

Lightning Web Components & User Interface API



&



"Please allow me to introduce myself"

Sympathy for the Devil - Rolling Stones



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Poll: Lightning Web Components

Lightning Web Components

Benefits

- lightweight and performant
- designed to build complex, sophisticated components & single page applications
- based on state-of-the-art web standards: ES8+, CSS3
- for building a GUI practically no specific Salesforce knowledge is required
(as long as you don't display Salesforce data ;-)

A skilled web developer can build
enthusiastic user interfaces!



But how can a skilled web developer
build enthusiastic user interfaces which
incorporate in Salesforce?

He should learn Visualforce! ;-)

The screenshot displays the Salesforce interface for a user named 'User User'. The top navigation bar includes links for Home, Chatter, Campaigns, Leads, Accounts (selected), Contacts, Opportunities, Forecasts, Contracts, Orders, Cases, Solutions, Products, Reports, Dashboards, and a 'Sales' button. A search bar is located in the top left, and a 'Sandbox' button is in the top right.

The left sidebar contains a 'Create New...' button, a 'Recent Items' list with 'Edge Communications', 'Burlington Textiles Corp of America', and 'User User', and a 'Recycle Bin' button.

The main content area shows the 'Edge Communications' account page. It features a 'Hide Feed' button, a 'Click to add topics' button, and a 'Post' section with a text input field and a 'Share' button. Below the post section, there is a 'Followers' section indicating 'No followers.' and a 'Show All Updates' link.

The 'Account Detail' section includes buttons for 'Edit', 'Delete', and 'Include Offline'. The account information is as follows:

Field	Value	Field	Value
Account Owner	User User [Change]	Rating	Hot
Account Name	Edge Communications [View Hierarchy]	Phone	(512) 757-6000
Parent Account		Fax	(512) 757-9000
Account Number	CD451796	Website	http://edgecomm.com
Account Site		Ticker Symbol	EDGE
Type	Customer - Direct	Ownership	Public
Industry	Electronics	Employees	1,000
Annual Revenue	139,000,000 €	SIC Code	6576
Billing Address	312 Constitution Place Austin, TX 78767 USA	Shipping Address	312 Constitution Place Austin, TX 78767 USA

What is Lightning?

*When we decided to rebuild our UI,
we didn't reskin it,
we built a powerful platform
that gives you even more access to customize Salesforce.
That's Lightning.*

source: <https://trailhead.salesforce.com/en/content/learn/modules/user-interface-api/get-started-with-user-interface-api>

