

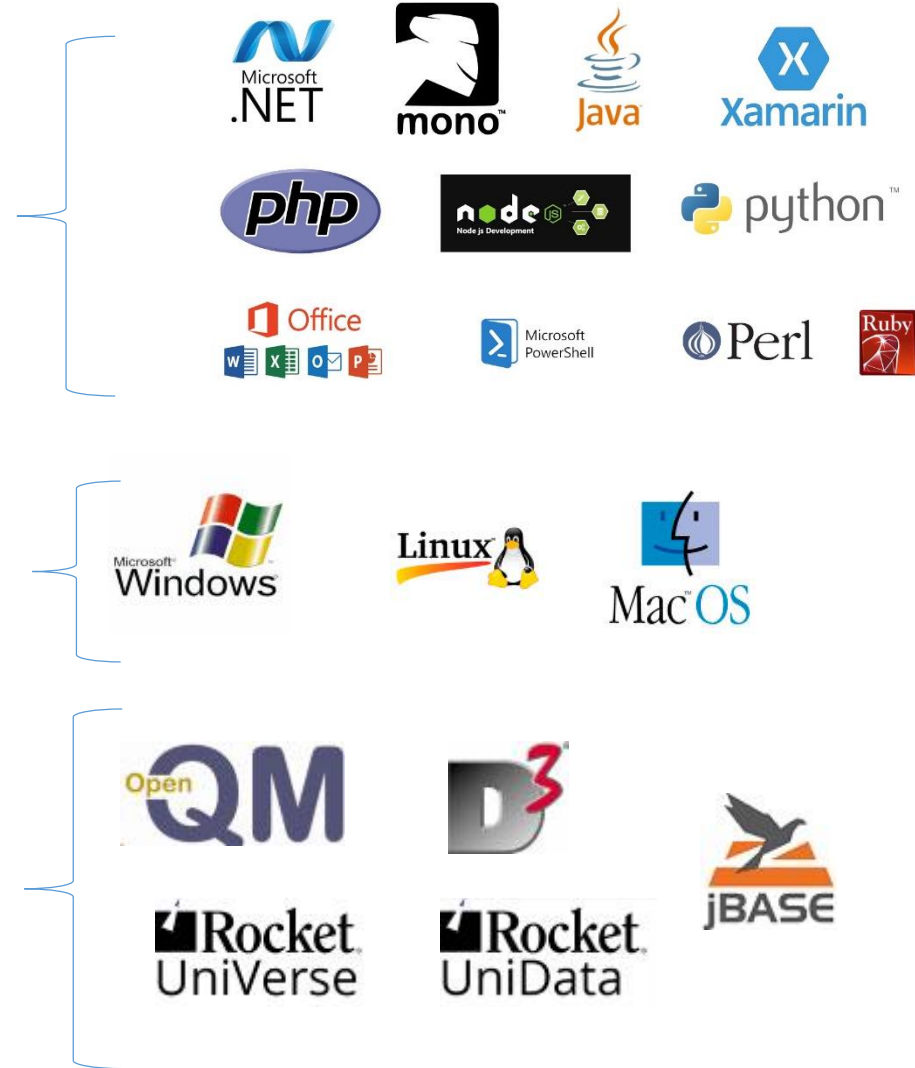
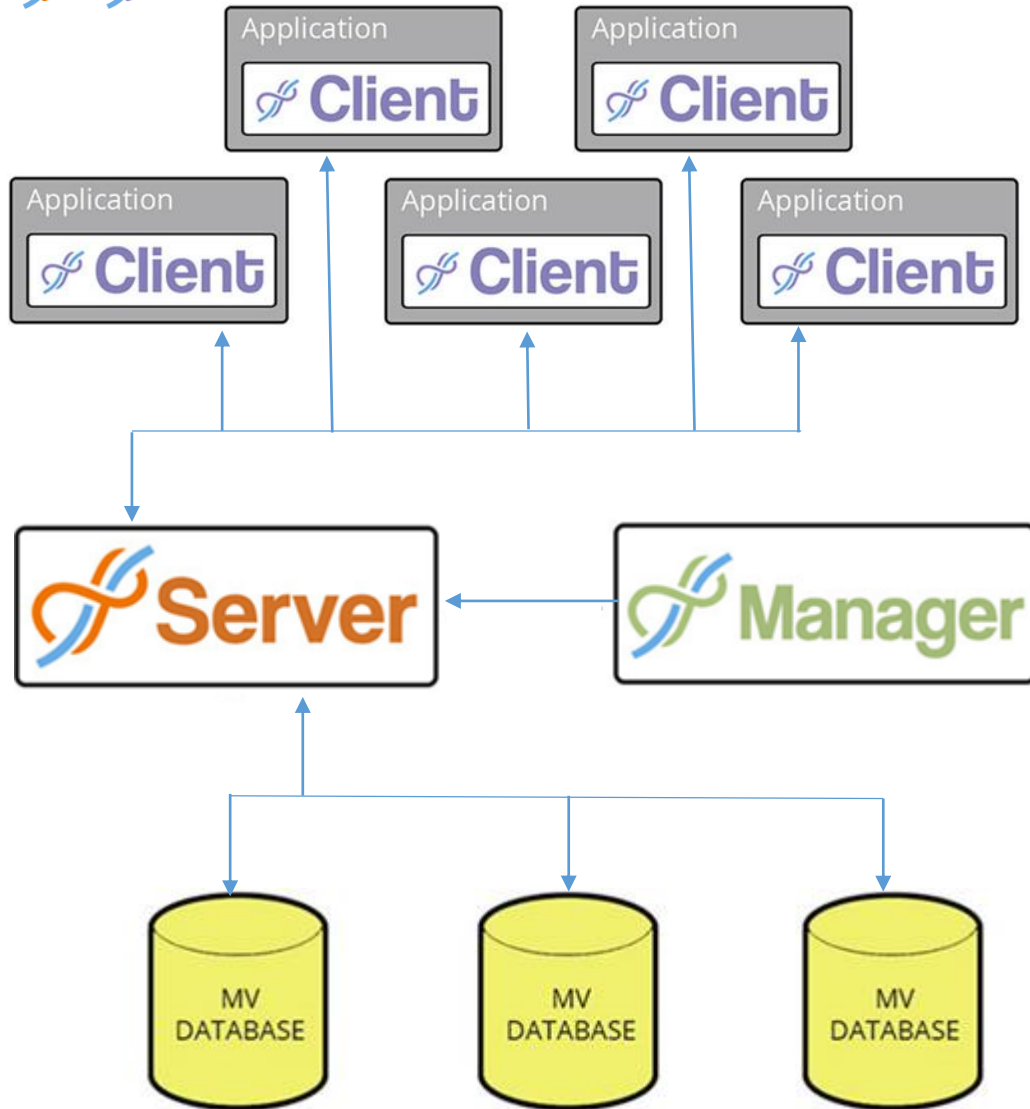


LINKAR SUITE

Connect with your multivalue database from everywhere



LINKAR SUITE



LINKAR SERVER

LINKAR SERVER

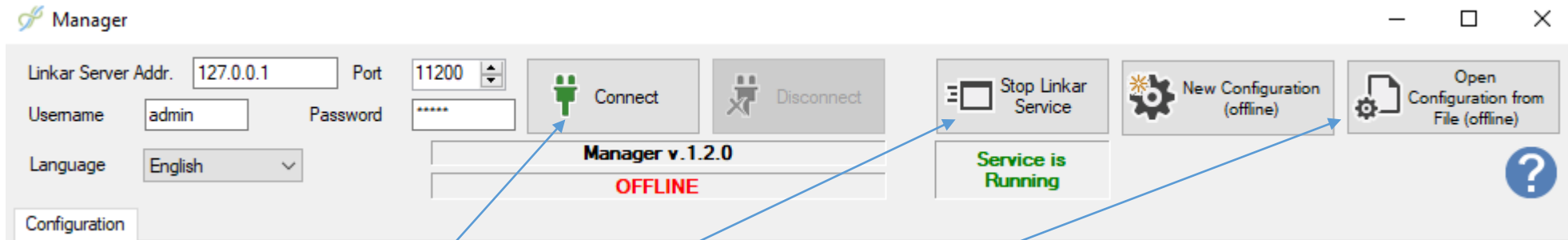
- is a sophisticated socket server.
- can run on Windows, Linux or MacOS.
- isolates the databases from “the clients”.
- pools database lines in order to maximize licence use.
- makes clients database independent.



LINKAR SERVER

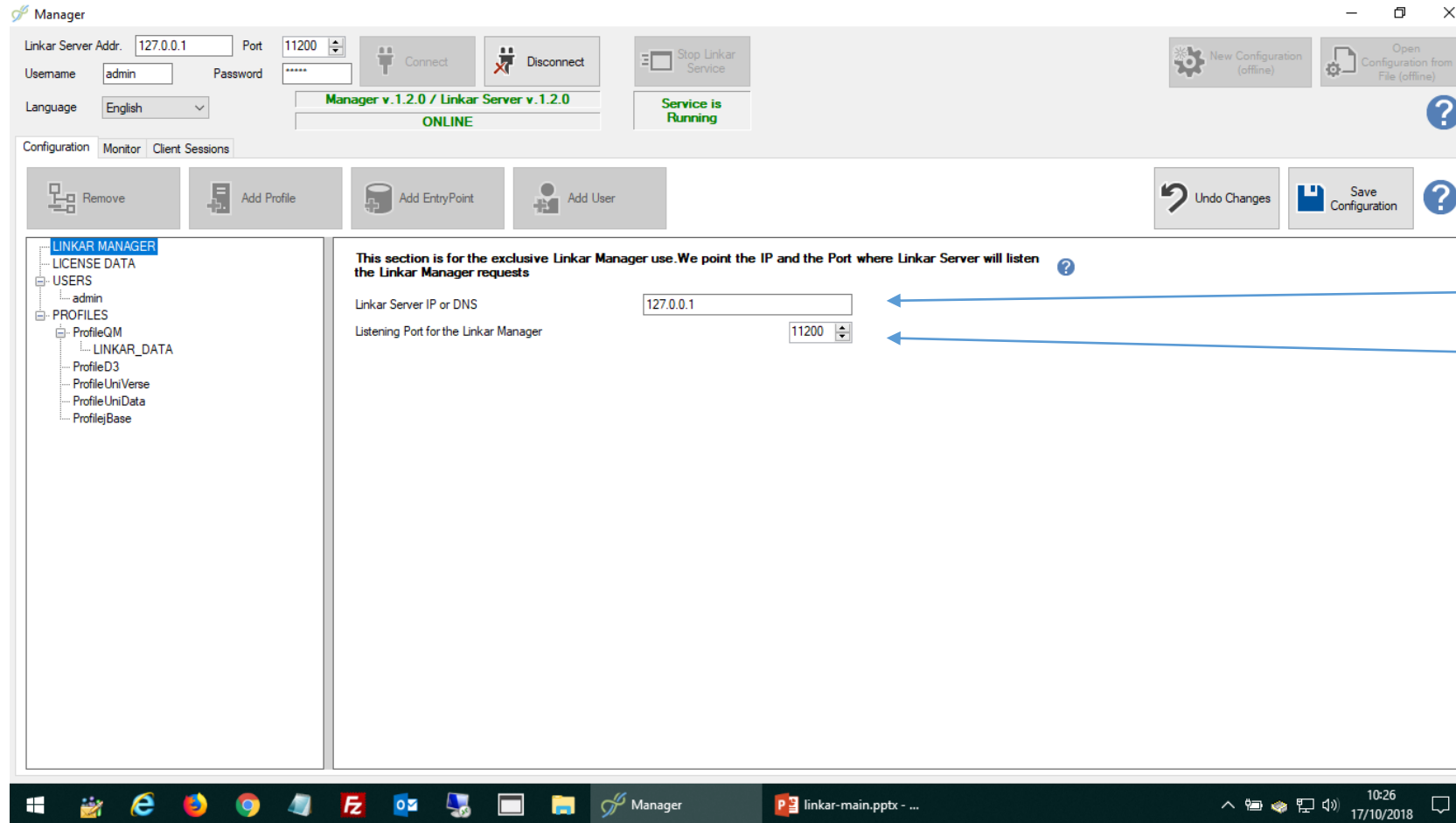
How Linkar Server connects with each database

