

ENCRYPTIK

What is Encryptik?

Encryptik is a native salesforce solution which ensures that your business data is not kept in a clear text or readable format.

Encryptik avoids and completely restricts any sensitive data kept in clear text format within your salesforce database. This prevents from data leakage if the provider infrastructure is been hacked or compromised.

It also ensures that these encrypted data is available to the authorised users for performing their day to day business operations. Though it adds an additional security, but does not hamper the day to day business operations.

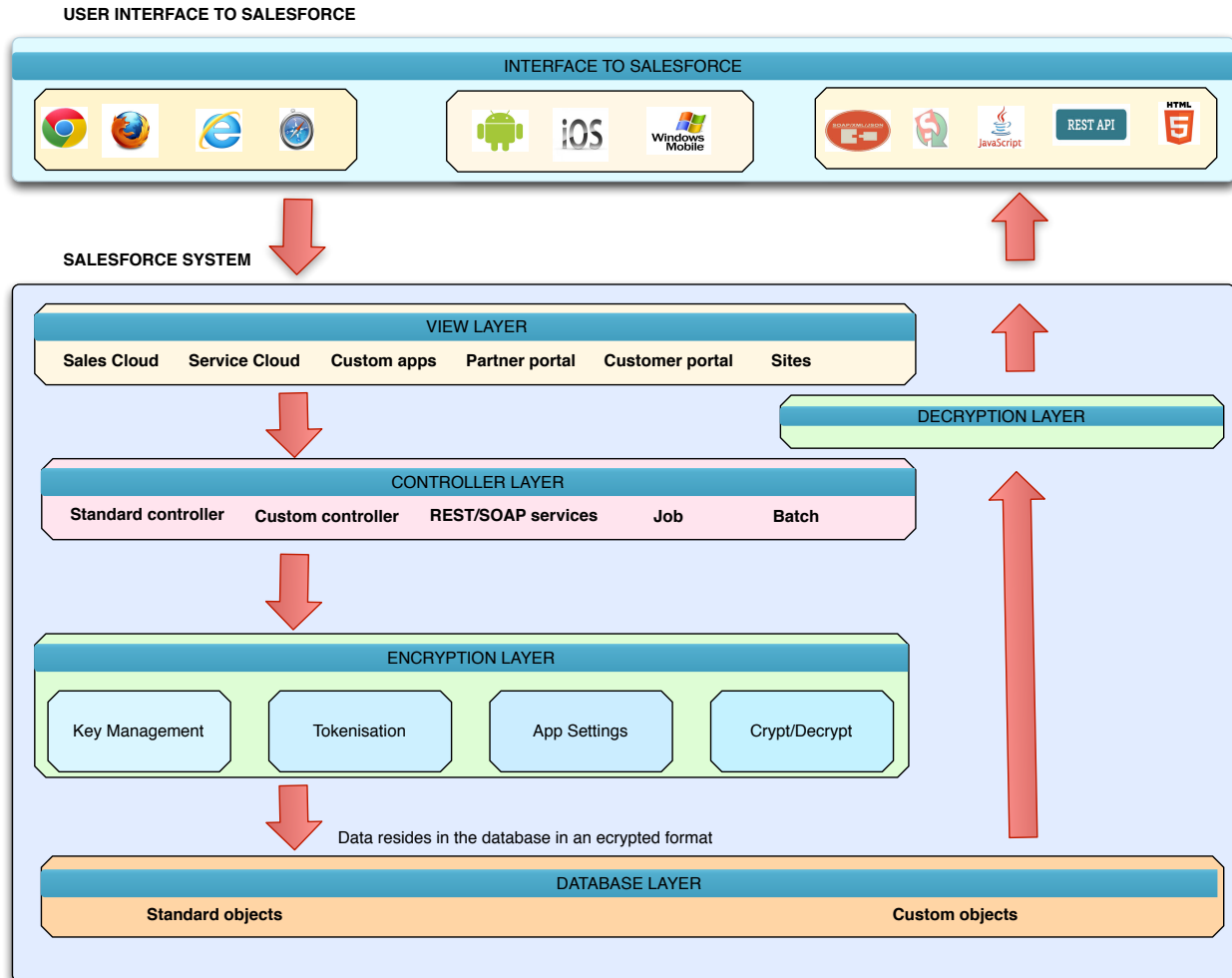
How it works?

Encryptik architecture within the salesforce system is unique and ensures total security and protect being a salesforce native app. This helps installation and setup a easy task for any admins.

