



We will begin shortly...

Access to High-End Computing Resources for NASA Earth and Space Science Research

June 26, 2018

Elizabeth (Elsa) Yoseph
HEC Program Analyst
Science Mission Directorate



WELCOME

Target Audience: Current and potential Science Mission Directorate-funded (SMD) users of NASA High-End Computing (HEC) resources

Objectives: Inform the community of programmatic changes impacting the HEC resource request process, focusing on:

1. How to Request HEC Resources
2. How to Set Up SMD User Accounts
3. Q&A Session

*Speaker Bio: Elizabeth (Elsa) Yoseph is the Program Analyst for the HEC Program. She works with the HEC Portfolio Manager, Dr. Tsengdar Lee, to implement process improvement strategies that better align resource requirements with agency priorities, as well as to guide resource management decision-making. Ms. Yoseph received her B.S. degree in marine biology and chemistry at the University of New England and has ten years of experience as an environmental specialist. Ms. Yoseph also provides program analysis support to **NASA's** Earth Science Division in areas of Earth observations, climate, oceans, and weather.*





HOUSEKEEPING

- Length is approximately 1 hour; 45-minute presentation, 15-minute Q&A
- All participant lines have been muted
- If you have an issue or question during the presentation, please type it into the Q&A pod in the lower right-hand corner of your screen
- All questions will be logged and answered only during the Q&A session
- This webinar is being recorded and will be posted to the HEC website



