

APPENDIX D

Preliminary Infringement Contentions for U.S. Patent 8,751,948

(Accused Instrumentalities: All SAP products using SAP Fiori technology (including Fiori versions 1, 2, 3, and/or Horizon))
(Specific products used with Fiori include at least SAP's S/4HANA, Business One, Business By Design, ECC, ERP, and all supported applications)

'948 Patent Claim 1	
1(a). An apparatus to provide secure user-centric information on at least one user platform operated by a user, and to evaluate at least some of the secure user-centric information, the apparatus comprising:	The Accused Instrumentalities are an apparatus providing secure user-centric information because they evaluate and ensure that the user information is secured and available to the user on any platform (e.g., windows computer, apple computer, android mobile device, web browser interface, etc.) via the application(s) (the “app” or “apps”) accessible through SAP Fiori. “Securing SAP Fiori system ensures that the information and processes . . . are secured without any unauthorized access to critical information.” See page 64 of SAP Fiori tutorialspoint, https://pdfcoffee.com/sap-fiori-pdf-free.html The excerpts below provide examples of how the Accused Instrumentalities evaluate and ensure that critical user information is available securely when the user uses the Accused Instrumentalities.

11. SAP Fiori – Security

Securing SAP Fiori system ensures that the information and processes support your business needs, are secured without any unauthorized access to critical information.

You must ensure that the user errors, negligence, or attempted manipulation of your system must not result in loss of information or processing time.

All these security policies should apply to all components in a Fiori system.

Managing users in SAP Fiori:

- To manage SAP Fiori transactional apps, you should have below users:
- Users in SAP NetWeaver Gateway and ABAP front-end server
- User in the ABAP back-end server

See page 64 of SAP Fiori tutorialspoint, <https://pdfcoffee.com/sap-fiori-pdf-free.html>

4/24/2024

SAP Fiori Launchpad

As the main entry point to SAP Fiori apps on mobile and desktop devices, the SAP Fiori launchpad gives users the relevant information they need at a glance and centers on their needs and how they work

SAP Fiori launchpad is a shell that hosts apps built with different UI technologies, and provides these apps with services such as navigation, personalization, embedded support, and application configuration. SAP Fiori launchpad is the entry point to apps on mobile and desktop devices.

The launchpad is a real time, role based, and personalized environment where all your SAP Fiori apps run. Navigation and search features ensure that you can quickly and effortlessly carry out your daily tasks. You can also include classic applications such as SAP GUI and Web Dynpro apps in your launchpad.



The SAP Fiori Launchpad Overview page that is available on SAP Help Portal gives you an overview and access to the documentation for the respective deliveries. The link is available in the *Related Information* section.

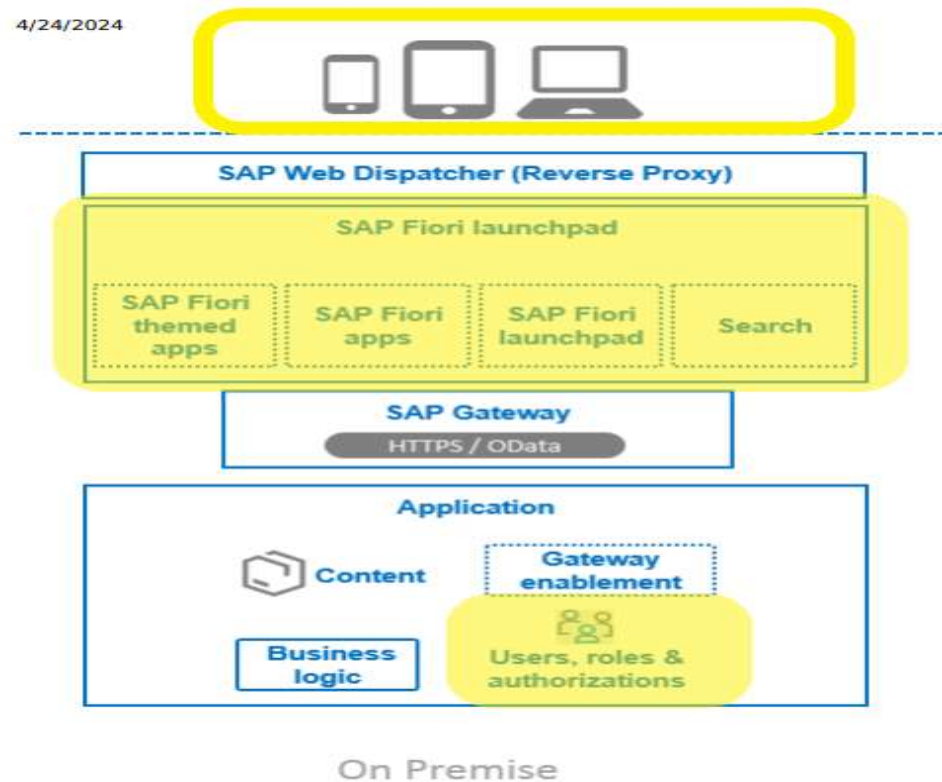
SAP Fiori Launchpad in the SAP Fiori Architecture

The following figure shows how the SAP Fiori launchpad is integrated in an SAP Fiori on premise scenario.

<https://help.sap.com/http.svc/pdfdownload?id=5713415225179543> or

https://help.sap.com/docs/SAP_FIORI_OVERVIEW/4694bb95aacb4cdfa1327c6d8735eaad/753af2c410584bc98f0363ca69a404f1.html?version=4_2020.000

4/24/2024



Related Information

[SAP Fiori Launchpad Overview Page on SAP Help Portal](#)

[SAP Fiori Launchpad](#)

<https://help.sap.com/http.svc/pdfdownload?id=5713415225179543> or

https://help.sap.com/docs/SAP_FIORI_OVERVIEW/4694bb95aacb4cdfa1327c6d8735eaad/753af2c410584bc98f0363ca69a404f1.html?version=4_2020.000

	As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
1(b). at least one communication interface facilitating wired and/or wireless communications with the at least one user platform via one or more transmission media; at least one memory storing processor-executable instructions; and at least one processor communicatively coupled to the at least one communication interface, and the at least one memory, retrieving processor-executable instructions from the at least one memory, and executing the processor-executable instructions to provide and evaluate at least some of the secure user-centric information by:	The Accused Instrumentalities include software to display SAP Fiori with application tiles on any device used by the user. "Each tile represents a business application that the user can launch." See https://experience.sap.com/fiori-design-web/launchpad/. The Accused Instrumentalities include display software for displaying SAP Fiori that can interact with any hardware, such as monitors. The Accused Instrumentalities include software to facilitate wired and wireless communications through hardware that is used, such as wired and wireless transceivers. The Accused Instrumentalities operate with software to act as memory and manage hardware memory while operating and execute the processor-executable instructions to evaluate and provide the secure information to the user on any platform that he uses. The Accused Instrumentalities also perform actions because they include software processing components for running the software and managing a hardware processor. As shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it during a user session.

SAP Fiori Launchpad | SAP Fiori x +

experience.sap.com/fiori-design-web/launchpad/

SAP Fiori for Web Design Guidelines

Search

Intro Components

Intro

The SAP Fiori launchpad is a shell that hosts SAP Fiori apps, and provides the apps with services such as navigation, personalization, embedded support, and application configuration.

The launchpad is the entry point to SAP Fiori apps on mobile and desktop devices. The launchpad displays a home page with tiles. Each tile represents a business application that the user can launch. Tiles can also display live status indicators, such as the number of open tasks. The launchpad is role-based. In other words, the user's role determines which app tiles are shown.

This article provides an overview of the main elements of the SAP Fiori launchpad.

Information With SAP UI5 1.75, we introduced SAP Fiori launchpad spaces in parallel to the SAP Fiori launchpad home page. Users can switch between the two with the user actions menu.

Home Page

The **home page** is the heart of the launchpad and the central access point for SAP Fiori apps.

The page contains tiles, which are used to launch apps and can also show additional application information. Users can personalize the home page by adding, removing, and grouping app tiles. Because the launchpad is role-based, only apps that are relevant for the user's role profile are shown.



The screenshot shows the SAP Fiori Launchpad Home Page. It features a top navigation bar with the SAP logo and a 'Home' button. Below the navigation bar, there are several tiles. The first row includes a 'My Inbox' tile with a checkmark and the number 13, a 'My Sales Orders' tile with a bar chart, and a 'My Deliveries' tile with a bar chart. The second row includes a 'Manage Sales Orders' tile with a bar chart, a 'Track Sales Orders' tile with a bar chart, a 'Sales Order Fulfillment' tile with a bar chart, a 'Confirmed Sales Order Status' tile with a bar chart, a 'Planned Delivery' tile with a bar chart, and a 'Duration Comparison' tile with a bar chart. The bottom of the page shows a row of links for 'Create Sales Order', 'Add Entry', 'Sales Order Fulfillment', 'Monitor Order Status', 'Sales Order Fulfillment', 'Monitor Order Status', and 'Sales Order Fulfillment'.

<https://experience.sap.com/fiori-design-web/launchpad/>

Furthermore, the Accused Instrumentalities include a software display to the Fiori Launchpad, which will manage a hardware display, as shown in the example below.

learning.sap.com/learning-journeys/learn-the-basics-of-sap-fiori/introducing-sap-fiori_c3915ced-ffd1-4127-a822-e217ff45fd72

SAP Learning

Browse / Learning Journeys / Learning the Basics of SAP Fiori

Introducing SAP Fiori

After completing this lesson, you will be able to:

- Identify the dimensions of SAP Fiori
- Explain the principles of SAP Fiori

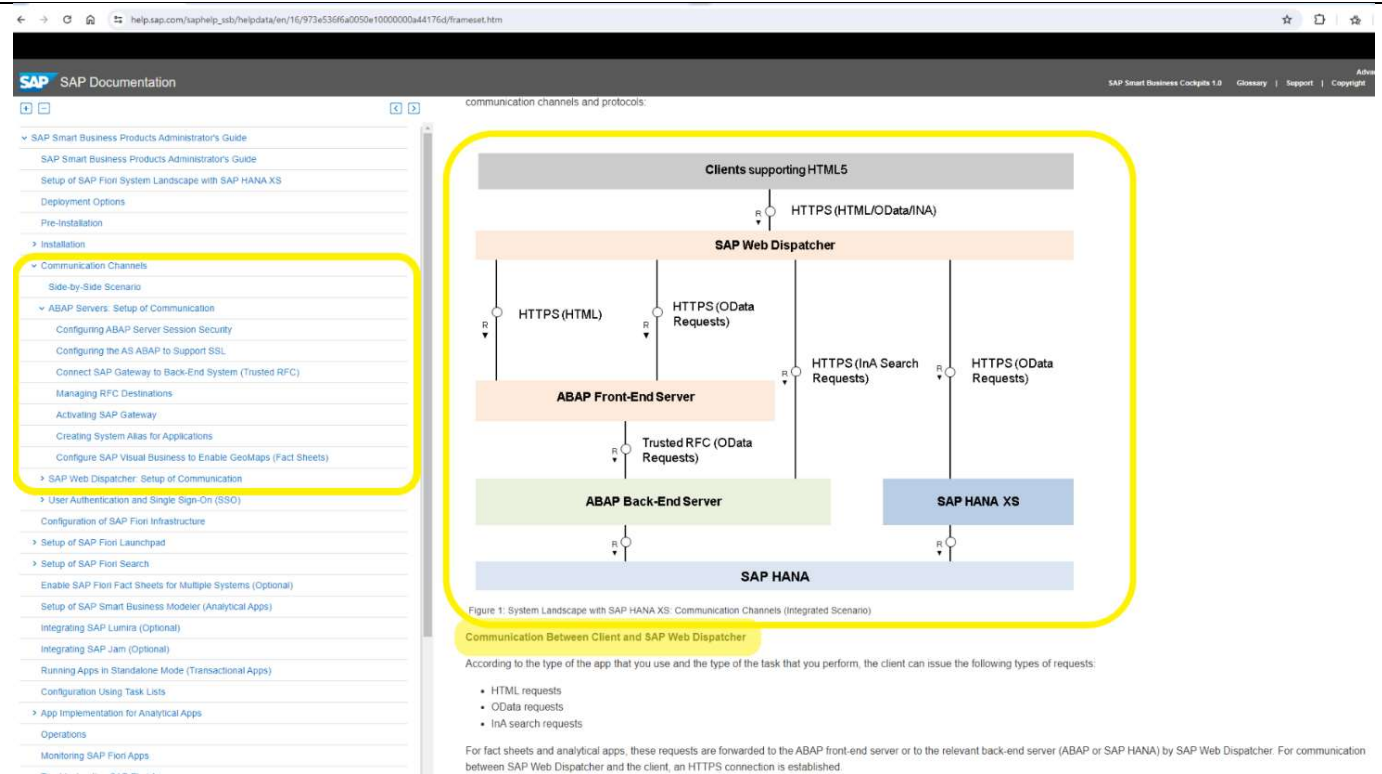
The Concept

SAP Fiori is the design language that brings great user experiences to enterprise applications based on SAP User Experience. It works seamlessly on desktops, tablets, and smartphones.

https://learning.sap.com/learning-journeys/learn-the-basics-of-sap-fiori/introducing-sap-fiori_c3915ced-ffd1-4127-a822-e217ff45fd72

The Accused Instrumentalities include software for communicating across a network. The excerpt below shows that “communication between the [user,] the front end, and the back end is established by using different communication channels and protocols” “[t]o transfer application data and security credentials within [the] SAP Fiori system landscape.”

https://help.sap.com/saphelp_ssb/helpdata/en/16/973e536f6a0050e10000000a44176d/frameset.htm



https://help.sap.com/saphelp_ssb/helpdata/en/16/973e536f6a0050e1000000a44176d/frameset.htm

help.sap.com/saphelp_ssb/helpdata/en/16/973e536f6a0050e10000000a44176d/frameset.htm

SAP Documentation

SAP Smart Business Cockpits 1.0 | Glossary | Support | Copyright | Disclaimer

Advanced Search

For communication between SAP Web Dispatcher and the ABAP servers, HTTPS connections are established.

Communication Between ABAP Front-End and ABAP Back-End Server

For transactional apps and fact sheets, data and services from the ABAP back-end server are provided to the ABAP front-end server by using OData services.

For communication between the ABAP front-end server and the ABAP back-end server, a trusted RFC connection is established.

Communication Between SAP Web Dispatcher and SAP HANA XS

For analytical apps, SAP Web Dispatcher forwards OData requests from the client to SAP HANA Extended Application Services (SAP HANA XS).

For communication between SAP Web Dispatcher and SAP HANA XS, an HTTPS connection is established.

Communication Between ABAP Back End and Map Provider

For fact sheets with integrated geographical maps, geographical coordinates and address data are transferred from the ABAP back-end server to the map provider using HTTP or HTTPS.

https://help.sap.com/saphelp_ssb/helpdata/en/16/973e536f6a0050e10000000a44176d/frameset.htm

Furthermore, the Accused Instrumentalities require the use of a hardware communication interface to connect to the internet and communicate with other systems. The Accused Instrumentalities include memory allocation in software, as well as hardware memory to store processor-executable instructions, as shown by the excerpt below:

SAP NW Installation Prerequisites

The minimum hardware requirements for SAP NetWeaver Gateway front-end server are as follows:

Requirements	Specification
Processor	Dual Core(2 logical CPUs) or higher, 2 GHz or higher
Random Access Memory (RAM)	8 GB or higher
Hard Disk Capacity	80 GB primary, or higher

See page 10 of SAP Fiori tutorialspoint (<https://pdfcoffee.com/sap-fiori-pdf-free.html>)

The Accused Instrumentalities include one processor that executes the software instructions and allows communication with the user display device, as shown by the excerpt below. The processor allows display and interaction with the secure user information.

SAP NW Installation Prerequisites

The minimum hardware requirements for SAP NetWeaver Gateway front-end server are as follows:

Requirements	Specification
Processor	Dual Core(2 logical CPUs) or higher, 2 GHz or higher
Random Access Memory (RAM)	8 GB or higher
Hard Disk Capacity	80 GB primary, or higher

See page 10 of SAP Fiori tutorialspoint (<https://pdfcoffee.com/sap-fiori-pdf-free.html>)

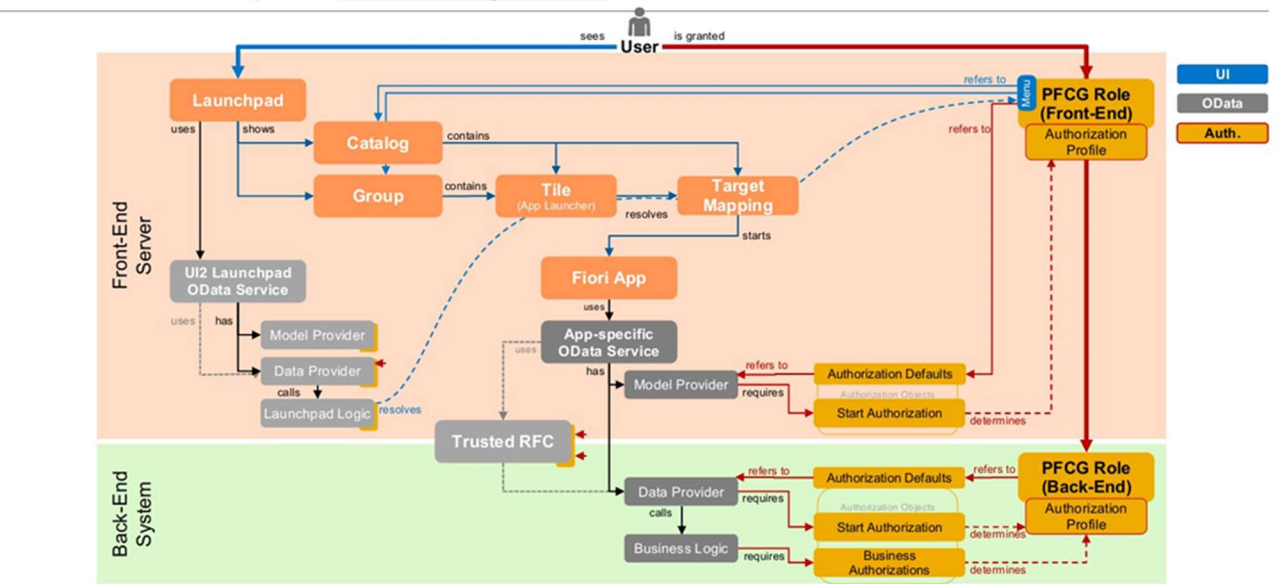
As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

1(c). A) implementing a channel grid framework including a matrix of a plurality of authorized channels through which the user receives and/or interacts with, via the at least one user platform, respective portions of the secure user-centric information based at least in part on information access rights and/or security protocols respectively associated with the plurality of authorized channels, the plurality of authorized channels including at least a first channel through which the user

The Accused Instrumentalities contain a channel grid framework (SAP Fiori) implemented for the user. The channel grid framework includes applications maintained in a matrix. The Accused Instrumentalities include SAP Fiori, which allows users to access the applications on different platforms. The user will have therefore access to all relevant information via the application(s) through SAP Fiori, and such information is provided according to the user’s authorized application(s), and access rights.

SAP Fiori Architecture

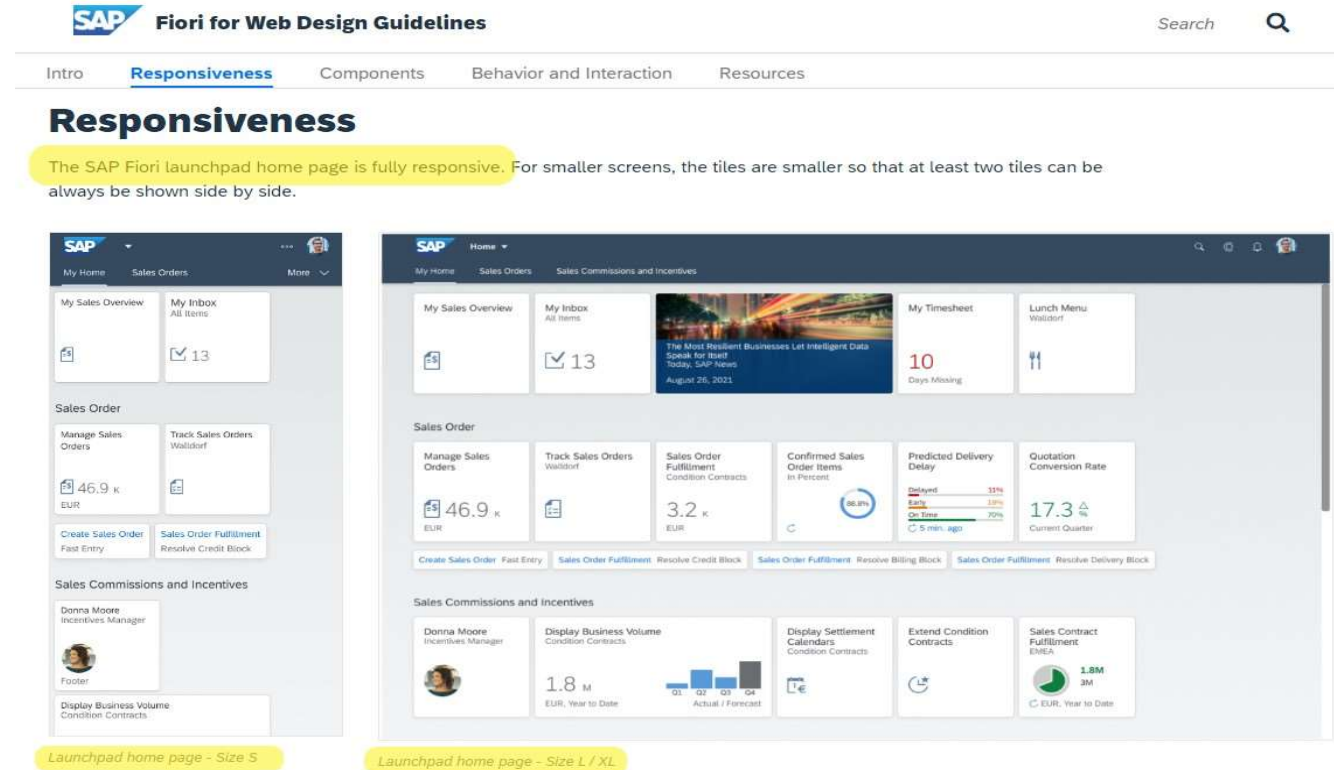
SAP Fiori launchpad - User Assignment and Authorizations of Content



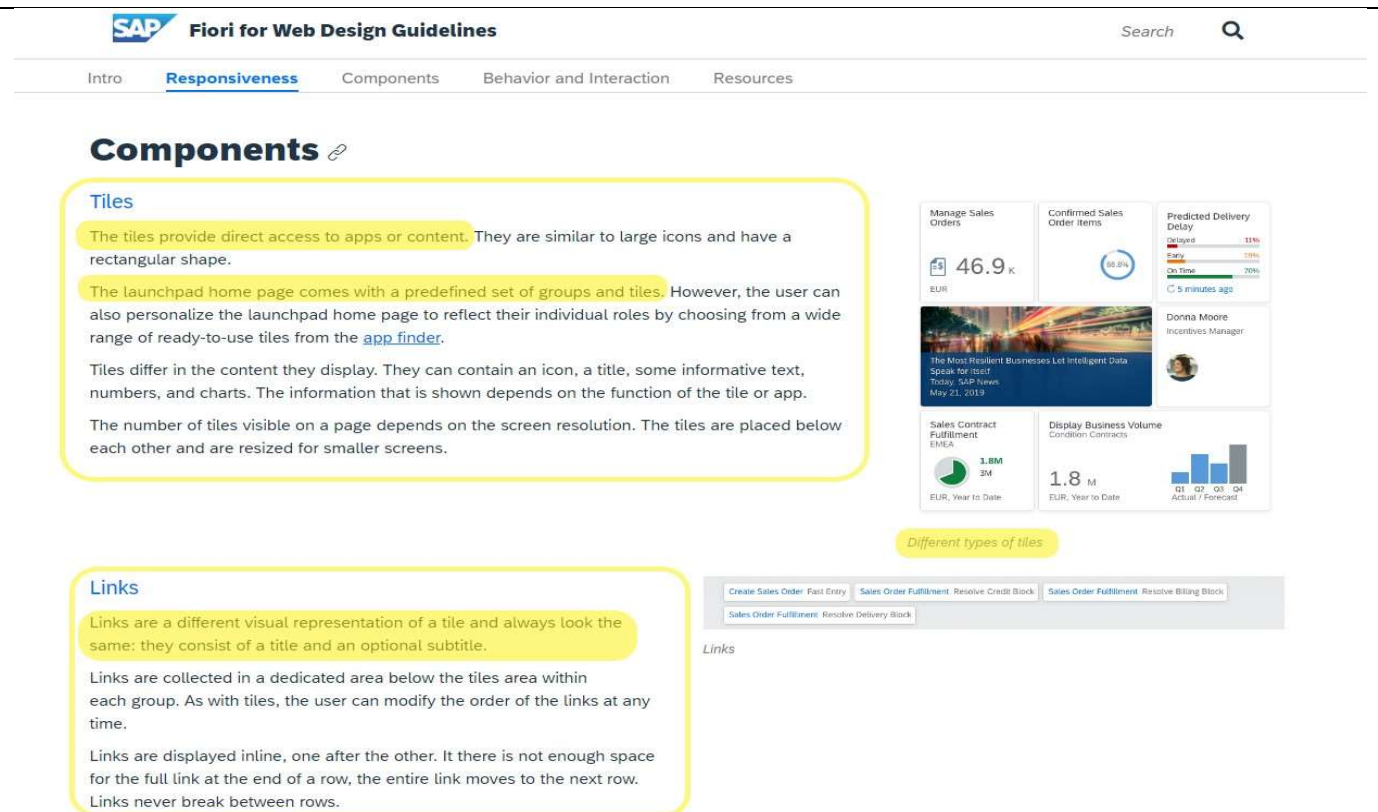
receives and/or interacts with first channel information constituting a first portion of the secure user-centric information;

See page 21 of SAP Fiori User Experience – SAP S/4HANA – Version 4.1 – August 2016, kupdf.net_sap-fiori-ux-architecture-for-s4h.pdf.

As shown by the excerpts below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an application, and that user's data can be sent to be displayed, and the user can interact with it.



See SAP Fiori Launchpad Home Page, Updated on April 17, 2023, <https://experience.sap.com/fiori-design-web/home-page/>



See SAP Fiori Launchpad Home Page, Updated on April 17, 2023,

<https://experience.sap.com/fiori-design-web/home-page/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

1(d). B) establishing a user profile to

The Accused Instrumentalities establish a user profile preference so that the user can specify his preferences, platform identities and service support instructions when setting up his user profile. The

identify user preferences, platform identities, and service support instructions that determine how the secure user-centric information behaves on the at least one user platform;

Accused Instrumentalities have instructions that specify how the secure user-centric channel behaves on a second platform because the Accused Instrumentalities include code instructions allowing the user to have the same or personalized experience (such as same design) across all the devices he is using.

The following excerpts show that the Accused Instrumentalities provide a seamless experience across the different platforms that are used by the user, based on his user profile (including role in an organization etc.) The Accused Instrumentalities use instructions specific to that platform to determine how it operates when used.

SAP Fiori Design Principles

There are five design principles for **SAP Fiori UI5**. These principles make SAP Fiori simple and decompose the different transactions into simple task based UI applications.

