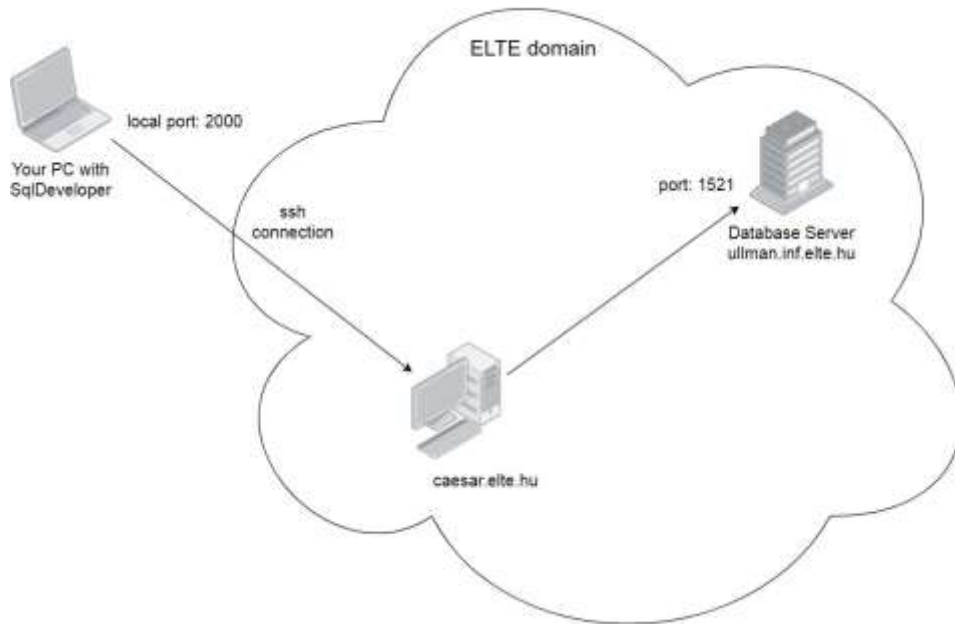


How to connect to **ORALE databases** from clients outside ELTE domain.

ELTE has a firewall, so you cannot directly connect to the database servers from outside ELTE domain. You need an ssh connection to **caesar.elte.hu** with proper port forward (ssh tunnel) configuration.



1. You can use a **command line ssh client program** with the following parameters:

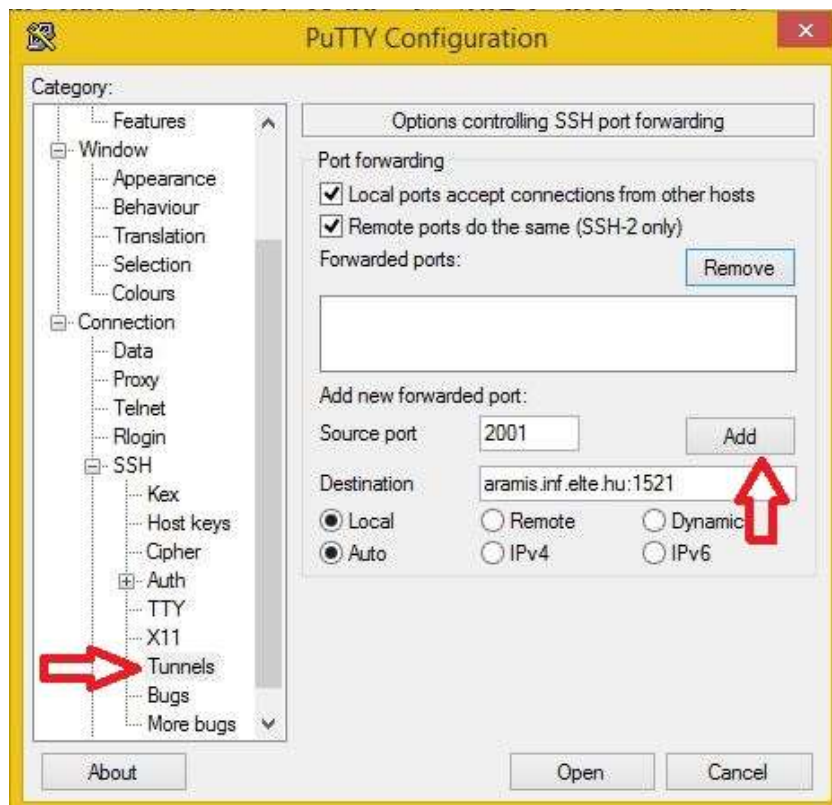
```
ssh -L 2000:ullman.inf.elte.hu:1521 username@caesar.elte.hu
```

