This documentation relates to the eyefacti-
ve MultiTouch Software Platform AppSuite.

A more recent and complete version you can
find on the web at www.multitouch-apps.com.

Please find further informationen about the
AppSuite here: www.multitouch-appstore.com.

Overview

Basics

Getting started with AppSuite

System Requirements

AppSuite is a client software for Windows operated PCs or notebooks. To operate the interactive touch functions a corresponding input device (Touchscreen) is required but alternatively mouse and keyboard will also work. Further information concerning the operation can be found in the respective section.

Hardware

The system requirements for a Windows operated PC are subject to the target resolution. The higher the resolution the higher the system requirements for the PC. The following chart displays the components required at a resolution of 1280x800 pixels.

	Minimum	Standard	High-End
OS	Windows 7 / 8 (32 Bit)	Windows 7 / 8 (32 Bit)	Windows 7 / 8 (32 Bit)
Processor	Intel Core2 E6400 @ 2,13GHz	Intel Core2 Quad Q9560 @ 3,00GHz	Intel i5-2500K @ 3,30GHz
RAM	1 GB	2 GB	4 GB
Graphics card	Nvidia 7600 GS, OpenGL 2.0	Nvidia Geforce GTS 250, OpenGL 2.0	Nvidia Geforce GTX 460, OpenGL 2.0
Harddrive	1,5 GB free space	1,5 GB free space	1,5 GB free space
Framerate	>= 30 fps	>= 60 fps	>= 60 fps

Applications will run smoothly at a frame rate of 30 fps (frames per second). A frame rate of 60 fps is ideal.

Touch protocol

The eyefactive´s AppSuite supports the open protocol TUIO as well as the proprietary protocol Windows Touch by Microsoft.

Tip AppSuite can be launched in a special mode should your PC´s resources not allow for smooth operation. This should only be a temporary solution though.

Tip Here you will find a list about the performance of processors (CPUs) and graphic cards (GPUs).

Tip For optimal operation and use of all functions we recommend an input device with at least five simultaneous touch points. For operation by multiple users (**MultiUser**) a touchscreen with at least 32 simultaneous touch points is recommended.
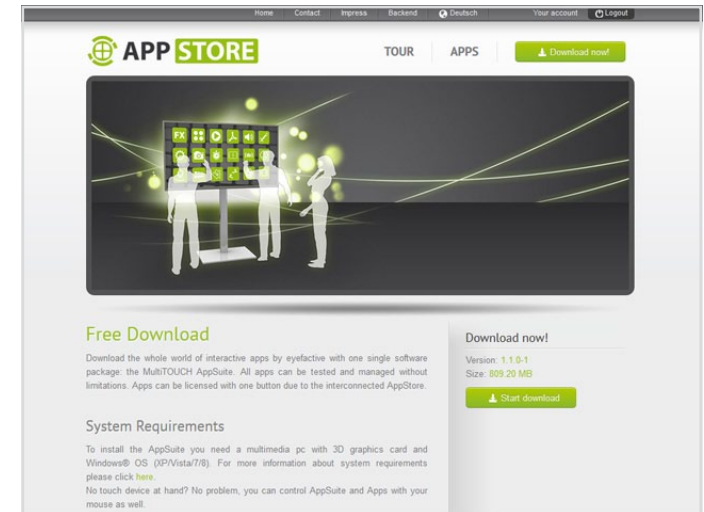
Installation

Download

After free registration to AppStore you can download the self installing AppSuite platform. To do so please click the assigned button in AppStore a www.multitouch-appstore.com.

Installation

Open the file with a double click and follow the instructions. Pay attention to the information concerning system requirements prior to installation. For the successful installation approx. 1GB of free disk space is needed.

Deinstallation

In order to deinstall AppSuite you will need to activate the deinstaller located in the installation directory of AppSuite. Alternatively you may deinstall AppSuite via the Windows Control Panel.

Free download at:
www.multitouch-appstore.com

Opening and Closing

Opening AppSuite

After the installation the files are located in the folder allocated at time of installation, for instance under `C:\Programs\eyefactive\AppSuite`.

AppSuite can be opened by double click on the `AppSuite` shortcut.
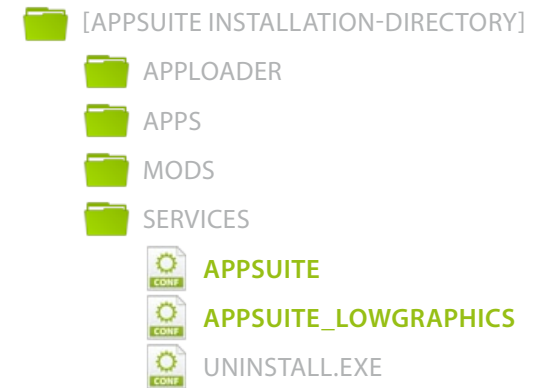
To optimize the performance on slower computers you may alternatively click the `AppSuite_LowGraphics` shortcut.

With standard settings AppSuite starts in Fullscreen-Mode and uses automatically the resolution of the operating system. Additionally, AppSuite can also be started in Window-Mode with a pre-defined resolution, please find further infomation in our Wiki.

Closing AppSuite

AppSuite can be closed in several ways by:

1.) Closing the Windows window (only in possible in windowed mode).

2.) Pressing the `[ESC]` window.

3.) Via the terminal.

📁 [APPSUITE INSTALLATION-DIRECTORY]

    📁 APPLOADER

    📁 APPS

    📁 MODS

    📁 SERVICES

        ⚙ **APPSUITE**

        ⚙ **APPSUITE_LOWGRAPHICS**

        ⚙ UNINSTALL.EXE

AppSuite starts in the standard setting the so-called **SystemView**.

Terminology

MultiTouch

The term *Touch* or *Touchscreen* typically associated with the operation of a display by use of one finger, generally substituting the function of a mouse or clicking simple buttons (*Single-Touch*).

MultiTouch means the operation by multiple fingers, generally swiping or zoom gestures executed by two fingers. Through its widespread use on smartphones and tablets (multi) touch control has become an established alternative to mouse and keyboard.

MultiUser

For the first time ever big displays from 40 inches up to several square metres could not only be controlled by use of multiple fingers (MultiTouch) but also by multiple users: *MultiUser*. The innovative concept can be subdivided into 2 categories:

Category 1: Parallel Operation

Multiple users simultaneously operate e.g. a virtual terminal of their own.

Category 2: Joint Operation

Multiple users operate a single application simultaneously.

Especially the joint operation (category 2) of software constitutes an evolution in human-computer interaction. Why? Basically the whole software industry is aimed at software operation by a single person (SingleUser), traditionally by mouse or keyboard. After all even apps for smartphones and tablets available at renowned market places are designed for SingleUser applications.

MultiTag

In addition to the recognition of touch and movement by fingers optical tracking technology also enables recognition of objects by use of so-called *Tags*. These patterns basically work like bar codes. They are being visually detected by cameras and correlate to a precise identification number.

Tags are generally stuck or directly printed on objects e.g. products or invitations. If placed on the display an application can react accordingly due to the object´s unique identification number and for instance display some specific information.

As a result users will get the impression the display actually knows and recognizes the object.

Operation

After you have opened AppSuite all functions can be controlled by your fingers. This requires an input device with MultiTouch functionality and at least two touch points. In case a suitable input device is lacking AppSuite can be operated by mouse and keyboard at anytime.

Gesture	Finger	Mouse	Example
TAP	Single short touch on the relevant element.	[Left Mouse] single short mouse click.	Active element (Buttons, Checkboxes, ...)
DRAG / DROP	Touch element with one finger and move element while touching it to the desired spot. Then lift finger.	Hold [Left Mouse] and release if element is at the desired position.	Move elements to desired position (Move images, scroll documents, ...)
ZOOM	Touch element with two fingers and move towards each other (ZOOM IN) or in opposite directions (ZOOM OUT).	Click [Right Mouse] once for the first permanent finger, then use [Left Mouse] for the second finger.	Scale elements (Scale images, zoom in/out documents, ...)
ROTATE	Touch element with two fingers and rotate to the desired direction.	Click [Right Mouse] once for the first permanent finger, then use [Left Mouse] for the second finger.	Rotate elements (Rotate images, turn controls, ...)

Shortkeys - Overview

Key	Description
[ESC]	Close AppSuite
[F]	Show Frames per Second (fps)
[F1]	Show Picking (Touch Areas)
[F2]	Show Blob-Paths, if Blobs are activated
[F3]	Show Blob details, if Blobs are activated
[F4]	Show Blobs (Touch points)
[F5]	Show Tags/Markers
[F6]	Show Mouse Cursor
[F7]	Show Console
[F8]	Clears Style-Cache; New elements will be reloaded from Style-files
[F10]	Shows Style-Hierarchy
[F11]	Switches Window/Fullscreen Mode
[F12]	Create a screenshot in AppSuite > AppLoader > data > screenshots
[M]	Open AppManager
[0] - [9]	Used to simulate Tags/Markers

SystemView

After the initial start of AppSuite you will find yourself in the so-called SystemView a universal menu for browsing, furnishing information and opening all apps and widgets installed as well as their mods. Several adjustment features such as filters, offer help with navigation and orientation.

App Overview

The first menu provides an overview of all the apps installed on your system.

1 Display: Current View

2 Matrix of all apps installed on the system

Swipe left or right horizontally at any arbitrary position to browse the display. A selection menu will open up when tapping on an app symbol.

3 Button: AppManager (backend)

App-Details

On this display you will be able to inform yourself about the functionalities of the app you have selected.

1 **App-Details**

Describes the functionalities of a currently selected app.

2 **Images**

First tap on an image to select it from the overall display. Then you can scale the image with a zoom gesture.
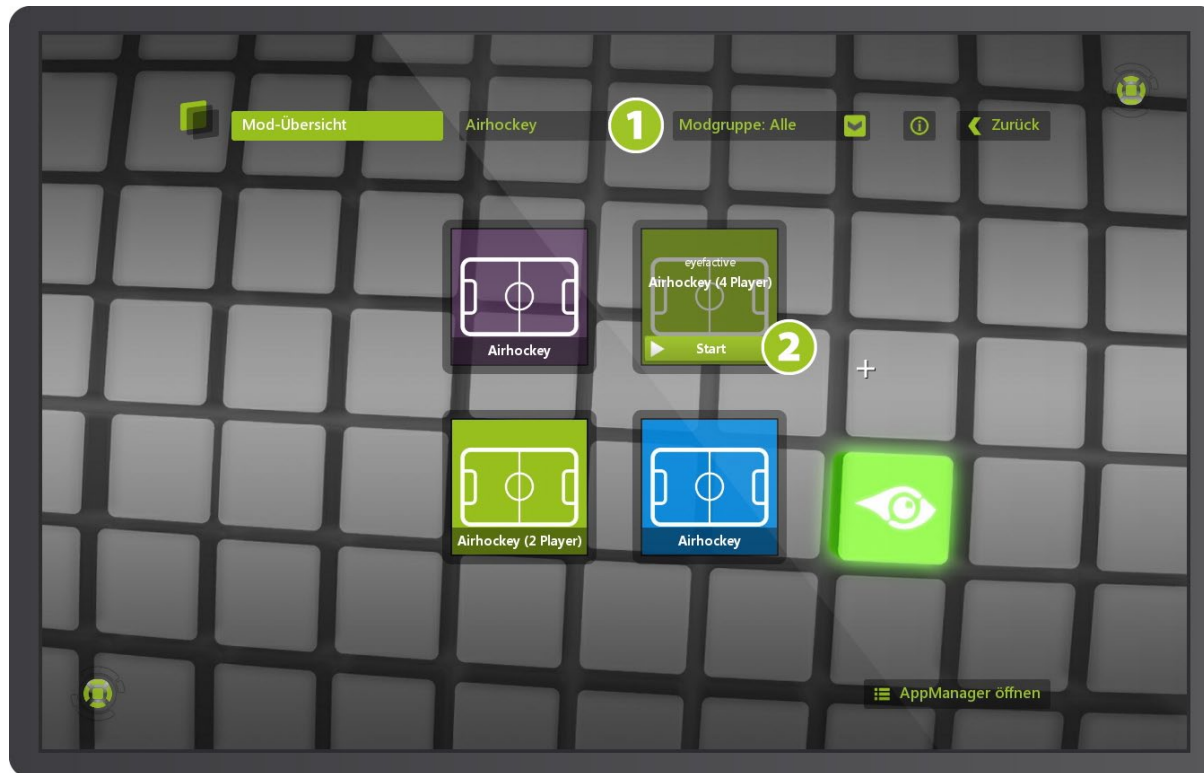
3 **Back Buttons**

Get back to the app overview by tapping the back button.

