

Solix EDMS Data Masking Standard Edition (SE) 2.2

Quick Reference



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1 Solix EDMS Data Masking Standard Edition (SE)

Solix EDMS Data Masking Standard Edition (SE) ensures data security and compliance by masking sensitive data in test databases using several masking algorithms. At the same time, the referential integrity of the data is maintained to keep the application testing process seamless.

1.1 Benefits of Solix EDMS Data Masking Standard Edition (SE)

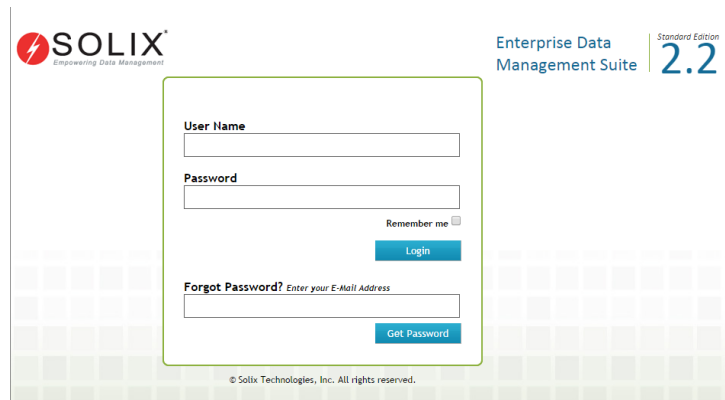
- Supports compliance with privacy legislation & policies.
- Increases protection against data theft.
- Access to data can be regulated based on user types (for example, internal users and external users).
- Provides realistic data for testing, development, training, outsourcing, data mining/research, etc.
- Enables off-site and cross-border software development and data sharing.
- Provides ability to secure the confidential and sensitive data in organizations based on standard compliance.
- Enables to preview the sample of masked data before masking the original data in the database during execution.
- Provides feasibility to view the data in the table before and after the data masking process is accomplished.



- Current version of Solix EDMS Data Masking Standard Edition (SE) supports Oracle Database (9i, 10g, and 11g), SQL Server (2005 and 2008) and Sybase ASE (15.5).
- Solix EDMS Data Masking Standard Edition (SE) does not support special data types such as 'BLOB', 'CLOB', 'LONG', 'LONG RAW', 'RAW', 'BFILE', 'XML', 'IMAGE', 'BINARY', 'VARBINARY', 'BIT', 'BINARY_FLOAT', 'BINARY_DOUBLE', 'NCLOB', 'TEXT', 'NTEXT', 'UNITEXT' etc.

1.2 Startup Solix EDMS Standard Edition (SE) Application

Once the Solix EDMS Standard Edition (SE) software is installed successfully, access the application to perform data masking process. To access Solix EDMS Standard Edition (SE), enter the respective URL = <http://<ip address>:9090/edms/> in the address bar. The **Login** screen for initiating the authentication process will be displayed as shown in the figure below.



To login to the application, enter the authenticated user name and password provided by the Solix Delivery team.

For example,

User Name: **ADMIN**

Password: **ADMIN**

1. Click **Login** to access **Solix EDMS Standard Edition (SE)**.
2. On successful login, the **Solix EDMS Standard Edition (SE)** home screen appears as shown in the figure below.




- Username and password are case sensitive.
- Based on the privileges authenticated to the login user, the authorized features will populate in the home screen respectively.

2 Data Masking process using Wizard

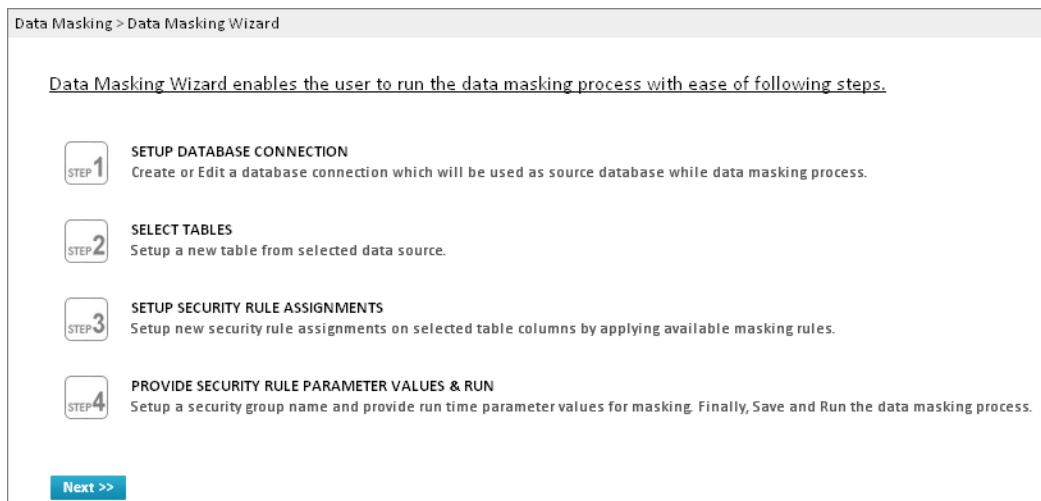
Solix EDMS Data Masking Standard Edition (SE) Wizard has been designed to provide an intuitive user friendly environment. The user is led through a step-by-step process to perform all the activities required to accomplish the data masking process efficiently.

This section outlines the procedure to setup a connection, setup tables to extract the required data for masking, setup security rule assignments to apply on the selected tables, setup run-time parameter and run the data masking process to mask the data effectively.

The screenshot shows the Solix EDMS Standard Edition 2.2 Enterprise Data Management Suite home page. The navigation bar includes 'Data Validation', 'Data Masking', 'Data Archiving', 'Data Assessment', and 'Schedule & Status'. The main content area is divided into four sections: 'DATA MASKING', 'DATA ASSESSMENT', 'DATA VALIDATION', and 'DATABASE ARCHIVING'. Each section contains a brief description, an icon, and a 'Launch' button. The 'DATA MASKING' button is highlighted with a red box and a mouse cursor. To the right, there is a 'Contact us for Enterprise Edition, which includes' section with a list of features: Solix EDMS Database Archiving, Solix EDMS Test Data Management, Solix EDMS Data Masking, and Solix EDMS Application Retirement.

To initiate the data masking process,

- In Solix EDMS Standard Edition (SE) home page, click **Launch Data Masking Wizard** button adjacent to the Data Masking. By default, the **Data Masking Wizard** initial screen will be displayed which depicts the summary of each step designed to accomplish the data masking process successfully.

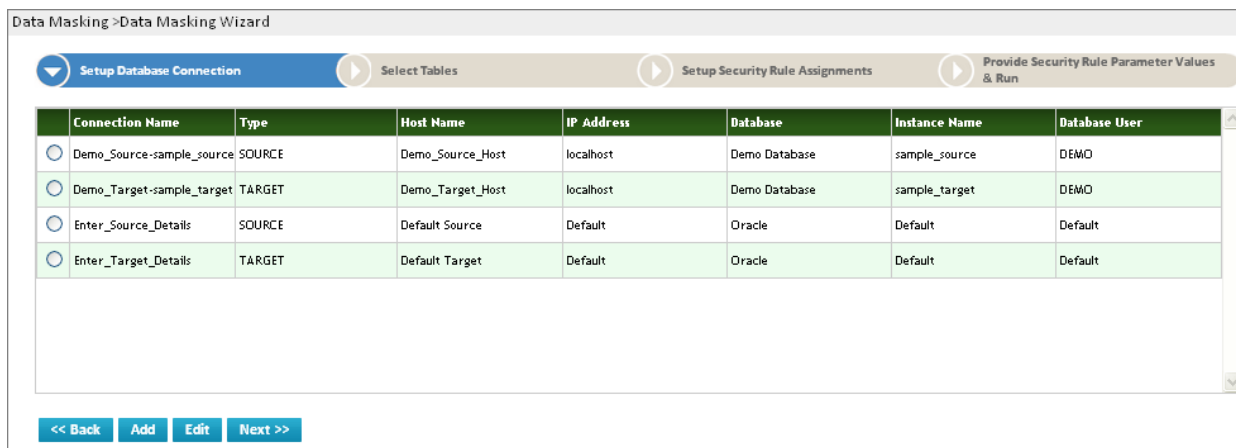


Solix EDMS Data Masking Standard Edition (SE) Wizard provides feasibility to run the data masking process and mask the data in the database with ease of four steps given below.

