

# External database

OPERATIONAL DIRECTIONS



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# 1

## GENERAL

### 1.1

### INTRODUCTION

These operational directions give a summarized overview description of the administration of the External Database function which can be used for example for an “alpha-tagging function”, i.e. storage of public subscriber names.

This function allows connections to external LDAP databases, and it is possible to look up information. The database name determines the MX-ONE functionality.

There is currently one database function defined:

- **PublicName**

The PublicName function is used to get the name of a public A-party. This can be done on public trunk lines where the number of the calling A-party is received. However, the function is only supported for ISDN and SIP trunks. The calling party number is used to search for a name in the name database. The name received from the database query will be displayed on the called party terminal with name display support.

Before querying, the received calling party number can be rearranged using the MX-ONE number conversion functionality. It is also possible to prefix the international country code and add ‘+’ for national numbers if all incoming traffic in the same country.

When inserting a value to a query, it will look for an ‘=’ sign and insert the value after the ‘=’ sign.

The query response will insert the received data as name1 and name2. There will be 3 attributes to choose from, where the 1:st is considered surname, the 2:nd given name and the 3:rd a generic display name. The first two have the highest priority and the 3:rd will only be used if any one of the first two is unavailable.

For detailed information on parameters see the command: “external\_database --help”.

### 1.2

### GLOSSARY

For a complete list of abbreviations and glossary, see the description for *ACRONYMS, ABBREVIATIONS AND GLOSSARY*.

## 2

# DEFINITIONS AND TERMINOLOGY

### **External Database**

An external database of directory numbers (and names and other data), i.e. separate from the internal LDAP database. The external database must in this context also be an LDAP based database. Usually it is a public network operator's database(s).

## **3 PREREQUISITES**

- The external database (for example the used ESTOS database) requires a specific license. Contact the provider of the external database to get the license.
- The external database shall be accessible and configured with user and password for access.

## **4 TOOLS, AIDS**

O&M terminal with access to the MX-ONE Service Node.

## **5 REFERENCES**

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## **6 PROCEDURE**

1. Install the external database or use existing database (not covered in this document).
2. Initiate the external database connection.
3. Test of external database connection.
4. Set up of number conversion if received A-number is not in international format..

## 7

## EXECUTION

### 7.1

### INITIATION OF EXTERNAL DATABASE CONNECTION

A connection to external database shall be initiated:

**Example:** `external_database -i --name PublicName --host 192.168.17.100 --port 712 --user Mxone --password password123 --base-dn dc=meta --filter "(searchNumber=)" --max-entries 3 --attributes sn,givenName,displayName --intl-format yes --prefix-number 46`

### 7.2

### REMOVAL OF EXTERNAL DATABASE CONNECTION

The connection to the external database shall be removed.

**Example:** `external_database -e --name "PublicName"`

### 7.3

### PRINTOUT OF EXTERNAL DATABASE CONNECTION

The connection to the external database shall be printed.

**Example:** `external_database -p --name "PublicName"`

### 7.4

### TEST OF EXTERNAL DATABASE CONNECTION FOR PUBLIC NAMES

The connection to the external database shall be tested to see that it is working.

**Example:** `external_database --test --name PublicName --search-for "+46856867000" --resolve-query`

### 7.5

### USE CASE EXAMPLE TO CONNECT TO ESTOS META DIRECTORY

The publicName function can be used to query ESTOS meta directory for names. With ESTOS meta directory it is possible to replicate a number of external databases and access them at a single point.

ESTOS requires the query number to be of international format, like +46856867000. Furthermore ESTOS will respond with it's own predefined attributes.

The recommended ESTOS search query is searchNumber and the recommended response attributes to use are, *sn*, *givenName* and *displayName*.

#### 7.5.1

#### SET UP OF ESTOS

Set up ESTOS and replicate the desired databases, Ensure that the attributes *sn*, *givenName* and *displayName* are mapped to useful fields in the replicated databases.

Open a user ID and a password for MX-ONE.

## 7.5.2 PROGRAMMING OF MX-ONE

### Example:

```
external_database -i --name PublicName --host 192.168.17.100 --port 712 --user  
Mxone --password password123 --base-dn dc=meta --filter "(searchNumber=)"  
--max-entries 3 --attributes sn,givenName,displayName --intl-format yes  
--prefix-number 46
```

In the example above the incoming trunk location is Sweden and there country prefix 46 is used. Since ESTOS requires an international format starting with '+', international format is used.

## 7.5.3 QUERY RESULT COMMENTS

If both "sn" and "givenName" are received, this will be used for displaying name. When one or both are missing the "displayName" is used.

## 7.6 SET UP NUMBER CONVERSION

If the received A-number is not in the correct format it can be converted to an international format (or other public format) with number conversion using conversiontype 7. Using conversiontype 7 will not change the number displayed on terminals. The converted number is only used in database search.

```
number_conversion_initiate -conversiontype 7 -entry 8 -pre 46 -numbertype 2  
-newtype 1 -route 10
```

In the example above any number received starting with 8 of type national number will be prefixed with the country code for Sweden making the number in international format.

## 8

# TERMINATION

After the external database connection is initiated or removed, a data backup (dump) must be performed in the system.