

Предмет	Управление и автоматизация БД
Курс	4
Семестр	2
Работа	Практическая работа №21
Группа	494
Фамилия	Зубкова
Имя	Валерия
Отчество	Геннадьевна

Отчет

Создание 2 базы данных

```

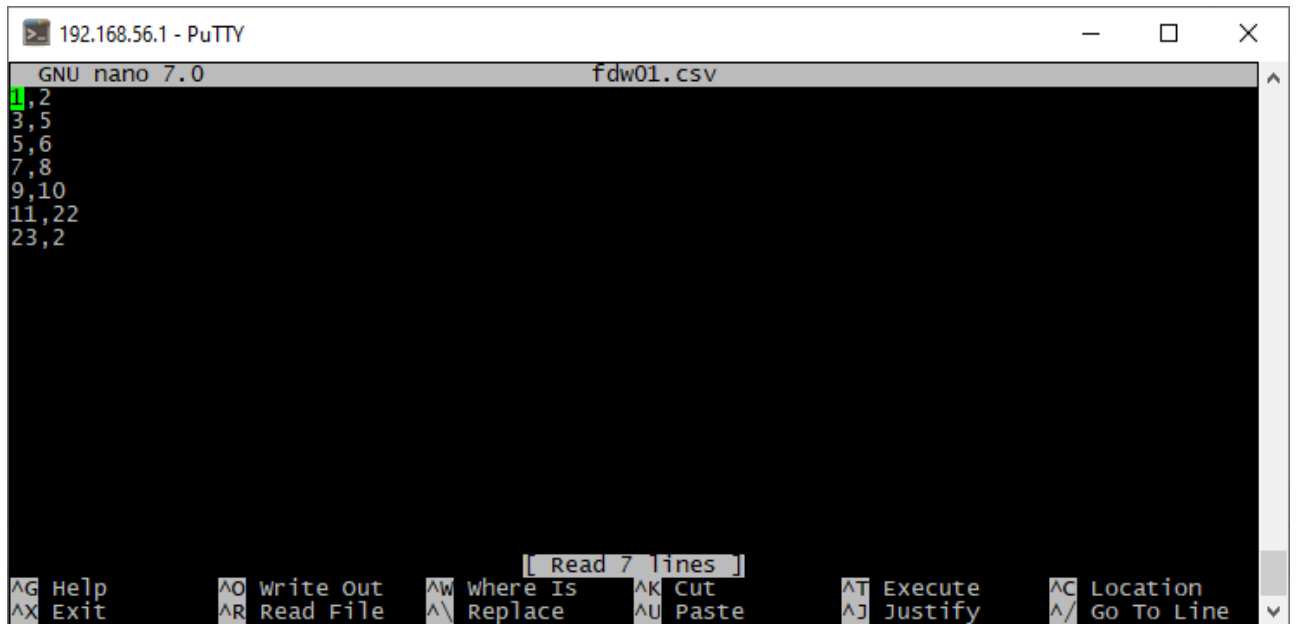
192.168.56.1 - PuTTY
postgres=# \dt
      List of relations
 Schema | Name | Type | Owner
-----+-----+-----+-----
 schema2 | t2   | table | postgres
(1 row)

postgres=# search_path
postgres=# \search_path
invalid command \search_path
Try \? for help.
postgres=# \dt
      List of relations
 Schema | Name | Type | Owner
-----+-----+-----+-----
 schema2 | t2   | table | postgres
(1 row)

postgres=# CREATE DATABASE local_test;
ERROR:  syntax error at or near "search_path"
LINE 1: search_path
        ^
postgres=# CREATE DATABASE local_test;
CREATE DATABASE
postgres=# CREATE DATABASE remove_test;
CREATE DATABASE
postgres=#

```

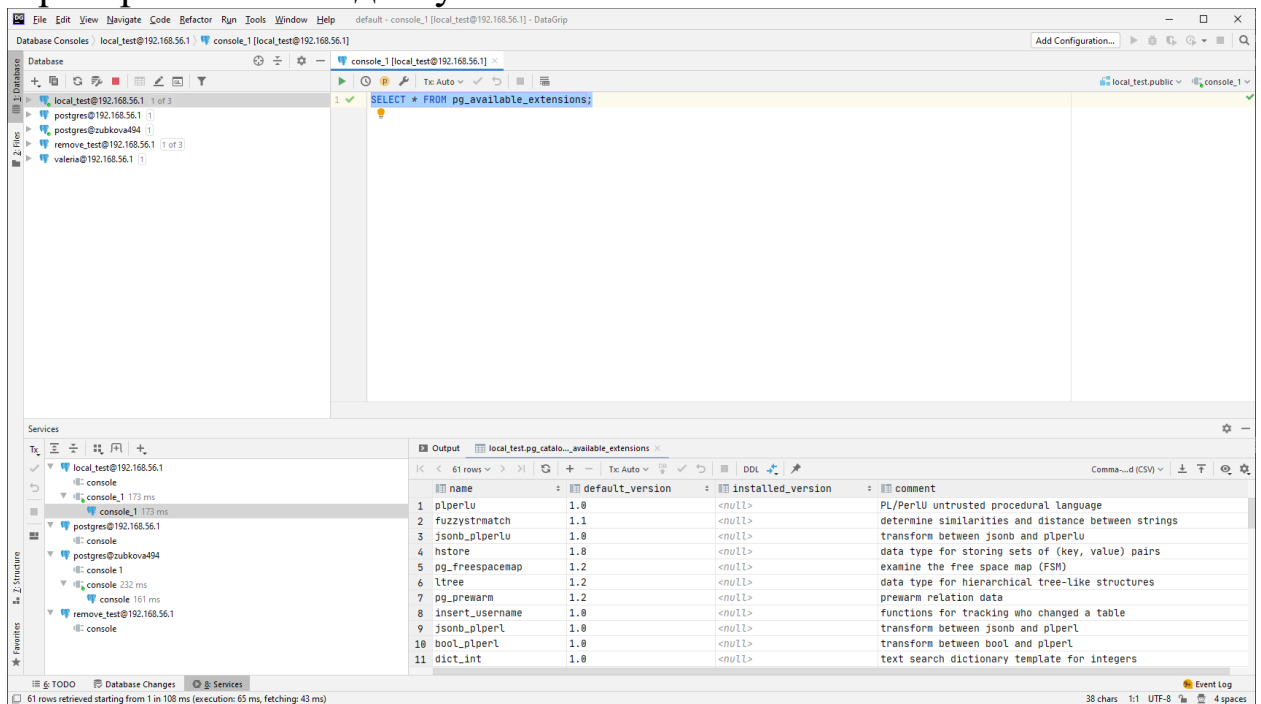
Создание csv файла для работы



```
GNU nano 7.0 fdw01.csv
1,2
3,5
5,6
7,8
9,10
11,22
23,2

^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location
^X Exit      ^R Read File  ^_ Replace    ^U Paste      ^J Justify    ^_ Go To Line
```