1. [Setup Database Connection](#)
1. [Select Tables](#)
2. [Setup Security Rule Assignments](#)
3. [Provide Security Rule Parameter Values & Run](#)

2.1 Setup Database Connection

In step 1, the user needs to configure the database connection to provide accessibility to the database. This section illustrates the process to configure the connection details in order to connect to the database and accomplish the data masking process effectively.



To setup the database connection for data masking, do the following:

1. In **Data Masking Wizard** initial screen, click **Next** button to initiate the data masking process and navigates to the first step in the wizard. The **Setup Database Connection** screen with the list of existing database connections will be displayed and provides the ability to create/edit connections.

- If the required database connection already exists, then the user can navigate to the second step by clicking **Next** button.
2. To create a new database connection, do the following:
- a. Click **Add** button (or) Hover on any existing database connection, the three links (Create Like, New and Edit) will appear to create/edit the database connection.
 - **Create Like** – enables the user to create a replica of the selected database connection. The same connections details are maintained It is recommended to define a new name for the replica.
 - **Create** - enables the user to create a new database connection.
 - **Edit** - enables the user to edit the details of an existing database connection.
 - b. The **Setup Database Connection** popup window is displayed. A new database connection can be created here as shown in the figure below.

The screenshot shows a 'Setup Database Connection' dialog box with the following fields:

- Name**: Text input field.
- Machine Name**: Text input field.
- Database**: Dropdown menu with "-- Select One --".
- Database User**: Text input field.
- Database Port Number**: Text input field.
- Description**: Text area.
- Type**: Dropdown menu with "-- Select One --".
- Host Name/IP Address**: Text input field.
- Instance Name**: Text input field.
- Database Password**: Text input field.

Buttons: Save, Cancel.

- i. Enter the name of the database connection in the **Name** text field.
- ii. Select an appropriate datasource type from the **Type** drop down list and designate the database as a source or target.
- iii. Enter the database server name associated to the datasource in the **Machine Name** text field.
- iv. Enter the host name/ IP address associated to the database server in the **Host Name/ IP Address** text field.

- v. Select the database which is compatible to the datasource from the **Database** (such as Oracle, Demo database) drop down list.
 - vi. Enter the instance name/service name of the database in the **Instance Name** text field.
 - vii. Enter the login user name of the database in **Database User** text field.
 - viii. Enter the password corresponding to the username of the database in **Database Password** text field.
 - ix. Enter the port number of the database in the **Database Port Number** field.
 - x. Enter the comments in the **Description** text box.
 - xi. Click **Save** button. Once the database connection details are saved successfully, a confirmation message is prompted in the **Setup Database Connection** screen.
3. Once database connection setup is completed successfully, click **Next** button. The **Select Tables** screen to select the table(s) for data masking will be displayed.



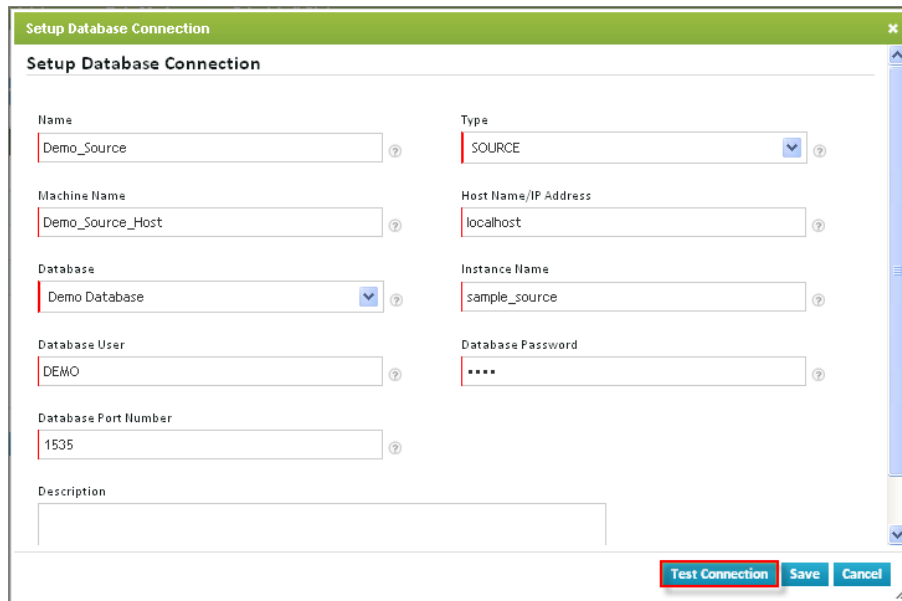
- The fields marked as ***** are mandatory fields.
- User has provided flexibility to hover on the existing database connection in order to create a replica of existing database connection (i.e., using **Create like**) and recommended to define a new name for the replica of database connection.
- Ensure that the specified databases are accessible and running.
- To navigate to **Setup Database Connection** screen from the **Setup Database Connection** popup window, click **Cancel** button.

2.1.1 Create Like, Editing or Testing the database connections

Test Connection feature is designed to provide feasibility to verify whether the connection details specified during database connection creation are valid.

To test the database connection, do the following:

1. In **Setup Database Connection** screen, hover on the database connection the needs to be verified. The three links (Create Like, New and Edit) will appears beneath the database connection.
2. Click **Create Like or Edit** button, to verify the connection details of the database connection. The **Setup Database Connection** popup window is prompted to edit /create a replica of the database connection as shown in the figure below.



3. Once the database connection details are saved successfully, in order to test the connection to the database based on the given details, click ***Test Connection*** button.
 - If the database is connected successfully, a message stating the successful connection to the database will be prompted.
 - If the database connection fails, an alert message to verify the given connection details will be prompted.



- The fields marked as ***!*** are mandatory fields.
- To create a replica of database, click ***Create Like*** link. In ***Setup Database Connection*** enter the name of the replica in the ***Name*** text field.

2.2 Select Tables

Once the database connection setup is completed successfully the user needs to select table(s) from the database to perform data masking process effectively.

Setup Database Connection | **Select Tables** | Setup Security Rule Assignments | Provide Security Rule Parameter Values & Run

Data Source
Demo_Source-demo_source-localhost (SOURCE) ?

Table Owner
DEMO_SOURCE ?

Table Name
- Select One - ?

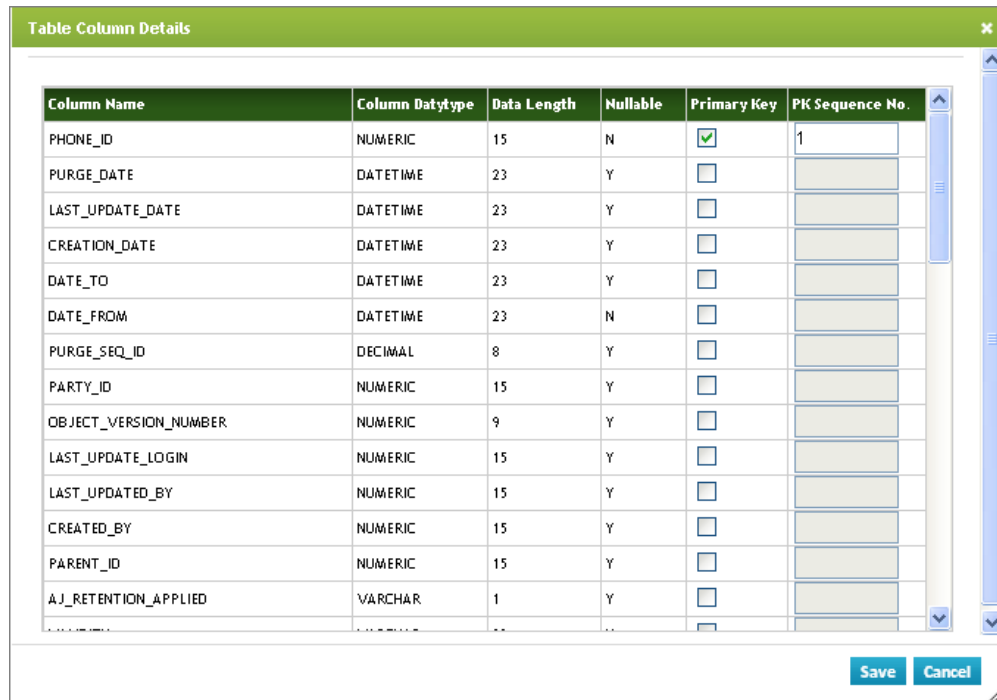
	Table Name	Table Owner	Data Source
<input checked="" type="checkbox"/>	EMPLOYEES	DEMO_SOURCE	Demo_Source-demo_source-localhost