DataBase	O.S. where LinkarServer is installed	Recommended Connection Type	Other Connection Types
	  	QMCLIENT	SOCKET
	  	MVSP	TELNET, SOCKET (only Linux)
		UNIOBJECTS	SOCKET
	 	SOCKET	
		UNIOBJECTS	SOCKET
	 	SOCKET	
		jAGENT	

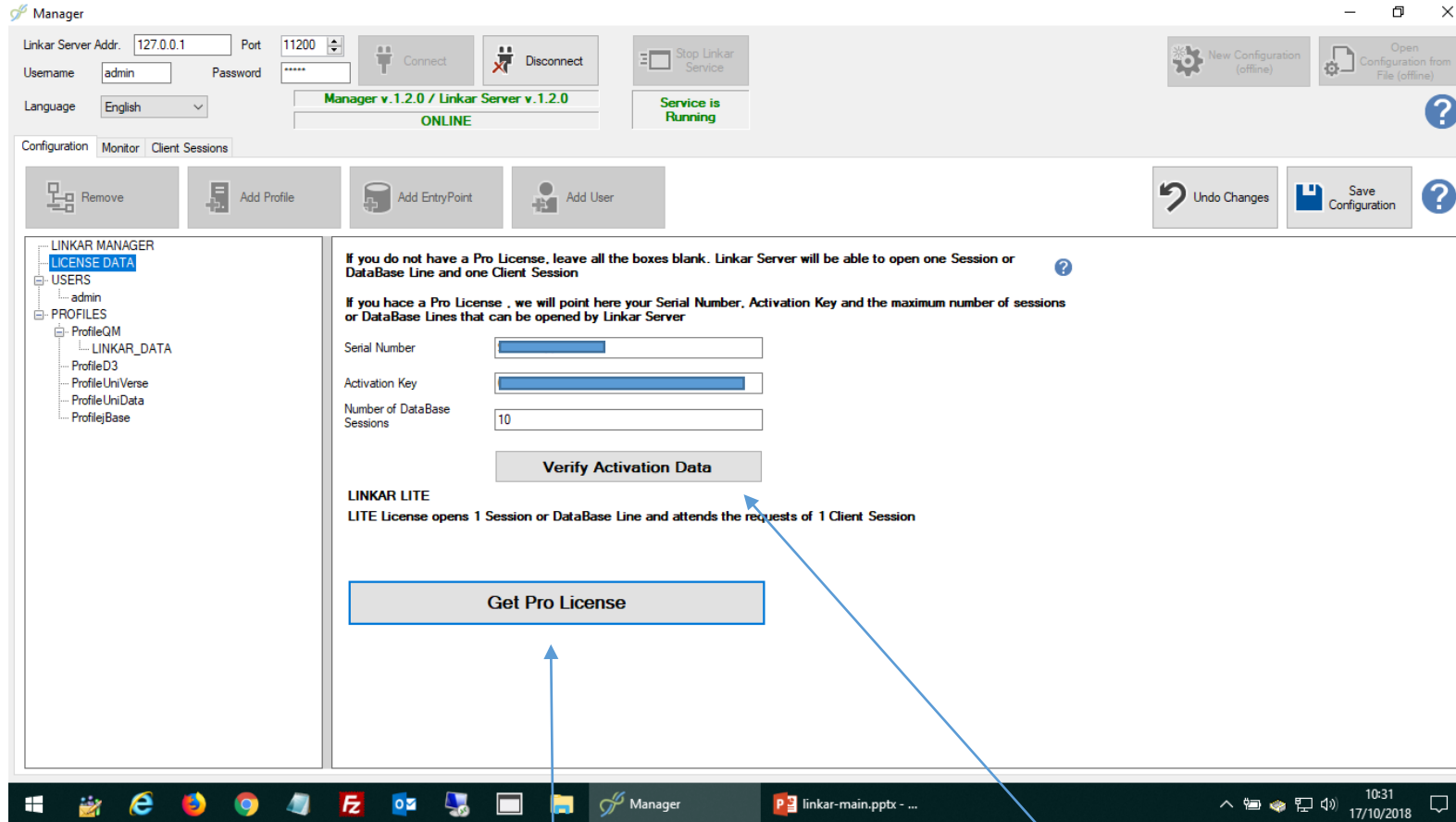


- Start and Stop Linkar Server:
 - Only if Linkar Manager is running in the same system that Linkar Server.
- Off line creation or change of Linkar Server Configuration.
- Connect Linkar Manager to Linkar Server:
 - Change configuration.
 - Monitor Lines and Connections.

LINKAR MANAGER



- Linkar Server IP.
- Linkar Server Listening Port.

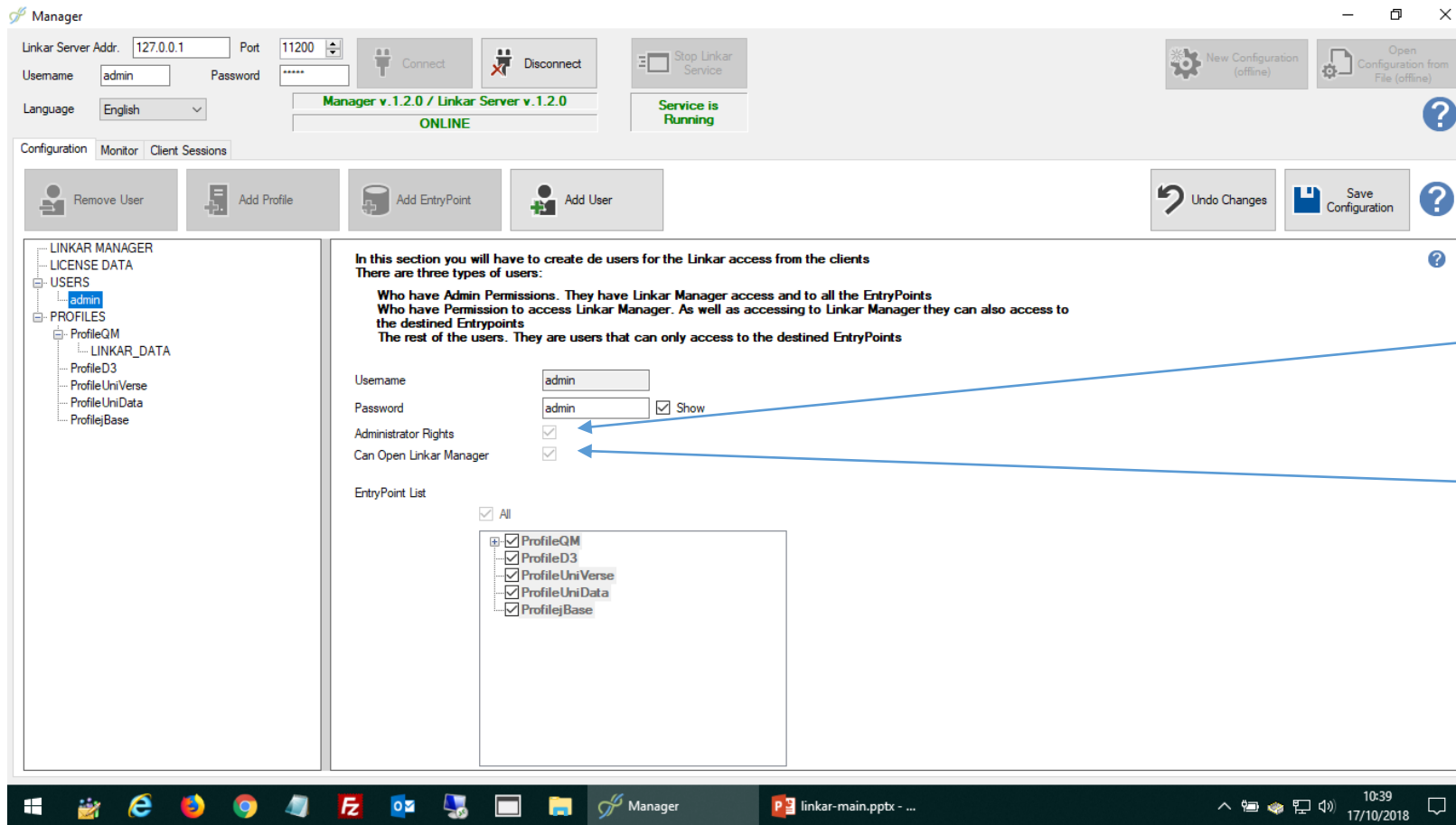


Linkar Server Pro activation

Get Pro Licence activation

Activate Pro Licence

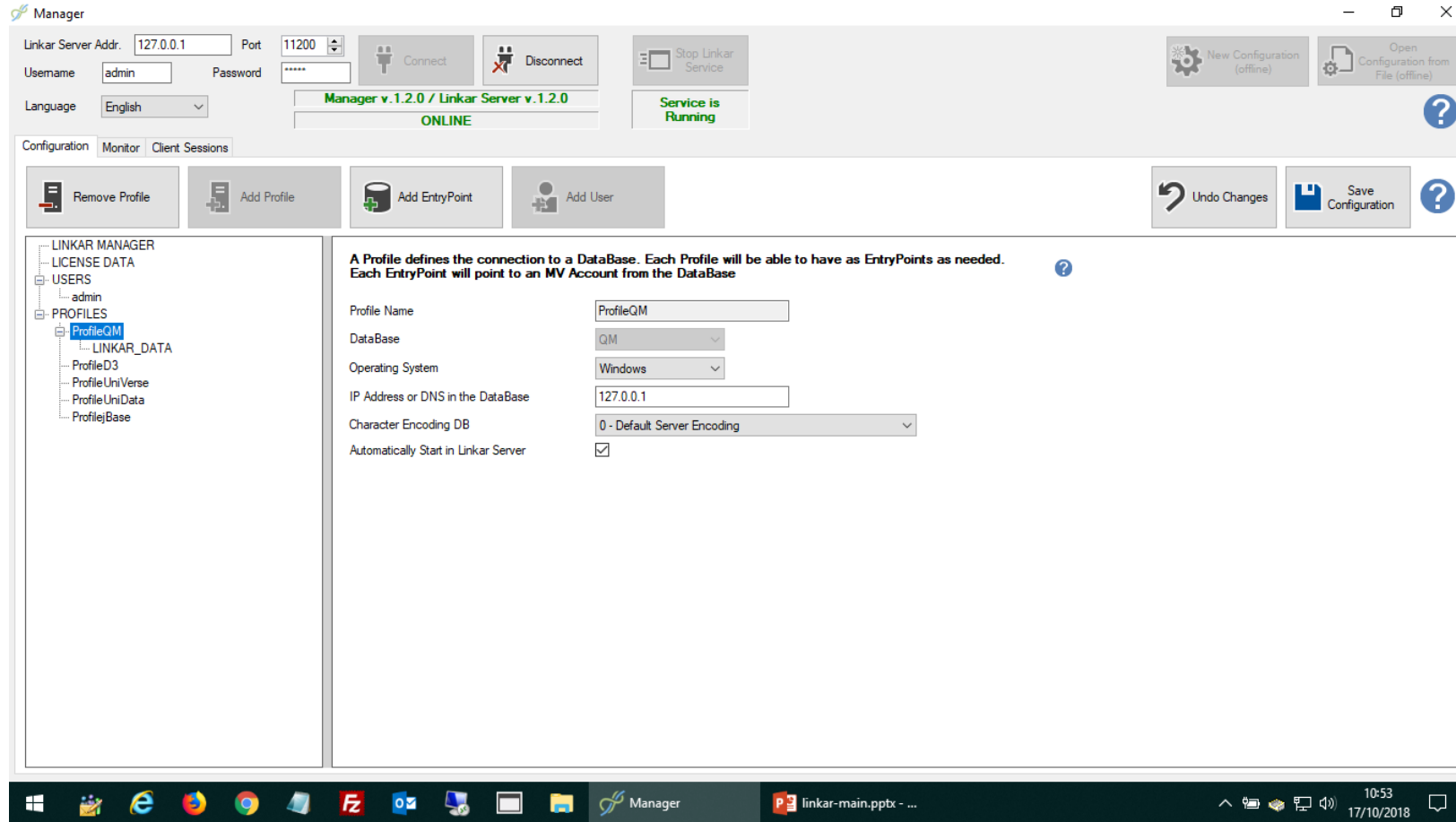
LINKAR MANAGER



USER MAINTANCE

- Administrators:
 - Access to manager.
 - Access to all profiles.
- Managers:
 - Access to manager.
 - Access to selected EntryPoints.
- Users:
 - Access to selected EntryPoints.