Проверяем список доступных плагинов



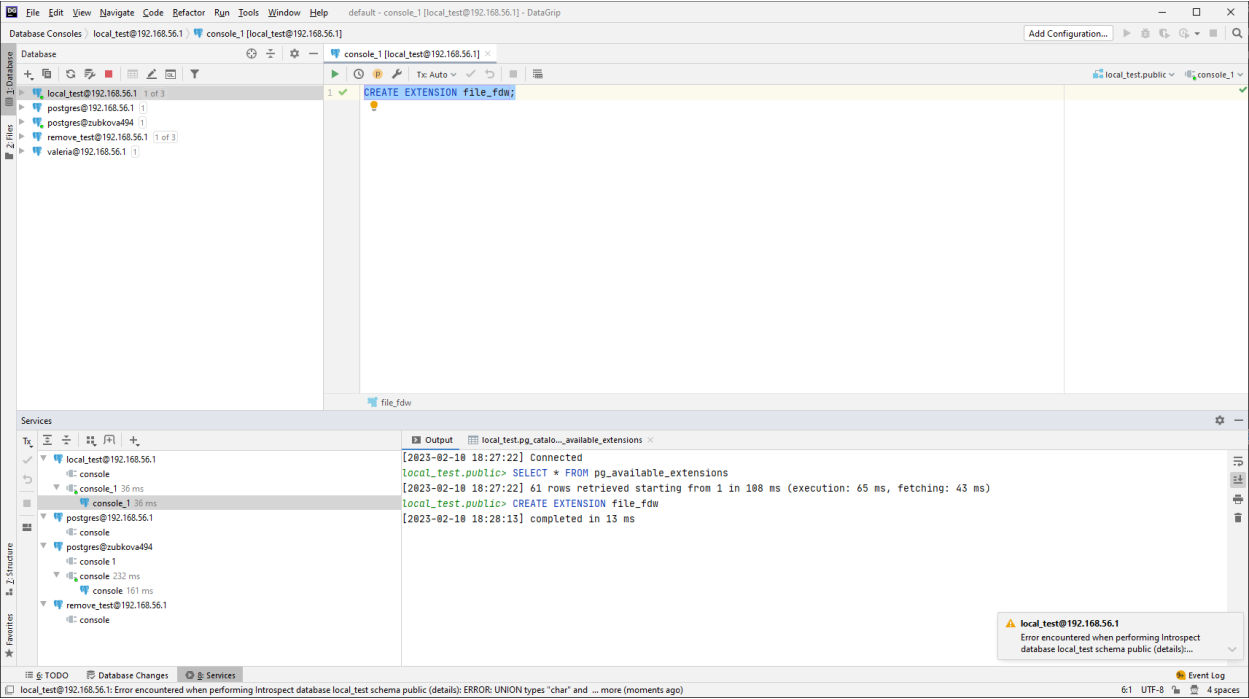
Database: local_test@192.168.56.1 | console_1 [local_test@192.168.56.1]

SQL Query: `SELECT * FROM pg_available_extensions;`

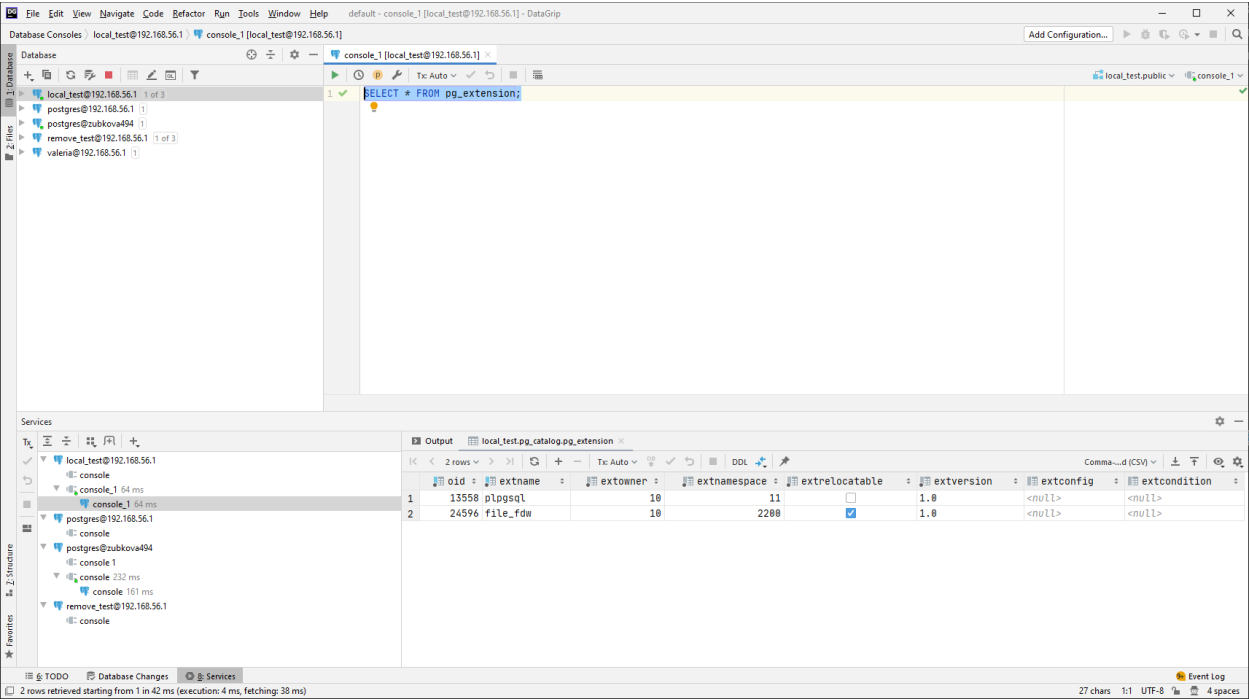
name	default_version	installed_version	comment
plperl	1.0	<null>	PL/Perl untrusted procedural language
fuzzystrmatch	1.1	<null>	determine similarities and distance between strings
jsonb_plperl	1.0	<null>	transform between jsonb and plperl
hstore	1.8	<null>	data type for storing sets of (key, value) pairs
pg_freeze	1.2	<null>	examine the free space map (FSM)
ltree	1.2	<null>	data type for hierarchical tree-like structures
pg_prewarm	1.2	<null>	prewarm relation data
insert_username	1.0	<null>	functions for tracking who changed a table
jsonb_plperl	1.0	<null>	transform between jsonb and plperl
bool_plperl	1.0	<null>	transform between bool and plperl
dict_int	1.0	<null>	text search dictionary template for integers

61 rows retrieved starting from 1 in 108 ms (execution: 65 ms, fetching: 43 ms)