4 **Button: Mod Overview**

Mod Overview

Displays all mods available according to the set filters.

1 **Filter**

These combo boxes allow for filtering of mods by app and mod group.

2 **Opening a mod**

Tapping on a mod symbol will display a start button. A repeated tap on the button opens the respective mod.

Opening and Closing Apps

Apps and widgets are generally opened via views which act as a selection menu. More pre-cisely you open individual modifications (mods) depending on the settings either on full screen or in a window.

Opening Apps

Navigate in SystemView to get to Mod Overview. Change filter settings if required to view a specific mod. A tap on the start button opens the chosen mod of a prevailing app. Mods can be started directly in AppManager as well as their prevailing views.

Closing Apps (full screen)

Apps resp. mods starting on full screen can be closed in several ways. Either press the respec-tive key on the keyboard (see list of keys) or use the terminal.

Terminal

Imagine the terminal to be a kind of main remote control for AppSuite. Via the terminal for instance you will close full screen apps or adjust the system´s volume.
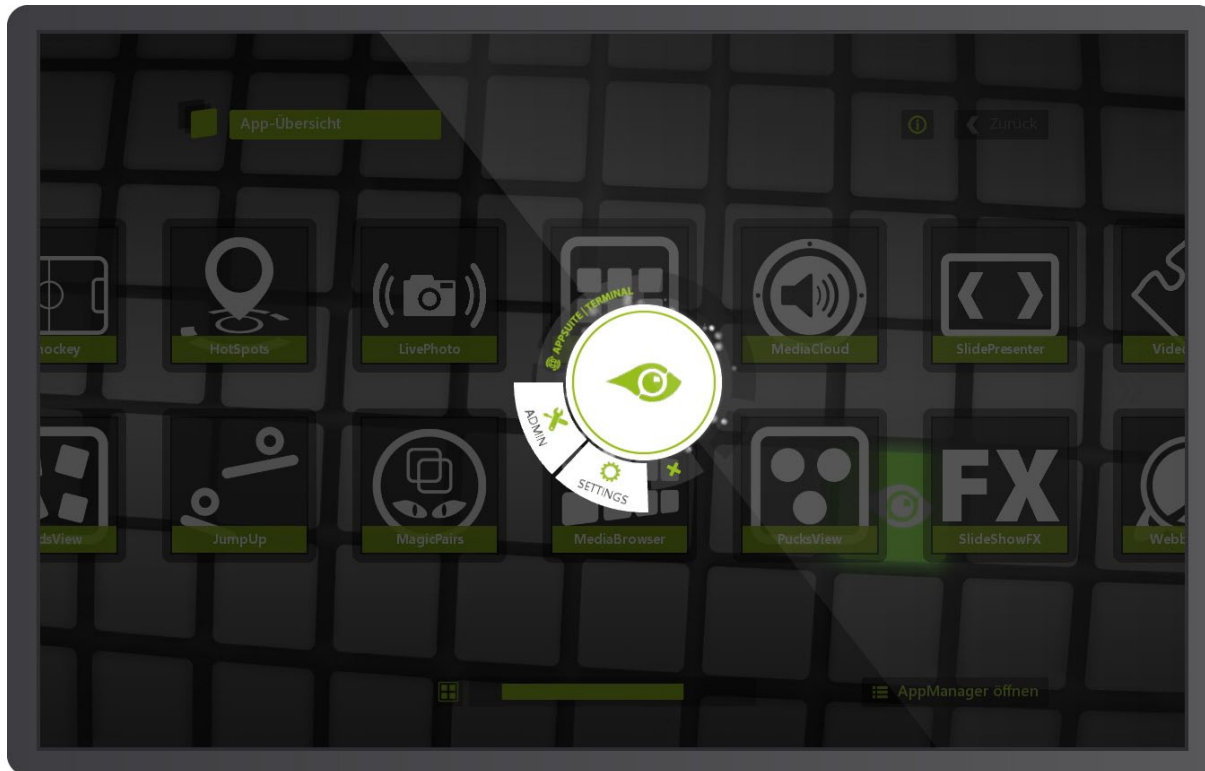
Opening the Terminal

Drag the terminal icons located in the corners of the screen to the centre. Alternatively you can open the terminal via a tag if supported by your system.

Closing the Terminal

To close the terminal tap on the X-symbol or drag the terminal away out of the screen.

AppManager

Administrations-Backend der AppSuite

Interface (GUI)

AppManager is the administration surface (also: back end) of AppSuite. Here you may download new apps from the AppStore, acquire licenses, create mods, and much more...

Starting the AppManager

Tap the appropriate button in SystemView or on the keyboard respectively.

1 Main area

This area is assigned to display the individual configuration options.

2 Main navigation

Use the main navigation bar to switch between the different areas from apps to services.

3 Login Area

Here you switch inbetween the (local) AppSuite view and the AppStore (online) provided there is an active internet connection.

4 Quick-Nav

These buttons will take you to the areas of your choice within AppManager.

General Structure

These terms constitute the basic units and structure of AppSuite and interrelate on different levels.

Apps

These software packets are downloaded from the AppStore online then installed in AppSuite and opened – either in a (virtual) window or full screen. Apps have a defined range of functions and are subdivided into several categories.

Widgets

Widgets have a considerably limited range of functions in comparison with apps. Thus widgets are opened in windows and are being used in apps and especially within views.

Views

Views can be unsterstood as different menu surfaces. Apps and widgets can be started with views, for instance also in various windows open at the same time. Since views basically are specific apps they are also available in the AppStore.

Mods

This is an abbreviation for modifications and means a customized version (entity, copy). Mods can be created for apps, widgets and views.

Mod groups

Mods are structured in mod groups. The inheritance principle allows for quick and efficient creation of mods within a mod group.
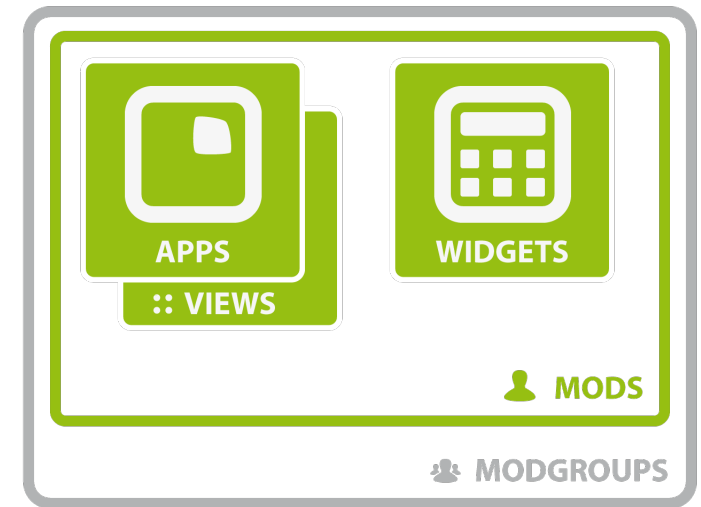
Create your own version of apps and widgets - so called mods.

:: VIEW

The graphic displays the typical design of a comprehensive solution consisting of several mods. A view app serves as home screen and central main menu where individual mods of apps and widgets can be opened.

Mods from different mod groups can also be combined within a view.

Registration & Login

Registration to eyefactive AppStore is subdivided into two registration stages. With your full registration you will get a free download of AppSuite, a personal user account and you will be eligible to license apps. For further information please visit our AppStore at www.multitouch-appstore.com.

1. registration step

At the 1st registration stage you will gain access to a free download of AppSuite. Furthermore you can log in to AppStore with your personal user account either directly or via AppSuite anytime.

2. registration step

After the update to the 2nd registration stage you will be able to comfortably acquire app licenses. Just log in on the AppStore website by clicking on the login button at the top right. When logged in enter the personal area (link at top right of the page) and complete your user profile by submitting the neccessary details. Please note that only business clients are eligible for the 2nd registration stage at present. Activation will be conducted manually by eyefactive usually the same day.

For further information please take a look at our terms of use.

License model

Freemium model

You can download eyefactive MultiTOUCH Apps for free and use their full range of functions. This includes the possibility to individually design Apps and Widgets and fill them with own contents. The only restriction: Water marks will be displayed that we permanently eliminate in case of fee-based licensing.

Purchase & rental

With the purchase of a license you permanently activate the respective App for a certain hardware system. You only want to activate an App for a certain period of time? No problem! For each App there are rental licenses that you can activate for a period of your choice.

Apps

When you open AppManager standardly the local AppSuite overview (see login area) will be displayed. You can also switch to the online app overview in AppStore via the corresponding button if you´re connected to the internet.

Overview

All available apps are displayed neatly arranged in a list . Information regarding licence status and current version can be found in the info box to the right.

Detailed view

After the selection of your desired app all relevant information regarding this app will be displayed in an overview. Buttons for the actions mentioned below can be found to the right.

Updating apps (Update)

Whenever there´s a new version of an app available you may update your existing version by clicking the corresponding button. Please note: For a correct display of the latest versions and new updates it is imperative to connect to the internet!

Deinstalling apps

The currently selected app will be removed by pressing the deinstall button. You can download and install the app via AppStore again at any given later date.

Licensing apps

The app will be licensed for your current system according to your selection. To find out more about licensing and licensing models please see the information displayed in the specific section.

Switch to the **app overview** via Apps on the left, where all apps installed are listed. Select the desired app.

Once you have selected an app from the overview, the **App details** will be displayed.

App licensing

Every app is initially being installed as a demo version which can be customized and tested in its entire functionality free of charge. Licences are required for commercial use only and will simply remove watermarks among others.

At the moment apps can only be licenced in AppSuite - just open AppSuite and then the AppManager.