Application Features

- 1) Native Salesforce/Force.com application
- 2) No additional cost on setup and administration
- 3) No external gateway required
- 4) Real-time encryption
- 5) No Latency
- 6) Tough Encryption supported
- 7) Unique and Robust key Management process
- 8) AES 256 encryption (EncryptWithManagedIV)
- 9) Tailored specifically for salesforce customers
- 10) Preserves application usability
- 11) Eliminate Compliance, Data Privacy and Security risks
- 12) Options to control visibility of data till user level
- 13) Supports entire salesforce platform (Sales, Service, Force.com, Chatter etc)

ENCRYPTIK HIGH-LEVEL ARCHITECTURE

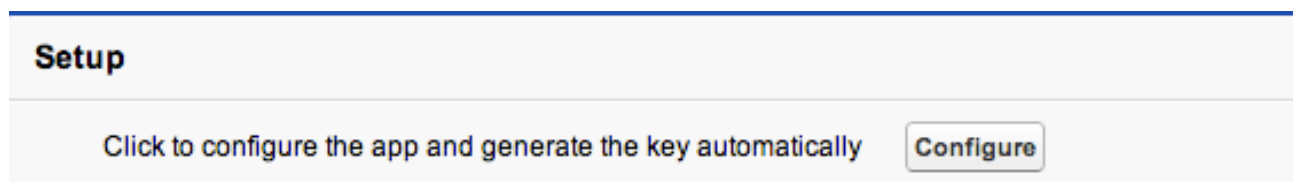


Encryption Setup

Encryptik application after installation, follow the below process.

A) Key Configuration

- 1) Go to App Setup —> Installed Packages
- 2) Click on the “ Configure” link as shown below
- 3) It would take you the the Encryptik “**Setup**” page
- 4) This page is available one time for the administrator to generate a system generated “AUTO KEY” that would be saved in a protected custom settings
- 5) This generated key would not be available for view for the admin as well. This key would be only be exclusively accessible for the application for encryption and decryption of data.



B) Object Configuration

- 1) Go to App Setup —> Installed Packages
- 2) Click on the “Configure” link as shown below
- 3) It would take you to the Encryptik “**Application Setup**” page.
- 4) Choose the Objects from the Drop down list for which Encryption has to be enabled.
- 5) The application would provide you Encryption and Decryption Steps to be done

▼ Encryption - Trigger Setup : Follow the steps to setup the Trigger for the object:

1. Copy and paste the following apex code to create a new trigger ([click here](#)).

```
trigger Account_EncryptikTrigger on Account (before insert,before update)
{CSENC.ENCServices.encryptObjectList(Trigger.New);}
```

Alternatively, you can update your existing trigger ([click here](#)) by adding the following code (at the end of the trigger body)

```
if(Trigger.IsBefore && (Trigger.IsInsert || Trigger.IsUpdate)) CSENC.ENCServices.encryptObjectList(Trigger.New);
```

▼ Decryption - VisualForce Page Setup : Follow the steps to create/update a VisualForce page

1. Copy and paste the following code after the <page> tag (line # 2) in already existing VisualForce pages([click here](#)).

```
<CSENC:Encryptik />
```

Alternatively, you can create a new detail page ([click here](#)) for the selected object with the following code. Override the View Action ([click here](#)).

```
<apex:page standardController="Account" >
<CSENC:Encryptik />
<apex:detail/>
</apex:page>
```

- 6) As directed for ENCRYPTION, copy the trigger code and click on the CLICK HERE link of the screen, that would open a new tab which will take you to the salesforce trigger creation page. If a trigger already exists for an object you can update the trigger as mentioned in the information.

Apex Trigger

Apex Trigger Edit Save Quick Save Cancel

Apex Trigger

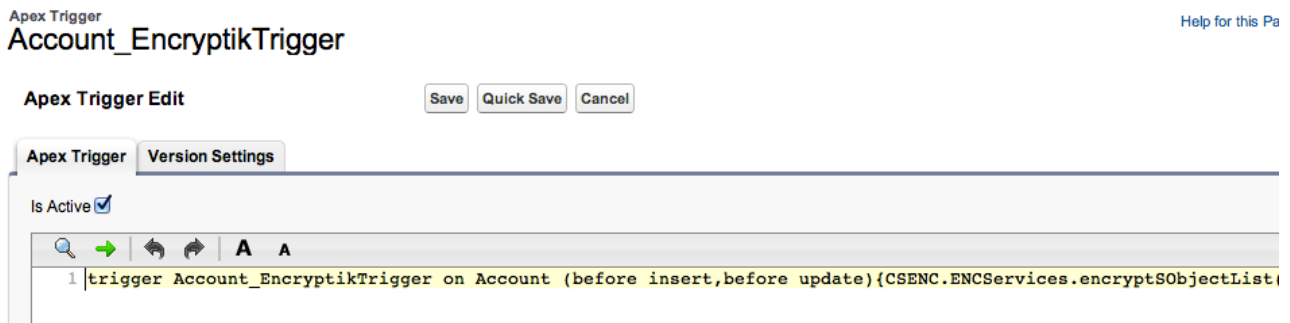
Version Settings

Is Active ☒

```
1 trigger <name> on Case (<events>) {
2
3 }
```

7) Replace the entire text with the trigger code provided and press “ SAVE”.



8) Close the tab and come back to the original Configuration page.

9) The next step is to setup the VisualForce page for the objects that are chosen for encryption to see the decrypted data.

10) For objects that already have a visual force page component, you can place the following code in the line#2 of the page tag. This will ensure that the encrypted data of the objects are decrypted and showcased.

<CSENC:Encryptik />

11) A new visual force page can be created for the encryption object for view the data.Follow the instructions as mentioned in the setup screen for creating this view page.

