



ESCAPE-NET standard operating procedure (SOP) for user and data management in BC|GENOME

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1 BC|GENOME database platform

The BC|GENOME database platform provided by BC|Platforms is used for data management and statistical analyses of the shared data resources of ESCAPE-NET. The shared database platform has been provided as a deliverable of WP3.



Both the WP2 and WP3 teams have been collaborated to build a secured data management and analysis platform where only authorized users of the ESCAPE-NET project are allowed to use data without risk of either unauthorized changes or unauthorized utilization of the shared data resources.

This standard operating procedure (SOP) document is created to provide necessary information for the ESCAPE-NET researcher to access and analyze the shared resources in BC|GENOME.

In addition to this SOP, please familiarize yourself with documents of

- BCGENOME_Administration_tools.pdf describing tools for data manager
- BCGENOME_User_Guide.pdf describing the tools in BC|GENOME

found at <https://escape-net.eu/groups/escape-net-consortium/documents/>

2 Responsibility assignments of users of the ESCAPE-NET shared database platform

BC|GENOME provides toolset for uploading, exporting, filtering and analyzing epidemiological study data. The BC|GENOME graphical user interface accessed using web browser is run on the secure virtual CentOS desktop (i.e. Secure Cloud 575) in the server environment hosted by Computerome at DTU. On this secure desktop data management functionalities are restricted inside the virtual desktop: This means users are not able to download result files, graphs and metadata derived from research data without control of the BC|GENOME administrators.

In Table 1 you can find a summary of tools and responsible assignments of the shared database platform with contact information.

Table 1. Functions and responsibilities for the user and data management in the ESCAPE-NET database platform.

	Function	Work package	Main contact person *	Note
Database platform	Maintenance of BC GENOME	WP3: BC	Päivi / BC support	BC provides BC GENOME, the database platform, and are responsible for the functionality of tools
	Server and calculation environment	WP3: Computerome	Via Päivi / BC support	Computerome provides the server infrastructure
Project management	User Accounts	WP2: RegionH	Simon, Niels	New user accounts
	User permission	WP2: RegionH	Simon, Niels	User permissions and user groups
	File transfer	WP2: RegionH and	Simon, Niels	Files transferred onto the server



		Computerome /DTU		
	Table structures	WP3	Simon / Päivi	Data integration of harmonized data in BC GENOME
	Data uploads	WP2 / BC	Simon / Päivi	Data integration of harmonized data in BC GENOME
Usage of Data management tools in BC GENOME	Data filtering / joining	All	Päivi / BC support	Data management in the secure cloud environment
	New datasets	All	Simon, Niels, Päivi / BC support	See above
	Dataset permissions	All	Simon, Niels, Päivi / BC support	See above
	Data visualization	All	Päivi / BC support	See above
	Data export	All	Päivi / BC support	See above
Data analysis in BC GENOME using research data	Data analysis	All		See above
Data exports from server environment	Export of meta data, analysis results, charts	WP2: RegionH and Computerome /DTU	Simon / Niels /Paulien / Marieke	Export of data from the server environment. <u>Project member who has uploaded data cannot supervise the data exports</u>

* Main contact person:

Simon: simon.mathis.koenig@regionh.dk

Niels: niels.kjaer.stampe@regionh.dk

Paulien: p.c.homma@amc.uva.nl

Marieke: m.t.blom@amc.uva.nl

BC support: support@bcplatforms.com

Päivi: paivi.tikka-kleemola@bcplatforms.com

3 User accounts

For the ESCAPE-NET database platform user need to have user accounts in both Secure Cloud 575 with a 2-factor authentication provided by Computerome and BC|GENOME.



3.1 User profiles

In the ESCAPE-NET project three different user profiles are available (Table 2): Each BC|GENOME database needs to have a database owner for managing both user accounts and user permissions to datasets. The database owner account password is managed by BC support but the account has been assigned to data manager of ESCAPE-NET. Both profiles of database administrator and researcher can be used for daily data management and analysis tasks, but database administrator can create new research user account and monitor system logs.

Table 2. ESCAPE-NET user profiles used in BC|GENOME.

