CHPC TRANSITION TO NEW HPC SYSTEM
Frequently Asked Questions

Purpose: To support consistent communication with CHPC users and relevant stakeholders regarding the planned transition from the Lengau HPC system to the new HPC system.

1. What is happening to the Lengau HPC system?
The Centre for High-Performance Computing (CHPC) is transitioning from the current Lengau HPC cluster to a new HPC system. Lengau is approaching the end of its operational life, and its replacement forms part of the planned modernisation of the CHPC's high-performance computing infrastructure.

Lengau is scheduled to be shut down from 1 December 2026 to enable the removal of the existing system, refurbishment of the data centre, and installation, integration, testing and commissioning of the new HPC system.

The new system is currently targeted to become available to users in March 2027 (exact date to be confirmed), subject to the successful completion of implementation, testing and commissioning.

2. Why is Lengau being replaced?
Lengau is approaching the end of its operational life and must be replaced to ensure that the CHPC can continue providing reliable high-performance computing capability to South Africa's research, science and innovation community.

The replacement system is expected to provide a modernised, more capable and sustainable HPC environment that can support the evolving computational requirements of CHPC users.

3. Why does the CHPC need to shut down HPC services during the transition?
The transition requires more than replacing computing equipment. Lengau must be shut down and removed before the data centre can be refurbished and prepared for the installation, integration, testing and commissioning of the new infrastructure.

HPC services associated with Lengau cannot remain operational while these activities are undertaken.
The service interruption is therefore a necessary and planned part of the transition.

4. When will Lengau be shut down?

Lengau will be shut down from **1 December 2026**.
Users must plan on the basis that the Lengau HPC environment and associated services will be unavailable from this date.

5. How long will the service interruption last?

The current implementation schedule provides for an approximately three-month service interruption, from 1 December 2026 to the target service-availability date in March 2027 (exact date to be confirmed). The planned milestones are:

Period	Planned activity
1 December 2026	Shutdown of Lengau
December 2026 – February 2027	Removal of existing infrastructure, data centre refurbishment, installation, integration, testing and commissioning
March 2027	(exact date to be confirmed) Target date for availability of the new HPC service

The CHPC will provide regular progress updates and will communicate any material change to the implementation schedule as soon as reasonably possible.

6. Is March 2027 a guaranteed date for restoration of service?

No. March 2027 is the current target date based on the approved implementation schedule, but it is subject to the successful completion of all implementations, testing and commissioning activities.

Installing a major HPC system involves interconnected activities, including data-centre preparation, equipment installation, integration, configuration, testing and commissioning. Delays in any of these activities may affect the service-availability date.

The CHPC will monitor implementation closely, provide regular progress updates and advise users promptly of any material change to the target date.

7. Which services will be affected?

All HPC services associated with the Lengau environment will be unavailable during the transition period. This includes access to Lengau compute resources, GPU compute nodes and the current Lustre parallel file system.

8. Will users be able to run jobs during the transition period?

No. Users will not be able to run computational jobs on Lengau after the shutdown begins. They must plan their workloads accordingly, complete priority jobs and save all required outputs before 1 December 2026.

9. What will happen to jobs that are still running on 1 December?

Any jobs still running when Lengau is shut down on 1 December 2026 will be terminated and may not produce complete or recoverable results. Users must therefore plan their workloads to ensure that jobs are completed and required outputs are saved before the shutdown.

The CHPC will communicate the final job-submission cut-off dates and any operating restrictions to be introduced ahead of 1 December 2026 to support an orderly shutdown.

10. What will happen to data currently stored on Lengau?

Data currently stored on the Lengau Lustre file system will not automatically be transferred to, or made accessible from, the new HPC environment, which will use a new parallel file system.

Users must therefore identify all important data and ensure that it is transferred to an appropriate location or backed up before the Lengau shutdown on 1 December 2026. The CHPC will provide further technical guidance on the applicable data-transfer arrangements.

11. Will data stored on Lengau automatically be migrated to the new system?

No. Data stored on Lengau will not be automatically migrated to the new HPC system. Users are responsible for transferring or backing up all important data before the shutdown on 1 December 2026. The CHPC technical team will communicate the applicable migration procedures and support arrangements.

12. Will my data be deleted on 1 December?

Yes. All data stored on Lengau will be deleted from 1 December 2026 when the system is shut down. Users must therefore transfer or back up all important data before this date. Data that has not been transferred or backed up by the deadline will be permanently lost and cannot be recovered by the CHPC.

13. When should users start backing up or transferring their data?

Users should begin backing up or transferring important data as soon as possible and must complete the process by 27 November 2026. Users should not wait until the final days, as high transfer volumes or technical difficulties may prevent completion before the deadline. The CHPC will communicate the applicable procedures, recommended timelines and available support.

14. Will CHPC provide additional storage or alternative facilities for users to back up their data?

The CHPC will communicate any approved temporary storage, transfer facilities or other support arrangements once these have been confirmed. Until then, users remain responsible for arranging sufficient storage and ensuring that all important data is securely transferred or backed up before 1 December 2026.

15. Will alternative HPC computing capacity be available during the three-month interruption?

No alternative HPC computing capacity is currently guaranteed for the transition period. Users should plan on the basis that Lengau computing services will be unavailable from 1 December 2026 until the new system becomes operational. If alternative capacity is secured, the CHPC will communicate the eligibility criteria, capacity limitations and access arrangements.

16. Why can't Lengau continue operating until the new system is ready?

Lengau cannot remain operational throughout the transition because it must be shut down and removed before the data centre can be refurbished and prepared for the new HPC system. The existing and replacement systems therefore cannot operate concurrently under the approved implementation approach.