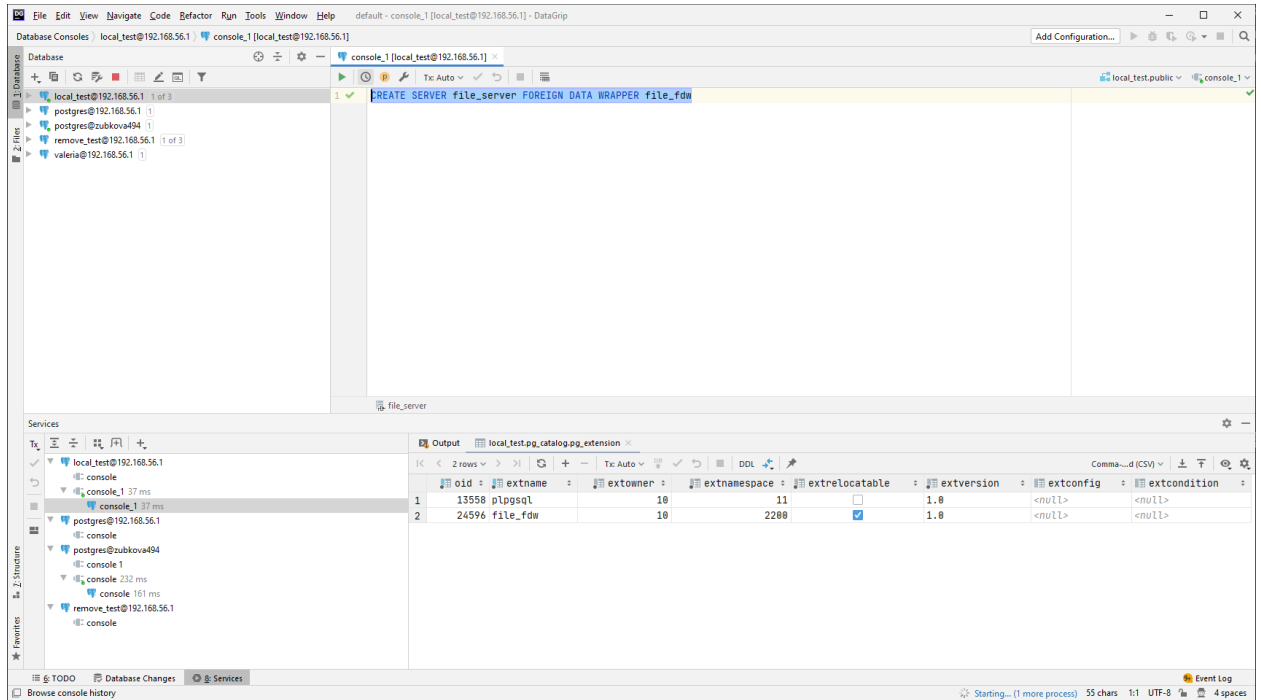
Подключаем расширение file_fdw



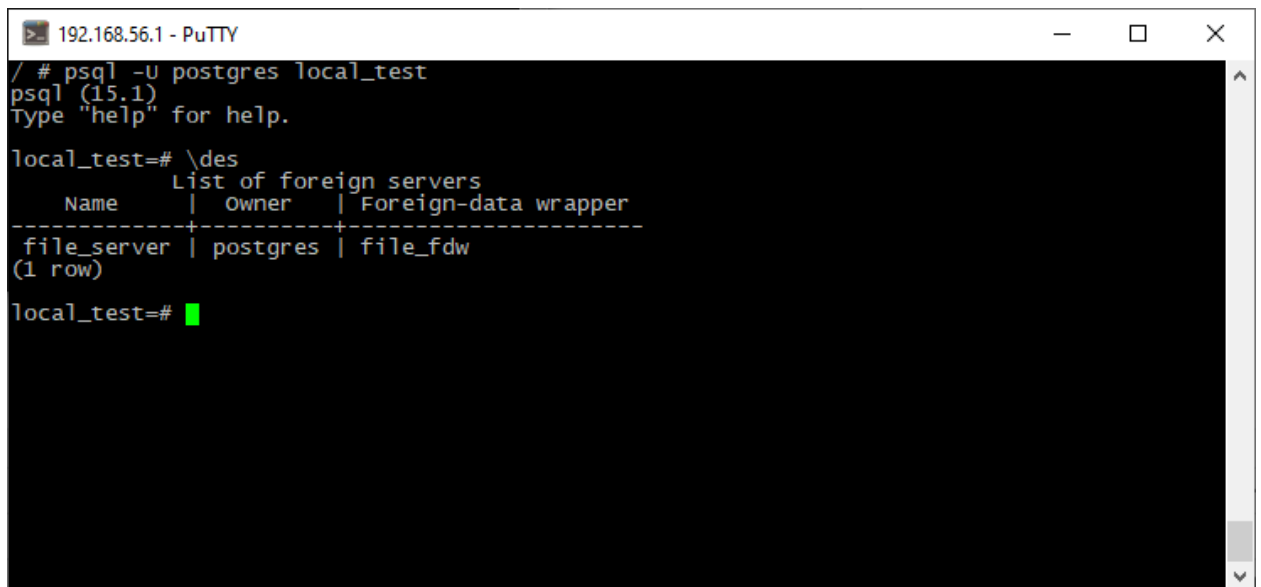
Проверка факта подключения расширения



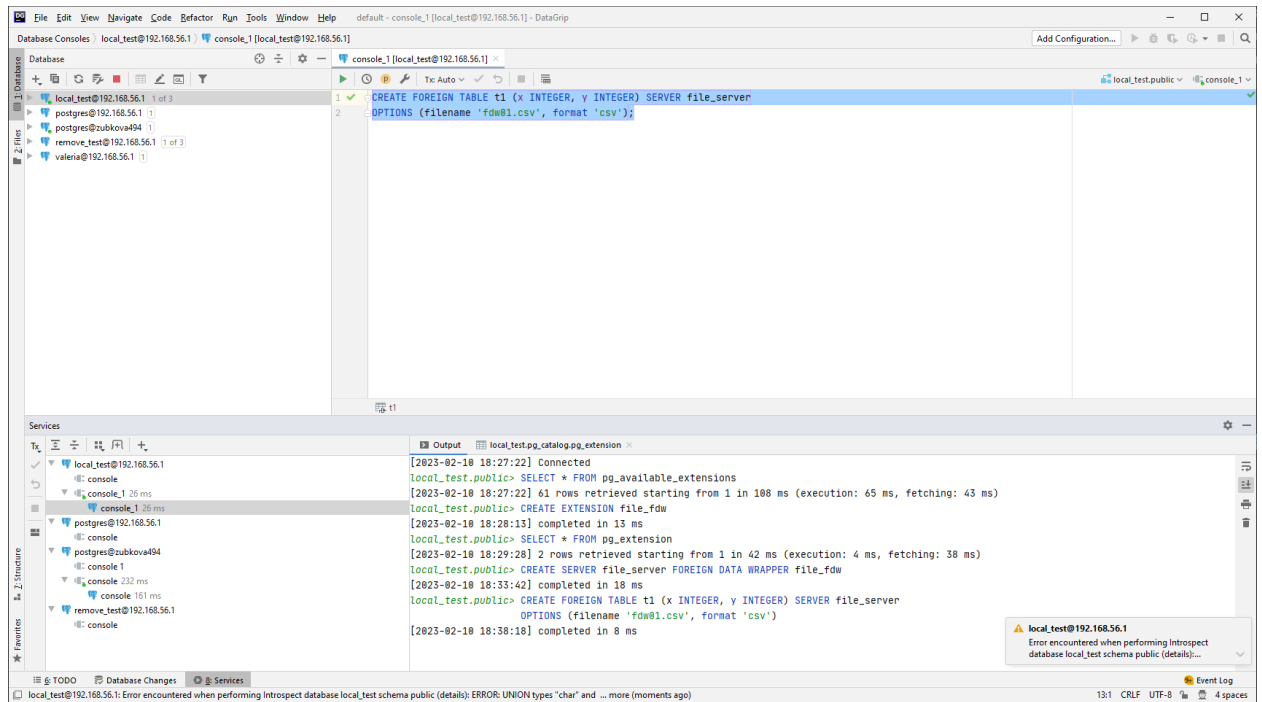
