that are required to coordinate between sensors, analyzers and archives
 - GIMS aggregate manager
- **Protocols:** required for configuration and use of I & M systems
 - Between CF and I & M, between I & M, etc.
- **All of the above are driven by use scenarios**



Test and evaluation

- **I & M is a peer of the experimental infrastructure**
- **Test and evaluation of I & M is essential**
 - **Validates functionality and capabilities**
 - **Reduces deployment risks**
- **Details are driven by use scenario**
- **Objective for GEC8: create I & M test and evaluation framework**