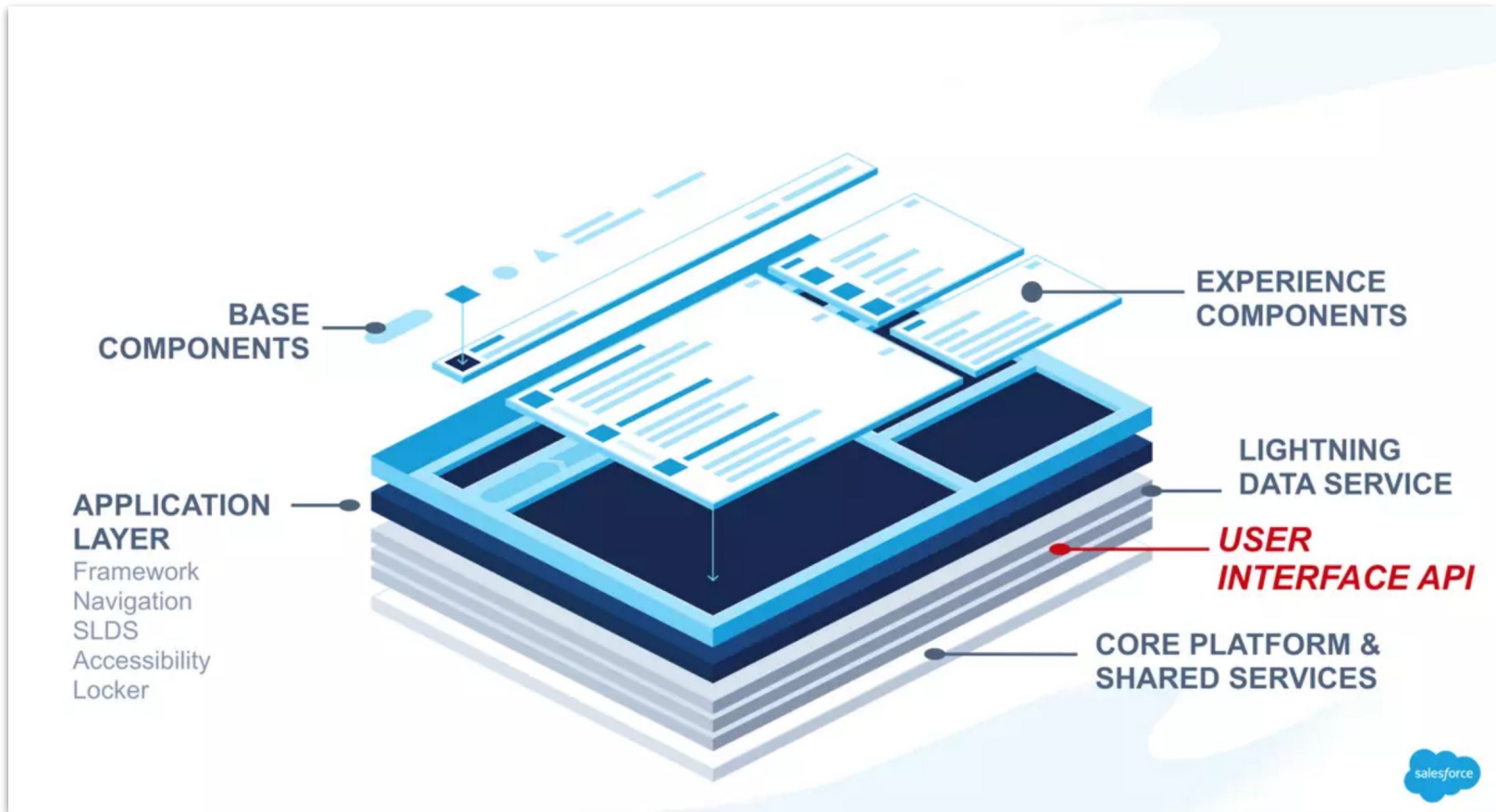


Image source: <https://trailhead.salesforce.com/en/content/learn/modules/user-interface-api/get-started-with-user-interface-api>

Poll: User Interface API

User Interface API

Overview

- REST API which returns data AND metadata
- designed to build custom applications like iOS apps
- responses from a request are in the context of the running user
- respects:
 - object permission (CRUD)
 - field level security (FSL)
 - sharing settings
 - localization

DEMO: sample request using Postman

```
1 | GET /ui-api/record-ui/001R00000003GeJ1IAK
```

Lightning Data Service (LDS)

Overview

- implementation of the User Interface API
- ground layer for Base Lightning Components
- adds caching, synchronization and error handling behaviors

Base Lightning Components

Easiest way to leverage LDS and UI-API

`<lightning-record-form>`

out-of-the-box form with support of view, edit, read-only for compact or full page layout or specific fields

`<lightning-record-edit-form>`

displays an editable form with a custom layout of fields

`<lightning-record-view-form>`

displays a read-only form with a custom layout of fields

whenever possible use Base Lightning Components!

Wire Adapter

Using prebuilt hooks into UI-API

use the @wire adapter to access User Interface API hooks:

```
import { adapterId } from 'adapterModule';
```

```
@wire(adapterId, adapterConfig)  
propertyOrFunction;
```

https://developer.salesforce.com/docs/component-library/documentation/en/lwc/lwc.reference_ui_api

▼ lightning/ui*Api Wire Adapters and Functions

Supported Objects

▼ lightning/uiListApi (Beta)

getListUi (Beta)

▼ lightning/uiObjectInfoApi

getObjectInfo

getPicklistValues

getPicklistValuesByRecordType

▼ lightning/uiRecordApi

createRecord(recordInput)

createRecordInputFilteredByEditedFields(rec...

deleteRecord(recordId)

generateRecordInputForCreate(record,objec...

generateRecordInputForUpdate(record,obj...

getFieldValue(record, field)

getFieldDisplayValue(record, field)

getRecord

getRecordCreateDefaults

getRecordUi

updateRecord(recordInput, clientOptions)

DEMO: create an own picklist field visualization

DEMO: create an own list view visualization

Conclusion

review the prebuilt Base Lightning Components when working with data

review the prebuilt hooks into User Interface API

be aware not all SObjects supported by the UI-API (like Activity, Event, Task)

Build sophisticated interfaces to thrill your users!

Resources

Wire Adapters and Functions for UI-API

https://developer.salesforce.com/docs/component-library/documentation/en/lwc/lwc.reference_ui_api

Base Lightning Components

<https://developer.salesforce.com/docs/component-library/bundle/lightning-record-edit-form/documentation>

<https://developer.salesforce.com/docs/component-library/bundle/lightning-record-form/documentation>

<https://developer.salesforce.com/docs/component-library/bundle/lightning-record-view-form/documentation>

Explore the Salesforce APIs with a Postman Collection

<https://developer.salesforce.com/blogs/2020/03/explore-the-salesforce-apis-with-a-postman-collection.html>

Sample Code and Presentation

<https://github.com/ChristianMenzinger?tab=repositories>

<https://github.com/pozil/ui-api-playground>

Winter '21 Release Notes

https://releasenotes.docs.salesforce.com/en-us/winter21/release-notes/rn_lwc_modules.htm?edition=&impact=

THANK YOU