<< Back | Add | Next >>

To select the intended table, do the following:

1. In **Select Tables** screen, select the database from the **Source Database** drop down list. Based on the database selected, the corresponding schemas/table owners will be listed in the **Table Owner** drop down list.
2. Select a schema/table owner from the **Table Owner** drop down list. Based on the schema/table owner selected, the corresponding tables will be listed in the Table Name drop down list.
3. Select the intended table from the **Table Name** drop down list.
4. Click **Add** button, to save and append the selected table information to the list. Once the information is saved successfully, a message stating “**New Table Saved Successfully**” is prompted on the screen and the respective table information will be appended to the list.
 - To view the columns that exist in the table, do the following:

- a. Hover on the table name in the list and click **Column** link. The **Table Column Details** popup window depicts the columns and comprehensive information of the column such as data type, data length as shown in the figure below.



Column Name	Column Datatype	Data Length	Nullable	Primary Key	PK Sequence No.
PHONE_ID	NUMERIC	15	N	<input checked="" type="checkbox"/>	1
PURGE_DATE	DATETIME	23	Y	<input type="checkbox"/>	
LAST_UPDATE_DATE	DATETIME	23	Y	<input type="checkbox"/>	
CREATION_DATE	DATETIME	23	Y	<input type="checkbox"/>	
DATE_TO	DATETIME	23	Y	<input type="checkbox"/>	
DATE_FROM	DATETIME	23	N	<input type="checkbox"/>	
PURGE_SEQ_ID	DECIMAL	8	Y	<input type="checkbox"/>	
PARTY_ID	NUMERIC	15	Y	<input type="checkbox"/>	
OBJECT_VERSION_NUMBER	NUMERIC	9	Y	<input type="checkbox"/>	
LAST_UPDATE_LOGIN	NUMERIC	15	Y	<input type="checkbox"/>	
LAST_UPDATED_BY	NUMERIC	15	Y	<input type="checkbox"/>	
CREATED_BY	NUMERIC	15	Y	<input type="checkbox"/>	
PARENT_ID	NUMERIC	15	Y	<input type="checkbox"/>	
AJ_RETENTION_APPLIED	VARCHAR	1	Y	<input type="checkbox"/>	

- b. Click **Cancel** button, to exit the popup window.

5. Click **Next** button, to navigate to the next step. The **Setup Security Rule Assignments** screen appears to configure an appropriate security rule on the column of the selected table to perform data masking process accordingly.



- The fields marked as **!** are mandatory fields.
- While performing data masking in other Oracle database (such as SQL Server, Sybase ASE and Demo database), it is mandatory that the table(s) selected must have atleast one Primary key column in a table. In case, if the table(s) selected does not have primary key column then the user will be restricted to proceed further and a warning message will be prompted as shown in the figure below.



Selected tables (AN_titles) should have atleast one Primary Key column before masking. Hover on table name in grid and click on Columns to set primary key columns.

2.3 Setup Security Rule Assignments

This step enables the user to assign an appropriate security rule on the required column of the selected table and mask the data that exist in the column based on the security rule applied.

To setup security rule assignment, do the following:

1. Select a table from the **Table Name** drop down list, to extract the columns of the selected table.
2. Select a column from the **Column Name** drop down list, to apply the security rule on the selected column while masking.
3. Select an appropriate masking method from the **Rule Type** drop down list.
4. Based on the column data type and rule type selected, the corresponding security rules will be displayed in the **Rule Name** drop down list. Select an appropriate security rule from the list, to perform masking based on the algorithm defined in the security rule.

For example,

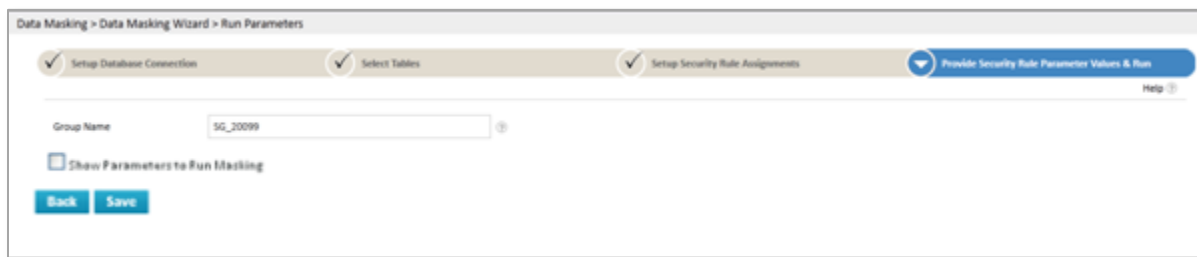
- If table column of **Numeric** type and rule type as **Masking Data** is selected, then the security rule associated to Masking and numeric data type will be displayed. (For example, Random Number (Numeric)).
5. To customize a criterion for the respective security rule assignment, select check box adjacent to the **Add Criteria** check box. Automatically, the **Criteria** text box will appear on the screen.
 - Enter the custom SQL statement in the **Criteria** text box to assign security rule on the data extracted based on the criteria exclusively.
 6. Click **Add** button to save and append the configured security rule assignment in the list. Once the security rule is assigned successfully, a message stating “**Security Rule Assignment Saved Successfully**” is prompted on the screen.
 7. Click **Next** button, to navigate to the next step to accomplish the data masking process. The security group name will be automatically generated for the respective security rule assignment in the **Provide Security Rule Parameter Values & Run** screen.



- The fields marked as **!** are mandatory fields.
- For each application/database, the total number of masking columns is restricted to only '10' in Solix EDMS Data Masking Standard Edition (SE).
- Exclusively, for table columns of **Character** type, the security rules of all the data types(i.e., character, Numeric and Date) and corresponding rule type will be displayed irrespectively.
- While masking a huge data, it is recommended to assign/setup the security rule assignment in the Security Rule Assignment screen (**Settings > Data Masking > Security Rule Assignment**). And, define the commit frequency and parallel thread to perform data masking process on the huge data efficiently. In such cases, the tables been registered in the Solix EDMS Data Masking Standard Edition (SE) Wizard will be populated automatically in the Security Rule Assignment screen to carry out the data masking process.

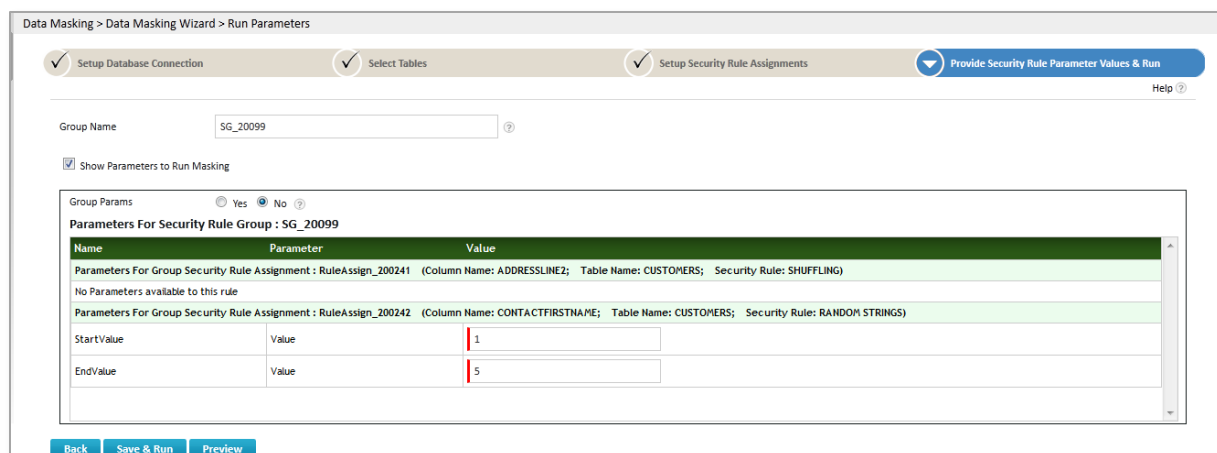
2.4 Provide Security Rule Parameter Values & Run

Once the security rule assignment is configured successfully, the security group name will be automatically generated for the respective security rule assignment in the **Provide Security Rule Parameter Values & Run** screen. This enables the user to provide the parameter value and preview the sample of masked data before executing the data masking process effectively.

