

Web Push Notifications for Hybris

Steps:

1. Ensure that both, **pushnotificationaddon** AddOn & the **storefront** extensions, are included as dependencies directly in the **/hybris/config/localextensions.xml** file.
2. **Optional (if not already done):** Update the below mentioned property key-value in the **project.properties.template** file of the **pushnotificationaddon** AddOn

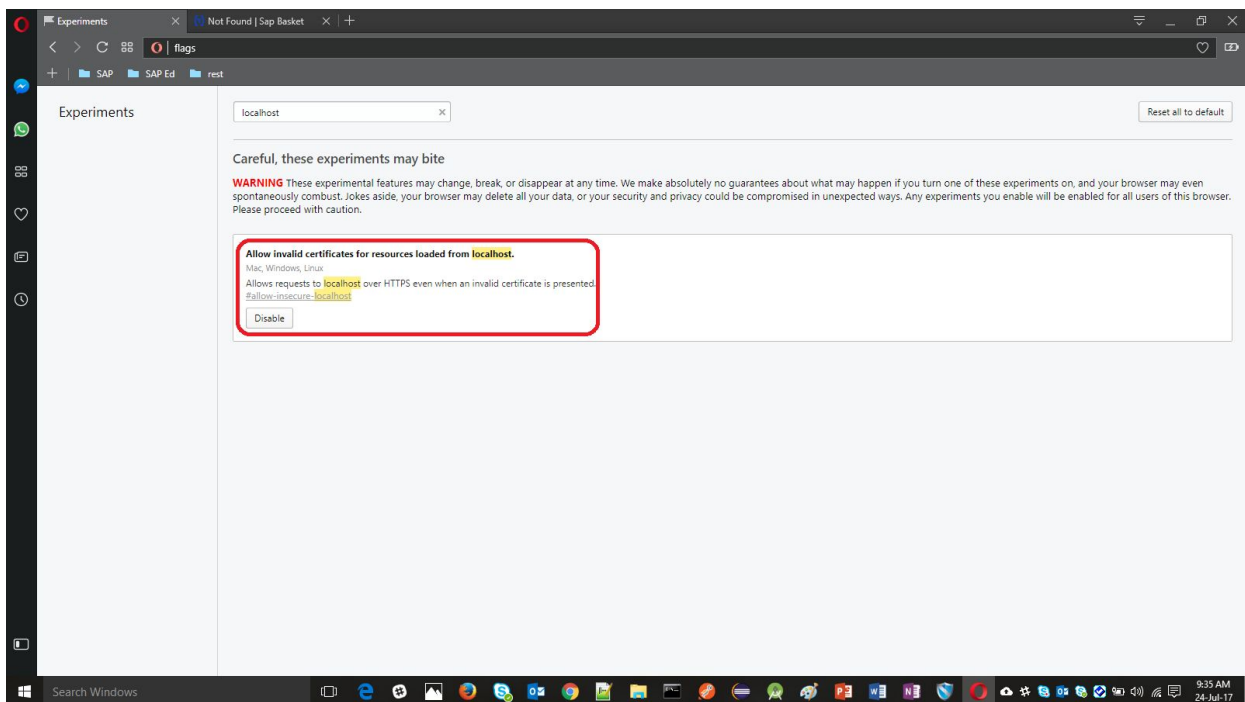
pushnotificationaddon.javascript.paths.responsive =
/responsive/common/js/firebase.js;/responsive/common/js/firebase-app.js;/
responsive/common/js/firebase-messaging.js;/responsive/common/js/fireb
ase-auth.js;/responsive/common/js/firebase-database.js;/responsive/comm
on/js/unload.js

3. **Optional (if not already done):** Before running the **addoninstall** command in the next step, ensure that the extension **addonsupport** is included as a dependency, **either directly in /hybris/config/localextensions.xml or indirectly as <requires-extension name="addonsupport"/>** in the **extensioninfo.xml** file of the **pushnotificationaddon** AddOn.
4. Install the **pushnotificationaddon**, for a specific storefront by running the following command

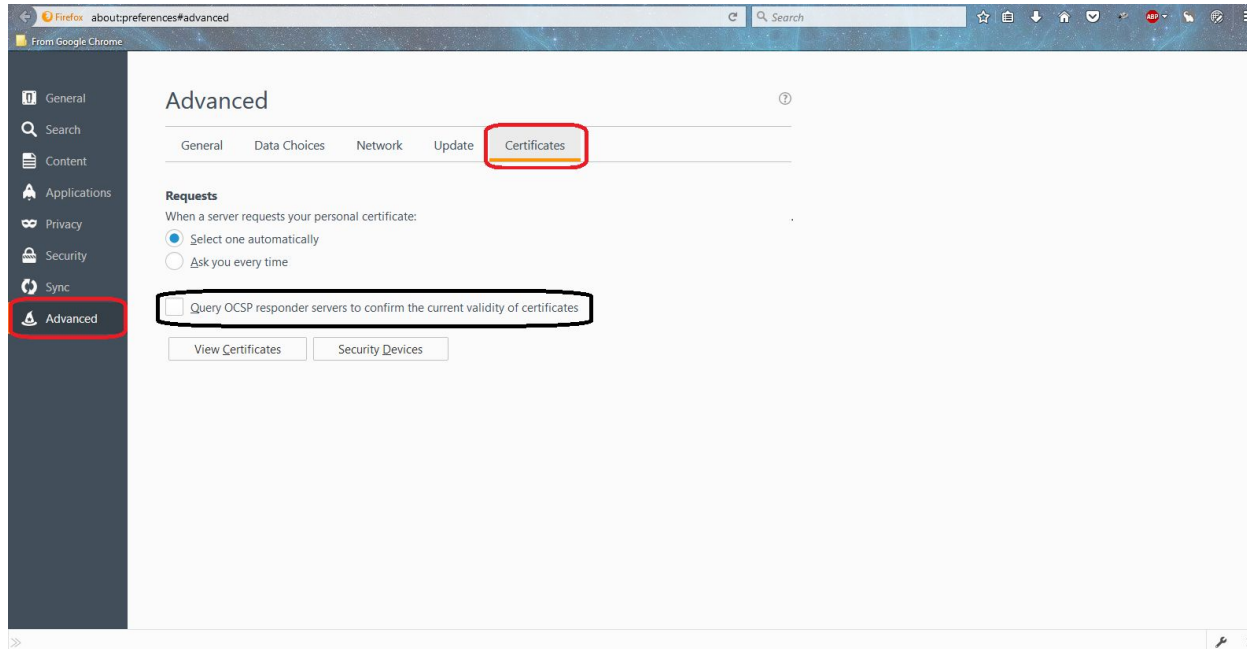
ant addoninstall -Daddonnames="pushnotificationaddon"
-DaddonStorefront.yacceleratorstorefront="<name of the storefront>"

5. Ensure that the **webpushnotificationsbackoffice** Backoffice extension is also included into the **/hybris/config/localextensions.xml** file
6. Run **ant clean all**, followed by **hybrisserver.bat [debug]** in the **/hybris/bin/platform/** directory.
7. **Update running system** from **HAC**, with the **webpushnotificationsbackoffice** extension **checked**.

8. After **updating** in the previous step, login into backoffice <https://localhost:9002/backoffice/login.zul> (using the login credentials **admin** & **nimda** as username & password, respectively), for hybris server running on localhost port no. 9002(always, by default, unless changed)
Then scroll down to find the **Web Push Notifications node** on the left hand side explorer tree.
9. Press F4 after clicking on the **Web Push Notifications node** in the previous step. Click on the '+' icon in the backoffice perspective. And in the available widgets pop up, select **webpushnotificationbackoffice**. Check **webpushnotificationbackoffice Sample Widget** option. Click on **Add & Close**.
10. For **hybris server running on localhost**, ensure that the following **chrome flag** is **enabled**(by clicking on the **Enable** button, after hitting the url <chrome://flags/#allow-insecure-localhost> in **Google Chrome &/or Opera**), on getting any Security exceptions(SSL Certificate error, resulting in unable to register the Service Worker file **firebase-messaging-sw.js**), on launching the storefront, & then **relaunch the browser**(**Chrome or Opera** here in this case).Also find the screenshots below for reference purposes.

