## NAS Special Services Request Form: Instructions

In addition to the normal computing, storage and network capabilities for science and engineering projects approved by NASA missions, the NASA Advanced Supercomputing (NAS) facility offers a full complement of additional special services, including increased job priority, scientific visualization and code optimization. Users sometimes require special services to accomplish priority or extraordinary work. The attached form allows NAS users to request those services.

Special service requests will be considered for projects that adequately demonstrate need. Since NAS resources and integrated services are nominally provided to all NASA mission directorates, requests require the approval of the appropriate Mission Directorate manager/point of contact (POC). In the event of a NASA or national emergency, agency priorities may supersede this approval, at least temporarily.

While NAS has the capability to support multiple service requests, there may be conflicting or overlapping requirements from these requests. Requesters of special services will be sharing service resources with other users. In order to provide adequate services to a variety of users, we may need to adjust these special services from time to time.

Please include as much information as possible about your project. Providing complete, detailed information will allow NAS to more quickly process your request. Once the request is received, this process normally takes 3 days.

**Note:** Please indicate 'N/A' for those sections that do not apply. Incomplete forms may cause a delay in processing your request.

If your request is urgent and needs to be expedited, have your Principal Investigator call the HECC Deputy Project Manager, Bill Thigpen, at (650) 604-1061; the User Services Lead, Cathy Schulbach, at (650) 604-3180; or the NAS Control Room at (650) 604-4444, toll-free at (800) 331-8737.

**Follow the steps below to submit your Special Services Request:**

1. Print out and complete the form.
2. Obtain signatures from your Principal Investigator and Program/Project Manager/POC.
3. FAX the form to: (650) 604-1777. (NAS Support will call you to verify receipt of your FAX)

# NAS Special Services Request Form

## Requestor Information

Name _____ Today's Date _____

Phone _____ Email _____

## Requested Start/Stop Dates

Start Date _____ Stop Date _____

## Project and User Information

1. Group Name or GID _____

2. Project Title _____

3. Principal Investigator

   Name _____ Phone _____

   Email _____ login name _____

4. Supported Program/Project Name _____

5. Program/Project Manager/POC

   Name _____ Phone _____

   Email _____

6. List of login names (of users) requiring priority access for this project or group name

   _____

   _____

……………………………………………………………………………………………………………………………

## Please provide a brief description of your request

_____

_____

_____

_____

_____

_____

_____

*(Check 'N/A' for all information that does not apply)*

**Priority/Dedicated Computing Resources Requested** _____ **N/A**

1.   Computing system (e.g., Columbia) _____

2.   Application Name _____

3.   Memory required per CPU _____ GBytes

4.   Total memory required per job _____ GBytes

5.   Total wall clock hours for this request _____ hours

6.   Maximum amount of wall clock time per job _____ hours

7.   Maximum number of CPUs per job _____ CPUs

8.   Maximum data output per job _____ GBytes

9.   Maximum number of jobs per day _____ jobs

10.  Size of job checkpoint file _____ GBytes

11.  Number of checkpoint files created per job _____ files

12.  Maximum 'scratch' data requirement for this request _____ TBytes

13.  Application programming paradigms: (check all that apply)

MPI _____    OpenMP _____    MLP _____

**Justification for Priority Access**

(Impact on project, benefit to NASA, why current resources or policies do not meet requirements)

_____

_____

_____

**Archive Systems Requested** _____ **N/A**

1.   Data Archive Rate (average per day) _____ GBytes

2.   Data Retrieval Rate (average per day) _____ GBytes

3.   Total data to be archived _____ Tbytes

4.   Total data to be retrieved _____ Tbytes

**WAN/LAN Requirements for Data Transfer** _____ **N/A**

1.   NAS host name(s) (e.g., lou.nas.nasa.gov) _____

_____

2. External host name(s) (e.g., tropic.dao.gsfc.nasa.gov) _____

_____

3. Major direction of data flow (check one)

   To NAS _____    From NAS _____    Both directions _____

4. Total size of data to transfer for this request _____Tbytes

5. Number of days needed to complete total transfer _____days

6. Typical transfer requirements _____GBytes/job _____jobs/day

7. Required window of time to complete each job data transfer

   _____ hours   or _____ days

8. Describe process and tools used to transfer the data _____

_____

_____

_____

## Visualization Support Requested _____N/A

1. What insights are you seeking to gain from your data? _____

_____

_____

2. Are you seeking advanced data analysis support, such as for very large or complex data?

   Yes _____ No _____

3. Are you having problems visualizing your data effectively? Yes _____ No _____

4. What commercial or open packages do you use to analyze or visualize your data?

_____

5. What are the limitations of your current data analysis and visualization software?

_____

_____

6. Would high temporal resolution data analysis and visualizations (every timestep) be useful?

   Yes _____ No _____

7. Would tiled-display (i.e., hyperwall) data analysis/visualization/exploration be useful?

   Yes _____ No _____

## Code Support / User Support Requested _____N/A

1. Please indicate what type of technical assistance you will need with your code.

   (check all that apply)

|            |        |                        |        |
|------------|--------|------------------------|--------|
| Debugging  | _____ | Algorithm enhancement  | _____ |
| Optimization | _____ | Checkpoint/restart   | _____ |
| Scaling    | _____ | Workflow automation    | _____ |
| Restructuring | _____ |                     |        |

Other (specify) _____

2. Will you require assistance to run jobs on Columbia? Yes _____ No .

**Principal Investigator's Signature and Date**

Signature_____    Date_____

**Program/Project Manager/POC Signature and Date**

Signature_____    Date_____