

Open-Xchange Display

Product Guide

Version 1.4.1

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1. OX Display v1.4.1

1.1. Intention of this Document

This document provides an overview of the pre-defined ad locations inside the web frontend. The purpose of this document is to inform Open-Xchange customers and partners about the major benefits which are available with latest release.

1.2. OX Monetization Program

Open-Xchange provides the OX Display as a product for customers who wish to integrate advertising into OX App Suite 7.10.

Please Note: OX Display is only available for OX App Suite as part of the OX Monetization Program. Please contact Open-Xchange Sales for further information.

1.3. Key Benefits

- Perfectly integrated into OX App Suite 7.10
- Easy to manage/configure
- Mobile ready through the OX App Suite Web UI
- Pre-defined ad spaces and locations
- Supports all ad formats conform to industry standard
- Fully customizable
- Supports multiple ad server
- API based upload of configurations based on user or user groups
- API allows for control panel or provisioning system integration
- Scales from a single static ad to a full advertising system

2. OX Display – Introduction

OX Display is a framework that enhances OX App Suite with advanced advertising and monetization capabilities.

2.1. Product Description

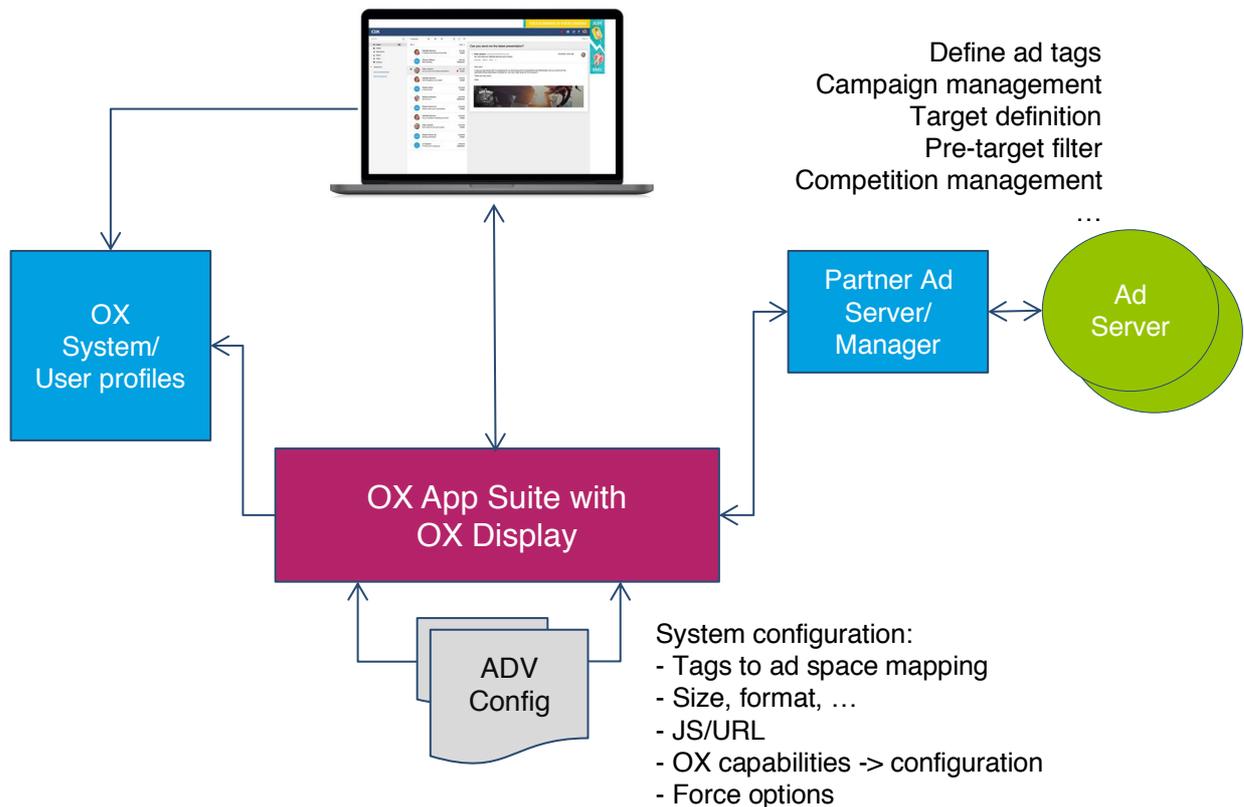
The OX Display framework is designed to work in conjunction with the OX App Suite UI. It can display advertisements in all core OX App Suite modules (i.e. OX Mail, OX Contacts, OX Calendar, OX Tasks, OX Portal, OX Documents and OX Drive).

