# Title of Facility or Research Project

## Background

From a ***networking*** and ***data*** perspective, briefly describe the scientific research and/or details of the science project, department, or laboratory that is being reviewed (1-2 paragraphs total.)

## Collaborators

Please list ***facilities***, ***significant users/collaborators***, and/or ***virtual organizations*** ***(VOs)*** that are critical to process of science. A rough estimate on the breadth and depth of the collaboration space (i.e., number of users, number of participating facilities, etc.) is also useful. Please list geographical endpoints for collaborators if you know them (estimates are fine, e.g. the state, territory, or country).

## Instruments and Facilities

In terms of the present (within 0-2 years), next 2-5 years (beyond the current fiscal year’s budget cycle) and future (beyond 5 years), please describe the ***network***, ***compute***, ***instruments***, and ***storage resources*** used for scientific/research work. If you are representative of a larger facility, please describe the resources you make available to your users, or that users deploy at your facility.

* Present
* Next 2-5 years
* Beyond 5 years

## Process of Science

Please describe the way in which the ***instruments*** and ***facilities*** (as discussed above) ***are used for knowledge discovery***. Examples might include workflow descriptions, data analysis, data reduction, integration of experimental data with simulation data, and so on. The goal is to capture the way in which the instruments and facilities are used (and will be used in the foreseeable future), so we can understand the potential impact of these processes on the network. If you are a facility, please describe the common use models of your users, with a data-centric or network-centric focus. Please describe this process in terms of:

* Present
* Next 2-5 years
* Beyond 5 years

## Remote Science Activities

Please include a description of any ***remote instruments*** or ***collaborations***, and describe how this work does or may have an impact on your network traffic—any connections to major scientific instruments outside of your local instruments and facilities (i.e., supercomputers, particle accelerators, genome sequencers, satellite data…)?

## Software Infrastructure

Describe the ***software*** used in daily activities of the scientific process. Please include tools that are used to locally or remotely manage data resources, facilitate the transfer of data sets from or to remote collaborators, or process the raw results into final and intermediate formats.

* Present
* Next 2-5 years
* Beyond 5 years

## Network and Data Architecture

Describe the ***network architecture*** for your facility, laboratory, and/or campus. This means as much information as possible about the ***Local Area (LAN)***, ***Metro Area (MAN)*** and ***Wide Area (WAN)*** capabilities. Provide as much detail as you have available.

It is critical to know how the data moves from the endpoint location, to the wider facility/campus network, and then to the broader Internet. Details should include ***local infrastructure configuration***, ***bandwidth capacities***, ***hardware***, etc. Also list any specific items of interest in regard to high-performance data transfers, network architecture (e.g., a Science DMZ <http://fasterdata.es.net/science-dmz/>) or other site, campus, or facility networking issues that are worth noting. Please include network diagrams if possible.

If the research group doesn’t have this information, please contact your IT or network support department/organization.

## Cloud Services

Please describe current or planned use of ***cloud services*** for data ***analysis, data storage, computing***, or ***other purposes***. Please also include the projected growth in the use of these services. Note that “cloud” in this case could include commercial clouds such as Amazon, Google, IBM, and Microsoft, or private clouds hosted by some other organization.

## Outstanding Issues

Please use this space to address or discuss any ***challenges, barriers***, or ***concerns*** that should be addressed that have not been asked for. In particular, if there are current network or data transfer performance problems that impact scientific productivity, please describe them.