

## 6.2+

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  -
- - ACCOUNT\_TYPES —
  - AUTH\_DOC\_TYPES — ,
  - BANKS —
  - COMMENT\_TYPES —
  - CURRENCIES —
  - CUSTOMER\_GROUPS —
  - CUSTOMER\_STATUSES —
  - EQUIPMENT\_TYPES —
  - FIRMS —
  - NETWORK\_SERVICES —
  - PAYMENT\_TYPES —
  - PHONE\_TYPES —
  - PRODUCTS — ,
  - PROVIDER\_EQUIPMENT —
  - STREET\_ADDRESS\_PURPOSES — ,
  - UNITS —
- - CUSTOMERS —
  - CUSTOMER\_GROUP\_BINDS —
  - CUSTOMER\_COMMENTS —
  - CUSTOMER\_MAPPINGS —
  - CUSTOMER\_PHONES —
  - CUSTOMER\_STREET\_ADDRESSES —
  - ACCOUNTS — c
  - CONTRACTS —
  - EQUIPMENT — ( )
  - EQUIPMENT\_COMMENTS —
  - EQUIPMENT\_STREET\_ADDRESSES —
  - CUSTOMER\_NET\_SERVICE\_BINDS —
  - SUBSCRIPTIONS —
  - CHARGES —
  - PAYMENTS —



() , CSV:

1. .
2. .
3. .
4. - .
5. .
6. .



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1. .
  2. :
    - .
    - .
    - .
    - .
  3. :
    - .
    - .
    - .
    - .
  4. , .
  5. , .



- CSV-, .
- UTF-8.
- () —;
- —"
- .
- (LF, \n) .
  - ( REMARK), , ¶ ( ).
- ( ID) (\*\_ID) — ( ).
- ZIP-, .
  - CSV-, .
  - .
- (\*\_DATE BILLING\_DATE) :
  - :.. :: ( Oracle — DD.MM.YYYY HH24:MI:SS), 12.04.1961 09:07:00. : .
  - :.. ( Oracle — DD.MM.YYYY), 12.04.1961. .

- , :

Error rendering macro 'view-file'

sun/misc/BASE64Encoder



- ACCOUNTS.csv [ACCOUNTS](#):

```
"ID";"CUSTOMER_ID";"ACCOUNT_NUMBER";"ACCOUNT_TYPE_ID";"CURRENCY_ID";"BANK_ID";"BALANCE";"CREDIT";"CREDIT_END_DATE";"BALANCE_DATE";"REMARK"
"10";"1";"14170";"1";"643";"";"802.00";"";"29.02.2024 23:59:59";""
"11";"1";"14170";"3";"999";"";"560";"";"29.02.2024 23:59:59";" .¶ ."
```

- , :

Error rendering macro 'view-file'

sun/misc/BASE64Encoder

- , :

Error rendering macro 'view-file'

sun/misc/BASE64Encoder

- [CUSTOMERS](#) ORGANIZATION.
- , -
- « » .

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- 

(PRODUCTS).



ER-



- ID —
- \*\_ID —
- CONTRACTS CUSTOMERS: - ,
- SUBSCRIPTIONS ( CONTRACT\_ID) ( ACCOUNT\_ID) —



ACCOUNT\_TYPES —



|        |  |
|--------|--|
|        |  |
| ID     |  |
| NAME   |  |
| REMARK |  |

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AUTH\_DOC\_TYPES — ,



|        |  |
|--------|--|
|        |  |
| ID     |  |
| NAME   |  |
| REMARK |  |

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: , .

**BANKS —**

★ , .

| ID     | . |
|--------|---|
| NAME   | . |
| REMARK | . |

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: , , .

**COMMENT\_TYPES —**

★ , .

| ID     | . |
|--------|---|
| NAME   | . |
| REMARK | . |

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: , , .

**CURRENCIES —**

⚠ , .

| ID     | . |
|--------|---|
| NAME   | . |
| REMARK | . |

: .