OX Display comes ready configured to display ads, from supplied ad tags, in the OX App Suite UI. The JSON based configuration can be fully customized in order to provide a very flexible way to display ads in OX App Suite.

OX Display centralizes the management and control of your advertising strategy. It uses a combination of easy to make, JSON based, configuration files that can be uploaded into OX App Suite with a simple API. This makes it simple to manage, flexible to implement and fool proof because there are no direct coding requirements within OX App Suite itself.

OX App Suite is an HTML5 single page app environment. This makes display and control of adverts more complicated. In a 'classic' HTML app, when a user, for example, changes modules, a new HTML page is loaded. Each page will have details about how and what to advertise. This makes it easy for a classic advertising system to load or manipulate advertisements. In OX App Suite, after login, no pages are ever loaded. New content is simply displayed as and when needed. This means a 'classic' approach cannot be used. For this reason, OX Display uses a combination of timeout values and triggers to work out when and how to display adverts. Timeouts are used to load/reload adverts when there is no user activity. Triggers, events that are activated when a user does something, are used to react to user interactions (e.g. when a user change modules). Note that most OX App Suite events triggers can be used, but this requires some extra coding.

For OX Display to display advertisements it has to be able to connect to some kind of ad server. It then uses the ad tags from that server to get its ads. Note that OX Display does not generate or provide the ad tags. If an Open-Xchange customer gets its advertising from a third party, then it is the responsibility of the third party to supply the relevant ad tags.



Client Support

OX Display is a framework that resides inside OX App Suite. For this reason, it possesses the same technical requirements as OX App Suite. The responsibility of whether an ad is available, or displayed correctly, depends on the ad server that supplies the ads.

2.2. Device Compatibility

OX Display is designed to work with a variety of different screen resolutions, and even mobile devices. It supports the three standard categories of device: Smartphone, Tablet and PC/Mac. This is all done seamlessly through uploaded configurations.

For example, by default, OX Display detects the device and adjusts:

- The leaderboard accordingly, when the page is displayed.
- The ad spaces on the right-hand side (skyscraper or rectangle), the advertising area adjusts automatically to the screen size: the area will be hidden if space is limited.
- A smaller screen, the size of the advertising area is adjusted when the page is displayed, or the area is not shown at all if the screen is too small.

After the size adjustment is calculated the ad tag, from the ad server, is called referencing the new size. The correctness and availability of the ad depends on the ad server. Note that real time resizing of ads based on responsive design is not supported.



3. OX Display – Ad Overview

OX Display is a combination of the OX App Suite UI and uploaded server-based configurations. These configurations specify the ad spaces to be activated and which ad tags should be applied. These configurations are then matched to users or user groups.

3.1. Pre-defined Ads

Within the OX App Suite UI, the OX Display framework allows for the display of pre-defined ad spaces. The availability and correctness of an ad depends on the ad server: if the ad server does not deliver an ad then no ad can be shown.

The ad spaces available are:

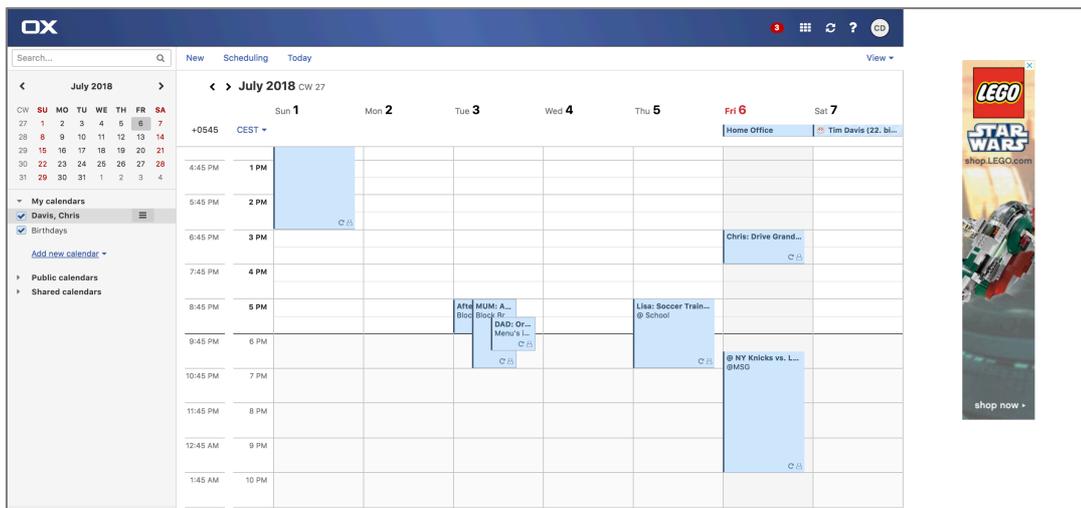
3.1.1. Leaderboard

- This ad space is fixed across all modules; which modules are allowed to show advertisement can be configured
- The size for this ad space is set once and will not get resized
- An event configuration can trigger the ad to show/reload if defined