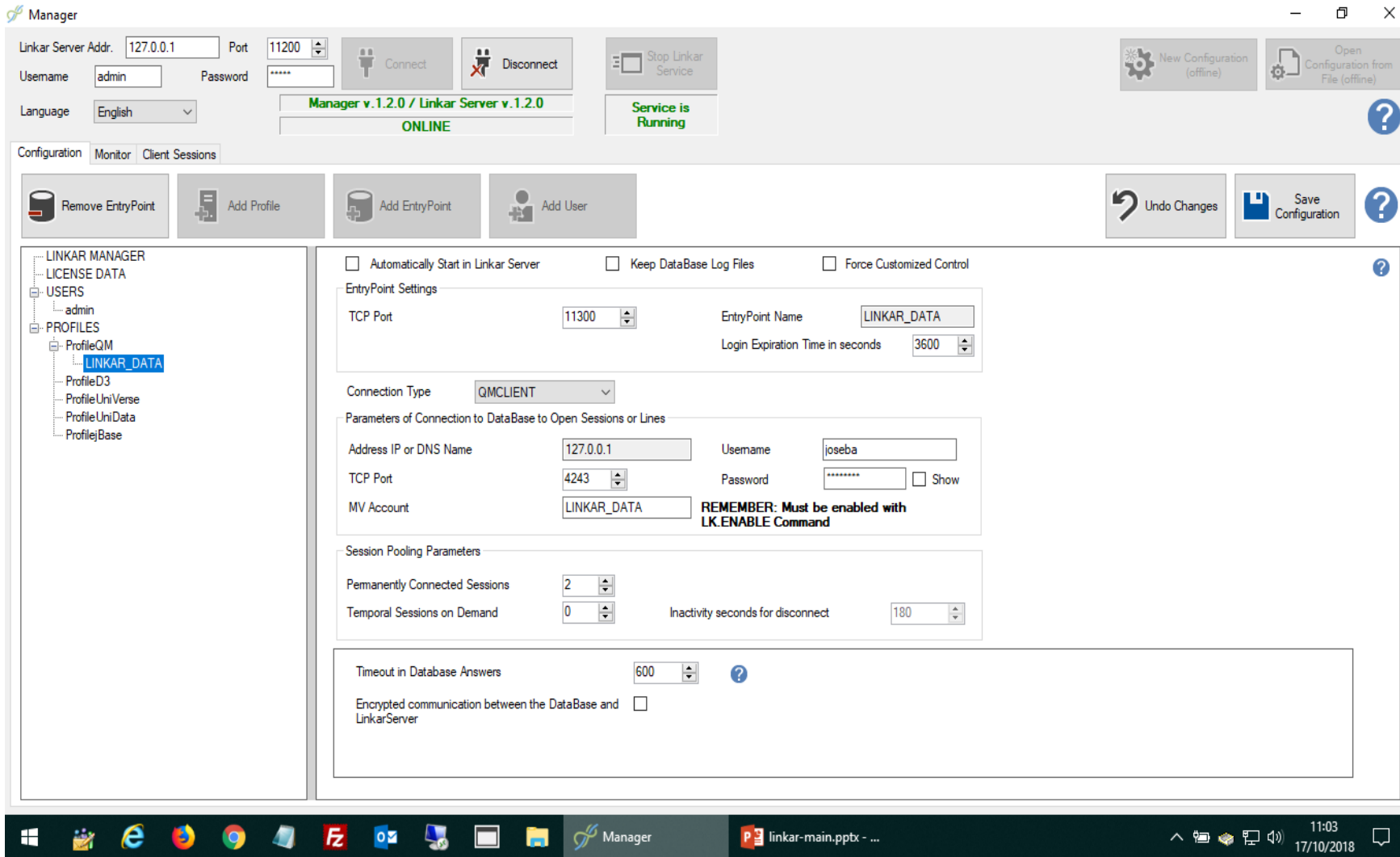
LINKAR MANAGER



PROFILES

- Profile Name.
- Database type.
- Database Operating System.
- Database IP or DNS name.
- Database carácter encoding.
- Start profile (start database connections) when Linkar Server starts.

LINKAR MANAGER



The screenshot shows the Linkar Manager application window. The top bar includes fields for Linkar Server Address (127.0.0.1), Port (11200), Username (admin), and Password (masked). It also has buttons for Connect, Disconnect, and Stop Linkar Service. The status bar indicates 'Manager v.1.2.0 / Linkar Server v.1.2.0' and 'Service is Running'. The main interface has tabs for Configuration, Monitor, and Client Sessions. The Configuration tab is active, showing a tree view on the left with 'LINKAR_DATA' selected. The main panel displays the configuration for 'LINKAR_DATA', including TCP Port (11300), Entry Point Name (LINKAR_DATA), Login Expiration Time (3600), Connection Type (QMCLIENT), and various session pooling parameters.

Linkar Server Addr: 127.0.0.1 Port: 11200

Username: admin Password: *****

Language: English

Manager v.1.2.0 / Linkar Server v.1.2.0

ONLINE

Service is Running

Configuration Monitor Client Sessions

Remove EntryPoint Add Profile Add EntryPoint Add User

Undo Changes Save Configuration

LINKAR MANAGER

LICENSE DATA

USERS

admin

PROFILES

ProfileQM

LINKAR_DATA

ProfileD3

ProfileUniVerse

ProfileUniData

ProfilejBase

Automatically Start in Linkar Server

Keep DataBase Log Files

Force Customized Control

EntryPoint Settings

TCP Port: 11300

EntryPoint Name: LINKAR_DATA

Login Expiration Time in seconds: 3600

Connection Type: QMCLIENT

Parameters of Connection to DataBase to Open Sessions or Lines

Address IP or DNS Name: 127.0.0.1

Username: joseba

TCP Port: 4243

Password: *****

MV Account: LINKAR_DATA

REMEMBER: Must be enabled with LK.ENABLE Command

Session Pooling Parameters

Permanently Connected Sessions: 2

Temporal Sessions on Demand: 0

Inactivity seconds for disconnect: 180

Timeout in Database Answers: 600

Encrypted communication between the DataBase and LinkarServer

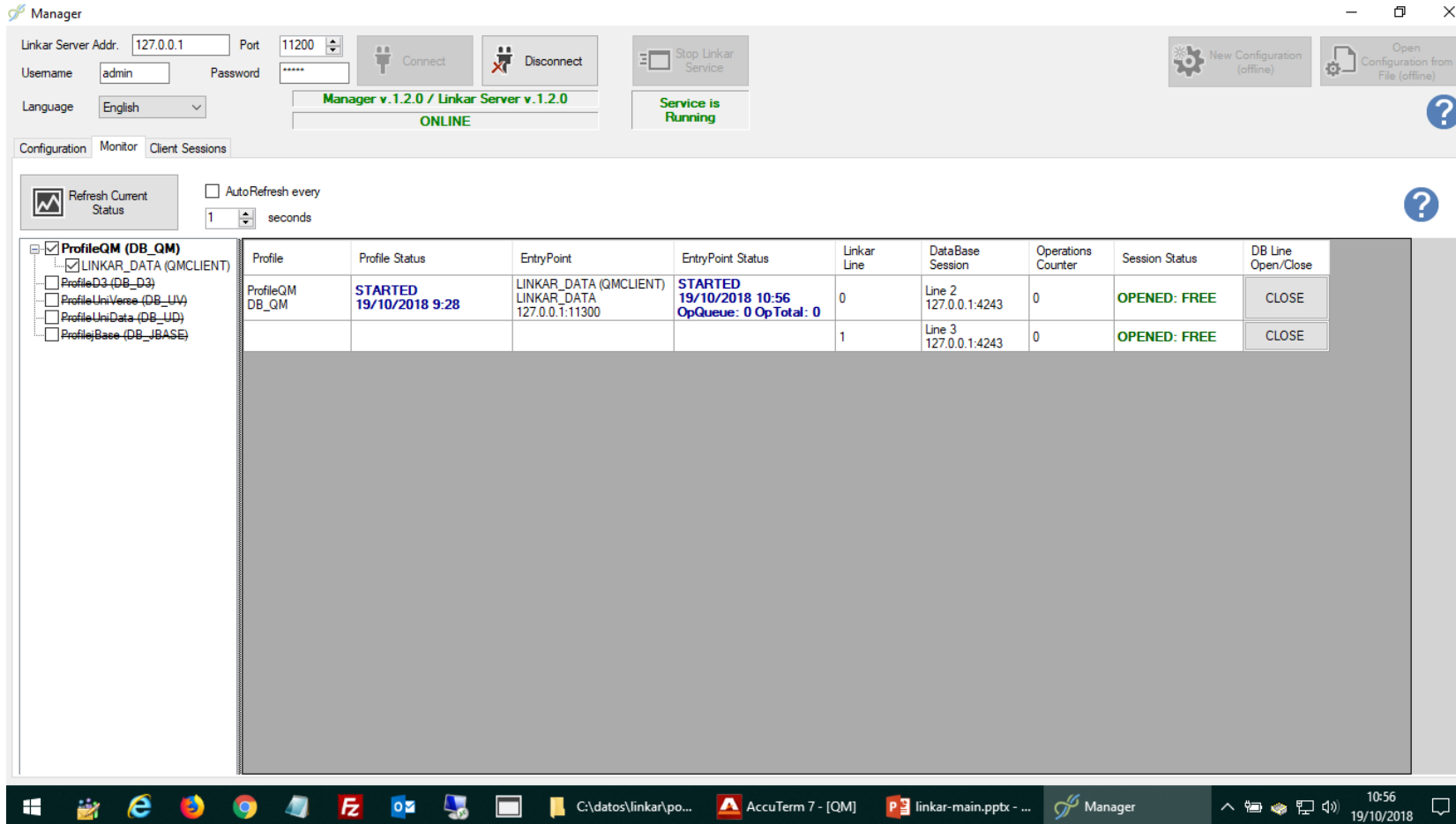
Entry Point

- Actual database connection definition.
- Depends on the database and the connection type.
- With SOCKET connection type it's quicker to start the socket inside the database (f.i. in D3 UserColdstart **LKLISTENING -SOCKET,11100**). You need the linkar mvcomponents in the database in order to do it.

LINKAR MANAGER

Monitor

- Only in *online* mode.
- Manage and monitor:
 - Profiles.
 - EntryPoints.
 - DataBase connections.
- Star and Stop:
 - Profiles.
 - EntryPoints
- Close or kill:
 - DataBase connections.