: , .

**CUSTOMER\_GROUPS —**

⚠ .

| ID     | . |
|--------|---|
| NAME   | . |
| REMARK | . |

: .

: , , , , .

CUSTOMER\_STATUSES —

⚠️ , .

|        |   |
|--------|---|
|        |   |
| ID     | . |
| NAME   | . |
| REMARK | . |

: .

: , , .

EQUIPMENT\_TYPES —

⚠️ ( ).

🍷 , .

|        |   |
|--------|---|
|        |   |
| ID     | . |
| NAME   | . |
| REMARK | . |

: .

: , -, Eltex LTP-8X.

FIRMS —

★ , .

|        |   |
|--------|---|
|        |   |
| ID     | . |
| NAME   | . |
| REMARK | . |

: .

: , Cloud Express.

NETWORK\_SERVICES —

⚠️ .

|        |   |
|--------|---|
|        |   |
| ID     | . |
| NAME   | . |
| REMARK | . |

: .

: , PPPoE, SIP-, , SMS-.

PAYMENT\_TYPES —

★ , ( ).

| ID      | .       |
|---------|---------|
| NAME    | .       |
| VIRTUAL | Y N — . |
| REMARK  | .       |

:  
•  
•  
•  
: 0, 0, 0, 0.

PHONE\_TYPES —

★ , CUSTOMER\_PHONES.

| ID     | . |
|--------|---|
| NAME   | . |
| REMARK | . |

: .  
: , , , .

PRODUCTS — ,

! , .

| ID      |          | .                    |
|---------|----------|----------------------|
| NAME    |          | .                    |
| TYPE    |          | Y , N — .            |
| UNIT_ID | UNITS.ID | UNITS.<br>.<br>(), . |
| REMARK  |          | .                    |

:  
•  
•  
•  
•  
: ( ), - 0, 0.

PROVIDER\_EQUIPMENT —

★ , ( IPoE DHCP Option 82).

| ID                |                    | . |
|-------------------|--------------------|---|
| EQUIPMENT_TYPE_ID | EQUIPMENT_TYPES.ID | . |
| CODE              |                    | . |

|         |                          |          |
|---------|--------------------------|----------|
| IP      |                          | IPv4 . . |
| FIRM_ID | <a href="#">FIRMS.ID</a> | .        |
| REMARK  |                          | .        |

: .

: olt--25, switch-T3KZ1C7001304.

STREET\_ADDRESS\_PURPOSES — ,

★ , [CUSTOMER\\_STREET\\_ADDRESSES](#) [EQUIPMENT\\_STREET\\_ADDRESSES](#).

|        |   |
|--------|---|
|        |   |
| ID     | . |
| NAME   | . |
| REMARK | . |

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UNITS —

★ , , .

|        |   |
|--------|---|
|        |   |
| ID     | . |
| NAME   | . |
| REMARK | . |

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CUSTOMERS —

⚠ , .

 . ( ), , [PARENT\\_ID](#).

|           |                                      |          |
|-----------|--------------------------------------|----------|
|           |                                      |          |
| ID        |                                      | ⚠ ( , ). |
| STATUS_ID | <a href="#">CUSTOMER_STATUSES.ID</a> | ⚠ . .    |