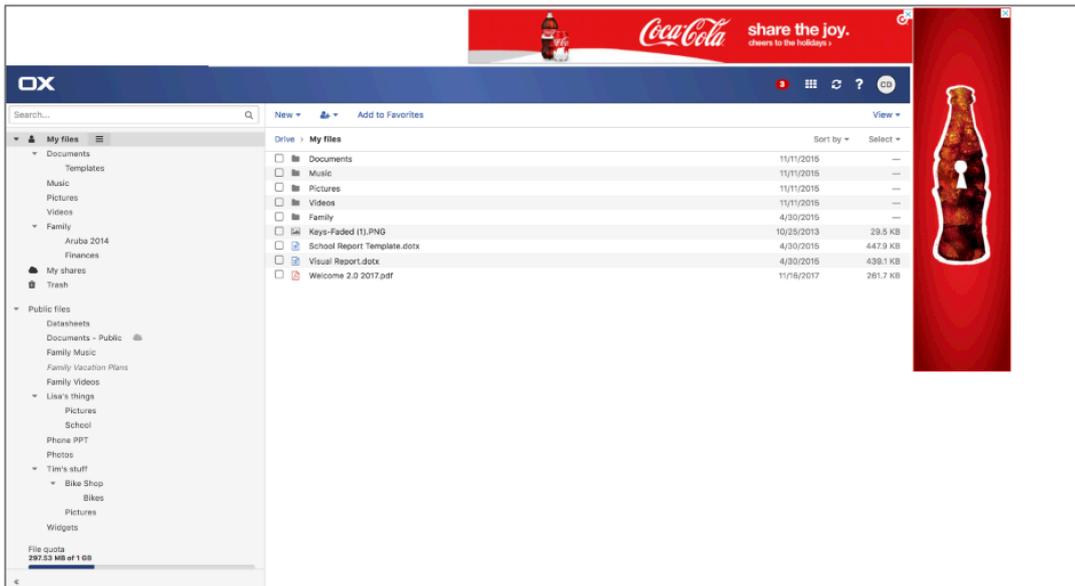
3.1.2. Skyscraper

- This ad space is fixed across all modules; which modules are allowed to show advertisement can be configured
- If the screen size is too small for this kind of ad (smaller than 1024x768px), the ad space will not be used, and no ads will be loaded
- Modules and ad sizes can be configured
- An event configuration can trigger the ad to show/reload if defined



