

SARBForms Technical Specifications

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1. Introduction

The South African Reserve Bank ("SARB") has developed SARBDEX (South African Reserve Bank Data Exchange), which allows the SARB to send and receive structured messages (various message types) electronically in XML format, from their business partners (banks, etc), using the Internet infrastructure. SARBForms is one of these message types and is used to receive DI return data.

When the SARB receives a SARBForms message type, certain validation is done on the data, as set out in what is known as the SARBForms Schema. This validation includes ensuring that all required attributes contain a value and that the attribute length and type are correct. See 3(b) for a detailed listing of the SARBForms Scheme.

2. Hierarchical structure of the XML elements and attributes

SARBForms

Reference

Set

Period

Institution

Test

SARBForm

Form

Cell

Unique Number

Value

Total

CellCount

HashUnique

Hash Total

3. SARBForms Scheme

(a) General Rules

In the SARBForms scheme listed below, MAXOCCURS indicates the maximum occurrences allowed of the particular element, and MINOCCURS indicates the minimum occurrences thereof. When MAXOCCURS is '*', the maximum amount of occurrences is unspecified.

TYPE indicates the data type required. It may either be 'enumeration' to indicate that a specific value is required, 'number' to indicate that a number is required, or 'string' to indicate that a combination of alphabetical and numeric text is required.

MAXLENGTH indicates the maximum number of characters that may be reported for the particular attribute and MINLENGTH indicates the minimum length. Thus, when both are the same, the **full length** has to be reported; otherwise the data will be rejected. When they are not the same, any amount of characters between the minimum amount and maximum amount will be accepted.

When one or more values are specified in VALUES, only one of those specified will be allowed. If another value is reported, the data will be rejected.

When REQUIRED is 'yes', the attribute has to be reported; otherwise the data will be rejected.

(b) Detailed description

SARBForms - ROOT node

TYPE - element

NAME - SARBForms

CONTENT - eltOnly

MODEL - closed

MAXOCCURS - 1

MINOCCURS - 1

Message header. Used to indicate the start of the message.

Attributes

Reference

TYPE - attribute

NAME - Reference

DT:TYPE - string

DT:MAXLENGTH - 30

DT:MINLENGTH - 2

REQUIRED - yes

Reference meaningful to the reporting party for the particular set of forms, for example, M1 Jan 2003 1st resubmission or c:\200301\M1.

Set

TYPE - attribute

NAME - Set

DT:TYPE - string

DT:MAXLENGTH - 3

DT:MINLENGTH - 2

REQUIRED - yes

The set of forms that is being reported, for example, D1, M1 or RSH.

Period

TYPE - attribute

NAME - Period

DT:TYPE - number

DT:MAXLENGTH - 8

DT:MINLENGTH - 4

REQUIRED - yes

The period for which the form is being reported. The format is CCYYMMDD in the case of daily forms, CCYYMM in the case of monthly, quarterly and half-yearly forms and CCYY in the case of yearly forms.

Institution

TYPE - attribute

NAME - Institution

DT:TYPE - number

DT:MAXLENGTH - 7

DT:MINLENGTH - 4

REQUIRED - yes

The unique code of the reporting institution issued by the SARB.

Test

TYPE - attribute

NAME - Test

DT:TYPE - enumeration

DT:VALUES - 1 0

DT:MAXLENGTH - 1

DT:MINLENGTH - 1

REQUIRED - yes

1 or 0. When 1 = test data, 0 = production data.

SARBForm – child of SARBForms

TYPE - element

NAME - SARBForm

CONTENT - eltOnly

MODEL - closed

MAXOCCURS - *

MINOCCURS - 1

Used to indicate which form is being reported.

*Attributes***Form**

TYPE - attribute

NAME - Form

DT:TYPE - string

DT:MAXLENGTH - 7

DT:MINLENGTH - 3

REQUIRED - yes

The name of the form that is being reported, for example, D90, DI610, DI100, IBD602 or K23.

Cell – child of SARBForm

TYPE - element

NAME - Cell

CONTENT - eltOnly

MODEL - closed

MAXOCCURS - *

MINOCCURS - 1

Used to identify and indicate the value being reported for a particular cell on a particular form.

*Attributes***UniqueNumber**

TYPE - attribute

NAME - UniqueNumber

DT:TYPE - number

DT:MAXLENGTH - 7

DT:MINLENGTH - 1

REQUIRED - yes

The unique number given by the SARB to a particular cell in a particular form.

Value

TYPE - attribute

NAME - Value

DT:TYPE - number

DT:MINLENGTH - 1
DT:MAXLENGTH - 15
REQUIRED - yes

Can have one of three formats/meanings:

1. **Monetary value for a particular cell in a particular form has to be in the format of N13.2, that is, maximum of 13 numeric values followed by a point (.) followed by two decimal values, for example, 12345.67. If the decimal values are 0, they may be omitted, for example, 12345**
2. **Percentages are reported as a number, for example, 12 per cent is reported as 12.00 or 12 and 12.5 per cent is reported as 12.50**
3. **Dates are reported as a number, for example, 20020524.00 or 20020524.**

Total – child of SARBForm

TYPE - element
NAME - Totals
CONTENT - eltOnly
MODEL - closed
MAXOCCURS - 1
MINOCCURS - 1

Used to report the hash total of a particular form.