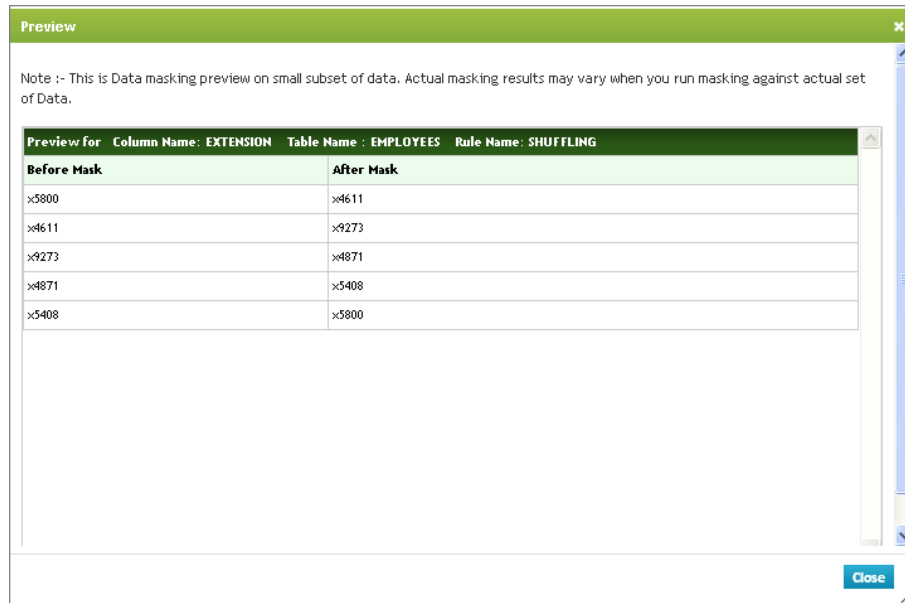


To save and execute the data masking process, do the following:

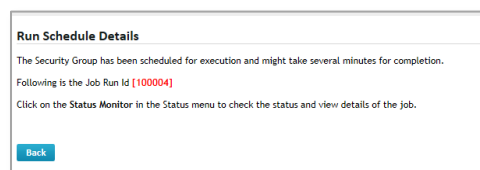
1. Select check box adjacent to the **Show Parameters to Run Masking** to enter the value of the parameter. Based on the security rule assignment, the run-time parameters will be prompted on the screen as shown in the figure below.



2. To enter the single value for a group of parameters at a time, select **Yes** option adjacent to the **Group Params.** (Or) select **No** option, to enter the value of the parameters individually.
3. Enter the value of the parameters in the corresponding fields.
 - To view the sample of masked data before masking the original data, do the following:
 - a. Click **Preview** button. The **Preview** popup window will be prompted which depicts the data of all the tables before and after masking as shown in the figure below.



- b. Click **Close** button, to navigate to the **Run Parameters** screen.
4. Click **Save & Run** button to save and execute the security group accordingly. Once the security group is executed successfully, automatically a Run ID is generated for the respective job in **Run Schedule Details** screen.



5. To monitor the status and view the details of the job, click Run ID or navigate to the **Status Monitor** screen (**Schedule & Status>Status Monitor**).



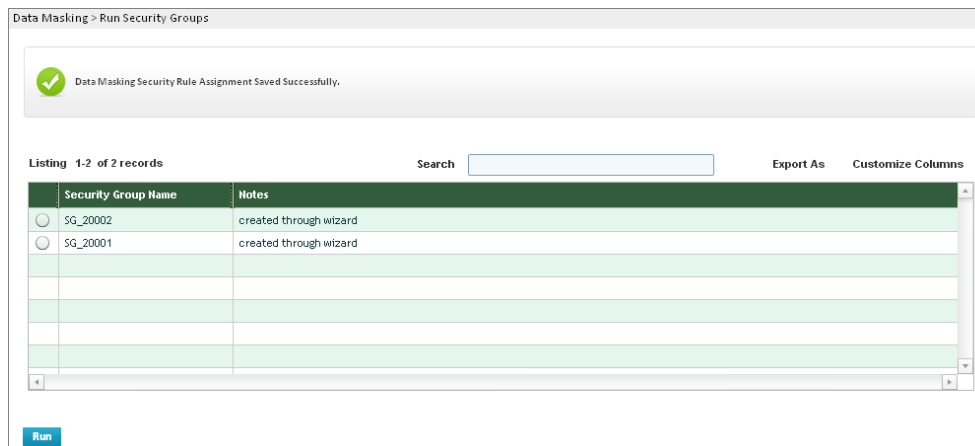
- The fields marked as **!** are mandatory fields.
- Based on the rule type and rule of the security rule assignment, the parameter will be initialized in the security group.

- To limit the rows in the preview results, set the value of mask preview rows count in ***MASK_PREVIEW_ROWS*** parameter in the ***Parameter*** screen. For example, to limit the rows to 10 then set the default value of mask preview rows count in ***MASK_PREVIEW_ROWS*** parameter to “10”. Henceforth, the Preview results screen will display 10 mask preview records exclusively.

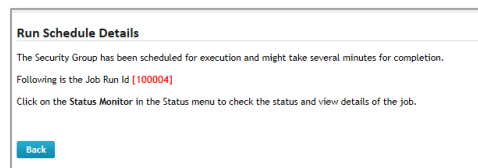
2.4.1 To Save Security group and execute it later

To save the security group and execute it later, do the following

1. In ***Provide Security Rule Parameter Values & Run*** screen, click ***Save*** button, to save the security group and append it in the ***Security Groups*** screen. The tool automatically navigates to the ***Run Security Groups (Data Masking > Run Security Groups)*** screen and a message stating “***Data Masking Security Rule Assignment Saved Successfully***” is prompted on the screen as shown in the figure below.



2. Select the intended security group and click ***Run*** button, to execute the security group for data masking process. Once the security group is executed successfully, automatically a Run ID is generated for the respective job in ***Run Schedule Details*** screen.



3. To monitor the status and view the details of the job, click Run ID or navigate to the ***Status Monitor*** screen (***Schedule & Status > Status Monitor***).

Schedule & Status > Status Monitor

Refresh | All Records

Listing 1-7 of 7 records

Search

Export As Customize Columns

Run Id	Object Name	Status	Activity	Start Date	End Date	Preview	Parameter Value	Details	Schedule Id	Log
100007	SG_20002_RuleAssign_200005	Process Completed	DATA_MASK_SCRAMBLE	13-Jul-2012 16:36:05	13-Jul-2012 16:36:06					
100006	SG_20002_RuleAssign_200004	Process Completed	DATA_MASK_SCRAMBLE	13-Jul-2012 16:36:04	13-Jul-2012 16:36:04					
100005	SG_20002_RuleAssign_200003	Process Completed	DATA_MASK_SCRAMBLE	13-Jul-2012 16:36:02	13-Jul-2012 16:36:03					
100004	SG_20002	Process Completed	DATA_MASK_GROUP_SCRAMBLE	13-Jul-2012 16:35:59	13-Jul-2012 16:36:06					
100003	SG_20001_RuleAssign_200002	Process Completed	DATA_MASK_SCRAMBLE	13-Jul-2012 15:39:27	13-Jul-2012 15:39:30					
100002	SG_20001_RuleAssign_200001	Process Completed	DATA_MASK_SCRAMBLE	13-Jul-2012 15:39:25	13-Jul-2012 15:39:27					
100001	SG_20001	Process Completed	DATA_MASK_GROUP_SCRAMBLE	13-Jul-2012 15:39:23	13-Jul-2012 15:39:30					

4. To view the job details, click Details icon adjacent to the Run ID. The Job Details screen will be displayed as shown in the figure below.