Запуск файлового сервера



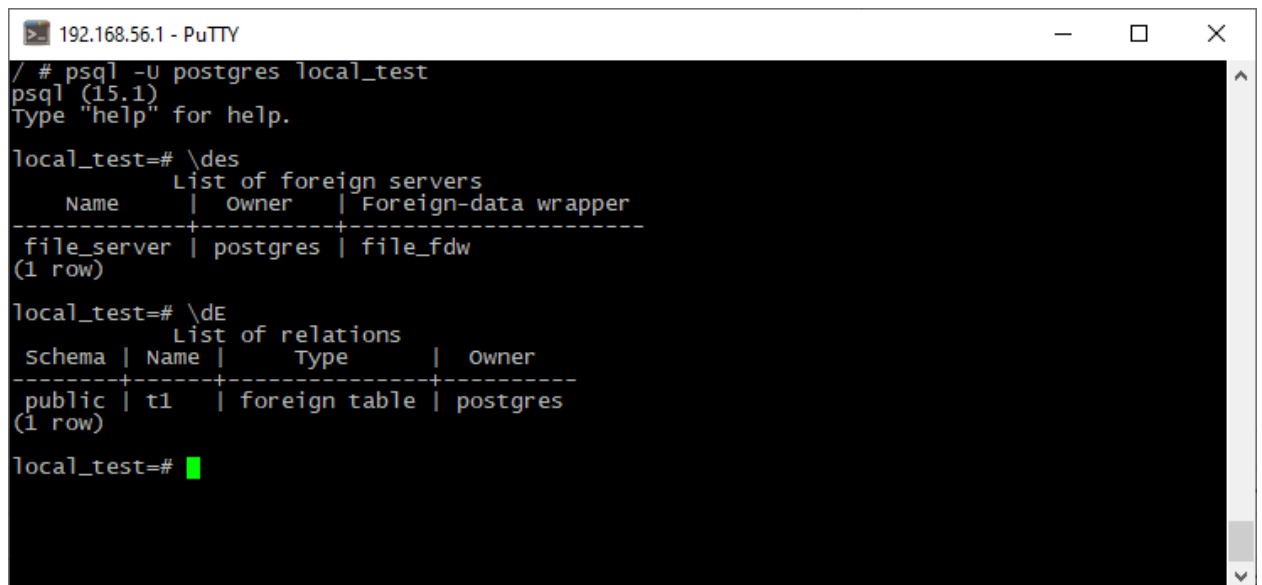
Проверка запущенного сервера



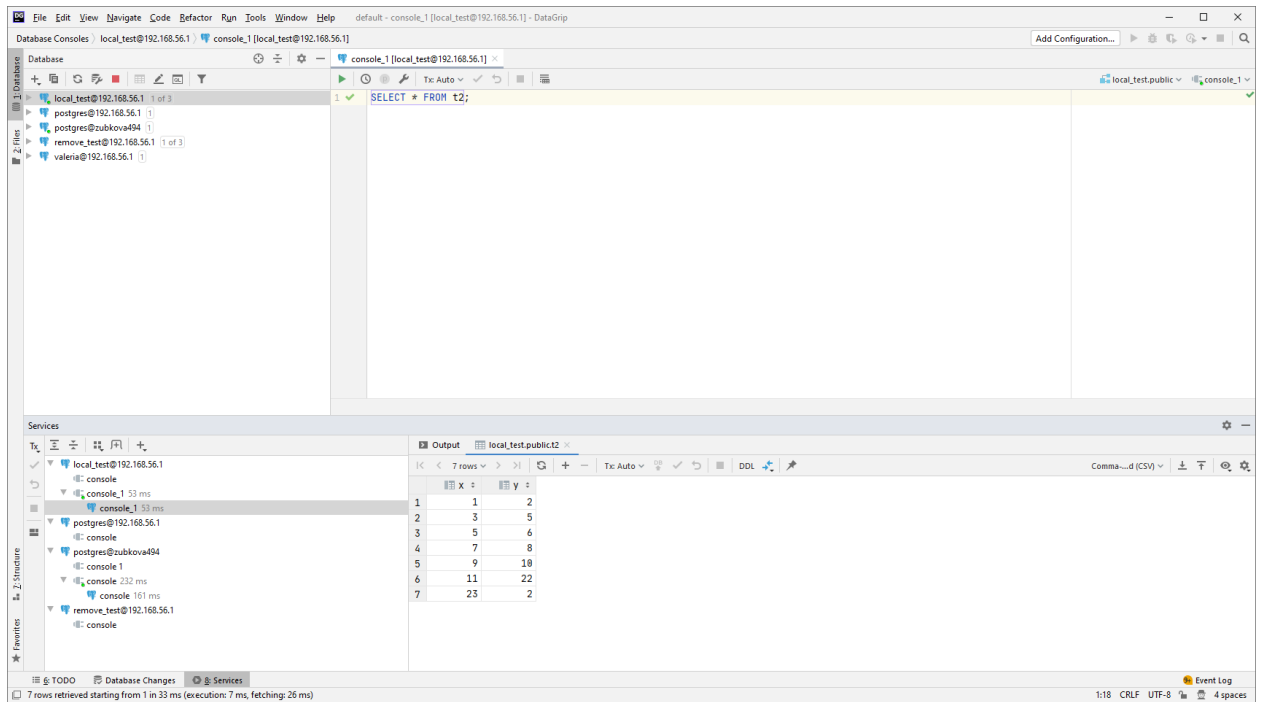
Импорт значений из csv файла



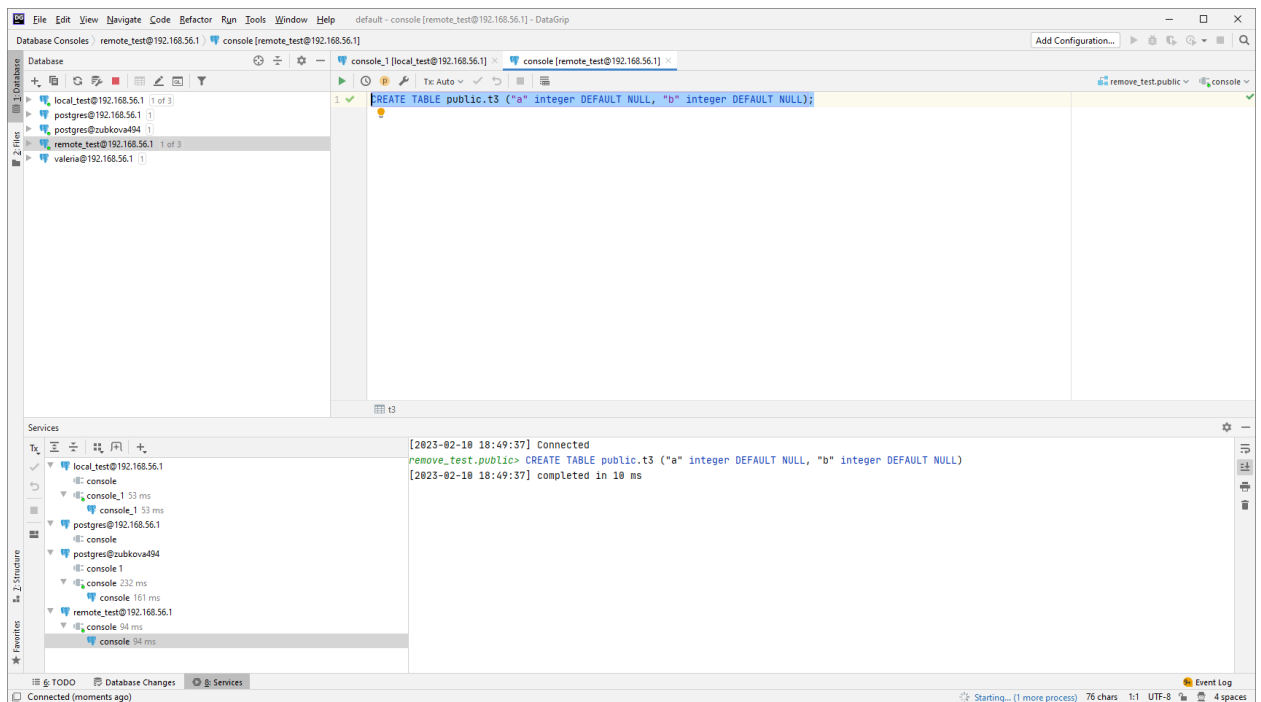