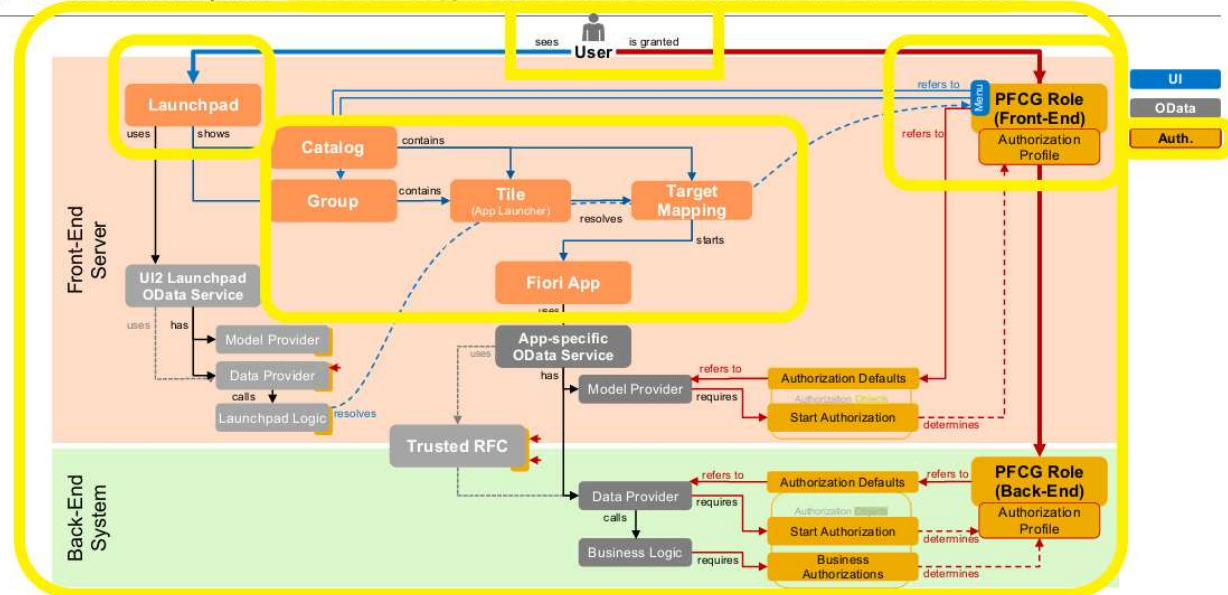
- **Role-Based** – SAP has decomposed various SAP transactions and changed them into beautiful user interactive applications that show only most relevant information to the users.
- **Responsiveness** – When SAP Fiori is combined with the power of SAP HANA, it provides an unmatched application response and query executions time.
- **Simple** – To make SAP Fiori simple to match the user demand, SAP has designed it as a **1-1-3** scenario. This means 1 user, 1 use case and 3 screens.
- **Seamless Experience** – SAP has provided all the Fiori apps based on the same language and it does not matter on the deployment and platform.
- **Delightful** – SAP Fiori was designed to work with **ECC 6.0** to make it easy for the users and to deploy on the existing SAP system.

2

See pages 2 of SAP Fiori tutorialspoint, <https://pdfcoffee.com/sap-fiori-pdf-free.html>.

SAP Fiori Architecture

SAP Fiori launchpad - User Assignment and Authorizations of Content



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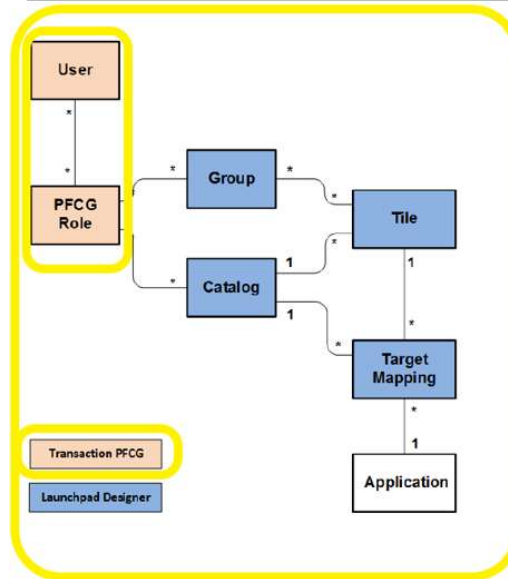
21

See page 21 of SAP Fiori User Experience – SAP S/4HANA Architecture Deep Dive, Version 4.1, August 2016,

https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf

SAP Fiori Architecture

SAP Fiori launchpad - Content Model for ABAP platform



Transaction PFCG

- Assign groups and catalogs to roles
- Roles are the means to assign catalogs and their apps to users

SAP Fiori launchpad designer (FLPD)

Content can be configured system wide (configuration) or client specific (customizing):

- Target Mapping: maps navigation intent to concrete (logical application/target)
- Tile: used to launch an application from the homepage
- Catalog: set of applications a user can use and add to his homepage
- Group: predefined set of tiles a user sees on his homepage

See page 19 of SAP Fiori User Experience – SAP S/4HANA Architecture Deep Dive, Version 4.1, August 2016,

https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf

SAP Fiori User Roles

Lines of Business

Finance  - Accounts Payable Accountant - Accounts Payable manager - Accounts Receivable Accountant - Accounts Receivable Manager - Cash Manager - Controller - G/L Accountant Manager - Access Control Administrator - Financial Close Manager - Employee - Senior Executive	Human Resources  - Employee - Manager	Sales & Marketing  - Sales Representative (CRM/ SD) - Sales Manager - Internal Sales Representative (SD) - Marketing Manager - Marketing Executive - Marketing Expert - Contract Accounts Receivable Manager	Procurement  - Purchaser - Inventory Accountant - Employee - Manager - Strategic Purchaser	R&D, Engineering  - Project Manager & Planner - Program Manager - Project Team Member - Engineer
	Asset Management  - Maintenance Worker & Planner - EHS-Production Worker - EHS-Foreman		Supply Chain  - Supplier - Supply Planner - Supply Chain Analyst - Transportation Manager - Warehouse Manager - Shipping Specialist - Product Manager - Data Scientist - ATP Controller - Local Demand Planner	Manufacturing  - MRP Controller - Quality Engineer - Production Planner - Production Worker/Supervisor - Recipe Developer - Demand Planner

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Customer

6

See page 6 of SAP Fiori UX, App Overviews, December 2014,

https://experience.sap.com/files/SAPFiori_AppOverviews.pdf

SAP Fiori Architecture

SAP Web IDE - Key Use Cases



- Develop new SAP Fiori and SAPUI5 applications
- Extend SAP Fiori apps
- Develop SAPUI5 mobile hybrid applications (using Hybrid Application Toolkit plug-in)
- Extend the SAP Web IDE with new plug-ins and SAP Fiori Elements
- Seamlessly deploy to run on any device – automatic rendering for phone, tablet, desktop
- Deploy to SAP HANA Cloud Platform, SAP Mobile Platform or ABAP

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https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf

SAP Fiori provides all business roles in real time on compatible hand devices. It offers business roles on easy to use functions, simple with unmatched responsiveness on desktop, smartphones and Tablets.

SAP Fiori enables multiple device applications that allow users to start a process on their desktop/laptops and to continue that process on a smartphone or on a tablet. SAP has developed Fiori Apps based on User interface UI5.



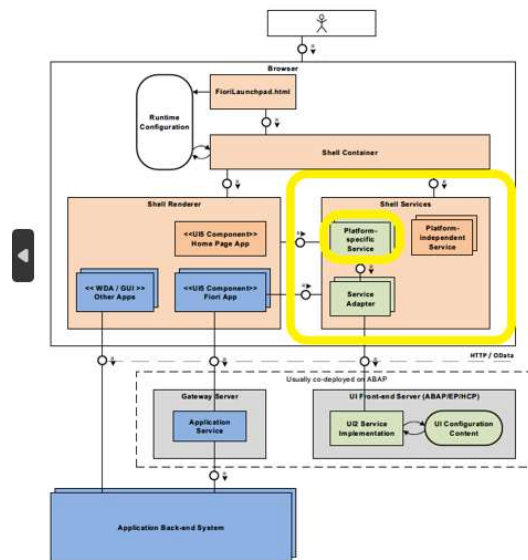
When SAP Fiori is combined with the power of the SAP HANA, it provides an unmatched application response and query-execution time. SAP Fiori user experience (UX) is used to provide a personalized and role-based user experience for enterprise-wide engagement across lines of business.

https://www.tutorialspoint.com/sap_fiori/sap_fiori_introduction.htm#:~:text=SAP%20Fiori%20enables%20multiple%20device,smartphone%20or%20on%20a%20tablet;

See also Page 2 of SAP Fiori tutorialspoint, pdfcoffee.com_sap-fiori-pdf-free.pdf

SAP Fiori Architecture

SAP Fiori launchpad - Architecture



SAP Fiori launchpad is a runtime container supporting intent-based navigation for

- SAPUI5 Components
- Web Dynpro ABAP or SAP GUI apps
- External URLs

It provides **platform-independent** service APIs with adapters for different front-end servers (ABAP, SAP Enterprise Portal, SAP HANA Cloud Platform) and local consumption (Sandbox for testing in SAP Web IDE, mobile offline).

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See page 18 of SAP Fiori User Experience – SAP S/4HANA – Version 4.1 – August 2016,

[kupdf.net_sap-fiori-ux-architecture-for-s4h.pdf](https://kupdf.net/_sap-fiori-ux-architecture-for-s4h.pdf)

While this element is literally met, to the extent that Defendants contend that this element is not literally met, it is at least met under DOE. Specifically, the Accused Instrumentalities perform the same function as this claim element because they maintain profiles for users that allow for customization for the particular user, and this customization includes information about the user, information about the platform the user is using, and information about the applications being used by the user is intended to behave for that user. The Accused Instrumentalities perform this function in the same way because they store data about the user in the user profile that and be accessed between platforms. This has the same result because the user profile can be used to set up the Accused Instrumentalities in the manner specified, including how the applications behave for the user.

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

1(e). C) receiving configuration data indicating one or more user preferences regarding alerts transmitted via the first channel based on the user profile;

The Accused Instrumentalities receive configuration data indicating the user's preferences regarding notifications transmitted via the app based on the user's profile.

The following excerpts show that the Accused Instrumentalities display notification alerts based on the configuration data related to the user profile. These alerts are shown in the channel in the Accused Instrumentalities and are configured in the user's profile. "[The user] can personalize various preferences relating to which notifications [the user] want[s] to receive, and how, and where they are displayed in the launchpad" by setting his notification preferences accessible via his SAP Fiori account.

The screenshot displays the SAP Fiori Launchpad documentation page. The sidebar on the left shows a tree view with the following structure:

- SAP Fiori Launchpad
 - What's New
 - SAP Fiori Launchpad Features
 - Administration Guide
 - User Guide
 - About the Launchpad
 - Using the Launchpad
 - Personalizing and Adapting Apps
 - Personalizing the Launchpad
 - Personalizing the Home Page
 - Adding Apps to Your Launchpad
 - Managing Your Settings
 - Maintaining your Default User Values
 - Setting Notification Preferences** (highlighted)
 - Developer Guide
 - Security Aspects
 - Troubleshooting

The main content area is titled "Setting Notification Preferences". It includes the following text:

The launchpad displays notifications that are related to your business role, such as leave requests or purchase orders. You can personalize various preferences relating to which notifications you want to receive, and how and where they are displayed in the launchpad.

Some of the notification preferences that you set affect all types of notifications, while others are specific to a notification type.

To access your notification preferences, in the Me Area, open **Settings > Notifications**.

General Preferences

The following settings affect all notifications, regardless of their notification type:

Setting	Description
Show High-Priority Alerts	If you are working in an app, the Me Area, or the app finder, a popup notifies you immediately when you receive a high-priority notification. When this setting is off, you will only see the high-priority notification when you are back in the home page view.
Show Preview in Home Page	Displays a preview panel on your home page showing your most recent notifications. This saves you from having to open the Notifications area to see your latest notifications.

Note
If you cannot see this setting, your administrator may not have enabled it.

On this page:

- General Preferences
- Preferences for Specific Notification Types
- Related Information

Was this page helpful?

Yes No

https://help.sap.com/docs/ABAP_PLATFORM_BW4HANA/a7b390faab1140c087b8926571e942b7/efec622a9eed4217a0a3fb6255801e41.html

The screenshot shows the SAP Help Portal interface for the topic 'Managing Your User Account'. The page has a dark header with the SAP logo and navigation links. The main content area is titled 'Managing Your User Account' and includes a search bar. The left sidebar lists various topics, with 'Notification Preferences' selected and highlighted in yellow. The main content area is titled 'Notification Preferences' and contains text about configuring account-level notifications. A yellow box highlights the 'Notification Preferences' section in the main content area. The right sidebar has a 'Was this page helpful?' poll with 'Yes' and 'No' buttons.

Managing Your User Account 2402

Notification Preferences

The **Notifications** tab on the **Account Settings** page lets account administrators configure account-level notifications. You can manage notification settings for SAP Business Network, SAP Business Network Discovery, SAP Ariba Sourcing, and SAP Ariba Contracts from one location.

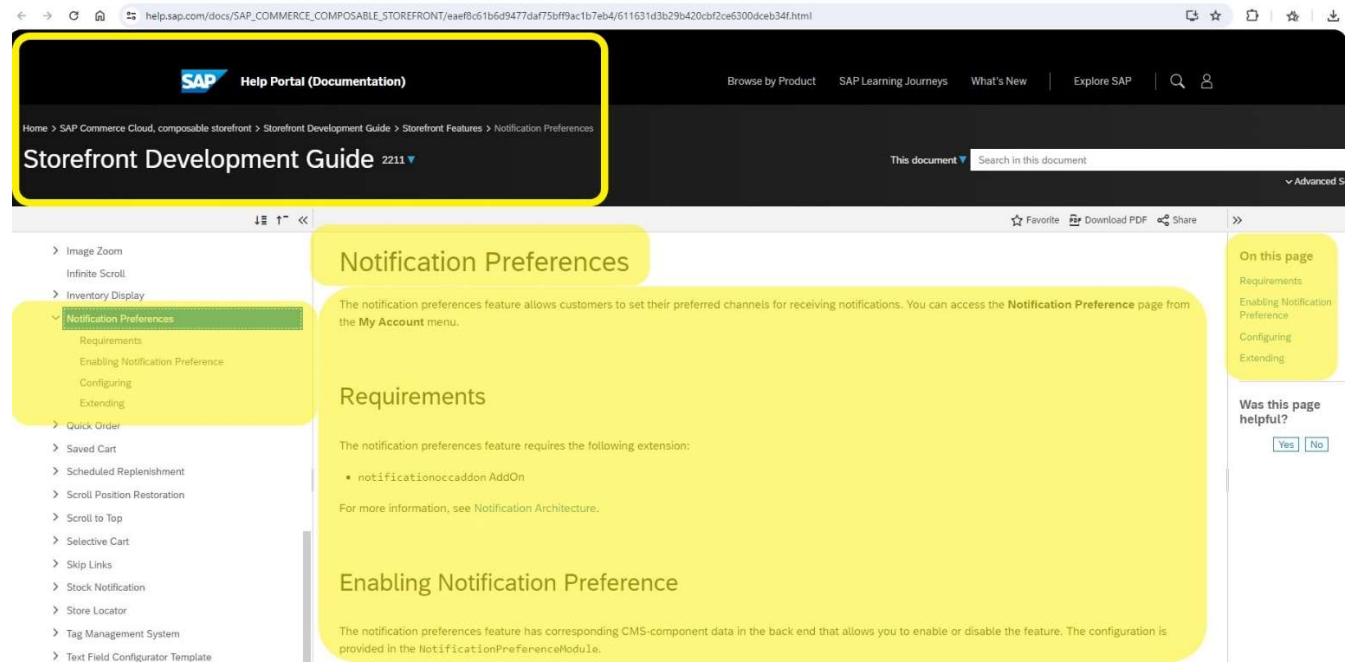
Depending on your permissions, you can configure user level, automatic notifications when certain events affect your account. You can use these notifications to monitor catalog access activity and debug problems with your account. The **Tasks** area on the **Home** dashboard displays other notifications.

Notification Types

Setting Notification Preferences

Was this page helpful?
Yes No

<https://help.sap.com/docs/business-network-for-trading-partners/managing-your-user-account/notification-preferences>



https://help.sap.com/docs/SAP_COMMERCE_COMPOSABLE_STOREFRONT/eaef8c61b6d9477daf75bff9ac1b7eb4/611631d3b29b420cbf2ce6300dceb34f.html

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

1(f). D) receiving session data indicating a current state of at least one external device of the user;

The Accused Instrumentalities receive session data (including tracking data, certificates and tokens, session cookies) indicating the current state of any device of the user (e.g., windows computer, apple computer, android mobile device, web browser interface, etc.). The Accused Instrumentalities receive session data that will track the status of these devices, including interactions by the user and their availability.

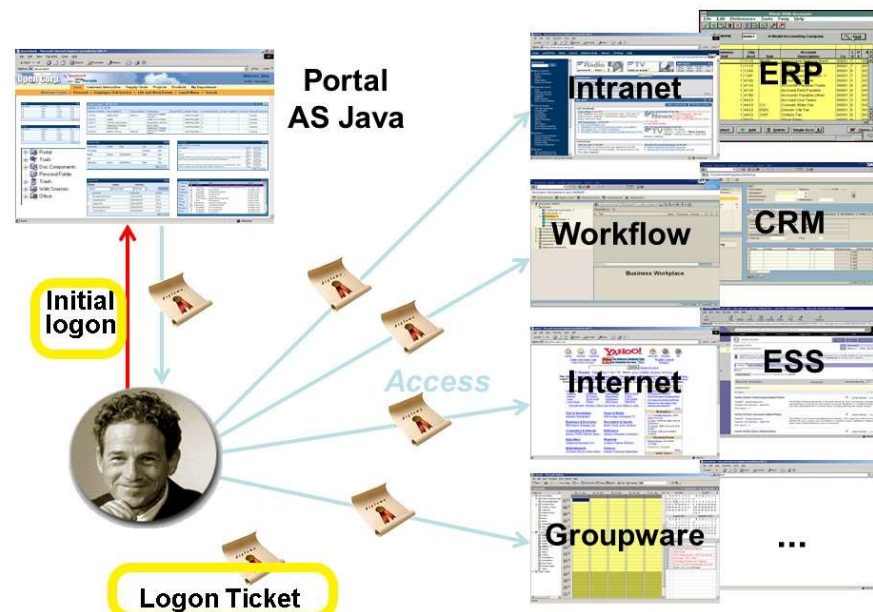
The following material regarding the Accused Instrumentalities shows that they receive session data in the form of logon tickets that indicate the current status of any platform associated with the user.

(1) SAP Logon Tickets - https://www.tutorialspoint.com/sap_security/sap_security_logon_tickets.htm

“[T]he digitally signed SAP logon tickets [can be] configure[d] with a Single Sign-On to access integrated applications in a SAP environment. [A portal can be configured] to issue SAP logon tickets to the users and the users need to authenticate this system for initial access. When SAP logon tickets are issued to users they are saved in web browsers and allows the user[s] to login to different systems with use of SSO.”

Logon Tickets

For user authentication to multiple systems, SAP NetWeaver enables you to configure the use of logon tickets. You can use logon tickets to provide and administer user authentication based on cookie technology for complex system landscapes. For an overview of the authentication process when using logon tickets, see the figure below.



https://help.sap.com/doc/saphelp_nw73ehp1/7.31.19/en-us/43/9d7bb1e08021b5e10000000a1553f6/content.htm?no_cache=true

(2) X.509 Client Certificates -

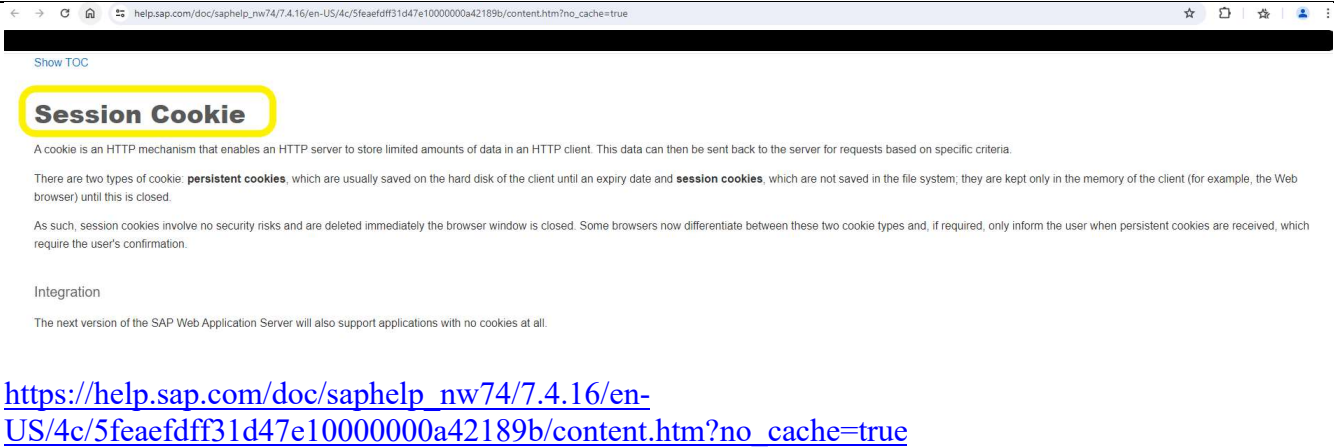
“As an alternative to authenticating with a user ID and passwords, users can present X.509 client certificates for accessing SAP and non-SAP systems. In this case, user authentication takes place using the underlying Secure Sockets Layer (SSL) protocol and users do not need to interactively enter a password for logon. “

“Authentication with X.509 Certificates makes use of a Public Key Infrastructure (PKI) to securely authenticate users. After users receive their X.509 certificates from a certificate issuing Certification Authority (CA), they can use them to securely access SAP NetWeaver, as well as non-SAP systems. The SAP NetWeaver and the non-SAP system can authorize access requests, based on an established trust relationship with the CA.

In addition, users can use their X.509 certificates to authenticate their access to systems located on the Internet and within the company Intranet. Thereby, the certificates for authentication can be used in open environments such as the Internet.”

https://help.sap.com/doc/saphelp_nw73ehp1/7.31.19/en-us/43/9d7bb1e08021b5e10000000a1553f6/content.htm?no_cache=true

The excerpt below shows the session cookies:

	 The screenshot shows a web browser window with the URL: https://help.sap.com/doc/saphelp_nw74/7.4.16/en-US/4c/5feafdf31d47e10000000a42189b/content.htm?no_cache=true. The page title is "Session Cookie". The content explains that a cookie is an HTTP mechanism for storing data on the client. It distinguishes between persistent cookies (saved on the hard disk) and session cookies (kept in memory). It also mentions integration with the SAP Web Application Server. https://help.sap.com/doc/saphelp_nw74/7.4.16/en-US/4c/5feafdf31d47e10000000a42189b/content.htm?no_cache=true As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
1(g). E) monitoring at least the first channel information so as to determine one or more events, conditions, logical workflows, discrete information values or signal data, based on at least one threshold condition or parameter relating to the first channel information and determined based on the user preferences	The Accused Instrumentalities allow the monitoring of relevant data (such as meaningful events, conditions, workflow results, discrete notification information, or signals etc.) (if an established condition is met, a “trigger” is established upon which one or more alerts or notifications may be generated) for the user based on the user’s preferences, indicated by the configuration data. The monitoring is provided so that when particular requirements are met, a signal can be sent as a result. The three excerpts below show how a user can be informed about the occurrence and status updates of situation instances (“Situation Monitoring”) via a notification on any platform or “any supported device types” (including desktop, tablet, or smartphone) that is being used by the user.

indicated by the configuration data; and if the one or more events, conditions, logical workflows, discrete information values or signal data is/are determined in E):

The screenshot shows the SAP Help Portal (Documentation) page for Situation Monitoring. The page title is "Situation Monitoring". The left sidebar contains a navigation menu with "Situation Monitoring" highlighted. The main content area includes a yellow box with instructions on enabling monitoring, a "Note" section about deleting monitored data, and a "Related Information" section with links to "Monitor Situations", "Business Situation - Read", and "Situation Handline Events".

Situation Monitoring

In this section, you can define whether you want to monitor the occurrence and status updates of situation instances based on this situation type.

- **Monitor Instances:** Monitoring (the tracking of situation instances) isn't enabled by default. You need to enable this option if you want to capture and monitor data for this situation type in the Monitor Situations app and enable the creation of business situation events. If it's enabled, you can navigate directly to this app from here by choosing **Monitor Situations**.

Note

You can delete the monitored data belonging to an operational situation type. In the object page of the situation type or in the **Situation Types** table, choose **Delete Monitored Data**. Then select one of these options:

- **Delete All Monitored Data:** This option deletes all of the monitored data belonging to the situation type.
- **Delete Monitored Data Before:** This option deletes only the monitored data from before the date you enter for this option.

• **Capture Data Context:** You can capture the situation data context that can be extracted using the **Business Situation - Read** (API_BUSINESS_SITUATION_SRV) API. You can see this option only if the template on which the situation type is based offers it. To enable this feature, you need to activate **Monitor Instances** first. The data context is deleted automatically after 7 days.

Note

When a template offers the **Data Context** capturing feature and you've selected it, you can also enable **Situation Automation** for your own automation solution. Please note that if a situation instance is handled automatically, the end user is not informed about it. If you haven't implemented an automation solution, do not select this option.

Related Information

- Monitor Situations
- Business Situation - Read
- Situation Handline Events

https://help.sap.com/docs/SAP_S4HANA_ON-PREMISE/8308e6d301d54584a33cd04a9861bc52/62f7d06f194143bab94e6b3020dfda68.html

See “SAP S/4HANA” (2023)

Manage Situation Types

With this app, you can maintain situation types that represent real-world business situations requiring attention. You can also define who receives notifications about these situations.

Situation types help you manage a large variety of circumstances that are critical to your business processes by automatically notifying the right users either as soon as the situations occur or at a defined time.

Key Features

You can use this app to:

- Create situation types from situation templates.
- Maintain conditions based on which situations occur.
- Maintain texts to inform users about situations.
- Decide whether you want the system to send notifications when situations occur.
- Define responsibility by assigning recipient groups to situations.
- Schedule batch jobs for situations, depending on the use case.
- Enable situation monitoring.
- Enable the capturing of situation data context, depending on the use case.