|                            |                   |                                                                                                                                   |
|----------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| PARENT_ID                  | CUSTOMERS.ID      | ★                                                                                                                                 |
| CODE                       |                   | ! — , , .                                                                                                                         |
| ORGANIZATION               |                   | ! Y , N — .                                                                                                                       |
| NAME                       |                   | ! .                                                                                                                               |
| SECOND_NAME                |                   | ★ , .                                                                                                                             |
| SURNAME                    |                   | ★ , .                                                                                                                             |
| ADDRESS                    |                   | <>,<>,<>,<>,<>,<>,<>,<><br>- , , : , , . , 5 , , , 78,78#234<br>: , , . , 5 . 7 , , , 78,78#234<br>★ , CUSTOMER_STREET_ADDRESSES. |
| ADDRESS_REMARK             |                   | ★ , CUSTOMER_STREET_ADDRESSES.                                                                                                    |
| AUTH_DOC_TYPE_ID           | AUTH_DOC_TYPES.ID | ★ - , .                                                                                                                           |
| AUTH_DOC_SERIAL            |                   | ★ , .                                                                                                                             |
| AUTH_DOC_NUMBER            |                   | ★ , .                                                                                                                             |
| AUTH_DOC_DATE              |                   | ★ .. .                                                                                                                            |
| AUTH_DOC_ISSUING_AUTHORITY |                   | ★ , .                                                                                                                             |
| BIRTH_DATE                 |                   | ★ .. .                                                                                                                            |
| BIRTH_PLACE                |                   | ★ , .                                                                                                                             |
| TAX_ID_NUMBER              |                   | ★ ().                                                                                                                             |
| LEGAL_FORM_CODE            |                   | - . : , .<br>: - .<br>★ - , .                                                                                                     |
| W_PHONE                    |                   | E.164: , , — . , .<br>★ , CUSTOMER_PHONES.                                                                                        |
| H_PHONE                    |                   | E.164: , , — . , .<br>★ CUSTOMER_PHONES.                                                                                          |
| M_PHONE                    |                   | E.164: , , — . , .<br>★ , CUSTOMER_PHONES.                                                                                        |
| EMAIL                      |                   | ★ . , .                                                                                                                           |
| FIRM_ID                    | FIRMS.ID          | ★ , .                                                                                                                             |
| REMARK                     |                   | ★ ( ).                                                                                                                            |

CUSTOMER\_GROUP\_BINDS —

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|    |  |   |
|----|--|---|
|    |  |   |
| ID |  | ! |

|             |                                    |             |
|-------------|------------------------------------|-------------|
| CUSTOMER_ID | <a href="#">CUSTOMERS.ID</a>       | ⚠ .         |
| GROUP_ID    | <a href="#">CUSTOMER_GROUPS.ID</a> | ⚠ .         |
| PRIMARY     |                                    | ⚠ Y , N — . |
| REMARK      |                                    | ★ , .       |

#### CUSTOMER\_COMMENTS —

★ , .

| ID              |                                  | ⚠ .     |
|-----------------|----------------------------------|---------|
| CUSTOMER_ID     | <a href="#">CUSTOMERS.ID</a>     | ⚠ .     |
| COMMENT_TYPE_ID | <a href="#">COMMENT_TYPES.ID</a> | ⚠ .     |
| COMMENT_TEXT    |                                  | ⚠ . ¶ . |
| CREATED_DATE    |                                  | ⚠ .. ∴. |
| REMINDER_DATE   |                                  | ★ .. ∴. |
| EXECUTION_DATE  |                                  | ★ .. ∴. |

#### CUSTOMER\_MAPPINGS —

★ «> .

| CUSTOMER_ID       | <a href="#">CUSTOMERS.ID</a> | ⚠ .<br>: . |
|-------------------|------------------------------|------------|
| CUSTOMER_DST_CODE |                              | ⚠ , , .    |
| REMARK            |                              | ★ , .      |

#### CUSTOMER\_PHONES —

★ () .

, — W\_PHONE, H\_PHONE M\_PHONE [CUSTOMERS.](#)

| ID            |                                | ⚠ .              |
|---------------|--------------------------------|------------------|
| CUSTOMER_ID   | <a href="#">CUSTOMERS.ID</a>   | ⚠ .<br>— .       |
| PHONE_TYPE_ID | <a href="#">PHONE_TYPES.ID</a> | ⚠ .              |
| PHONE         |                                | ⚠ E.164: , , — . |
| REMARK        |                                | ★ .              |

#### CUSTOMER\_STREET\_ADDRESSES —

★ () .