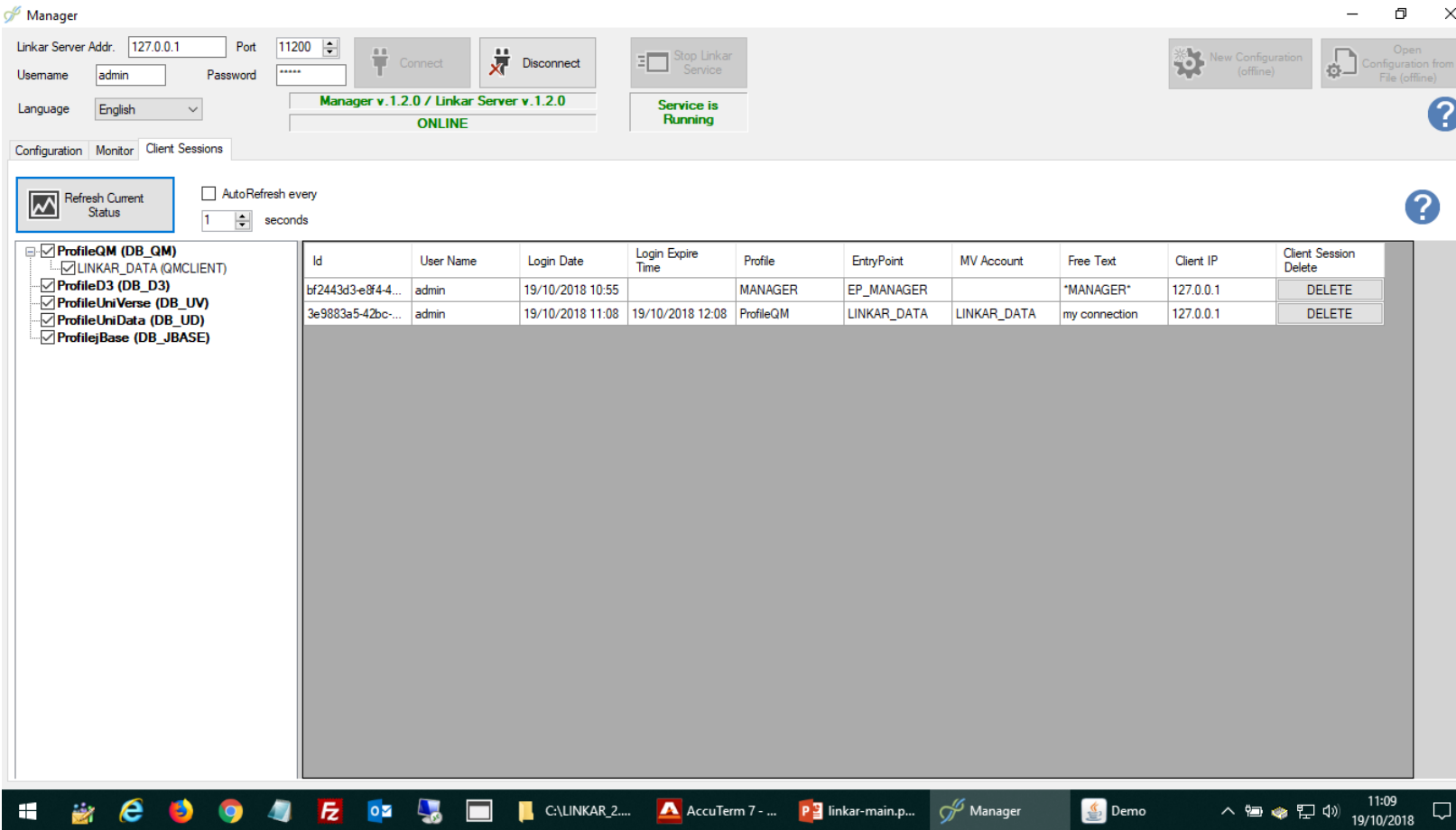


The screenshot shows the Linkar Manager Monitor window. At the top, there are fields for Linkar Server Addr (127.0.0.1) and Port (11200), along with Username (admin) and Password (*****). There are buttons for Connect, Disconnect, and Stop Linkar Service. Below these, it shows 'Manager v.1.2.0 / Linkar Server v.1.2.0' and 'Service is Running'. The main area is divided into tabs: Configuration, Monitor (selected), and Client Sessions. The Monitor tab displays a table with columns: Profile, Profile Status, EntryPoint, EntryPoint Status, Linkar Line, DataBase Session, Operations Counter, Session Status, and DB Line Open/Close. The table shows two entries for ProfileQM DB_QM, both with status 'STARTED' and 'OPENED: FREE'. On the left, there is a tree view showing a hierarchy of profiles: ProfileQM (DB_QM), LINKAR_DATA (QMCLIENT), ProfileD3 (DB_D3), ProfileUniVerse (DB_UV), ProfileUniData (DB_UD), and ProfileBase (DB_JBASE).

Profile	Profile Status	EntryPoint	EntryPoint Status	Linkar Line	DataBase Session	Operations Counter	Session Status	DB Line Open/Close
ProfileQM DB_QM	STARTED 19/10/2018 9:28	LINKAR_DATA (QMCLIENT) LINKAR_DATA 127.0.0.1:11300	STARTED 19/10/2018 10:56 OpQueue: 0 OpTotal: 0	0	Line 2 127.0.0.1:4243	0	OPENED: FREE	CLOSE
				1	Line 3 127.0.0.1:4243	0	OPENED: FREE	CLOSE

Client Sessions

- Only in *online* mode.
- MANAGER sessions always appears.
- ID Sessions.
- VOLATILE sessions.
- KILL a sesión (DELETE): If CLIENT is active, it will receive an error dialog when trying to execute any operation and will have to login again.



The screenshot shows the Linkar Manager interface with the 'Client Sessions' tab selected. The top bar displays connection settings (Linkar Server Addr: 127.0.0.1, Port: 11200) and status (Manager v.1.2.0 / Linkar Server v.1.2.0, ONLINE, Service is Running). The main area shows a table of active sessions.

Id	User Name	Login Date	Login Expire Time	Profile	EntryPoint	MV Account	Free Text	Client IP	Client Session Delete
bf2443d3-e8f4-4...	admin	19/10/2018 10:55		MANAGER	EP_MANAGER		"MANAGER"	127.0.0.1	DELETE
3e9883a5-42bc-...	admin	19/10/2018 11:08	19/10/2018 12:08	ProfileQM	LINKAR_DATA	LINKAR_DATA	my connection	127.0.0.1	DELETE

On the left, a tree view shows the following profiles selected:

- ☒ ProfileQM (DB_QM)
- ☒ LINKAR_DATA (QMCLIENT)
- ☒ ProfileD3 (DB_D3)
- ☒ ProfileUniVerse (DB_UV)
- ☒ ProfileUniData (DB_UD)
- ☒ ProfilejBase (DB_JBASE)

Config.XML file

```
<?xml version="1.0" encoding="utf-8"?>
<CONFIG>
<REGISTER SN="xxxxxxxxxxxxxx" LN="10" AK="xxxxxxxxxxxxxxxC" SUBSCRIPTION="False" END_SUBSCRIPTION="" MAC1="D0:7E:35:6D:BD:0C" MAC2="" />
<MANAGER LISTENER_IP="xxx.xxx.xxx.xxx" LISTENER_PORT="11200" />
<USERS>
<USER NAME="admin" PASSWORD="3LUtRI8v4hm4IekaryXWLg==" IS_ADMIN_USER="True" IS_MANAGER_USER="True" />
</USERS>
<PROFILES>
<PROFILE ACCOUNT="LINKAR" NAME="ProfileQM" AUTO_START="True" DB_TYPE="QM" HOST="127.0.0.1" DB_OS="WIN" DB_ENCODING="0">
<ENTRYPOINT NAME="LINKAR_DATA" AUTO_START_WITH_SERVER="False" LISTENER_PORT="11300" STATISTICS_ENABLED="False" LOG_ENABLED="False"
FORCE_CUSTOMIZED_CONTROL="False" SOCKET_RECEIVE_TIMEOUT="60" SOCKET_SEND_TIMEOUT="60" EXPIRATION_LOGIN="3600">
<CONNECTION_QMCLIENT PORT="4243" IS_ENCRYPTED="False" USERNAME="joseba" PASSWORD="SqUuZUlsfpIYaPxaBEC4Uw=="
DATA_ACCOUNT="LINKAR_DATA" DB_CONNECTIONS_FIXED="2" DB_CONNECTIONS_ADDITIONALS="0" INACTIVITY_SECONDS_FOR_DISCONNECT="180"
RX_TIMEOUT="600" />
</ENTRYPOINT>
</PROFILE>
<PROFILE ACCOUNT="LINKAR" NAME="ProfileD3" AUTO_START="False" DB_TYPE="D3" HOST="127.0.0.1" DB_OS="WIN" DB_ENCODING="0" />
<PROFILE ACCOUNT="LINKAR" NAME="ProfileUniVerse" AUTO_START="False" DB_TYPE="UNIVERSE" HOST="127.0.0.1" DB_OS="WIN" DB_ENCODING="0" />
<PROFILE ACCOUNT="LINKAR" NAME="ProfileUniData" AUTO_START="False" DB_TYPE="UNIDATA" HOST="127.0.0.1" DB_OS="WIN" DB_ENCODING="0" />
<PROFILE ACCOUNT="LINKAR" NAME="ProfilejBase" AUTO_START="False" DB_TYPE="JBASE" HOST="127.0.0.1" DB_OS="WIN" DB_ENCODING="0" />
</PROFILES>
</CONFIG>
```

- Its purpose is:
 - Verify that everything works correctly.
 - See the different possibilities of the classes that can be used from the clients.

 Linkar TESTER

Login Read Update New Delete Select Subroutine Conversion Format Dictionaries

Linkar Host: 127.0.0.1

EntryPoint: LINKAR_DATA

Linkar User: admin

Language:

Free Text: Tester

CustomVars:

Login Logout

Login Async Logout Async

Server Response Timeout: 600

Status: LOGGED

Session ID: 7ae9f86a-6d2f-4fcf-a54a-6a12e0aa050a

Linkar Manager Configuration

This section is for the exclusive Linkar Manager use. We point the IP and the Port where Linkar Server will listen the Linkar Manager requests

Linkar Server IP or DNS: 127.0.0.1

Listening Port for the Linkar Manager: 11200

EntryPoint Settings

TCP Port: 11300

EntryPoint Name: LINKAR_DATA

Login Expiration Time in seconds: 3600

Linkar Manager Configuration

Username: admin

Password: ***** ☐ Show

Administrator Rights: ☒

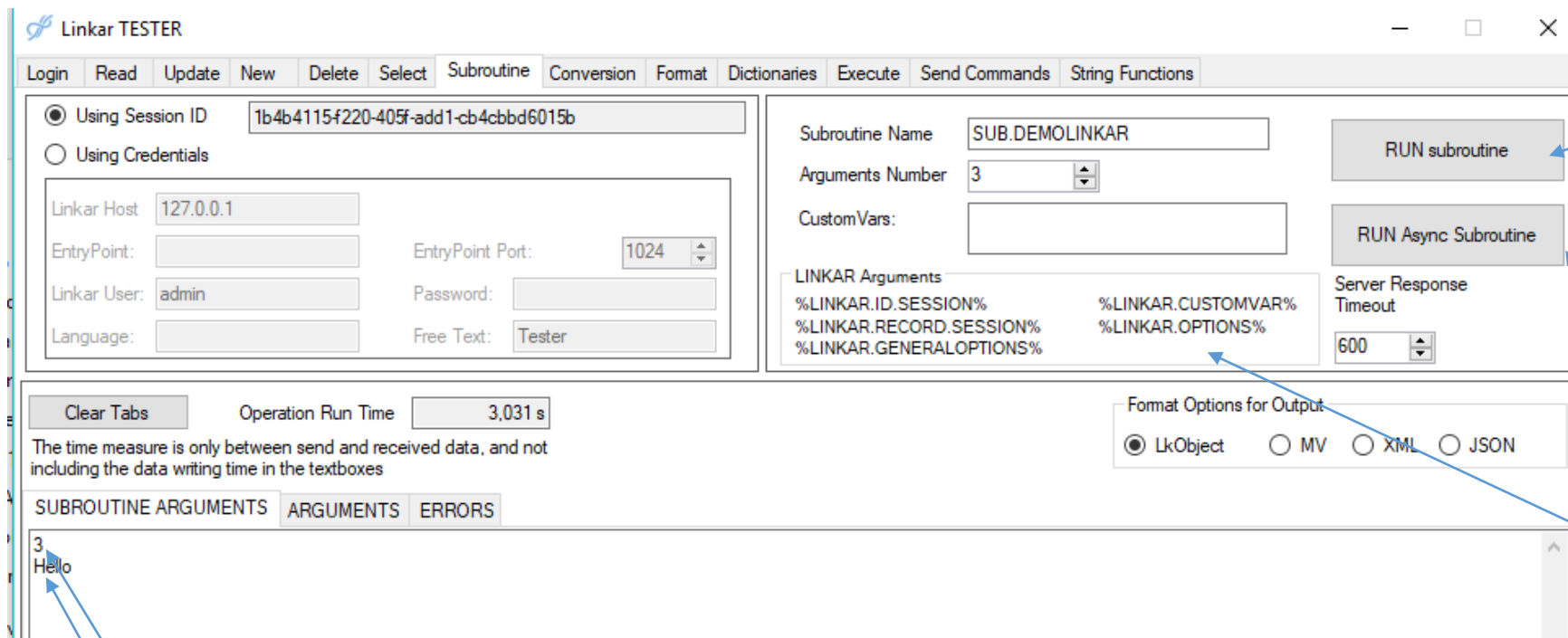
Can Open Linkar Manager: ☒

EntryPoint List

☒ All

☒ ProfileQM

☒ ProfileD2



- Run:
 - Can do nothing until the subroutine finished.
- Run Async:
 - Continue working while subroutine runs.
- Arguments:
 - Available arguments.