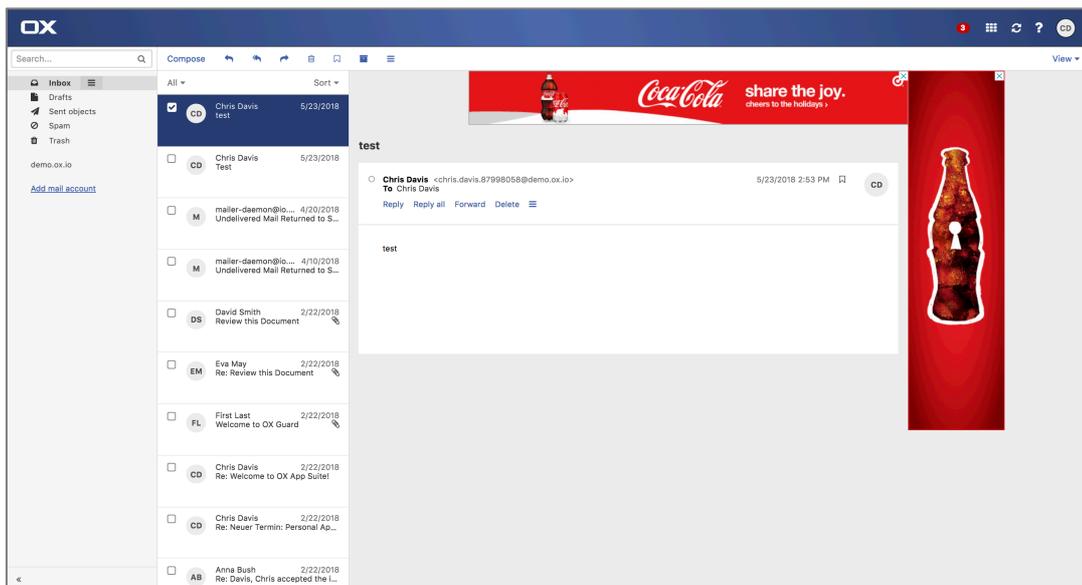
3.1.3. Wallpaper

- This ad space is fixed across all modules; which modules are allowed to show advertisement can be configured
- It supports the same sizes as the leaderboard and the skyscraper and combines them into one ad space
- An event configuration can trigger the ad to show/reload if defined



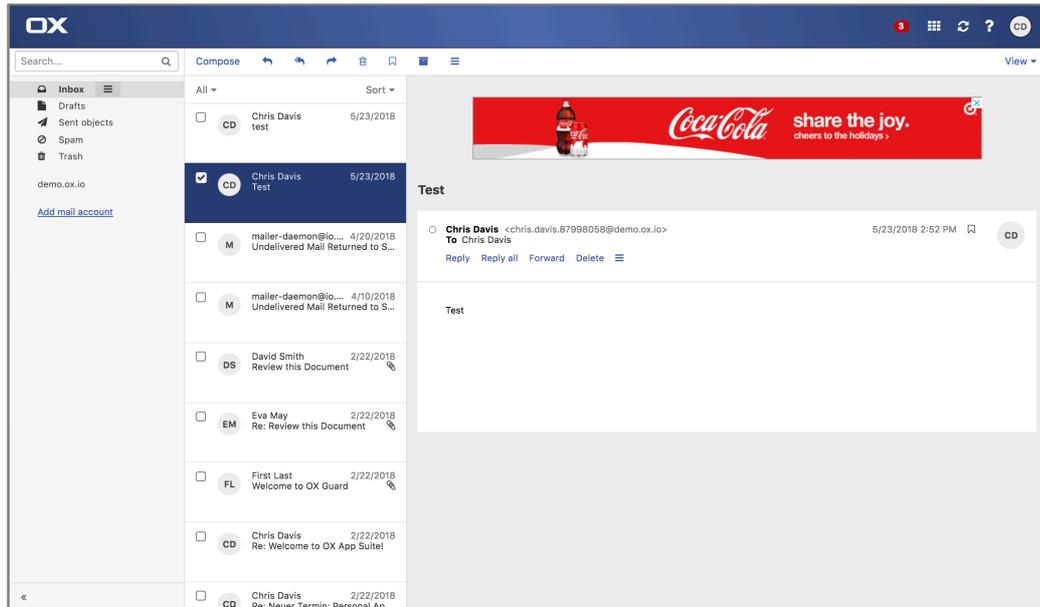
3.1.4. Email Wallpaper

- This ad space is only available in OX Mail and shows ads above the mails content when the user checks email details
- It supports the same sizes as the mail detail view leaderboard and skyscraper and combines them into one ad space around the mail content
- An event configuration can trigger the ad to show/reload if defined