Login

After logging in with your username to AppStore you will be presented with a menu of all apps available and their status. Then choose an app and install it if required.
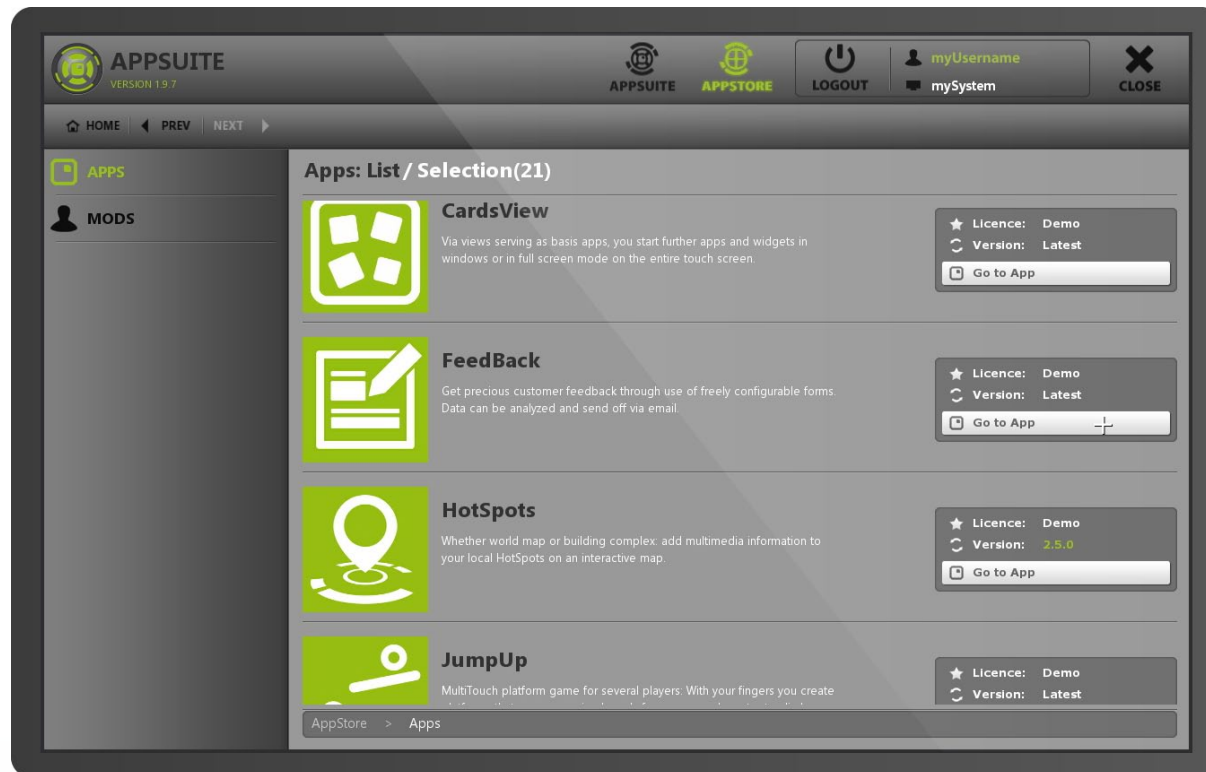
Login to your user account.

Permanent Licence

Click on the respective button to obtain a permanent licence. The licence menu will open and you may enter a coupon code if available. Upon confirmation of the licensing, the licence will be activated subject to charge for the system.
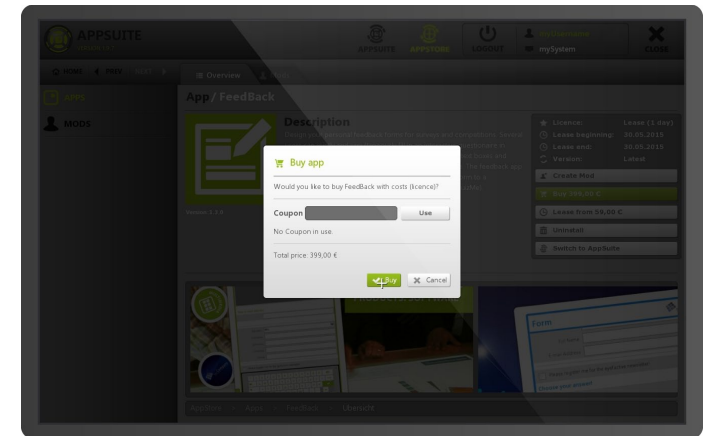

Confirm the purchase of an app. Where applicable you may enter a coupon code.

The new licence status of the app will be displayed in AppStore on the right.

Timed Licence

Click on the relevant button to open the licensing menu and determine the rental period of the app licence. The rental price is being calculated automatically upon confirmation of the rental period and entering a coupon code where applicable. After confirmation via the respective button, the licence becomes subject to charge and is activated for the chosen period.
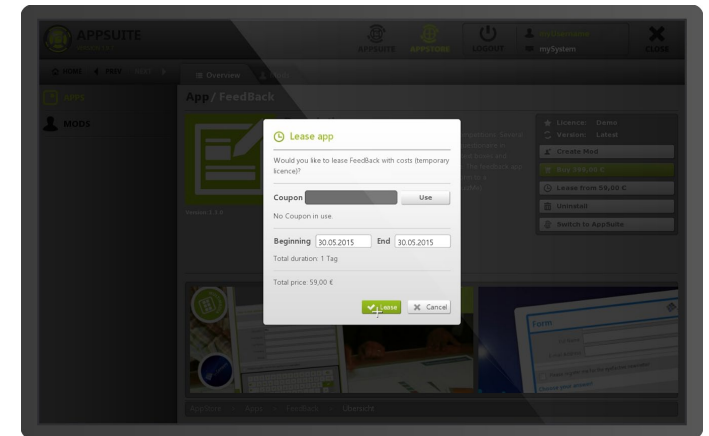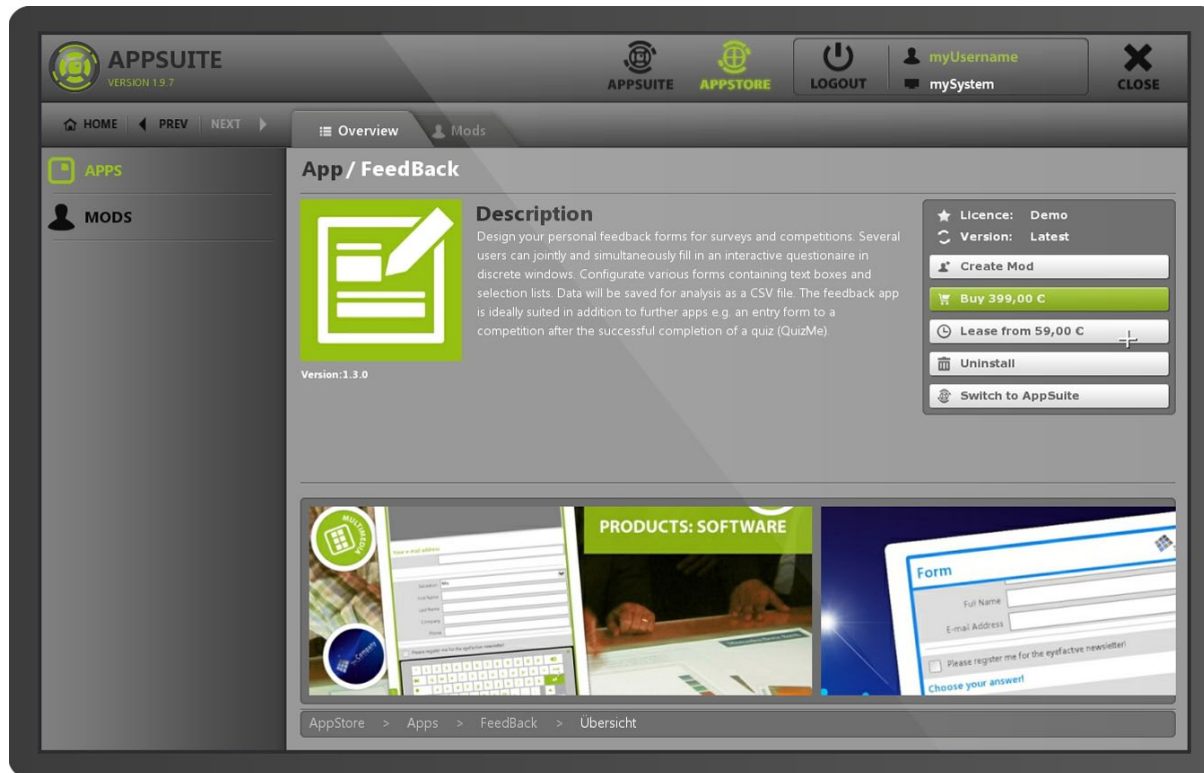
Enter your rental period and confirm it. If you have been issued a coupon code, you may enter it in the relevant field.

Rental duration, beginning and expiration dates are shown in AppStore´s display of the respective app on the right.
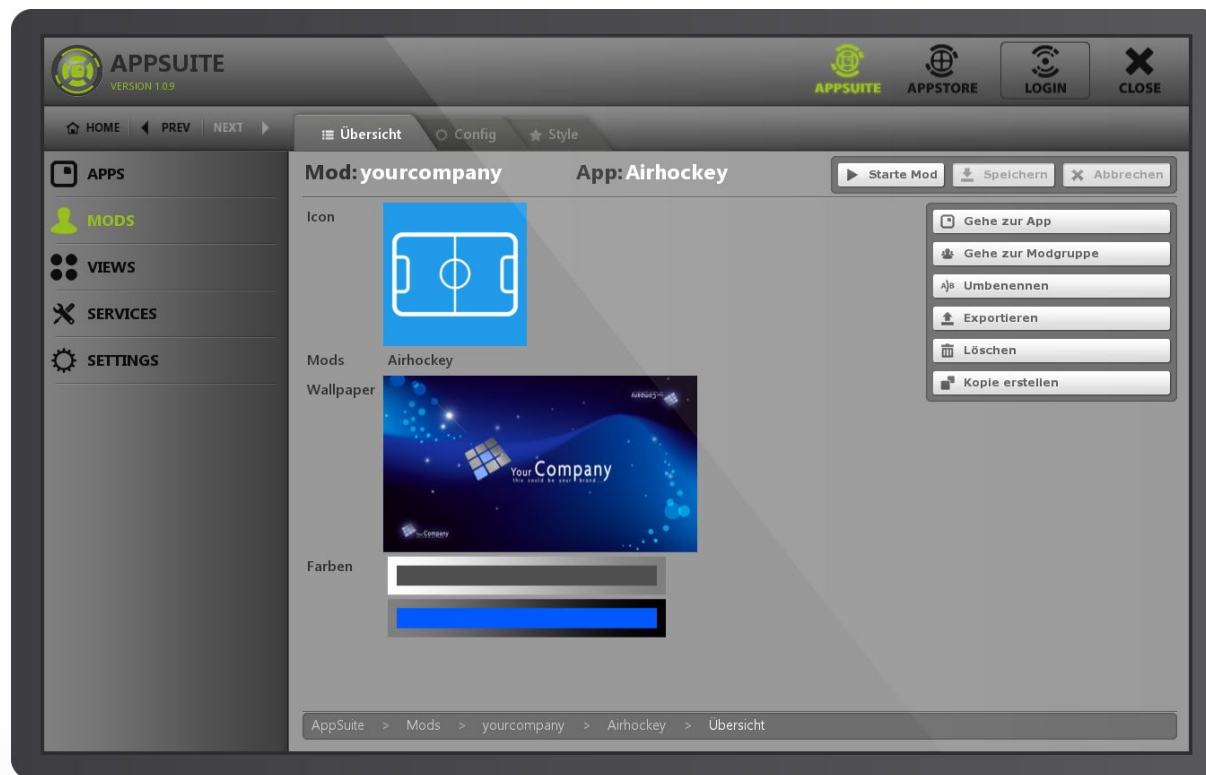
Mods

Mod groups

All available mod groups are displayed in an overview list.

Mods

All mods associated with a previously selected mod group are displayed in an overview list.