or you can forward two local ports with one ssh connection:

```
ssh -L 2000:ullman.inf.elte.hu:1521 -L 2001:aramis.inf.elte.hu:1521 username@caesar.elte.hu
```

(username above is your **caesar username**)

Alternatively you can use a **putty program** with the following settings.

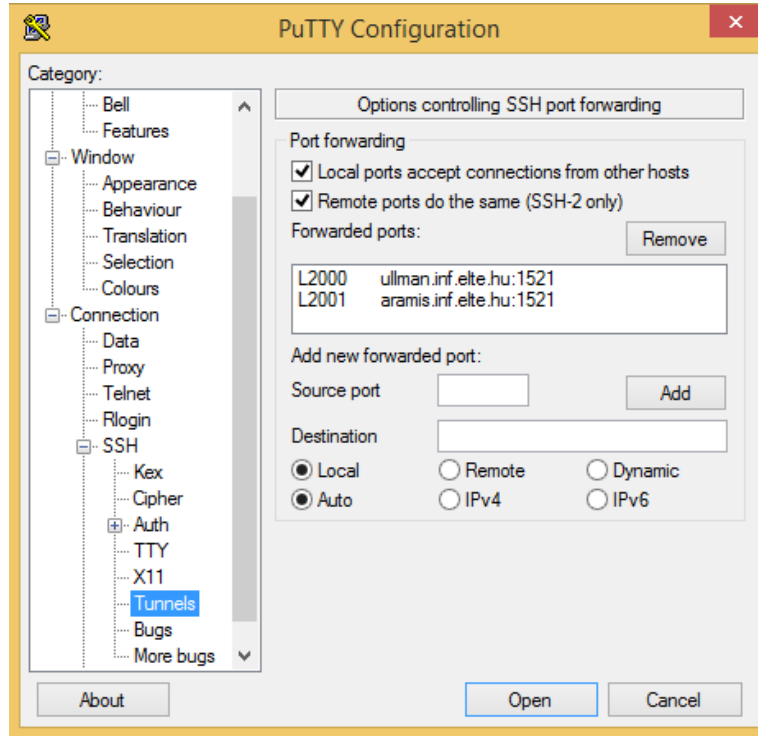


Write 2000 in 'Source port' field, ullman.inf.elte.hu:1521 in 'Destination' field then click Add button.