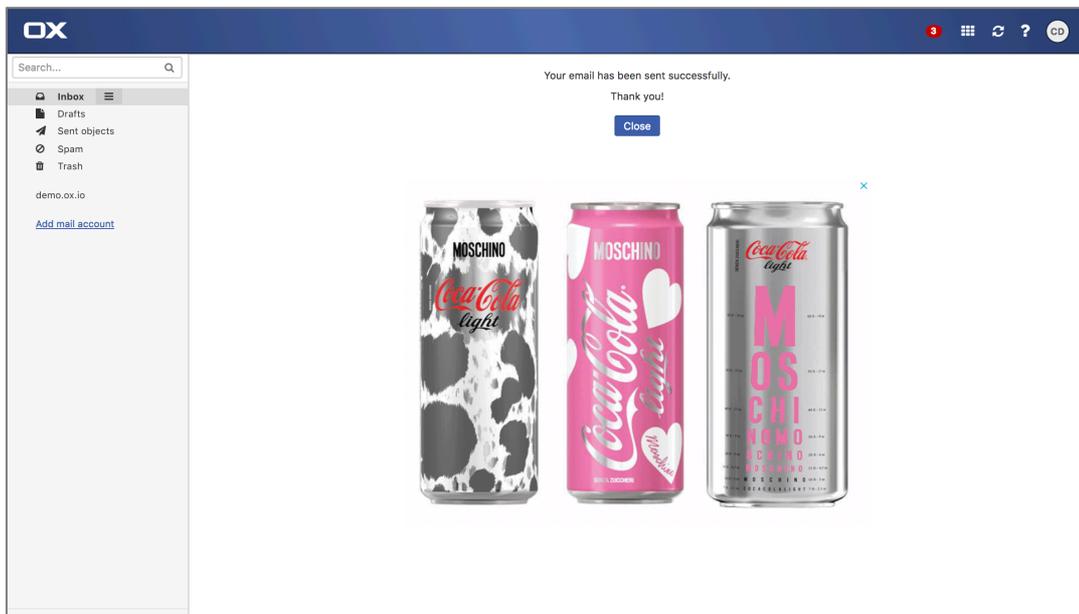
3.1.5. Mail Detail View Leaderboard

- This ad space is only available in OX Mail and shows ads above or below the mail content when the user checks an email's details
- An event configuration can trigger the ad to show/reload if defined



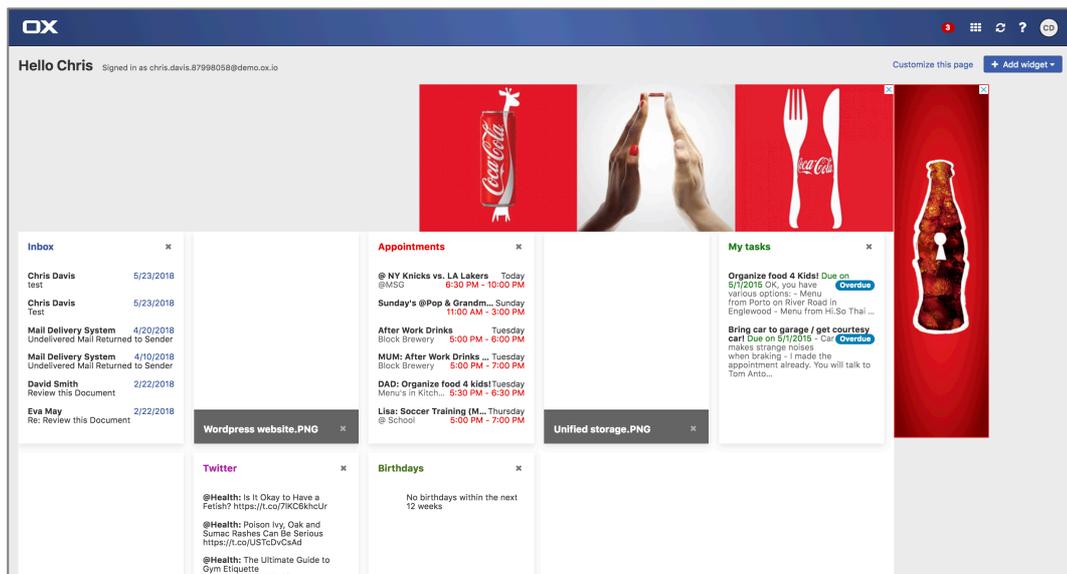
3.1.6. Mail Sent Ad

- Every time a user sends an email, some text information, along with an ad, is shown
- The placement area can be much bigger than the area used for the original text (e.g. “mail successfully sent”). The advertising area is under this text
- It supports the same sizes as the rectangle and the maxi ad
- Further configuration can be added to this area such as instructions to the user (e.g. add the recipient to the address book)
- The event “mail successfully sent”, always triggers the ad to show/reload if defined