Solix Enterprise Data Management Suite - Windows Internet Explorer

http://10.2.152.197:9090/edms/jsp/ShowJobs.jsp?RUN_ID=100005&ACTIVITY=DATA_MASK_SCRAMBLE

Status > Status Monitor > Job Details

Listing 1-1 of 1 records

Search

Activity	Table Owner	Table Name	Job Seq Id	From Record No	To Record No	Activity Count	Status
SCRAMBLE	DEMO_SOURCE	EMPLOYEES	1	1	23	23	Process Completed


Close

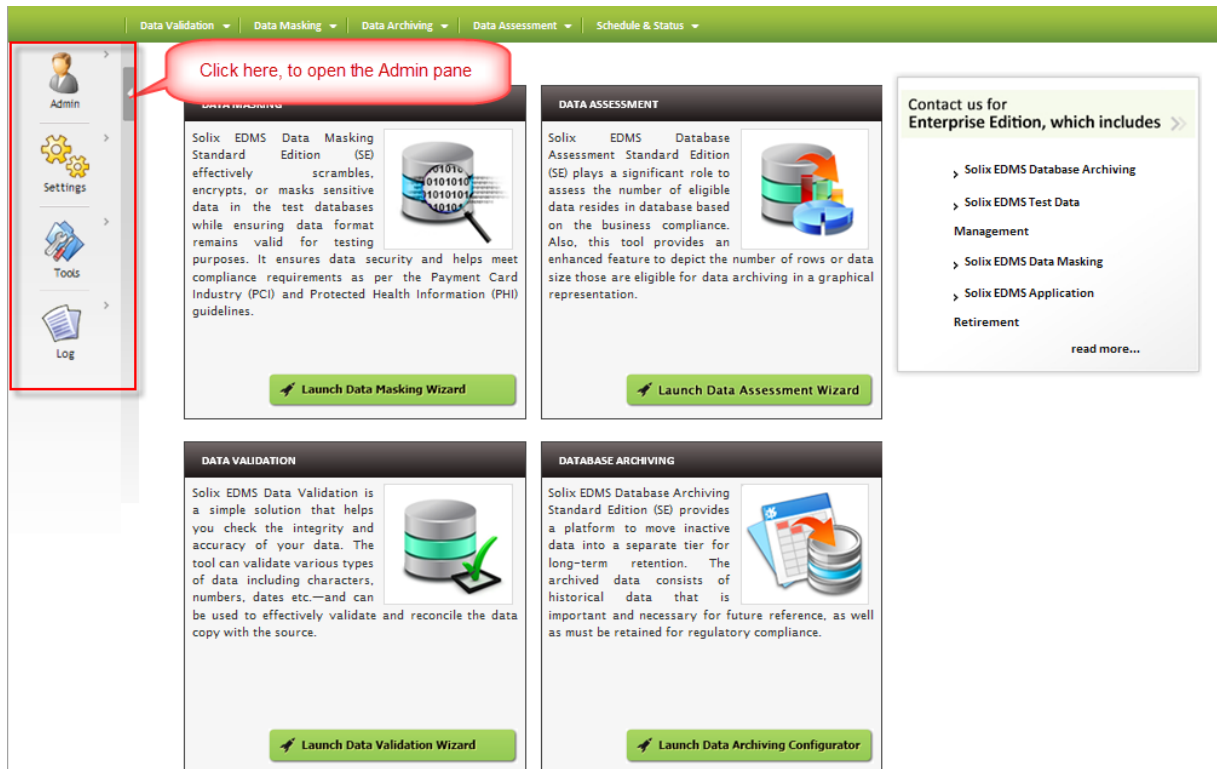


- The fields marked as are mandatory fields.

2.4.2 View Data

View Data feature provides an option to view the data existing in the table or extracted using custom SQL. Also, it provides flexibility to view the data before and after the data masking process to verify whether the data has been masked appropriately or not.

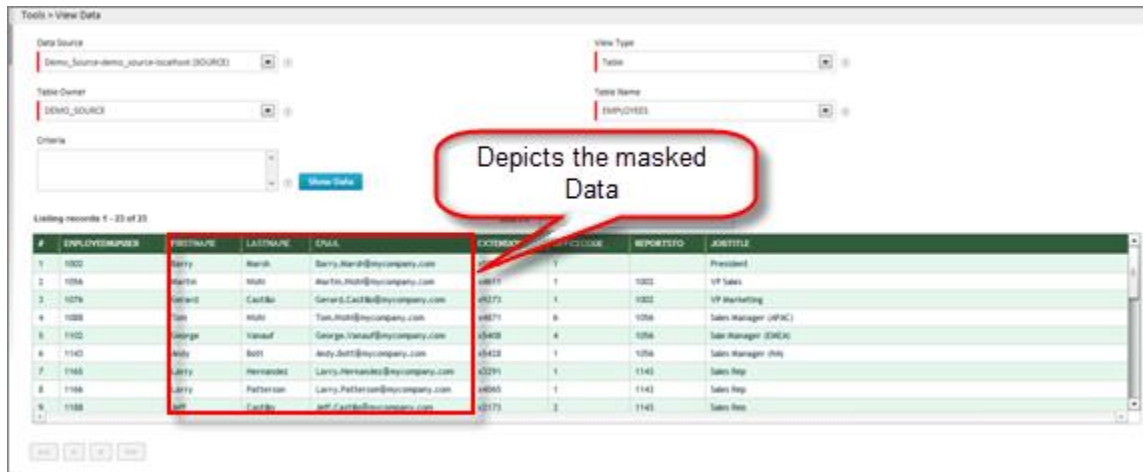
To access view data, click  bar appears on the left hand side of the screen. Once the bar is clicked, the administrative menus will be opened as shown in the picture below.



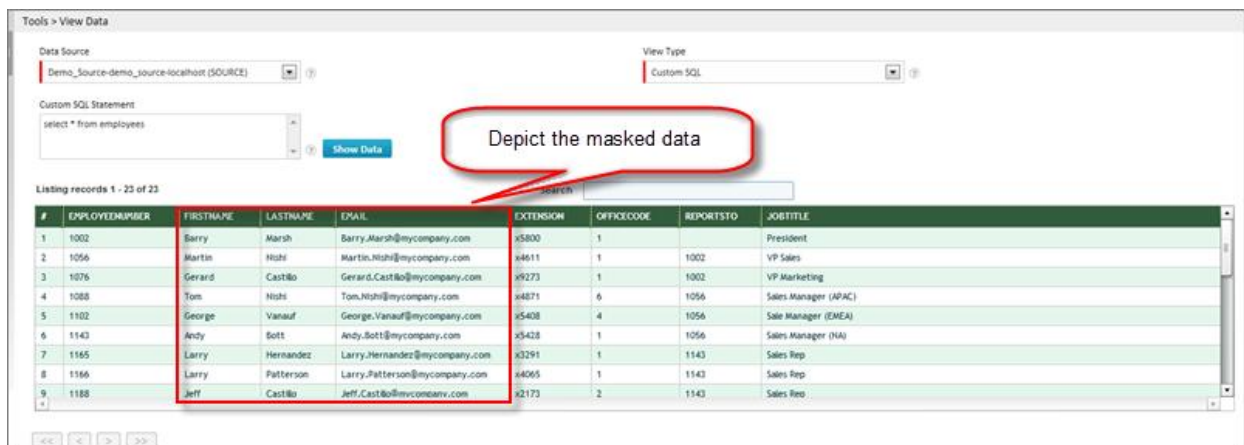
1. Navigate to the following path: **Tool > View Data**. The **View Data** screen will be displayed and it enables the user to view the data in the table.

2. Select database from the **Source Database** drop down list.
3. Select an appropriate option (i.e., Table or Custom SQL) from the **View Type** drop down list.
 - **Table** – enables the user to show all the data exist in the table.

