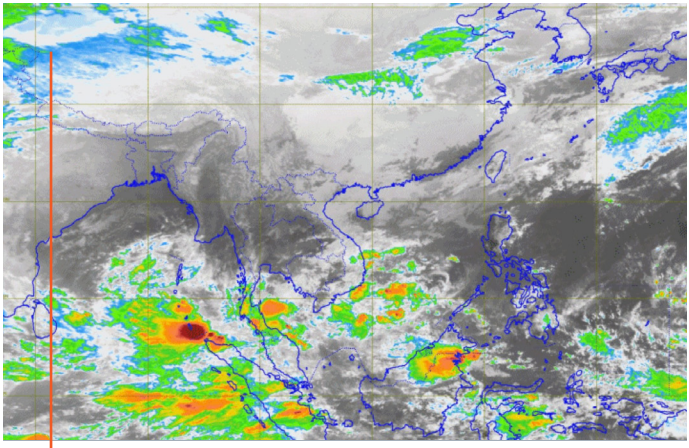
ALTAIR FOR WEATHER & CLIMATE

altair.com/weather-climate

Weather and climate centers worldwide rely on the power of high-performance computing (HPC), and Altair keeps HPC running reliably and efficiently. Because modeling the Earth's weather and climate is a challenge, it requires powerful HPC systems and software that can orchestrate the most complex workloads. Fields such as climate modeling and numerical weather forecasting have global economic and social impact.

WEATHER AND CLIMATE MODELING

Altair solutions for HPC workload orchestration, resource management, user access, analytics and more power major weather centers all over the world. Where time is always a critical factor, our Altair PBS Works™ solutions make sure weather and climate modeling and simulation workloads run as quickly and efficiently as possible, making the most of HPC resources.



Modeling weather and climate patterns requires HPC and powerful software to orchestrate complex, critical workloads

PBS PROFESSIONAL AND THE CYLC WORKFLOW ENGINE

Cylc is an open-source workflow engine for cycling systems that handles a range of workflow complexities. It automatically executes tasks according to detailed schedules and dependencies, and it's especially useful in areas such as weather and climate modeling, numerical weather prediction, physics simulation, and data processing.

Cylc has become a popular choice at major weather and climate centers around the world — and now it's a key tool at Australia's Bureau of Meteorology. Cylc was originally developed for operational environmental forecasting at NIWA, the National Institute of Water and Atmospheric Research in New Zealand, and now it's an open-source collaboration between NIWA, the Met Office (UK), the Center of Excellence for Weather and Climate Simulation in Europe (ESiWACE), the Bureau of Meteorology, and other contributors.

Altair provides commercial support for the community-based Cylc workflow engine to users of PBS Professional.

Altair, NIWA, and the Bureau of Meteorology developed a production environment for monitoring the performance of many Cylc workflows along with Altair PBS Professional, our industry-leading workload manager and job scheduler for HPC and cloud environments.

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THE ALTAIR WEATHER SOLUTION

Altair's weather solution is built on the Altair® PBS Professional® workload manager for HPC and cloud environments, combined with the Cylc workflow engine. The solution lets users monitor HPC hardware, Cylc suites, and PBS Professional jobs, and it provides clear and concise status reporting. Purpose-built for the complex workloads of climate modeling and prediction, the Altair weather solution was designed to be modular, comes ready for easy, out-of-the-box deployment and includes:

- Message Viewer – view into Cylc and PBS Professional messages
- Event Inspector – insight into system events
- Message Modifier – for development and support
- Schedule Prediction Tool – visual representation of the workflow schedule

The Altair weather solution provides out-of-the-box workload management functionality specifically for weather and climate modeling and prediction

HELPING THE INNOVATORS INNOVATE, DRIVE BETTER DECISIONS, AND TURNING TODAY'S PROBLEMS INTO TOMORROW'S OPPORTUNITIES.

ALTAIR TRENDING IN:

Additive Manufacturing
Autonomous & ADAS
Big Data
Cloud Computing
Data Transformation
Digital Twin
e-Mobility
Exascale
GPU Solutions
Lightweighting
Machine Learning
Mechatronics
Smart Product Development
5G

PBS Professional provides the job resource management and scheduling on our HPC system.

It's critical to the system such that if that service were to go down, then we'd consider that a whole-system outage. Altair understands the criticality of that."

Tim Pugh, Australia's Bureau of Meteorology

ALTAIR

Altair is a global technology company that provides software and cloud solutions in the areas of product development, high performance computing (HPC) and data analytics. Altair enables organizations across broad industry segments to compete more effectively in a connected world while creating a more sustainable future.

To learn more, please visit altair.com