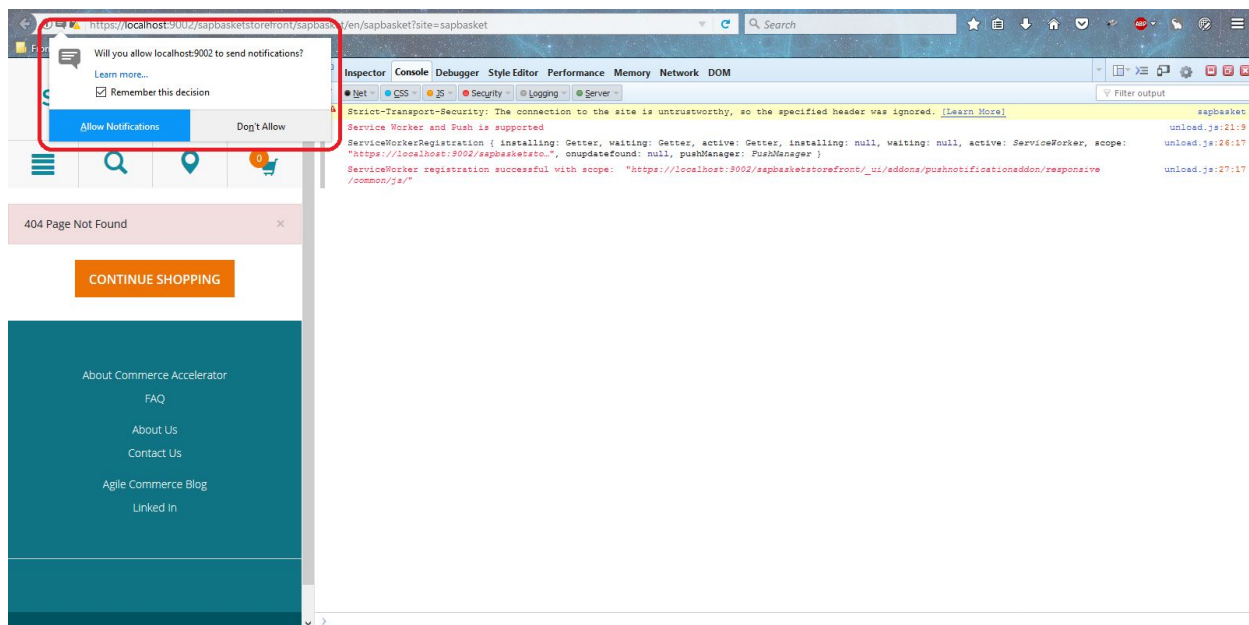
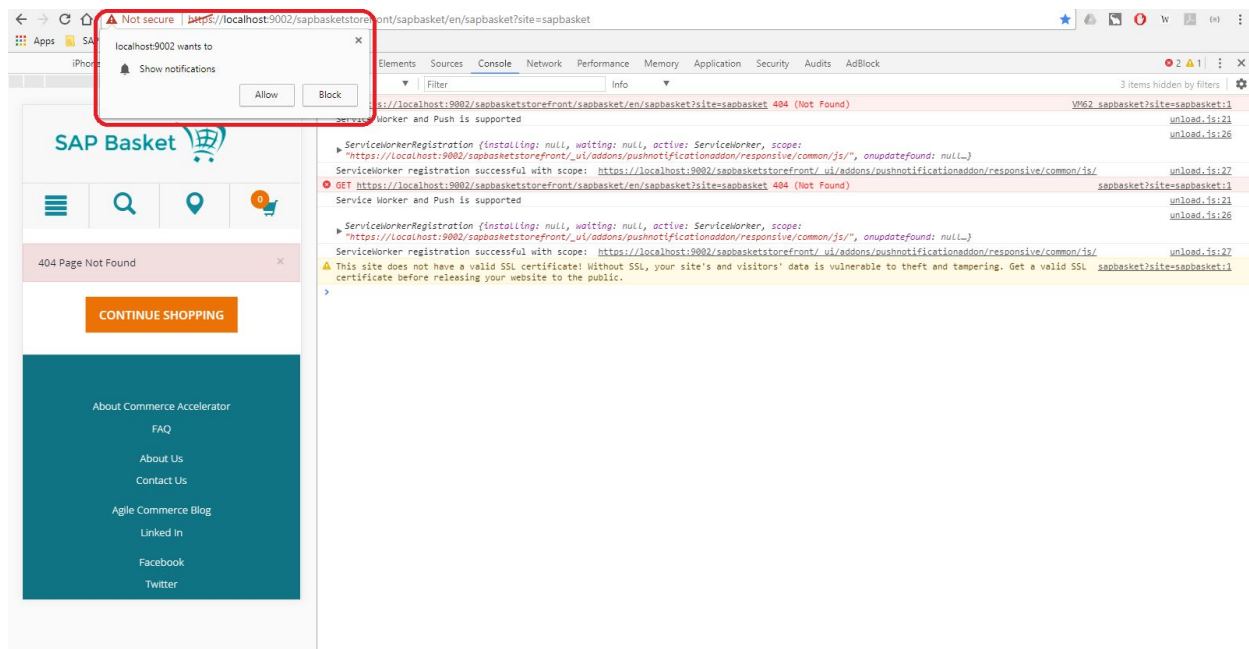


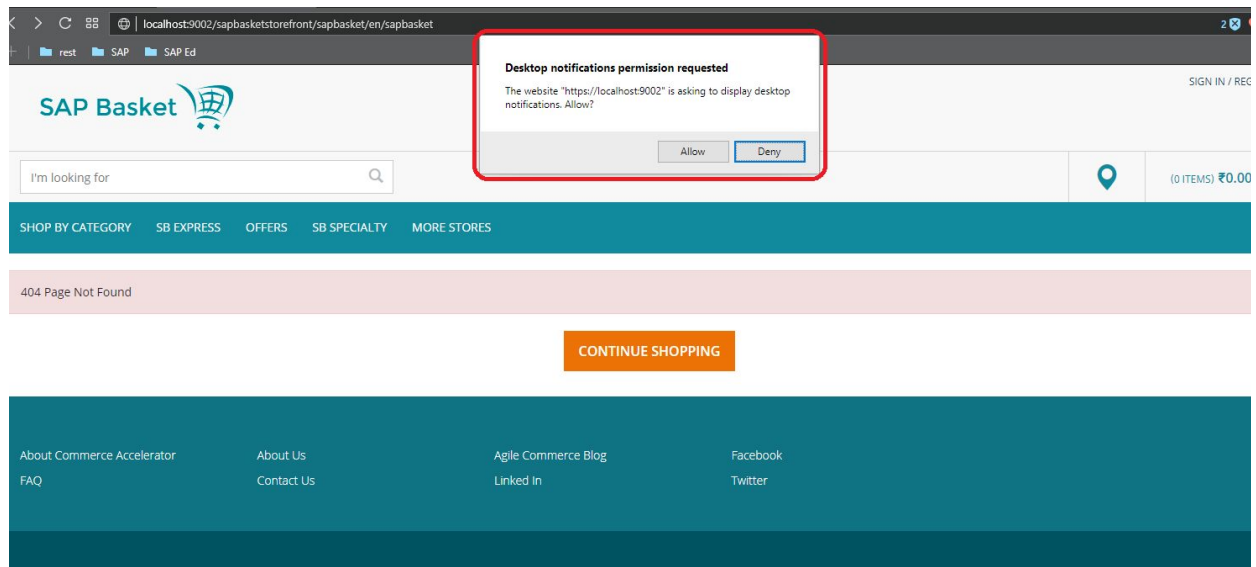
Similarly, for **Mozilla Firefox**, here is the screenshot. So, **uncheck the checkbox highlighted in black**.



N.B: For a storefront **not running on localhost & able to produce a certificate** (for making HTTPS connection requests), this step won't be needed for any of the 3 browsers supporting Service Workers, as it was only during the development & testing phases. It won't be required in the production environment, provided a **valid SSL** certificate is produced to the browser, on making HTTPs calls to the server hosting the storefront & also the certificate.