User Profiles in in the ESCAPE-NET project	Description
Database owner	User management, dataset permissions, see the document of BCGENOME_Administration_tool.pdf
Database administrator	Tool for user account creations, monitoring the logs, data management and analysis tools
Researcher	Data management and analysis tools

3.2 Applying for the user account for both Secure Cloud 575 and BC|GENOME

1. When you apply for a user account with a profile of “researcher” send an email to:
 - 1.1. Jacob Tfelt (jacob.tfelt@regionh.dk) and Niels Kjær Stampe (niels.kjaer.stampe@regionh.dk),
 - 1.2. cc Hanno Tan (h.i.tan@amc.uva.nl), Marieke Blom (m.t.blom@amc.uva.nl) and Simon Kønig (simon.mathis.koenig@regionh.dk)
 - 1.3. with information of your:
 - 1.3.1. Full name
 - 1.3.2. Affiliation as specified in the ESCAPE-NET proposal
 - 1.3.3. E-mail
 - 1.3.4. Mobile phone number with the country code
 - 1.3.5. cc your PI assigned with the ESCAPE-NET project
 - 1.3.6. Inform whether you wish to use either the Google Authenticator application or SMS to authenticate your login using your mobile phone
2. When your application for the user account has been approved forward the approval email with your contact information and authenticator information as in step 1 to:
 - 2.1. Computerome’s help desk hpc@bio.dtu.dk for the account in Secure Cloud 575
 - 2.2. ESCAPE-NET’s data manager simon.mathis.koenig@regionh.dk, cc niels.kjaer.stampe@regionh.dk for the account in BC|GENOME
3. You will receive two SMS messages with your passwords:
 - 3.1. one from the HPC team of Secure Cloud 575 and
 - 3.2. one from the data manager of ESCAPE-NET.



3.3 Login to Computerome's secure cloud desktop and BC|GENOME

Here's the instructions on how to navigate to BC|GENOME on Computerome's Secure Cloud 575 desktop:

3.3.1 Login to Computerome's secure cloud desktop

1. Familiarize yourself with instructions found in <https://www.computerome.dk/display/CW/How+to+login>, login with user name and password sent by the HPC team. PLEASE do NOT change the password on the wiki, it is a shared user.
2. If you have chosen to use Google Authenticator app, then install the application onto your mobile phone
3. Navigate to <https://secureremote.dtu.dk/vpn/index.html> using Chrome
4. Type your user name and password sent by the HPC team in Denmark
5. Type the passcode sent via either SMS (from risoe.dtu.dk) or Google authenticator app
6. On the virtual desktop click on the Desktop icon at the top
7. Click on the icon BIOINF Computerome 575 Centos
8. Confirm you want to open Citrix Receiver Launcher. This application will create a secure connection.
9. On the Desktop select Shortcuts / Start
10. You may need to slide the blue screen up to access the active desktop

3.3.2 Login to BC|GENOME and changing your password

1. On the virtual Desktop navigate to Applications / Internet and click the Firefox Web browser open
2. Type URL: <https://risoe-r12-cn518/bcapp/>
3. Type your user name and password provided by Simon, and click Log In
4. You will enter to BC|GENOME dataset navigator.
5. Go to <userID> / Administration on the top right of your browser page



6. On the Profile page click the Edit button to change your password
 - 6.1. Password must have 7 - 32 characters in a combination of upper (A-Z) and lower case letters (a-z) and numbers 0-9 (obs! special characters are not supported)



7. Press Save

4 Working in BC|GENOME

The core of BC|GENOME is the data navigator that can be used to search for datasets you have permissions to (either read or read/write) in BC|GENOME. In addition, each user with either the database administrator or researcher profile can create their own datasets and filtered views, which are subsets in BC|GENOME. However, in Secure Cloud 575 all data exports have been restricted inside the secure cloud desktop thus you need to ask for data transfer service from Simon (simon.mathis.koenig@regionh.dk), for more information please see chapter 4.2.

4.1 BC|GENOME user guide

Table 3 below refers to BC|GENOME's PDF documentation that provides information about the basic usage of the BC|GENOME tools. However, all users are recommended to read the BC|GENOME document entitled BCGENOME_User_Guide.pdf.

Table 3. Key functionalities in BC|GENOME and reference to BCGENOME_User_Guide.pdf

Functions in BC GENOME	Chapter in the user guide
Dataset navigator	2.2. Navigating in BC GENOME
Dataset creation	3.1. Creating a form and datasets
Data upload	3.2. Uploading data
Result folder	3.3. Viewing results and reports
Filtering and joining data	5.2. Subsets
Analysis	5.4. Running analyses in BC GENOME

4.2 Downloading results from BC|GENOME server

Due to the secure cloud environment users of BC|GENOME are not able to transfer any analysis results, metadata information or charts from the server without authorization from the WP2 team.


4.2.1 Instructions for researcher working in BC|GENOME

Here are the instructions for sharing your result and chart files to be downloaded from BC|GENOME by data manager of the ESCAPE-NET project. The instructions can be applied also for sharing results and graphs inside BC|GENOME to your colleagues.

