

Genesis Mission Infrastructure Team

The infrastructure team delivers the software and hardware infrastructure for the American Science and Security Platform. The platform is built on a federated and secure ecosystem that integrates:

1. a composable software infrastructure for secure, scalable, multi-agent workflows on open and classified systems; and
2. a hybrid hardware platform that unites cloud and high-performance computing resources with the Department of Energy's and the National Nuclear Security Administration's (DOE and NNSA) production and experimental research and development facilities to accelerate scientific discovery, strengthen national security, and achieve energy dominance.

The infrastructure solution is robust and extensible to meet the current and future needs of government agencies in collaboration with industry partners, academia, and international stakeholders.

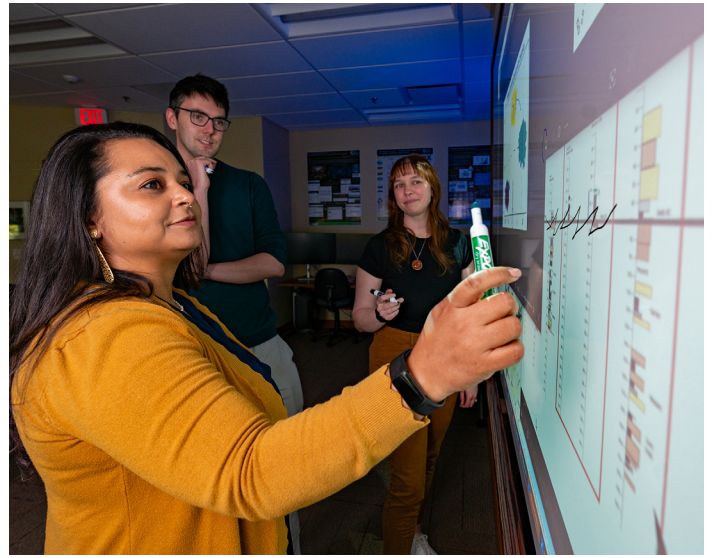
What the Team Delivers

The infrastructure team establishes a composable, federated, and elastic infrastructure that is the foundation of the science and security platform. It will deliver:

- Solutions to host frontier-scale thinking and reasoning and multimodal models for use cases across DOE laboratories while serving trillions of tokens per minute for DOE scientists
- A scalable software approach to develop an AI system where DOE science teams can develop and deploy specialized agents that can be used within multi-scale agentic workflows
- An integrated approach to match computational and resource needs for each agent at the platform level while simultaneously sustaining hundreds of agents performing lengthy scientific tasks



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- An approach for scalable training of multi-hundred billion to trillion parameter foundation models for science and engineering use cases
- An integrated approach to connect high-performance computing simulations with production and experimental research and development facilities to inform and advance future facilities
- A solution that addresses the U.S. government's unique needs to operate in open, restricted, and classified environments
- An approach to ensure preparedness of models, security of data and models at different classification levels, and secure

access to DOE production and experimental research and development facilities

- An extensible approach that allows easy integration of new types of agents, models, data sets, resources, and computing into the platform

tenant of the infrastructure approach is co-design with all stakeholders across the DOE ecosystem and industry partners—building on industry's advancements in AI to develop unique, world-leading AI capabilities that further drive U.S. innovation.

Execution Across DOE and NNSA

The infrastructure team operates as a federated capability across DOE's Office of Science, Applied Energy Offices, and NNSA facilities and brings together experts and practitioners across all 17 National Laboratories. It works in close coordination with all Genesis Mission teams to advance secure and operational capabilities across the mission space. A core



The Genesis Mission a national initiative to build the world's most powerful scientific platform to accelerate discovery science, strengthen national security, and drive energy innovation. For more information: <https://energy.gov/genesis>



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