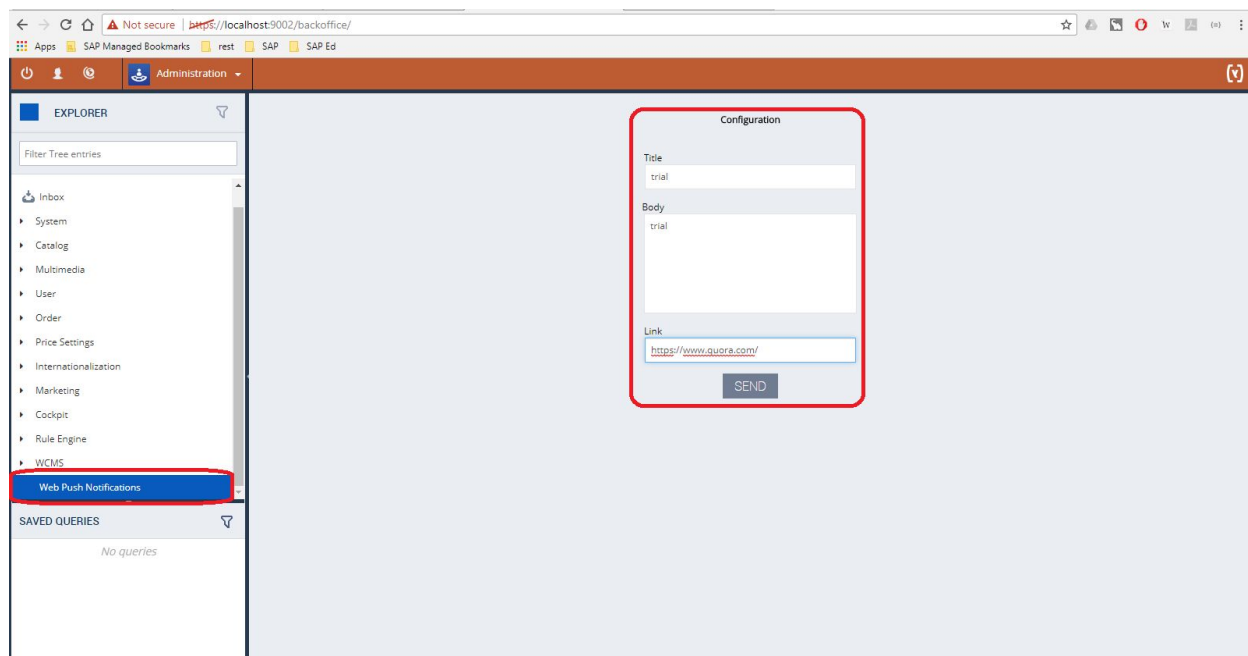
11. Before clicking the SEND button in the next step, the storefront needs to be loaded once in any of the 3 browsers supporting, to **subscribe/opt-in** to receive any future notifications, by clicking on Allow in the **Allow/Notifications - Don't Allow/Block/Deny(depending upon the browser)** popup setting. (Screenshots of all the 3 browsers here).





12. **(N.B:** Should be on **SAP Internet** network to **trigger** a push notification from the **webpushnotificationsbackoffice** backoffice extension's **Configuration**, as the SAP Corporate network doesn't allow to do so, due to some security reasons.)

The push notification **Configuration** widget now appears, after pressing F4 again. Enter a **Title**, a message **Body** & a **Link** & then click on the **SEND** button to send a notification message to all the subscribed users.

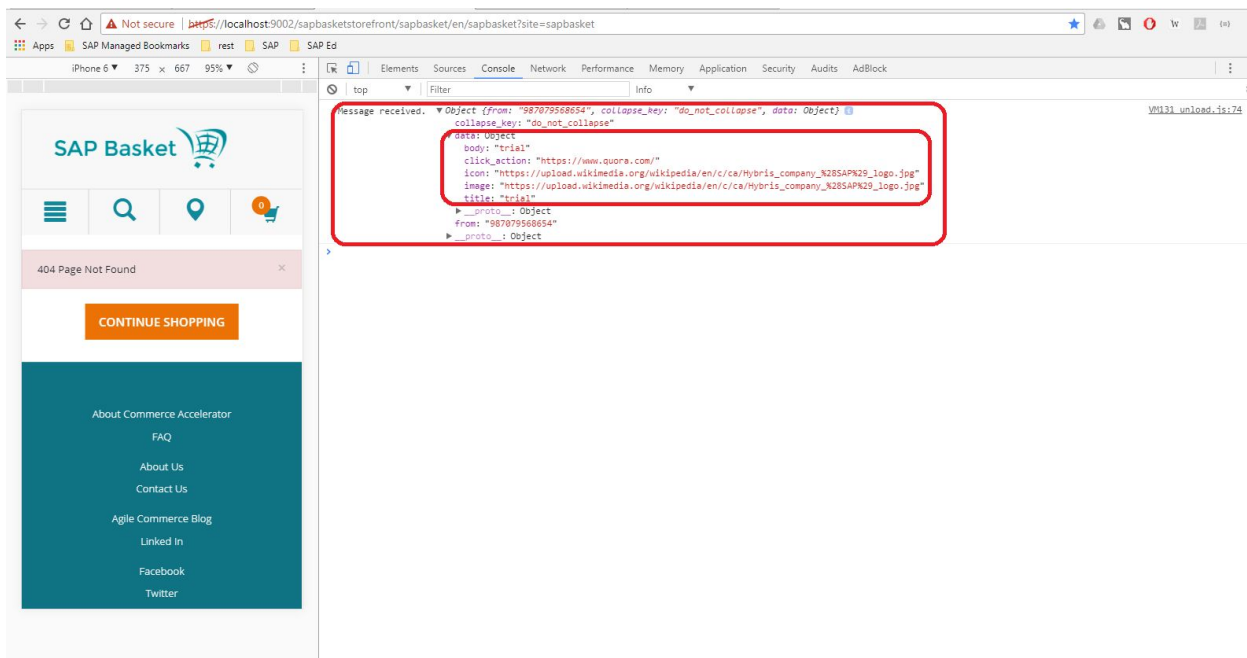
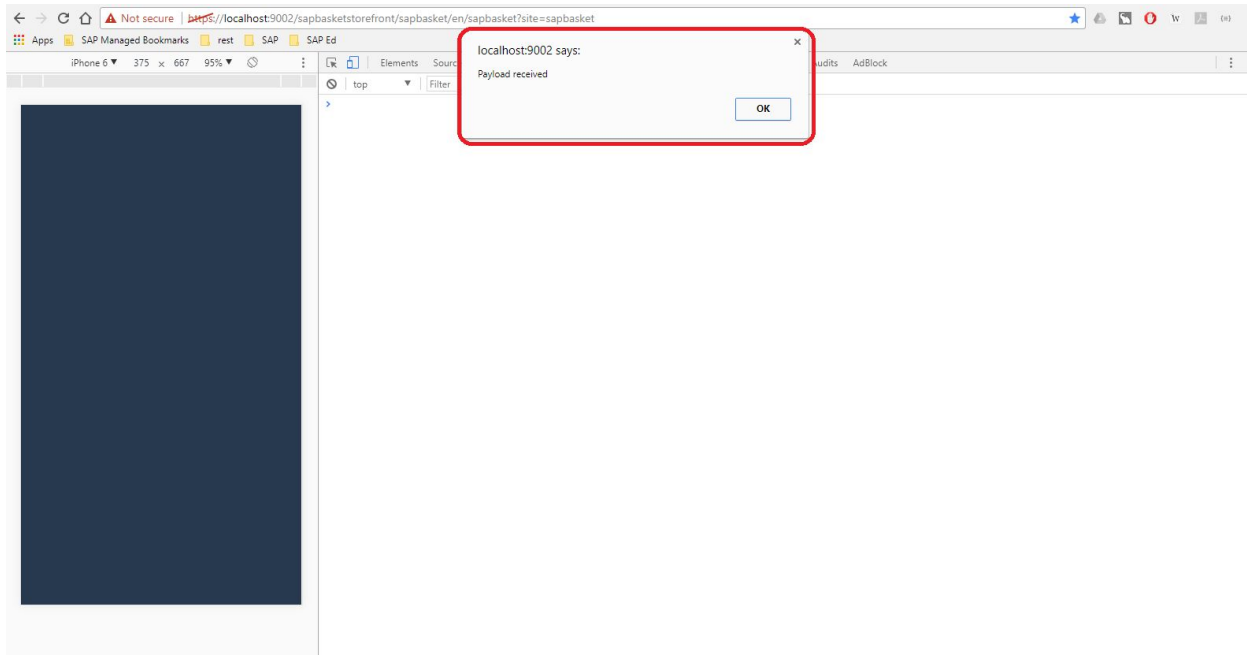