, ADDRESS ADDRESS\_REMARK [CUSTOMERS.](#)

| ID                 |                            | ⚠️ .                                                                                                                                      |
|--------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| CUSTOMER_ID        | CUSTOMERS.ID               | ⚠️ .<br>— .                                                                                                                               |
| ADDRESS_PURPOSE_ID | STREET_ADDRESS_PURPOSES.ID | ⚠️ .                                                                                                                                      |
| DISTRICT           |                            | ★ , . — REGION_TYPE_District.                                                                                                             |
| CITY               |                            | ⚠️ . — .                                                                                                                                  |
| CITY_TYPE          |                            | ⚠️ . , , , .<br>: .                                                                                                                       |
| STREET             |                            | ⚠️ . — .                                                                                                                                  |
| STREET_TYPE        |                            | ⚠️ . , , , .<br>: .                                                                                                                       |
| HOUSE              |                            | : <ul style="list-style-type: none"> <li>• HOUSE — ,</li> <li>• BUILDING — ,</li> <li>• CONSTRUCT — ,</li> <li>• OWNERSHIP — .</li> </ul> |
| BUILDING           |                            |                                                                                                                                           |
| CONSTRUCT          |                            |                                                                                                                                           |
| OWNERSHIP          |                            |                                                                                                                                           |
| ENTRANCE           |                            | ⚠️ , .                                                                                                                                    |
| FLOOR              |                            | ★ , .                                                                                                                                     |
| FLAT               |                            | ★ .                                                                                                                                       |
| INTERCOM_CODE      |                            | ★ .                                                                                                                                       |
| CUSTOM_ADDRESS     |                            | ★ , : .                                                                                                                                   |
| REMARK             |                            | ★ .                                                                                                                                       |

ACCOUNTS — c

⚠️ : , .

| ID              |                  | ⚠️ .                            |
|-----------------|------------------|---------------------------------|
| CUSTOMER_ID     | CUSTOMERS.ID     | ⚠️ . — .                        |
| ACCOUNT_NUMBER  |                  | ⚠️ .                            |
| ACCOUNT_TYPE_ID | ACCOUNT_TYPES.ID | ⚠️ .                            |
| CURRENCY_ID     | CURRENCIES.ID    | ⚠️ .                            |
| BANK_ID         | BANKS.ID         | ★ , .                           |
| BALANCE         |                  | ★ , .                           |
| CREDIT          |                  | ★ , .                           |
| CREDIT_END_DATE |                  | ★ .. :: , .                     |
| BALANCE_DATE    |                  | ⚠️ .. ::<br>PAYMENTS CHARGES, . |
| REMARK          |                  | ★ .                             |

CONTRACTS —

⚠️ .

| ID              |              | ⚠️ .         |
|-----------------|--------------|--------------|
| CUSTOMER_ID     | CUSTOMERS.ID | ⚠️ .         |
| CONTRACT_NUMBER |              | ⚠️ .         |
| SIGNATURE_DATE  |              | ⚠️ ...       |
| START_DATE      |              | ⚠️ ... .     |
| END_DATE        |              | ★ () ... : . |
| REMARK          |              | ★ .          |

EQUIPMENT — ( )

⚠️ , .  
— .