Mod: detailed display

After the selection of a specific mod you will be presented with an overview displaying all actions you could perform on it.
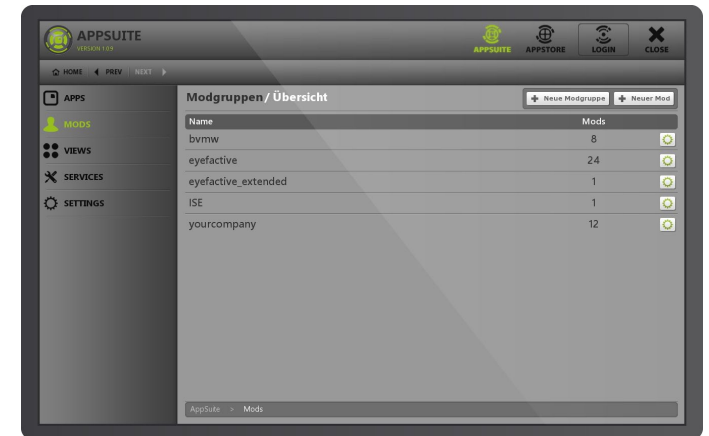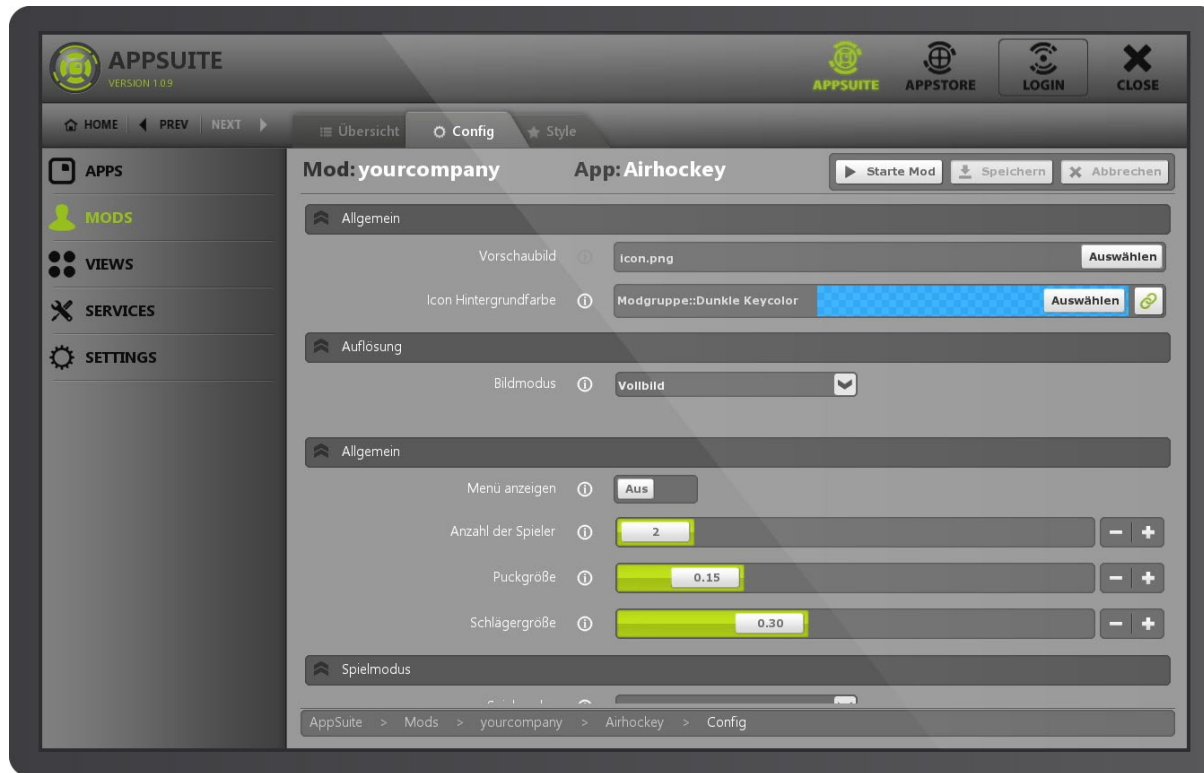

First select the desired mod group from the **mod group overview** list.
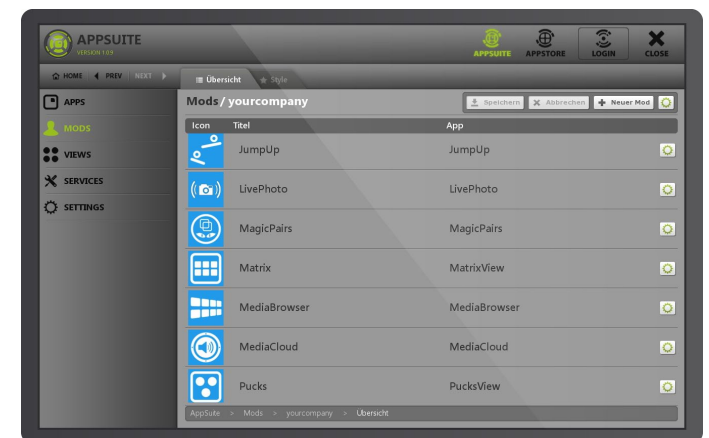
Then select the desired mod from the **mod overview** list.

Mod: Settings

Every app offers a multitude of parameters, which can be customized within mods and saved via a comprehensive graphical user interface with familiar elements like i.e. buttons, sliders and file selection dialogs.
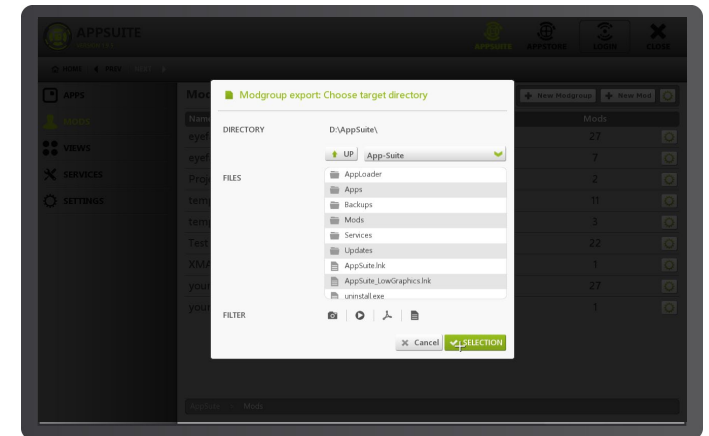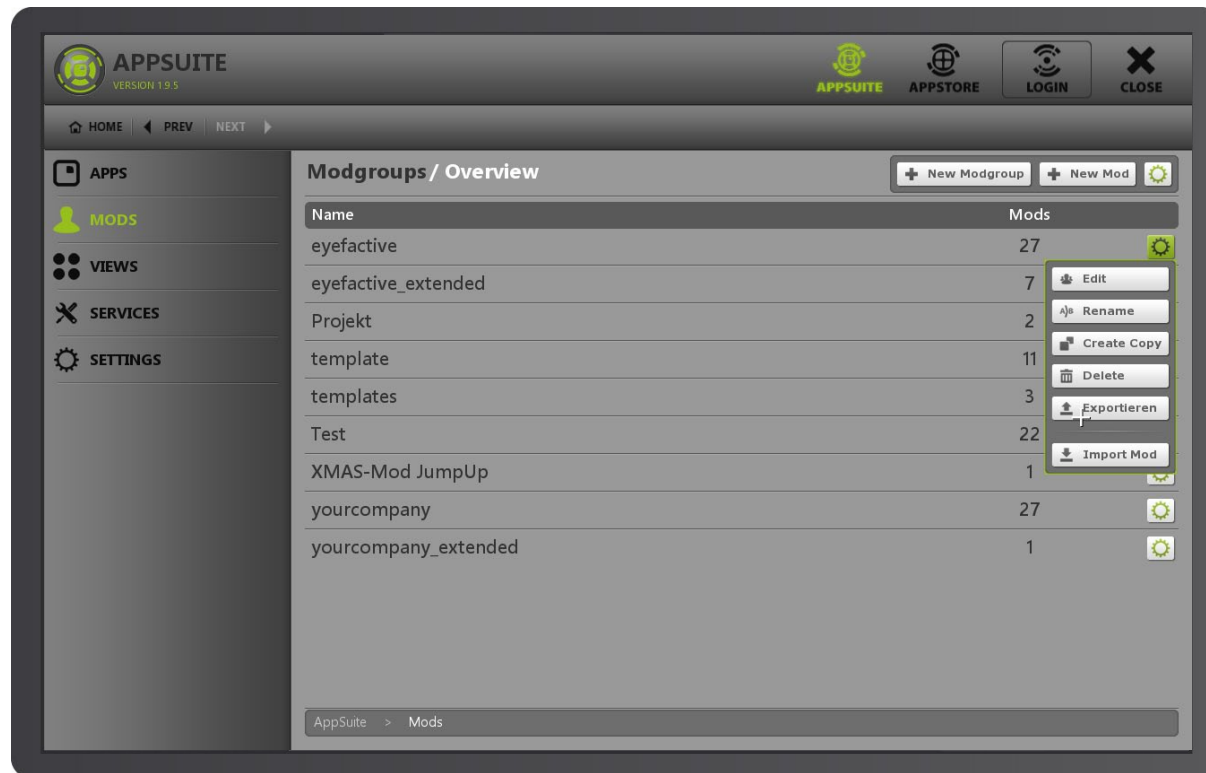
Export & Import

Modgroups can be imported and exported directly from AppManager, you have different options:

Export of Modgroups

Click on the gears-icon next to the respective modgroup you like to export. Choose a directory for the Zip-File in the following popup.
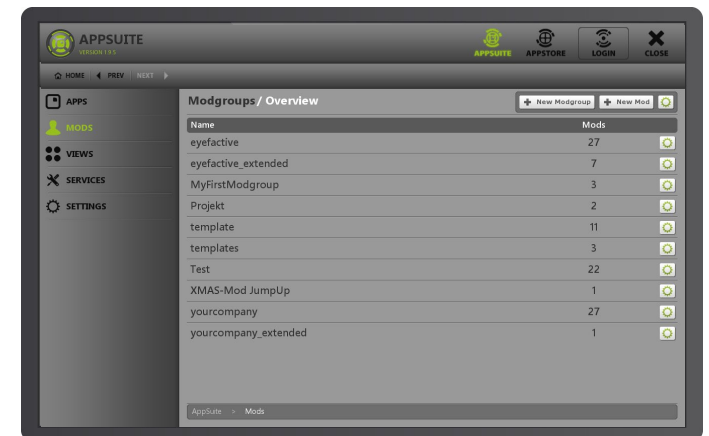

Choose a directory for the Zip-File to be exported.

