

***Using RSAT Virtual Machine
at IFB cloud
(Institut Français de Bioinformatique)***



Connection to the IFB cloud (Institut Français de Bioinformatique)

- <https://cloud.france-bioinformatique.fr/>

A cloud for life sciences

Life science researchers, thanks to the continuous improvement of experimental technologies, face a deluge of data whose exploitation requires large computing resources and appropriate software tools. They simultaneously use many of the bioinformatics tools from the arsenal of hundreds available from the international community. Usually they combine their data with public data that are too large to be moved easily. So the computational infrastructure need to be tightly connected to public biological databases.

The French Institute of Bioinformatics (IFB) is the national infrastructure which purpose is to provide bioinformatics core resources to the national and international life science research community. IFB is also the French node of ELIXIR, the European Cloud principle bioinformatics infrastructure. Among the many tasks required to fulfill this goal, IFB must provide an IT infrastructure devoted to the management and analysis of biological data, in particular data generated by high-throughput technologies. This infrastructure will rely on sizeable hardware resources (high throughput computation, large storage capacity) and will provide access to high-quality developments in terms of software tools and databases. IFB consists of a network of more than 20 bioinformatics platforms gathered into six regional centers that span the French territory and a national hub called IFB-core (CNRS UMS3601). In particular, IFB-core is in charge of setting up and running the IFB academic cloud infrastructure hosted at IDRIS - IT Center for Science "IDRIS".

One important aspect of deploying a cloud for the life science is to provide virtual machines (appliances) that encapsulate the many complex bioinformatics pipelines and workflows needed to analyze distributed life science data. At the IFB, we developed several bioinformatics services available as cloud appliances. We created bioinformatics appliances providing, for example, a user-devoted Galaxy portal, a virtual desktop environment for proteomics analysis or a bioinformatics cluster with a lot of standard tools (BLAST, ClustalW2, R, Samtools, Bowtie, TopHat, etc.). Scientists can run their own appliances through a user-adapted web interface. Our cloud infrastructure is configured in such a way as to enable VMs to automatically connect to a local repository containing public biological databases, e.g., UNIPROT, EMBL, etc.

IFB is currently running an academic cloud infrastructure with the appropriate biological data and bioinformatics tools to meet the needs of the life science community.

Get access to the cloud: [Register](#)

Already an account! Proceed to the cloud: [Cloud HQ](#)

IFB acknowledges funding by the call "Infrastructures in Biology and Health" in the framework of the French "Investments for the Future" initiative





IFB is the French ELIXIR node


Login form

IFB BIOINFORMATICS CLOUD

WELCOME!
[SIGN IN](#) | [HELP](#)

SIGN IN

Hosted at  Powered by 






 INSTITUT FRANÇAIS DE BIOINFORMATIQUE



Username

Password


[Lost password](#) | [Request account](#)

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Click “Settings”

- Before starting to use the IFB cloud, it is worth filling the “Settings” form.
- BEWARE: you need a **public ssh key**.
- You can find instructions about ssh keys (for example) here <https://help.github.com/articles/generating-ssh-keys>
- and for Windows users here <http://wiki.joyent.com/wiki/display/jpc2/Manually+Generating+Your+SSH+Key+in+Windows>





The screenshot shows the IFB Bioinformatics Cloud dashboard. At the top left, it says "IFB BIOINFORMATICS CLOUD". On the right, it says "YOU ARE SIGNED IN AS IFBTUTO16" with a list of navigation links: "NEWS | DASHBOARD | MONITOR | SETTINGS | HELP | SIGN OUT". Below this, there is a blue bar with the word "DASHBOARD" in white. On the left, there is the IFB logo (Institut Français de Bioinformatique) and a stylized DNA helix logo. On the right, there are logos for "Hosted at iris" and "Powered by stratuslab".

Enter your **public** ssh key in "Settings"

IFB BIOINFORMATICS CLOUD YOU ARE SIGNED IN AS IFBTUTO16
NEWS | DASHBOARD | MONITOR | SETTINGS | HELP | SIGN OUT

SETTINGS

Hosted at  Powered by 

Personal Information

Affiliation ?
City ?






Cloud Preferences



Pubkey ?

Appliance ?


Instance type ?

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Click "New Instance" to create an instance



Profile saved.

[Shutdown](#) [Go](#) [Get IPs](#) [Rename](#)

[New Instance](#) [New Storage](#) [Show Instances](#) [Show Storages](#)

Showing 0 to 0 of 0 entries

Search:

<input type="checkbox"/>	ID	Name	Appliance	CPU%	CPU	Mem.	#Storage	Access	+
No instances available.									
	0			0		0	0		

Show entries

[First](#) [Previous](#) [Next](#) [Last](#)



Create a new instance

- Note

- The appliance “RSAT-ub14-3000-genomes” is preloaded with genomes of 3000 species (mostly Bacteria).
- The appliance “RSAT-mini” has only 2 genomes (*S.cerevisiae* and *E.coli*)

Create Instance [X]

Choose The Appliance

Appliance ? RSAT-ub14-3000-genomes

Filter by ? --- THEMATIC FIELDS ---

--- TOOLS ---

Configure Your Virtual Machines

Name ? my_rsat

Unique ?

Type ? c2.small (1 CPU, 2GB RAM)

Number ? 1

Configure Your Storage

Persistent disk ? -----

Create Cancel

Your instance of the RSAT server

- After having created the instance, wait for a few seconds and refresh the page (the virtual machine takes ~1 minute to boot).
- You can use this instance in three ways
 - As web server (right-click “http” under “Access”)
 - On the Linux terminal (click “ssh” under “Access”)

The screenshot shows the IFB Bioinformatics Cloud dashboard. At the top, it says "IFB BIOINFORMATICS CLOUD" and "DASHBOARD". The user is signed in as "IFBTUTO16". The dashboard includes logos for "ifb INSTITUT FRANÇAIS DE BIOINFORMATIQUE", "Hosted at aris", and "Powered by stratuslab". Below the navigation bar, there are buttons for "Shutdown", "Go", "Get IPs", "Rename", "New Instance", "New Storage", "Show Instances", and "Show Storages". A search bar is also present. The main content area displays a table with one instance:

ID	Name	Appliance	CPU%	CPU	Mem.	#Storage	Access
894	my_rsat	RSAT-ub14-3000-genomes	0%	1	2	0	ssh http

At the bottom of the table, there are navigation buttons: "First", "Previous", "Next", and "Last". Two arrows point to the "ssh" and "http" links in the "Access" column of the table row.