- **Custom SQL** – enables the user to customize SQL statement to extract the data from the table and show the data extracted based on the specified SQL statement.
4. If **Table** option is selected, select appropriate information associated to the intended table in the corresponding fields (such as table owner and table name) and click **Show Data** button. The data (including masked data) in the table will be displayed beneath the fields as shown in the figure below.



5. If **Custom SQL** option is selected, the **Custom SQL Statement** text box appear on the screen. Enter the SQL Statement in the **Custom SQL Statement** text box and click **Show Data** button to show the data extracted based on the specified criteria as shown in the figure below.



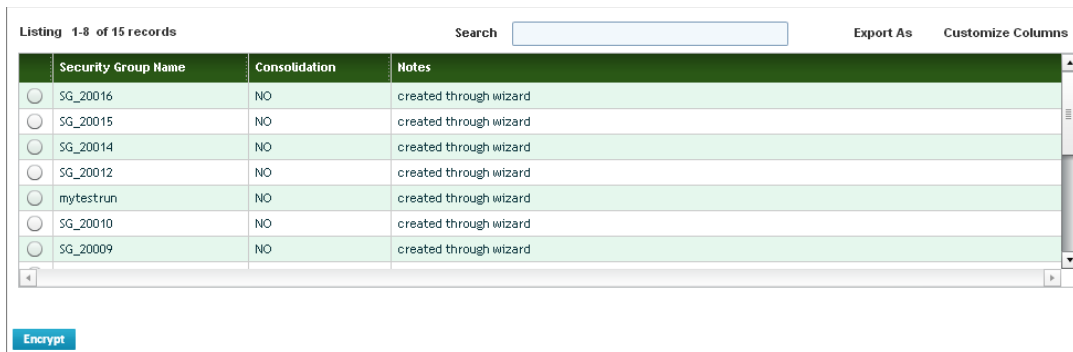
- The fields marked as ***** are mandatory fields.
- When the status of data masking turns to 'Process Completed' the user would be able to view the masked data/encrypted data in the table.

3 Rerun the Data Masking

Once the data masking is created and executed successfully, it will be automatically appended to the list of Security Groups on the **Run Security Groups** screen (**Data Masking > Run Security Groups**). This feature allows the user to rerun the executed security group recursively.

To rerun the data masking process, do the following:

1. Navigate to the following path: **Data Masking > Run Security Groups**. The **Security Groups** screen with the list of security groups created will be displayed as shown in the figure below.



Listing 1-8 of 15 records

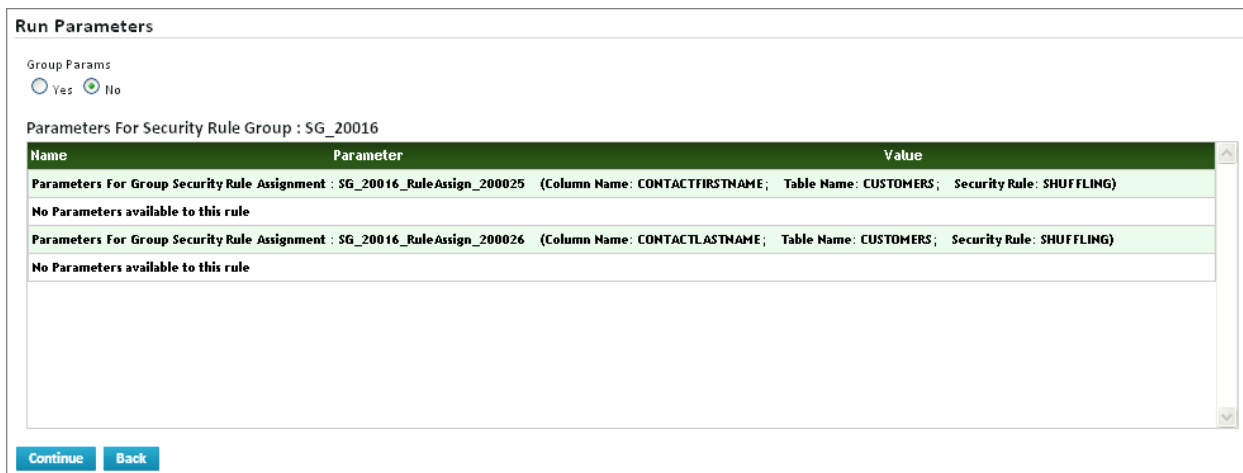
Search

Export As Customize Columns

	Security Group Name	Consolidation	Notes
<input type="radio"/>	SG_20016	NO	created through wizard
<input type="radio"/>	SG_20015	NO	created through wizard
<input type="radio"/>	SG_20014	NO	created through wizard
<input type="radio"/>	SG_20012	NO	created through wizard
<input type="radio"/>	mytestrun	NO	created through wizard
<input type="radio"/>	SG_20010	NO	created through wizard
<input type="radio"/>	SG_20009	NO	created through wizard

Encrypt

2. Select the intended security group and click **Run** button. The **Run Parameters** screen to enter the run-time parameters will be displayed as shown in the figure below.



Run Parameters

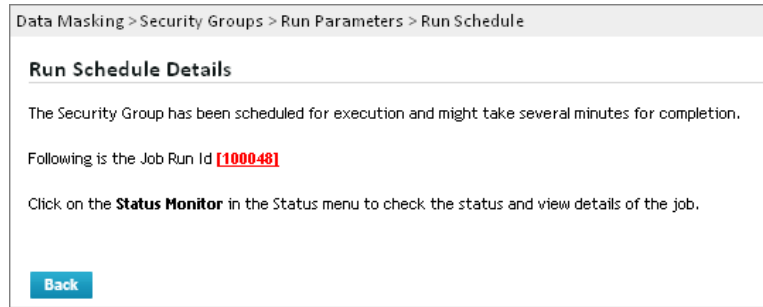
Group Params
 Yes No

Parameters For Security Rule Group : SG_20016

Name	Parameter	Value
Parameters For Group Security Rule Assignment : SG_20016_RuleAssign_200025 (Column Name: CONTACTFIRSTNAME; Table Name: CUSTOMERS; Security Rule: SHUFFLING)		
No Parameters available to this rule		
Parameters For Group Security Rule Assignment : SG_20016_RuleAssign_200026 (Column Name: CONTACTLASTNAME; Table Name: CUSTOMERS; Security Rule: SHUFFLING)		
No Parameters available to this rule		

Continue Back

3. Click **Continue** button, to execute the security group for data masking process. Once the security group is executed successfully, automatically a Run ID is generated for the respective job in **Run Schedule Details** screen.



- To monitor the status and view the details of the job, click Run ID or navigate to the **Status Monitor** screen (**Schedule & Status > Status Monitor**).

Run Id	Object Name	Status	Activity	Start Date	End Date	Preview	Parameter Value
100050	SG_20016_RuleAssign_200026	Process Completed	DATA_MASK_SCRAMBLE	03-Jul-2012 12:57:22	03-Jul-2012 12:57:23		
100049	SG_20016_RuleAssign_200025	Process Completed	DATA_MASK_SCRAMBLE	03-Jul-2012 12:57:19	03-Jul-2012 12:57:21		
100048	SG_20016	Process Completed	DATA_MASK_GROUP_SCRAMBLE	03-Jul-2012 12:57:18	03-Jul-2012 12:57:23		
100047	TEST DEMO	Process Completed	DATA_VALIDATION	02-Jul-2012 19:01:35	02-Jul-2012 19:01:42		
100046	TEST DEMO	Process Completed	DATA_VALIDATION	02-Jul-2012 18:09:29	02-Jul-2012 18:09:34		
100045	SG_20014_RuleAssign_200023	Process Completed	DATA_MASK_SCRAMBLE	02-Jul-2012 15:11:18	02-Jul-2012 15:11:20		
100044	SG_20014	Process Completed	DATA_MASK_GROUP_SCRAMBLE	02-Jul-2012 15:11:16	02-Jul-2012 15:11:20		

- Once the status of execution is '**Process Completed**' the masked data can be viewed as follows:
 - Navigate to the following path: **Tool > View Data**. The **View Data** screen displays the data in the table after data masking process.