Attributes

CellCount

TYPE - attribute
NAME - CellCount
DT:TYPE - number
REQUIRED - yes

The number of cell elements in the form.

HashUnique

TYPE - attribute
NAME - HashUnique
DT:TYPE - number
DT:MAXLENGTH - 7
DT:MINLENGTH - 1
REQUIRED - yes

The unique number of the cell containing the hash total of the form.

HashTotal

TYPE - attribute
NAME - Value
DT:TYPE - number
DT:MINLENGTH - 1
DT:MAXLENGTH - 15
REQUIRED - yes

The accumulated value of all the values reported in Value for the form. It must be in the format of N13.2, for example, maximum of 13 numeric values followed by a point (.) followed by two decimal values, for example, 12345.67. If the decimal values are 0, they may be omitted, for example, 12345.

4 Example of XML file

```
<sarbforms:SARBForms Reference="BSD" Set="M4" Frequency="M"
Period="200203" Institution="1234567" Test=1>
<sarbforms:SARBForm Form="DI400">
<sarbforms:Cell UniqueNumber="25001" Value="31798976.00"/>
<sarbforms:Cell UniqueNumber="25002" Value="0"/>
<sarbforms:Cell UniqueNumber="25003" Value="3814360.00"/>
<sarbforms:Cell UniqueNumber="60063" Value="0"/>
<sarbforms:Cell UniqueNumber="60064" Value="0"/>
<sarbforms:Cell UniqueNumber="60065" Value="0"/>
<sarbforms:Total CellCount="64" HashUnique="60010"
HashTotal="4212513757.64"/>
</sarbforms:SARBForm>
</sarbforms:SARBForms>
```

5. Password-management procedures

This ANNEXURE defines the user and password-management procedures and rules for the SARBDEX system for the bank using the SARBDEX application and those using a direct link.

(i) **SARBDEX application:**

This section describes the user and password management procedures and rules for the SARBDEX application.

A bank making use of the SARBDEX Client v 1.0.27 version and higher can use the password-change facility in the options form.

Once SARBDEX Client is loaded and running, click on the **File** menu, select the **Options** menu. At the bottom of the options form, the facility to change your password is displayed.

The screenshot shows the 'Options' dialog box for the SARBDEX application. It is organized into several sections:

- Files location:** A text box containing 'C:\Program Files\SARBDEX\Data' and a 'Browse' button.
- Log file location:** A text box containing 'C:\Program Files\SARBDEX\Logfiles' and a 'Browse' button.
- Identity type:** Three radio buttons: 'Encrypted HASH' (selected), 'Encrypted Password', and 'Password only'.
- Schedule:** A 'Submit data every' spinner set to '1', radio buttons for 'Minute(s)' (selected), 'Hour(s)', and 'Day at' (with a time box set to '18:00'), and a 'Use scheduler' checkbox.
- Password:** Three text boxes for 'Current Password', 'New Password', and 'Confirm Password', and a 'Change' button.

At the bottom of the dialog are 'OK' and 'Cancel' buttons.

In the *Current Password* field, type in your current password. Then type in your new password into the *New Password* and *Confirm Password* fields,. Then click on the Change button (which will be enabled ONLY if you have typed the correct values). You will then receive an acknowledgement from the SARBDEx system indicating whether the change was successful

PLEASE NOTE: YOUR NEW PASSWORD HAS TO BE AT LEAST SIX CHARACTERS IN LENGTH AND HAS TO CONSIST OF EITHER NUMERIC OR ALPHANUMERIC VALUES ONLY.

(ii) Direct-link method

This section lists URL calls to verify and change passwords for banks using the direct-link method.

The following URL calls are available:

1. To verify the password and the Authorised Dealer Code
<https://sarbdex.resbank.co.za/banks/verifybankpassword.asp?ad={AD}&pass={PASS}>
Where {AD} is the 3 digit Authorised Dealer Code and {PASS} is the password
2. To change the password
<https://sarbdex.resbank.co.za/banks/changepassword.asp?ad={AD}&pass={PASS}&newpass={NEWPASS}&confirmpass={CONFIRMPASS}>
Where {AD} is the 3 digit Authorised Dealer Code, {PASS} is the password, {NEWPASS} is the new password and {CONFIRMPASS} is also the new password

PLEASE NOTE: YOUR NEW PASSWORD HAS TO BE AT LEAST SIX CHARACTERS IN LENGTH AND HAS TO CONSIST OF EITHER NUMERIC OR ALPHANUMERIC VALUES ONLY.

Should you experience any difficulty with the submission procedure, please contact the Business System and Technology Department's Ms Lindy Van Jaarsveld, at her e-mail address lindy.vanjaarsveld@resbank.co.za, or at telephone number (012) 313-3602, or Mr Kurt Heiz, at his e-mail address kurt.heiz@resbank.co.za, or at telephone number (012) 313-4142.