

An Update on Free/Libre and Open Source Software (FLOSS) in Healthcare

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MedFLOSS.org



Medical Free/Libre and Open Source Software

Structured project database, service providers, publications, events, ...

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323 projects
106 companies
341 publications

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Medfloss.org provides a comprehensive and structured overview of Free/Libre and Open Source Software (FLOSS) projects in the domains of medical informatics and health care delivery. It is an open information portal that aims to foster the exchange of ideas, knowledge and experiences about existing projects and the related ecosystem.

Beside actual [software projects](#) also [professional service providers](#), [events](#) and [scientific publications](#) are listed. Try the [Project Wizard](#) to find relevant projects for your use case.

For more information please refer to the [Mission Statement](#).

European projects: epSOS



- Time period 1st July 2008 - 31st June 2014
- Duration: **72 months** (6 years)
- Volume: **€ 36,5 Million**: co-funded by the European Commission Competitiveness and Innovation Programme (CIP) within the ICT Policy Support Programme
- Number of **Beneficiaries**: **45**
- Consisting of national ministries of health, national/regional competence centers, a consortium of industry and the project management team.
- Number of **countries**: **25**
- different European countries: 22 EU member states and 3 non-EU member states.

OpenNCP: epSOS eHealth pilot

As of January 2016, the **OpenNCP governance model changes**. The OpenNCP project shifts under the direct responsibility of the European Commission, Directorate General for Health and Food Safety, DG SANTE. The goal is to move the epSOS e-health pilot OpenNCP into the global European **"Connecting Europe Facility"** (CEF) framework project under the umbrella of the **"eHealth Digital Service Infrastructure"** (eHealth DSI).

OpenNCP Introduction

Erstellt von Licínio kustra Mano, zuletzt geändert von Rui Alves am Nov 21, 2015

This page holds the OpenNCP General Presentation, please find below the multiple formats in which

123456 Who Page 27 12/30/2013

Willing People == Community

OpenNCP Team and epSOS Members at their initial meeting

Open Source for the Nationwide Health Information Network (NwHIN)

The screenshot shows the CONNECT Community Portal website. At the top, there is a navigation bar with the CONNECT logo (a stylized American flag) and the text "Community Portal". To the right of the logo is a "Log In" link and a search bar labeled "Enter Search Topic..." with a "GO" button. Further right is a "DOWNLOAD CONNECT" link with a download icon. Below the navigation bar is a red menu bar with links: "Home", "About", "Product", "Developer Resources", and "Archives". The main content area is divided into two columns. The left column has a yellow background and contains the text: "CONNECT IS AN OPEN SOURCE PROJECT DESIGNED TO ENABLE THE SECURE, EFFECTIVE EXCHANGE OF INFORMATION." followed by a paragraph: "CONNECT implements the Nationwide Health Information Network (NwHIN) standards and specifications, including Direct project specifications, and offers organizations a robust, scalable platform to exchange health data with their partners, share medical information and improve patient care." and a "Read more »" link. The right column features a large blue graphic with a hand pointing at a screen displaying various medical icons (stethoscope, pill, syringe, etc.) and the text: "A LEADING EDGE, FLEXIBLE SOLUTION FOR SECURE HEALTH INFORMATION EXCHANGE." Below this graphic is a box for "CONNECT RELEASE VERSION 4" with a "NOW AVAILABLE" label and a "CLICK HERE TO DOWNLOAD" button. At the bottom of the page, there is a "Latest Developments: Download CONNECT 4.5 Today!" link, a search bar for "Email" and "Organization", a "Get Project Updates" button, and a Twitter icon.

CONNECT Community Portal

Log In Enter Search Topic... GO

DOWNLOAD CONNECT

Home About Product Developer Resources Archives

CONNECT IS AN OPEN SOURCE PROJECT DESIGNED TO ENABLE THE SECURE, EFFECTIVE EXCHANGE OF INFORMATION.

CONNECT implements the Nationwide Health Information Network (NwHIN) standards and specifications, including Direct project specifications, and offers organizations a robust, scalable platform to exchange health data with their partners, share medical information and improve patient care.

[Read more »](#)

A LEADING EDGE, FLEXIBLE SOLUTION FOR SECURE HEALTH INFORMATION EXCHANGE.

