

INMET Expands its Computational Capacity: Gains Speed and Resolution

Key Facts

Organization:

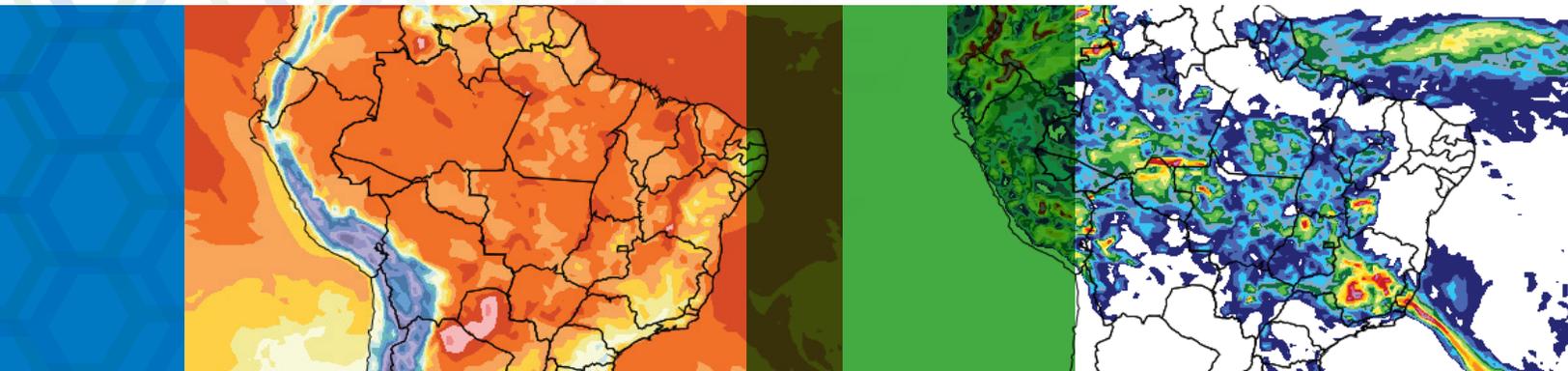
National
Institute of
Meteorology

Location:

Brazil

Application:

Life Sciences



Introduction

Established in 1909, The National Meteorological Institute (INMET) is the official government organization for providing Meteorological and Climatological services in Brazil. It has ten remote branches throughout the country.

The mission of INMET is to provide weather information to the Brazilian society and have a constructive influence in the process of decision-making and contributing to the sustainable development of the country. Their mission is achieved through monitoring, analysis and prediction of weather and climate, which are based on applied research, and working in partnership, sharing knowledge, with emphasis on practical and reliable results.

Loyal SGI Customer

INMET's first SGI solution was an SGI® Origin® 2400 with 32 processors and installed at INMET in 2000. Since then all of their solutions have been SGI. These include an Origin 3800, Altix 4700, Altix XE 1300, Altix ICE 8400, SGI® ICE™ X, other small configurations, and its most recent acquisition, an SGI UV 2000. INMET considers SGI products as very reliable in the field of meteorological modeling.

All SGI solutions are purchased with the idea to fulfill the demand imposed by the numerical models in relation to weather forecasting. INMET is always looking for a complete solution of hardware and software, and are happy with the support provided by SGI.

Configuration

- SGI UV 2000 with 42 compute blades
- 672 cores of Intel® Xeon® processor E5-4640 running at 2.4GHz
- 2.69TB of coherent shared memory

INMET mainly uses their SGI UV 2000 for High Performance Computing (HPC) in the area of numerical weather forecasting. They run two regional meteorological model systems originally from Germany. One is a High Resolution Model (HRM) and the other is Consortium for Small-Scale Modeling (COSMO).

INMET wanted to be able to increase the model resolution while reducing the time that it took to process. The UV 2000 enables them to increase the mesh resolution over South America from 10x10 km to 7x7 km and add a 2.8x2.8km grid resolution over selected regions in Brazil. This gives them much more information on weather behavior and enhances their forecasting products.

"We considered SGI products as very reliable equipment in the field of weather modeling. The UV 2000 saves us time to run other instances on our model processing and allows us to anticipate some future work and development. This was a great help. We choose UV 2000 considering it to play in the next technological jump." States José Mauro de Rezende, Deputy Director and Coordinator for Communication Systems at INMET.

José Mauro de Rezende also states, “The customization work was always done in partnership and full support from SGI Engineering. There was no chance of us doing it alone. SGI participated in the project at the very moment we started until all of the applications were running and operational. I’m confident that SGI understands our business and contributes to our success.”

About INMET

The National Institute of Meteorology (INMET) was created by Decree 7672 of President Epitacio Pessôa, on November 18, 1909, with the name of Directorate of Meteorology and Astronomy, organ of the National Observatory, linked to Ministry of Agriculture, Industry and Commerce. Throughout its history, the Institute has gone through several names until the National Institute of Meteorology (Law 8490 of November 19, 1992), an agency under direct administration of the Ministry of Agriculture, Livestock and Supply.

About SGI

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