- The fields marked as ***** are mandatory fields.
- View Data** screen provides feasibility to view the data in the table before data masking process and after data masking process to verify whether the data has been masked appropriately or not.

4 Edit the existing Data Masking

Once the security group is created and executed for data masking process successfully it will be automatically appended in the **Security Groups** screen (**Setting > Data Masking > Security Groups**). Henceforth, Solix EDMS Data Masking Standard Edition (SE) provides feasibility to edit the security group details and alter the security rule assignment details (such as rule type or rule name) in the existing security group. This section illustrates the process to modify the details/criteria in the existing security group.

To edit the existing data security group, do the following:

- Navigate to the following path: **Setting > Data Masking > Security Groups**. The **Security Groups** screen will be displayed as shown in the figure below.

Settings > Data Masking > Security Groups

Listing 1-5 of 5 records Search Export As Customize Columns

	Security Group Name	Consolidation	Notes
<input type="radio"/>	SG_20005	NO	created through wizard
<input type="radio"/>	SG_20004	NO	created through wizard
<input type="radio"/>	SG_20003	NO	created through wizard
<input type="radio"/>	SG_20002	NO	created through wizard
<input type="radio"/>	SG_20001	NO	created through wizard

4.1 Edit Security Group details

To edit the security group details, do the following:

1. In **Security Groups** screen, select the intended security groups and click **Edit** button to edit the security group details. **The Security Group Details** screen will be displayed as shown in the figure below.

Security Group Details

Security Group Name

Notes

Description

You have 978 characters remaining for your notes.

- Click **Group Assignments** button. The **Security Group Assignments** screen with the list of security rule assignments grouped in the selected security group will be displayed as shown in the figure below.

Settings > Data Masking > Security Groups > Security Group Details > Security Group Assignments

Listing 1-2 of 2 records Search Export As Customize Columns

	Group Name	Assignment Name	Sequence No	Security Rule Name	Table Name	Column Name	Decryptor
<input type="radio"/>	SG_20005	SG_20005_RuleAssign_2000	2	SUBSTRING	CUSTOMERS	ADDRESSLINE1	N
<input type="radio"/>	SG_20005	SG_20005_RuleAssign_2000	1	SUBSTRING	CUSTOMERS	ADDRESSLINE1	N

- The **Security Group Assignments** screen provides feasibility to add or delete the security rule assignments in the respective security group.



- The fields marked as ***** are mandatory fields.

5 Change Password

The default User ID and password provided by Solix Technologies logs the user in as an Admin user.

To change the password, do the following:

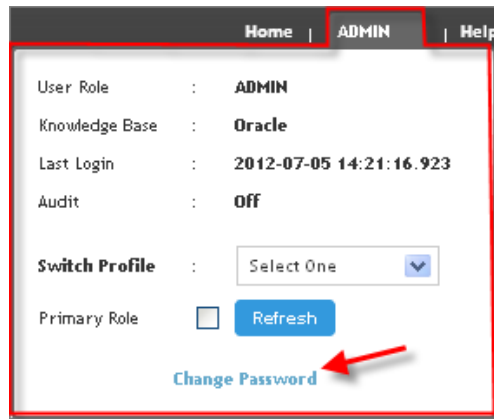
1. Login to the Solix EDMS Standard Edition (SE) using the authenticated user name and password.
2. When user wants to change the password for the first time, it is requisite to change the default email-id provided by Solix in order to send new password to the email-id specified by the user). To change user email-id,
 - a. Navigate to the following path: **Admin > Manage Users & Roles > Users**. The **User** screen will be displayed.
 - b. Select radio button adjacent to Admin and click **Edit** button. The **User Details** screen with the information associated to admin user will be displayed as shown in the figure below.

The screenshot shows the 'User Details' form for the 'Admin' user. The form is titled 'Admin > Manage Users & Roles > Users > User Details'. The 'User Details' section contains the following fields:

- First Name: Admin
- Last Name: User
- Phone: +1-888-467-6549
- Email: support@solix.com (highlighted with a red box and a callout bubble that says 'Enter user's email_id')
- Login Name (User Name): ADMIN
- Start Date: 2012/03/12
- End Date: (empty)
- Customer Name: Solix Technologies, Inc.

Below the 'User Details' section is a 'Notes' section with a 'Description' field and a character count: 'You have 1000 characters remaining for your notes.' At the bottom of the form are 'Save' and 'Back' buttons.

- c. Enter email address of the user in the **Email_id** text box.
 - d. Click **Save** button, to update the user information.
3. Once email_id of the user is changed, click **Role** (by default-ADMIN) appears at the top right corner of screen as shown in the figure below.



4. In **Role Popup** window, click **Change Password** hyperlink to change the password. The **Change Password** pop-up window will be displayed as shown in the figure below.

- Enter current password in the **Old Password** text field.
- Enter the new password in the **New Password** text field.
- Re-enter the new password in the **Confirm Password** text field.
- Enter the email address of the user in the **Email** in the text field, to send the confirmation mail.
- Click **Change Password** button. A message stating that “**Password is changed successfully**” appears and the confirmation message would be sent to the email address specified by the user.



- The field marked as ***** are mandatory fields.
- It is mandatory to enter the email address of the user in the **User Details** screen only when the password is changed for the first time.

6 Appendix

6.1 Appendix-A: Java based Algorithms

Location: Application

Java algorithms which support data masking in Solix EDMS Data Masking Standard Edition (SE) are listed in the table given below.

SECURITY RULE NAME	Data Type	DESCRIPTION
EMAIL	Character	Mask Email column value with first name, last name and domain name values in FIRST_NAME.LAST_NAME@Domainname format. Both FIRST_NAME and LAST_NAME columns should be available in same table. For example, Carl.Douglas@mycompany.com
FULL NAME	Character	Mask Full Name Value with first name and last name. Both FIRST_NAME and LAST_NAME columns should be available in same table. For example, Carl Douglas
SALARY PERCENT	Numeric	Mask Numeric value with a percentage variation of given range. For example, provide 10 percent at run time means + or -10 percent variation can be seen after masking.
SHUFFLE CHARS NUMERIC	Numeric	Mask Numeric Data by Shuffling the digits of a column value. For example, if original value is 123456789 then mask value could be 579314628.
SHUFFLE CHARS	Character	Mask Character Data by Shuffling the characters of a column value. For example, If original value is ABCDEFGH then mask value could be EGACBbfd.
NUMERIC DATA ENCRYPT	Numeric	Encrypts Numeric Column Data.
CHAR DATA ENCRYPT	Character	Encrypts Character Column Data.
TRUNCATE DATA	Character, Numeric and Date	Truncates Table Data.
MASK_CREDIT_CARD_WITH_FMT	Character	Mask Character Data with Randomly generated Credit Card Numbers (LUHN validated) based on selected Card Type with format character. For example, 4872-2670-0856-2847
MASK_CREDIT_CARD	Character	Mask Character Data with Randomly generated Credit Card Numbers (LUHN validated) based on selected Card Type. For example,

		4338818716421722
MASK_PHONE_NUMBER_WITH_FMT	Character	Mask Character Data with Randomly generated US Phone Numbers with valid area codes along with format character. For example, 443-801-1719
MASK_PHONE_NUMBER	Character	Mask Character Data with randomly generated US Phone Numbers with valid area codes. For example, 4346565661
MASK_UK_SSN	Character	Mask Character Data with randomly generated UK National Identifier. For example, KR671426W
MASK_US_SSN_WITH_FMT	Character	Mask Character Data with randomly generated US Social Security Numbers along with format character. For example, 471-56-6525
MASK_US_SSN	Character	Mask Character Data with randomly generated US Social Security Numbers. For example, 934525467
NULLING OUT	Character	Mask Character column value with null values.
RANDOM DIGITS NUMERIC	Numeric	Masking Numeric data value with randomly generated digits in the given range.
RANDOM DIGITS CHAR COL	Character	Masking character data value having numeric data with randomly generated digits in the given range.
RANDOM DATES	Date	Masking Date values with randomly generated dates in the given date range. For example, 01-JAN-2001.
RANDOM NUMBERS	Numeric	Masking Numeric Data with randomly generated numeric values in the given range. For example, 9999.
RANDOM STRINGS	Character	Masking Character Data with randomly generated character string. For example, ABCDEFGH
NUMERIC ARRAYLIST VALUES	Numeric	Masking Numeric Data with the given list of numeric values separated by comma.
STR ARRAYLIST VALUES	Character	Masking Character Data with the given list of character values separated by comma.
FIXED NUMBER	Numeric	Masking Numeric data with the given fixed numeric value. For example, 9999 (fixed value)
FIXED STRING	Character	Masking character data with the given fixed string

		value. For example, ABCDEFGH (constant value)
FIXED DATE	Date	Masking character data with the given fixed date value. For example, 01-01-2013
SUBSTRING	Character	Masking data with Substring of the each column value. For example, If original value ABCDEFGH then mask value could be ABCD.
SHUFFLING NUMERIC	Numeric	Shuffling Numeric Column Values from one row to another. For example, Row one numeric value shuffles with row “n” value.
SHUFFLING STRING	Character	Shuffling Character Column Values from one row to another. For example, Row one character value shuffles with row “n” value.
SHUFFLING STRING	Date	Shuffling Date Column Values from one row to another. For example, Row one character value shuffles with row “n” value.