| ID                           |                       | ⚠️ .                                                                                                                   |
|------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------|
| CUSTOMER_ID                  | CUSTOMERS.ID          | ⚠️ .                                                                                                                   |
| EQUIPMENT_TYPE_ID            | EQUIPMENT_TYPES.ID    | ⚠️ .                                                                                                                   |
| PROVIDER_EQUIPMENT_ID        | PROVIDER_EQUIPMENT.ID | ★ ( OLT), .<br>, .                                                                                                     |
| PROVIDER_EQUIPMENT_PORT_CODE |                       | ★ () .<br>, .                                                                                                          |
| PROVIDER_EQUIPMENT_PORT_TYPE |                       | ★ ( ).<br>, .                                                                                                          |
| CODE                         |                       | ⚠️ () .                                                                                                                |
| MAC                          |                       | ★ (MAC) XX-XX-XX-XX-XX-XX XX:XX:XX:XX:XX:XX. ().<br>, .                                                                |
| IP                           |                       | ★ IPv4 ( 128.66.125.125) IPv4- CIDR- ( 128.66.25.48/29).<br>, .                                                        |
| IP6                          |                       | ★ IPv6 ( 2001:db8:7df5::/64).<br>, .                                                                                   |
| PHONE                        |                       | ★ , , E.164: , , — . : 78122128506.<br>, .                                                                             |
| VLAN                         |                       | ★ , .                                                                                                                  |
| ADDRESS                      |                       | <>,<>,<>,<>,<>,<>,<>,<><br>- , , : . , , 5,,,78,78#234<br>: . , , 5 . 7,,,78,78#234<br>★ , EQUIPMENT_STREET_ADDRESSES. |

|                |  |                                                  |
|----------------|--|--------------------------------------------------|
| ADDRESS_REMARK |  | ★ , <a href="#">EQUIPMENT_STREET_ADDRESSES</a> . |
| REMARK         |  | ★ .                                              |

EQUIPMENT\_COMMENTS —

★ ( ) , .

|                 |                                  |         |
|-----------------|----------------------------------|---------|
|                 |                                  |         |
| ID              |                                  | ⚠ .     |
| EQUIPMENT_ID    | <a href="#">EQUIPMENT.ID</a>     | ⚠ .     |
| COMMENT_TYPE_ID | <a href="#">COMMENT_TYPES.ID</a> | ⚠ .     |
| COMMENT_TEXT    |                                  | ⚠ . ¶ . |
| CREATED_DATE    |                                  | ⚠ .. ∴. |
| REMINDER_DATE   |                                  | ★ .. ∴. |
| EXECUTION_DATE  |                                  | ★ .. ∴. |

EQUIPMENT\_STREET\_ADDRESSES —

★ ().

, ADDRESS ADDRESS\_REMARK [EQUIPMENT](#).

|                    |                                            |                                                                                                                                                                     |
|--------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |                                            |                                                                                                                                                                     |
| ID                 |                                            | ⚠ .                                                                                                                                                                 |
| EQUIPMENT_ID       | <a href="#">EQUIPMENT.ID</a>               | ⚠ ( ).                                                                                                                                                              |
| ADDRESS_PURPOSE_ID | <a href="#">STREET_ADDRESS_PURPOSES.ID</a> | ⚠ .                                                                                                                                                                 |
| DISTRICT           |                                            | ★ , . — <b>REGION_TYPE_District</b> .                                                                                                                               |
| CITY               |                                            | ⚠ . — ∴.                                                                                                                                                            |
| CITY_TYPE          |                                            | ⚠ ∴, ∴, ∴<br>∴ .                                                                                                                                                    |
| STREET             |                                            | ⚠ . — ∴.                                                                                                                                                            |
| STREET_TYPE        |                                            | ⚠ ∴, ∴, ∴<br>∴ .                                                                                                                                                    |
| HOUSE              |                                            | ∴<br><ul style="list-style-type: none"><li>• <b>HOUSE</b> — ,</li><li>• <b>BUILDING</b> — ,</li><li>• <b>CONSTRUCT</b> — ,</li><li>• <b>OWNERSHIP</b> — .</li></ul> |
| BUILDING           |                                            |                                                                                                                                                                     |
| CONSTRUCT          |                                            |                                                                                                                                                                     |
| OWNERSHIP          |                                            |                                                                                                                                                                     |
|                    |                                            | ⚠ , .                                                                                                                                                               |
| ENTRANCE           |                                            | ★ .                                                                                                                                                                 |
| FLOOR              |                                            | ★ , .                                                                                                                                                               |
| FLAT               |                                            | ★ .                                                                                                                                                                 |
| INTERCOM_CODE      |                                            | ★ .                                                                                                                                                                 |
| CUSTOM_ADDRESS     |                                            | ★ , ∴ .                                                                                                                                                             |
| REMARK             |                                            | ★ .                                                                                                                                                                 |