CONNECT
RELEASE VERSION
4
NOW AVAILABLE
[CLICK HERE TO DOWNLOAD](#)

[Latest Developments: Download CONNECT 4.5 Today!](#)

Email Organization [Get Project Updates](#) [Twitter](#)

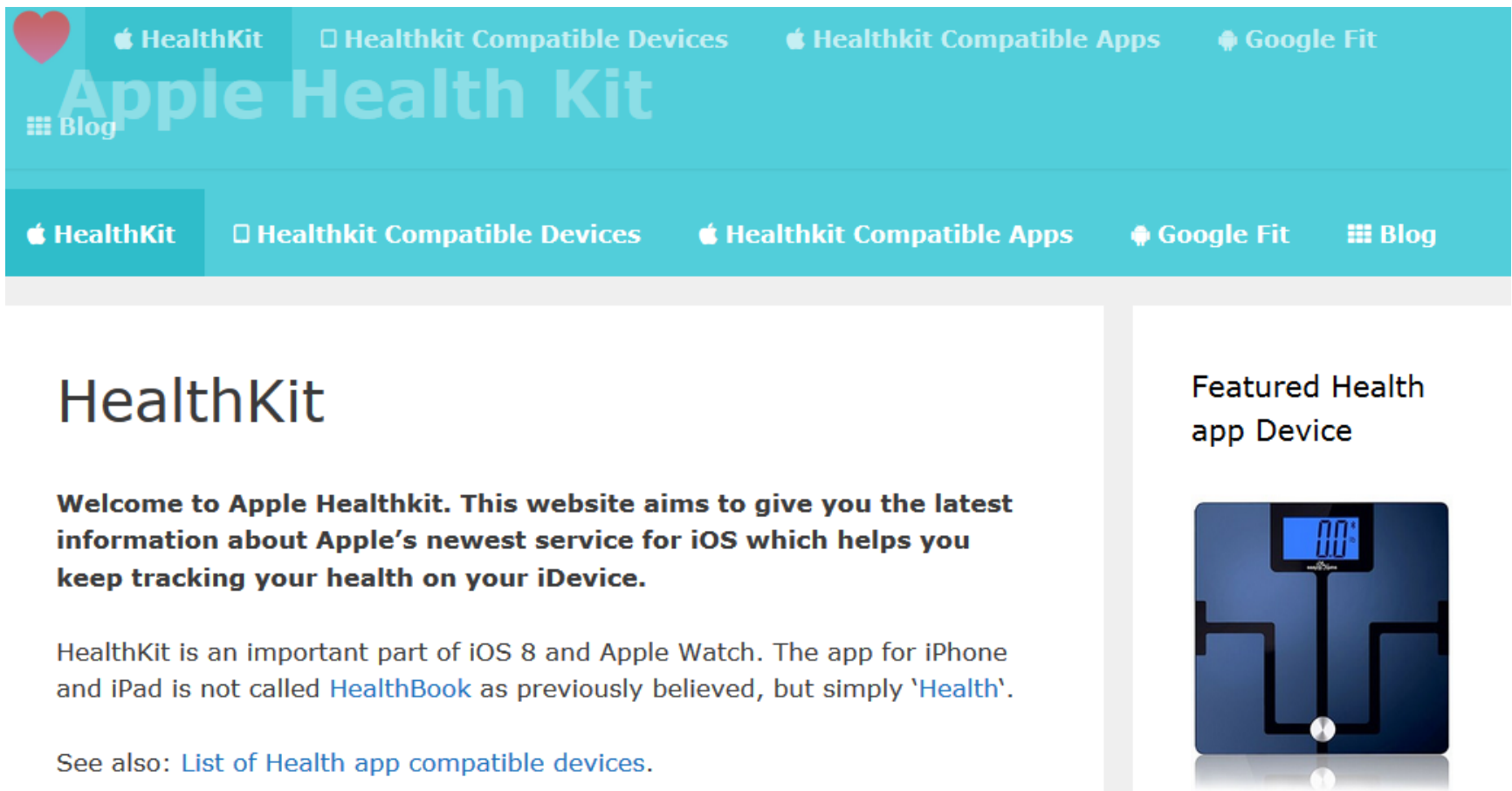
Apples' ResearchKit



Introducing ResearchKit

ResearchKit is an **open source framework** introduced by Apple that allows researchers and developers to create powerful **apps for medical research**. Easily create visual consent flows, real-time dynamic active tasks, and surveys using a variety of customizable modules that you can build upon and share with the community. And since **ResearchKit works seamlessly with HealthKit**, researchers can access even more relevant data for their studies — like **daily step counts, calorie use, and heart rate**.