- Execute a Subroutine in the Database (SUB.DEMOLINKAR):
 - 3 Arguments (2 Input- 1 Output):
 1. Time to *sleep* in seconds.
 2. String text.
 3. Same String in upper case.

Call a Subroutine in the database Using Session ID

Linkar TESTER

Login Read Update New Delete Select Subroutine Conversion Format Dictionaries Execute Send Commands String Functions

☒ Using Session ID

☐ Using Credentials

Linkar Host:

EntryPoint: EntryPoint Port:

Linkar User: Password:

Language: Free Text:

Subroutine Name:

Arguments Number:

CustomVars:

LINKAR Arguments

%LINKAR.ID.SESSION% %LINKAR.CUSTOMVAR%

%LINKAR.RECORD.SESSION% %LINKAR.OPTIONS%

%LINKAR.GENERALOPTIONS%

Server Response Timeout:

RUN subroutine

RUN Async Subroutine

Clear Tabs Operation Run Time:

The time measure is only between send and received data, and not including the data writing time in the textboxes

Format Options for Output

☒ LkObject ☐ MV ☐ XML ☐ JSON

SUBROUTINE ARGUMENTS ARGUMENTS ERRORS

3

Hello

Id	User Name	Login Date	Login Expire Time	Profile	EntryPoint	MV Account	Free Text	Client IP
bf2443d3-e0f4-4540-a56a-dbd74a6c2d33	admin	19/10/2018 10:55		MANAGER	EP_MANAGER		*MANAGER*	127.0.0.1
1b4b4115f220-405f-add1-cb4cbbd6015b	admin	19/10/2018 12:38	19/10/2018 13:39	ProfileQM	LINKAR_DATA	LINKAR_DATA	Tester	127.0.0.1

Linkar Manager – Client Sessions

Call a Subroutine in the database Using Credentials

Linkar TESTER

LoginReadUpdateNewDeleteSelectSubroutineConversionFormatDictionariesExecuteSend CommandsString Functions

☐ Using Session ID

☒ Using Credentials

Linkar Host127.0.0.1

EntryPoint:LINKAR_DATA

Linkar User:admin

Language

EntryPoint Port:11300

Password:*****

Free Text:Tester

Subroutine NameSUB.DEMOLINKAR

Arguments Number3

Custom Vars:

LINKAR Arguments

%LINKAR.ID.SESSIO%LINKAR.CUSTOMVAR%
%LINKAR.RECORD.SESSIO%LINKAR.OPTIONS%
%LINKAR.GENERALOPTIONS%

RUN subroutine

RUN Async Subroutine

Server Response Timeout600

Clear Tabs

Operation Run Time10,006 s

Format Options for Output

☒ LkObject☐ MV☐ XML☐ JSON

SUBROUTINE ARGUMENTS

ARGUMENTS

ERRORS

10
Hello
HELLO

Id	User Name	Login Date	Login Expire Time	Profile	EntryPoint	MV Account	Free Text	Client IP
bf2443d3-e8f4-4540-a56a-dbd74a6c2d33	admin	19/10/2018 10:55		MANAGER	EP_MANAGER		*MANAGER*	127.0.0.1
VOLATILE	admin	19/10/2018 12:57	19/10/2018 13:57	ProfileQM	LINKAR_DATA	LINKAR_DATA	Tester	127.0.0.1

Linkar Manager – Client Sessions

SELECT DATA FROM DE DATABASE

LINKAR TESTER

Linkar TESTER

Login Read Update New Delete Select Subroutine Conversion Format Dictionaries Execute Send Commands String Functions

☒ Using Session ID

☐ Using Credentials

Linkar Host:

EntryPoint: EntryPoint Port:

Linkar User: Password:

Language: Free Text:

SelectOptions

☒ Calculated ☒ Dictionaries

☐ Conversion ☐ Format Spec.

☐ Original Record

☒ Pagination

☐ Only Record Id

CustomVars:

Records per page:

Page number:

Select Async

Filename:

Sort Clause:

Dict Clause:

PreSelect Clause:

Server Response Timeout:

Clear Tabs

Operation Run Time:

The time measure is only between send and received data, and not including the data writing time in the textboxes

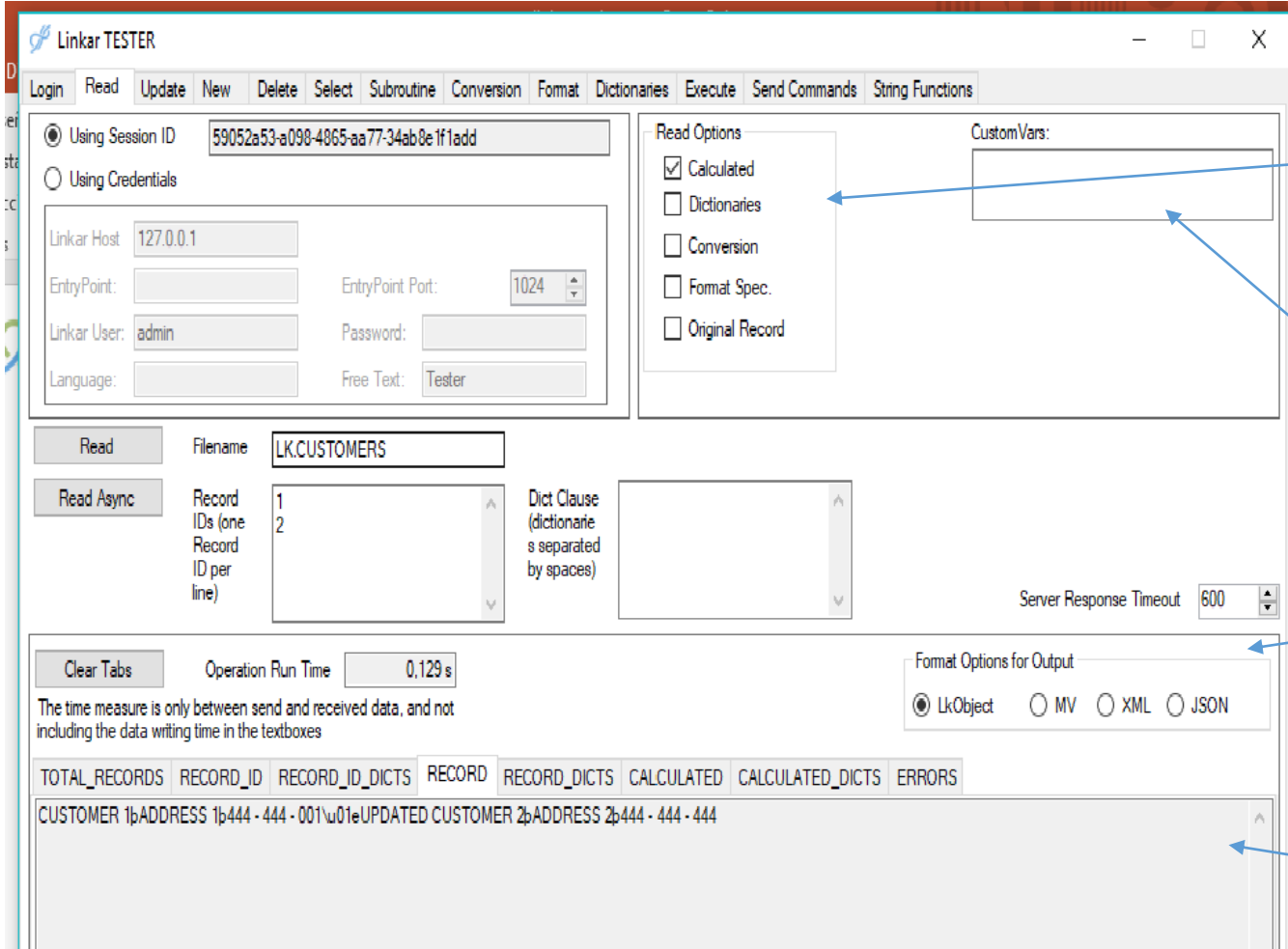
Format Options for Output

☒ LkObject ☐ MV ☐ XML ☐ JSON

TOTAL_RECORDS	RECORD_ID	RECORD_ID_DICTS	RECORD	RECORD_DICTS	CALCULATED	CALCULATED_DICTS	DICTIONARIES_ID	DICTIONARIES	ERRORS
87b17546b101190y101839y101580y101257y101048y101637y101086y101865y101957y101980y101403y101852y101171y101290y101080p355y840y433y941y320y196y620y927y152y897y234y	393y789y58y177b404.84y686.89y103.58y497.37y19.79y417.67y995.61y62.51y471.01y934.13y457.71y349.53y126.74y559.2y789.96y17622u17676y17605u17692y17625u17721y17	568u17598y420u420y216u217y448u448y88u89u01e51p17271p101856y101583y101282y101676y101481y101993y101430y101599p83y427y93y101y731y926y86y927p999.77y90	7.48y944.96y528.14y387.53y240.16y797.13y885.83p17309u17355y17282u17349y17330u17429y17342u17387p213u214y463u463y433u433y463u464u01e74p17721p101135p506p	62.12bp	u01e3p17810p101204y101198y101658y101105y101248y101291y101012y101844y101775p343y492y37y632y774y832y443y303y341p26.77y859.26y578.66y805.37y329.09y276.42y525.91y89	73y333.13p17840u17885y246u246y			

- Input Options:
 - Calculated.
 - Conversion.
 - Original Record.
 - Pagination.
 - Dictionaries.
 - Format Spec.
- Customer Vars.

- Output Options:
 - LkObject.
 - MV.
 - XML.
 - JSON.
- Output Data.