CUSTOMER\_NET\_SERVICE\_BINDS —

★ , .

| ID                 |                     | ⚠ .                      |
|--------------------|---------------------|--------------------------|
| CUSTOMER_ID        | CUSTOMERS.ID        | ⚠ .                      |
| NETWORK_SERVICE_ID | NETWORK_SERVICES.ID | ⚠ .                      |
| EQUIPMENT_ID       | EQUIPMENT.ID        | .<br>★ .<br>⚠ ( PPPoE ). |
| LOGIN              |                     | ( ). () .<br>★ , , .     |
| PASSWORD           |                     | . .<br>★ , , .           |
| PASSWORD_HASH_TYPE |                     | ★ , .                    |
| REMARK             |                     | ★ , .                    |

SUBSCRIPTIONS —

⚠ , .

🍷 , .

| ID           |              | ⚠ .                                                    |
|--------------|--------------|--------------------------------------------------------|
| ACCOUNT_ID   | ACCOUNTS.ID  | ⚠ .                                                    |
| CONTRACT_ID  | CONTRACTS.ID | ⚠ .                                                    |
| PRODUCT_ID   | PRODUCTS.ID  | ⚠ ( ).<br>.                                            |
| EQUIPMENT_ID | EQUIPMENT.ID | — . , .<br>★ , , .                                     |
| START_DATE   |              | ⚠ .. :: — .                                            |
| END_DATE     |              | .. :: — .<br>★ — .<br>🍷 : , — ( ).                     |
| QUANTITY     |              | PRODUCTS.UNIT_ID. : 100 2 — 2 × 100 = 200 .<br>★ ( ) . |
| BILLING_DATE |              | — 1 28. - 1 — .<br>★ , : .                             |
| REMARK       |              | ★ , .                                                  |

CHARGES —



SUBSCRIPTIONS:

 — . « » — .

| ID                         |              |  .                                         |
|----------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------|
| ACCOUNT_ID                 | ACCOUNTS.ID  |  .                                         |
| CONTRACT_ID                | CONTRACTS.ID |  .                                         |
| CHARGE_DATE                |              |  ( ) .. :: ACCOUNTS.BALANCE_DATE .         |
| PRODUCT_ID                 | PRODUCTS.ID  |  , .                                       |
| EQUIPMENT_ID               | EQUIPMENT.ID | . SUBSCRIPTIONS.EQUIPMENT_ID.<br> , .      |
| AMOUNT                     |              |  ( ) , <u>100</u> .<br>, , — .             |
| CHARGING_PERIOD_START_DATE |              |  .. :: , , 00:00:00 — .<br>CHARGE_DATE.    |
| CHARGING_PERIOD_END_DATE   |              |  .. :: , , 23:59:59 — .<br>CHARGE_DATE.  |
| QUANTITY                   |              | PRODUCTS.UNIT_ID, <u>100</u> .<br> ( ) . |
| REMARK                     |              |  .                                       |

PAYMENTS —

 — .

| ID               |                  |  .                             |
|------------------|------------------|-------------------------------------------------------------------------------------------------------------------|
| ACCOUNT_ID       | ACCOUNTS.ID      |  .                             |
| BANK_ID          | BANKS.ID         |  — .                           |
| TRANSACTION_DATE |                  |  .. :: ACCOUNTS.BALANCE_DATE . |
| PAYMENT_AMOUNT   |                  |  , <u>100</u> .                |
| PAYMENT_TYPE_ID  | PAYMENT_TYPES.ID | .<br> , — .                    |
| REMARK           |                  |  .                             |