Import of ZIP-File

To import an exported modgroup, please click on the upper gears icon in the modgroup list overview. Choose the respective Zip-File in the popup dialog. Afterwards the new mod-group will be listed and available in the overview list.
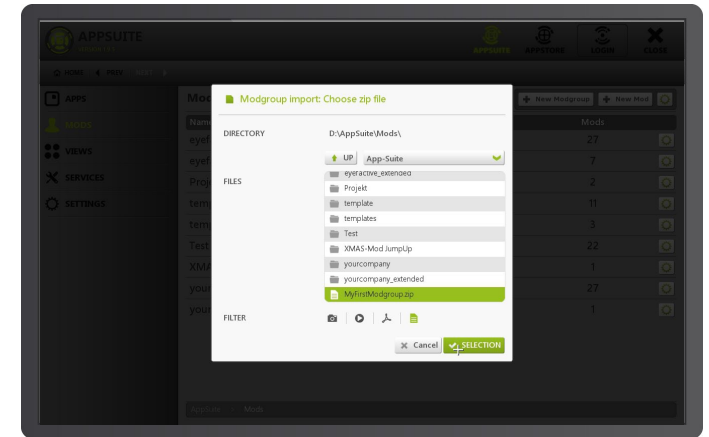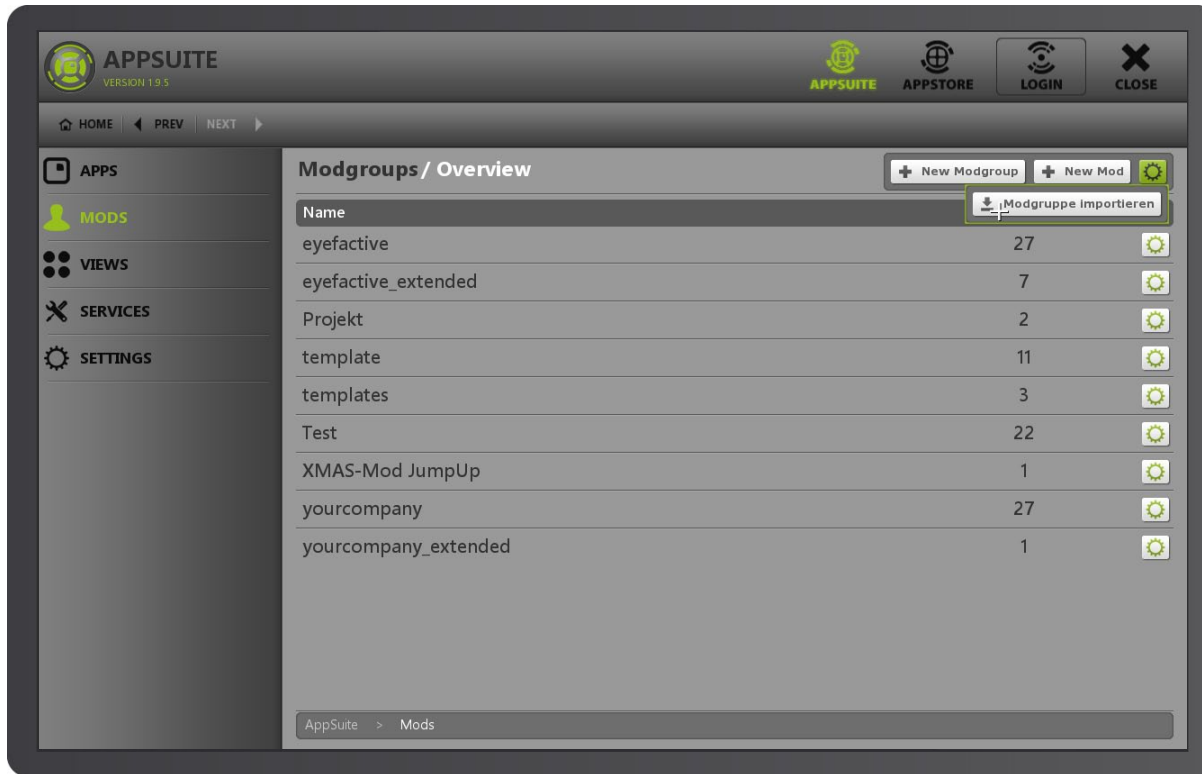
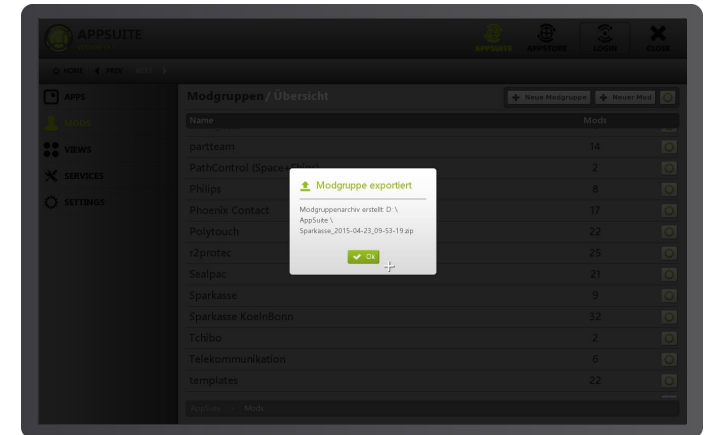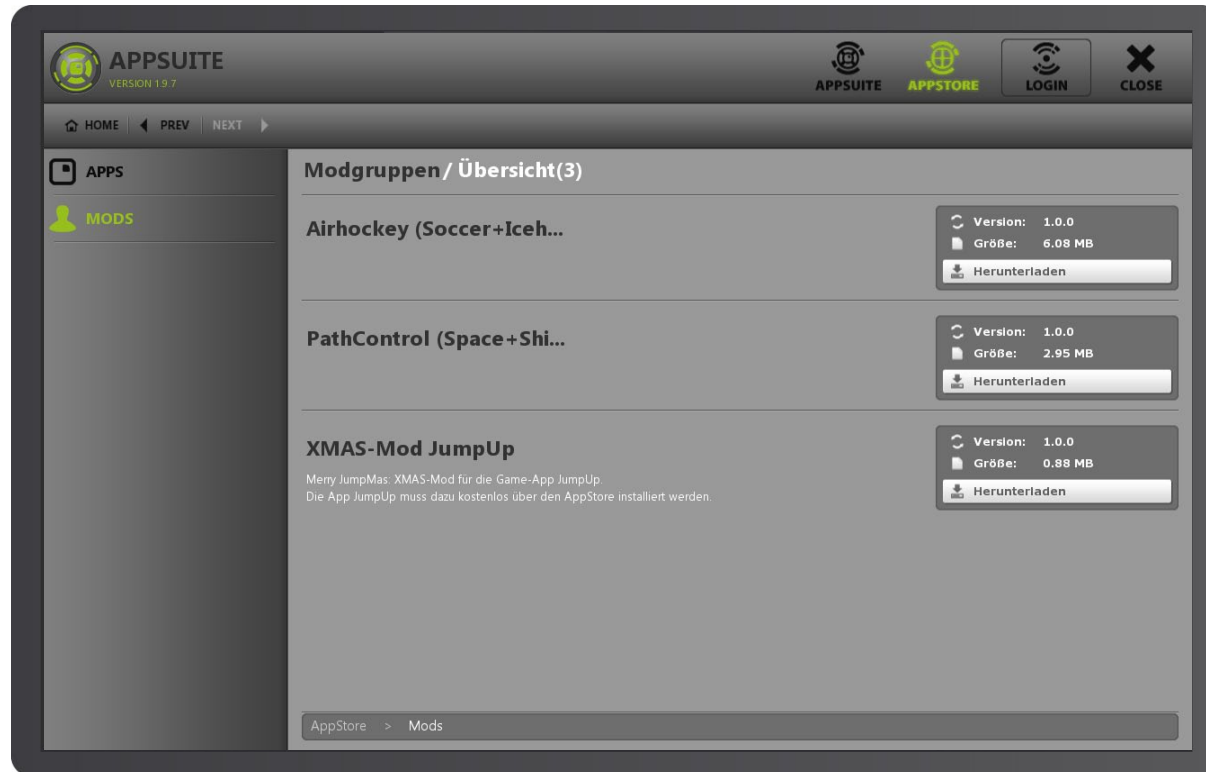Choose the modgroup Zip-File in the popup dialog.

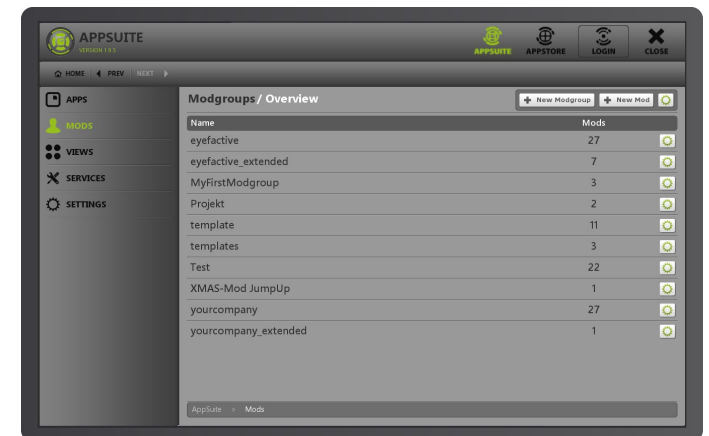The imported modgroup will be listed in the overview.

Import from cloud

Public and private modgroups are available for direct download in the AppStore.

Please note: To see and download private modgroups you have to be logged in with your respective user account first.


Confirm download of modgroup.

The imported modgroup will be listed in the overview.

Views

All available mods are displayed in an overview list. A radio button indicates the currently selected view, which will be initially loaded when you open AppSuite. The system view constitutes a special status as it serves as navigation for all mod groups and mods of all apps and widgets.
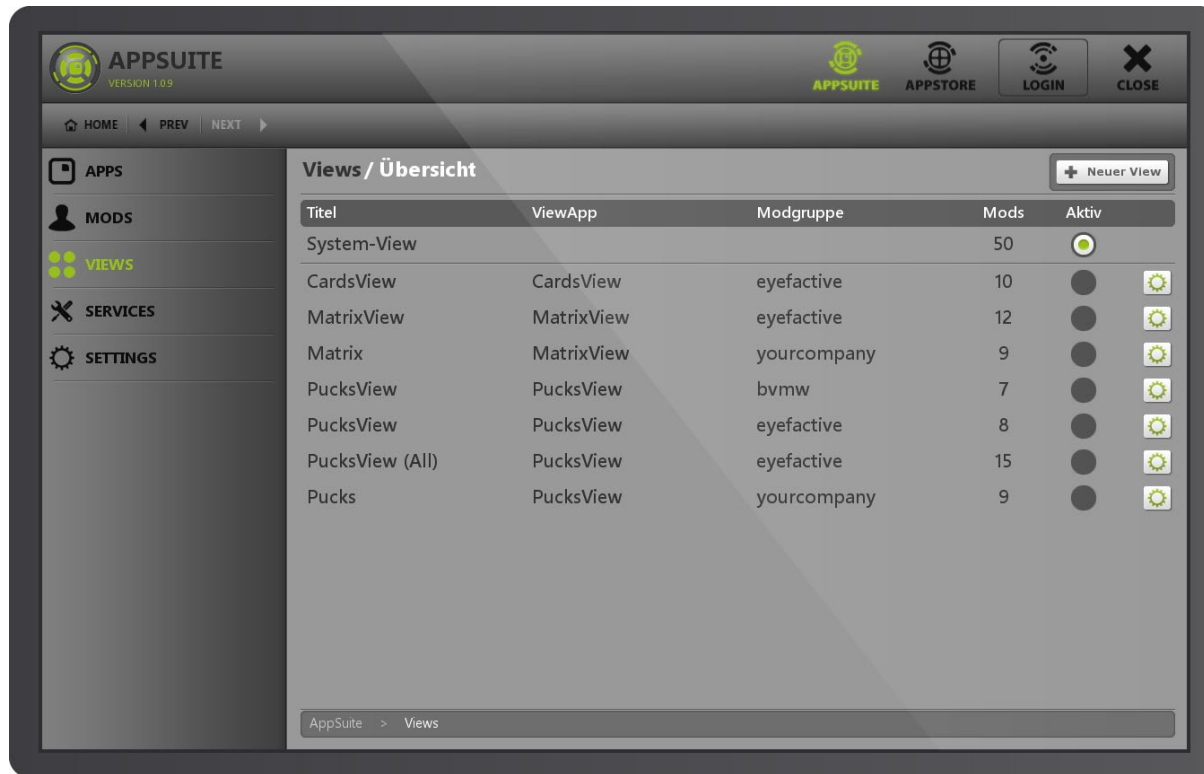
Association of apps and widgets