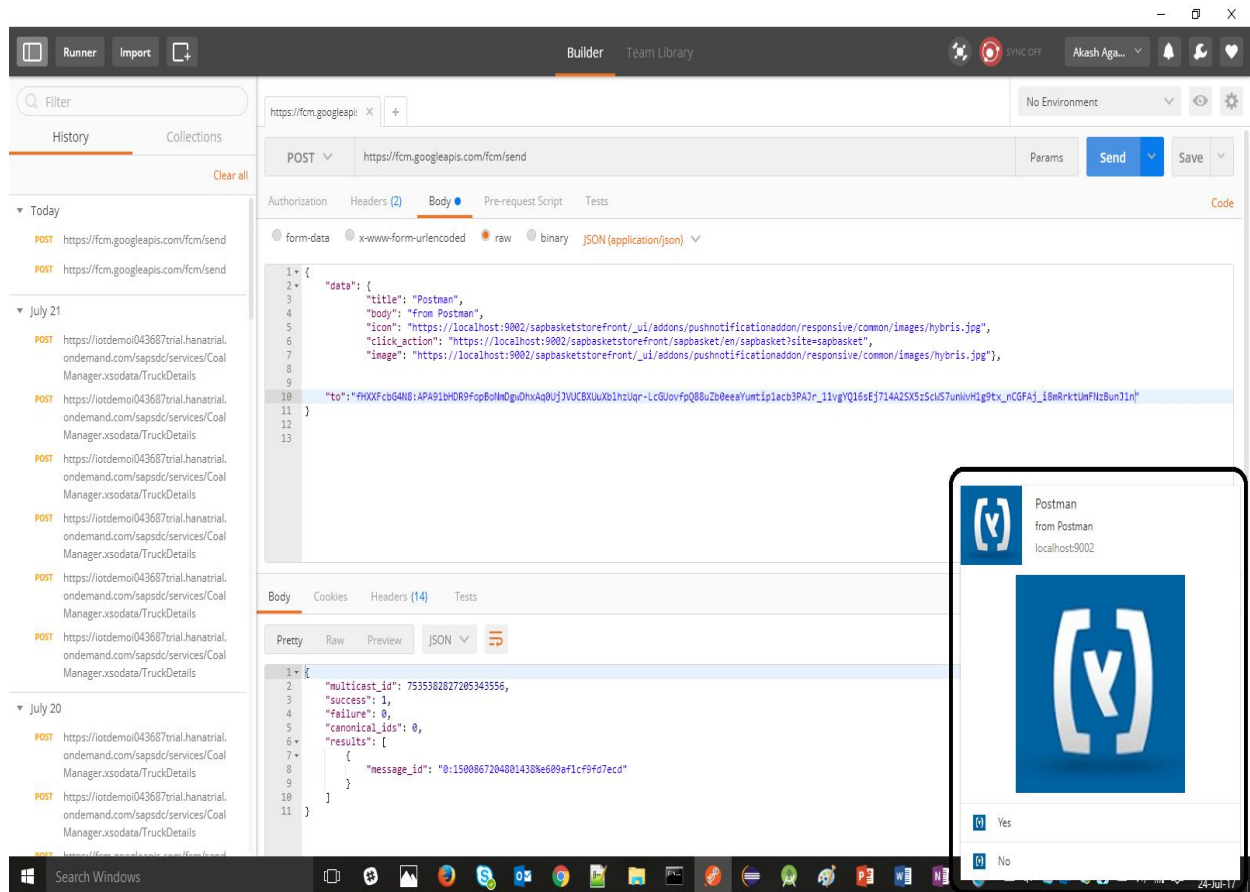
13.If the **storefront's tab** is **in focus**, then the user will receive an **alert popup** message, or else s/he will receive a **notification popup**.

14.On clicking the **notification popup**, the user is redirected to the **Link** mentioned in the backoffice widget.

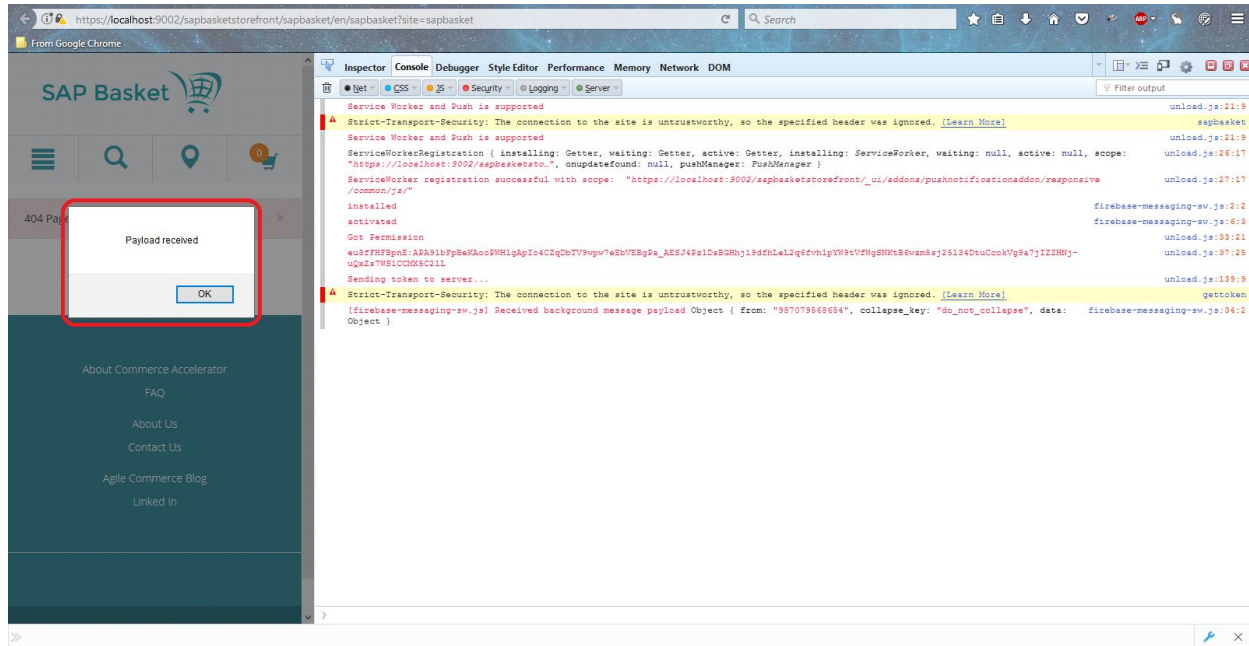
Screenshots for the previous 2 steps:

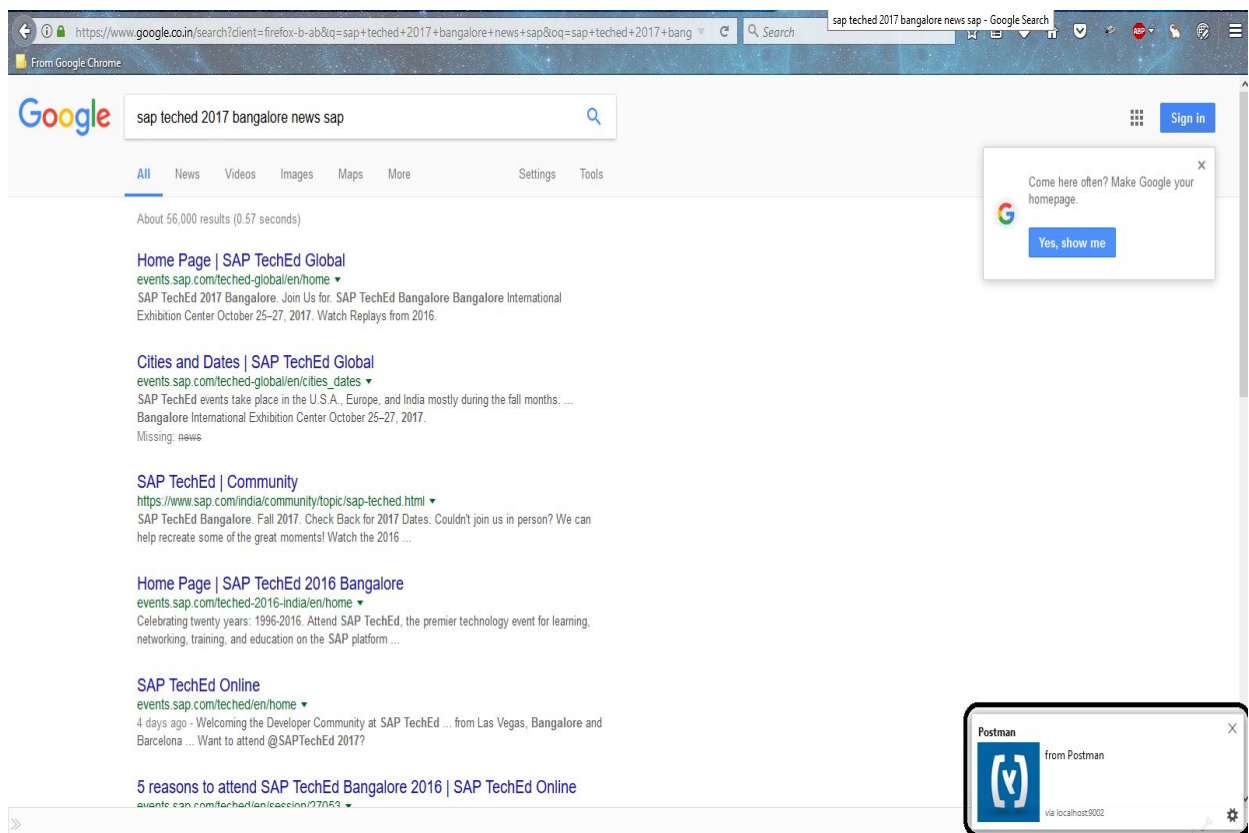
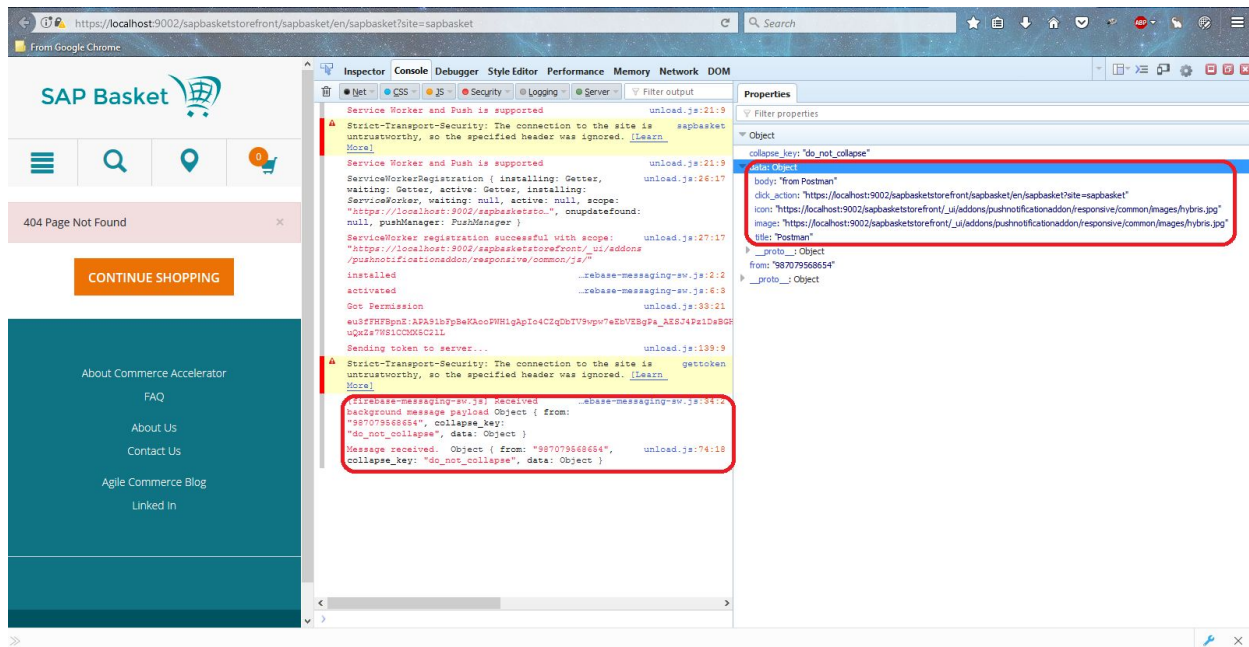
Google Chrome:



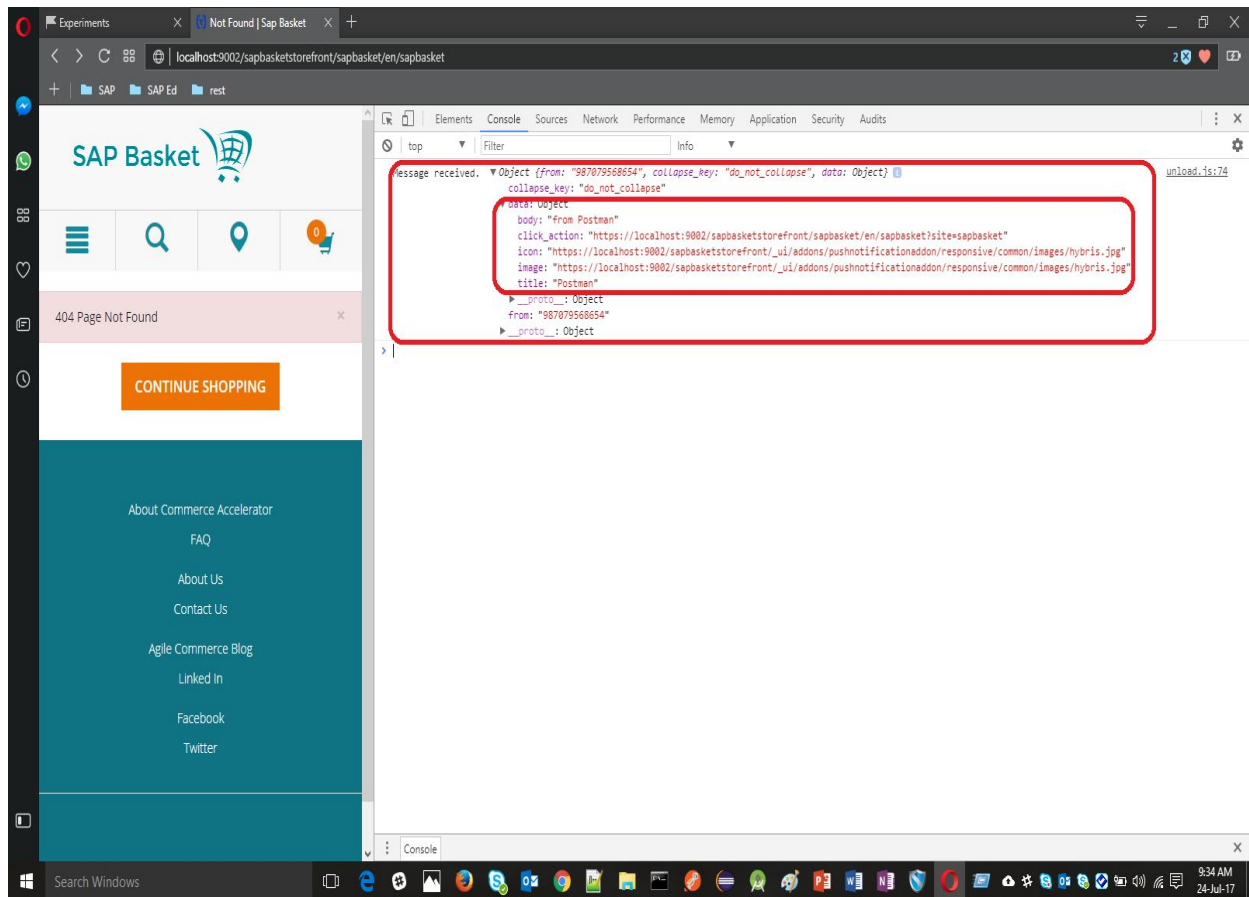


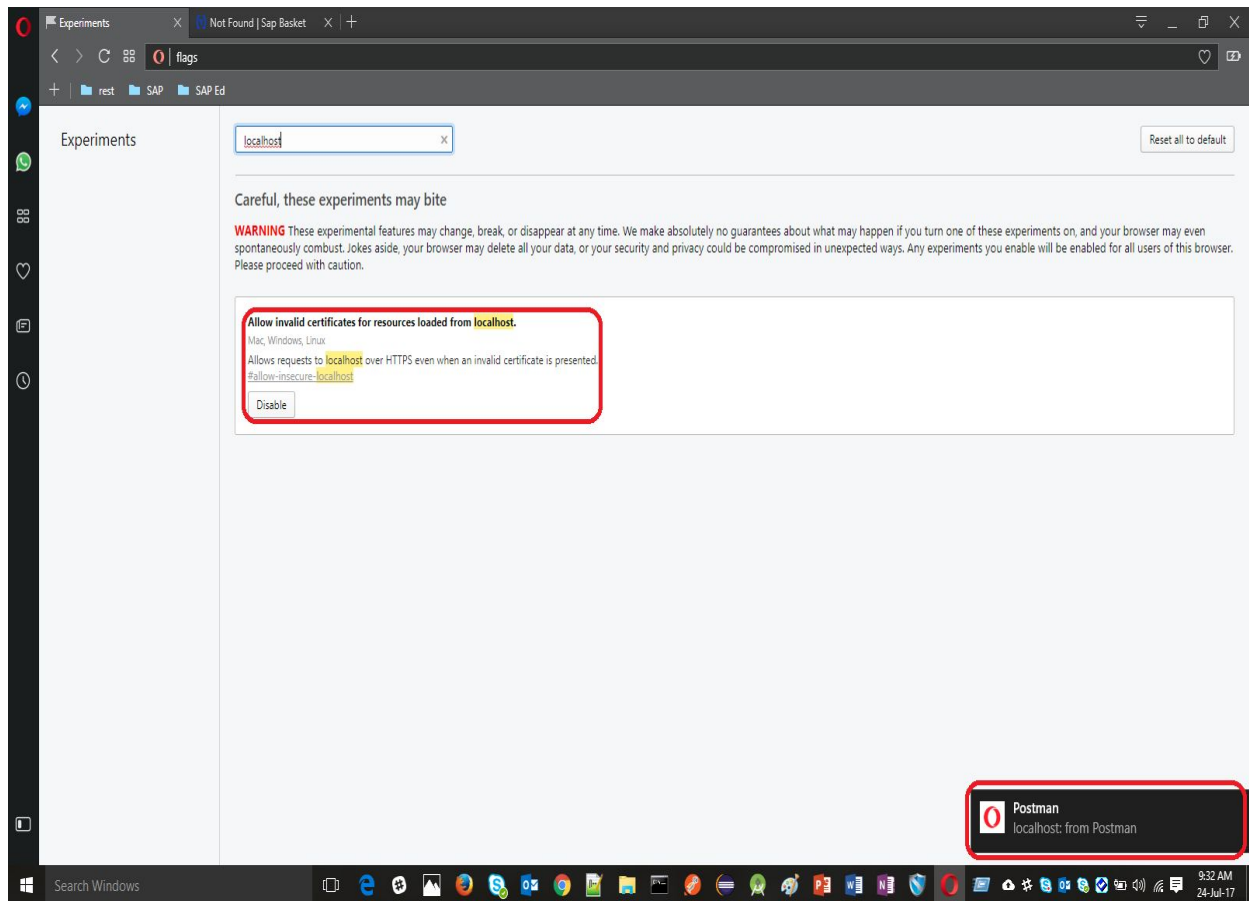
Mozilla Firefox:





Opera:





Customer Specific Customizations:

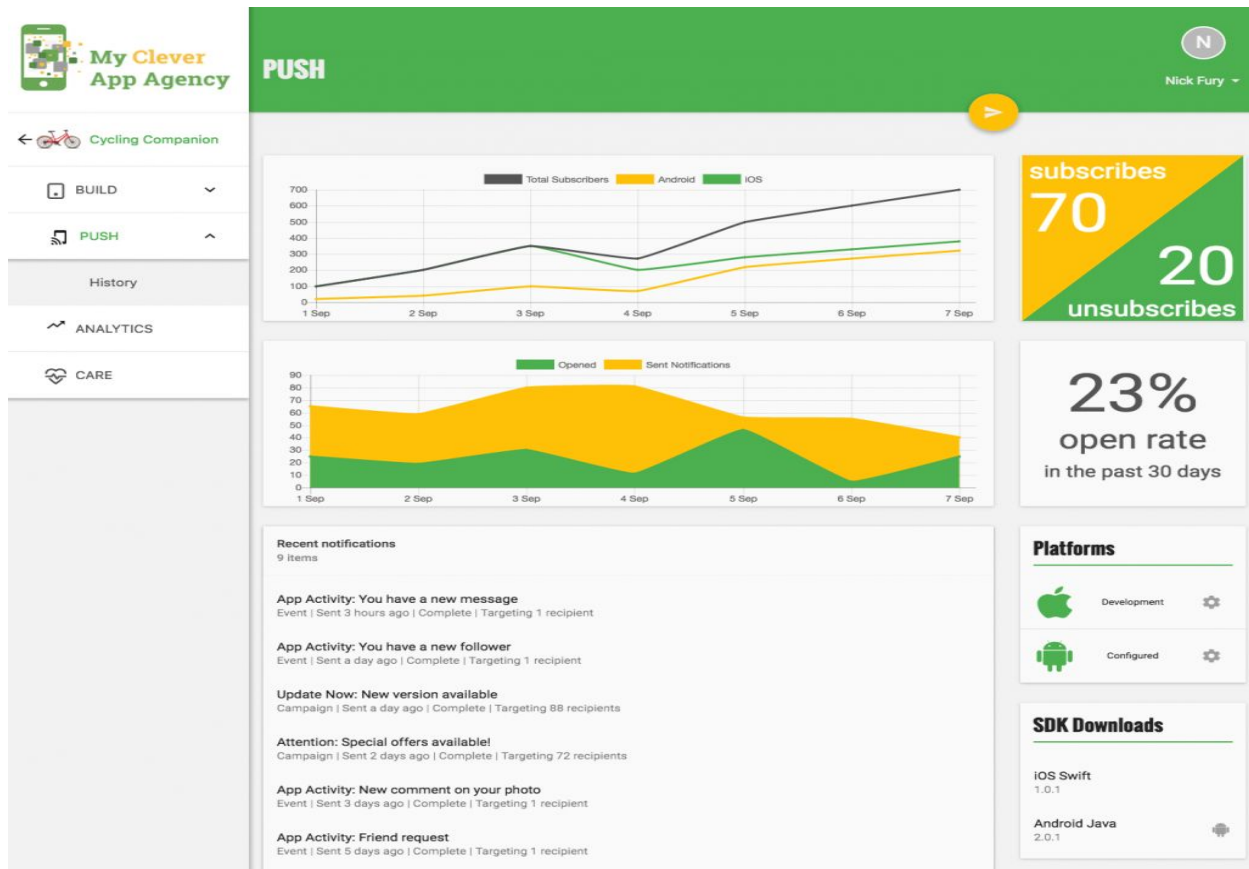
- Create a **new Firebase project** altogether, by clicking on **+ Add Project**, & then follow the steps as required, here <https://console.firebase.google.com/>

N.B: A firebase project is specific to a **Google account** only.

- Then copy the **config** object, after clicking **Add Firebase to your web app** section of the firebase project just created in the previous step.
Replace the same in **pushnotificationaddon->unload.js** and **pushnotificationaddon->firebase-messaging-sw.js** files.
Run **ant all** now to reflect all the changes made from the **pushnotificationaddon** to the **sapbasketstorefront**.
- Replace **conn.setRequestProperty("AUTHORIZATION",<key>)** in **WebpushnotificationsbackofficeService.java** file with the **server key or the legacy server key** of the newly created firebase project (You can get it from **Settings>>CloudMessaging** in your dashboard for your firebase project at <https://console.firebase.google.com/>)

Extensibility Options:

- Customer-specific notifications(**User Segmentation**).
- **CronJob(s) to automatically send notifications** at regular time intervals or trigger at certain events.
- Can be used alongside **analytics** systems and correlate with business performance indicators trend
- Few **samples** are as follows:



OneSignal

Web Push App > Sent Messages

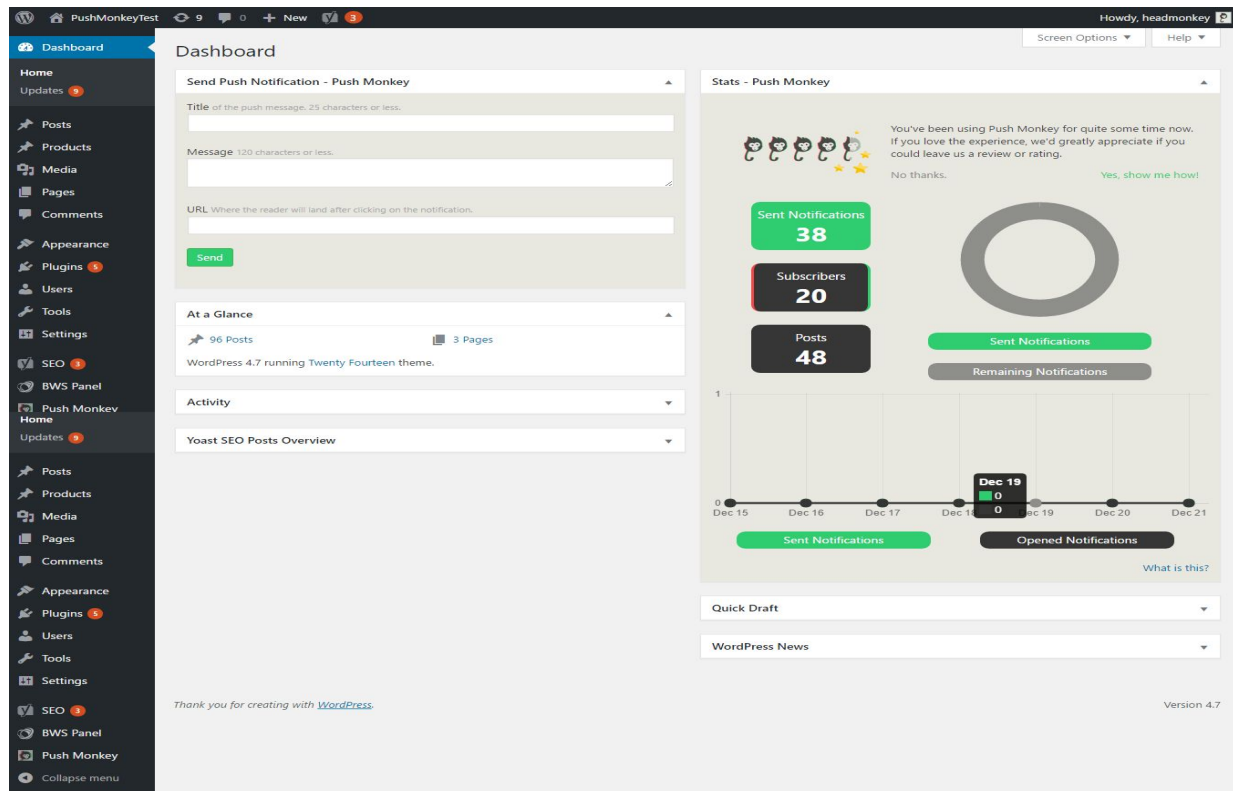
Viewing: Dashboard Notifications

Status	Created	Message	Delivery	Clicked
DELIVERED	6/21/16, 2:21:00 pm 2 hours, 20 minutes ago	Tesla Makes Offer to Acquire SolarCity	<div></div>	1.68%
DELIVERED	6/21/16, 11:22:59 am 5 hours, 19 minutes ago	Elxir v1.3 released 🚀	<div></div>	1.82%
DELIVERED	6/21/16, 10:21:01 am 6 hours, 20 minutes ago	A Third of Valve Is Now Working on VR 🎮	<div></div>	3.6%
DELIVERED	6/21/16, 7:51:11 am 8 hours, 50 minutes ago	Docker 1.12: Now with Built-In Orchestration 🐳	<div></div>	1.41%
DELIVERED	6/21/16, 6:34:55 am 10 hours, 7 minutes ago	Scammers Game Amazon A-Z Policy By Replacing iPhones With Clay	<div></div>	4.15%
DELIVERED	6/19/16, 10:41:12 pm 1 day, 18 hours ago	The Fathers of the Internet Urge Today's Software Engineers to Reinvent the Web	<div></div>	1.5%
DELIVERED	6/19/16, 10:12:16 pm 1 day, 18 hours ago	Intel pits monster 72-core Xeon Phi chip against GPUs	<div></div>	1.61%
DELIVERED	6/19/16, 1:18:49 pm 2 days, 3 hours ago	Building a more power-efficient browser 📄	<div></div>	1.28%
DELIVERED	6/19/16, 8:06:46 am 2 days, 8 hours ago	China issues demolition order on world's largest religious town in Tibet 🏔️	<div></div>	2.31%
DELIVERED	6/18/16, 3:27:21 pm 3 days, 1 hour ago	A New Constraint on the Drake Equation 🌌	<div></div>	2.66%
DELIVERED	6/18/16, 9:38:50 am 3 days, 7 hours ago	Power plants that convert all of their CO2 emissions into carbon nanotubes	<div></div>	1.95%
DELIVERED	6/18/16, 7:31:17 am 3 days, 9 hours ago	Thiel Foundation Announces 2016 Thiel Fellows 🏆	<div></div>	1.79%

Delivery Statistics

- 47321 Delivered (98.1%)
- 292 Failed (0.6%)
- 616 Invalid (1.3%)

1 2 3 4 5 8 9 Next →



- Notifications can be customized to tweak the behaviour in different devices
Follow the links below for more customization options available

<https://firebase.google.com/docs/cloud-messaging/http-server-ref#notification-payload-support> and
<https://firebase.google.com/docs/cloud-messaging/concept-options>

Here's a sample screenshot...

Visual settings

Title	Short sentence (LTR)
Body	One sentence (LTR)
Direction !	Left-to-right
Image !	No image
Icon	Normal PNG icon (256x256)
Badge	Cat icon

Behavioral settings

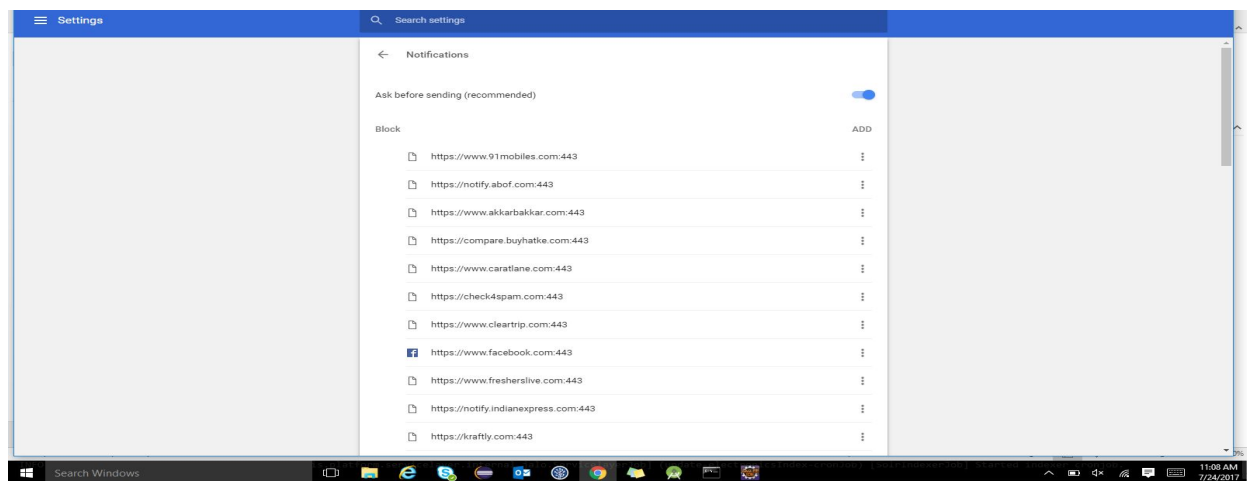
Persistent	<input checked="" type="checkbox"/>
Tag	No tag
Vibration !	No vibration
Timestamp !	No custom timestamp
Actions !	No actions
Silent !	<input type="checkbox"/>
Renotify !	<input type="checkbox"/>
Req. interaction !	<input type="checkbox"/>
notificationclose event !	<input type="checkbox"/>

Reaction settings

Action	Focus or open a new window.
Close it?	<input checked="" type="checkbox"/>

[Reset](#) [Display the notification](#) [Get displayed notifications](#)

- Further, on clicking the “settings” gear icon on the notification pop up, we get a default page for push settings, like in chrome



This can be further customized to provide more user specific options like subscribing to a specific sale, time slots to display notifications etc.. For example,

BUYHATKE EXTENSION OPTIONS
v3.4.194

Overview

Price Alerts

Features

Ebay Offers

Live Scoreboard

Mi Flash Sale

Address

Import Wishlist

My Wishlist

Referral

Jio Offer

Overview

PRICE ALERTS:

✓ Email Sync - Email is not set

CHANGE

FEATURES:

✓ Price Comparison (Yellow Bar)

✓ Price Graph History

✓ Watch Price Button

✓ Compare Price Button

✓ Coupons and Deals Tab

✓ Apply Coupons automatically

✓ Show Related Deals

SUBSCRIBE TO FLASH SALE:

✓ Paytm 100% Cashback Sale

✓ American Swan 100% Cashback Sale

CHANGE

SUBSCRIBE TO PROMOTIONAL PUSH MESSAGES:

CHANGE

Time Slots

10:00 AM - 09:00 PM	09:00 PM - 10:00 AM	Live Offers Update (17th-21st Dec)
✓	✓	✓

NOTIFICATIONS

ALL OFFERS PRICE DROPS

Clear All

Free ₹750 Amazon Voucher

Super Duper Deals on Credit Cards. Get a ₹ free Rs.750 Amazon Voucher ₹ on approval. Apply now.

Amazon: Vivo Carnival

Grab the best selfie mobile ever @ 10% off + get >> 2,000 goibibo vouchers + 500 bookmyshow vouchers <<< + extra 2000 off on exchange + No cost EMI. Hurry!! Shop Now.