Проверка наличия таблицы



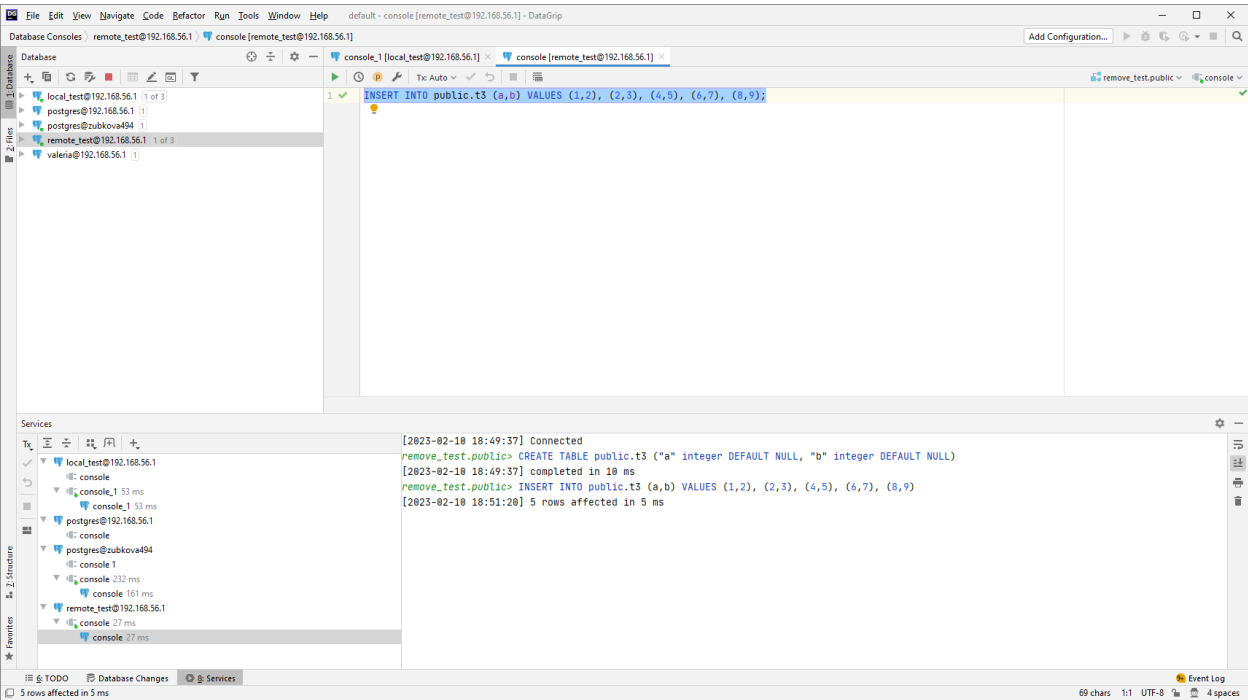
Вывод данных импортируемой таблицы



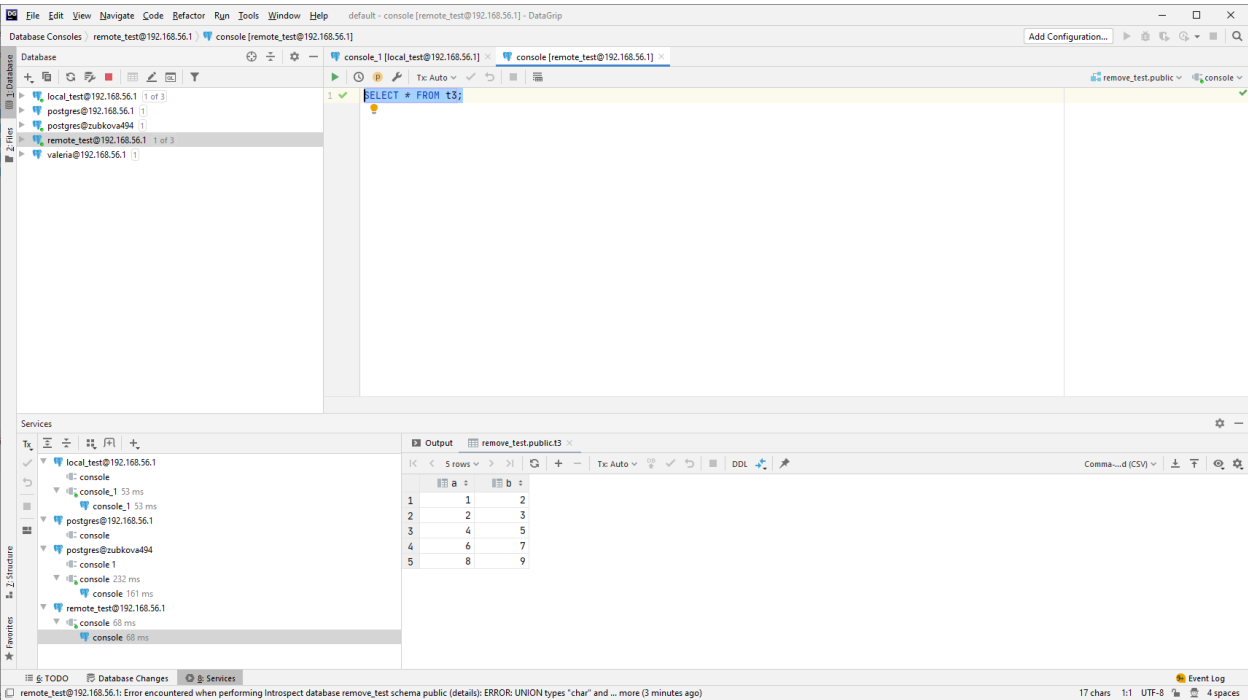
Создание таблицы в remote_test базе данных