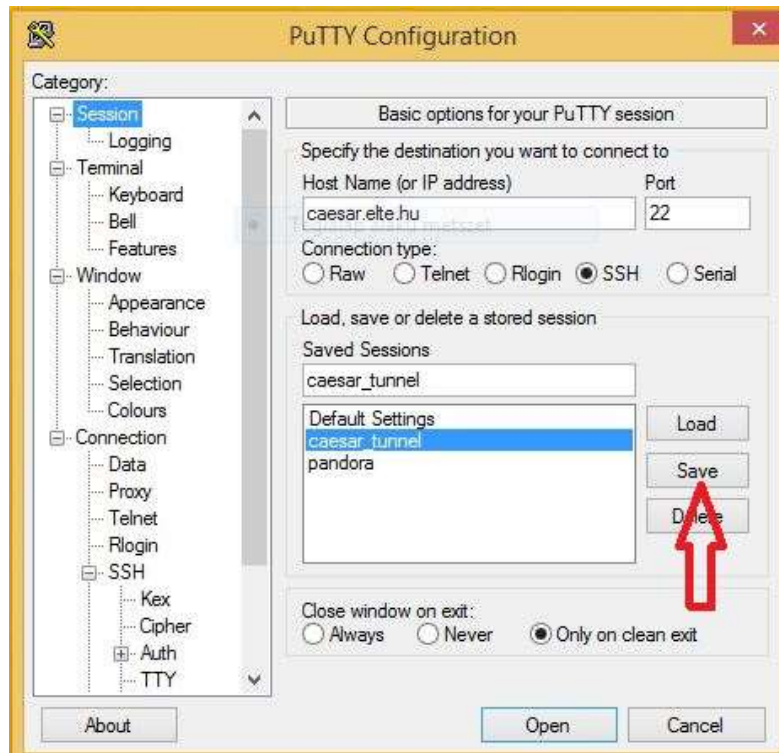
Write 2001 in 'Source port' field, aramis.inf.elte.hu:1521 in 'Destination' field then click Add button.

With the above settings your ssh connection will forward your local 2000 port to ullman.inf.elte.hu:1521 and your local 2001 port to aramis.inf.elte.hu:1521.

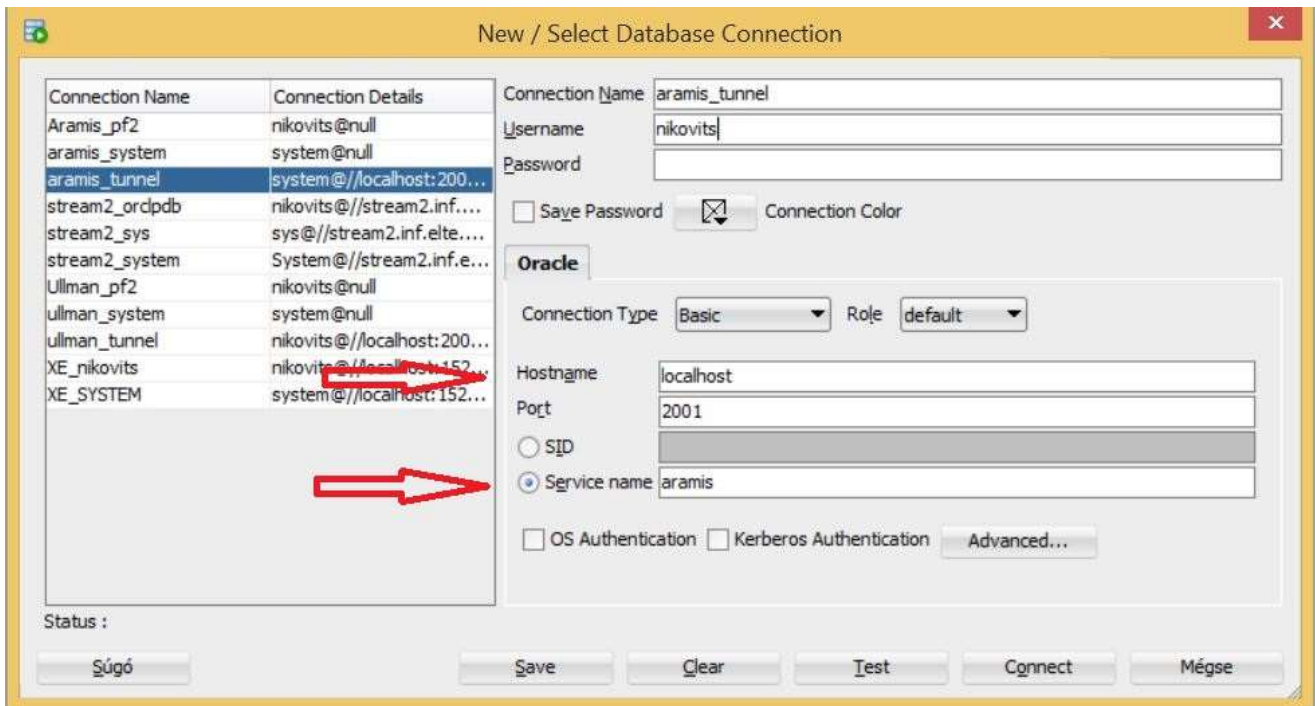
The result looks like this:



Save the configuration as a new session (e.g. caesar_tunnel) and login to caesar.elte.hu with the above settings.