The screenshot shows the Linkar TESTER application window. The interface includes a menu bar with options like Login, Read, Update, New, Delete, Select, Subroutine, Conversion, Format, Dictionaries, Execute, Send Commands, and String Functions. The main area is divided into several sections:

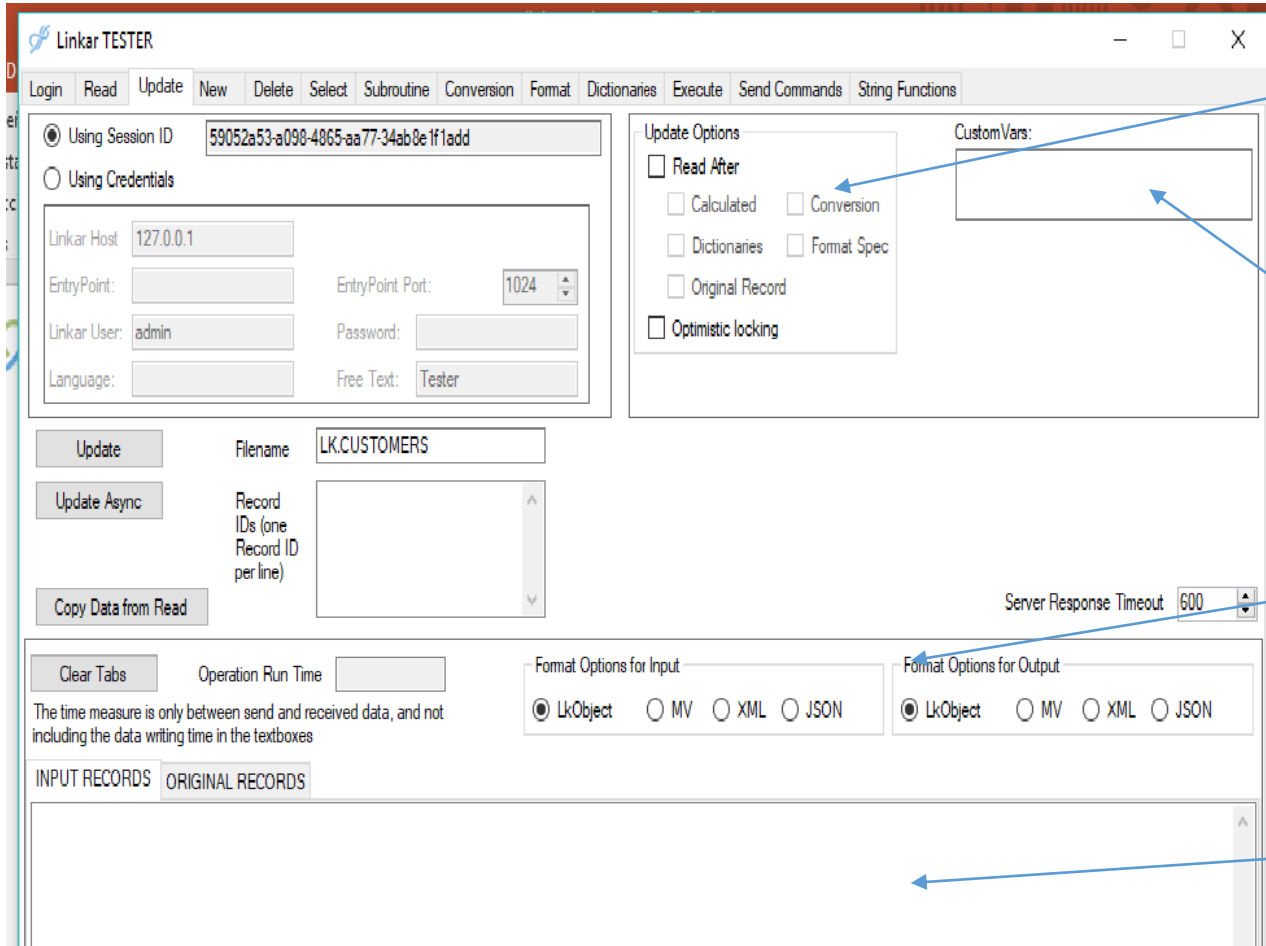
- Session Selection:** Radio buttons for "Using Session ID" (selected) and "Using Credentials". The Session ID field contains "59052a53-a098-4865-aa77-34ab0e1f1add".
- Connection Details:** Fields for Linkar Host (127.0.0.1), EntryPoint, EntryPoint Port (1024), Linkar User (admin), Password, Language, and Free Text (Tester).
- Read Options:** A group box containing checkboxes for Calculated (checked), Dictionaries, Conversion, Format Spec., and Original Record.
- CustomVars:** A text area for defining custom variables.
- Read Action:** Buttons for "Read" and "Read Async". The Filename field contains "LK.CUSTOMERS".
- Record Selection:** A list box for Record IDs (one Record ID per line) containing "1" and "2". A Dict Clause field is also present.
- Server Response Timeout:** A spinner box set to 600.
- Format Options for Output:** Radio buttons for LkObject (selected), MV, XML, and JSON.
- Output Data:** A table with columns: TOTAL_RECORDS, RECORD_ID, RECORD_ID_DICTS, RECORD, RECORD_DICTS, CALCULATED, CALCULATED_DICTS, and ERRORS. The first row of data shows: CUSTOMER 1bADDRESS 1b444 - 444 - 001w01eUPDATED CUSTOMER 2bADDRESS 2b444 - 444 - 444.

- Input Options:
 - Calculated.
 - Dictionaries.
 - Conversion.
 - Format Spec.
 - Original Record.
- Customer Vars.

- Output Options:
 - LkObject.
 - MV.
 - XML.
 - JSON.
- Output Data.

UPDATE DATA IN THE DATABASE

LINKAR TESTER



Linkar TESTER

Login Read **Update** New Delete Select Subroutine Conversion Format Dictionaries Execute Send Commands String Functions

☒ Using Session ID 59052a53-a090-4065-aa77-34ab0e1f1add
☐ Using Credentials

Linkar Host: 127.0.0.1
 EntryPoint: EntryPoint Port: 1024
 Linkar User: admin Password:
 Language: Free Text: Tester

Update Filename: LK.CUSTOMERS
 Update Async
 Copy Data from Read
 Record IDs (one Record ID per line)

Update Options
☐ Read After
☐ Calculated ☐ Conversion
☐ Dictionaries ☐ Format Spec
☐ Original Record
☐ Optimistic locking

Custom Vars:

Server Response Timeout: 600

Clear Tabs Operation Run Time
 The time measure is only between send and received data, and not including the data writing time in the textboxes

Format Options for Input: ☒ LkObject ☐ MV ☐ XML ☐ JSON
 Format Options for Output: ☒ LkObject ☐ MV ☐ XML ☐ JSON

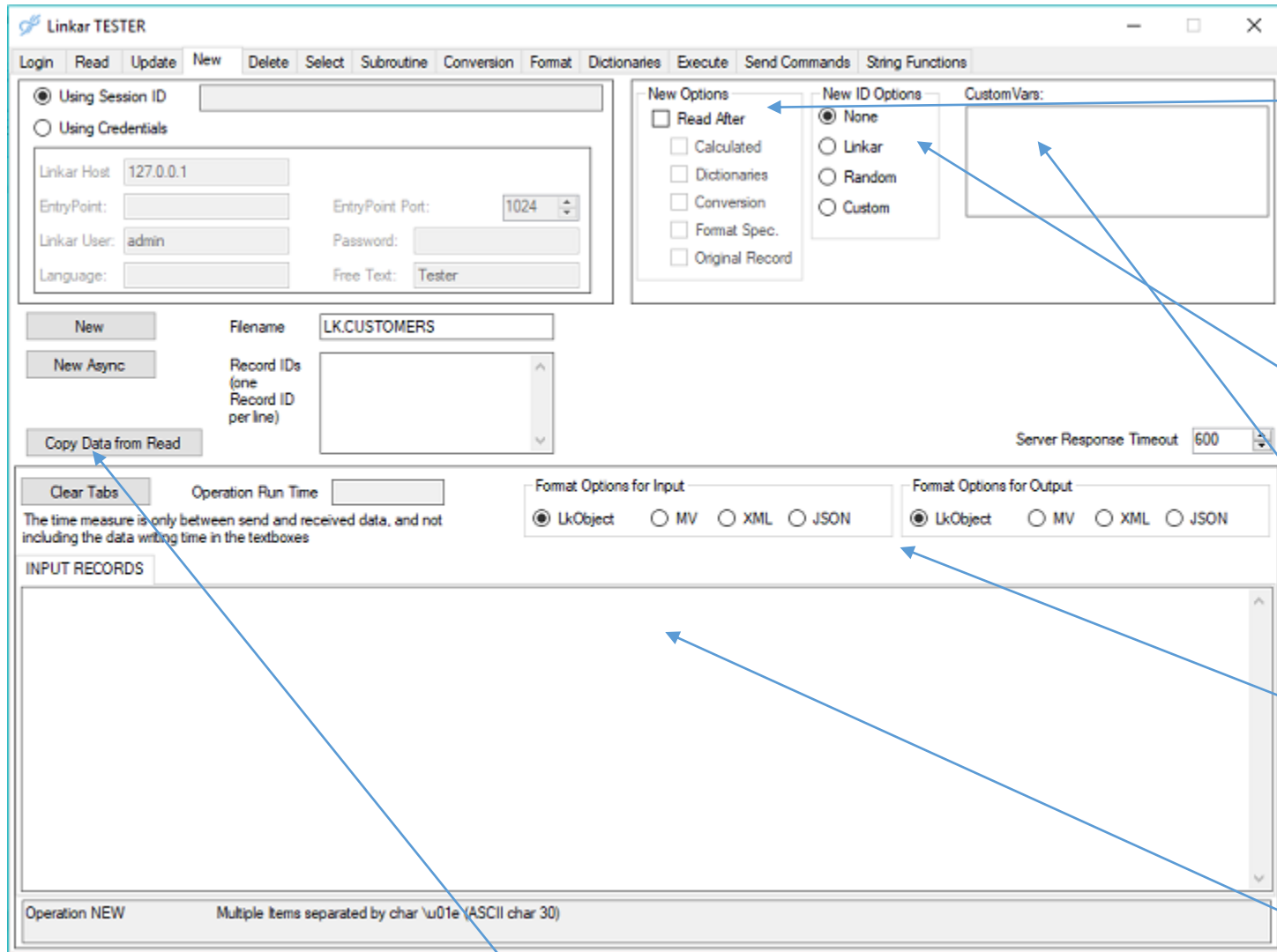
INPUT RECORDS ORIGINAL RECORDS

- Update Options:
 - Calculated.
 - Dictionaries.
 - Conversion.
 - Format Spec.
 - Original Record.
 - Optimistic lock.
- Customer Vars.

- Format Options (Input/Output):
 - LkObject.
 - MV.
 - XML.
 - JSON.
- Input Data.

INSERT NEW DATA IN THE DATABASE

LINKAR TESTER



The screenshot shows the Linkar TESTER application window. The menu bar includes: Login, Read, Update, New, Delete, Select, Subroutine, Conversion, Format, Dictionaries, Execute, Send Commands, and String Functions. The main interface is divided into several sections:

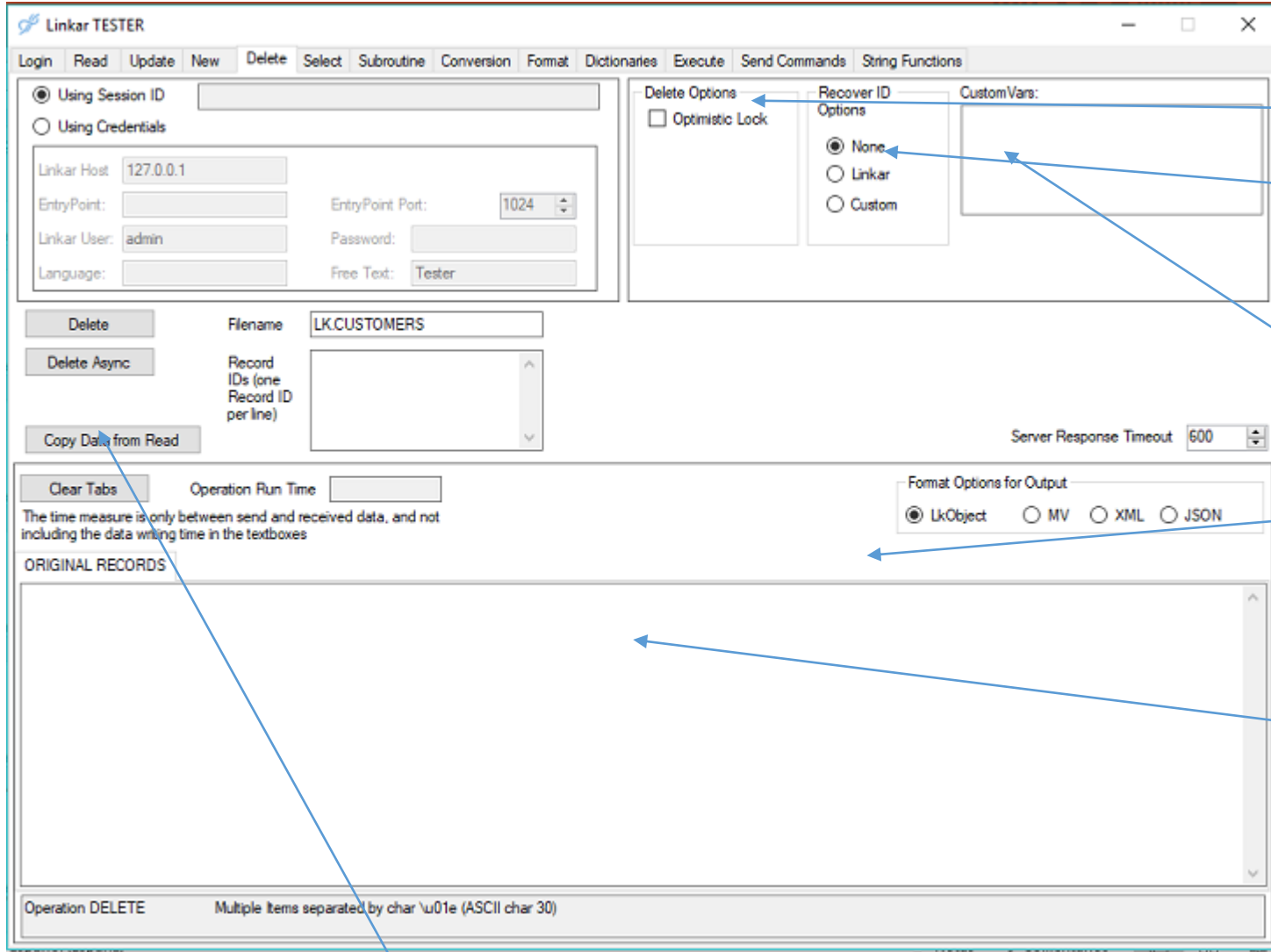
- Session Selection:** Radio buttons for "Using Session ID" (selected) and "Using Credentials".
- Connection Fields:** Linkar Host (127.0.0.1), EntryPoint, EntryPoint Port (1024), Linkar User (admin), Password, Language, and Free Text (Tester).
- File Management:** Buttons for "New", "New Async", and "Copy Data from Read". A "Filename" field contains "LK.CUSTOMERS". A "Record IDs" list box is empty.
- Options:**
 - New Options:** A checkbox for "Read After" with sub-options: Calculated, Dictionaries, Conversion, Format Spec., and Original Record.
 - New ID Options:** Radio buttons for None (selected), Linkar, Random, and Custom.
 - Custom Vars:** An empty text area.
- Format Options:** Two groups of radio buttons for "Format Options for Input" and "Format Options for Output", both with LkObject (selected), MV, XML, and JSON options.
- INPUT RECORDS:** A large text area for input data.
- Footer:** "Operation NEW" and "Multiple Items separated by char '\u001e' (ASCII char 30)".

- Copy Data from read

- New Item Options:
 - Read After:
 - Calculated.
 - Dictionaries.
 - Conversion.
 - Format Spec.
 - Original Recod.
- New ID Options:
 - Linkar.
 - Random.
 - Custom.
- Customer Vars.
- Format Options (Input/Output):
 - LkObject.
 - MV.
 - XML.
 - JSON.
- Input Data.

DELETE DATA IN THE DATABASE

LINKAR TESTER



Linkar TESTER

Login Read Update New Delete Select Subroutine Conversion Format Dictionaries Execute Send Commands String Functions

☒ Using Session ID
☐ Using Credentials

Linkar Host:
 Entry Point: Entry Point Port:
 Linkar User: Password:
 Language: Free Text:

Delete Delete Async

Filename:
 Record IDs (one Record ID per line):

Copy Data from Read

Server Response Timeout:

Clear Tabs Operation Run Time:

The time measure is only between send and received data, and not including the data writing time in the textboxes

Format Options for Output:
☒ LkObject ☐ MV ☐ XML ☐ JSON

ORIGINAL RECORDS

Operation DELETE Multiple Items separated by char '\u01e' (ASCII char 30)

- Delete Options:
 - Optimistic lock.
- Recover ID Options:
 - None.
 - Linkar.
 - Custom.
- Customer Vars.
- Format Options (Output):
 - LkObject.
 - MV.
 - XML.
 - JSON.
- Input Data.

- Copy Data from read

Linkar TESTER

☒ Using Session ID
☐ Using Credentials

Linkar Host:
 EntryPoint: EntryPoint Port:
 Linkar User: Password:
 Language: Free Text:

Code: Custom Vars:

Type
☒ Input (ICONV)
☐ Output (OCONV)

Server Response Timeout:

Expression (expressions separated by MV marks):

Operation Run Time:

The time measure is only between send and received data, and not including the data writing time in the textboxes

Format Options for Output
☒ LkObject ☐ MV ☐ XML ☐ JSON

Operation CONVERSION

- Execute Conversions (OCONV, ICONV) in the database

Linkar TESTER

Login Read Update New Delete Select Subroutine Conversion Format Dictionaries Execute Send Commands String Functions

☒ Using Session ID 7daf52c3fd51-4943-b860-6b37541e8c90
☐ Using Credentials

Linkar Host: 127.0.0.1
EntryPoint:
Linkar User: admin Password:
Language:
Free Text: Tester

EntryPoint Port: 1024

Filename: LK.CUSTOMERS CustomVars:
Dictionaries
Dictionaries Async

Server Response Timeout: 600

Clear Tabs Operation Run Time: 0.000 s

The time measure is only between send and received data, and not including the data writing time in the textboxes

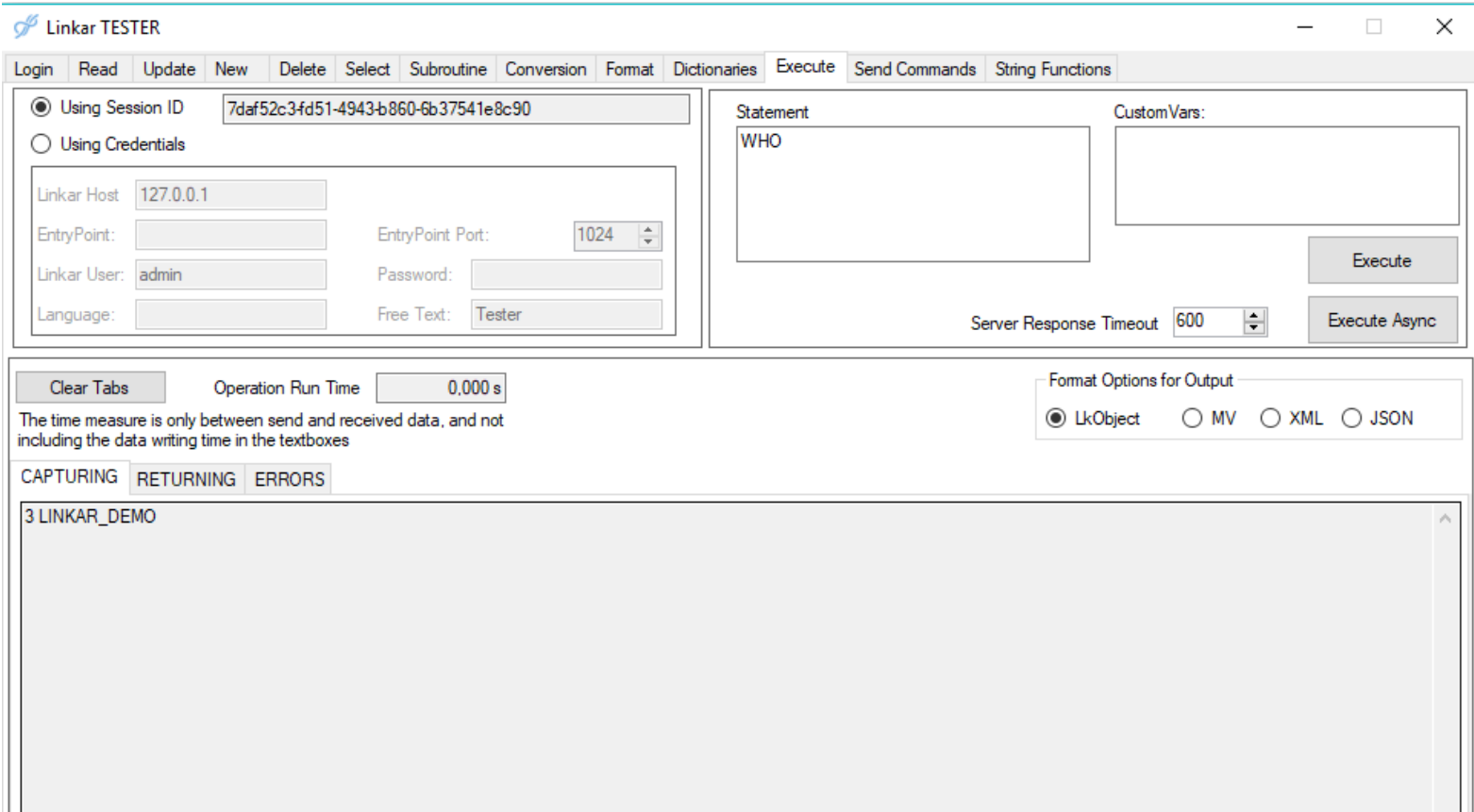
Format Options for Output
☒ LkObject ☐ MV ☐ XML ☐ JSON

DICTIONARIES_ID DICTIONARIES ERRORS

Dp0bLK.CUSTOMERSb10RbSbpbpbpbu01eDpb0bCustomer Codeb10Rbpbpbpbu01eDpb1bNameb50Lbpbpbpbu01eDpb2bAddressb40Lbpbpbpbu01eDpb3bPhoneb20Lbpbpbpb

- File dictionaries

- Execute TCL statement



The screenshot shows the Linkar TESTER application window. The title bar reads "Linkar TESTER". The menu bar includes: Login, Read, Update, New, Delete, Select, Subroutine, Conversion, Format, Dictionaries, Execute, Send Commands, and String Functions. The "Execute" tab is active.

On the left, there are two radio buttons: "Using Session ID" (selected) and "Using Credentials". The "Using Session ID" option has a text field containing the session ID "7daf52c3fd51-4943b860-6b37541e8c90". Below this, there are fields for "Linkar Host" (127.0.0.1), "EntryPoint" (empty), "Linkar User" (admin), "Language" (empty), "EntryPoint Port" (1024), "Password" (empty), and "Free Text" (Tester).

On the right, there is a "Statement" text area containing "WHO" and a "CustomVars" text area (empty). Below these is a "Server Response Timeout" dropdown set to "600". There are "Execute" and "Execute Async" buttons.

At the bottom, there is a "Clear Tabs" button, an "Operation Run Time" display showing "0,000 s", and a note: "The time measure is only between send and received data, and not including the data writing time in the textboxes". To the right of this is a "Format Options for Output" section with radio buttons for "LkObject" (selected), "MV", "XML", and "JSON".

Below the format options are three tabs: "CAPTURING" (selected), "RETURNING", and "ERRORS". The "CAPTURING" tab shows a list of results, with the first entry being "3 LINKAR_DEMO".