Supported Device Types

- Desktop
- Tablet
- Smartphone

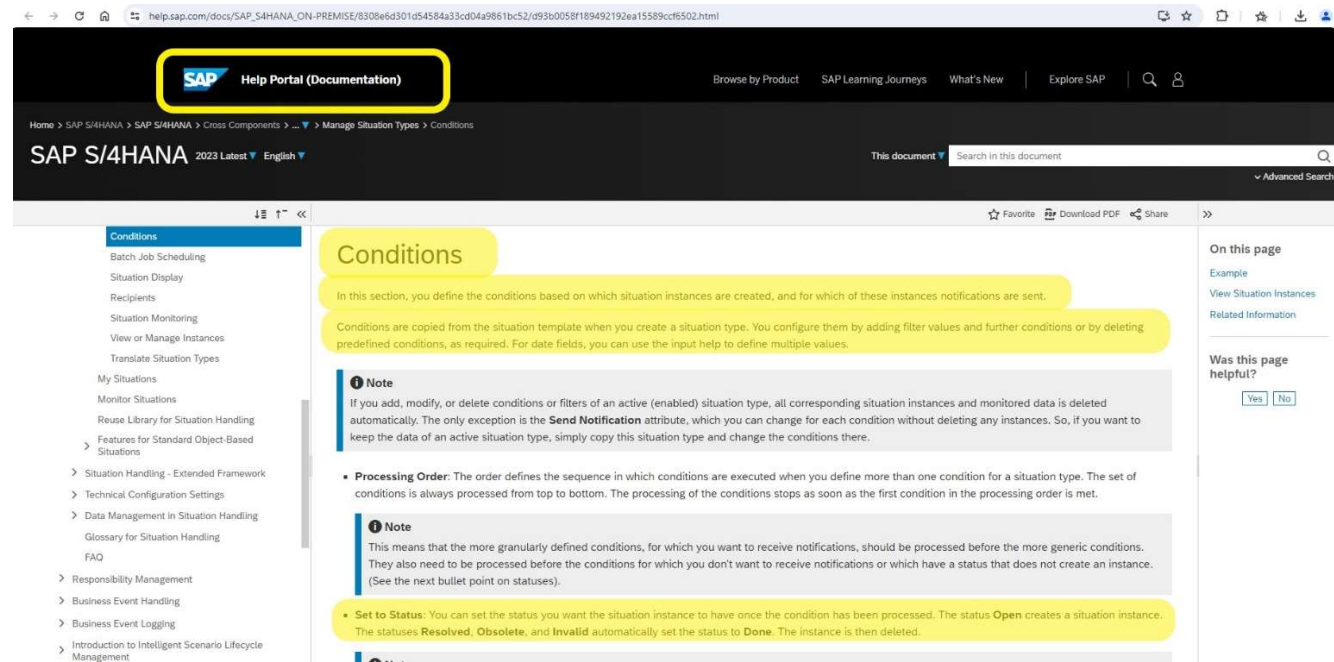
https://help.sap.com/docs/SAP_S4HANA_ON-PREMISE/8308e6d301d54584a33cd04a9861bc52/60748ea9f37d4692912578b698aaefee.html?q=%22manage%20situation%20types%22

See “SAP S/4HANA” (2023)

The screenshot shows the SAP Help Portal documentation page for 'Notification' settings. The page is titled 'Notification' and is part of the 'Situation Display' section. The left sidebar contains a navigation menu with various topics, including 'Situation Display', 'Recipients', 'Situation Monitoring', 'View or Manage Instances', 'Translate Situation Types', 'My Situations', 'Monitor Situations', 'Reuse Library for Situation Handling', 'Features for Standard Object-Based Situations', 'Situation Handling - Extended Framework', 'Technical Configuration Settings', 'Data Management in Situation Handling', 'Glossary for Situation Handling', 'FAQ', 'Responsibility Management', 'Business Event Handling', 'Business Event Logging', 'Introduction to Intelligent Scenario Lifecycle Management', 'APIs for Process Management', 'Process Observer (CA-EPT-POC)', 'Master Data Governance', 'Data Replication Framework', 'Key Mapping', and 'Value Mapping'. The main content area is titled 'Notification' and contains a yellow box with the text: 'This is where you define the notification texts for situations that are displayed on SAP Fiori launchpad when a situation occurs (depending on the settings you've made in the Conditions section)'. Below this, there is a section for 'Message Preview' and a list of bullet points: 'Secure Notification Details', 'Notification Preview', 'Public Notification Details', 'Email Preview', 'Note', 'Aggregate Notifications', and 'Resend Notifications'. The right sidebar contains a section for 'On this page' with links to 'In-App Situation Message', 'Notification', and 'Related Information'. Below this is a section for 'Was this page helpful?' with 'Yes' and 'No' buttons.

https://help.sap.com/docs/SAP_S4HANA_ON-PREMISE/8308e6d301d54584a33cd04a9861bc52/56219e78b2054e678d9b9fd10a81b3c0.html

See “SAP S/4HANA” (2023)



https://help.sap.com/docs/SAP_S4HANA_ON-PREMISE/8308e6d301d54584a33cd04a9861bc52/d93b0058f189492192ea15589ccf6502.html

See “SAP S/4HANA” (2023)

The excerpt below shows how a user can configure SAP Fiori Launchpad so that the user can be aware of push notifications in Fiori Launchpad. The following excerpt shows an example of the relevant data monitored and provided to the user so that the user is aware of certain actions that need to be performed in a timely manner or certain events are brought to his attention for his own knowledge. This example shows that the user can monitor for events like purchasing unusual items.

SAP Fiori for manager

My Unusual Items



My Unusual Items (10/90)		Unusual Item	
Search		Performance test 1	4,700.00 EUR Exceeded
Performance test 1	4,700.00 EUR	Document Number: 0000001215	Total: 5,000.00 EUR
New validation	Disputed	New validation	Disputed
Performance test 1	4,700.00 EUR		
New validation	Cleared		
Performance test 1	4,700.00 EUR	Item Number: 001	
New validation	Disputed	Account: Direct labor costs (420000)	
		Department: Pump Production (4220)	
Performance test 1	1,424.14 EUR	Description: Sample Spec 3	
New validation	Disputed	Created By: KUMH6	
		Creation Date: October 30, 2013	
Performance test 1	1,424.14 EUR	ITEMS	
		Item	Quantity
		Unit Price	Price
		Confirm	Dispute

Description

With the transactional app My Unusual Items, you can keep watch on the expense items of your departments and projects that are likely to be disputable. This app collects disputable expense items, according to predefined rules and patterns, and consolidates them into your inbox so that you can clear them either by disputing or confirming them.

Capabilities

- View disputable expense items in your inbox
- Confirm expense items
- Dispute expense items with comments
- View the status of expense items to follow up

Prerequisites

[Help portal](#)

See SAP Fiori UX App Overviews, December 2014

https://experience.sap.com/files/SAPFiori_AppOverviews.pdf

The following excerpt shows how the Work Flow is configured in SAP Fiori so that user can receive email notification of workflow:

tutorialspoint.com/sap_fiori/sap_fiori_workflow.htm

tutorialspoint Category Search tutorials, courses and ebooks...

SAP FIORI Absolute Beginners

SAP Fiori Tutorial

- SAP Fiori - Home
- SAP Fiori - Introduction
- SAP Fiori - Architecture
- SAP Fiori - NetWeaver Gateway
- SAP Fiori - Installation
- SAP Fiori - Launchpad
- SAP Fiori - OData Services
- SAP Fiori - Transactional Apps
- SAP Fiori - Fact Sheets
- SAP Fiori - Analytical Apps
- SAP Fiori - Theme Designer
- SAP Fiori - Security

How to add custom Workflow scenarios?

To add custom workflow scenarios in Fiori, follow the steps given below in front-end and back-end system.

- Step 1** – Get Workflow definitions.
- Step 2** – Define the scenarios for workflow.
- Step 3** – Add a tile to Fiori Launchpad.
- Step 4** – Decision options definition.
- Step 5** – BADI implementation for decision update.
- Step 6** – Display Application data.

How to configure Work Flow in Fiori?

- Step 1** – Login to back-end System.

T-Code: SWI2_FREQ

https://www.tutorialspoint.com/sap_fiori/sap_fiori_workflow.htm

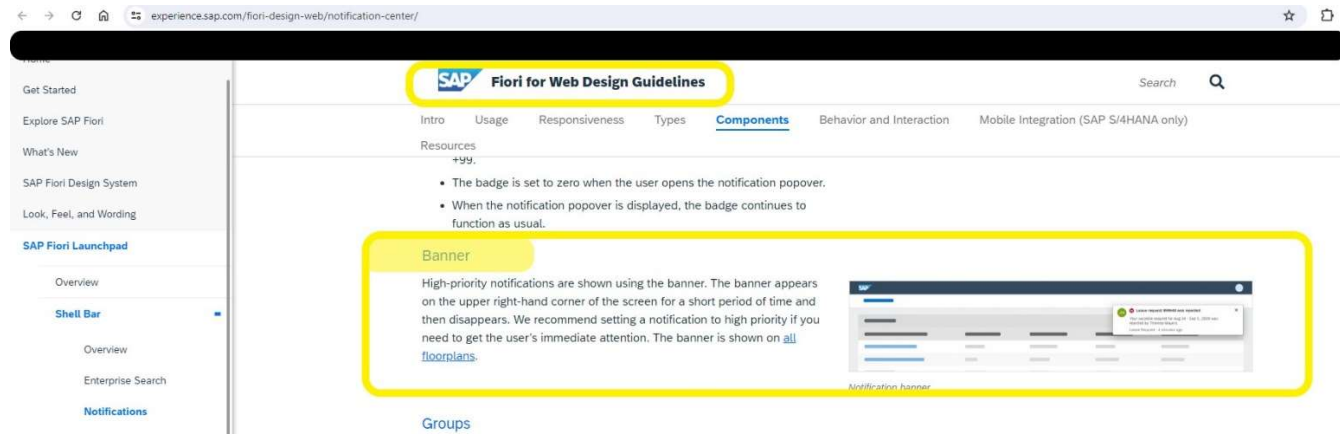
As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

1(h). F) determining a notification method

The Accused Instrumentalities allow a notification method to provide alerts to the user for his timely action or attention or knowledge. The user can choose his notification method (the user can receive

by which to provide at least one alert on the at least one external device based on the current state of the at least one external device indicated by the session data;

notifications through different channels) so that the notifications can be sent via a banner appearing on the user interface, an email, or to the user's mobile device.



<https://experience.sap.com/fiori-design-web/notification-center/>

experience.sap.com/fiori-design-web/notification-center/

SAP Fiori for Web Design Guidelines

Intro Usage Responsiveness Types **Components** Behavior and Interaction Mobile Integration (SAP S/4HANA only)

Resources
and bold headlines: unclicke/unopened notifications are shown as "unread" and in bold. When an item is clicked/opened, it is shown with a medium headline.

Navigation
Navigation is triggered by clicking the item.

Content
As of today, no other content is possible nor allowed.

Settings
All notification types are displayed in the settings dialog. Users can switch each type on or off without affecting the underlying processes.

Users can activate the banner function for each notification type. This sets the notification status to high priority and corresponding notifications have a red status indicator. Banners are also displayed for all other high priority notifications.

If the *Show High-Priority Alerts* setting is switched off, banners for high-priority notifications are deactivated, and the user can work without being interrupted.

Users can also receive notifications through other channels:

- **Email:** If this option is active, the user gets an email with a link to the underlying app.
- **Mobile:** If this option is active, notifications are sent to a mobile device.
Note: This feature is currently only available for Apple iOS devices and SAP S/4HANA apps. For more information, see [Mobile Integration](#).

Settings

User Account (John.Doe@acme.com)

Appearance
SAP Quartz Dark

Spaces

User Activities

User Profiling

Language & Region
EN | Time Format: 12h

Default Values

Notifications

Notifications

☒ Show High-Priority Notification Alerts

Notification Type	Email	High Priority	Banner
Sales contract not fulfilled as expected	☒	☐	☒
This sales quotation is about to expire	☐	☐	☒
This sales quotation is about to expire	☒	☐	☒
WISSCONSOLIDATION 0000000000000000	☐	☒	☒
WISSCONSOLIDATION 0000000000000000	☐	☐	☒
WISSCONSOLIDATION 0000000000000000	☐	☐	☒

Save Cancel

Notification settings

<https://experience.sap.com/fiori-design-web/notification-center/>

The following excerpts show how an alert is sent as a notification that alerts any platform that is being used by the user so that the information can be provided to the user or otherwise used in the app.

Chapter 1 Notification Introduction

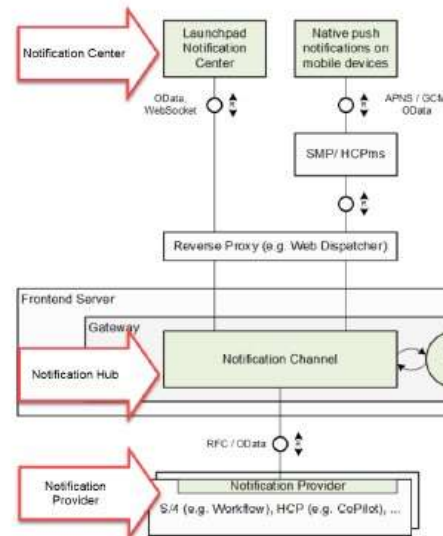
Notification is a widely-used concept to directly inform users about situations that require an immediate action or attention. Fiori 2.0 offers this possibility with the Notification Channel, a framework for applications to deliver notifications to end users. From Fiori 2.0, SAP Fiori Launchpad provides a Notifications area that lets you know about important tasks and requests requiring your timely action or knowledge. They allow you to view immediate updates on the latest and most important events that are related to your business role.

The Launchpad consumes notifications from the notification channel, which is a Backend system that aggregates notifications from different notification providers configured in your environment.

There are three concepts to understand when activating notifications:

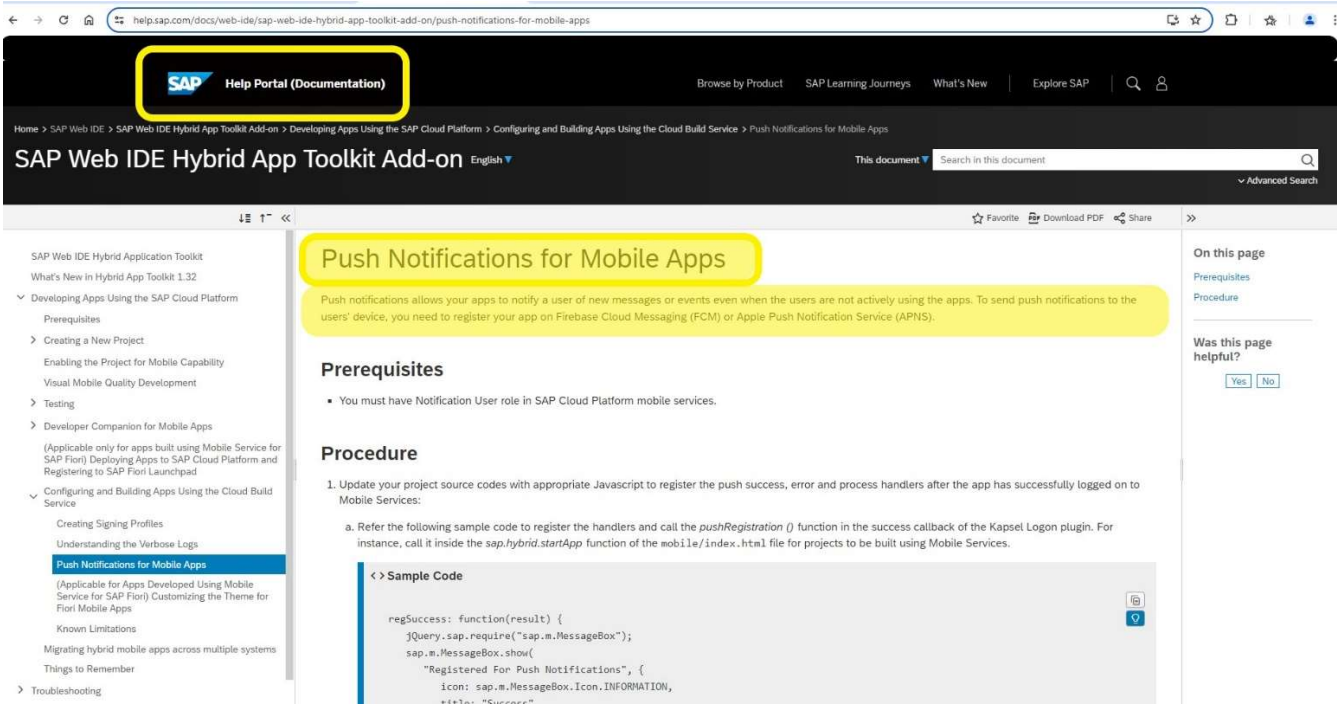
- Notification Center – the area in the Fiori Launchpad where notifications are displayed
- Notification Hub – Collects notifications to be shown in the Notification Center
- Notification Provider – Provides notification content to the Notification Hub

Below is the architecture of the Notification. This document will only cover the Launchpad Notification. Native push notification is not in the scope.

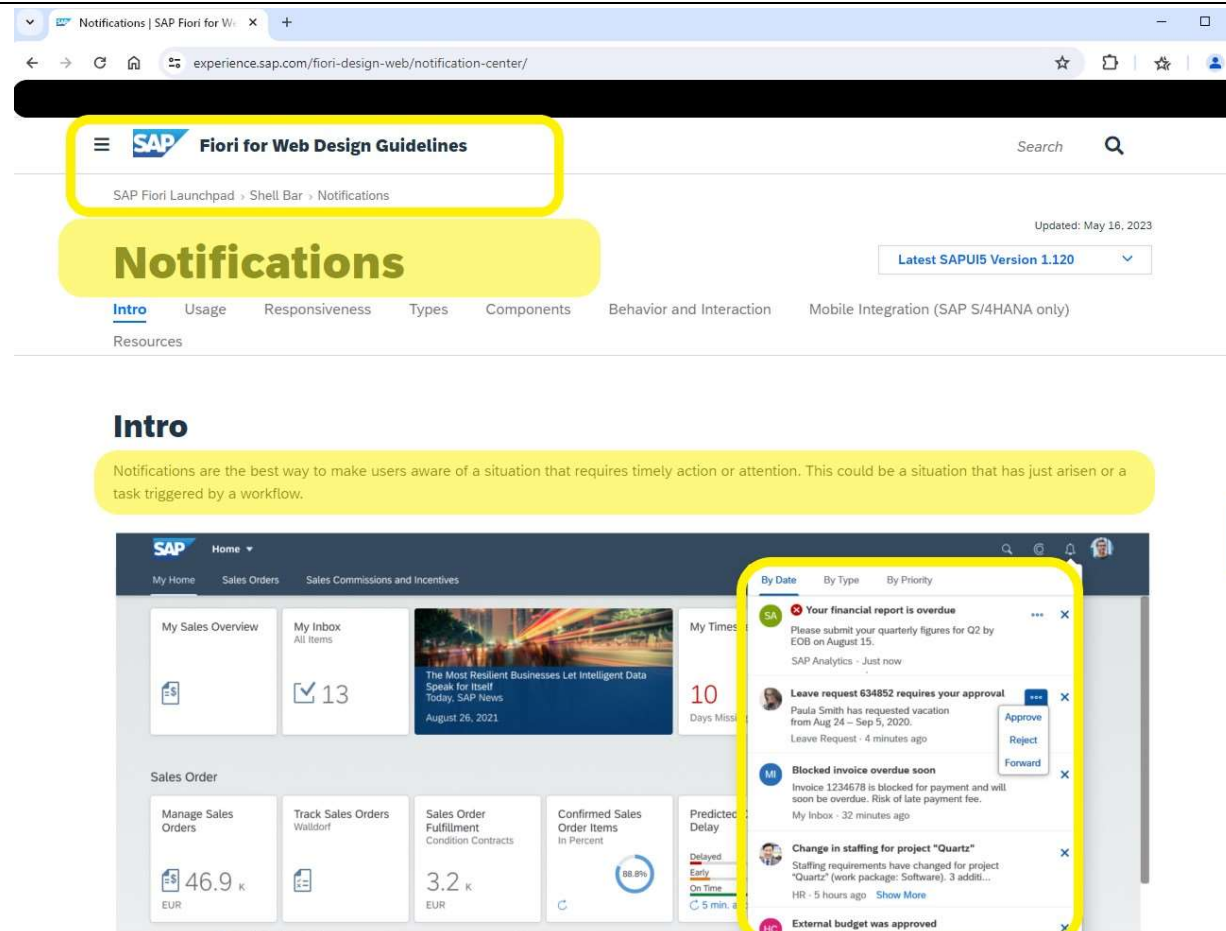


5

See page 5 of “How to Setup Notifications in Fiori 2.0 Step-by-Step for 1809 – SAP S/4HANA 1809 – Part 1”

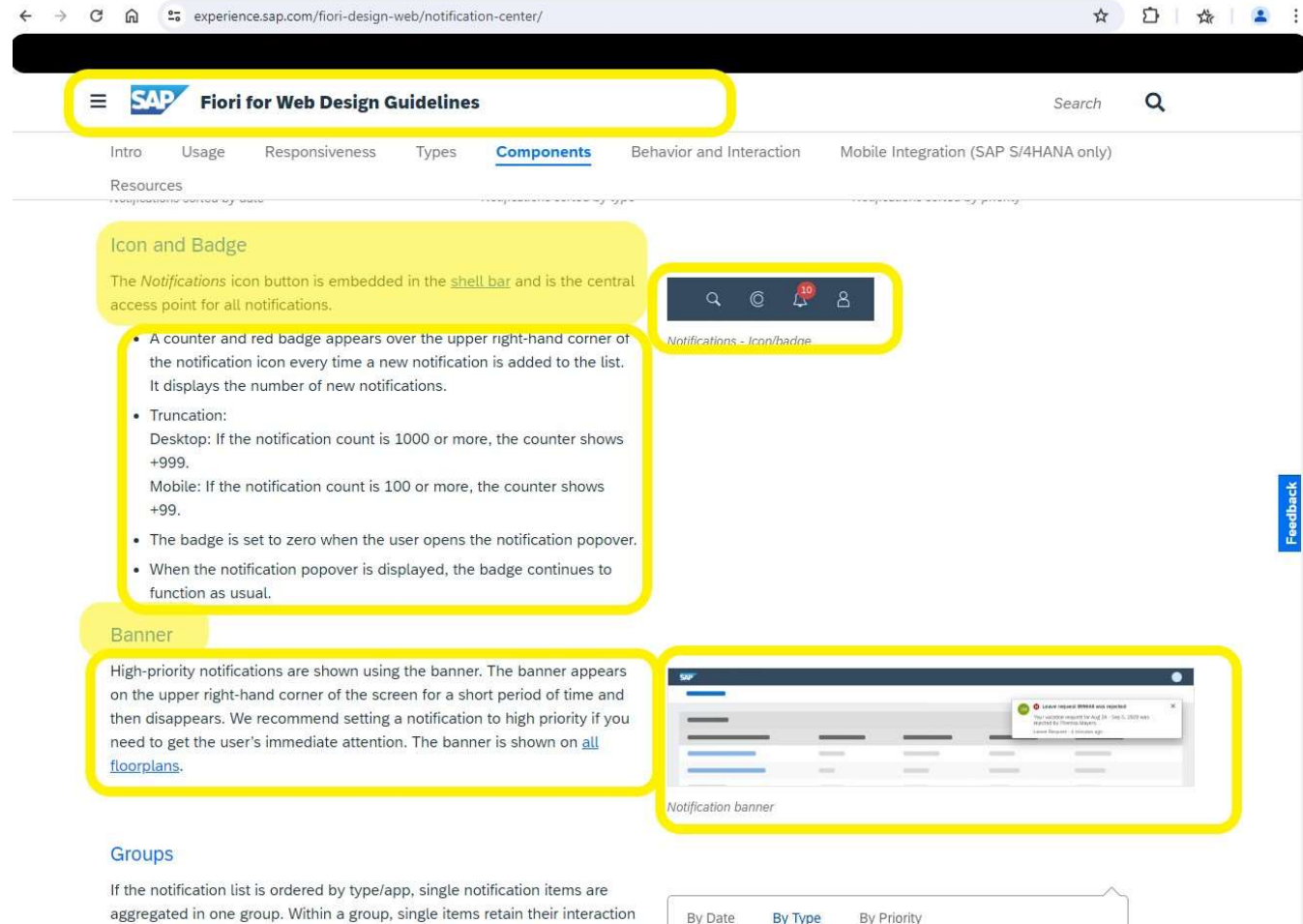
	As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
1(i). G) generating notification data according to the determined notification method, wherein the notification data is configured to cause the at least one external device to provide the at least one alert on the at least one external device; and	The Accused Instrumentalities allow the alert or notification data to be generated based on the notification method chosen by the user and also allow the notification data to be sent from a platform onto another platform (including a mobile device). The excerpt below shows that the Accused Instrumentalities allow for the configuration of push notification messages for a mobile device.  https://help.sap.com/docs/web-ide/sap-web-ide-hybrid-app-toolkit-add-on/push-notifications-for-mobile-apps

	See also “SAP Web IDE Hybrid App Toolkit Add-on” (“Push Notifications for Mobile Apps”) (https://help.sap.com/docs/SAP_Web_IDE/8e5c63b6470a4255861c259f3b2d9b41?locale=en- As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
1(j). H) controlling the at least one communication interface to transmit the notification data to the at least one external device via the first channel without being requested by the user, wherein the transmission of the notification data to the at least one external device is based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of authorized channels, the user, and the at least one user platform.	The Accused Instrumentalities control the communication interface and allow the transmission of an alert or a notification to the user platform via an app without being requested by that user based on the access rights associated with the corresponding apps, the identity of the user, and identity of the platforms. The following excerpts show different notifications that are sent as alert data to their user device through the Accused Instrumentalities channel. These alerts are automated and generated without the user needing to request them. The alerts that can be sent use information about the user, such as whether they have a right to access that particular information. Furthermore, security protocols prevent highly sensitive information from being incorrectly displayed in the notifications.



<https://experience.sap.com/fiori-design-web/notification-center/>

As shown below, notifications can be presented to the user as alerts in the icons and badges in the system.



<https://experience.sap.com/fiori-design-web/notification-center/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

'948 Patent Claim 2	
The apparatus of claim 1, wherein if the one or more events, conditions, logical workflows, discrete information values or signal data is/are determined in E), the at least one processor performs H).	See Claim 1. Further, the Fiori Architecture monitors channel information across authenticated platforms so as to determine one or more events, conditions, logical workflows, discrete information values or signal data. If one of the latter is determined in Claim 1 E), the processor will perform H). As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
'948 Patent Claim 3	
The apparatus of claim 1, wherein if the one or more events, conditions, logical workflows, discrete information values or signal data is/are determined in E), the at least one processor controls the at least one memory so as to store trigger information relating to the one or more determined events, conditions, logical workflows, discrete	See Claim 1. Further, the Fiori Architecture monitors channel information across authenticated platforms so as to determine one or more events, conditions, logical workflows, discrete information values or signal data. If one of the latter is determined in Claim 1 E), the processor controls one memory so as to store trigger such information. As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

information values, or signal data.	
‘948 Patent Claim 4	
The apparatus of claim 3, wherein if the one or more events, conditions, logical workflows, discrete information values or signal data is/are determined in E), the at least one processor further performs H).	See Claim 1, and Claim 3. Further, the Fiori Architecture monitors channel information across authenticated platforms so as to determine one or more events, conditions, logical workflows, discrete information values or signal data. If one of the latter is determined in Claim 1 E), the processor further performs H. As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
‘948 Patent Claim 5	
The apparatus of claim 1, wherein the first channel information includes at least one of: text information; graphic information; one or more pictures; one or more videos; audio or digital sound; streaming data, audio or video;	See Claim 1. Further, the secure user-centric information can be displayed in various ways and different format, including in text information, and images. The excerpts below are examples of the features that SAP Fiori offers to users.

content associated with an executing computer application; voice-over-IP communication; instant messaging/SMS information; video-conferencing information; environmental monitoring information; financial services information; enterprise resource planning information; enterprise content management information; building information; project management information; product lifecycle management information; RSS (Really Simple Syndication) reader information; remote device control/interaction information;

The screenshot shows the SAP Fiori for Web Design Guidelines page for the `sap.m.Image` control. The page has a yellow header with the SAP logo and the title "Fiori for Web Design Guidelines". Below the header, there is a breadcrumb trail: "UI Elements - SAPUI5 > Display > Image". The main title "Image" is prominently displayed, followed by the control name "sap.m.Image". A search bar is located in the top right corner. The page is updated as of November 29, 2022, and the latest SAPUI5 version is 1.122. A navigation bar includes links for "Intro", "When to Use", "Behavior and Interaction", "Guidelines", "Responsiveness", "Examples", and "Related Links". The "Intro" section explains that images are a powerful way to capture user attention and communicate messages, and that the image control can be used to integrate images into apps for specific purposes. The "When to Use" section lists three scenarios: displaying decorative images, supporting or enhancing page content, and displaying images in a gallery. A URL is provided at the bottom of the page.

<https://experience.sap.com/fiori-design-web/image/>

a three-dimensional graphic visualization of one or more objects and/or immersive environments; one or more word processing documents; one or more spreadsheets; one or more presentation/slide shows; email; and address book information.