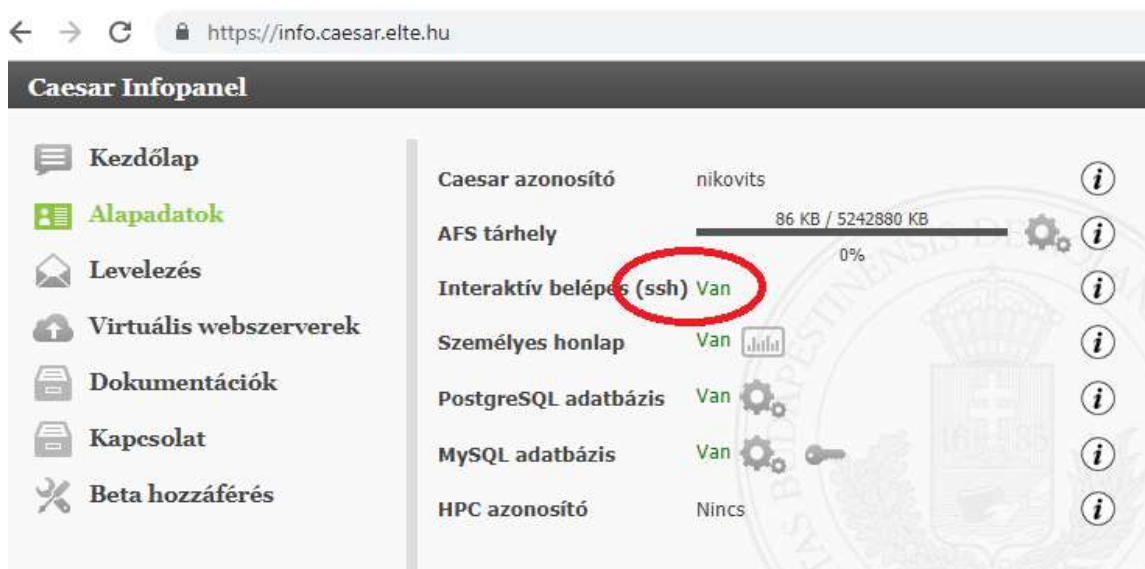


2. Connect to the database using **SqlDeveloper** with the following settings:
 Take care about hostname and port!
 (ssh connection should be open during the whole database connection time)



If you don't have a **Caesar account** or you don't remember your Caesar account:
 Go to <https://ugykezelو.elte.hu/> login with your Neptun account and create a Caesar account.
 (Use Google Translate, there is no english version.)

If you have a **Caesar account**, but you cannot log in when opening the ssh connection:
 Go to <https://info.caesar.elte.hu/>, log in (with Caesar account), then go to "**Alapadatok**" menu, and check the text after "**Interaktív belépés (ssh)**". If it shows "Nincs", then your ssh is disabled. Try to enable it by clicking on the shopping cart icon next to it. In 1-2 minutes it will be green. The green „**Van**” means, your ssh connection is enabled.



Sometimes your caesar connection will be closed after a short time, because your session is idle. Then do the following.

1. Create a script which regularly (every 5 seconds) prints something to the screen, so your caesar connection stays alive, and it will not be closed.
2. Give 'execute' permission to the script.
3. Run the script.
4. Press ctrl-c at the end, when you want to stop your script.

1. keep_alive.sh

```
#!/bin/bash
declare -i x=0
while true
do
    echo $x
    sleep 5
    x=$((x+5))
done
```

2. chmod +x keep_alive.sh

3. ./keep_alive.sh

4. ctrl-c