Apple Health Kit



The screenshot shows the Apple HealthKit website. The top navigation bar is teal and contains a heart icon, links to 'HealthKit', 'Healthkit Compatible Devices', 'Healthkit Compatible Apps', 'Google Fit', and a 'Blog' link. Below this is a large teal banner with the text 'Apple Health Kit' in a large, light blue font. Underneath the banner is another teal bar with the same navigation links. The main content area is white. On the left, the heading 'HealthKit' is followed by a welcome message: 'Welcome to Apple Healthkit. This website aims to give you the latest information about Apple's newest service for iOS which helps you keep tracking your health on your iDevice.' Below this is a paragraph explaining that HealthKit is part of iOS 8 and Apple Watch, and that the app is called 'Health' instead of 'HealthBook'. A link to 'List of Health app compatible devices' is provided. On the right, there is a section titled 'Featured Health app Device' which features an image of a blue digital scale.


HealthKit

Welcome to Apple Healthkit. This website aims to give you the latest information about Apple's newest service for iOS which helps you keep tracking your health on your iDevice.

HealthKit is an important part of iOS 8 and Apple Watch. The app for iPhone and iPad is not called [HealthBook](#) as previously believed, but simply 'Health'.

See also: [List of Health app compatible devices.](#)

Featured Health app Device



Produkte > Google Fit



Google Fit

An open platform that lets users control their fitness data, developers build smarter apps, and manufacturers focus on creating amazing devices.

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The Google Fit SDK

New APIs to make building fitness apps and devices easier.



Discover sensors

Easily view available sensor data sources from connected apps and devices with the Sensors API.



Collect activity data

Connect your app and devices to Google Fit with the Recording API.



Help users keep track

Access and edit the user's fitness history with the History API.



fatsecret

STRAVA

mapmyrun



motorola

LG
Life's Good

+

htc



RunKeeper



MIO

Xiaomi



POLAR®

noom



LYNXFIT

runtastic
makes sports funtastic

The Google Fit ecosystem

Open mHealth



Open mHealth



Open mHealth

PLATFORM ▼

SERVICES ▼

ORGANIZATION ▼

BLOG

GET STARTED

HEALTH DATA THAT MAKES SENSE.

Free, open-source code that
makes it easy for developers to
integrate digital health data

GET STARTED

LEARN MORE

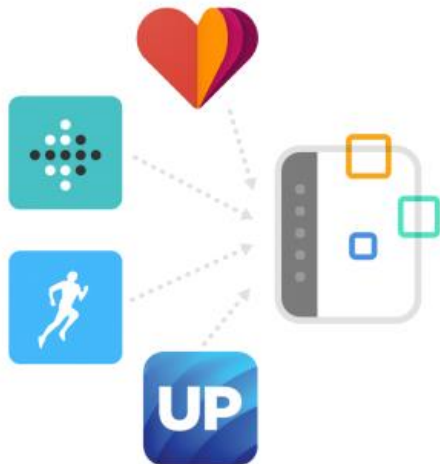


ANNOUNCING THE FIRST OPEN-SOURCE HEALTH DATA AGGREGATOR - [GET SHIMMER TODAY](#)

Open mHealth Shimmer: The First Open-Source Health Data Integration Tool

Install Shimmer

The first and only open-source health data aggregator



We currently support the following APIs

- [Fitbit](#)
- [Google Fit](#)
- [Jawbone UP](#)
- [Misfit](#)
- [RunKeeper](#)
- [Withings](#)
- [iHealth](#)

NHS Hack day



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Recent Tweets by @NHSHackDay

"...My main take-home message from the Hack Day was how the human drive to create and collaborate can be so strong given the right conditions..."

-- NHS Hack Day attendee, 2014

The **NHS Hack Day** team run weekend events that bring together healthcare and technology professionals and other "geeks who love the NHS" to promote health, good practice and good science.

Our events are free to attend, and have great support from across the healthcare and tech sectors. We're a friendly bunch, so come along and get stuck in!

The next NHS Hack Day will be on 14 & 15 May 2016 in London.

Blackpool Teaching Hospitals NHS Foundation Trust selects open source electronic patient records from IMS MAXIMS



New system to cost around 60% less than proprietary software

Source: <http://www.imsmaxims.com/news/blackpool-teaching-hospitals-nhs-foundation-trust-selects-open-source-electronic-patient-records-from-ims-maxims/>

tranSMART



The initial version of **tranSMART's data management system** was developed in 2009 by scientists at Johnson & Johnson and Recombinant Data Corporation. It was used initially by pharmaceutical researchers in Johnson & Johnson's Centocor R&D division.