 **Fiori for Web Design Guidelines**

UI Elements - SAPUI5 - Data Visualization - 3D Viewport

3D Viewport

sap.ui.vk.Viewport

Updated: November 29, 2022

Latest SAPUI5 Version 1.122

[Intro](#) [Usage](#) [Responsiveness](#) [Behavior and Interaction](#) [Resources](#)

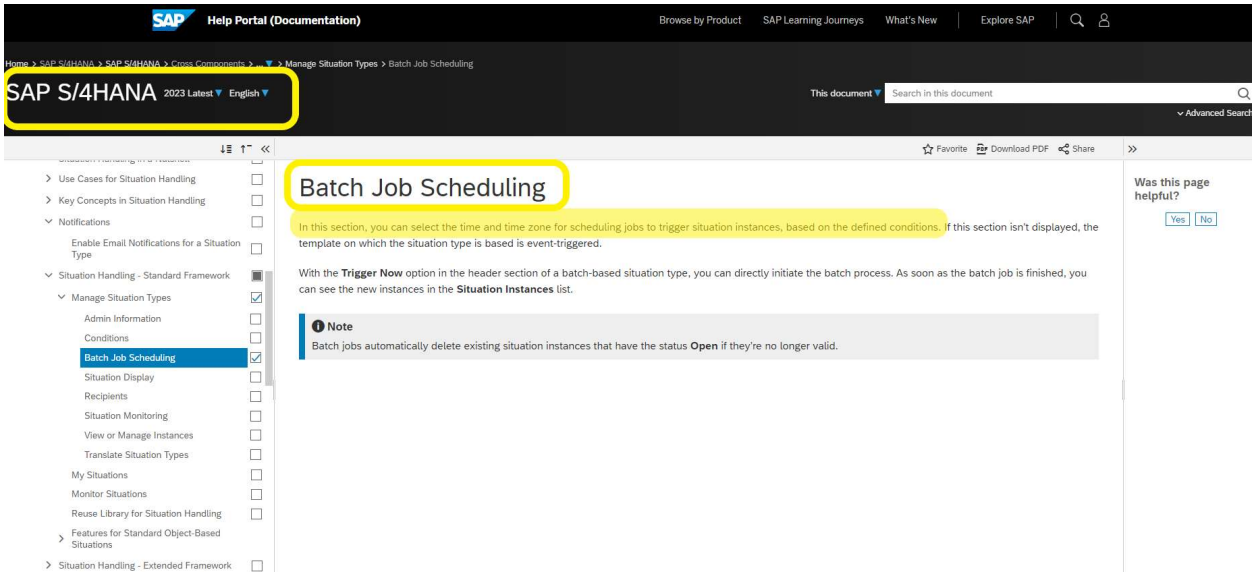
Intro

You can use the 3D viewport control to enable 3D viewing in your SAP Fiori application. This control is available in the Visual Interaction toolkit library. The 3D viewport control can display simple and complex 3D objects in SAP Fiori, and offers basic user interaction with the 3D environment and its objects.

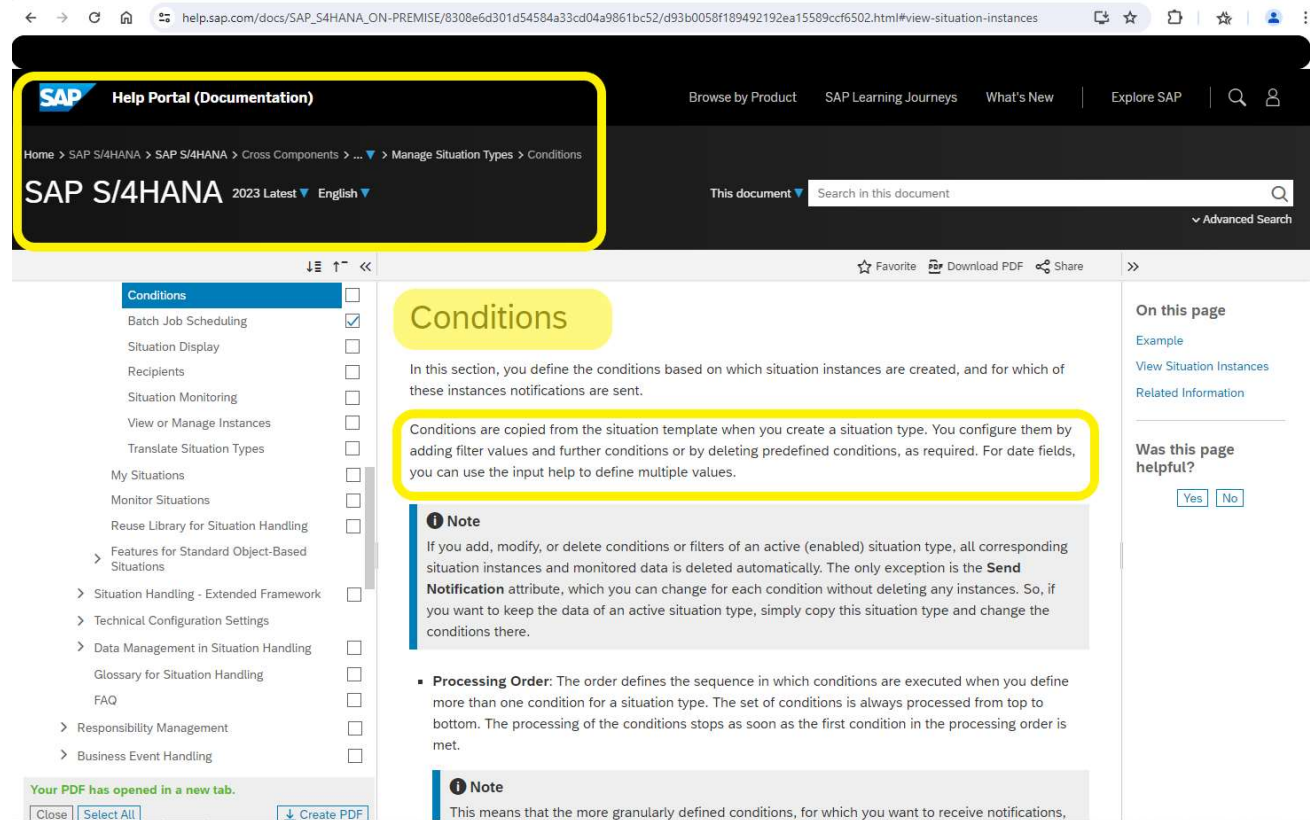


<https://experience.sap.com/fiori-design-web/3d-viewport/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

‘948 Patent Claim 6	
The apparatus of claim 1, wherein the at least one threshold condition or parameter includes a numerical limit or a trend.	See Claim 1. Further, the excerpt below shows that the threshold condition or parameter can include a numerical limit, such as when “[the user] can select the time and time zone for scheduling jobs to trigger situation instances, based on the defined conditions.”  As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
‘948 Patent Claim 7	
7(a). The apparatus of claim 1, wherein E1) making a comparison of the monitored first	See Claim 1. Further, the excerpt below shows how the Accused Instrumentalities allow the user to make any comparison between the monitored information and any condition or threshold.

channel information and the at least one threshold condition or parameter based at least in part on at least one criterion for the comparison; and

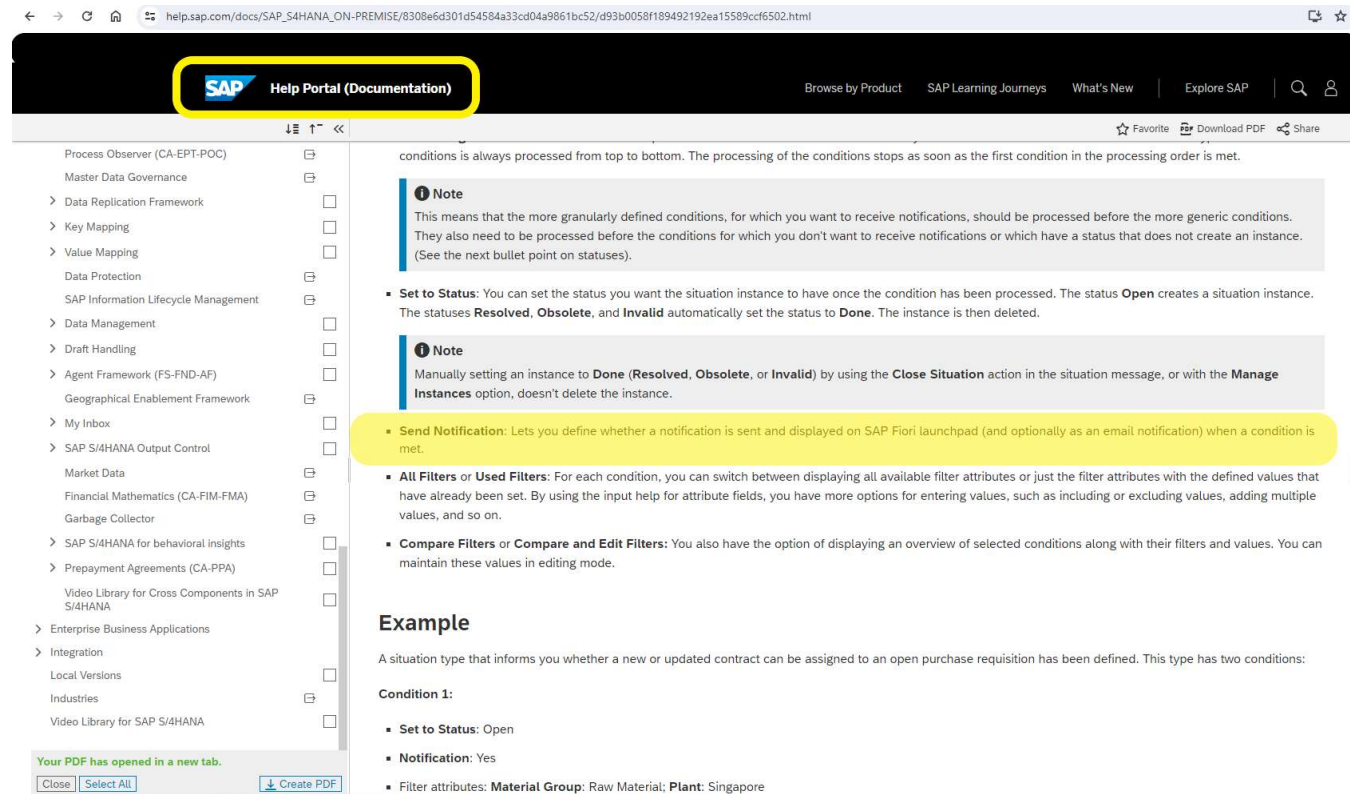


https://help.sap.com/docs/SAP_S4HANA_ON-PREMISE/8308e6d301d54584a33cd04a9861bc52/d93b0058f189492192ea15589ccf6502.html

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

7(b). E2) establishing a trigger, based at least in part on EI), if the at least one criterion is met.

The excerpt below shows how the Accused Instrumentalities allow the user to establish a trigger. The latter helps the user “define whether a notification is sent and displayed on SAP Fiori launchpad (and optionally as an email notification) when a condition is met.”



The screenshot displays the SAP Help Portal (Documentation) interface. The left sidebar contains a list of SAP components, including Process Observer (CA-EPT-POC), Master Data Governance, Data Replication Framework, Key Mapping, Value Mapping, Data Protection, SAP Information Lifecycle Management, Data Management, Draft Handling, Agent Framework (FS-FND-AF), Geographical Enablement Framework, My Inbox, SAP S/4HANA Output Control, Market Data, Financial Mathematics (CA-FIM-FMA), Garbage Collector, SAP S/4HANA for behavioral insights, Prepayment Agreements (CA-PPA), Video Library for Cross Components in SAP S/4HANA, Enterprise Business Applications, Integration, Local Versions, Industries, and Video Library for SAP S/4HANA. The main content area shows a 'Note' and a 'Send Notification' section. The 'Send Notification' section is highlighted in yellow and contains the following text:

Send Notification: Lets you define whether a notification is sent and displayed on SAP Fiori launchpad (and optionally as an email notification) when a condition is met.

All Filters or Used Filters: For each condition, you can switch between displaying all available filter attributes or just the filter attributes with the defined values that have already been set. By using the input help for attribute fields, you have more options for entering values, such as including or excluding values, adding multiple values, and so on.

Compare Filters or Compare and Edit Filters: You also have the option of displaying an overview of selected conditions along with their filters and values. You can maintain these values in editing mode.

Example

A situation type that informs you whether a new or updated contract can be assigned to an open purchase requisition has been defined. This type has two conditions:

Condition 1:

- Set to Status:** Open
- Notification:** Yes
- Filter attributes:** **Material Group:** Raw Material; **Plant:** Singapore

https://help.sap.com/docs/SAP_S4HANA_ON-PREMISE/8308e6d301d54584a33cd04a9861bc52/d93b0058f189492192ea15589ccf6502.html

As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

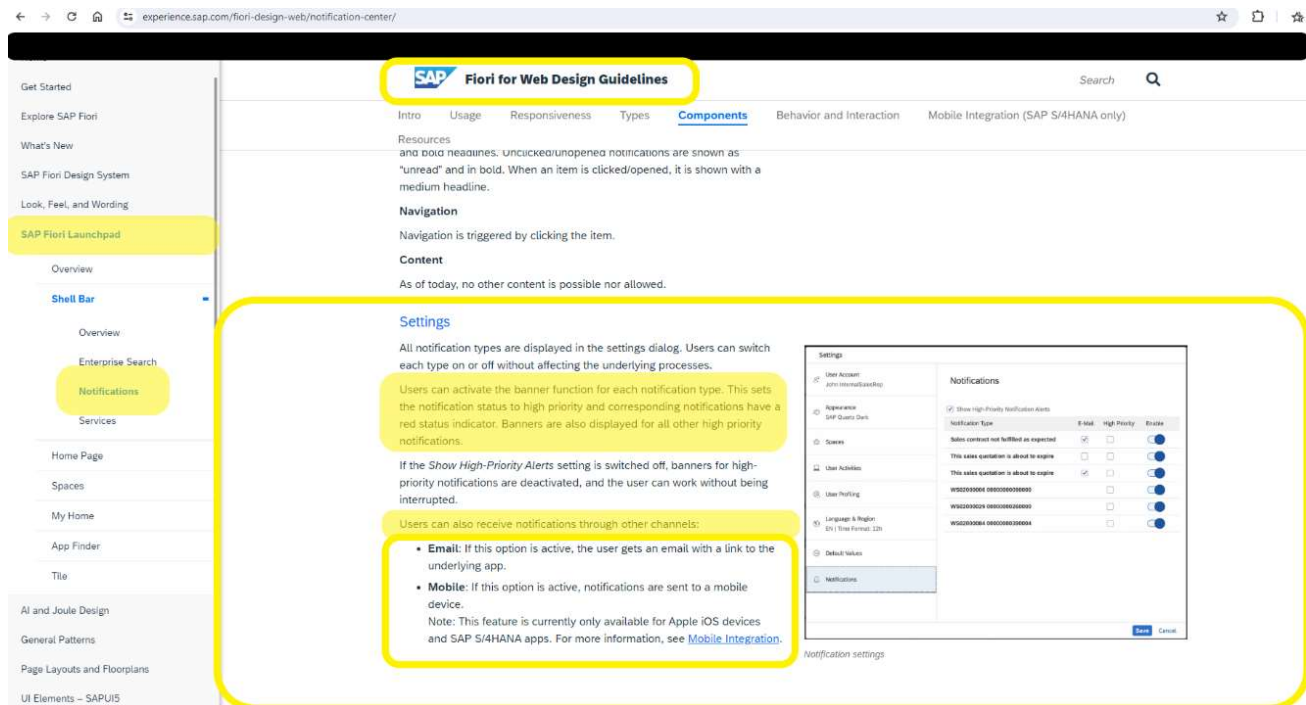
**‘948 Patent
Claim 10**

The apparatus of claim 1, wherein the at least one processor performs H), and wherein the at least one alert includes at least one of :
at least one visual alert;
at least one auditory alert;
at least one email message; and at least one SMS text message.

See Claim 1.

The processor performs H, and the alert may include an email message.

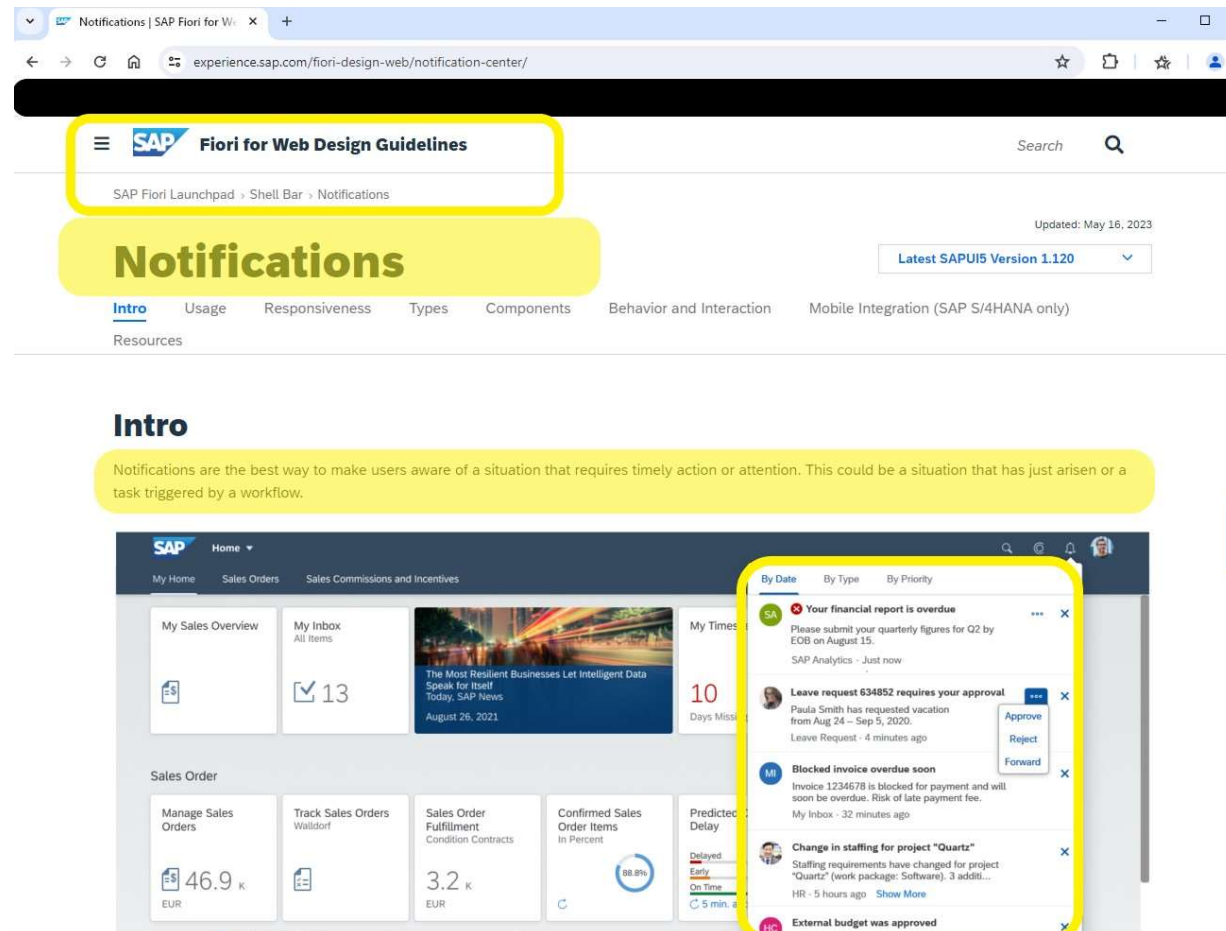
The following excerpt shows that the alert can include an email which is sent to the user.



<https://experience.sap.com/fiori-design-web/notification-center/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

'948 Patent Claim 11	
The apparatus of claim 1, wherein the at least one processor performs H), and wherein the at least one alert includes activation of at least one channel of the plurality of channels.	See Claim 1. Further, one processor performs H) and one alert can provide to the user “information where immediate action needs to be taken.” The excerpts below show how different notifications that are sent as alert data to app(s) on any user platform.



<https://experience.sap.com/fiori-design-web/notification-center/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

'948 Patent Claim 13	
13(a). The apparatus of claim 1, wherein the at least one processor performs H), and wherein:	See Claim 4. Further, the processor performs H). As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
13(b). H) comprises transmitting the notification data so as to generate the at least one alert on at least one external device; the at least one processor further provides the at least some of the secure user-centric information by:	The Accused Instrumentalities allow transmission of the notification data so as to generate one alert on any of the user device. The processor of the Accused Instrumentalities provides the secure user-centric information to the user. The following excerpts show the different notifications sent as alert data to any user device. They also show how this alert is sent to any platform that is being used by the user so that the information can be provided to the user or otherwise used in the app.

Notifications | SAP Fiori for Web Design Guidelines

experience.sap.com/fiori-design-web/notification-center/

SAP Fiori Launchpad > Shell Bar > Notifications

Updated: May 16, 2023

Latest SAPUI5 Version 1.120

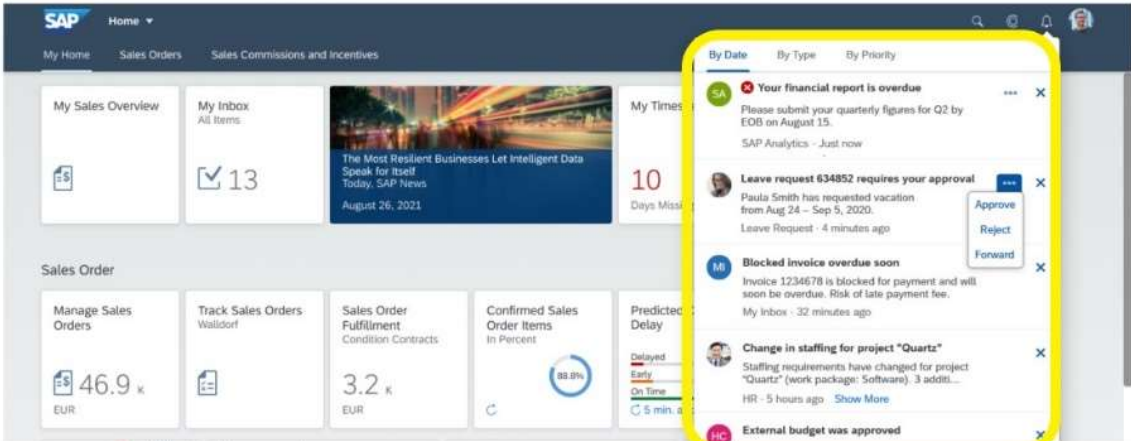
Intro Usage Responsiveness Types Components Behavior and Interaction Mobile Integration (SAP S/4HANA only)

Resources

Notifications

Intro

Notifications are the best way to make users aware of a situation that requires timely action or attention. This could be a situation that has just arisen or a task triggered by a workflow.



The screenshot shows the SAP Fiori Notification Center interface. The top navigation bar includes 'Home', 'Sales Orders', and 'Sales Commissions and Incentives'. The main content area displays a list of notifications. A yellow box highlights the notification list, and a blue box highlights the notification details for 'Your financial report is overdue'.

By Date By Type By Priority

- Your financial report is overdue**
Please submit your quarterly figures for Q2 by EOB on August 15.
SAP Analytics - Just now
- Leave request 634852 requires your approval**
Paula Smith has requested vacation from Aug 24 - Sep 5, 2020.
Leave Request - 4 minutes ago
- Blocked invoice overdue soon**
Invoice 1234678 is blocked for payment and will soon be overdue. Risk of late payment fee.
My inbox - 32 minutes ago
- Change in staffing for project "Quartz"**
Staffing requirements have changed for project "Quartz" (work package: Software). 3 addi...
HR - 5 hours ago Show More
- External budget was approved**

<https://experience.sap.com/fiori-design-web/notification-center/>

← → ↻ 📑 🌐 experience.sap.com/fiori-design-web/notification-center/ ☆ 📄

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SAP Fiori for Web Design Guidelines

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Intro Usage Responsiveness Types **Components** Behavior and Interaction Mobile Integration (SAP S/4HANA only)

Resources +99

- The badge is set to zero when the user opens the notification popover.
- When the notification popover is displayed, the badge continues to function as usual.

Banner

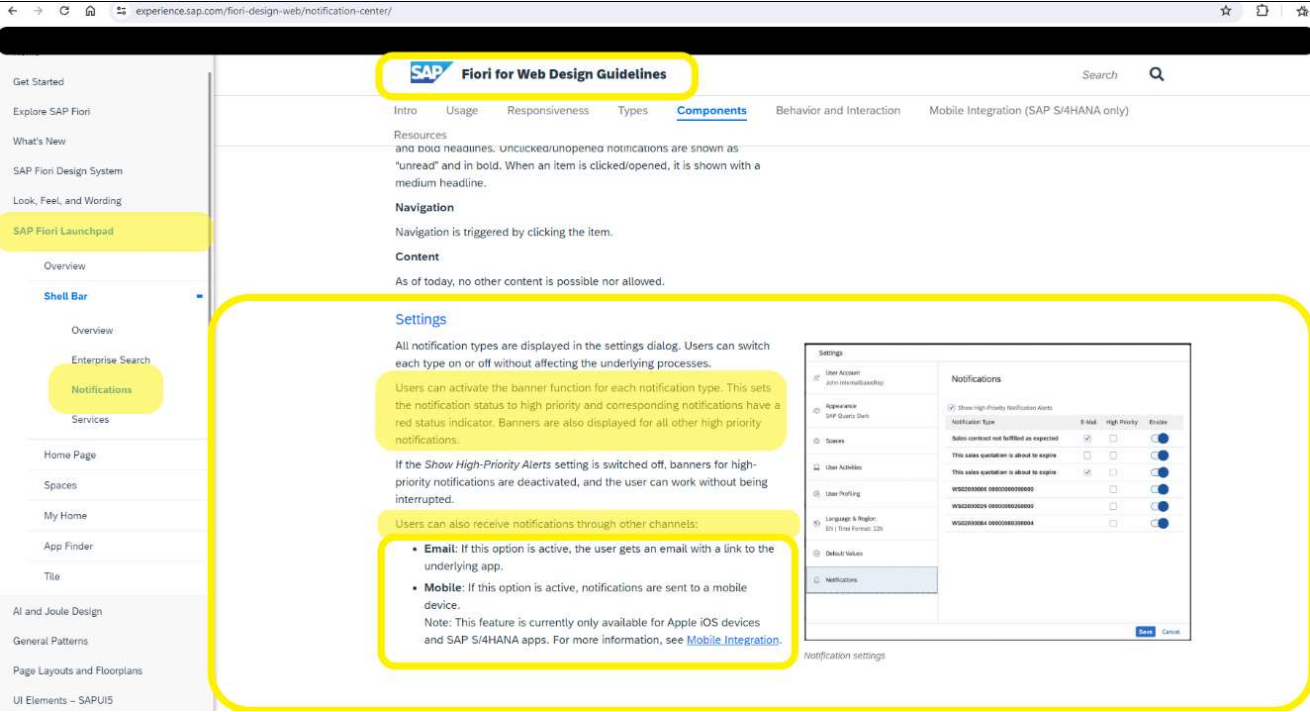
High-priority notifications are shown using the banner. The banner appears on the upper right-hand corner of the screen for a short period of time and then disappears. We recommend setting a notification to high priority if you need to get the user's immediate attention. The banner is shown on [all floorplans](#).



