

Access to BlueGene LOFAR

For the purpose of LOFAR processing a six-rack IBM BlueGene system has been acquired. The six racks of the BlueGene system will, within the central processing of LOFAR, be split into four racks for on-line processing (correlation etc.) and two racks for off-line processing. In any case, at the time of LOFAR operations, all six racks will be fully used, and no access for other purposes can be considered.

During the early stages of LOFAR construction and operations, however, excess capacity may be available. This could be the case as early as the summer of 2005 until summer of 2007, with the overcapacity gradually diminishing between these two dates. The LOFAR consortium is considering temporarily allowing access for purposes other than the processing of the streaming data from the LOFAR sensor network. This document is intended to clarify the possibilities for access to the LOFAR BlueGene supercomputer system.

Why provide access?

The main reason for allowing access is to make optimal use of the BlueGene system while the LOFAR streaming data do not yet tax it to its full capacity. The breadth of the scientific applications of LOFAR is such that LOFAR would like to give as many different disciplines as possible an opportunity to make use of the system. In this way the development of strong theoretical and modelling activities related to the multi-disciplinary scientific application areas of LOFAR, the RuG and more broadly within the Netherlands science community will be stimulated.

Why restrict and regulate access?

The reasons to restrict and regulate access are:

- a) LOFAR BlueGene is not intended as a national common-user facility, competing with the existing national supercomputing facilities sponsored by NCF (Netherlands National Computing Facilities).
- b) The contractual agreement between ASTRON and IBM prohibits commercial use of the BlueGene system. However, IBM has the right to provide limited access to selected potential customers to use BlueGene as a try-out.
- c) The regulation of access is essential because the technical work in development and construction of the LOFAR sensor network will have priority.

How to obtain access to BlueGene?

BlueGene/LOFAR is a joint investment by the LOFAR consortium with an additional contribution by the Rijksuniversiteit Groningen (equivalent of two BG racks). Users from the LOFAR scientific applications and from the University of Groningen, therefore, may be allowed access to the system prior to full use by the LOFAR data stream. Additionally, LOFAR may decide, exclusively upon advice from NCF, to allow access to other non-commercial, Dutch scientific user communities on a try-out basis. The latter access will, on a case-by-case basis be discussed with IBM.

Access will be subject to availability with the priority going (initially) to development and construction of the total LOFAR system and (ultimately) to the processing of the LOFAR sensor data stream. Given all the restrictions mentioned above, interested parties shall be requested to indicate their interest in making use of the system. The details to be incorporated in such requests shall be the subject of a separate document. A small committee, consisting of the general director LOFAR and the RUG representative on the board of directors of LOFAR, shall consider the proposals from the LOFAR community, from the Groningen community and those advised by NCF. The committee shall limit its judgement only to whether the requests meet the restrictions mentioned above. There shall be no scientific judgement of the proposals, because we aim to encourage specifically the exploratory nature inherent in the philosophy of the LOFAR project.

This document is not intended to detail the procedure for requesting access. This will be clarified in a separate document.