Since then, more than **100 other corporate, non-profit, academic, patient advocacy and government organizations** have joined the tranSMART community.

Established in 2013, the **tranSMART Foundation is a public-private partnership** – the result of collaborations between scientists in the United States and the European Union. Founding partners include the University of Michigan, the Pistoia Alliance and Imperial College London.

The tranSMART Foundation will coordinate development of the next generation of tranSMART, which is being developed in collaboration with developers and users of eTRIKS and TraIT – two informatics/analytics knowledge management systems currently under development and supported by major European translational research initiatives. TraIT and eTRIKS are based on the tranSMART platform. The result will be one **global informatics-based analysis and pre-competitive data-sharing platform for clinical and translational research.**

tranSMART – Open Source Platform

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Legal/Licensing

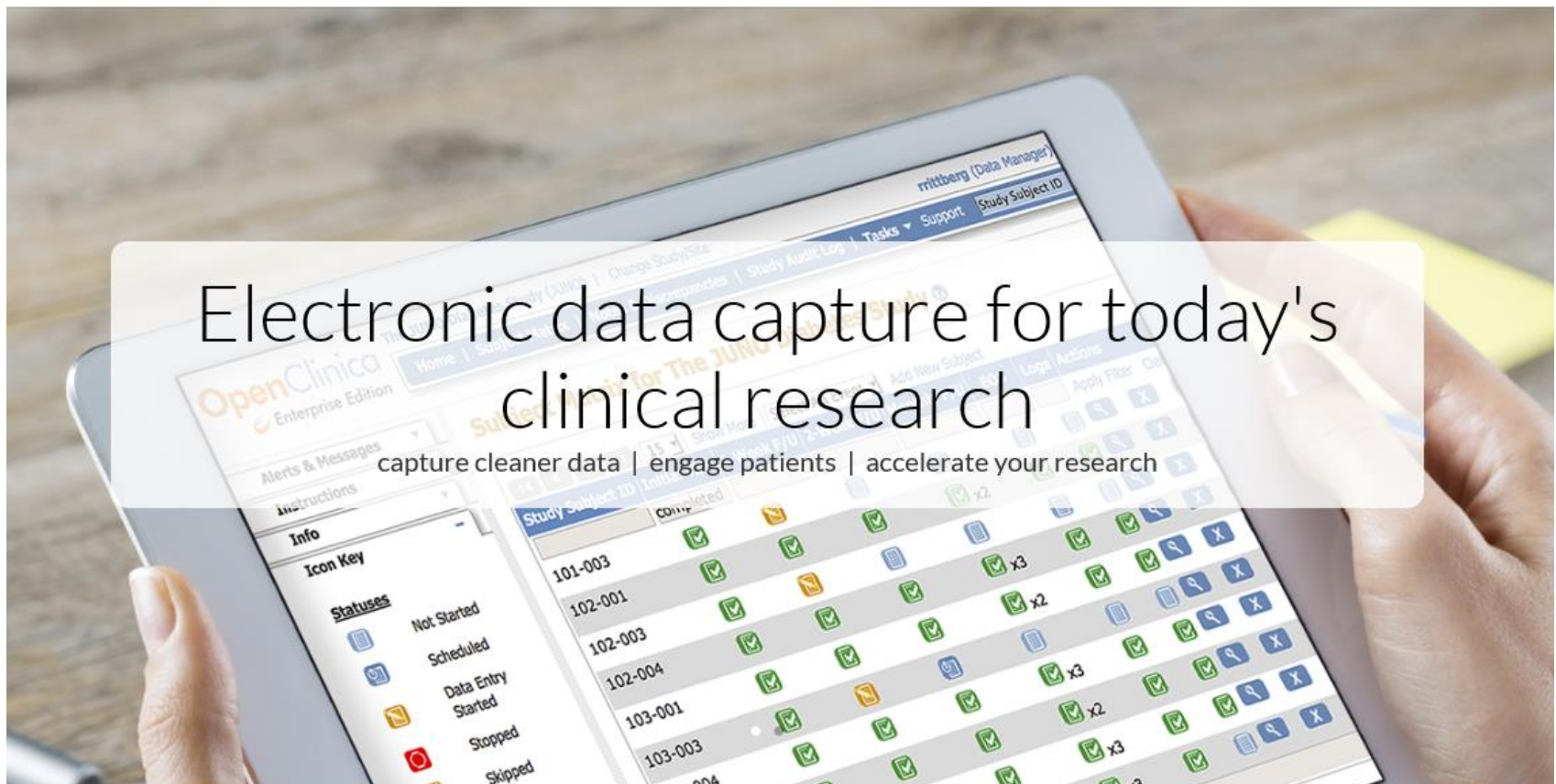
tranSMART is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or(at your option) any later version.