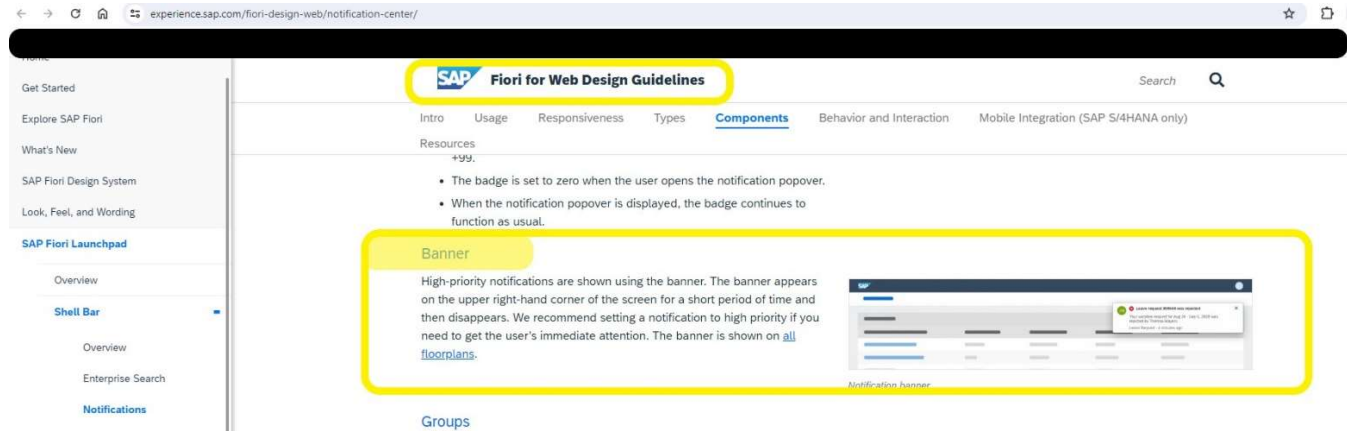
Notification banner

Groups

<https://experience.sap.com/fiori-design-web/notification-center/>

	 https://experience.sap.com/fiori-design-web/notification-center/ As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
13(c). I) controlling the at least one communication interface so as to transmit to the at least one external device channel information relating	The Accused Instrumentalities control the communication interface so as to transmit the secured information to the user device via the app(s). The following excerpts show how the notification data is transmitted to provide alerts to the user on any device that is being used by the user. The notifications can be sent via a banner appearing on the user interface, an email, or to the user’s mobile device. The notifications can also be presented to the user as alerts in the icons and badges in the system.

to at least one authorized channel of the plurality of authorized channels implemented in A); and the notification data transmitted in H) causes an appearance of the at least one authorized channel, as represented on the at least one external device, to change so as to generate the at least one alert on the at least one external device.



<https://experience.sap.com/fiori-design-web/notification-center/>

← → ↻ 🏠 🌐 experience.sap.com/fiori-design-web/notification-center/ ☆ 📄 ⚙️ 👤 ⋮

SAP Fiori for Web Design Guidelines Search 🔍

Intro Usage Responsiveness Types **Components** Behavior and Interaction Mobile Integration (SAP S/4HANA only)

Resources

Icon and Badge

The *Notifications* icon button is embedded in the *shell bar* and is the central access point for all notifications.

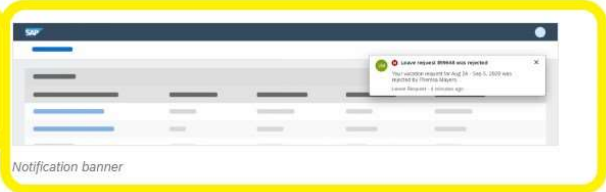
- A counter and red badge appears over the upper right-hand corner of the notification icon every time a new notification is added to the list. It displays the number of new notifications.
- Truncation:
Desktop: If the notification count is 1000 or more, the counter shows +999.
Mobile: If the notification count is 100 or more, the counter shows +99.
- The badge is set to zero when the user opens the notification popover.
- When the notification popover is displayed, the badge continues to function as usual.



Notifications - Icon/badge

Banner

High-priority notifications are shown using the banner. The banner appears on the upper right-hand corner of the screen for a short period of time and then disappears. We recommend setting a notification to high priority if you need to get the user's immediate attention. The banner is shown on [all floorplans](#).



Notification banner

Groups

If the notification list is ordered by type/app, single notification items are aggregated in one group. Within a group, single items retain their interaction

By Date By Type By Priority

Feedback

<https://experience.sap.com/fiori-design-web/notification-center/>

	https://experience.sap.com/fiori-design-web/notification-center/ As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection
'948 Patent Claim 18	
The apparatus of claim 1, wherein the at least one processor performs H), and wherein in H), the at	See Claim 1. Further, one processor performs H and the Accused Instrumentalities can run on any device can be used by the user.

least one external device includes at least one of a mobile device, a television, and a Blu-ray player.

The excerpt below shows the different types of device on which SAP Fiori can run:

SAP Fiori provides all business roles in real time on compatible hand devices. It offers business roles on easy to use functions, simple with unmatched responsiveness on desktop, smartphones and Tablets.

SAP Fiori enables multiple device applications that allow users to start a process on their desktop/laptops and to continue that process on a smartphone or on a tablet. SAP has developed Fiori Apps based on User Interface UI5.



When SAP Fiori is combined with the power of the SAP HANA, it provides an unmatched application response and query-execution time. SAP Fiori user experience (UX) is used to provide a personalized and role-based user experience for enterprise-wide engagement across lines of business.

https://www.tutorialspoint.com/sap_fiori/sap_fiori_introduction.htm#:~:text=SAP%20Fiori%20enables%20multiple%20device,smartphone%20or%20on%20a%20tablet;

see also – See page 2 of SAP Fiori tutorialspoint

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

‘948 Patent Claim 19	
19(a). The apparatus of claim 1, wherein the at least one processor further provides and evaluates at least some of the secure user-centric information by:	See Claim 1. The Accused Instrumentalities evaluate and ensure that the user information is secured and available to the user on any platform (e.g., windows computer, apple computer, android mobile device, web browser interface, etc.) via the application(s) (the “app” or “apps”) accessible through SAP Fiori. The processor of the Accused Instrumentalities ensure that such information is provided to the user. The excerpts below provide examples of how the Accused Instrumentalities evaluate and ensure that critical user information is available securely when the user uses the Accused Instrumentalities. 11. SAP Fiori – Security Securing SAP Fiori system ensures that the information and processes support your business needs, are secured without any unauthorized access to critical information. You must ensure that the user errors, negligence, or attempted manipulation of your system must not result in loss of information or processing time. All these security policies should apply to all components in a Fiori system. Managing users in SAP Fiori: • To manage SAP Fiori transactional apps, you should have below users: • Users in SAP NetWeaver Gateway and ABAP front-end server • User in the ABAP back-end server See page 64 of SAP Fiori tutorialspoint, https://pdfcoffee.com/sap-fiori-pdf-free.html

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SAP Fiori Launchpad

As the main entry point to SAP Fiori apps on mobile and desktop devices, the SAP Fiori launchpad gives users the relevant information they need at a glance and centers on their needs and how they work.

SAP Fiori launchpad is a shell that hosts apps built with different UI technologies, and provides these apps with services such as navigation, personalization, embedded support, and application configuration. SAP Fiori launchpad is the entry point to apps on mobile and desktop devices.

The launchpad is a real time, role based, and personalized environment where all your SAP Fiori apps run. Navigation and search features ensure that you can quickly and effortlessly carry out your daily tasks. You can also include classic applications such as SAP GUI and Web Dynpro apps in your launchpad.



The SAP Fiori Launchpad Overview page that is available on SAP Help Portal gives you an overview and access to the documentation for the respective deliveries. The link is available in the *Related Information* section.

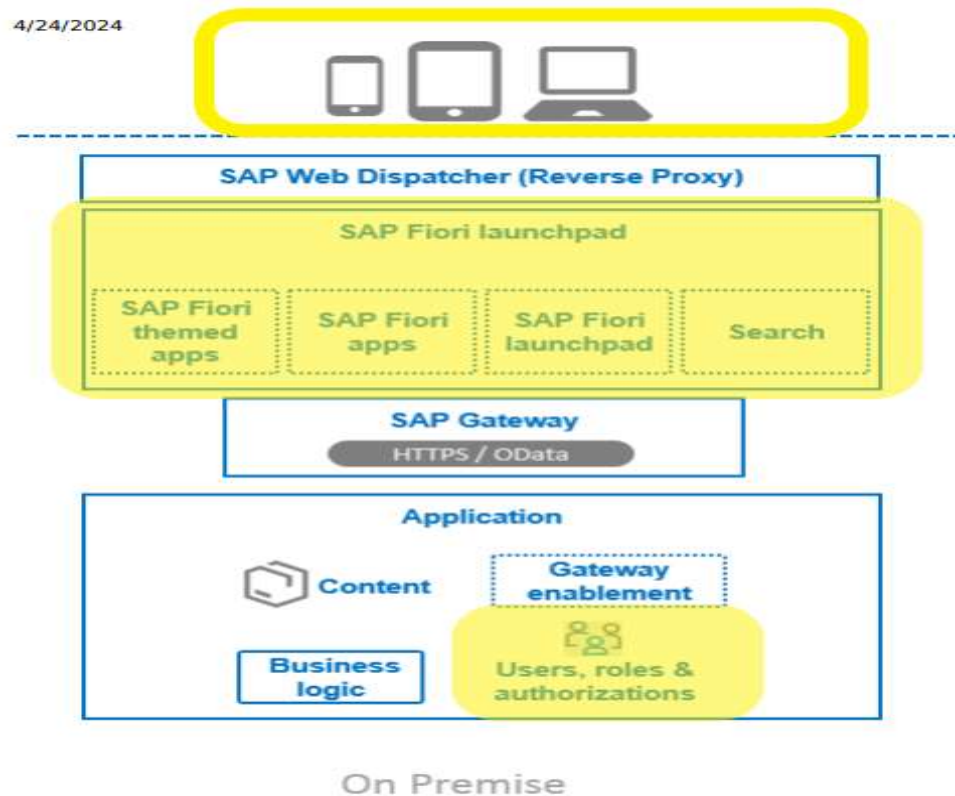
SAP Fiori Launchpad in the SAP Fiori Architecture

The following figure shows how the SAP Fiori launchpad is integrated in an SAP Fiori on premise scenario.

<https://help.sap.com/http.svc/pdfdownload?id=5713415225179543> or

https://help.sap.com/docs/SAP_FIORI_OVERVIEW/4694bb95aacb4cdfa1327c6d8735eaad/753af2c410584bc98f0363ca69a404f1.html?version=4_2020.000

4/24/2024



Related Information

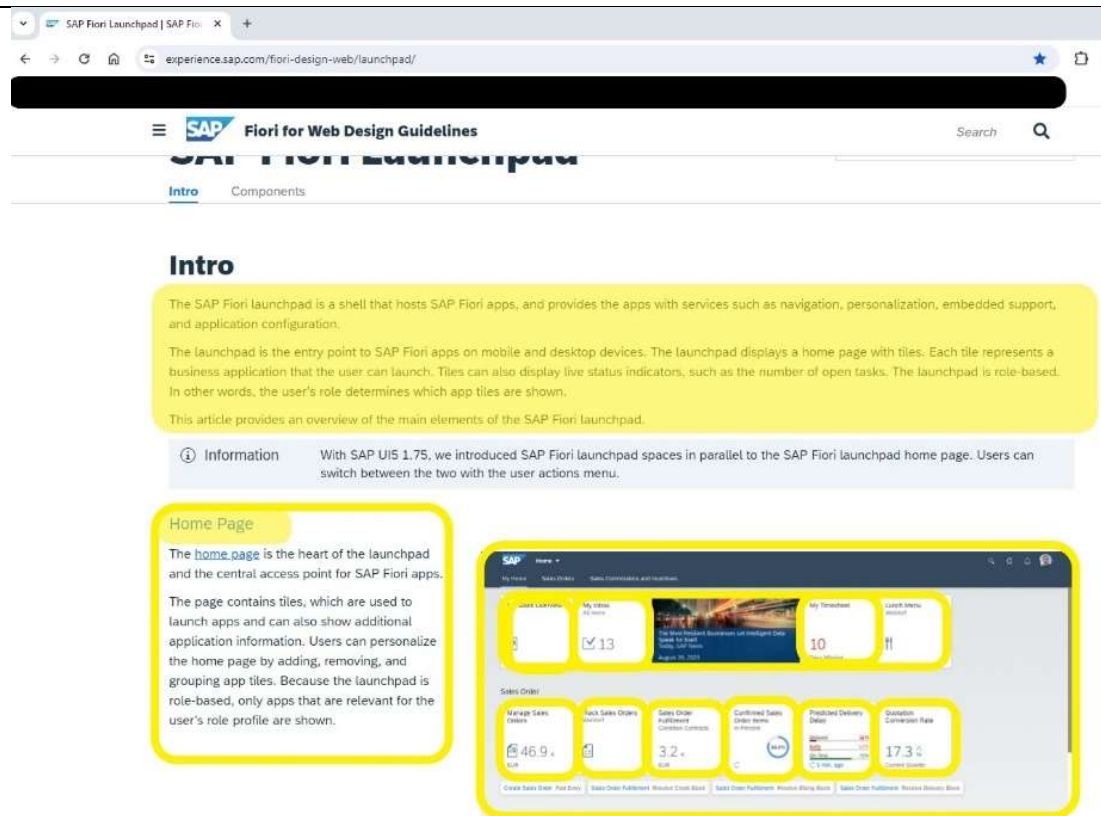
[SAP Fiori Launchpad Overview Page on SAP Help Portal](#)

[SAP Fiori Launchpad](#)

<https://help.sap.com/http.svc/pdfdownload?id=5713415225179543> or

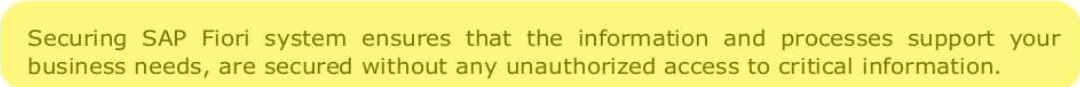
https://help.sap.com/docs/SAP_FIORI_OVERVIEW/4694bb95aacb4cdfa1327c6d8735eaad/753af2c410584bc98f0363ca69a404f1.html?version=4_2020.000

	As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
19(b). I) controlling the at least one communication interface to transmit at least some of the first channel information to the at least one user platform.	The Accused Instrumentalities control the communication interface so as to transmit the secured information to the user via the app(s) on any platform being used by the user. The Accused Instrumentalities include software to display SAP Fiori with application tiles on any device used by the user. “Each tile represents a business application that the user can launch.” See https://experience.sap.com/fiori-design-web/launchpad/. As shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user’s data can be sent to be displayed, and the user can interact with it during a user session.



<https://experience.sap.com/fiori-design-web/launchpad/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

‘948 Patent Claim 23	
23(a). The apparatus of claim 1, wherein the at least one processor further provides and evaluates at least some of the secure user-centric information by:	See Claim 1. The Accused Instrumentalities evaluate and ensure that the user information is secured and available to the user on any platform (e.g., windows computer, apple computer, android mobile device, web browser interface, etc.) via the application(s) (the “app” or “apps”) accessible through SAP Fiori. The processor of the Accused Instrumentalities ensure that such information is provided to the user. The excerpts below provide examples of how the Accused Instrumentalities evaluate and ensure that critical user information is available securely when the user uses the Accused Instrumentalities.  11. SAP Fiori – Security  Securing SAP Fiori system ensures that the information and processes support your business needs, are secured without any unauthorized access to critical information. You must ensure that the user errors, negligence, or attempted manipulation of your system must not result in loss of information or processing time.  All these security policies should apply to all components in a Fiori system. Managing users in SAP Fiori: • To manage SAP Fiori transactional apps, you should have below users: • Users in SAP NetWeaver Gateway and ABAP front-end server • User in the ABAP back-end server See page 64 of SAP Fiori tutorialspoint, https://pdfcoffee.com/sap-fiori-pdf-free.html

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SAP Fiori Launchpad

As the main entry point to SAP Fiori apps on mobile and desktop devices, the SAP Fiori launchpad gives users the relevant information they need at a glance and centers on their needs and how they work

SAP Fiori launchpad is a shell that hosts apps built with different UI technologies, and provides these apps with services such as navigation, personalization, embedded support, and application configuration. SAP Fiori launchpad is the entry point to apps on mobile and desktop devices.

The launchpad is a real time, role based, and personalized environment where all your SAP Fiori apps run. Navigation and search features ensure that you can quickly and effortlessly carry out your daily tasks. You can also include classic applications such as SAP GUI and Web Dynpro apps in your launchpad.



The SAP Fiori Launchpad Overview page that is available on SAP Help Portal gives you an overview and access to the documentation for the respective deliveries. The link is available in the *Related Information* section.

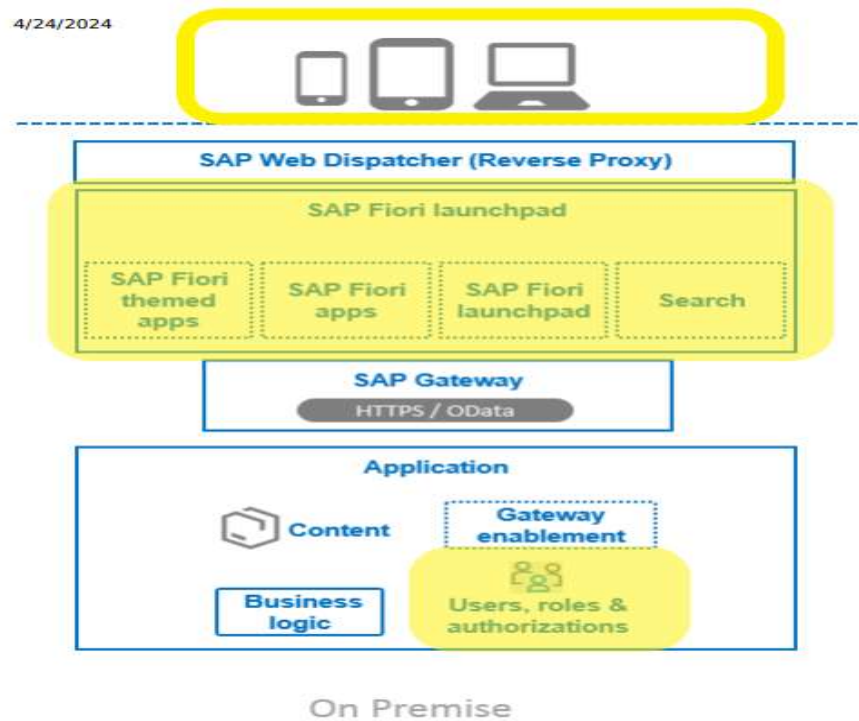
SAP Fiori Launchpad in the SAP Fiori Architecture

The following figure shows how the SAP Fiori launchpad is integrated in an SAP Fiori on premise scenario.

<https://help.sap.com/http.svc/pdfdownload?id=5713415225179543> or

https://help.sap.com/docs/SAP_FIORI_OVERVIEW/4694bb95aacb4cdfa1327c6d8735eaaad/753af2c410584bc98f0363ca69a404f1.html?version=4_2020.000

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Related Information

[SAP Fiori Launchpad Overview Page on SAP Help Portal](#)
[SAP Fiori Launchpad](#)

<https://help.sap.com/http.svc/pdfdownload?id=5713415225179543> or

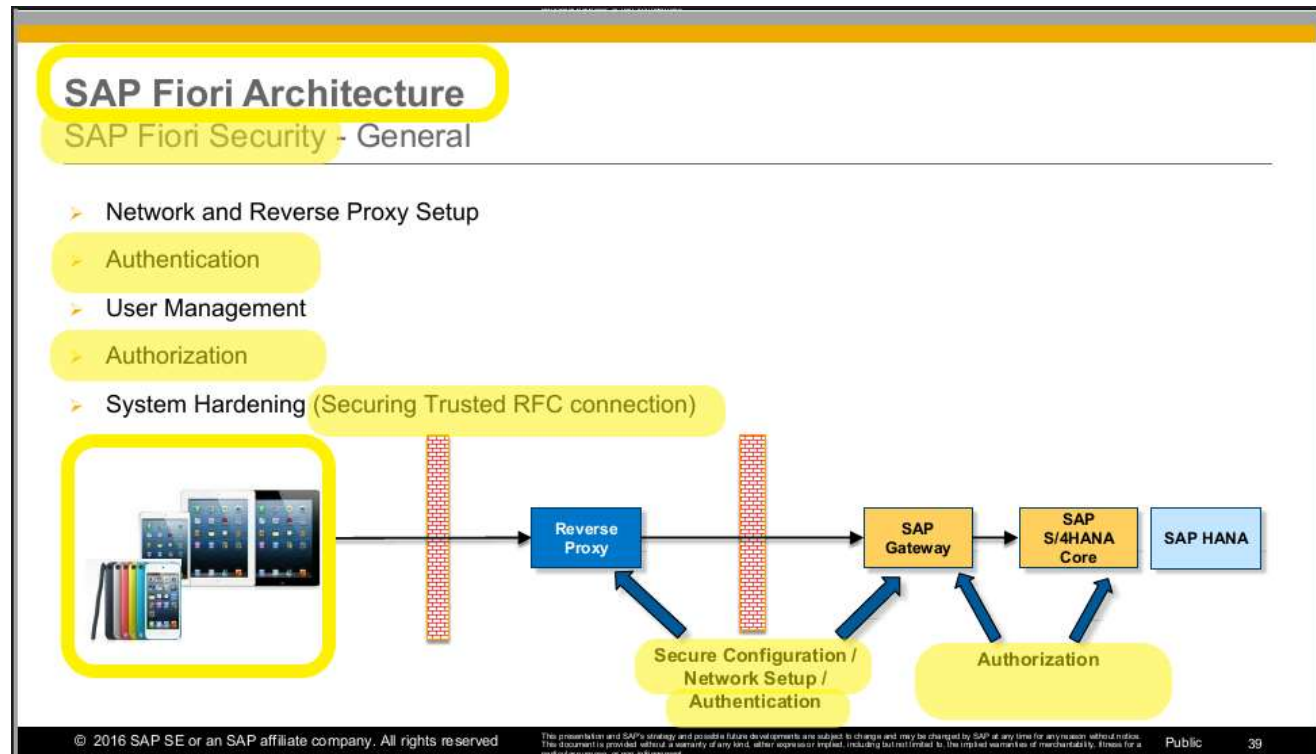
https://help.sap.com/docs/SAP_FIORI_OVERVIEW/4694bb95aacb4cdfa1327c6d8735eaad/753af2c410584bc98f0363ca69a404f1.html?version=4_2020.000

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

23(b). I) authenticating the user and the at least one user platform to receive at least the first channel information and/or the at least one alert.

The user and any platform that he is using are authenticated so that the user can receive the relevant information via the app(s) accessible through SAP Fiori.

The two following excerpts below show that the user can run SAP Fiori on any platform so long as the user is authenticated (verification of the user's identity) and authorized to have access to secure information based on his role or profile (what the user has access to).

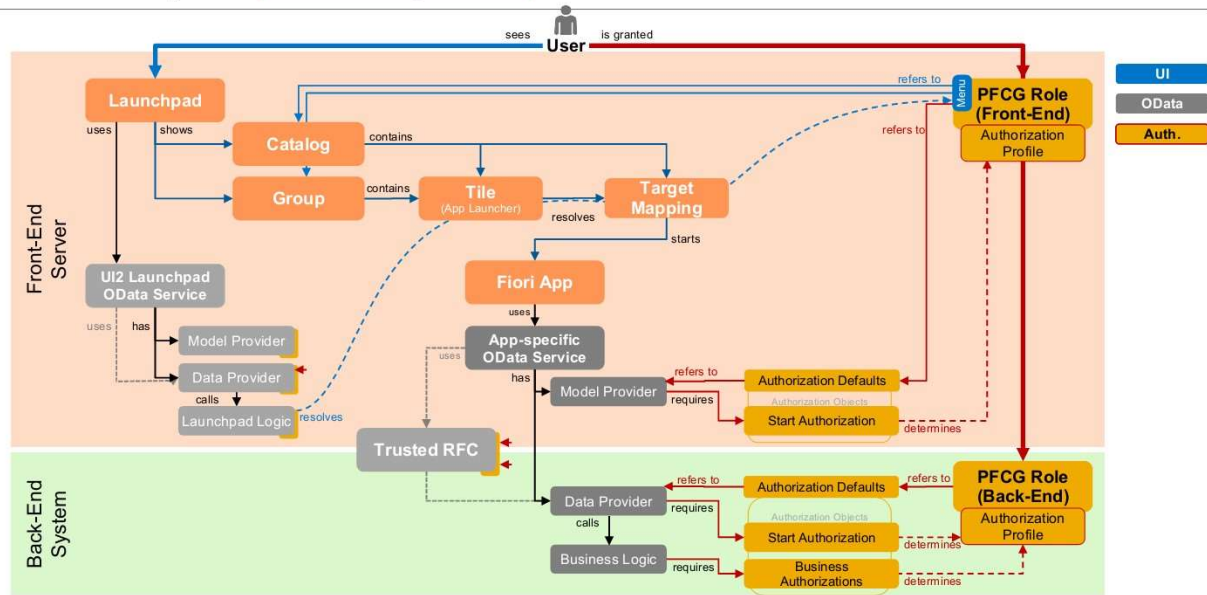


See page 40 of SAP Fiori User Experience – SAP S/4HANA Architecture Deep Dive, Version 4.1, August 2016,

https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf

SAP Fiori Architecture

SAP Fiori launchpad - User Assignment and Authorizations of Content



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Public

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See page 21 of SAP Fiori User Experience – SAP S/4HANA – Version 4.1 – August 2016, [kupdf.net_sap-fiori-ux-architecture-for-s4h.pdf](https://www.kupdf.net/sap-fiori-ux-architecture-for-s4h.pdf).

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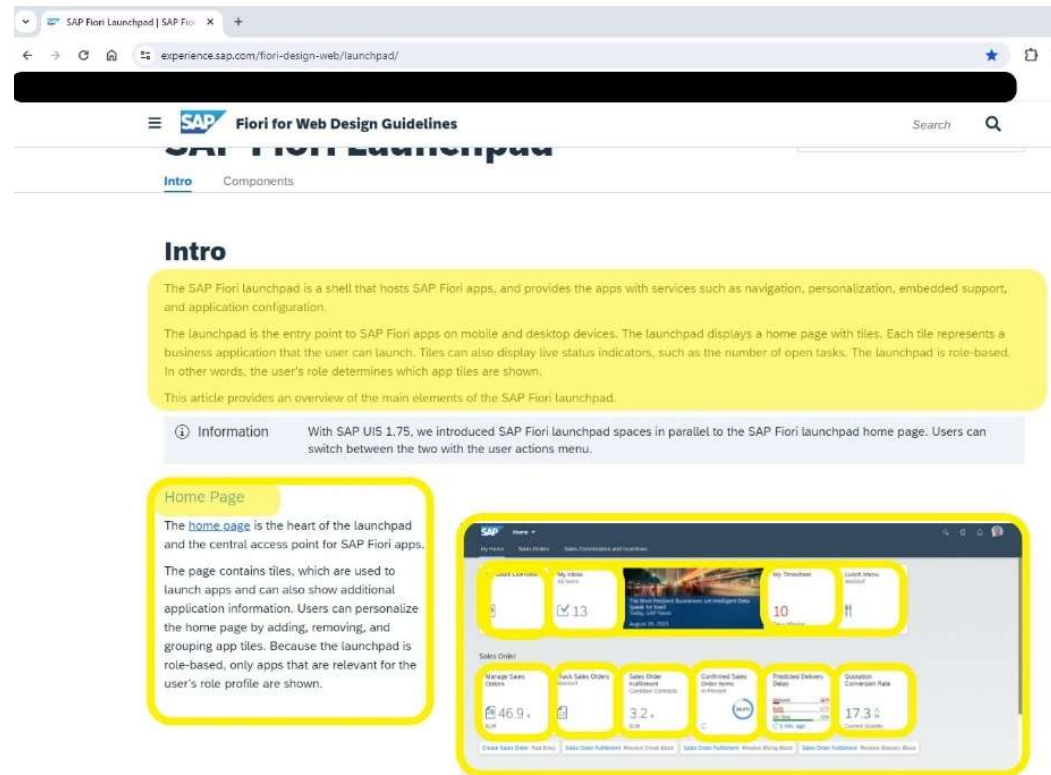
948 Patent Claim 29

29(a). The apparatus of claim 1, wherein in A), the at least one

See Claim 1.

processor implements a channel server that defines one or more information types provided by respective channels of the plurality of channels through which the user receives and/or interacts with the respective portions of the secure user-centric information, wherein the channel server implements at least the first channel, and wherein the at least one processor further provides and evaluates at least some of the secure user-centric information by:

The Accused Instrumentalities include a processor that implements a server so that the information is evaluated and provided to the user via the apps. As shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it.



