



## Charter for access and use of the BiRD IT infrastructure

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### Object

The purpose of this Charter is to define the conditions for using the IT infrastructure of BiRD bioinformatics core facility (Bioinformatics Research and Development) and to formalize the commitments of the facility on the one hand and of users on the other hand.

First of all, the use of the BiRD's IT resources is subject to the acceptance and signature of the University of Nantes' IT charter.

The core facility's servers, clusters and storage bays are hosted in the University of Nantes datacenter building. These equipments are supported by the computer network of the University of Nantes. Internet access is provided by RENATER (<http://www.renater.fr>).

Contact : [pf-bird@univ-nantes.fr](mailto:pf-bird@univ-nantes.fr)

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### Services

The BiRD facility provides an infrastructure dedicated to biologists and bioinformaticians who need to launch intensive computations while taking advantage of a bioinformatics environment. The computing cluster is composed of 10 quadrocessor nodes (560 cores in total), 3.8TB of RAM, associated with ~400TB of BeeGFS storage connected in Infiniband.

Access to these services is provided via the command line on the cluster's front-end server (login), including standard "Open Source" genomics tools and the necessary data resources (main genomes). Tasks are submitted through a Job Manager system (JMS).

Assigning disk spaces :

- /sandbox/users: workspace in which the user is by default when logging in. This space is subject to a 1TB quota and is not saved. This space is not intended for permanent data storage.
- To have more space, it is necessary to request it using the following form: <https://pf-bird.univ-nantes.fr/ask-for/storage/>. This additional space will be available in /sandbox/shares and can be shared with other people on request (creation of a group).

## Conditions d'accès et d'utilisation

### **Accounts**

Access to the BiRD infrastructure is subject to the creation of a user account, after approval of this Charter. Accounts are strictly personal, non-transferable, temporary and linked to a structure (Unit, research team, company, etc.).

The accounts are opened for the current calendar year and are renewable annually. An automatic account expiration system sends each user an email for account renewal.

An account may be closed at any time if the user's function no longer justifies it or in the event of non-compliance with the Charter.

The use of resources is intended only for professional activities that comply with the legislation in place and comply with the missions of the BiRD core facility, namely the development of databases and bioinformatics tools and the execution of experimental intensive computing campaigns for data processing and analysis in bioinformatics. The use of resources for private purposes is not tolerated.

### **Use of resources**

The submission of command line jobs is delegated to a scheduler (SGE, Sun Grid Engine). From the front-end server, the programs must be encapsulated in a submission script. Any program launch directly on the front server or nodes is not allowed and will result in the task being deleted without notice by the administrators and possibly the account being deleted in the event of intentional recurrence.

### **Safety and security**

Access to computing resources is secure: the computing job submission tool (SGE) is only accessible through SSH (Secure Shell: authentication, encryption) communication.

When creating an account, users are asked to change their password by contributing to the security of the platform. The University's password definition policy prevails:

- it must be different from your username,
- it must be at least 7 characters long,
- it must contain at least 3 different characters,
- it must not contain accented characters,
- it must not belong to the dictionary.

User disk spaces (/sandbox/users) are configured by default to be read/write accessible only to the holders of the associated computer account, except for the system administrators (who are responsible for the infra's proper functioning and availability).

Project spaces (/sandbox/shares) are shared with group members identified by the project leader. Users are responsible for positioning UNIX permissions on their directories and files.

Under no circumstances can the core facility be held responsible for any misconfiguration of UNIX rights.

### **Data transfer**

Data transfer between the user's workstation and the front-end server is done by the secure protocol (authentication, encryption) SFTP (SSH File Transfer Protocol). To do this, the scp command from a terminal or a software client such as FileZilla is recommended.

### **Software installation**

Users are free to install on their disk space software necessary for bioinformatics activities, in compliance with the legislation in use. The installation of software for multiple users can only be done by the platform administrators and must be discussed beforehand.

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## **Platform Engagements**

### **Supervision**

Administrators have a responsibility to ensure the proper functioning of computer, hardware and software resources. They are entitled to take the necessary measures to remedy any malfunction or safety risk.

The platform is committed to minimizing service interruptions and ensuring the best availability of the cluster. In the event of a necessary interruption for hardware or system updates, users are notified as soon as possible.

All connections or attempts are recorded and logged.

In the event of non-compliance with this Charter, the core facility may remove access to resources and stop IT processes without notice.

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## **Confidentiality**

To ensure the good performance and availability of the platform, the directors may take all necessary measures to assume their responsibility while respecting the obligation of professional discretion. They must not disclose information that they have come to know in the course of their duties (respect for confidentiality).

In the context of processing biomedical and/or individual data, the users of the infrastructure are responsible for compliance with the ethical framework and the law in vigour: they must rely on the opinions of the Comité de Protection des Personnes (CPP), the Comité Consultatif sur le Traitement

de l'Information en matière de Recherche dans le domaine de la Santé (CCTIRS), the Commission Nationale Informatique et Libertés (CNIL).

By default, cluster users are registered in the GenoBiRD Newsletter mailing list. They have the possibility to unsubscribe using a link at the bottom of the News.

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## Pricing

A rate is in place for storage /sandbox requests exceeding 1TB (and up to 20TB) depending on the quota requested through the form on the website (<https://pf-bird.univ-nantes.fr/ask-for/storage>). Academic fees are available on the website. Private rates are available on request.

For requests over 20TB users should contact the facility to discuss the terms and conditions.

The monthly fee is based on the quotas requested during the year. (Ex: 10TB for 8 months, and 15TB for 4 months). Quota changes are possible on request for the following month.

Invoicing will be established over a one-year period from June to May (based on the year's quotas).

The platform reserves the right to apply an update of its rates during the year. A period of one month will be respected between the date of communication of the new rates and their application.

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## Valorisation, intellectual property

In the context of scientific collaboration between users and facility staff, a collaboration contract must be negotiated in good faith between the parties. The intellectual property of the results produced by the platform will be subject to the terms of the collaboration agreement. When the use of the platform is made without a collaboration contract, the staff cannot claim an intellectual property right on the results produced.

The authors undertake to thank BiRD in their publications and communications, when they have used the core facility resources, in the following way:

*"We are most grateful to the Genomics and Bioinformatics Core Facility of Nantes (GenoBiRD, Biogenouest) for its technical support"*

If the scale of the project, the technological investment, or the scientific contribution justifies it, one of the facility's staff will participate in the scientific publication work and will therefore be a co-author. The scientific manager of the platform will be consulted if necessary.

The core facility publishes their pipelines in Biotools. If one of these analysis pipelines has been used for a publication, the authors undertake to cite this pipeline with the Biotools link.

The list of pipelines is available on the website: <https://pf-bird.univ-nantes.fr/resources/pipelines/>

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## **Satisfaction**

In a process of quality, improving its performance, and gathering the opinions of its users, the platform offers an annual satisfaction survey.