17. Why is the transition being done as a single-phase deployment?

A single-phase deployment enables the CHPC to remove Lengau, complete the required data-centre refurbishment, and install, integrate, test and commission the replacement system within one coordinated implementation programme. This approach avoids operating two major HPC environments concurrently in a facility that must be prepared for the new infrastructure.

18. Why will the transition take approximately three months?

The approximately three-month period covers the full transition programme, not only the installation of computing equipment. It includes shutting down and removing Lengau, refurbishing and preparing the data centre, installing and integrating the new infrastructure, configuring the environment, conducting testing and commissioning, and confirming operational readiness. The new service will be opened to users only after these activities have been successfully completed.

19. Why is the data centre being renovated?

The data centre must be refreshed and prepared to meet the infrastructure requirements of the new HPC system. This work forms part of ensuring that the facility can support the system's installation, integration, testing, commissioning and reliable

operation. Further technical details will be communicated where relevant to users and stakeholders.

20. What benefits will the new HPC system provide?

The new system is expected to provide a modernised, more capable and more sustainable high-performance computing environment for South Africa's research, science and innovation community. Detailed information on its architecture, performance, storage, software environment and user services will be communicated as commissioning progresses.

21. Who will benefit from the new HPC system?

The new system will support the existing CHPC user community and the broader national research and innovation ecosystem, including universities, science councils, research institutions and other eligible users undertaking computationally intensive research. Access will remain subject to the CHPC's applicable allocation, onboarding and usage requirements.

22. What should researchers with critical projects or deadlines do?

Researchers with critical projects or fixed deadlines should immediately assess the impact of the interruption on their work, prioritise essential jobs for completion before 1 December 2026, and secure all required outputs and data. They should also revise project schedules where necessary and contact the CHPC Helpdesk as early as possible if technical guidance is required.

23. What should universities and other institutional users do?

Universities and other institutional users should coordinate their response by:

- circulate the transition information to affected researchers and research groups;
- identify projects that may be significantly affected;
- encourage users to begin data-transfer and backup preparations early;
- incorporate the shutdown period into research and project planning; and
- ensure that relevant institutional research and ICT leadership is aware of the planned interruption.

24. How will users be kept informed?

The CHPC will issue regular updates through its established communication channels. Communications will cover data preparation and transfer, reminders before shutdown, confirmation of the shutdown, implementation progress, commissioning and readiness, and the arrangements for restoring user access. Any material change to the implementation schedule will be communicated as soon as reasonably possible.

25. When will users receive information about accessing the new system?

Detailed onboarding and access information will be issued as the new system approaches operational readiness. The guidance will address user accounts, authentication, software environments, job submission, storage, data transfer and any actions users must complete before access is enabled. Users should rely on formal CHPC communication and should not assume that existing Lengau configurations will transfer unchanged.

26. Will existing CHPC user accounts continue to work on the new system?

Users should not assume that existing account credentials and access arrangements will continue unchanged. The CHPC will confirm whether current accounts will be retained and will communicate any required account verification, authentication changes or onboarding steps before the new system becomes available.

27. Will existing software and applications be available on the new system?

The software environment for the new system is still being finalised. The CHPC will communicate the applications, libraries and development tools that will be supported, together with any version changes, compatibility requirements or user actions. Users should not assume that every package or configuration available on Lengau will be reproduced unchanged.

28. What happens if the implementation takes longer than expected?

The CHPC will monitor implementation against the project schedule and provide regular progress updates. If an issue is expected to affect the target date of March 2027 (exact date to be confirmed), users and relevant stakeholders will be informed as soon as the impact is sufficiently understood. The communication will set out the

revised position, the implications for users and, where possible, the next expected milestone.

29. Is the shutdown related to the cybersecurity incident experienced by the CHPC earlier in 2026?

No. The planned shutdown is part of the approved transition from Lengau, which is approaching the end of its operational life, to the new HPC system. It is not being undertaken as a response to the cybersecurity incident experienced earlier in 2026 and the transition was planned before the incident.

30. Is there a problem with Lengau that has forced the shutdown?

No specific failure has forced the shutdown. Lengau is approaching the end of its operational life and must be removed to enable refurbishment of the data centre and deployment of its replacement. The shutdown is therefore a planned component of the transition programme.

31. Why are users only being informed now?

The communication is being issued in advance of the planned shutdown to give users and institutions time to adjust research plans, manage computational workloads and secure important data before 1 December 2026. Further technical and implementation details will be communicated progressively as they are finalised.

32. Has DSTI been informed?

Yes. The Department of Science, Technology and Innovation (DSTI) has been informed of the planned transition and shutdown. The CHPC will continue to engage DSTI and other relevant stakeholders as implementation progresses and will communicate material developments through the appropriate channels.

33. Will there be alternative external storage available that users can make use of before and after the final shutdown of the Lustre parallel file system?

Yes, there is alternative hot and archival storage available from DIRISA if users want to make use of it. Details on how to make use of the DIRISA storage options are provided on the CHPC Wiki here: https://wiki.chpc.ac.za/howto:dirisa

34. What are the specifications of the new HPC cluster to be deployed?

The new HPC system, to be named Ihlosi, will be a 10-rack HPE cluster consisting of 512 nodes with Intel 8593Q CPUs (64c, 2.2GHz, 385W), 512 GiB memory per node and total HPL Rmax performance of 4 Pflop/s.

35. Who should users contact if they need assistance?

Users requiring assistance should contact the CHPC Helpdesk through the established support channel: **helpdesk@chpc.ac.za**