AGENDA

Program Overview

- Resource Challenge
- New Approach

eBooks Redesign

- Terminology
- Request Process
- System Features

eBooks Demo

- New/Continuing
- Modifications

User Accounts

- NAS & NCCS

Q&A Session

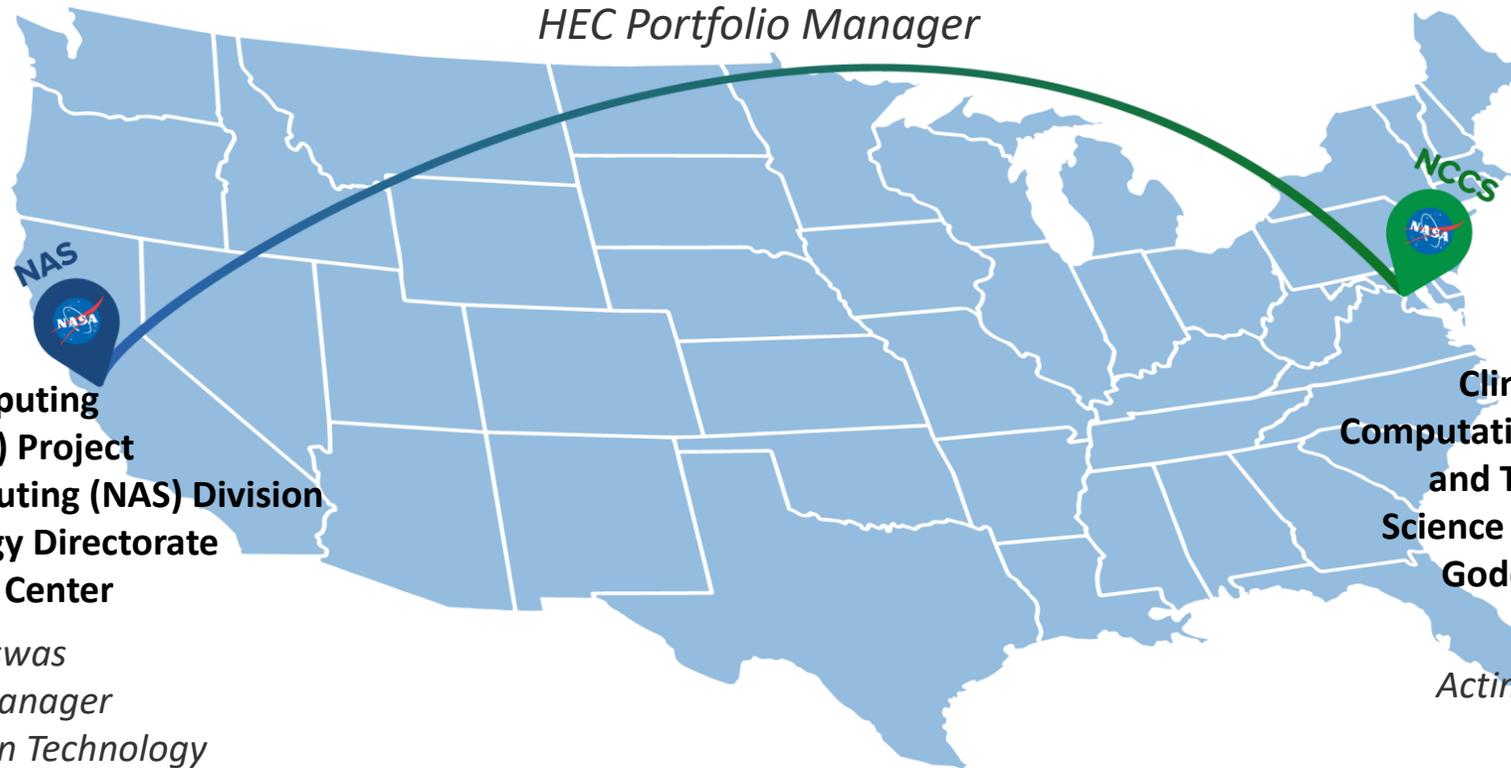
- via Chat



HEC PROGRAM

**High-End Computing (HEC) Program Office
Science Mission Directorate (SMD)
NASA Headquarters**

*Dr. Tsengdar Lee
HEC Portfolio Manager*



**High-End Computing
Capability (HECC) Project
NASA Advanced Supercomputing (NAS) Division
Exploration Technology Directorate
Ames Research Center**

*Dr. Rupak Biswas
HECC Project Manager
Director of Exploration Technology*

**NASA Center for
Climate Simulation (NCCS)
Computational and Information Sciences
and Technology Office (CISTO)
Science and Exploration Directorate
Goddard Space Flight Center**

*Dr. Daniel Duffy
Acting NCCS Project Manager
CISTO Chief*



HEC Resource Allocation Challenge

- Demand for HEC resources continues to be greater than the available capacity
- SMD research divisions select and award research proposals without considering the HEC resource constraints
- The HEC resource allocation process and time scale are independent from those of the research project award process

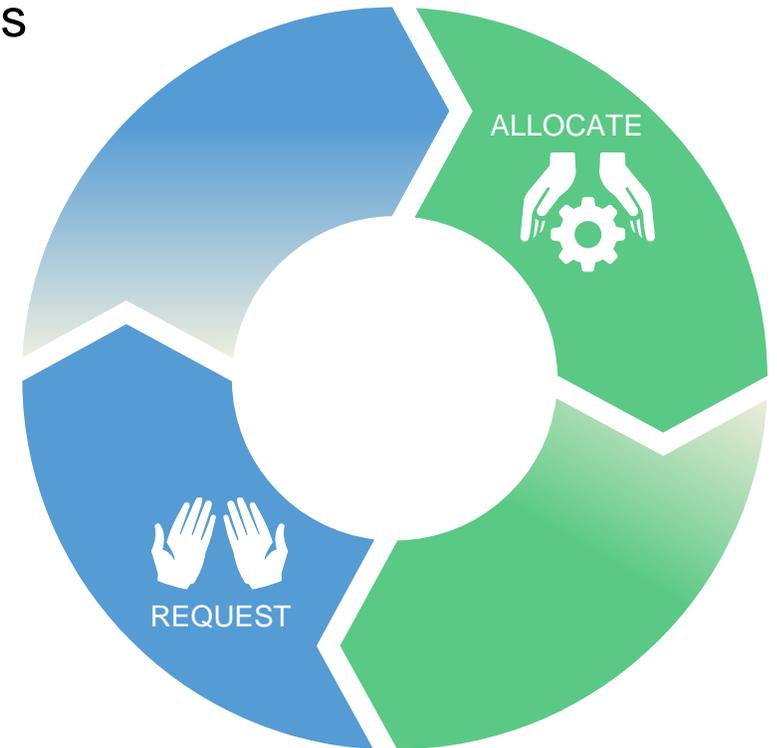
Moving Toward New Disciplined Approach



SMD is adopting a new bottom-up request, top-down allocation model
...to instill planning discipline and ensure delivery of HEC resources

Bottom Line:

- New process tightly ties HEC award to specific project funding
 - New request per new funding source
 - HEC award lifetime corresponds directly to life-cycle of the grant or contract funding your project
- More frequent allocation cycles support rolling research project selections and changes in HEC resources





AGENDA

Program Overview

- Resource Challenge
- New Approach

eBooks Redesign

- Terminology
- Request Process
- System Features

eBooks Demo

- New/Continuing
- Modifications

User Accounts

- NAS & NCCS

Q&A Session

- via Chat

eBooks Redesign



Integrates HEC request and proposal processes
...to better align resource management decisions