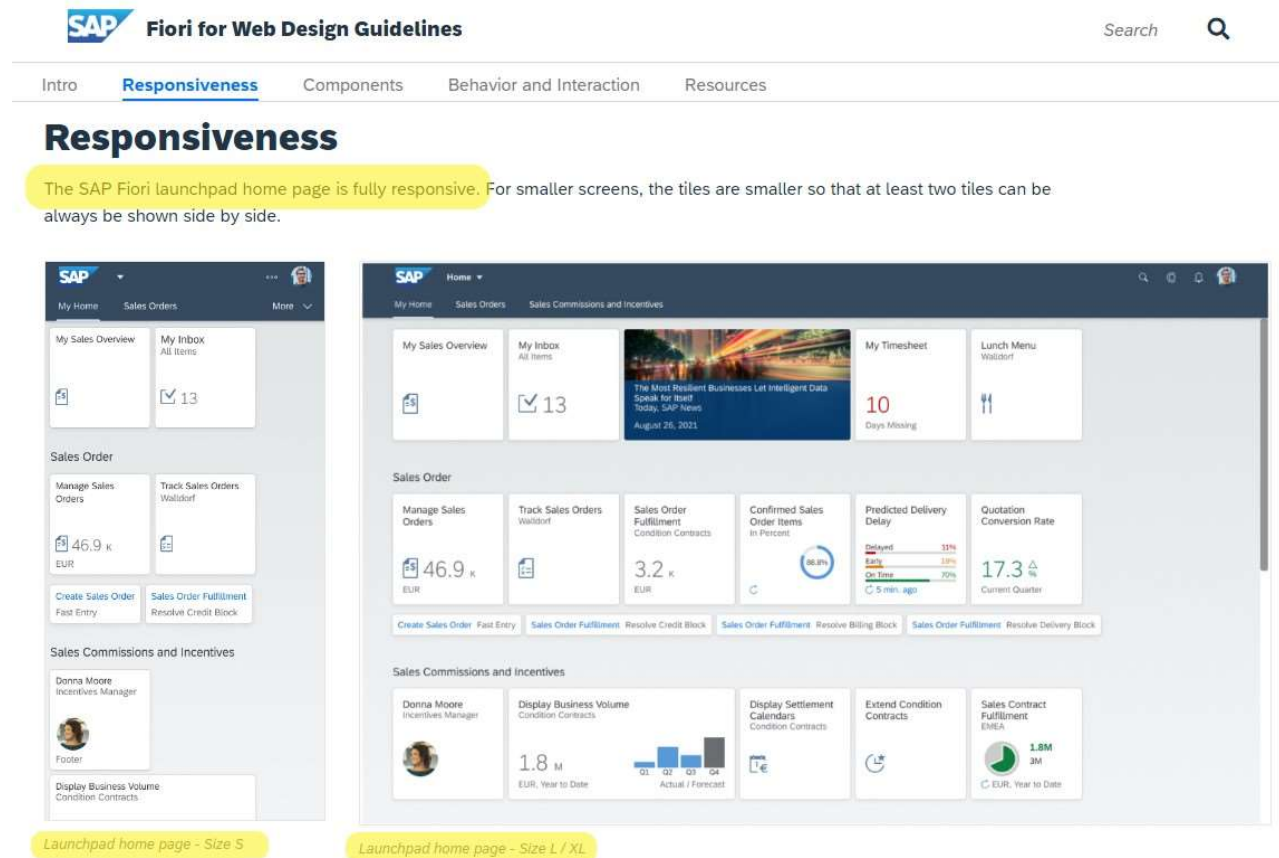
<https://experience.sap.com/fiori-design-web/launchpad/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

29(b). I) controlling the at least one communication interface to transmit at least some of the first channel information to the at least one user platform.

The Accused Instrumentalities control the communication interface to ensure the transmission of information via the SAP Fiori apps to any user platform.

The excerpt below demonstrates that the user can be provided information via the apps to any platform as a result of the communication interface. As shown, there is a matrix of elements each representing an application that provides the user with access to the information in the application.



See pages 1-2 of SAP Fiori Launchpad Home Page, Updated on April 17, 2023,

<https://experience.sap.com/fiori-design-web/home-page/>.

The tiles in the Accused Instrumentalities act as the interface to the applications and are contained in a matrix in the channel grid framework. Tiles display information specific to the user and the use of the application.

SAP Fiori for Web Design Guidelines Search 

[Intro](#) [Responsiveness](#) [Components](#) [Behavior and Interaction](#) [Resources](#)

Components

Tiles

The tiles provide direct access to apps or content. They are similar to large icons and have a rectangular shape.

The launchpad home page comes with a predefined set of groups and tiles. However, the user can also personalize the launchpad home page to reflect their individual roles by choosing from a wide range of ready-to-use tiles from the [app finder](#).

Tiles differ in the content they display. They can contain an icon, a title, some informative text, numbers, and charts. The information that is shown depends on the function of the tile or app.

The number of tiles visible on a page depends on the screen resolution. The tiles are placed below each other and are resized for smaller screens.



Different types of tiles

Links

Links are a different visual representation of a tile and always look the same: they consist of a title and an optional subtitle.

Links are collected in a dedicated area below the tiles area within each group. As with tiles, the user can modify the order of the links at any time.

Links are displayed inline, one after the other. If there is not enough space for the full link at the end of a row, the entire link moves to the next row. Links never break between rows.



Links

See pages 2-3 of SAP Fiori Launchpad Home Page, Updated on April 17, 2023, <https://experience.sap.com/fiori-design-web/home-page/>.

	As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
‘948 Patent Claim 35	
35(a). A computer-implemented method for evaluating secure user-centric information to be provided on at least one user platform operated by a user, the method comprising:	The Accused Instrumentalities ensure that the user information is secured and available to the user on any platform (e.g., windows computer, apple computer, android mobile device, web browser interface, etc.) via the application(s) (the “app” or “apps”) accessible through SAP Fiori. “Securing SAP Fiori system ensures that the information and processes . . . are secured without any unauthorized access to critical information.” – See page 64 of SAP Fiori tutorialspoint, https://pdfcoffee.com/sap-fiori-pdf-free.html The excerpts below provide examples of the methods implemented to ensure that critical user information is available securely when the user uses the Accused Instrumentalities. 11. SAP Fiori – Security Securing SAP Fiori system ensures that the information and processes support your business needs, are secured without any unauthorized access to critical information. You must ensure that the user errors, negligence, or attempted manipulation of your system must not result in loss of information or processing time. All these security policies should apply to all components in a Fiori system. Managing users in SAP Fiori: • To manage SAP Fiori transactional apps, you should have below users: • Users in SAP NetWeaver Gateway and ABAP front-end server • User in the ABAP back-end server

See page 64 of SAP Fiori tutorialspoint, <https://pdfcoffee.com/sap-fiori-pdf-free.html>

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SAP Fiori Launchpad

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The launchpad is a real time, role based, and personalized environment where all your SAP Fiori apps run. Navigation and search features ensure that you can quickly and effortlessly carry out your daily tasks. You can also include classic applications such as SAP GUI and Web Dynpro apps in your launchpad.



The SAP Fiori Launchpad Overview page that is available on SAP Help Portal gives you an overview and access to the documentation for the respective deliveries. The link is available in the *Related Information* section.

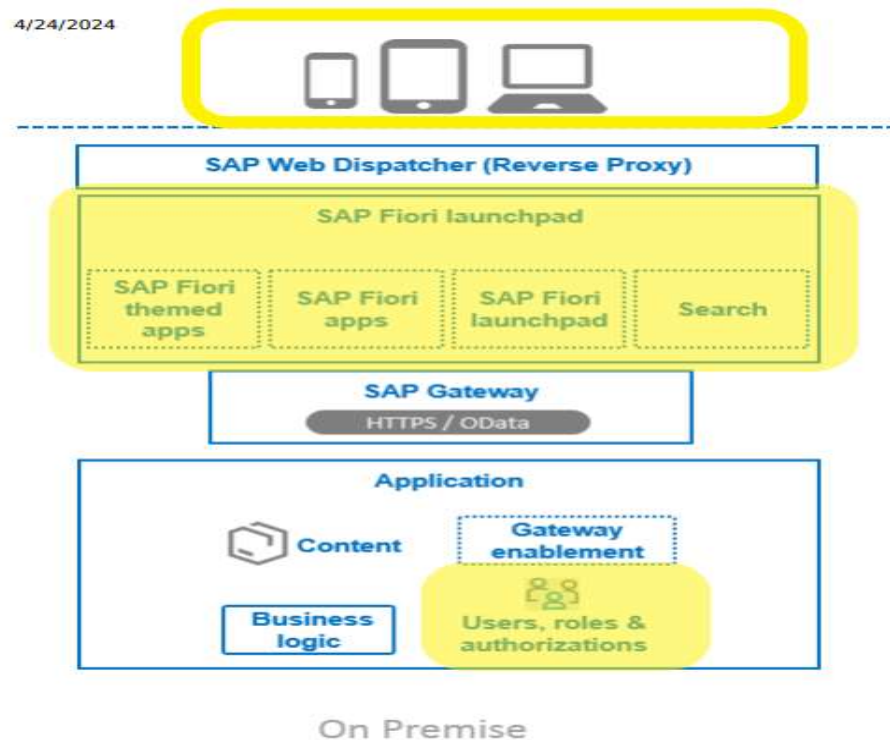
SAP Fiori Launchpad in the SAP Fiori Architecture

The following figure shows how the SAP Fiori launchpad is integrated in an SAP Fiori on premise scenario.

<https://help.sap.com/http.svc/pdfdownload?id=5713415225179543> or

https://help.sap.com/docs/SAP_FIORI_OVERVIEW/4694bb95aacb4cdfa1327c6d8735eaad/753af2c410584bc98f0363ca69a404f1.html?version=4_2020.000

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Related Information

[SAP Fiori Launchpad Overview Page on SAP Help Portal](#)

[SAP Fiori Launchpad](#)

<https://help.sap.com/http.svc/pdfdownload?id=5713415225179543> or

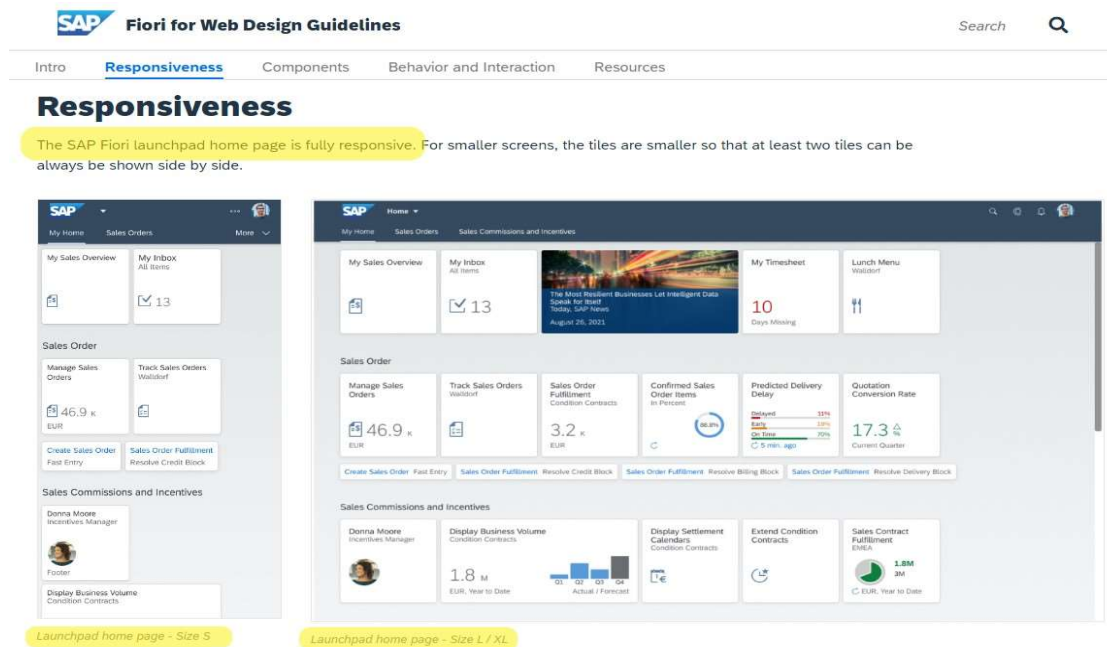
https://help.sap.com/docs/SAP_FIORI_OVERVIEW/4694bb95aacb4cdfa1327c6d8735eaad/753af2c410584bc98f0363ca69a404f1.html?version=4_2020.000

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

35(b). A) electronically implementing a channel grid framework including a matrix of a plurality of authorized channels through which the user receives and/or interacts with, via the at least one user platform, respective portions of the secure user-centric information based at least in part on information access rights and/or security protocols respectively associated with the plurality of authorized channels, the plurality of authorized channels including at least a first channel through which the user receives and/or interacts with first channel information constituting a first portion of the secure

The Accused Instrumentalities are computer-based systems that electronically implement a channel grid framework (as shown in SAP Fiori) implemented for the user. SAP Fiori is a point of entry to SAP Fiori apps on any platform (including mobile and desktop devices). The matrix of tiles and links displays and launches the corresponding apps. Each of the links is a secure user-centric channel associated with an app and user's data can be sent to be displayed, and the user can interact with it. The user can only receive and interact with the relevant information based on the access rights provided to him corresponding to the user identity and platform identity.

The material below shows how the Accused Instrumentalities provide a channel grid framework with a matrix of channel tiles through which the user receives information and can interact. The information provided is based on the particular user and his associated access rights to the particular data set. This data is accessible via the authorized apps associated with that user on SAP Fiori .

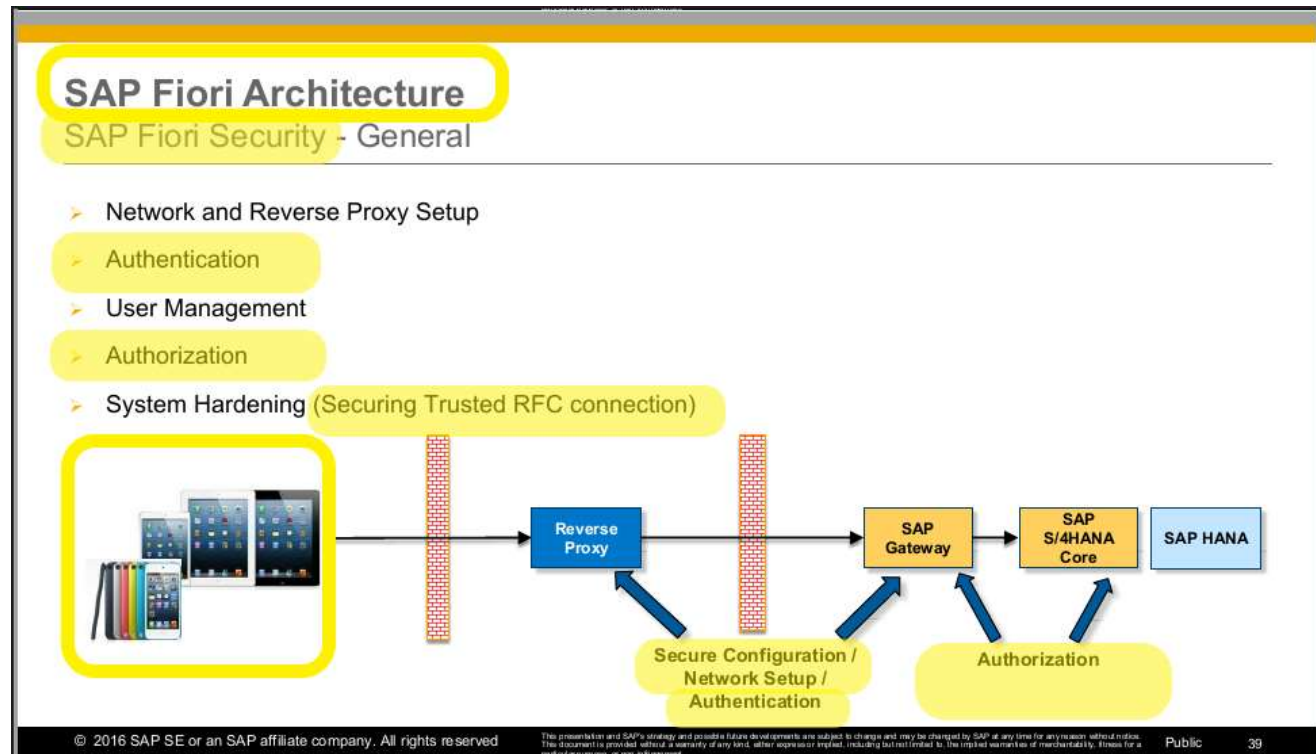


See SAP Fiori Launchpad Home Page, Updated on April 17, 2023,

user-centric
information;

<https://experience.sap.com/fiori-design-web/home-page/>

The two following excerpts below show that the user can run SAP Fiori on any platform so long as the user is authenticated (verification of the user's identity) and authorized to have access to secure information based on his role or profile (what the user has access to).

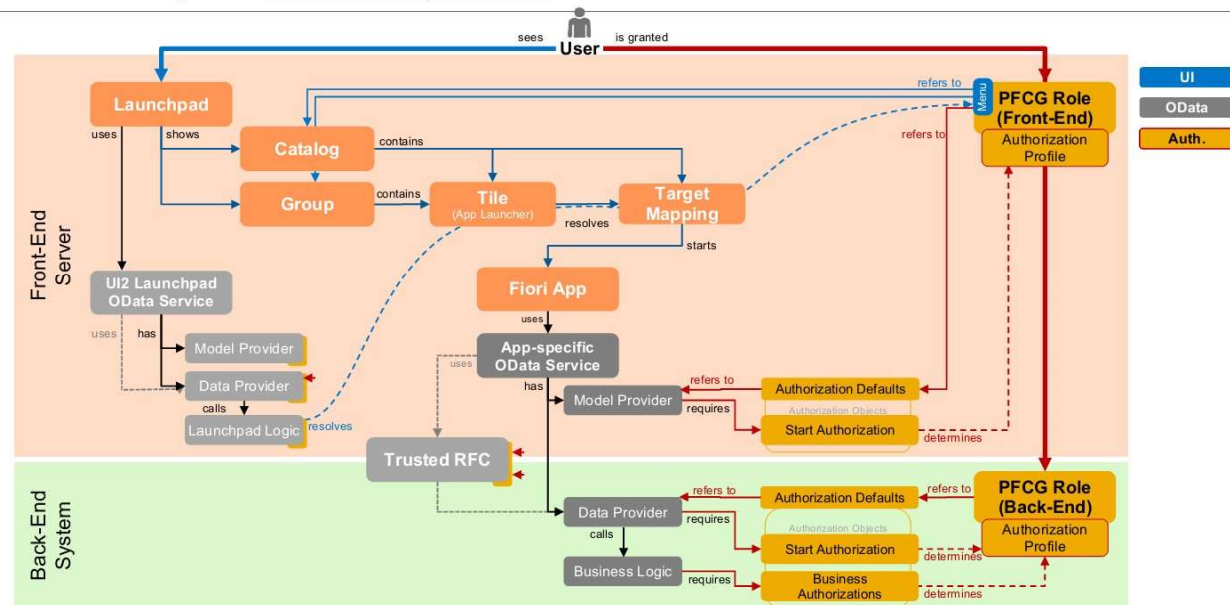


See page 40 of SAP Fiori User Experience – SAP S/4HANA Architecture Deep Dive, Version 4.1, August 2016,

https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf

SAP Fiori Architecture

SAP Fiori launchpad - User Assignment and Authorizations of Content



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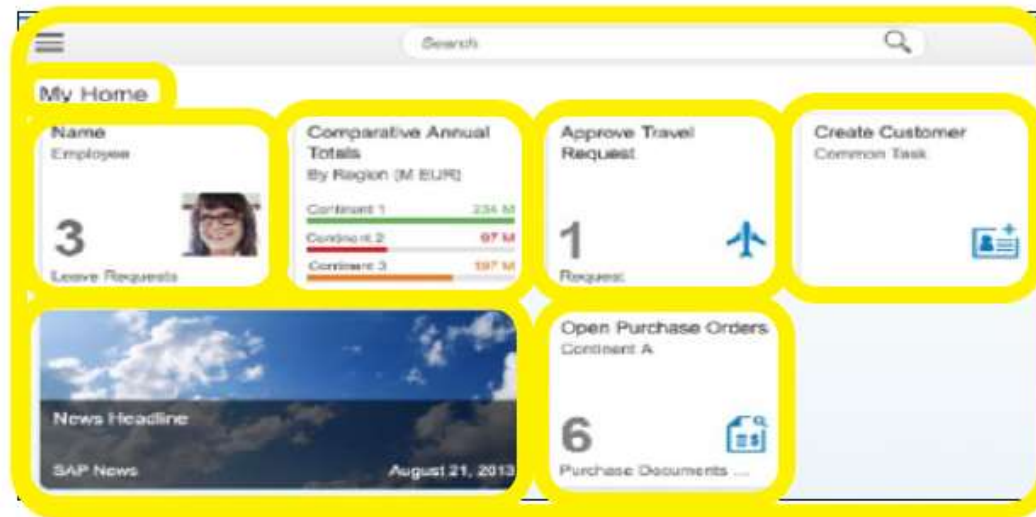
See page 21 of SAP Fiori User Experience – SAP S/4HANA – Version 4.1 – August 2016, [kupdf.net_sap-fiori-ux-architecture-for-s4h.pdf](https://www.kupdf.net/sap-fiori-ux-architecture-for-s4h.pdf).

As shown by the excerpts below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it.

SAP Fiori Launchpad- Key Facts

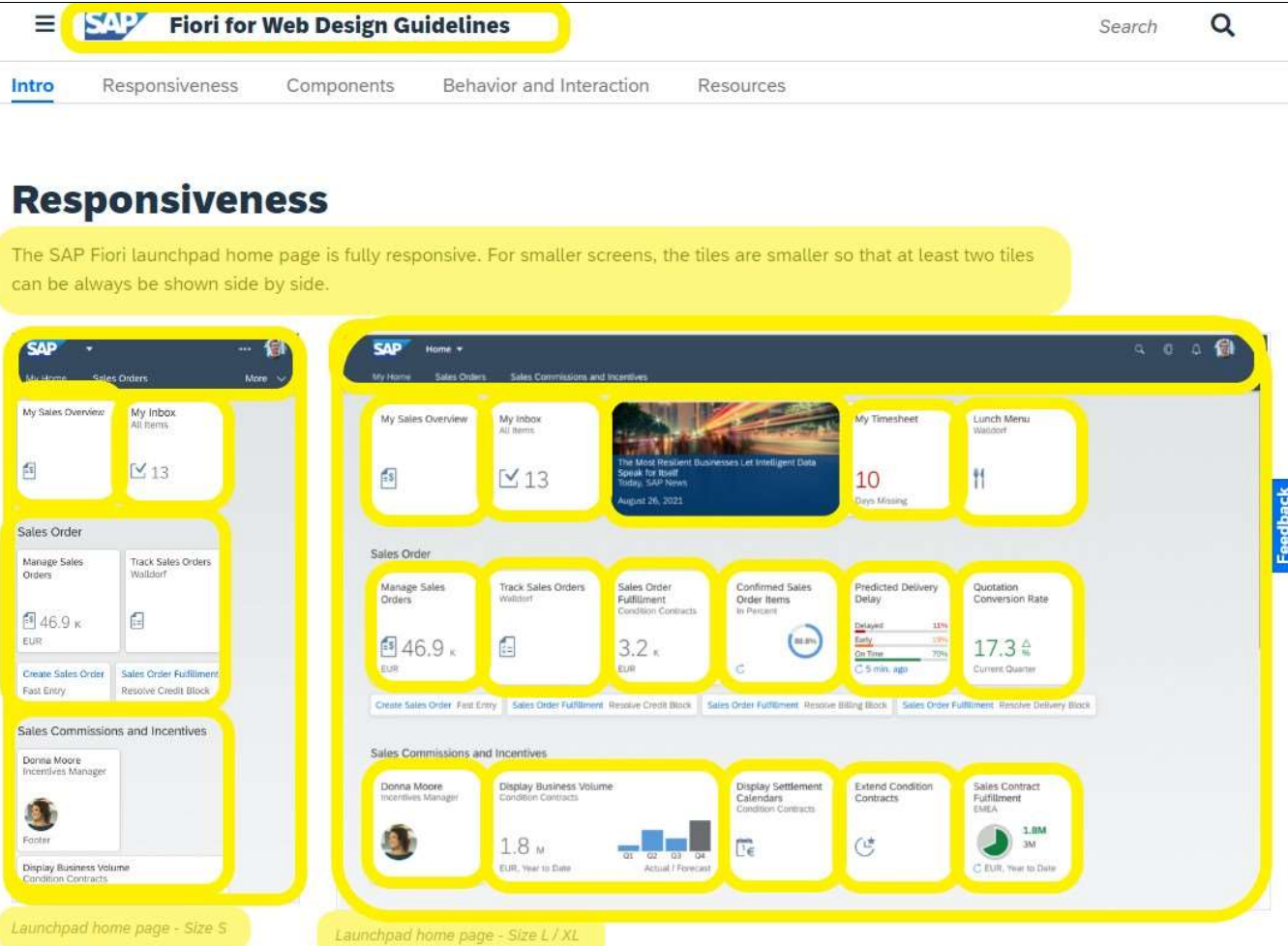
The key points about SAP Fiori Launchpad are given below.

- Web-based entry point to use SAP Business applications across platforms and devices.
- Delivered as an out-of-the-box thinking to the HTML client.
- High productivity for end users using features like theming, search integration, customization, etc.
- Offers single entry points for end users using multiple device types.



See page 28 of SAP Fiori tutorialspoint,

<https://pdfcoffee.com/sap-fiori-pdf-free.html>



See SAP Fiori Launchpad Home Page, Updated on April 17, 2023,

<https://experience.sap.com/fiori-design-web/home-page/>

The Accused Instrumentalities provide the authorized channels for that user in multiple tiles. The tiles provide the user the ability to receive and/or interact with secured information for that user, such as enterprise data specific to that user's role.

[Intro](#)
[Responsiveness](#)
[Components](#)
[Behavior and Interaction](#)
[Resources](#)

[Search](#)

Components

Tiles

The tiles provide direct access to apps or content. They are similar to large icons and have a rectangular shape.

The launchpad home page comes with a predefined set of groups and tiles. However, the user can also personalize the launchpad home page to reflect their individual roles by choosing from a wide range of ready-to-use tiles from the [app finder](#).

Tiles differ in the content they display. They can contain an icon, a title, some informative text, numbers, and charts. The information that is shown depends on the function of the tile or app.

The number of tiles visible on a page depends on the screen resolution. The tiles are placed below each other and are resized for smaller screens.

Different types of tiles

Links

Links are a different visual representation of a tile and always look the same: they consist of a title and an optional subtitle.

Links are collected in a dedicated area below the tiles area within each group. As with tiles, the user can modify the order of the links at any time.