Mods of view apps have an additional tab in their mod settings, where individual apps and widgets are associated with the menu items of the view.
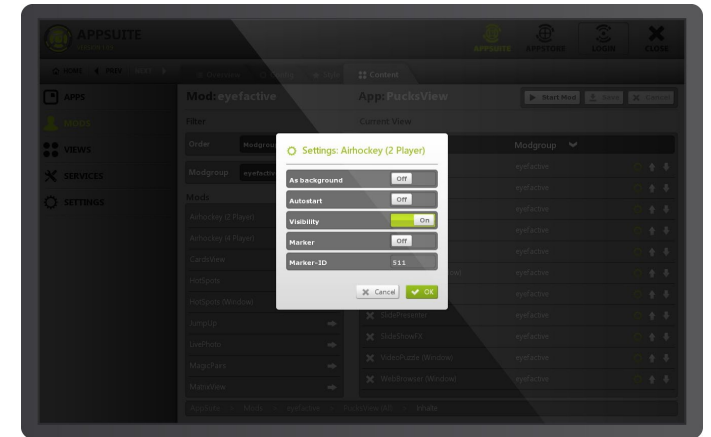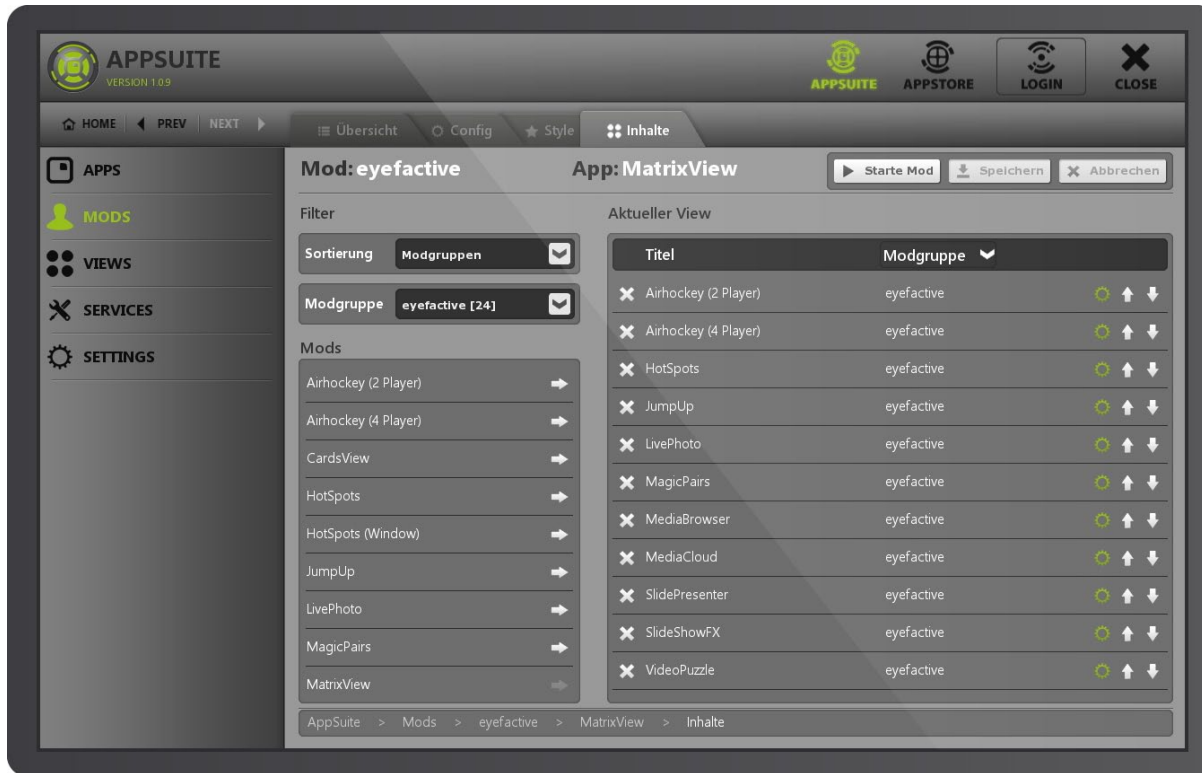
Individual settings can be defined for every association with a mod, app or widget. You can open the settings dialog via the the Config-button in the list to the right.

Services

List of all services.
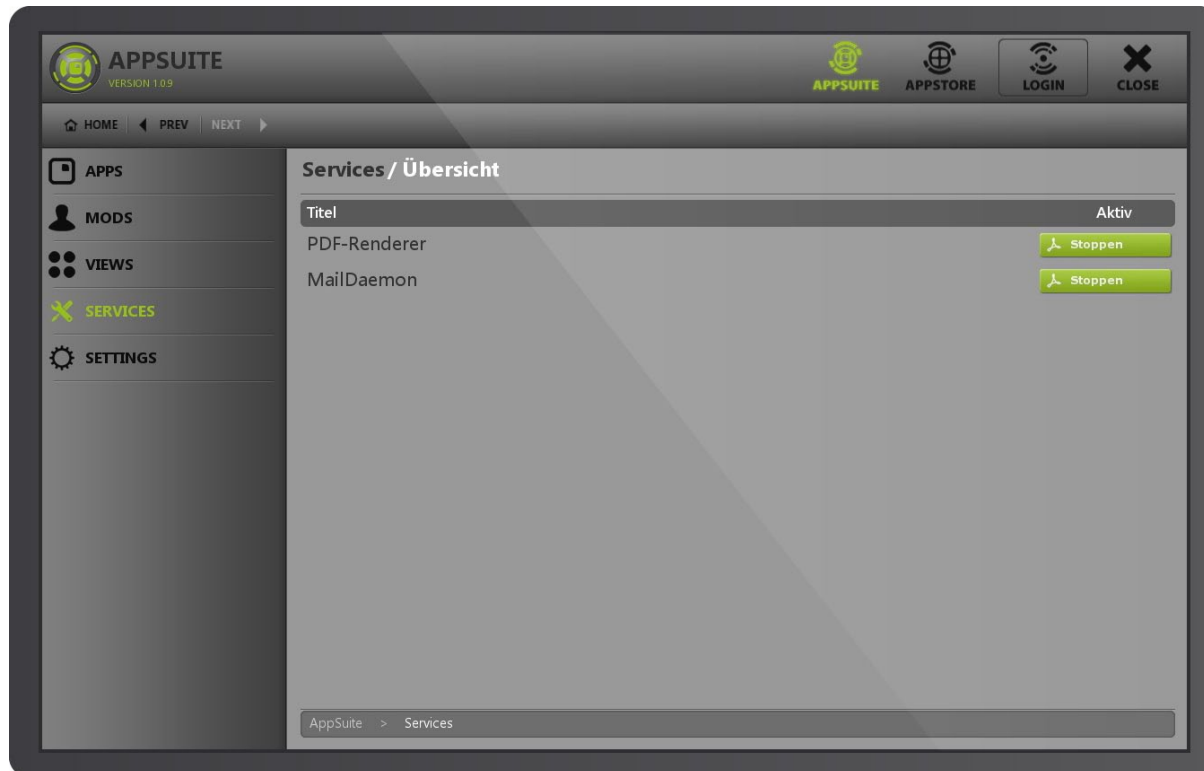
Settings

The setting options mentioned here refer to the general settings in AppSuite, e.g. the activation of the terminal.
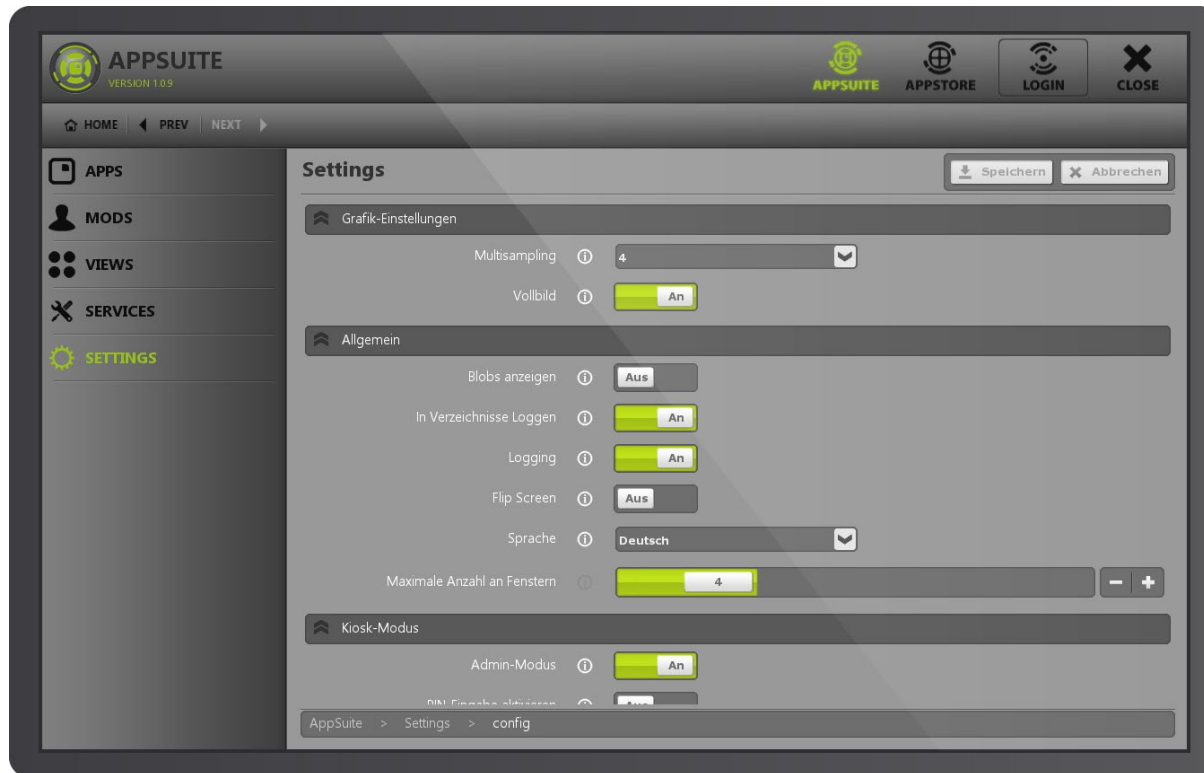
Modding: Miscellaneous

Basics for creating and editing of mods

General Information

The creation of your own app and widget modifications essentially involves three steps:

Preparing data

Prepare the content (images, videos, PDF documents, logos, icons and colors (Keycolors)) for your CI. Further information can be obtained in the corresponding app documentation as well as in the section about data formats.

Creating a mod

When you create a mod you link your data with the corresponding app.

Testing & roll-out

Open your mod in AppSuite and check your content and designs. Alternatively you could also create a mod conveniently on your PC or laptop first and then import it to the target system.

Config, Style & Content

The creation of modifications comprises three structural categories, which are listed under those names in AppManager and can also be found in the file and folder structure.

Settings are implemented via a graphical user interface (GUI) in AppManager and saved in XML-Format. The XML files can also be edited manually.

Config

Basic settings of the functionalities.

Style

All parameters which define the look of a particular mod.

Content

Individual multimedia content, e.g. product photos, video ads or info brochures. These data will be linked correspondingly via AppManager`s GUI.

MOD
DATA
CONFIG
CONTENT
STYLE

Content Strategy

You can manage your content in two different ways and you may also create a mix of these options.

Centralized

As a standard procedure you should store your content in the corresponding mod. This makes manual copying of mods much easier.

Decentralized

If you want to use content in different mods a decentralized data storage will be favourable. In order to do so create and store your content in a parent folder then link your data from within the different mods.

Modding: Tutorials

Creating mods step by step

My first mod

Learn how to create an individual modification of an app: Your first mod.

Requirements

Following requirements should be met for this tutorial:

» **AppSuite** installed and running

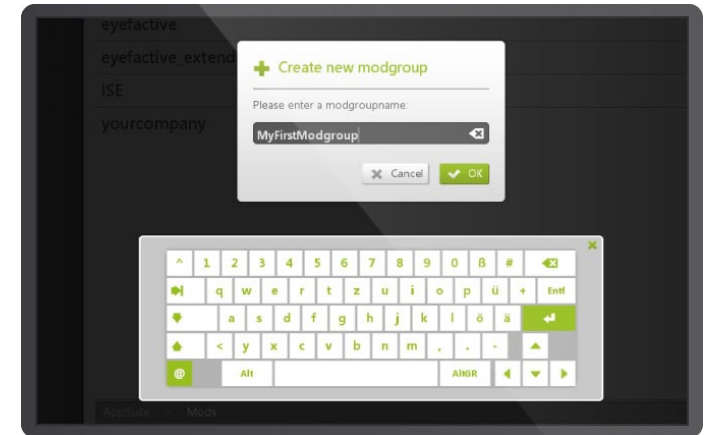» App **AirHockey** installed and running

Create a mod group

1.) Change to AppManager and go to the main section *Mods*.
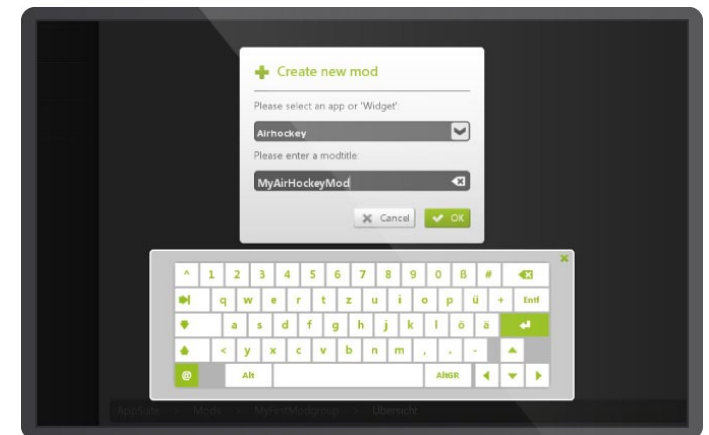
2.) Create a mod group named *MyFirstModgroup*.