Improves advanced planning
...by capturing computing requirements when projects are first considered for funding



Accommodates shift from annual to multi-year requests
...for awards of HEC resources covering entire project lifecycle, enabling one-time request submission



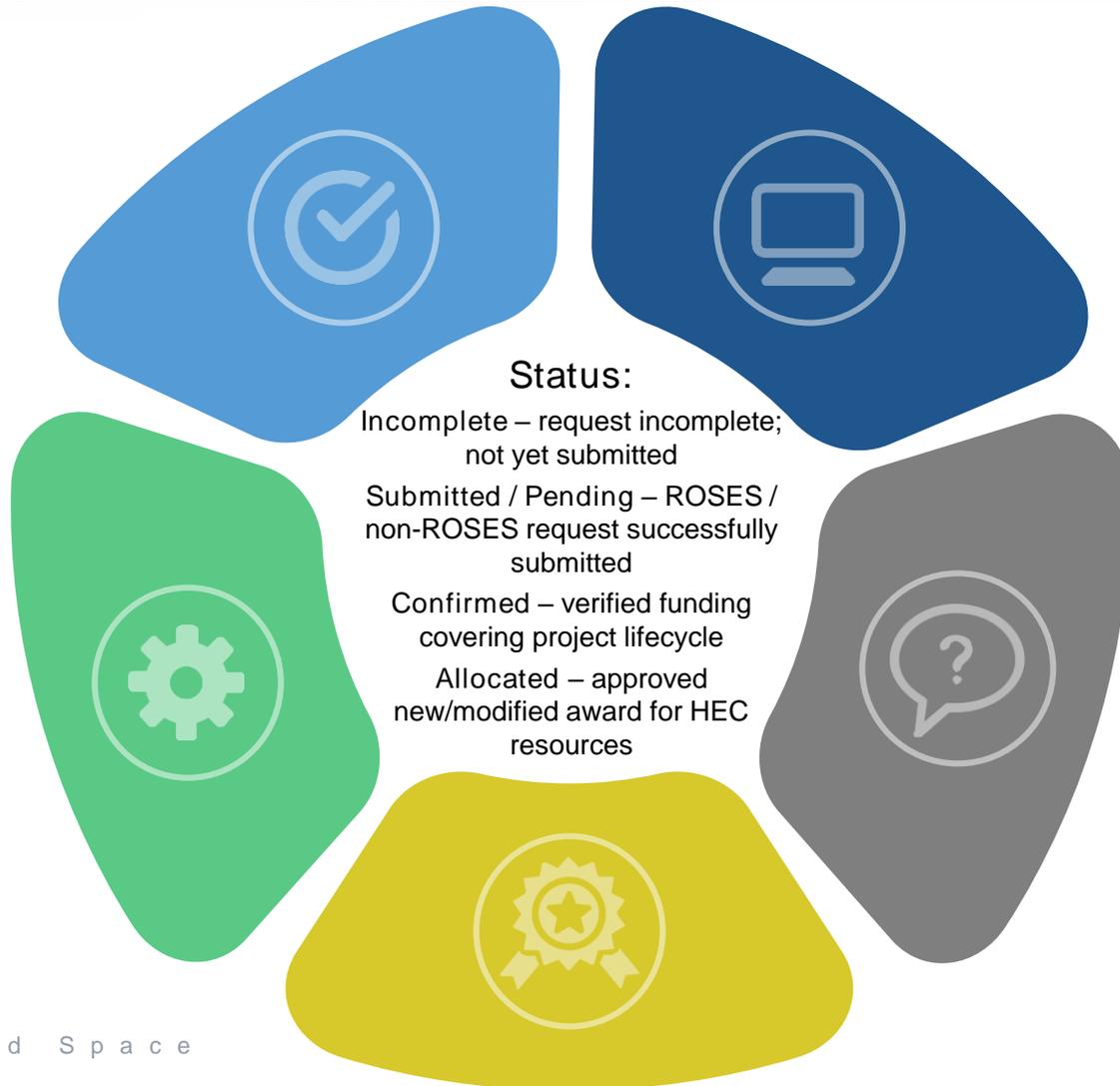
New Terminology

Eligibility Request

Informs peer review of proposed computational needs and establishes eligibility to use HEC resources when/if project is selected

Modification Request

Request a change (increase/decrease) to active award for HEC resources



Computing Request

PIs invited to submit detailed computing requirements if selection is verified (i.e., cover sheet, entry quad chart, and detailed summary of requirements)

Ad Hoc Request

An unanticipated demand on HEC resources

Allocation/Award

Amount of HEC resources approved for a particular year / the lifecycle of a funded project