6.2 Appendix-B: Database Algorithms

Location: Database (Exclusively, Oracle)



- To make use of DB algorithms to mask the data, it is mandatory to compile the following script in Oracle database where masking process is performing:
“*edms_database_security_algorithm.sql*” under ***EDMS_Home*** > ***scripts*** folder.

DB algorithms which support data masking in Solix EDMS Data Masking Standard Edition (SE) are listed in the table given below.

Security Rule Name	Data Type	Description
DB-DATE	Date	This security rule generates the value of day and month randomly in date column, whereas the value of Year remains the same (i.e., Original value)
DB-EMAIL	Character	This security rule masks the email column values based on the given First Name Column, Last Name Column and Domain name value.
DB-FULLNAME	Character	This security rule masks the Full Name based on the column values provided in the FIRST_NAME and LAST_NAME parameters. Pre-requisite: Both the parameters (for example, FIRST_NAME and LAST_NAME) provided for the Full Name should be in Source table.
DB-SALARY	Numeric	This security rule increments or decrements the column values based on the given percentage of value. For example if the user provides 10, then the column value will be incremented or decremented randomly within the range of +10 to -10. [Source Value : 1500, Masked Value : 1545]
DB-SHUFFLE	Character	This security rule shuffles the characters within a string. For example, "SOLIX" is a string and after shuffling it is masked as "XOSLI"
DB-CREDIT-CARD-ALL-MASKX	Character	This security rule masks all the Numeric Characters with X. For example, if the value is equal to 123-234, then the value after masking is XXX-XXX
DB-CREDIT-CARD-PARTIAL-MASK	Character	Mask All Numeric Characters with X apart from first 4 Characters, like 1234-5678 masks with 1234-XXXX

DB-SHUFFLE-COLUMN-CHARS	Character	Masking the table on which this security rule is assigned based on the source column value (provided during runtime). This algorithm enables the user to mask the source column value randomly by leaving the first N number of characters.
DB-RANGE-MASK-ALONG-CHILD-TABLE	Numeric	This security rule masks the column of the parent table and replicates the masked value on the child table column data.
DB-FIXED-STRING	Character	This security rule masks the column value with the given fixed string value. [Parameter Value : Blake, Source Value : Miller, Masked Value : Blake]
DB-RANDOM-CCARD-GEN	Character	This security rule generates the Credit Card Valid Number randomly as per LUHN based on Card Type selected. [Parameter Value : Visa, Source Value : 4503 8803 9903 2326, Masked Value : 4322678416974018]
DB-RANDOM-US-SSN-GEN	Character	This security rule generates the US Social Security Number randomly. [Source Value : 554-98-2445, Masked Value : 315531544]
DB-RANDOM-US-SSN-GEN-FMT	Character	This security rule generates the US Social Security Number randomly along with format character (i.e, character used as separator). [Parameter Value : - , Source Value : 554-98-2445, Masked Value : 315-53-1544]
DB-RANDOM-NUMBERS-GEN-CHAR	Character	This security rule generates random numbers within a specified range for Character datatype columns. [Parameter Values : 10000,99999 , Source Value : 34782, Masked Value : 64669]
DB-RANDOM-NUMBERS-GEN-NUM	Numeric	This security rule generates random numbers within a specified range for NUMBER datatype columns. [Parameter Values : 10000,99999 , Source Value : 34782, Masked Value : 64669]
DB-SUBSTRING	Character	This security rule generates SUBSTRING of Original Value based on provided from character value to No of characters. [Parameter Values : 1, 5 , Source Value : Debbie, Masked Value : Debbi]
DB-RANDOM-VALUE-FROM-LIST-CHAR	Character	This security rule generates a random STRING value from provided comma separated strings like abc, def, ghi. [Parameter Value : Debbie,Blake,Smith,Tunner , Source Value : Miller, Masked Value : Smith]
DB-RANDOM-DATES-GEN	Date	This security rule generates random dates within a specified DATE range. [Parameter Values : 2001-06-20,2012-06-20 , Source Value : 05/16/2012, Masked Value : 12/21/2007]

DB-RANDOM-DIGITS-CHAR	Character	This security rule generates a numeric number between given minimum and maximum digits for CHARACTER data type columns. [Parameter Values : 2, 6 , Source Value : 9785, Masked Value : 835840]
DB-US-PHONE-NUM-GEN	Character	This security rule generates random US Phone Numbers with valid area codes. [Source Value : 4085671234, Masked Value : 6498628963]
DB-US-PHONE-NUM-GEN-FMT	Character	This security rule generates random US Phone Numbers with valid area codes along with provided format character. [Parameter Value : - , Source Value : (408)5671234, Masked Value : 302-809-4281]
DB-VALUE-SHUFFLE	Character	This security rule is used to randomly generate the characters of First N Chars or Last N Chars or All Characters. For example if the Parameter values are provided as FIRST-N, 5. Then, Miller John will be masked as Ehyzfr, John
DB-FIXED-NUMBER	Numeric	This security rule masks the column value with the given fixed numeric value. [Parameter Value : 15000, Source Value : 1255, Masked Value : 15000]
DB-RANDOM-CCARD-GEN-FMT	Character	This security rule generates the Credit Card Valid Number randomly as per LUHN along with the format character (i.e., character used as separator) based on Card Type. [Parameter Values : Visa And - , Source Value : 4503 8803 9903 2326, Masked Value : 4322-6784-1697-4018]
DB-RANDOM-UK-SSN-GEN	Character	This security rule generates the UK Social Security Number randomly. [Source Value : JR567078H, Masked Value : LS648045P]
DB-RANDOM-STRINGS-GEN	Character	This security rule generates RANDOM STRING within given minimum and maximum length characters. [Parameter Values : 5,15 , Source Value : Blake, Masked Value : VxGNiUqHP]
DB-RANDOM-VALUE-FROM-LIST-NUM	Numeric	This security rule generates a random NUMERIC value from provided comma separated string like 26781, 99999, 355667, 13234. [Parameter Value : 26781,99999,355667,13234 , Source Value : 8778, Masked Value : 355667]
DB-RANDOM-DIGITS-NUM	Numeric	This security rule generates a Numeric number between given minimum and maximum digits for NUMBER data type columns. [Parameter Values : 2 , 6 , Source Value : 9785, Masked Value : 835840]

7 About Solix Technologies

[Solix Technologies](#), Inc. is a leading provider of [Enterprise Data Management](#) solutions for public and private clouds. Solix data growth solutions help businesses improve application performance, reduce storage costs and meet compliance and data privacy requirements by achieving [Information Lifecycle Management](#) (ILM) goals. The [Solix Cloud](#) provides a pay-as-you-go model for [database archiving](#) and [application retirement](#). The Solix Enterprise Data Management Suite ([EDMS](#)) software enables organizations to implement [Database Archiving](#), [Test Data Management](#) (Data Subsetting), [Data Masking](#) and [Application Retirement](#) across all enterprise data. Solix Technologies is headquartered in Santa Clara, California and operates worldwide through an established network of value added resellers (VARs) and systems integrators.

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