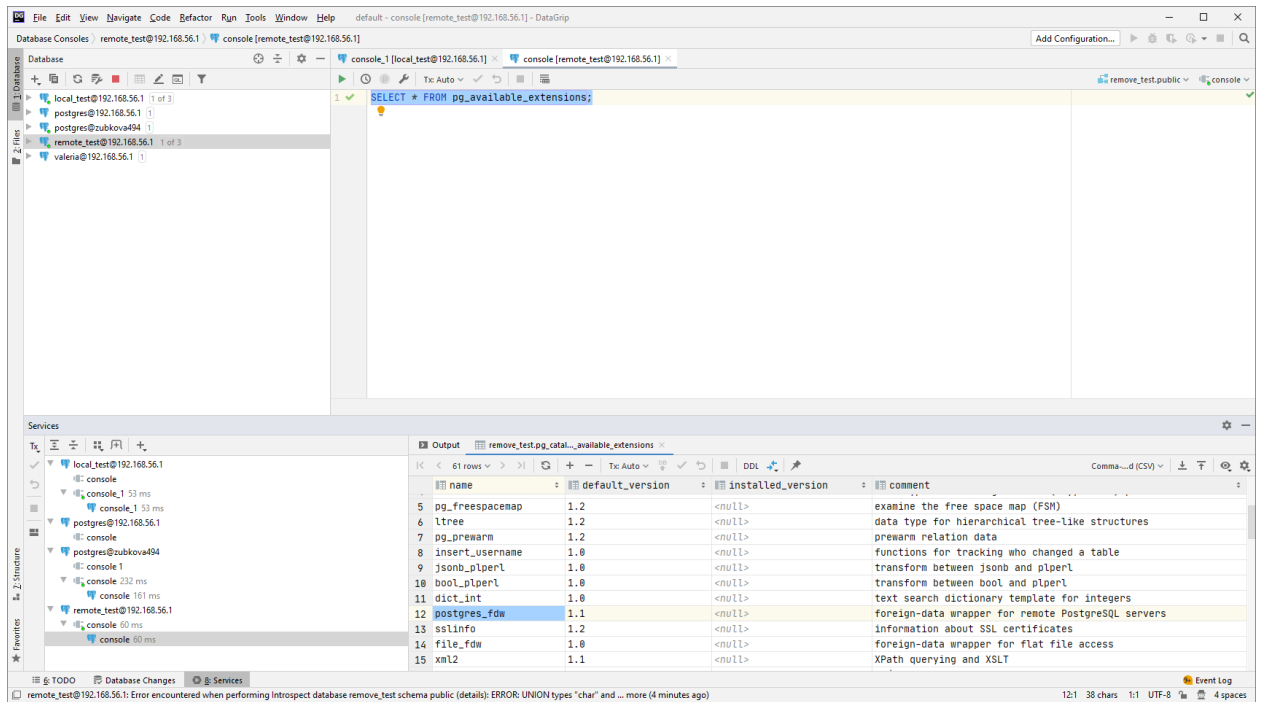
Внесение данных в таблицу



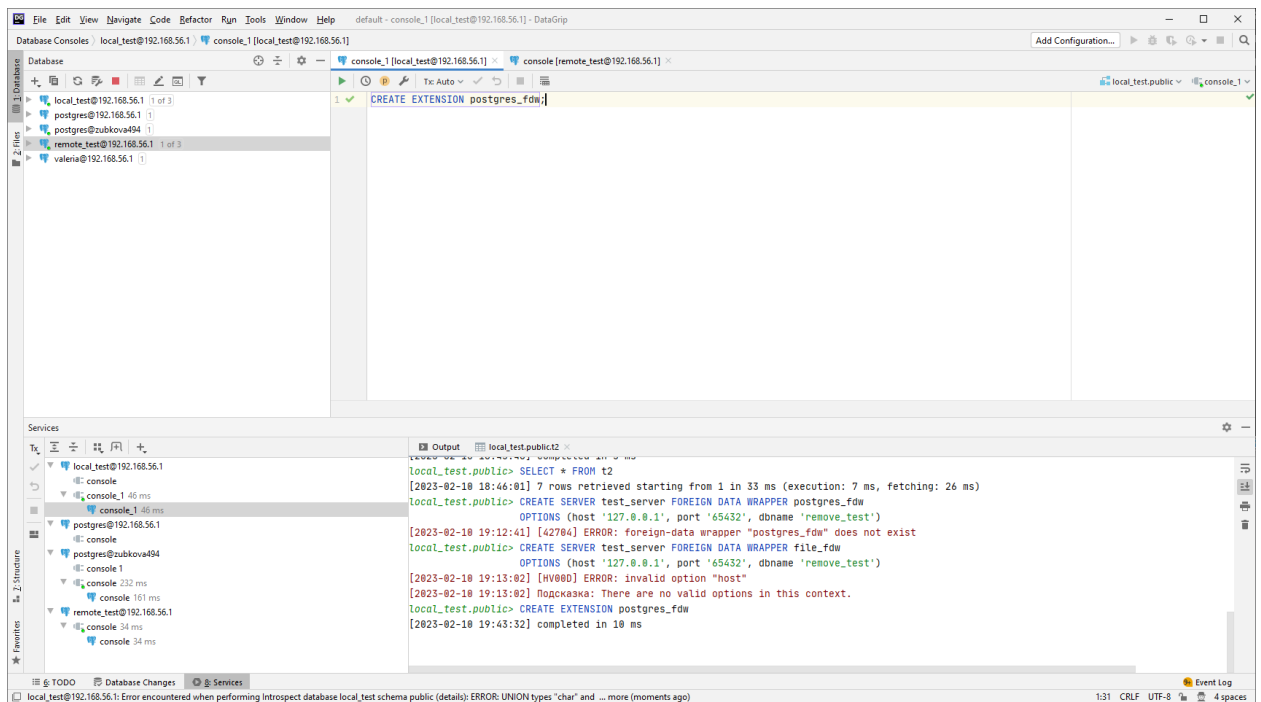
Проверка наличия данных в таблице



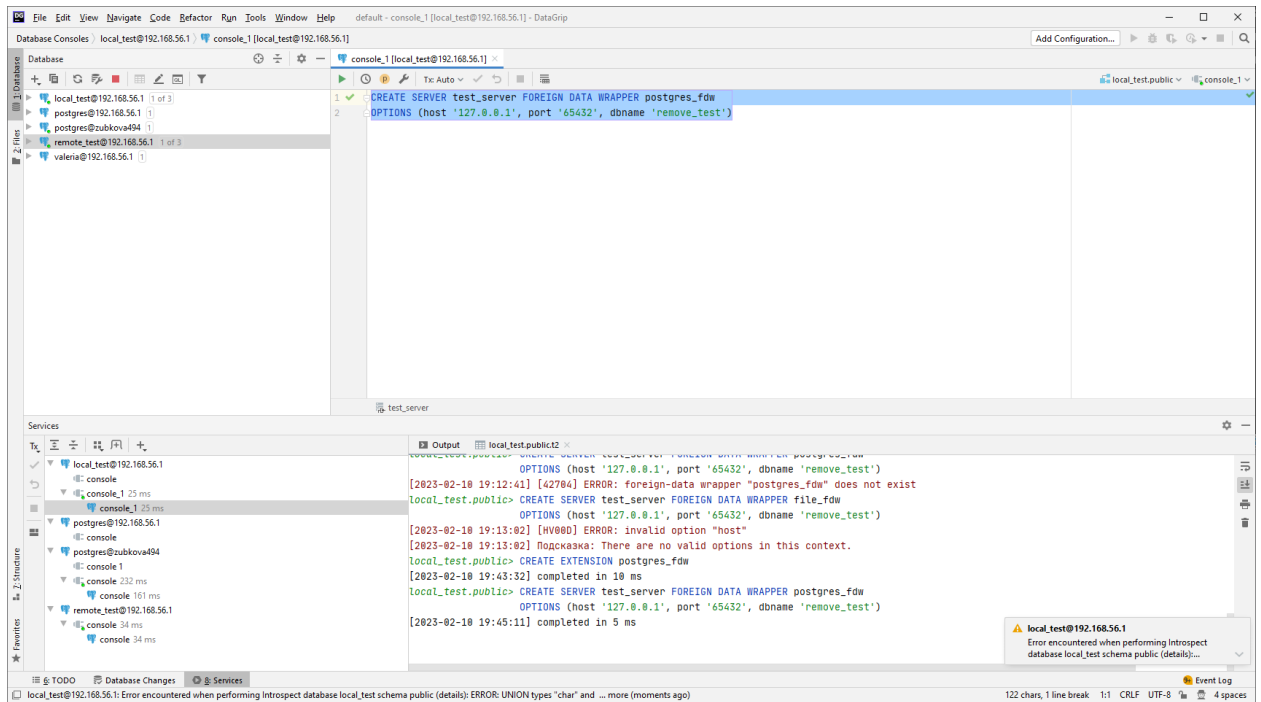
Проверка наличия расширения



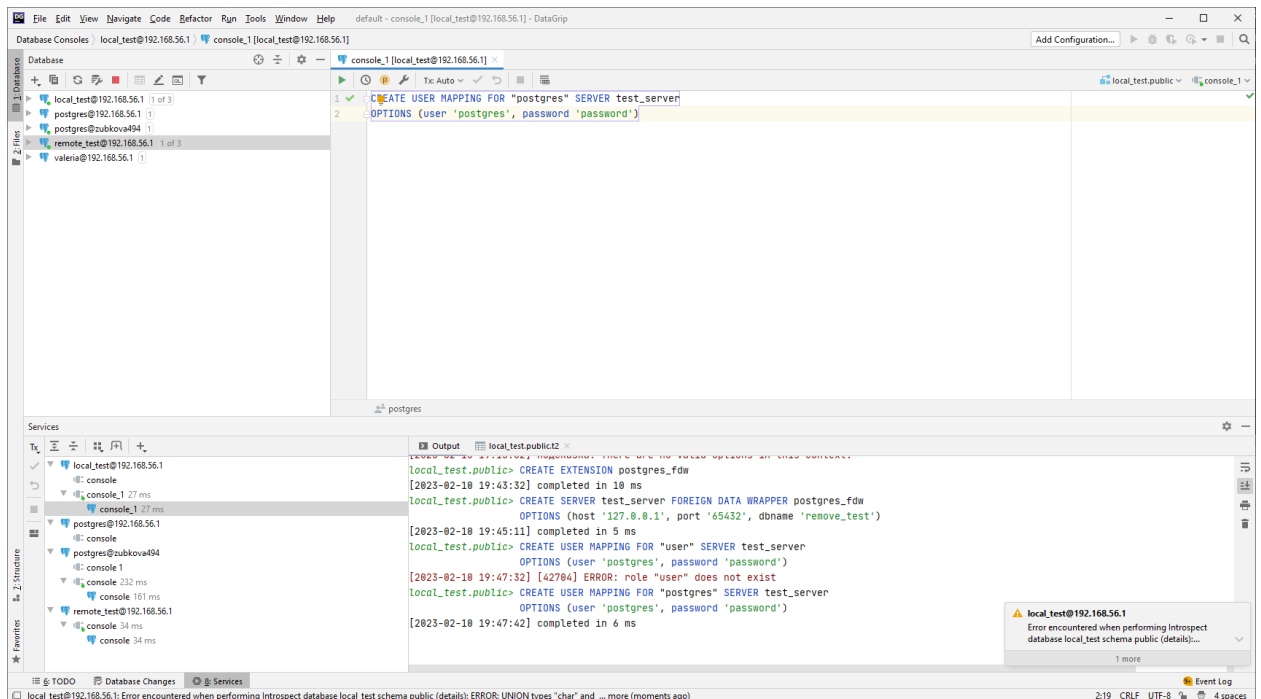
Установка расширения для удаленного подключения



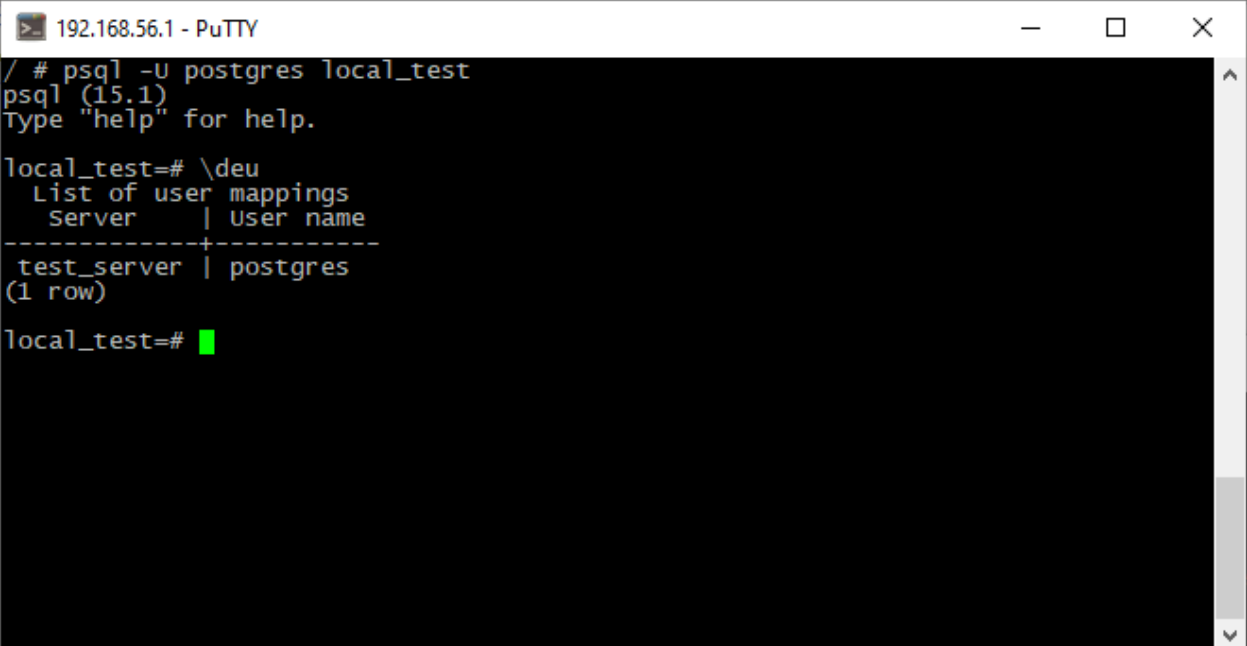
Создание сервера для удаленного доступа к remote_test



Добавление сопоставления пользователей для доступа на удаленный сервер



Проверка наличия, созданного сервера



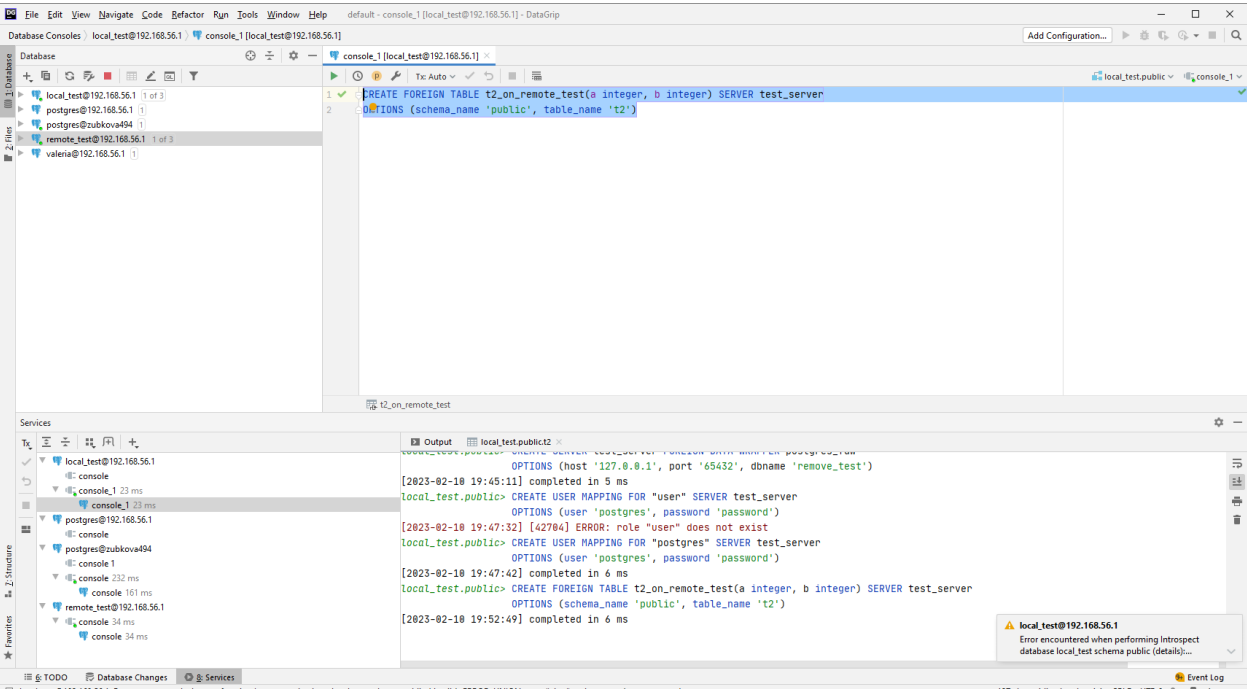
The screenshot shows a PuTTY terminal window titled "192.168.56.1 - PuTTY". The user has executed the command `/ # psql -U postgres local_test`. The prompt is `psql (15.1)` and the instruction is "Type 'help' for help.". The user then enters `local_test=# \du`, which displays the list of user mappings. The output is a table with two columns: "Server" and "User name". There is one row: "test_server" mapped to "postgres".

```
/ # psql -U postgres local_test
psql (15.1)
Type "help" for help.

local_test=# \du
      List of user mappings
   Server   | User name 
-----+-----
 test_server | postgres
(1 row)

local_test=#
```