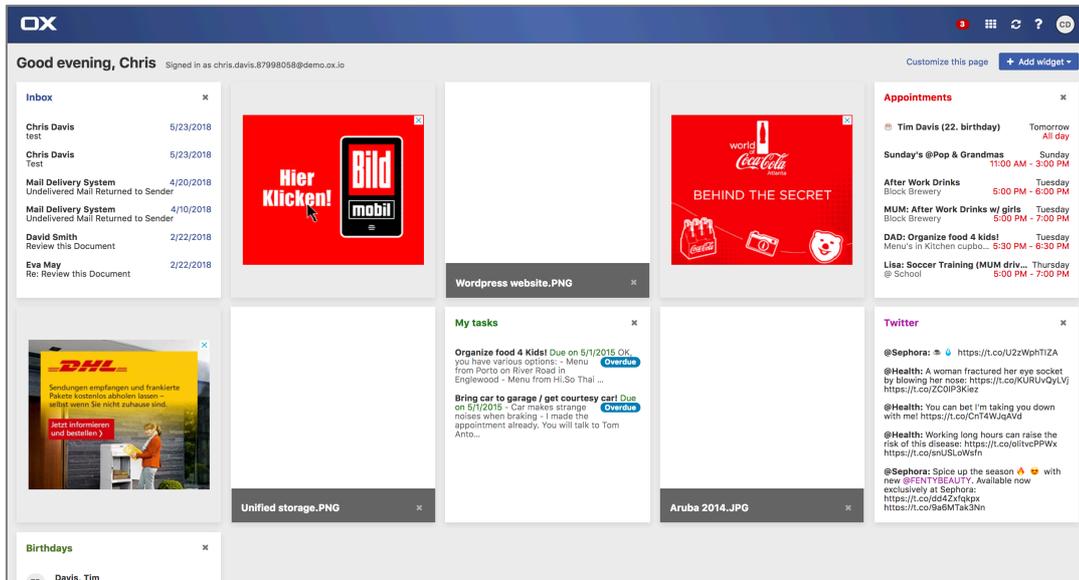
3.1.1.7. Portal Wallpaper

- This ad space is only available in the OX Portal and shows ads above portal widgets
- It supports the same sizes as the portal billboard and skyscraper and combines them into one ad space around the portal widgets
- An event configuration can trigger the ad to show/reload if defined



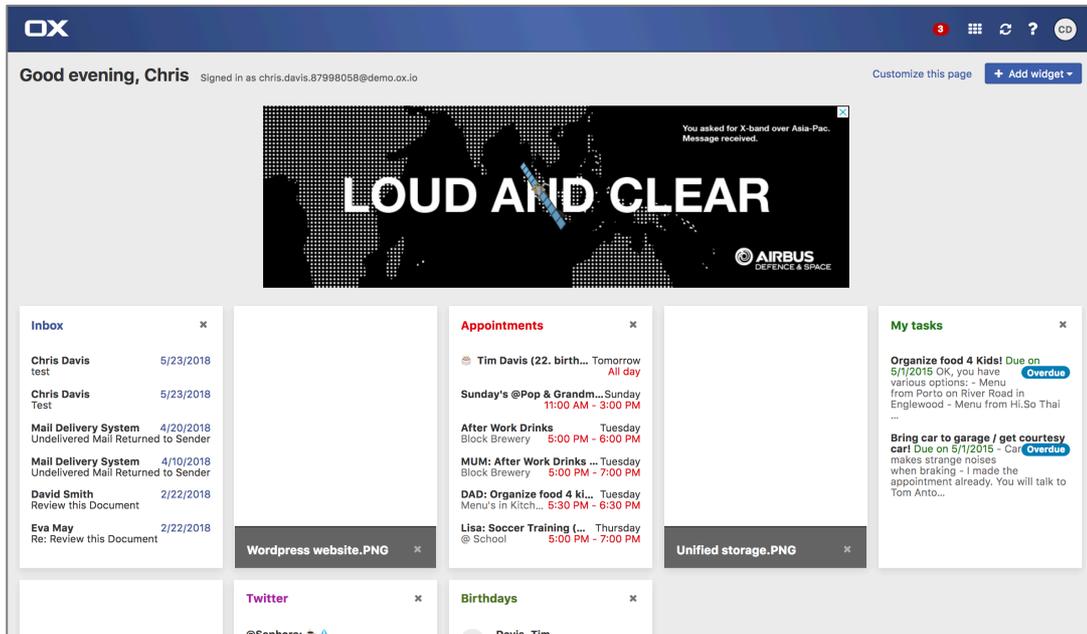
3.1.8. Portal Widget

- This ad space is only available in OX Portal
- The ad space supports rectangle ads and replaces a portal widget
- An event configuration can trigger the ad to show/reload if defined