Create a mod

After you have created the mod group it becomes selected automatically.

3.) Create a mod of the app **AirHockey** and name it in *MyAirHockey*.

Dialog for creating a mod group

Dialog for creating a mod

Customize your mod

After you have created the mod it becomes selected automatically. Go through the tabs in the Config-section.

4.) Change number of players via the graphical user interface (GUI).

Enter the *Style*-section via the tabs

5.) Select your individual background image (wallpaper) from the file selection dialog window when it opens.

6.) Assign to the players an individual color from the color selection dialog when it opens.

7.) Save your settings by clicking the corresponding button.

Open your mod

8.) Open your mod to see your changes live. You could either open the app directly in AppManager via the corresponding button or alternatively via **SystemView**.

Done!

Congratulations, you have just created your first mod and made an individual customization! You can make further changes to the settings in AppManager to your liking.
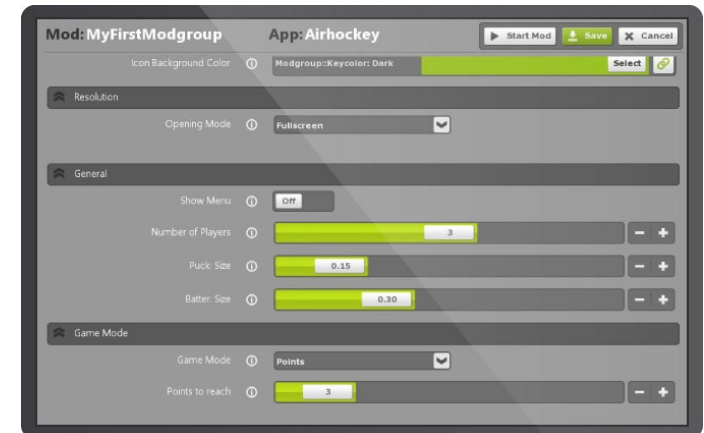
Graphical user interface (GUI)
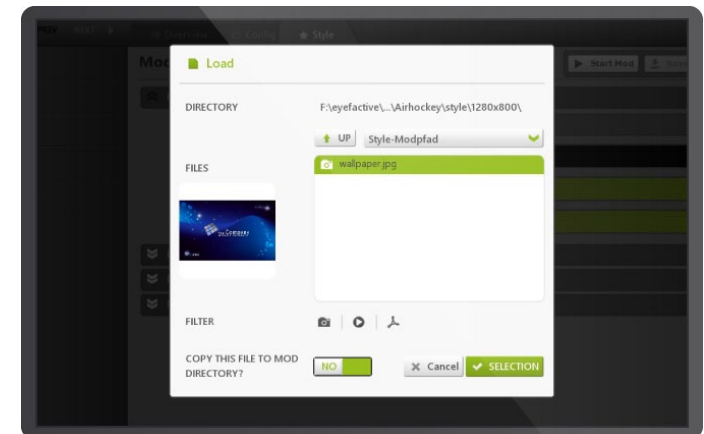
Dialog for file selection

My first widget

In this tutorial you learn how to create an individual widget.

Requirements

Following requirements should be met for this tutorial:

 » **AppSuite** installed and running

 » Successful completion of preceding tutorials

Create a Widget

1.) Select the recently created mod group *MyFirstModgroup* in the main section *Mods*.

2.) Create a new mod via the corresponding button. Select *Widget* in the subsequently appearing dropdown selection and name the new widget mod to be created *MyWidgetMod*.

Customize Widget

After you have created the widget it becomes selected automatically.

3.) Go to the tab *Configurator*.

4.) Select the image widget from the drop down selection.

5.) Click on the cog wheel symbol and the settings will be displayed on the right.

6.) Select a graphic file. Pay attention to the information about the file formats supported.

7.) Save your settings by clicking the corresponding button.

Start Widget

8.) Open the widget, to see your changes live. You could either open the widget directly in AppManager via the corresponding button or alternatively via **SystemView**.
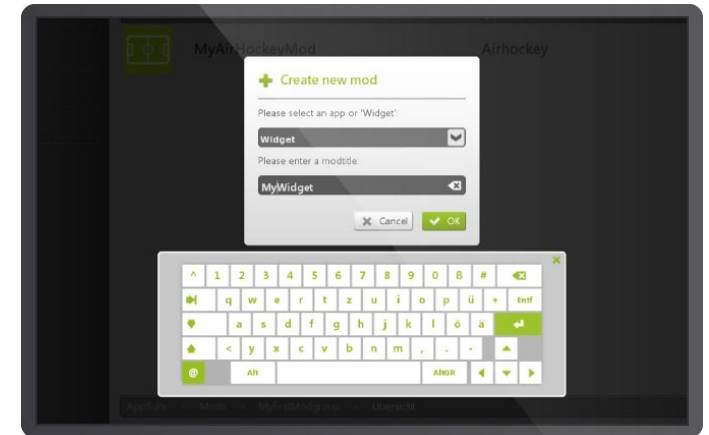
Dialog for creating a mod
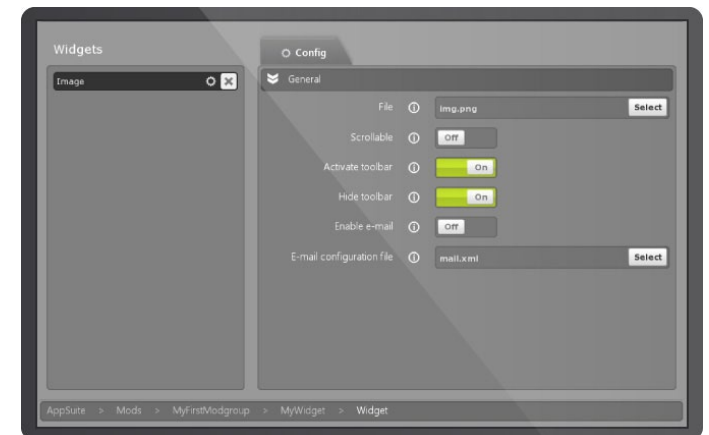
Widget Configurator

My first view

Learn here how to combine the previously created mods in an individual view.

Requirements

Following requirements should be met in order to run this tutorial:

» **AppSuite** installed and running

» Successful completion of preceding tutorials

Create View

1.) Select the recently created mod group *MyFirstModgroup*.

2.) Create a new mod via the corresponding button. Select the ViewApp PucksView in the subsequently appearing dropdown selection and name this mod *MyPucksViewMod*.

Associate Mods

After you have created the view it becomes selected automatically.

3.) Go to the tab *Content*.

4.) Select the mod group *MyFirstModGroup* via the drop down menu at the top left. You should be able to see both mods you have created for the app **AirHockey** and the **Image-Widgets** in the field below. The ViewMod itsself cannot be selected and is deactivated.

5.) Click on the arrow symbol in the Mods box on the left and the corresponding mod will be associated with the current View.

display of the view mod in AppManager
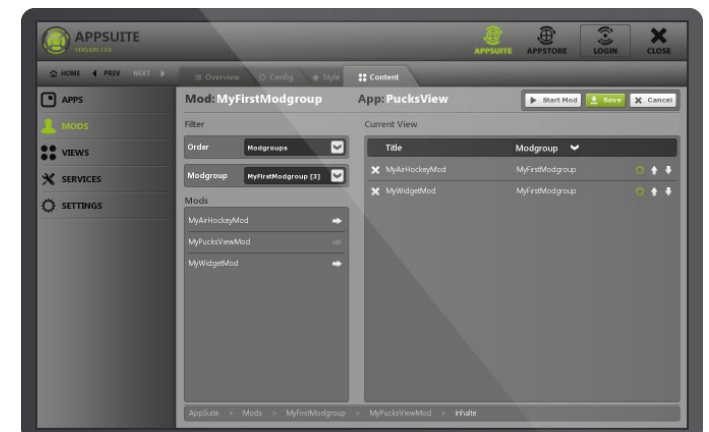
assignment screen in the *Content* tab

Configure associations

6.) Click on the cog wheel symbol of a corresponding mod in the list on the right. A dialog window with settings for the selected association will open. Keep the settings as they are for now, as they will be explained in detail later on.

7.) Close the dialog with the *Cancel* button.

Customize view

You have just associated the view with both mods you created before. Now customize the view mod itsself:

8.) Go to the tab *Style*.

9.) Change the background image (Wallpaper).

10.) Change further settings in the sections *Style* and *Config* if desired.

Set View as Standard View

11.) First of all save changes via the corresponding button.

12.) Switch to the main section **Views** on the left. A complete mod list of ViewApps and the **SystemView** at the top, which is selected as standard, will be displayed.

13.) Select the currently created view mod *MyPucksViewMod* via the radio button on the right. It is set as standard view from now on and will start automatically when you launch **AppSuite**.
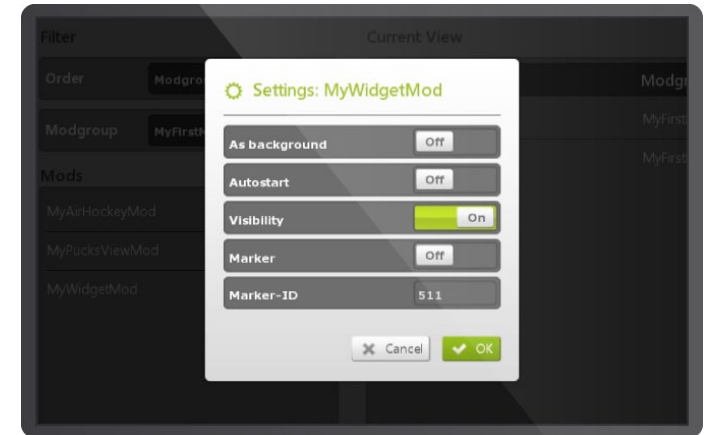
Overview of the view mod in AppManager des View-Mods im AppManager

The selection menu of standard views

Open View

To open the view you merely need to close **AppManager**. The view is set as standard view.
Switch to AppManager to select a different view as standard view if required.
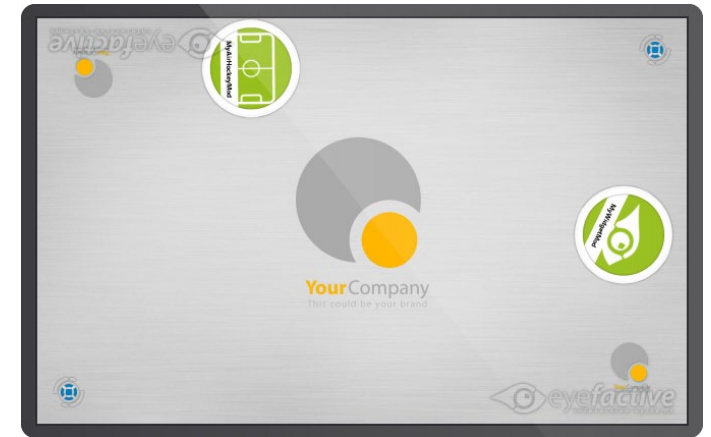
Example of an individual view with two associated mods
as puck

Modding: Specials

Special topics for the administration of AppSuite & Apps

Keycolors & Inheritance

The principle of inheritance allows you to adjust several mods within a mod group simultaneoulsy.

Define standard keycolors

In the style section of a mod group you can set the **Keycolors** Light and Dark. **Keycolor: Light** is being used on dark backgrounds, **Keycolor: Dark** on light backgrounds. Assign a clearly light and dark color respectively to ensure a satisfactory contrast to the current background. Further special colors are optional.