Создание внешней таблицы с использованием ранее созданного сервера



The screenshot shows the DataGrip IDE interface. The "Database" pane on the left shows the "local_test@192.168.56.1" database. The "Script" editor in the center contains the following SQL code:

```
1 CREATE FOREIGN TABLE t2_on_remote_test(a integer, b integer) SERVER test_server
2 OPTIONS (schema_name 'public', table_name 't2')
```

The "Output" pane at the bottom shows the execution log. It indicates that the foreign table was created successfully. The log also shows an error message: "Error encountered when performing introspect database local_test schema public (details: ERROR: UNION types 'char' and ... more (moments ago))".

Database Consoles / local_test@192.168.56.1 / console_1 [local_test@192.168.56.1]

Database

- local_test@192.168.56.1 (1 of 3)
- postgres@192.168.56.1 (1)
- postgres@zubkova494 (1)
- remote_test@192.168.56.1 (1 of 3)
- valeria@192.168.56.1 (1)

Script

```
1 CREATE FOREIGN TABLE t2_on_remote_test(a integer, b integer) SERVER test_server
2 OPTIONS (schema_name 'public', table_name 't2')
```

Services

- local_test@192.168.56.1
 - console_1 23 ms
 - postgres@192.168.56.1
 - console_1 23 ms
 - postgres@zubkova494
 - console_1 23 ms
 - console_2 161 ms
 - remote_test@192.168.56.1
 - console_1 34 ms
 - console_2 34 ms

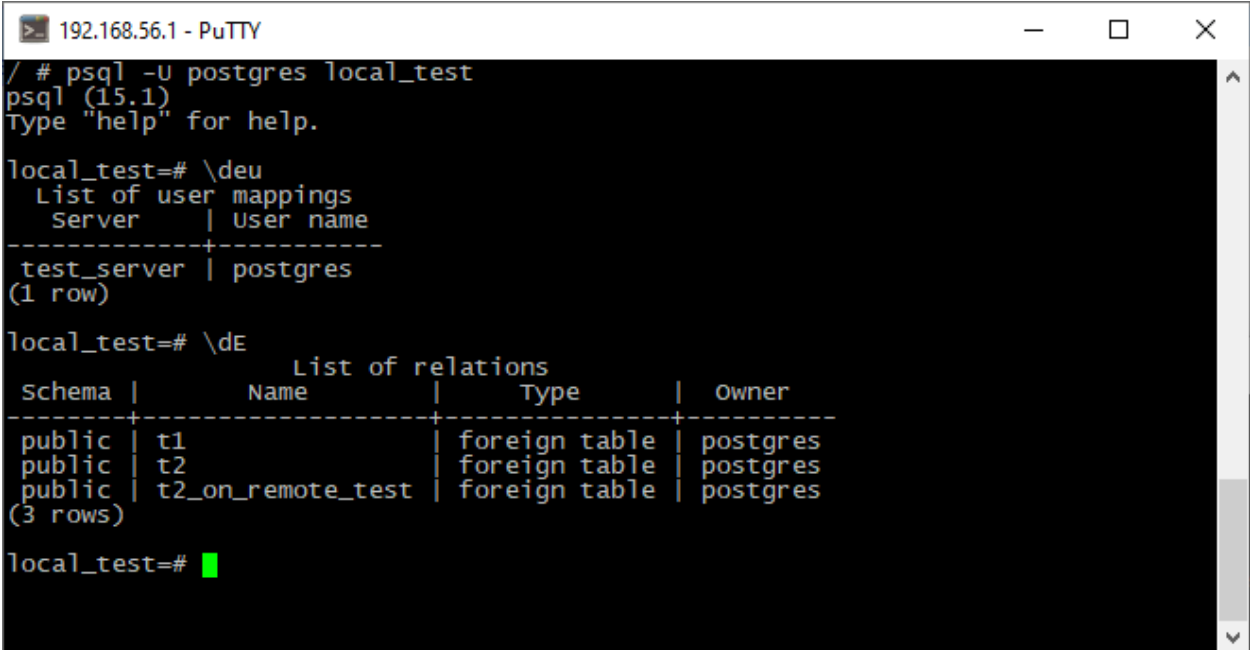
Output

```
local_test@192.168.56.1: Error encountered when performing introspect database local_test schema public (details: ERROR: UNION types 'char' and ... more (moments ago))
[2023-02-10 19:45:11] completed in 5 ms
local_test.public: CREATE USER MAPPING FOR "user" SERVER test_server
OPTIONS (user 'postgres', password 'password')
[2023-02-10 19:47:32] [42704] ERROR: role "user" does not exist
local_test.public: CREATE USER MAPPING FOR "postgres" SERVER test_server
OPTIONS (user 'postgres', password 'password')
[2023-02-10 19:47:42] completed in 6 ms
local_test.public: CREATE FOREIGN TABLE t2_on_remote_test(a integer, b integer) SERVER test_server
OPTIONS (schema_name 'public', table_name 't2')
[2023-02-10 19:52:49] completed in 6 ms
```

local_test@192.168.56.1: Error encountered when performing introspect database local_test schema public (details: ERROR: UNION types 'char' and ... more (moments ago))

127 chars, 1 line break 1:1 CRLF UTF-8 4 spaces

Проверка наличия созданной таблицы



The screenshot shows a PuTTY terminal window titled "192.168.56.1 - PuTTY". The terminal displays the following commands and output:

```
/ # psql -U postgres local_test
psql (15.1)
Type "help" for help.

local_test=# \du
      List of user mappings
   Server   | User name 
-----+-----
 test_server | postgres 
(1 row)

local_test=# \dt
      List of relations
 Schema |      Name      |      Type      | Owner
-----+-----+-----+-----
 public | t1              | foreign table   | postgres
 public | t2              | foreign table   | postgres
 public | t2_on_remote_test | foreign table   | postgres
(3 rows)

local_test=#
```

The terminal output shows the results of two PostgreSQL commands: `\du` and `\dt`. The `\du` command lists user mappings, showing a single row for `test_server` with user `postgres`. The `\dt` command lists relations, showing three rows for tables `t1`, `t2`, and `t2_on_remote_test`, all of type `foreign table` and owned by `postgres`.