Links are displayed inline, one after the other. If there is not enough space for the full link at the end of a row, the entire link moves to the next row. Links never break between rows.

Links

See <https://experience.sap.com/fiori-design-web/home-page/>

	As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
35(c). B) establishing a user profile to identify user preferences, platform identities, and service support instructions that determine how the secure user-centric information behaves on the at least one user platform;	The Accused Instrumentalities establish a user profile preference so that the user can specify his preferences, platform identities and service support instructions when setting up his user profile. The Accused Instrumentalities have instructions that specify how the secure user-centric channel behaves on a second platform because the Accused Instrumentalities include code instructions allowing the user to have the same or personalized experience (such as same design) across all the devices he is using. The following excerpts show that the Accused Instrumentalities provide a seamless experience across the different platforms that are used by the user, based on his user profile (including role in an organization etc.). The Accused Instrumentalities allow the user to start a process on his laptop and continue that same process on his mobile device or tablet. The Accused Instrumentalities use computer instructions to determine its operation .

SAP Fiori Design Principles

There are five design principles for **SAP Fiori UI5**. These principles make SAP Fiori simple and decompose the different transactions into simple task based UI applications.

- **Role-Based** – SAP has decomposed various SAP transactions and changed them into beautiful user interactive applications that show only most relevant information to the users.
- **Responsiveness** – When SAP Fiori is combined with the power of SAP HANA, it provides an unmatched application response and query executions time.
- **Simple** – To make SAP Fiori simple to match the user demand, SAP has designed it as a **1-1-3** scenario. This means 1 user, 1 use case and 3 screens.
- **Seamless Experience** – SAP has provided all the Fiori apps based on the same language and **it does not matter on the deployment and platform.**
- **Delightful** – SAP Fiori was designed to work with **ECC 6.0** to make it easy for the users and to deploy on the existing SAP system.

2

See page 2 of SAP Fiori tutorialspoint,
pdfcoffee.com_sap-fiori-pdf-free.pdf

SAP Fiori Architecture

SAP Web IDE - Key Use Cases



- Develop new SAP Fiori and SAPUI5 applications
- Extend SAP Fiori apps
- Develop SAPUI5 mobile hybrid applications (using Hybrid Application Toolkit plug-in)
- Extend the SAP Web IDE with new plug-ins and SAP Fiori Elements
- Seamlessly deploy to run on any device – automatic rendering for phone, tablet, desktop
- Deploy to SAP HANA Cloud Platform, SAP Mobile Platform or ABAP

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See page 46 of SAP Fiori User Experience – SAP S/4HANA Architecture Deep Dive, Version 4.1, August 2016,

https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf

SAP Fiori provides all business roles in real time on compatible hand devices. It offers business roles on easy to use functions, simple with unmatched responsiveness on desktop, smartphones and Tablets.

SAP Fiori enables multiple device applications that allow users to start a process on their desktop/laptops and to continue that process on a smartphone or on a tablet. SAP has developed Fiori Apps based on User interface UI5.



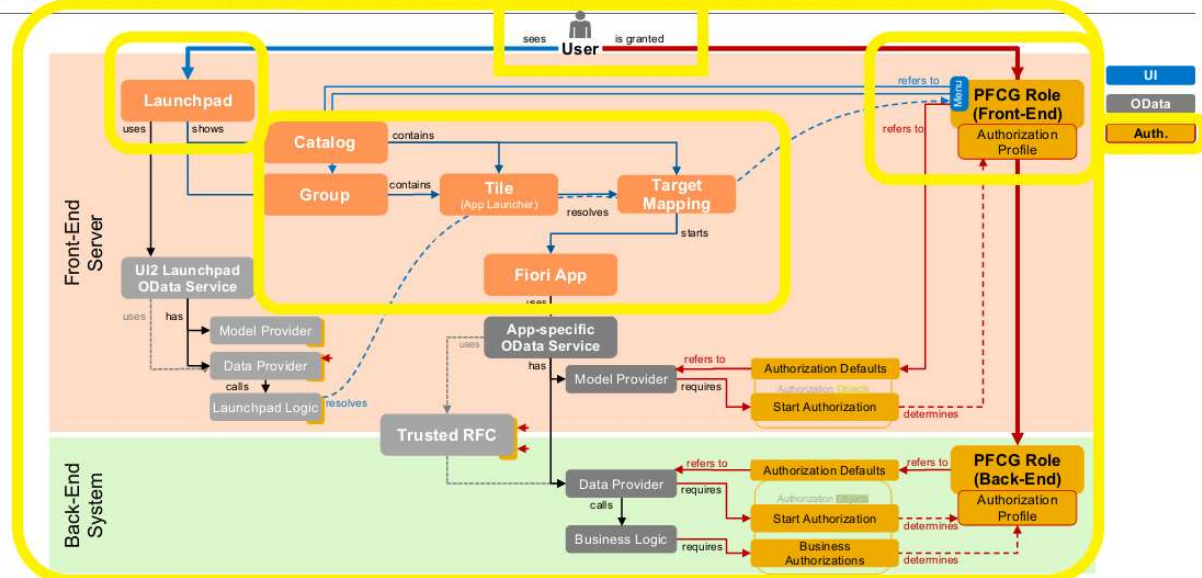
When SAP Fiori is combined with the power of the SAP HANA, it provides an unmatched application response and query-execution time. SAP Fiori user experience (UX) is used to provide a personalized and role-based user experience for enterprise-wide engagement across lines of business.

See also page 2 of SAP Fiori tutorialspoint

The excerpts below show that the Accused Instrumentalities allow the user to access SAP Fiori on any platform based on the user's authorization related to his profile (including role in an organization).

SAP Fiori Architecture

SAP Fiori launchpad - User Assignment and Authorizations of Content



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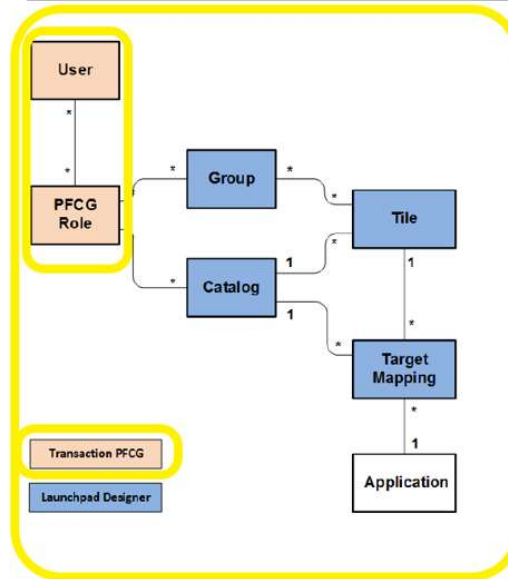
Public 21

See page 21 SAP Fiori User Experience – SAP S/4HANA Architecture Deep Dive, Version 4.1, August 2016

https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf

SAP Fiori Architecture

SAP Fiori launchpad - Content Model for ABAP platform



Transaction PFCG

- Assign groups and catalogs to roles
- Roles are the means to assign catalogs and their apps to users

SAP Fiori launchpad designer (FLPD)

Content can be configured system wide (configuration) or client specific (customizing):

- **Target Mapping:** maps navigation intent to concrete (logical application/target)
- **Tile:** used to launch an application from the homepage
- **Catalog:** set of applications a user can use and add to his homepage
- **Group:** predefined set of tiles a user sees on his homepage

See page 19 of SAP Fiori User Experience – SAP S/4HANA Architecture Deep Dive, Version 4.1, August 2016

https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf

SAP Fiori User Roles

Lines of Business

Finance  - Accounts Payable Accountant - Accounts Payable manager - Accounts Receivable Accountant - Accounts Receivable Manager - Cash Manager - Controller - G/L Accountant Manager - Access Control Administrator - Financial Close Manager - Employee - Senior Executive	Human Resources  - Employee - Manager	Sales & Marketing  - Sales Representative (CRM/ SD) - Sales Manager - Internal Sales Representative (SD) - Marketing Manager - Marketing Executive - Marketing Expert - Contract Accounts Receivable Manager	Procurement  - Purchaser - Inventory Accountant - Employee - Manager - Strategic Purchaser	R&D, Engineering  - Project Manager & Planner - Program Manager - Project Team Member - Engineer
	Asset Management  - Maintenance Worker & Planner - EHS-Production Worker - EHS-Foreman		Supply Chain  - Supplier - Supply Planner - Supply Chain Analyst - Transportation Manager - Warehouse Manager - Shipping Specialist - Product Manager - Data Scientist - ATP Controller - Local Demand Planner	Manufacturing  - MRP Controller - Quality Engineer - Production Planner - Production Worker/Supervisor - Recipe Developer - Demand Planner

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Customer

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See page 6 of SAP Fiori UX, App Overviews, December 2014,

https://experience.sap.com/files/SAPFiori_AppOverviews.pdf

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

35(d). C) receiving configuration data indicating one or more user preferences regarding alerts transmitted via the first channel based on the user profile;

The Accused Instrumentalities receive configuration data indicating the user's preferences regarding notifications transmitted via the app based on the user's profile.

The following excerpts show that the Accused Instrumentalities display notification alerts based on the configuration data related to the user profile . These alerts are shown in the channel in the Accused Instrumentalities and is configured in the user's profile. "[The user] can personalize various preferences relating to which notifications [the user] want[s] to receive, and how, and where they are displayed in the launchpad" by setting his notification preferences accessible via his SAP Fiori account.

The screenshot displays the SAP Help Portal documentation for 'Setting Notification Preferences' within the SAP Fiori Launchpad user guide. The page is structured with a sidebar navigation menu on the left, a main content area, and a right-hand sidebar with additional links and a feedback section.

Sidebar Navigation:

- Home > ABAP_PLATFORM_BW4HANA > SAP Fiori Launchpad > User Guide > Personalizing the Launchpad > Managing Your Settings > Setting Notification Preferences
- SAP Fiori Launchpad
 - What's New
 - SAP Fiori Launchpad Features
 - Administration Guide
 - User Guide
 - About the Launchpad
 - Using the Launchpad
 - Personalizing and Adapting Apps
 - Personalizing the Launchpad
 - Personalizing the Home Page
 - Adding Apps to Your Launchpad
 - Managing Your Settings
 - Maintaining your Default User Values
 - Setting Notification Preferences** (selected)
 - Developer Guide
 - Security Aspects
 - Troubleshooting

Main Content Area:

Setting Notification Preferences

The launchpad displays notifications that are related to your business role, such as leave requests or purchase orders. You can personalize various preferences relating to which notifications you want to receive, and how and where they are displayed in the launchpad.

Some of the notification preferences that you set affect all types of notifications, while others are specific to a notification type.

To access your notification preferences, in the Me Area, open **Settings > Notifications**.

General Preferences

The following settings affect all notifications, regardless of their notification type:

Setting	Description
Show High-Priority Alerts	If you are working in an app, the Me Area, or the app finder, a popup notifies you immediately when you receive a high-priority notification. When this setting is off, you will only see the high-priority notification when you are back in the home page view.
Show Preview in Home Page	Displays a preview panel on your home page showing your most recent notifications. This saves you from having to open the Notifications area to see your latest notifications.

Note
If you cannot see this setting, your administrator may not have enabled it.

On this page

- General Preferences
- Preferences for Specific Notification Types
- Related Information

Was this page helpful?
Yes No

https://help.sap.com/docs/ABAP_PLATFORM_BW4HANA/a7b390faab1140c087b8926571e942b7/efec622a9eed4217a0a3fb6255801e41.html

help.sap.com/docs/business-network-for-trading-partners/managing-your-user-account/notification-preferences

SAP Help Portal (Documentation)

Home > SAP Business Network for Trading Partners > Managing Your User Account > Notification Preferences

Managing Your User Account 2402

This document Search in this document

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Notification Preferences

The **Notifications** tab on the **Account Settings** page lets account administrators configure account-level notifications. You can manage notification settings for SAP Business Network, SAP Business Network Discovery, SAP Ariba Sourcing, and SAP Ariba Contracts from one location.

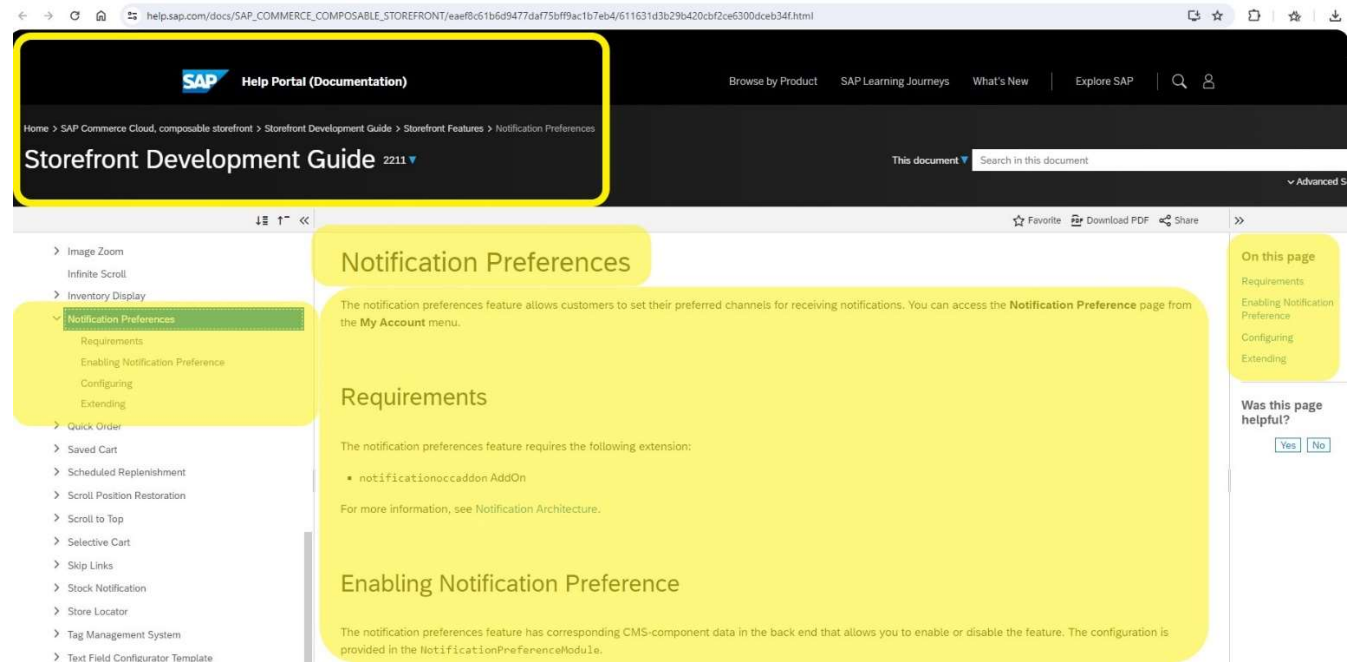
Depending on your permissions, you can configure user level, automatic notifications when certain events affect your account. You can use these notifications to monitor catalog access activity and debug problems with your account. The **Tasks** area on the **Home** dashboard displays other notifications.

Notification Types

Setting Notification Preferences

- Managing your SAP Business Network
- > The Supplier Homepage
- > User Account Information
- Setting Up Two-Factor Authentication (Supplier Users)
- > Your Password
- > Business Roles
- ▼ **Notification Preferences**
- > Notification Types
- Setting Notification Preferences
- Linking User Accounts
- > Removing Your Personal Information and Revoking User Access to SAP Business Network
- Contacting Your Account Administrator
- > About the SAP Business Network Supplier Mobile App

<https://help.sap.com/docs/business-network-for-trading-partners/managing-your-user-account/notification-preferences>



https://help.sap.com/docs/SAP_COMMERCE_COMPOSABLE_STOREFRONT/eaef8c61b6d9477daf75bff9ac1b7eb4/611631d3b29b420cbf2ce6300dceb34f.html

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

35(e). D) receiving session data indicating a current state of at least one external device of the user;

The Accused Instrumentalities receive session data (including certificates and tokens, and session cookies) indicating the current state of any platform of the user (e.g., windows computer, apple computer, android mobile device, web browser interface, etc.)

The following material regarding the Accused Instrumentalities shows that they receive session data in the form of logon tickets that indicate the current status of any platform associated with the user.

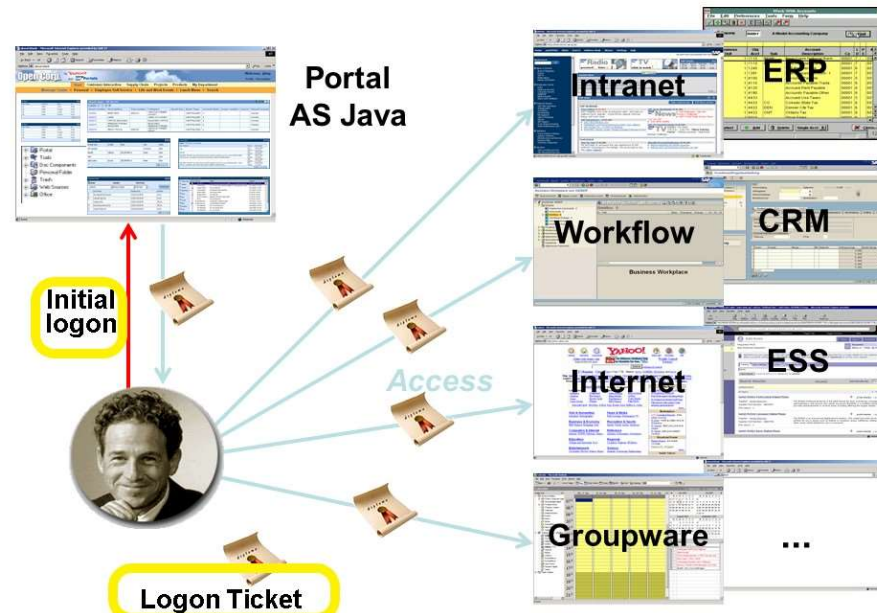
(3) SAP Logon Tickets - https://www.tutorialspoint.com/sap_security/sap_security_logon_tickets.htm

“[T]he digitally signed SAP logon tickets [can be] configure[d] with a Single Sign-On to access integrated applications in a SAP environment. [A portal can be configured] to issue SAP logon tickets to the users and the users need to authenticate this system for initial access. When SAP logon tickets are issued to users they are saved in web browsers and allows the user[s] to login to different systems with use of SSO.”

Logon Tickets

For user authentication to multiple systems, SAP NetWeaver enables you to configure the use of logon tickets. You can use logon tickets to provide and administer user authentication based on cookie technology for complex system landscapes.

For an overview of the authentication process when using logon tickets, see the figure below.



https://help.sap.com/doc/saphelp_nw73ehp1/7.31.19/en-us/43/9d7bbe08021b5e10000000a1553f6/content.htm?no_cache=true

(4) X.509 Client Certificates -

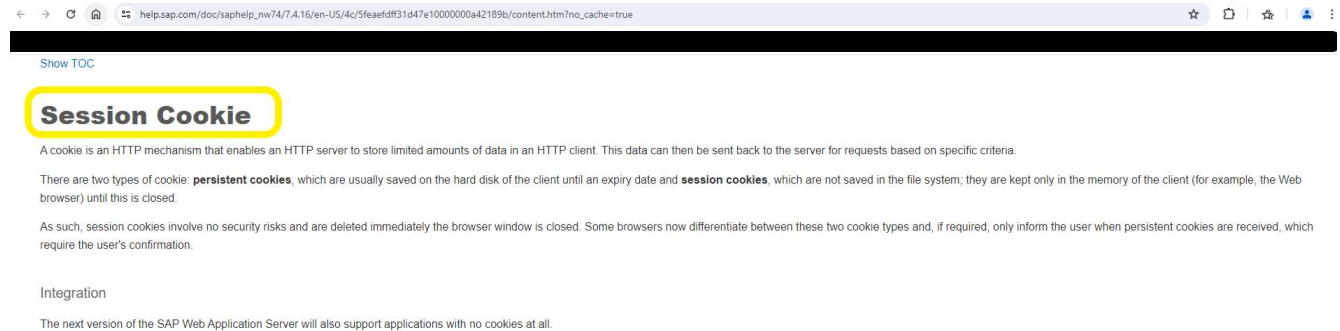
“As an alternative to authenticating with a user ID and passwords, users can present X.509 client certificates for accessing SAP and non-SAP systems. In this case, user authentication takes place using the underlying Secure Sockets Layer (SSL) protocol and users do not need to interactively enter a password for logon. “

“Authentication with X.509 Certificates makes use of a Public Key Infrastructure (PKI) to securely authenticate users. After users receive their X.509 certificates from a certificate issuing Certification Authority (CA), they can use them to securely access SAP NetWeaver, as well as non-SAP systems. The SAP NetWeaver and the non-SAP system can authorize access requests, based on an established trust relationship with the CA.

In addition, users can use their X.509 certificates to authenticate their access to systems located on the Internet and within the company Intranet. Thereby, the certificates for authentication can be used in open environments such as the Internet.”

https://help.sap.com/doc/saphelp_nw73ehp1/7.31.19/en-us/43/9d7bb1e08021b5e10000000a1553f6/content.htm?no_cache=true

The excerpt below shows the session cookies:



https://help.sap.com/doc/saphelp_nw74/7.4.16/en-US/4c/5feafdf31d47e10000000a42189b/content.htm?no_cache=true

	As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
35(f). E) electronically monitoring at least the first channel information so as to determine one or more events, conditions, logical workflows, discrete information values or signal data, based on at least one threshold condition or parameter relating to the first channel information and determined based on the user preferences indicated by the configuration data; and if the one or more events, conditions, logical workflows, discrete information values or signal data is/are determined in E):	The Accused Instrumentalities allow the electronically monitoring of relevant data (such as meaningful events, conditions, workflow results, discrete notification information, or signals etc.) (if an established condition is met, a “trigger” is established upon which one or more alerts or notifications may be generated) for the user based on the user’s preferences, indicated by the configuration data. The monitoring is provided so that when particular requirements are met, a signal can be sent as a result. The three excerpts below show how a user can be informed about the occurrence and status updates of situation instances (“Situation Monitoring”) via a notification on any platform or “any supported device types” (including desktop, tablet, or smartphone) that is being used by the user.

help.sap.com/docs/SAP_S4HANA_ON-PREMISE/8308e6d301d54584a33cd04a9861bc52/62f7d06f194143bab94e6b3020dfda68.html

SAP Help Portal (Documentation)

Browse by Product | SAP Learning Journeys | What's New | Explore SAP | Search

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Situation Monitoring

View or Manage Instances
Translate Situation Types

My Situations
Monitor Situations
Reuse Library for Situation Handling
Features for Standard Object-Based Situations
Situation Handling - Extended Framework
Technical Configuration Settings
Data Management in Situation Handling
Glossary for Situation Handling
FAQ

Responsibility Management
Business Event Handling
Business Event Logging
Introduction to Intelligent Scenario Lifecycle Management
APIs for Process Management
Process Observer (CA-EPT-POC)
Master Data Governance
Data Replication Framework
Key Mapping
Value Mapping
Data Protection
SAP Information Lifecycle Management
Data Management

Situation Monitoring

In this section, you can define whether you want to monitor the occurrence and status updates of situation instances based on this situation type.

- **Monitor Instances:** Monitoring (the tracking of situation instances) isn't enabled by default. You need to enable this option if you want to capture and monitor data for this situation type in the Monitor Situations app and enable the creation of business situation events. If it's enabled, you can navigate directly to this app from here by choosing **Monitor Situations**.

Note
You can delete the monitored data belonging to an operational situation type. In the object page of the situation type or in the **Situation Types** table, choose **Delete Monitored Data**. Then select one of these options:

- **Delete All Monitored Data:** This option deletes all of the monitored data belonging to the situation type.
- **Delete Monitored Data Before:** This option deletes only the monitored data from before the date you enter for this option.

• **Capture Data Context:** You can capture the situation data context that can be extracted using the **Business Situation - Read** (API_BUSINESS_SITUATION_SRV) API. You can see this option only if the template on which the situation type is based offers it. To enable this feature, you need to activate **Monitor Instances** first. The data context is deleted automatically after 7 days.

Note
When a template offers the **Data Context** capturing feature and you've selected it, you can also enable **Situation Automation** for your own automation solution. Please note that if a situation instance is handled automatically, the end user is not informed about it. If you haven't implemented an automation solution, do not select this option.

Related Information

Monitor Situations
Business Situation - Read
Situation Handling Events

Was this page helpful?

https://help.sap.com/docs/SAP_S4HANA_ON-PREMISE/8308e6d301d54584a33cd04a9861bc52/62f7d06f194143bab94e6b3020dfda68.html

See “SAP S/4HANA” (2023)

Manage Situation Types

With this app, you can maintain situation types that represent real-world business situations requiring attention. You can also define who receives notifications about these situations.

Situation types help you manage a large variety of circumstances that are critical to your business processes by automatically notifying the right users either as soon as the situations occur or at a defined time.

Key Features

You can use this app to:

- Create situation types from situation templates.
- Maintain conditions based on which situations occur.
- Maintain texts to inform users about situations.
- Decide whether you want the system to send notifications when situations occur.
- Define responsibility by assigning recipient groups to situations.
- Schedule batch jobs for situations, depending on the use case.
- Enable situation monitoring.
- Enable the capturing of situation data context, depending on the use case.