Re-1 Flash Sale

Redmi 4A, Mi Power bank 2, WiFi Repeater, VR & Selfie Stick all at just Re 1. Flash Sale at 11 AM & 1 PM. Get ready now.

Wednesday Night Bazaar

⇒ Upto 80% off on branded footwear, apparels & electronics ⇒ The offer ends at midnight. Hurry!! The ⌚ is ticking

Mi Redmi 3S Prime Sale Is Live

>>> 3 GB RAM | 32 GB ROM | 5 inch HD Display | 13MP Rear Camera | 5MP Front | 4100 mAh <<< 8,999 only. Hurry!! Limited stocks only

Flipkart: Monsoon Sale

Upto 40% off + ₹ Extra 6000 off + No Interest EMI + Exciting exchange offers ✦ across ACs, Oven, Fridge, Washing Machine, TVs. Hurry!! Shop Now.

₹1000 off on Flight Booking

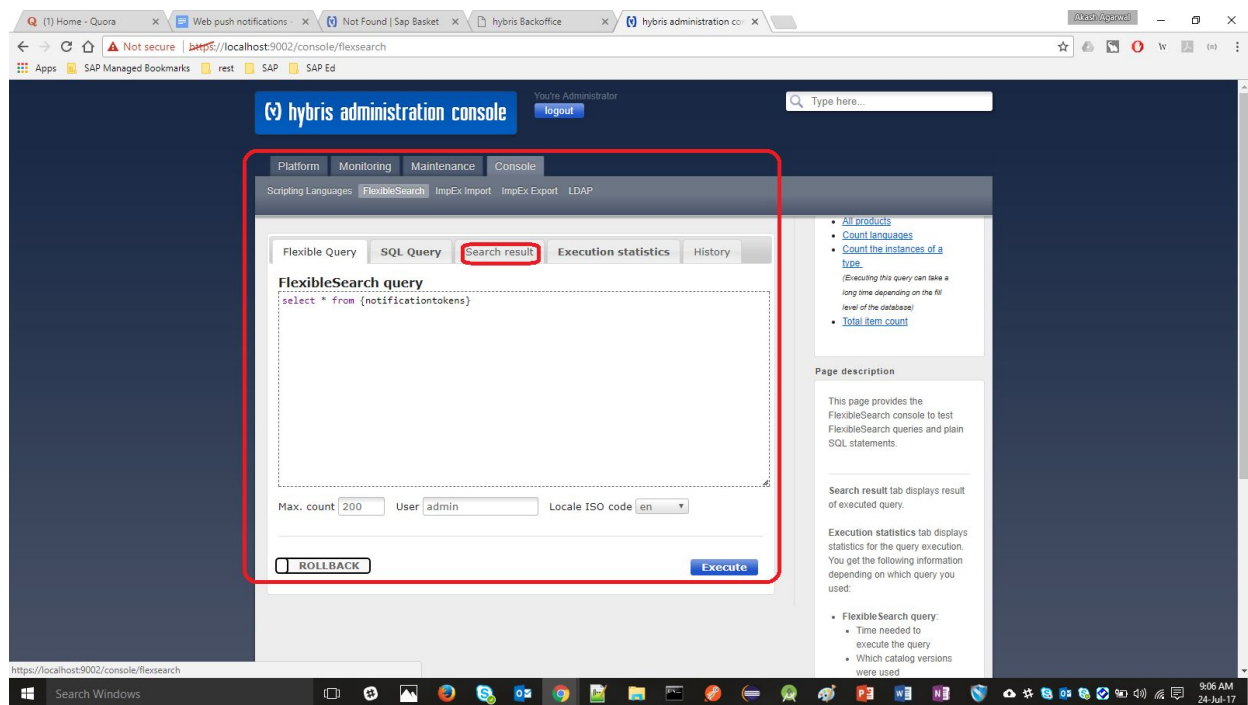
⇒ Use code: ATLETFLY ⇒ & get upto ₹ ₹1000 instant off ✦ Offer ends on 15th July. Hurry!! Book Now.

N.B:

- The end-user can **opt-out/unsubscribe any time**, of the subscription(through many ways).
- In order to display all the **tokens** currently persisted in our hybris hsql db, navigate to **hac>>console>>flexible search** & then execute the following query

SELECT * FROM {NotificationTokens}

& then switch to the **Search Result** tab to view them.



- Current state of support for Service Workers(SW) in different browsers(tested on latest versions):
(Courtesy: <https://jakearchibald.github.io/isserviceworkerready>)

Google Chrome, Mozilla Firefox & Opera->Supported

MS Edge -> Still under development, to be supported in near future

MS IE v 11 & Safari -> Not supported

Screenshots:

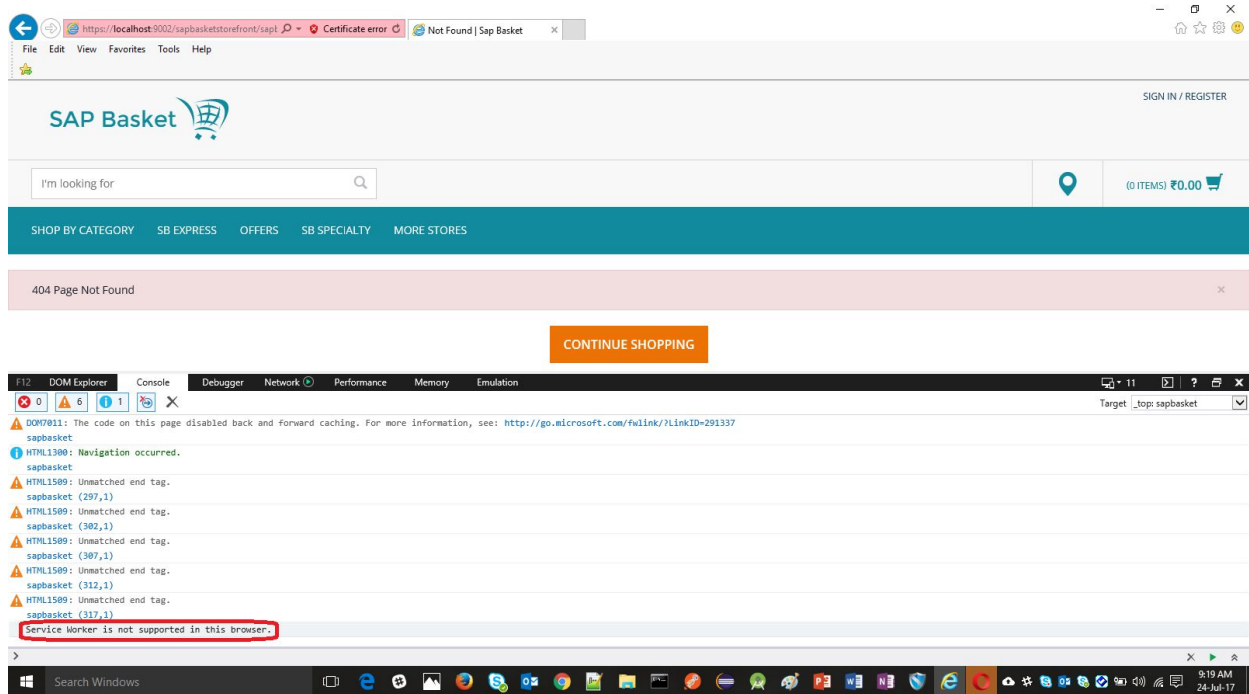
The screenshot shows the Microsoft Edge Developer Tools status page for Service Workers. The page is titled "Service Worker" and is marked as "IN DEVELOPMENT" with 7078 votes. The description states: "ServiceWorkers (formerly Navigation Controllers) are a new system that provides event-driven scripts that run independent of web pages. They are similar to SharedWorkers except that their lifetime is different and they have access to domain-wide events such as network fetches." The page also includes links for "Detailed browser support" and "Working draft or equivalent". A list of browser support status is shown on the right:

- In Development in Microsoft Edge on Desktop, Mixed Reality, Mobile and Xbox
- Shipped in Chrome
- Shipped in Firefox
- Not Supported in Internet Explorer 11
- Shipped in Opera
- Not Supported in Safari

Below the Service Worker section, a list of other features is shown with their status and build numbers:

Feature	Status	Build Number
Set (ES6)	SUPPORTED	Build Number 10240+
Shadow DOM	UNDER CONSIDERATION	11003 Votes
Shapes	UNDER CONSIDERATION	1029 Votes
Shared Memory and Atomics	PREVIEW	Build Number 16215+
Shared Web Workers	NOT CURRENTLY PLANNED	

MS IE v 11



MS Edge