1. Sharing a result file

1.1. Navigate to DATA MANAGEMENT > RESULT ARCHIVE and identify your job folder



- 1.2. Click the small green dot  next to your result file line found in the Share column
- 1.3. Select the data manager's user account (skonig) and press Save changes


Select users who should see this folder

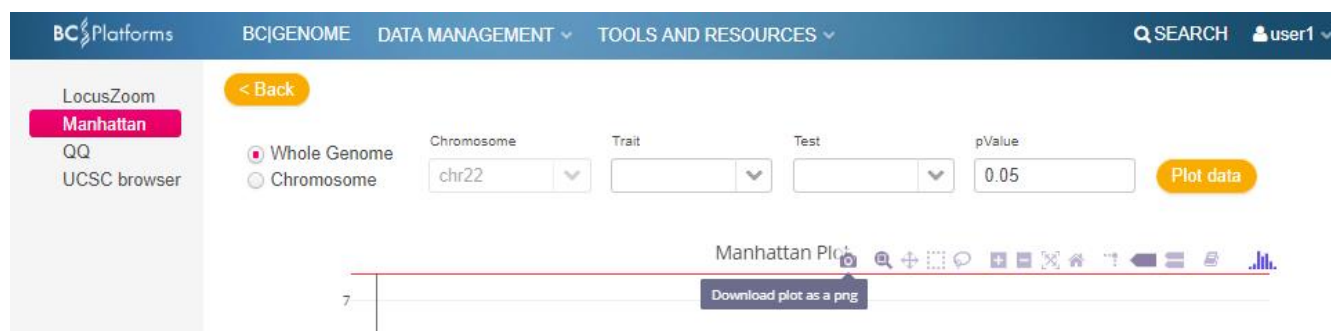
Use Ctrl key to select several items.

All **None**

- robot59 (robot59)
- robot6 (robot6)
- robot60 (robot60)
- robot61 (robot61)
- robot62 (robot62)
- robot63 (robot63)
- robot64 (robot64)
- robot65 (robot65)
- robot66 (robot66)
- robot67 (robot67)
- robot68 (robot68)
- robot69 (robot69)
- robot7 (robot7)
- robot70 (robot70)
- robot71 (robot71)
- robot72 (robot72)
- robot8 (robot8)
- robot9 (robot9)
- Test user (testuser1)
- User 2 (user2)**
- User x (userx)
- User y (usery)

Save changes **Cancel**

- 1.4. After sharing your file(s) you can see the shared icon  on your result file row
 - 1.5. Contact Simon (simon.mathis.koenig@regionh.dk) with your user name and jobID information so that he knows to ship the files to you.
2. Sharing chart files:
- 2.1. Either in the a) job folder of DATA MANAGEMENT > RESULT ARCHIVE, or using the b) Charts tools in the DATA tab for your association result dataset (see the screenshot below), or in the c) VISUALIZATION tab you can export (download) charts and graphs



- 2.2. Download a file onto your Desktop of secure cloud 575
- 2.3. Navigate to TOOLS AND RESOURCES > FILE TRANSFER
- 2.4. Use the Create Folder button for creating a folder with a descriptive name and date information as shown below



2.5. Click the newly created folder active before using the Add Files button (or Drag and drop files)

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BC|GENOME

DATA MANAGEMENT ▾

TOOLS AND RESOURCES ▾

Welcome user1

Drag-and-drop single or multiple files from your desktop to this table.

Add Files

Start upload

Stop upload

Type here to filter files and fold

Create Folder

Delete File or Folder

Rename

Create Folder

2.6. Navigate to DATA MANAGEMENT > RESULT ARCHIVE for sharing the folder with the data manager

2.6.1. Click the Upload folder open


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DATA MANAGEMENT ▾

Result archive

File name	Description
⌵	Reload current folder (user1)
upload	Transferred files
shared	Results shared by other users

2.6.2. In the upload folder click the share icon  to share the folder with your data manager (skonig) and press the Save changes button

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BC|GENOME


DATA MANAGEMENT ▾

TOOLS AND RESOURCES ▾

Result archive

[Regular folder](#)

File name	Description	Edit title	Size	Modified	Share
⌵	Reload current folder (upload)			12:37/30.12.18	
⌵	Parent folder			10:42/30.12.18	
 user1_export.QjixHM.txt	Regular file		703 bytes	15:39/14.12.18	
 subjects.sample	Regular file		749 bytes	12:52/07.11.18	
 My results some date	Directory		24 KB	12:37/30.12.18	

2.6.3. After sharing your file(s) you can see a shared icon  in your folder



2.6.4. Contact Simon (simon.mathis.koenig@regionh.dk) with your user name and folder information so that he knows to ship the files to you.