Inheriting of keycolors

In the style section of a mod within a mod group you may apply the principle of inheritance to the keycolors. The corresponding button is located on the right next to the color selection. You can also apply the parent values of the mod group in the subsequent dialog.

Tip Newly created mods inherit the keycolor settings Light and Dark of their mod group as a standard. If you change the values of the mod group, all mods within the group will adopt the new value. This way you can adjust several mods at the same time.
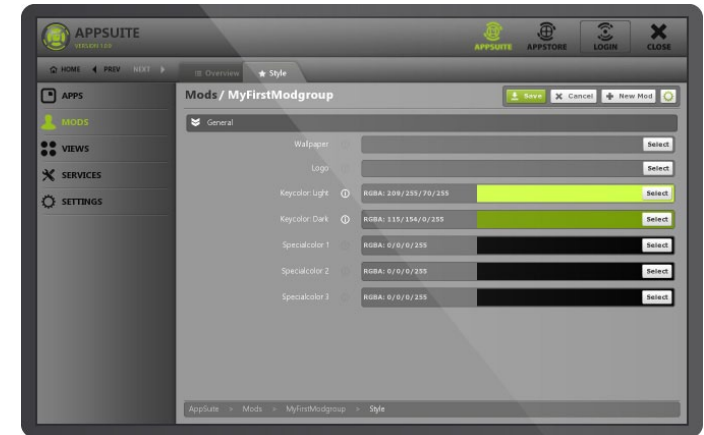
Style section of a mod group
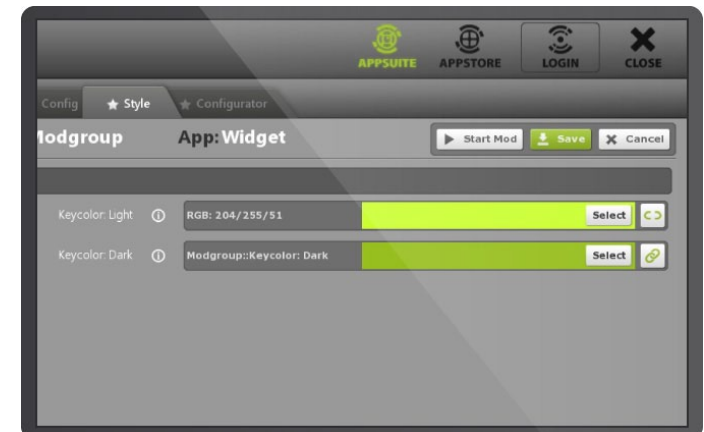
Graphical user interface for the inheritance of keycolors

XML

XML documents are text documents in a tree structure consisting of so called *nodes*. usually have a main node with arbitrary sub nodes assigned to it.

Nodes are defined by *tags*, consisting of an opening and closing angle bracket and a name. Apart from that nodes can also have an arbitrary number of attributes consisting of a precise name and value (`attribname="value"`).

Nodes with sub nodes need to be closed with an identically named node tag with a preceding single slash symbol (`<knot>...</knot>`). Nodes without sub nodes are closed by a slash symbol following a closing angle bracket (`<knot attrib1="value" attrib2="value" />`).

Use of XML files

XML files are used within AppSuite to save various settings for instance parameters for apps, which can be set via the integrated graphic user interface in AppManager. Sometimes it may be neccessary though to edit files manually. In this case you will only need a simple text editor to get the job done.

Advice Please be extra cautious when editing XML files manually. Even a missing bracket can already lead to faults within AppSuite resp. app.

```
<?xml version="1.0" encoding="utf-8"?>

<root>
    <child_1>
        <subchild_1>
            ...
        </subchild_1>
        <subchild_2>
            ...
        </subchild_2>
        ...
    </child_1>
    <child_2>
        ...
    </child_2>
    ...
    <single attrib1="a" attrib2="b" />
</root>
```

Tip Manual editing of XML files does become much more pleasant when executed with a syntax highlighting editor. We recommend the Notepad++ tool, ready for free download here www.notepad-plus-plus.org.

SMTP Mail-Server

Einige Apps ermöglichen den Versand von E-Mails. Neben einem Internetzugang wird dafür ein sogenannter SMTP Mail-Server benötigt, genauer gesagt: seine Adresse und gegebenenfalls entsprechende Zugangsdaten.

Gängige Anbieter von E-Mail Postfächern oder Webservern stellen SMTP-Server standardmäßig online zur Verfügung. In diesem Fall bietet es sich an, ein eigenes neues Benutzerkonto mit entsprechender Mail-Adresse und Zugangsdaten anzulegen und zu verwenden. Gleiches gilt für SMTP-Server, die selbst „inhouse" eingesetzt werden.

Hinweis SMTP ist das Standard-Protokoll für den Versand von E-Mails und steht für Simple Mail Transfer Protokoll.

Die jeweils vorhandene IT-Infrastruktur muss dieses Protokoll akzeptieren, damit Mails nicht an den Sicherheitseinstellungen blockiert werden.

Supported file formats

Guidelines and tips for creating media

Images / Graphics

Recommended Size

The optimal original size of an image file should be as close to the actual size used in a specific application. The latter depends on the dimensions of the actual display being used.

The sizes mentioned here are intended mostly as recommended guidelines. Since various parameters and mechanisms can additionally influence the size of elements depending on their application a pixel-accurate adjustment of the original files generally isn´t neccessary.

As a rule of thumb: An original file should be as big as the size of the element when running in the specific application, displayed at maximum size on the actual display.

Icons and logos are generally displayed much smaller when running in an application than say background images (wallpapers) which need to fill the whole display.

Resolution: Dimension vs. DPI

The file size solely refers to its dimension in pixels (width x height). Since there is no change of medium – e.g. from screen to print – the DPI value (dots per inch) is irrelevant. The defacto standard value of dpi on screens is 72 dpi.

Supported image formats

Currently the pixel formats JPEG and PNG are being supported. The JPG format compresses files and is recommended for background images and photos. The PNG format has a loss free compression and allows for the creation of transparent graphics. These properties make the PNG format ideal for graphics such as icons and logos.

| Standard dimensions of displays		
AEON	1280x800	16:10
Full HD	1920x1080	16:9
4K	3840x2160	16:9

Tip The advantages of an optimized image file size are an optimal sharp presentation as well as sparing your computer´s resources.

Tip With few exceptions a file size bigger than the display being used does not make sense! Besides files bigger than 8000x8000 px can´t be used for technical reasons: Such dimensions will lead to faults in display.

Icons and logos

Icons and logos act as company key visuals and can be used in many ways. It is recommended to have them in a range of different sizes to determine an appropriate variant.

Contrary to logos icons should be preferably squared and void of font etc.
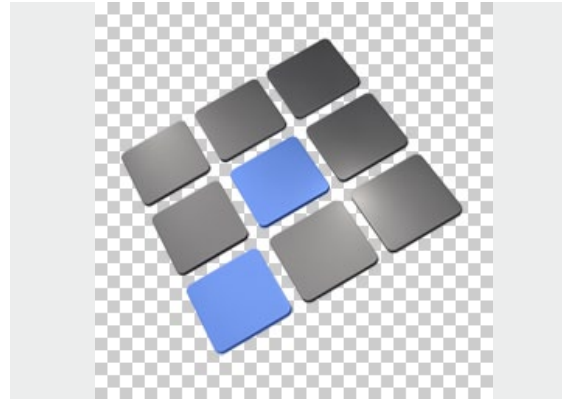
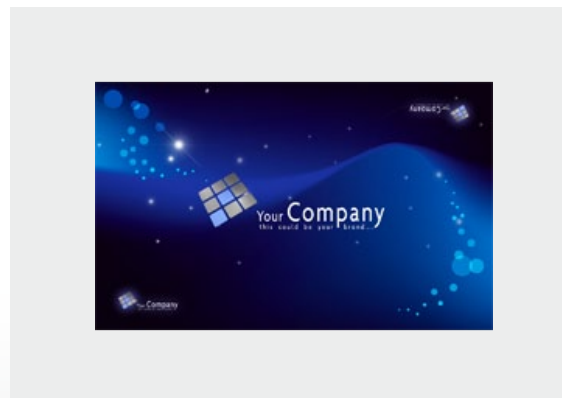| Icon	
Size(px)	32x32
	64x64
Format	PNG

Logo	
Size(px)	256x128
	512x256
Format	PNG

Wallpaper

These images are used as background graphics and should preferably have exactly the same size as the target resolution of the display.
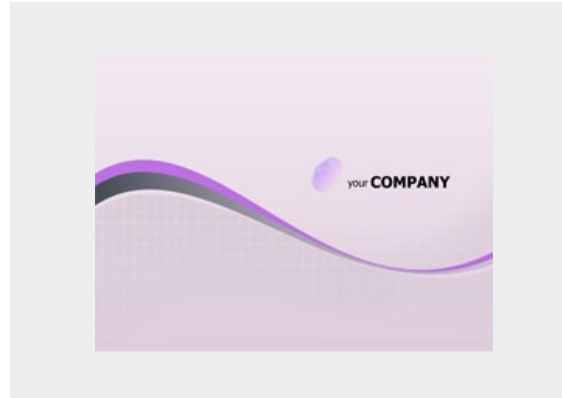

Wallpaper	
Size(px)	[Fullscreen]
Format	JPG

Images / Photos

Files with content such as images of products or photos should be at least a quarter the size of the target display and at the utmost of the same size.

Images / Photos		
Size(px)	MIN	25% [Fullscreen]
	MAX	100% [Fullscreen]
Format	JPG	

Videos

Supported video formats

The eyefactive SDK uses the VLC framework. This means that basically all formats it supports will be running. Especially Quicktime by Apple turned out to be a magnificent format regarding quality and file size.

Container vs. Codec

The video codec used is relevant for the support of video files. The video codec does not always match the file extension though.

Recommended Video-Formats	
Quicktime	.MOV (H.263/H.264)
MPEG I+II	.MPG
MPEG IV	.MP4

Tip Videos can easily be converted with the free tool „Any Video Converter". Services like www.filsh. net allow you to download and use YouTube-clips as video files.

Attention use of WMV and AVI formats is explicitly NOT recommended!

PDF

Simple PDF documents containing texts and images are being supported. Special functions such as special fonts or embedded content will not be supported. Fontsprovided they are embedded in the PDF as such- do stay crisp and clear when zooming in.

Powerpoint

Presentation formats (e.g. Powerpoint) will not be supported directly. However they can be exported to PDF documents or image files. There are some particular features of presentations which cannot be exported though, animated transitions between individual slides and embedded media such as videos being some of them.

3D Models

On Request.

Tip For an easier handling of PDF documents we recommend to keep page format and number of pages consistent within the document: e.g. to stick to either single or double pages only. Furthermore it is favourable to use large font sizes to make navigation within a PDF file as easy as possible.

Webpages

The **WebBrowser** app manages to open discretionary webpages also in individual parallel open windows for several users simultaneously.

WebBrowser is based on the Chromium embedded framework which is also being used in the famous Chrome browser. Several script languages are supported. These include Flash and HTML5. Parallel entries can be made on virtual keyboards.

Limitations

Please note that vast numbers of manifold content exist in the world wide web´s infinite cosmos. This may also hold potential problems and obstacles. We can´t guarantee flawless browser operation with every website, script language and content. Therefore please do check content in question individually. You may do so anytime completely free of charge at www.multitouch-appstore.com

Tip If available, use the mobile version of your website as they are usually optimized for limited screen sizes.

Texts / Fonts

Texts can only be used when integrated into the given media files, for example in images and pdf documents. Please check if texts are big enough to be readable.

This also counts for pdf documents. Although texts can be zoomed and re-rendered, the navigation caused by excessive zooming is not very user friendly.

Tip Add an introductional page to pdf documents with a self-explanatory image and a large headline to get the attention of users for the content.