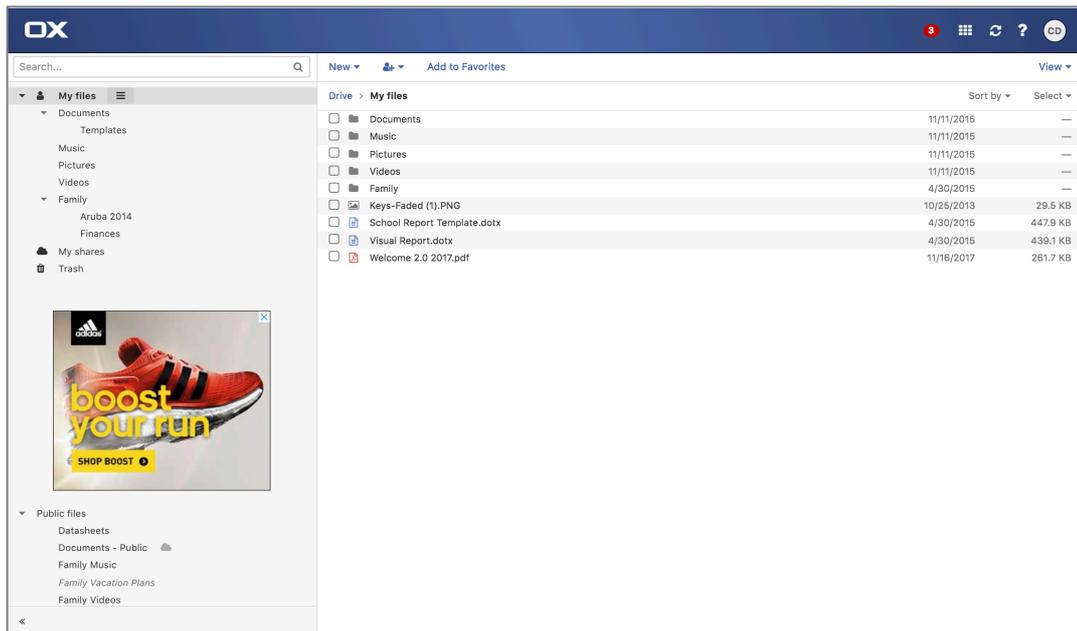
3.1.9. Portal Billboard

- This ad space is only available in OX Portal
- If defined, the ad space shows an advertisement above the portal content
- An event configuration can trigger the ad to show/reload if defined



3.1.10. Drive Folder Ad

- This ad space is only available in the folder section of OX Drive
- It supports the same sizes as the rectangle
- If the folder tree is minimized, no ad space is created, and no ad will be shown
- An event configuration can trigger the ad to show/reload if defined



3.1.11. Logout Page

- This ad space is only available in the OX App Suite logout page
- It can also be used for video ads
- An event configuration can trigger the ad to show/reload if defined



4. OX Display – Configurations

The configuration for ad spaces can be stored via middleware API. Beginning with the 1.3.0 release, configuration is requested via this API by default. The default behaviour can be completely customized using well-known methods, extension points. Despite the special points for the spaces, it is possible to extend the general point io.ox/ads.

4.1. Filter Options

The OX Display offers the following filter configuration to display ads.

Filter Configuration	Comment	Desktop	Mobile
Module visibility	Configurable array of OX App Suite UI modules where ads are visible for the user. If this is not configured, each pre-defined ad space will be shown in the related modules (JSON configuration)	Supported	Supported
Capabilities customization*	Option to configure which users gets advertisement based on OX App Suite capabilities	Supported	Supported
Margin customization*	Margin around ad spaces can be configured	Supported	Hidden

*Customizations has to be defined by Customer and need to be requested via Services Engineering

4.2. Event Options

The OX Display offers the following filter configuration to display ads.

Event Configuration	Comment	Desktop	Mobile
Trigger	An event, which is usually fired by the user interface, which can be used to load/reload an ad into an ad space	Supported	Supported

Module change	A module change always triggers an ad reload	Supported	Supported
Folder change*	A folder change has to be defined in order to trigger ads (possible in App Suite settings and the following modules: Mail, Calendar, Drive, Address book)	Supported	Supported
Reload trigger	A trigger that is fired, after a given period of time, which causes a load/reload of an ad into an ad space (JSON configuration)	Supported	Supported
Cool down timer	A specified period of time, after a trigger is fired, within which an ad cannot be loaded/reloaded (JSON configuration)	Supported	Supported
Ad reload trigger customization*	Individual events to execute custom JavaScript code when the advert is about to be loaded/replaced/triggered or hidden	Supported	Supported
Initialization customization*	Allows to inject ad partner JavaScript and to store global variables for further use	Supported	Supported
GPT tag	Automatically inject GPT ad tags by simply configuring the unit ID (JSON configuration)	Supported	Supported

*Customizations has to be defined by Customer and need to be requested via Services Engineering

4.3. Mapping Pre-defined Ad Spaces

A mapping from generic “module names” to specific module IDs is provided. This mapping can be used to refer to a group of modules which belong together. The following ad placements are pre-defined and can be used to serve ads:

- io.ox/ads/leaderboard
- io.ox/ads/skyscraper
- io.ox/ads/skyscraperLeft
- io.ox/ads/driveFolder
- io.ox/ads/portalBackground
- io.ox/ads/portalBillboard
- io.ox/ads/mailBackground
- io.ox/ads/mailDetail
- io.ox/ads/mailSentOverlay
- io.ox/ads/logout

In order to activate one of these spaces, a custom plugin is needed shipping a configuration as described in the technical documentation (<https://documentation.open-xchange.com/7.10.0/ui/features/advertisement.html>).