Linkar TESTER

Login Read Update New Delete Select Subroutine Conversion Format Dictionaries Execute Send Commands String Functions

Extract Field 0 Value 0 Subvalue 0

Replace Field 0 Value 0 Subvalue 0 Replace Value

Change Old Value New Value

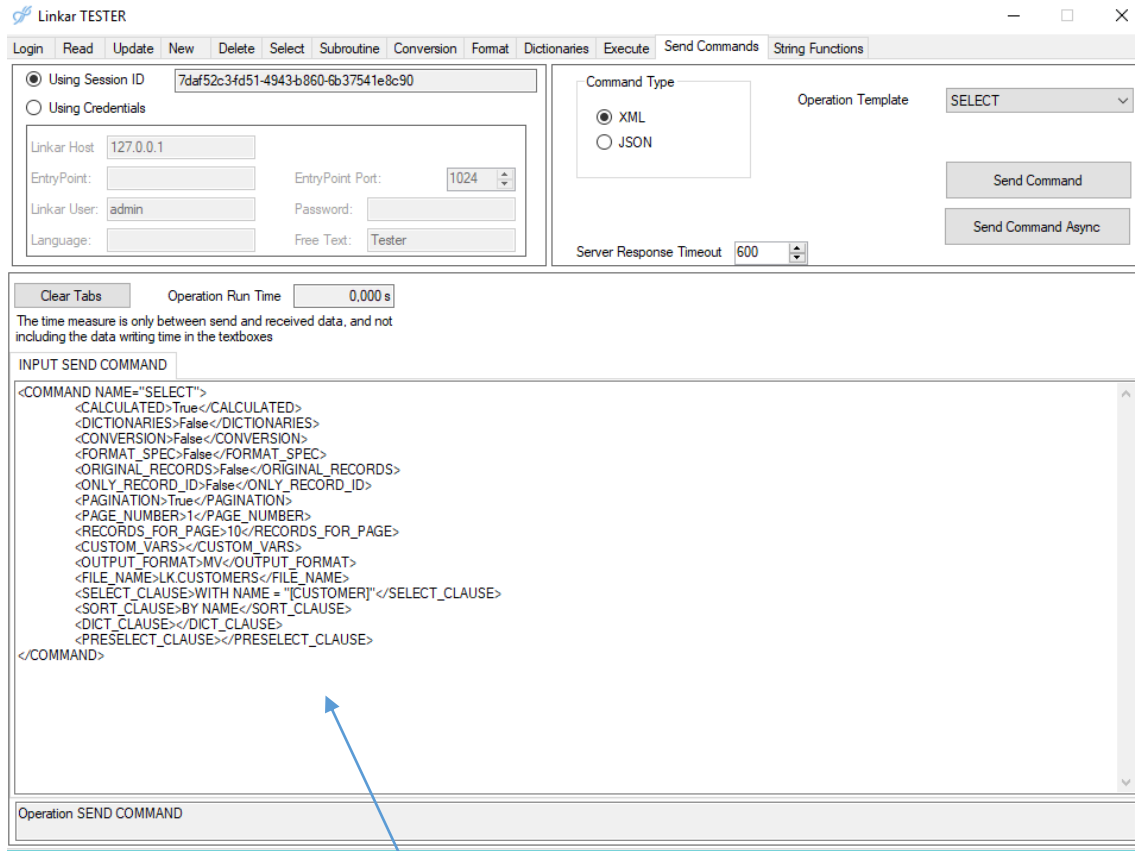
Count Count Options ☒ AM ☐ VM ☐ SM ☐ Custom b Count

DCount Count Options ☒ AM ☐ VM ☐ SM ☐ Custom b DCount

Execute String Functions:

- Extract.
- Replace.
- Change.
- Count.
- Dcount.

Functions are executed in the Linkar Server, not in the database. No connection is required.



Linkar TESTER

Login Read Update New Delete Select Subroutine Conversion Format Dictionaries Execute Send Commands String Functions

☒ Using Session ID 7daf52c3fd51-4943b860-6b37541e8c90

☐ Using Credentials

Linkar Host: 127.0.0.1

EntryPoint: Entry Point Port: 1024

Linkar User: admin Password:

Language: Free Text: Tester

Command Type: XML (selected) JSON

Operation Template: SELECT

Send Command Send Command Async

Server Response Timeout: 600

Clear Tabs Operation Run Time: 0,000 s

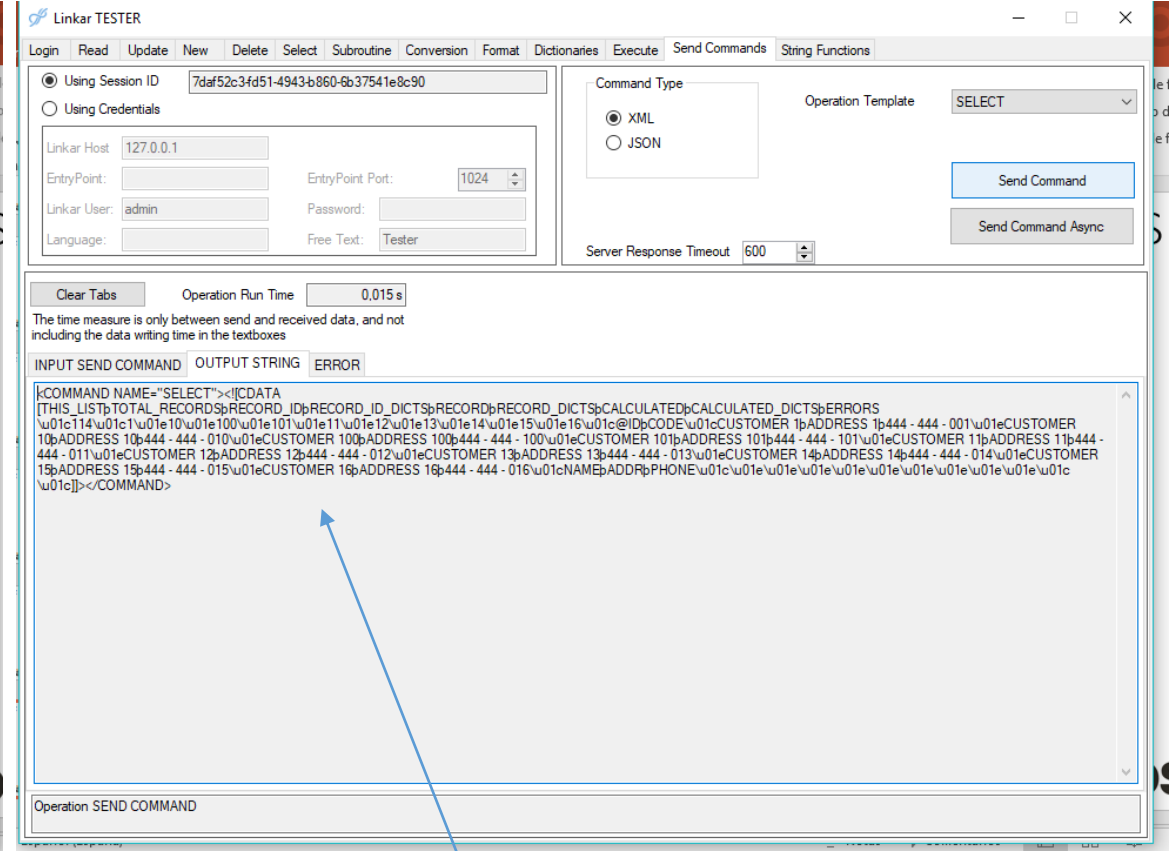
The time measure is only between send and received data, and not including the data writing time in the textboxes

INPUT SEND COMMAND

```
<COMMAND NAME="SELECT">
  <CALCULATED>True</CALCULATED>
  <DICTIONARIES>False</DICTIONARIES>
  <CONVERSION>False</CONVERSION>
  <FORMAT_SPEC>False</FORMAT_SPEC>
  <ORIGINAL_RECORDS>False</ORIGINAL_RECORDS>
  <ONLY_RECORD_ID>False</ONLY_RECORD_ID>
  <PAGINATION>True</PAGINATION>
  <PAGE_NUMBER>1</PAGE_NUMBER>
  <RECORDS_FOR_PAGE>10</RECORDS_FOR_PAGE>
  <CUSTOM_VARS></CUSTOM_VARS>
  <OUTPUT_FORMAT>MV</OUTPUT_FORMAT>
  <FILE_NAME>LK.CUSTOMERS</FILE_NAME>
  <SELECT_CLAUSE>WITH NAME = "[CUSTOMER]"</SELECT_CLAUSE>
  <SORT_CLAUSE>BY NAME</SORT_CLAUSE>
  <DICT_CLAUSE></DICT_CLAUSE>
  <PRESELECT_CLAUSE></PRESELECT_CLAUSE>
</COMMAND>
```

Operation SEND COMMAND

- Input:
 - XML
 - JSON



Linkar TESTER

Login Read Update New Delete Select Subroutine Conversion Format Dictionaries Execute Send Commands String Functions

☒ Using Session ID 7daf52c3fd51-4943b860-6b37541e8c90

☐ Using Credentials

Linkar Host: 127.0.0.1

EntryPoint: Entry Point Port: 1024

Linkar User: admin Password:

Language: Free Text: Tester

Command Type: XML (selected) JSON

Operation Template: SELECT

Send Command Send Command Async

Server Response Timeout: 600

Clear Tabs Operation Run Time: 0,015 s

The time measure is only between send and received data, and not including the data writing time in the textboxes

INPUT SEND COMMAND OUTPUT STRING ERROR

```
[k[COMMAND NAME="SELECT"><[CDATA
[THIS_LISTbTOTAL_RECORDsbRECORD_IDbRECORD_ID_DICTsbRECORDbRECORD_DICTsbCALCULATEDbCALCULATED_DICTsbERRORS
u01c114u01c1u01e10u01e100u01e101u01e11u01e12u01e13u01e14u01e15u01e16u01c@IDbCODEu01cCUSTOMER 1bADDRESS 1b444 - 444 - 001u01eCUSTOMER
10bADDRESS 10b444 - 444 - 010u01eCUSTOMER 100bADDRESS 100b444 - 444 - 100u01eCUSTOMER 101bADDRESS 101b444 - 444 - 101u01eCUSTOMER 11bADDRESS 11b444 -
444 - 011u01eCUSTOMER 12bADDRESS 12b444 - 444 - 012u01eCUSTOMER 13bADDRESS 13b444 - 444 - 013u01eCUSTOMER 14bADDRESS 14b444 - 444 - 014u01eCUSTOMER
15bADDRESS 15b444 - 444 - 015u01eCUSTOMER 16bADDRESS 16b444 - 444 - 016u01cNAMEbADDRbPHONEu01c\u01e\u01e\u01e\u01e\u01e\u01e\u01e\u01e\u01e\u01e\u01e\u01c
u01c]]></COMMAND>
```

Operation SEND COMMAND

- Output:
 - XML
 - JSON

Lksendcommand.exe allows to execute any Linkar function from:

- The operating system Shell.
- Power Shell.
- Any program, application, etc. that can execute a OS Shell command.
 - F.I. a Databasic program from one mv database to another one (there is a LK.DEMO.SENDCOMMAND example program in LK.BP file)

```
c:\temp>LkSendCommand.exe /?
Error: unknown or incomplete command line.
USE:
    LkSendCommand  [/?] |
                        /H:host |
                        /P:port |
                        /E:EntryPoint |
                        /U:user |
                        /W:password |
                        [ /L:language | ]
                        [ /T:free text | ]
                        /F:input file |
                        /S:input string |
                        [ /O:output file | ]
                        /M:message format |
                        [ /C:codepage | ]
                        [ /R ]

OPTIONS:
/?          Show Help
/H          Linkar Server host name or ip address.
/P          Linkar Server entry point port number.
/E          Linkar Server entry point name.
/U          Linkar Server user name.
/W          Linkar Server user password.
/L          Language to send to the server.
/T          Free Text to send with the commands.
/F          Get the command from input file.
/S          Write the command here.
/O          Output file to set the command result. If don't put it
            the result will be displayed in console.
/M          The message format: XML or JSON
/C          Output CodePage
/R          Remove output envelope

c:\temp>
```