Supported Device Types

- Desktop
- Tablet
- Smartphone

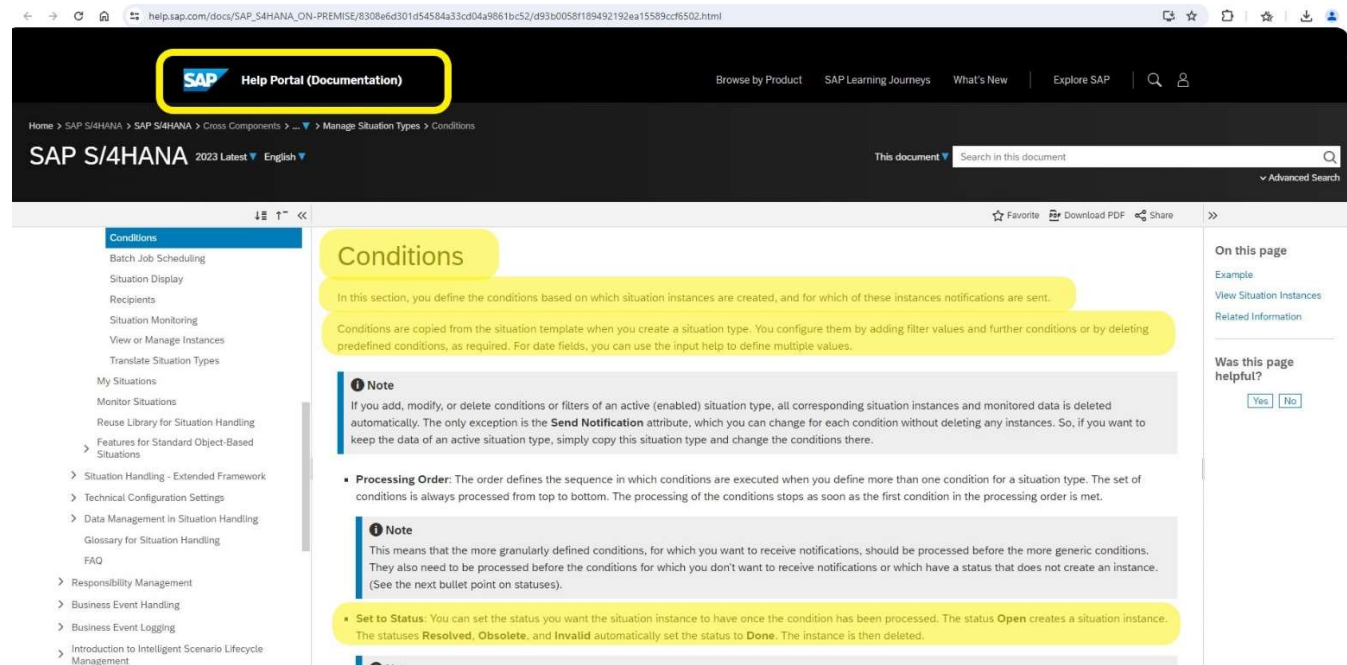
https://help.sap.com/docs/SAP_S4HANA_ON-PREMISE/8308e6d301d54584a33cd04a9861bc52/60748ea9f37d4692912578b698aaefee.html?q=%22message%20situation%20types%22

See “SAP S/4HANA” (2023)

The screenshot shows the SAP Help Portal interface. The top navigation bar includes the SAP logo, 'Help Portal (Documentation)', and links for 'Browse by Product', 'SAP Learning Journeys', 'What's New', and 'Explore SAP'. A search icon and user profile icon are also present. The left sidebar contains a tree view with categories like 'Situation Display', 'Recipients', 'Situation Monitoring', 'View or Manage Instances', 'Translate Situation Types', 'My Situations', 'Monitor Situations', 'Reuse Library for Situation Handling', 'Features for Standard Object-Based Situations', 'Situation Handling - Extended Framework', 'Technical Configuration Settings', 'Data Management in Situation Handling', 'Glossary for Situation Handling', 'FAQ', 'Responsibility Management', 'Business Event Handling', 'Business Event Logging', 'Introduction to Intelligent Scenario Lifecycle Management', 'APIs for Process Management', 'Process Observer (CA-EPT-POC)', 'Master Data Governance', 'Data Replication Framework', 'Key Mapping', and 'Value Mapping'. The main content area is titled 'Notification' and includes a 'Message Preview' section. A yellow callout box states: 'This is where you define the notification texts for situations that are displayed on SAP Fiori launchpad when a situation occurs (depending on the settings you've made in the Conditions section)'. Below this, text explains that notification recipients can choose to receive email notifications. A list of bullet points provides details on 'Secure Notification Details', 'Notification Preview', 'Public Notification Details', 'Email Preview', 'Aggregate Notifications', and 'Resend Notifications'. A 'Note' box mentions that public notifications can also be used on mobile phones or tablets. The 'Related Information' section lists 'Conditions'. The right sidebar contains links for 'On this page', 'In-App Situation Message', 'Notification', 'Related Information', and a 'Was this page helpful?' survey with 'Yes' and 'No' buttons.

https://help.sap.com/docs/SAP_S4HANA_ON-PREMISE/8308e6d301d54584a33cd04a9861bc52/56219e78b2054e678d9b9fd10a81b3c0.html

See “SAP S/4HANA” (2023)



https://help.sap.com/docs/SAP_S4HANA_ON-PREMISE/8308e6d301d54584a33cd04a9861bc52/d93b0058f189492192ea15589ccf6502.html

See “SAP S/4HANA” (2023)

The excerpt below shows how a user can configure SAP Fiori Launchpad so that the user can be aware of push notifications in Fiori Launchpad. The following excerpt shows an example of the relevant data monitored and provided to the user so that the user is aware of certain actions that need to be performed in a timely manner or certain events are brought to his attention for his own knowledge. This example shows that the user can monitor for events like purchasing unusual items.

SAP Fiori for manager

My Unusual Items



Description

With the transactional app **My Unusual Items**, you can keep watch on the expense items of your departments and projects that are **likely to be disputable**. This app collects disputable expense items, according to predefined rules and patterns, and consolidates them into your inbox so that you can clear them either by disputing or confirming them.

Capabilities

- View disputable expense items in your inbox
- Confirm expense items
- Dispute expense items with comments
- View the status of expense items to follow up

Prerequisites

[Help portal](#)

See SAP Fiori UX App Overviews, December 2014

https://experience.sap.com/files/SAPFiori_AppOverviews.pdf

The following excerpt shows how the Work Flow is configured in SAP Fiori so that user can receive email notification of workflow:

tutorialspoint.com/sap_fiori/sap_fiori_workflow.htm

tutorialspoint Category Search tutorials, courses and ebooks...

SAP FIORI Absolute Beginners

SAP Fiori Tutorial

- SAP Fiori - Home
- SAP Fiori - Introduction
- SAP Fiori - Architecture
- SAP Fiori - NetWeaver Gateway
- SAP Fiori - Installation
- SAP Fiori - Launchpad
- SAP Fiori - OData Services
- SAP Fiori - Transactional Apps
- SAP Fiori - Fact Sheets
- SAP Fiori - Analytical Apps
- SAP Fiori - Theme Designer
- SAP Fiori - Security

How to add custom Workflow scenarios?

To add custom workflow scenarios in Fiori, follow the steps given below in front-end and back-end system.

- Step 1** – Get Workflow definitions.
- Step 2** – Define the scenarios for workflow.
- Step 3** – Add a tile to Fiori Launchpad.
- Step 4** – Decision options definition.
- Step 5** – BADI implementation for decision update.
- Step 6** – Display Application data.

How to configure Work Flow in Fiori?

- Step 1** – Login to back-end System.

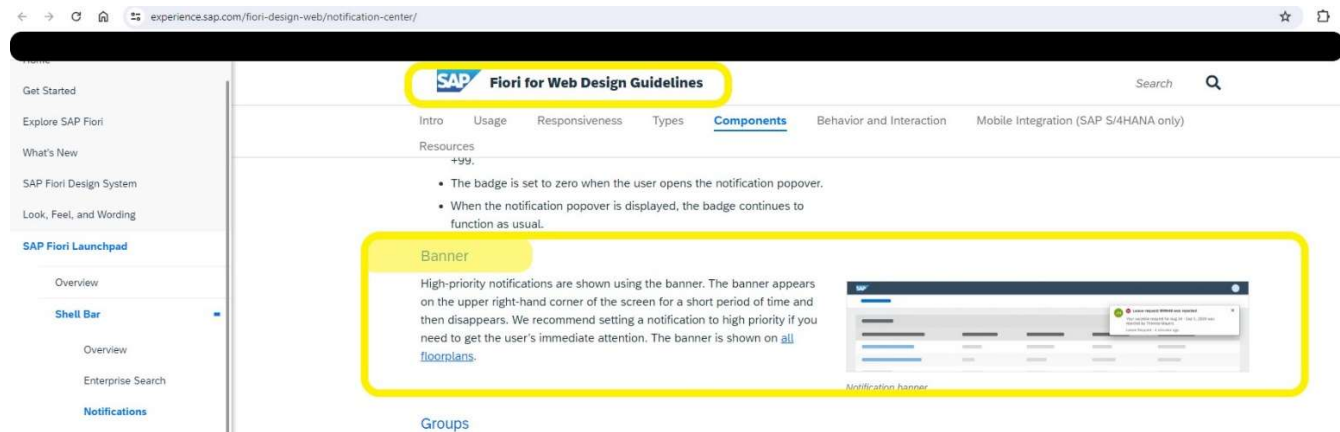
T-Code: SWI2_FREQ

https://www.tutorialspoint.com/sap_fiori/sap_fiori_workflow.htm

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

35(g). F) determining a notification method by which to provide at least one alert on the at least one external device based on the current state of the at least one external device indicated by the session data;

The Accused Instrumentalities allow a notification method to provide alerts to the user for his timely action or attention or knowledge. The user can choose his notification method (the user can receive notifications through different channels) so that the notifications can be sent via a banner appearing on the user interface, an email, or to the user's mobile device.



<https://experience.sap.com/fiori-design-web/notification-center/>

Chapter 1 Notification Introduction

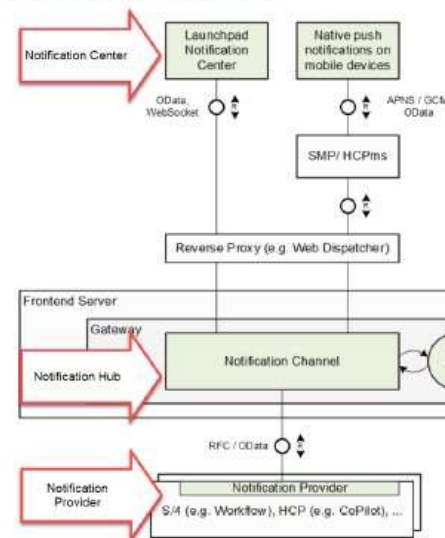
Notification is a widely-used concept to directly inform users about situations that require an immediate action or attention. Fiori 2.0 offers this possibility with the Notification Channel, a framework for applications to deliver notifications to end users. From Fiori 2.0, SAP Fiori Launchpad provides a Notifications area that lets you know about important tasks and requests requiring your timely action or knowledge. They allow you to view immediate updates on the latest and most important events that are related to your business role.

The Launchpad consumes notifications from the notification channel, which is a Backend system that aggregates notifications from different notification providers configured in your environment.

There are three concepts to understand when activating notifications:

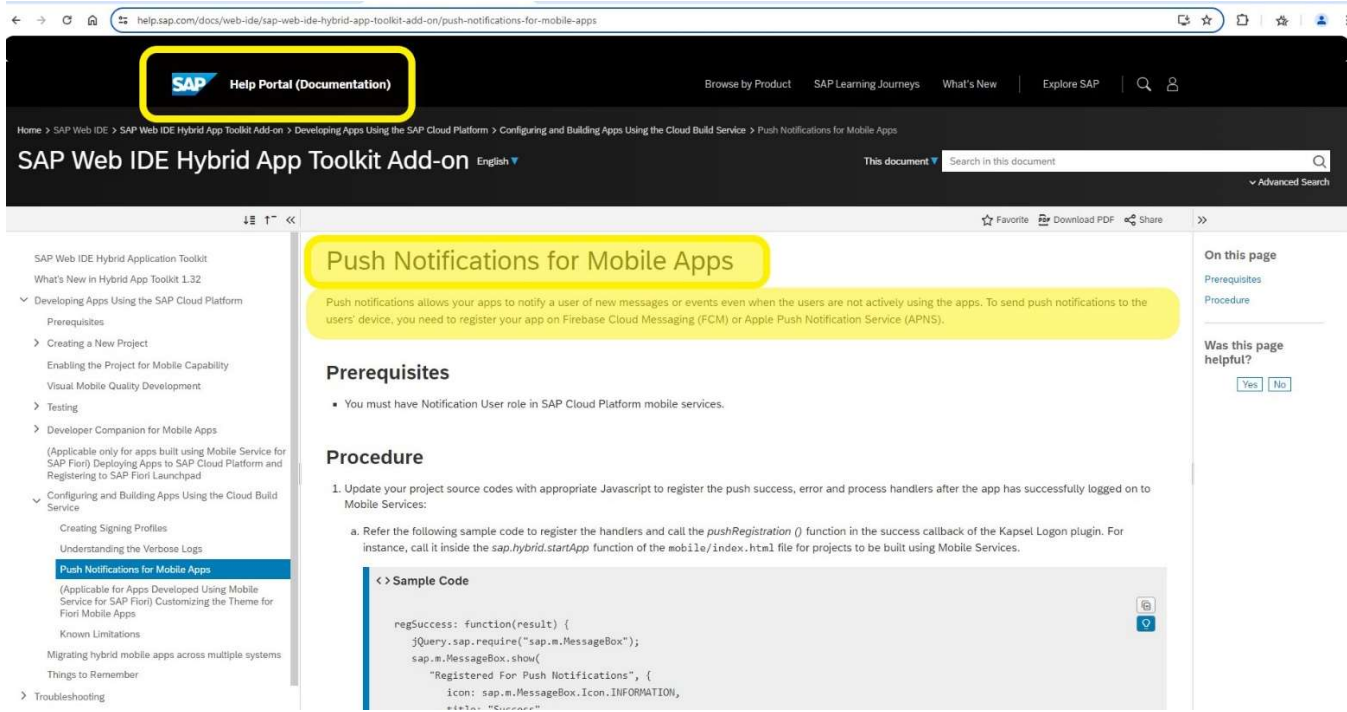
- Notification Center – the area in the Fiori Launchpad where notifications are displayed
- Notification Hub – Collects notifications to be shown in the Notification Center
- Notification Provider – Provides notification content to the Notification Hub

Below is the architecture of the Notification. This document will only cover the Launchpad Notification. Native push notification is not in the scope.



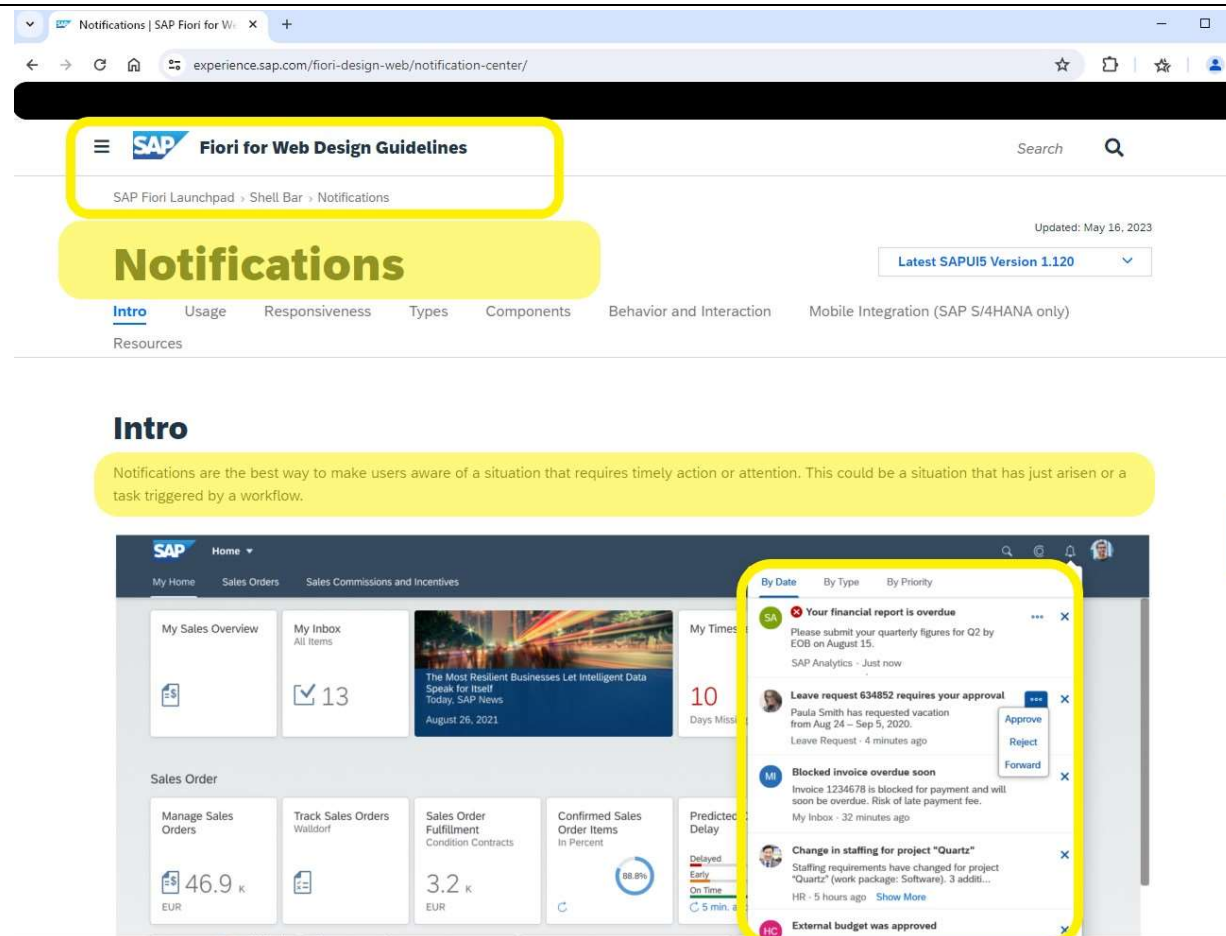
5

See page 5 of “How to Setup Notifications in Fiori 2.0 Step-by-Step for 1809 – SAP S/4HANA 1809 – Part 1”

	As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
35(h). G) generating notification data according to the determined notification method, wherein the notification data is configured to cause the at least one external device to provide the at least one alert on the at least one external device; and	The Accused Instrumentalities allow the alert or notification data to be generated based on the notification method chosen by the user and also allow the notification data to be sent from a platform onto another platform (including a mobile device). The excerpt below shows that the Accused Instrumentalities allow for the configuration of push notification messages for a mobile device.  https://help.sap.com/docs/web-ide/sap-web-ide-hybrid-app-toolkit-add-on/push-notifications-for-mobile-apps

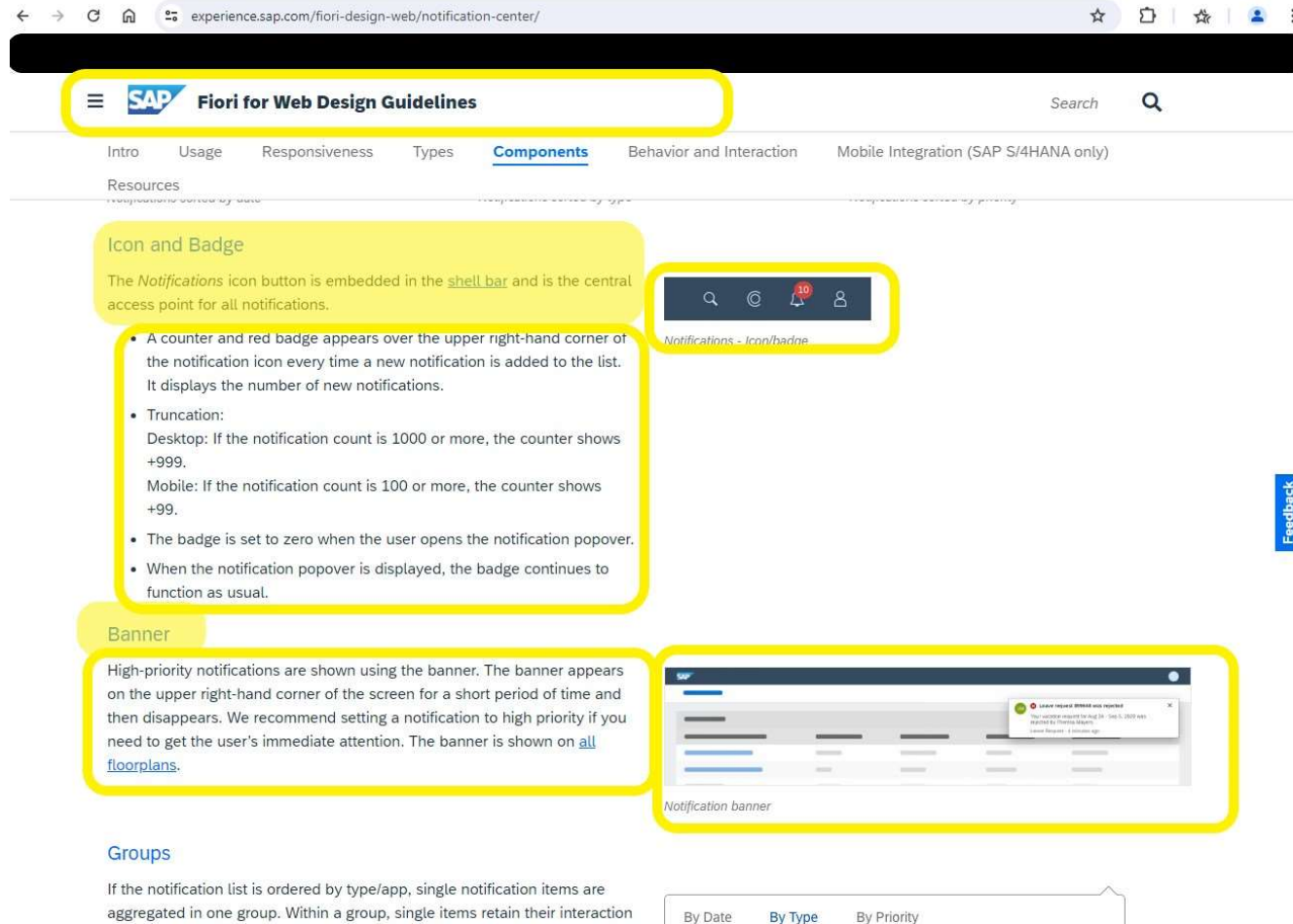
	See also “SAP Web IDE Hybrid App Toolkit Add-on” (“Push Notifications for Mobile Apps”) (https://help.sap.com/docs/SAP_Web_IDE/8e5c63b6470a4255861c259f3b2d9b41?locale=en- As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
35(i). H) electronically transmitting at least one alert to, or transmitting the notification data to the at least one external device via the first channel without being requested by the user, wherein the transmission of the at least one alert or notification data to the at least one external device is based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of authorized channels, the user, and the at	The Accused Instrumentalities are computer-based systems that electronically transmit an alert or a notification to the user platform via an app without being requested by that user based on the access rights associated with the corresponding apps, the identity of the user, and identity of the platforms. The following excerpts show different notifications that are sent as alert data to their user device through the Accused Instrumentalities channel. These alerts are automated and generated without the user needing to request them. The alerts that can be sent use information about the user, such as whether they have a right to access that particular information. Furthermore, security protocols prevent highly sensitive information from being incorrectly displayed in the notifications.

least one user platform.



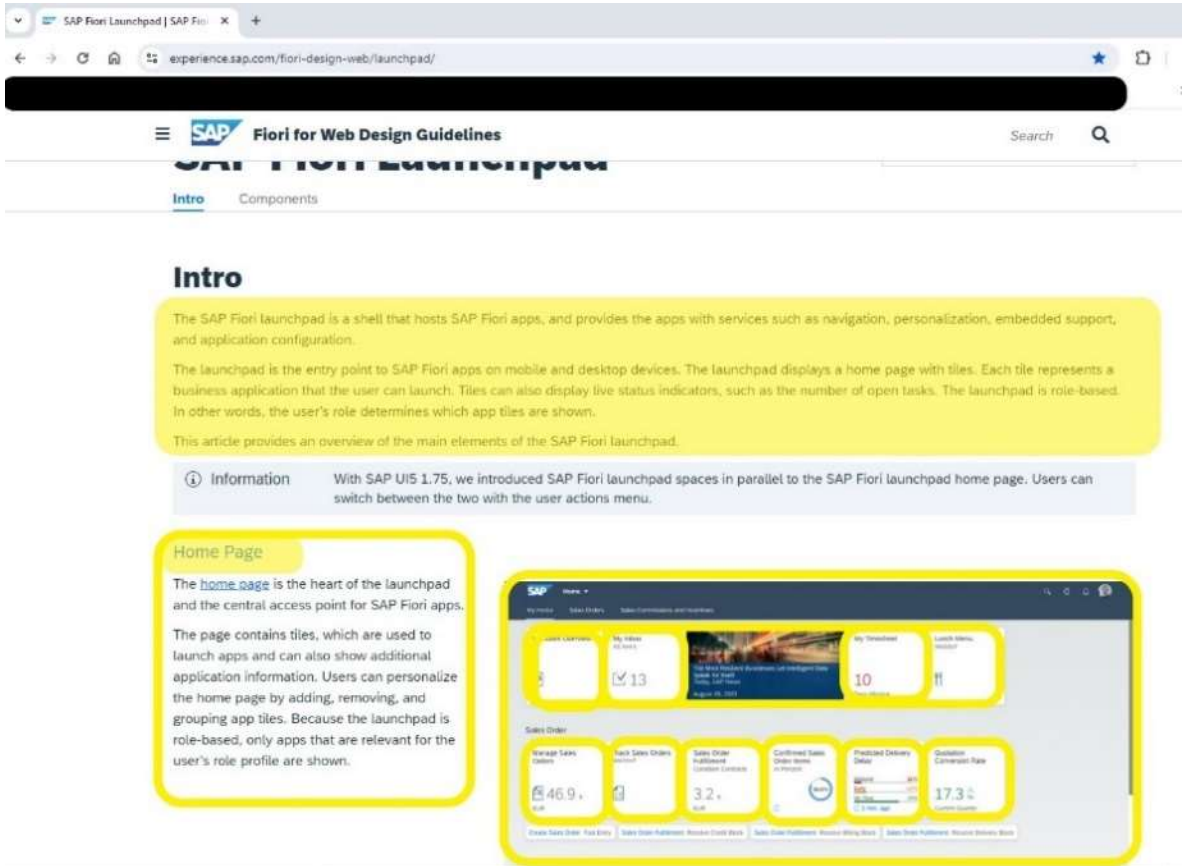
<https://experience.sap.com/fiori-design-web/notification-center/>

As shown below, notifications can be presented to the user as alerts in the icons and badges in the system.



<https://experience.sap.com/fiori-design-web/notification-center/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

‘948 Patent Claim 36	
36(a). At least one-transitory computer-readable storage medium encoded with processor-executable instructions that, when executed by at least one processor, perform a method for evaluating secure user-centric information to be provided on at least one user platform operated by a user, the method comprising:	The Accused Instrumentalities include a transitory computer readable storage medium encoded with processor-executable instructions that, when executed by at least one processor, perform a method for evaluating secure user-centric information to be provided on any user platform operated by a user. As shown below, the user will have access to all relevant information via the application(s) through SAP Fiori including as a result of the transitory computer readable storage medium encoded with processor-executable instructions.  The screenshot displays the SAP Fiori Launchpad interface. At the top, there is a navigation bar with the SAP logo and the text 'Fiori for Web Design Guidelines'. Below this, the 'Intro' section is highlighted in yellow. It contains text explaining the launchpad's role as a shell for SAP Fiori apps and its function as an entry point. Below the 'Intro' section, there is an 'Information' box stating that with SAP UI5 1.75, launchpad spaces were introduced. To the right of the text, there is a 'Home Page' section, also highlighted in yellow, which describes the home page as the central access point for SAP Fiori apps. Below the 'Home Page' section, there is a screenshot of the SAP Fiori Launchpad home page, which shows various app tiles and a 'Sales Order' section with a table of data.

	https://experience.sap.com/fiori-design-web/launchpad/ As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
36(b). A) implementing a channel grid framework including a matrix of a plurality of authorized channels through which the user receives and/or interacts with, via the at least one user platform, respective portions of the secure user-centric information based at least in part on information access rights and/or security protocols respectively associated with the plurality of authorized channels, the plurality of authorized channels including at least a first channel through which the user receives and/or	See Claim 1 and Claim 35. As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

interacts with first channel information constituting a first portion of the secure user-centric information;	
36(c). B) establishing a user profile to identify user preferences, platform identities, and service support instructions that determine how the secure user-centric information behaves on the at least one user platform;	See Claim 1 and 35. As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
36(d). C) receiving configuration data indicating one or more user preferences regarding alerts transmitted via the first channel based on the user profile;	See Claim 1 and Claim 35. As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

36(e). D) receiving session data indicating a current state of at least one external device of the user;	See Claim 1 and Claim 35. As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
36(f). E) monitoring at least the first channel information so as to determine one or more events, conditions, logical workflows, discrete information values or signal data, based on at least one threshold condition or parameter relating to the first channel information and determined based on the user preferences indicated by the configuration data; and if the one or more events, conditions, logical workflows, discrete information values or signal data is/are determined in E)	See Claim 1 and Claim 35. As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

36(g). F) determining a notification method by which to provide at least one alert on the at least one external device based on the current state of the at least one external device indicated by the session data;	See Claim 1 and Claim 35. As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
36 (h) G) generating notification data according to the determined notification method, wherein the notification data is configured to cause the at least one external device to provide the at least one alert on the at least one external device; and	See Claim 1 and Claim 35. As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
36(i). H) transmitting at least one alert to, or transmitting the notification data to the at least one	See Claim 1 and Claim 35. As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

external device via the first channel without being requested by the user, wherein the transmission of the at least one alert or notification data to the at least one external device is based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of authorized channels, the user, and the at least one user platform.	
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