Several sizes for each ad placement are possible. OX Display gives more than one option to the ad server in order to provide an ad slot.

Spaces	Format Options	max. Weight	max. Height	Desktop	Mobile
Leaderboard	320x50 (mobile) 468x60 728x90	728	90	Supported	Supported
Skyscraper (left / right)	120x600 160x600 200x200	300	1050	Supported	Hidden

	240x400 250x250 300x250 300x1000 300x1050				
Wallpaper	see leaderboard and skyscraper			Supported	Hidden
Email Wallpaper	see mail detail view leaderboard and skyscraper			Supported	Hidden
Mail Detail View Leaderboard	320x50 (mobile) 468x60 728x90 970x90	970	90	Supported	Supported
Mail Sent Ad	200x200 240x400 250x250 336x280 300x250 (both) 320x50 (mobile) 320x100 (mobile) 468x60 640x480	640	480	Supported	Supported
Portal Wallpaper	see mail portal billboard and skyscraper			Supported	Hidden
Portal Billboard	320x50 320x100 468x60 728x90 970x90 200x200	970	250	Supported	Hidden

	800x250				
Portal Widget	300x250 250x250	300	250	Supported	Supported
Drive Folder Ad	200x200 250x250 300x250 320x100 320x50	320	250	Supported	Supported
Logout Page	250x250 300x200 640x480 800x250 1024x768	1024	768	Supported	Supported

4.4. Ad Tracker

To monitor performance and ensure technical functionality, Open-Xchange collects and evaluates information related to advertisement within the OX App Suite. The collection of the data is done by the use of functions shipped with the framework to send tracking data to a tracking middleware.

When the user logs in to OX App Suite, the following data will be collected per default for statistical evaluation and commission payments as well as technical performance:

- Unique user

This event is triggered when the tracking code is loaded, once per login (refreshing the page). The payload of this event is a combination of user id and context id. The tracking middleware will use the payload as a unique identifier to only count this event once in a certain interval. The unique identifier is never to be persisted in any way.

- Browser

This event is triggered when the tracking code is loaded, once per login (refreshing the page). The tracking middleware will store information based on the user agent string.

- Advertisement

For each ad space configured, there can be several types of events.

- Request

Whenever the HTML code for a certain ad space is inserted into the Document Object Model (DOM) as well as when a certain ad space is reloaded, an event with a type request will be triggered. The tracking middleware receives the type and the name of the ad space being the source of the event.

- Impression

Another important metric are ad impressions. The availability of this event highly depends on the library of the provider serving the ads. For the default GPT implementation, this event will be tracked, once the library reports a banner to be shown.

All the events are not sent to the tracking middleware instantly. Instead those are queued over a period of currently 15 seconds and sent to the middleware in one request containing all the events of the past period. Should the middleware fail to accept the request, the events will be enqueued again for the next request.

5. OX Display – Feature Summary

- Easy to manage/configure with no large upfront investment
- API based upload of configurations based on user or user groups
- API allows for control panel or provisioning system integration
- Supports standard ad formats
- Pre-defined ad spaces are ready to use once the ad server is connected
- Ad integration on all devices (Smartphone, Tablet and PC) through the web UI
- Each pre-defined ad spaces can be individually configured/adjusted (e.g. size and position)
- Each pre-defined ad space can inject individual ad specific JavaScript/CSS for maximum flexibility
- Completely configurable with minimum coding know-how via a JSON based configuration file. Changes impact immediately. One configuration per cluster or per node or upload with API
- Configurable reload trigger available to perform non-event triggered ad reloads
- Individual reload trigger possible, e.g. if the user changes the module
- Each module can be configured to show/hide ads (e.g. show ad in the OX Mail but not in OX Drive)
- Capabilities can be configured to show/hide ads (e.g. show ads if the user has no OX Drive capabilities)
- Dynamic orchestration available, i.e. the support of multiple ad servers
- Monitor performance and ensure technical functionality via Ad Tracker