12) Please enter the code snippet provided in a new VF page

Visualforce Page

[Help for this Page](#)

Page Edit [Save](#) [Quick Save](#) [Cancel](#) [Where is this used?](#) [Component Reference](#) [Preview](#)

Page Information ! = Required Information

Label

Name

Description

Available for Salesforce mobile apps ☐

Require CSRF protection on GET requests ☐

Visualforce Markup **Version Settings**

A A

```
1 <apex:page standardController="Account" >
2 <CSEC:Encryptik />
3 <apex:detail/>
4 </apex:page>
```

13) After the new page has been created, the objects view has to be overridden with this page.

14) Go to Buttons, Links and Actions

Use this page to manage buttons, links, and actions.

Buttons, Links, and Actions

New Action

New Button or Link

Default Custom Links

Buttons, Links, and Actions Help

?

Action	Label	Name	Description	Type	Content Source	Icon	Overridden
Edit	Accounts Tab	Tab			Standard Salesforce.com Page		☐
Edit Del	Billing	Billing		Detail Page Link	URL		☐
Edit	Delete	Delete			Standard Salesforce.com Page		☐
Edit	Edit	Edit			Account_edit (Visualforce Page)		☒
Edit	List	List			Standard Salesforce.com Page		☐
Edit	New	New			Standard Salesforce.com Page		☐
Edit	View	View			Account_view (Visualforce Page)		☒
Edit	 XFiles Attach	XFiles_Attach		Detail Page Button	URL		☐

15) Click on Edit of the View label

16) Select Override With VisualForce Page option and select the newly created page and SAVE

Override Properties [Save] [Cancel]

Label: View
Name: View
Default: Standard Salesforce.com Page

Override With: ☐ No Override (use default) ☒ Visualforce Page Account_view [Account_view]

Comment:

17) Close the tab and come back to the original Configure page to configure the fields for the encryption

18) Select the field to be encrypted and choose the appropriate Encryption scheme as per the field type and press SUBMIT.

Account Fields					
Select	Field Label	Field Name	Field Size	Field Type	Encryption Scheme
☒	Account Phone	Phone	40	PHONE	Phone/Fax Left Encryption Scheme
☒	Billing City	BillingCity	40	STRING	-----Please Select-----
☒	Account Fax	Fax	40	PHONE	Tokenization Scheme
☐	Shipping City	ShippingCity	40	STRING	Text Type-1 Encryption Scheme
☐	Shipping State/Province	ShippingState	80	STRING	Phone/Fax Left Encryption Scheme
☐	SIC Description	SicDesc	80	STRING	Phone/Fax Right Encryption Scheme
☐	Workflow Status	CMPL123_WF_Status__c	100	STRING	URL Encryption Scheme
☐	Billing State/Province	BillingState	80	STRING	Phone/Fax Encryption Scheme
☐	Billing Country	BillingCountry	80	STRING	Text Type-2 Encryption Scheme
☐	Workflow Action	CMPL123_WF_Action__c	100	STRING	-----Please Select-----
☒	Account Name	Name	255	STRING	-----Please Select-----
☒	Account Number	AccountNumber	40	STRING	Text Type-1 Encryption Scheme
☐	Account Site	Site	80	STRING	Text Type-2 Encryption Scheme
					-----Please Select-----

- 19) **VERY IMPORTANT.** The encryption scheme once applied to a field cannot be changed. You can only enable or disable the encryption but not change the encryption scheme. Refer (Technical doc for more information on Schemes)
- 20) Ensure that the proper schemes are chosen
- 21) This process can be repeated to the other objects as well.
- 22) This completes the setup process.

Decryption Setup

A) Encrypt/Decrypt Access restrictions

Admin has option to setup users and profiles who gets access to view the encrypted data

By default, all users get to view the decrypted data unless setup in the configuration.

Admin needs to do the following to restrict the access.

- 1) Go to App Setup —> Develop —> Custom Settings
- 2) You will see the Encryptik “App Settings”. Click on Manage

New					
Action	Label ↑	Visibility	Settings Type	Namespace Prefix	Description
Manage	 App Settings	Public	Hierarchy	CSENC	

- 3) Manage would give the following details.

EditDelete

▼ Default Organization Level Value

Location [Ceptes software Pvt Ltd](#)View Encrypted Data ☐

View:

All

[Create New View](#)

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R

New

Setup Owner ↑	Location
No records to display.	

- 4) The default organization level value is set to view decrypted data. The admin can change the settings as per their business needs.
- 5) Admin can also create settings for User and Profile level by clicking the “New” button

App Settings Edit

Provide values for the fields you created. This data is cached with the application.

Edit App Settings

SaveCancel

App Settings Information

Location

✓ Profile

User

View Encrypted Data

6) Admin can setup different settings for user and profiles as needed.

B) Decryption of data

The decryption of data is supported by creating custom pages for VIEW and EDIT of the objects that are chosen for encryption. In the setup page, instructions has been provided to setup the VF components and how to use it.

For custom applications having it own VF pages and controller, needs to embed a one line code in the pages to ensure the encrypted data is decrypted. Instructions mentioned in the setup details as well.