HEC Request Process

Login
...to HEC eBooks



...when proposing new or continuing work in response to a new funding call

Confirming eligibility is dependent on conclusion of proposal review process



...upon receipt of an automated email notification confirming eligibility

All HEC awards will be determined as part of quarterly adjudication cycle



...yearly allocations will be automatically issued according to your award letter

HEC award decisions are announced by Jan 1, April 1, Jul 1, and Oct 1 of each year



...IF there are changes to your project's computing requirements



Ad Hoc Requests



Creates unanticipated demand:

- Allocations may be limited
- For increased modifications, current usage rate must indicate allocation(s) is in jeopardy of being exhausted



Types may include:

- Non-ROSES competed proposed projects (e.g., NESSF, Space Telescope, etc.)
- NASA HQ/Center directed proposed projects
- Immediate start-ups (< 3-month turnaround)



Email Requests:

- For non-ROSES competed proposed projects and immediate start ups, email support@hec.nasa.gov after selected for funding to request a HEC Request form
- For all directed proposed projects, submit request in eBooks when proposing new work

New Features in eBooks

Two-Step Request Process for New Awards



1. Eligibility Requests:

- Indicate type of request: ROSES vs non-ROSES
- If ROSES, select solicitation information
- Enter multi-year requirements
- Provide justification



2. Computing Requests:

- Complete AND submit all 3 forms: cover sheet, quad chart and detailed requirements
 - » Cover Sheet: Select one* preferred location
 - » Detailed Requirements: Redistribute requested SBUs/storage across fiscal years, as needed

One-Step Request Process to Modify Awards



1. Modification Requests:

- Modify current and/or future year requirements
 - » Increase: must be in jeopardy of exhausting allocation(s)
 - » Decrease: report significant under-utilization (<50% of allocation(s))
 - » No-cost extension*
- Confirm/update AND submit all 3 forms: cover sheet, quad chart and detailed summary of requirements
 - » Detailed Requirements: Enter new total SBUs/storage requested for a given year

*email support@hec.nasa.gov for case-by-case evaluation. Include HEC Request ID and justification.



AGENDA

Program Overview

- Resource Challenge
- New Approach

eBooks Redesign

- Terminology
- Request Process
- System Features

eBooks Demo

- New/Continuing
- Modifications

User Accounts

- NAS & NCCS

Q&A Session

- via Chat



AGENDA

Program Overview

- Resource Challenge
- New Approach

eBooks Redesign

- Terminology
- Request Process
- System Features

eBooks Demo

- New/Continuing
- Modifications

User Accounts

- NAS & NCCS

Q&A Session

- via Chat

Setting up User Accounts



Use your unique GID found in your award letter to set up accounts on HEC systems

General process is as follows:



Notes: NAS and NCCS currently have separate processes for getting accounts. Visit the respective NAS and NCCS websites and/or contact their support staff for further details.

Requests for foreign nationals, legal permanent residents or naturalized U.S. citizens and requests for users without a NASA Identity may take longer, as they must first be processed by NASA Security.



AGENDA

Program Overview

- Resource Challenge
- New Approach

eBooks Redesign

- Terminology
- Request Process
- System Features

eBooks Demo

- New/Continuing
- Modifications

User Accounts

- NAS & NCCS

Q&A Session

- via Chat



Q&A Session



Submit questions via Q&A pod

- If you haven't already done so, please use the Q&A pod found in the lower right-hand corner of your screen to submit your questions
- All questions submitted during the presentation have been logged and will be answered during this Q&A session
- This Q&A session may be extended depending on the volume of questions
- Representatives from both NAS and NCCS are also on the line to address Center-specific questions



Thank You

Thank you for joining today's webinar!

...and a special thank you to our host, Jennifer Brennan - EOSDIS Communications Lead. Also thank you to NAS and NCCS for their role today, as well as contributions during development of this webinar.

Additional information is available at:

HEC eBooks: <https://hec.reisys.com/hec/computing/index.do>

HEC Website: SMD Process Overview, www.hec.nasa.gov/request/science.html

HEC Website: Systems & Services At A Glance, <https://www.hec.nasa.gov/user/systems.html>

HEC Website: Standard Billing Units, <https://www.hec.nasa.gov/user/policies/sbus.html>

NAS Website: Getting an Account, <https://www.nas.nasa.gov/hecc/accounts/getaccounts.html>

NCCS Website: Become a User, https://www.nccs.nasa.gov/user_info/new_user

You may also email questions to support@hec.nasa.gov at any time following this webinar