tranSMART is licensed through GPL 3. For more information on GPL 3 please see: [GNU General Public License](#)

OpenClinica – open source for clinical research



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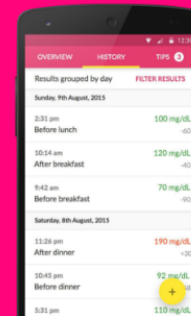


Glucosio – open source for diabetes management



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User centered free and open
source apps for diabetes
management and research



User Centered

Glucosio apps are built with features and a design that matches the users needs and we are constantly open to feedback for improvement.

[LEARN MORE](#)



Open Source

Glucosio apps give you the freedom to use, copy, study, and change the source code of any of our apps and even contribute to the Glucosio project.

[LEARN MORE](#)



Manage Data

Glucosio allows you to track and manage your diabetes data from an intuitive, modern interface built with feedback from diabetics.

[LEARN MORE](#)

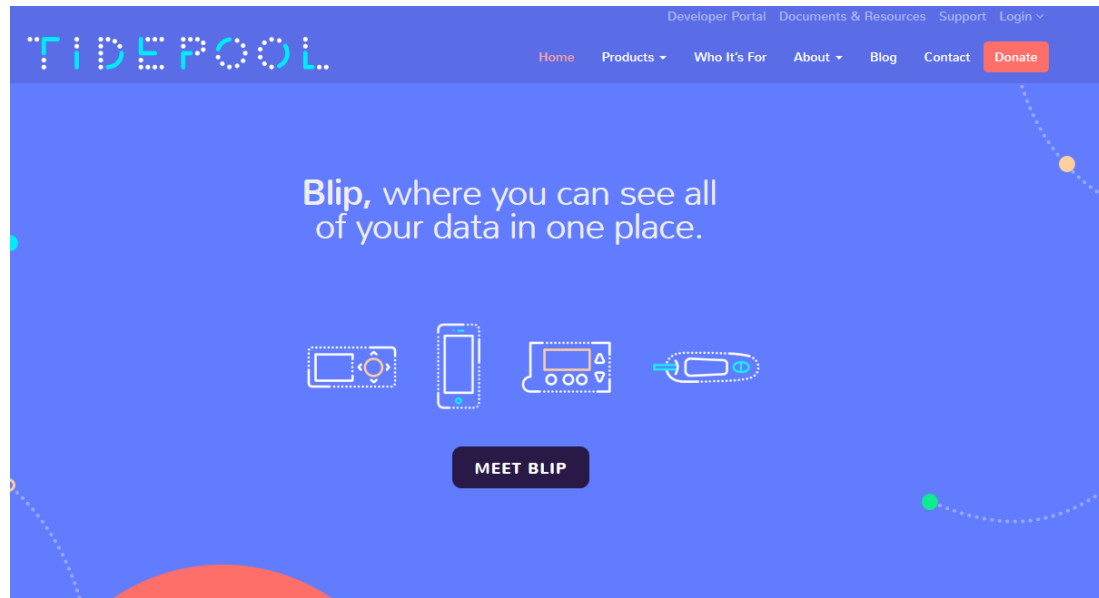


Support Research

Glucosio apps give users the option to opt-in to sharing anonymized diabetes data and demographic info with researchers.

[LEARN MORE](#)

Tidepool – open source diabetes management



ABOUT TIDEPOOL

We are a non-profit, open source effort with the mission of reducing the burden of managing Type 1 diabetes.

[Our Mission ▶](#)

Stewards of your data.
Proudly non-profit.

[SUPPORT OUR CAUSE](#)

OpenTele – open source telemedicine platform



JOIN THE TELEMEDICINE REVOLUTION!

We have developed the
free OpenTele Platform

How do you want to use it?



OpenTele is presented by
4S - an open source ecosystem for
telemedicine providers and consumers



Home

GNU Health

G+1

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NEWS!

Jamaica chooses GNU Health!
Jamaica Ministry of Health adopts GNU Health, first country to embrace it nationwide.

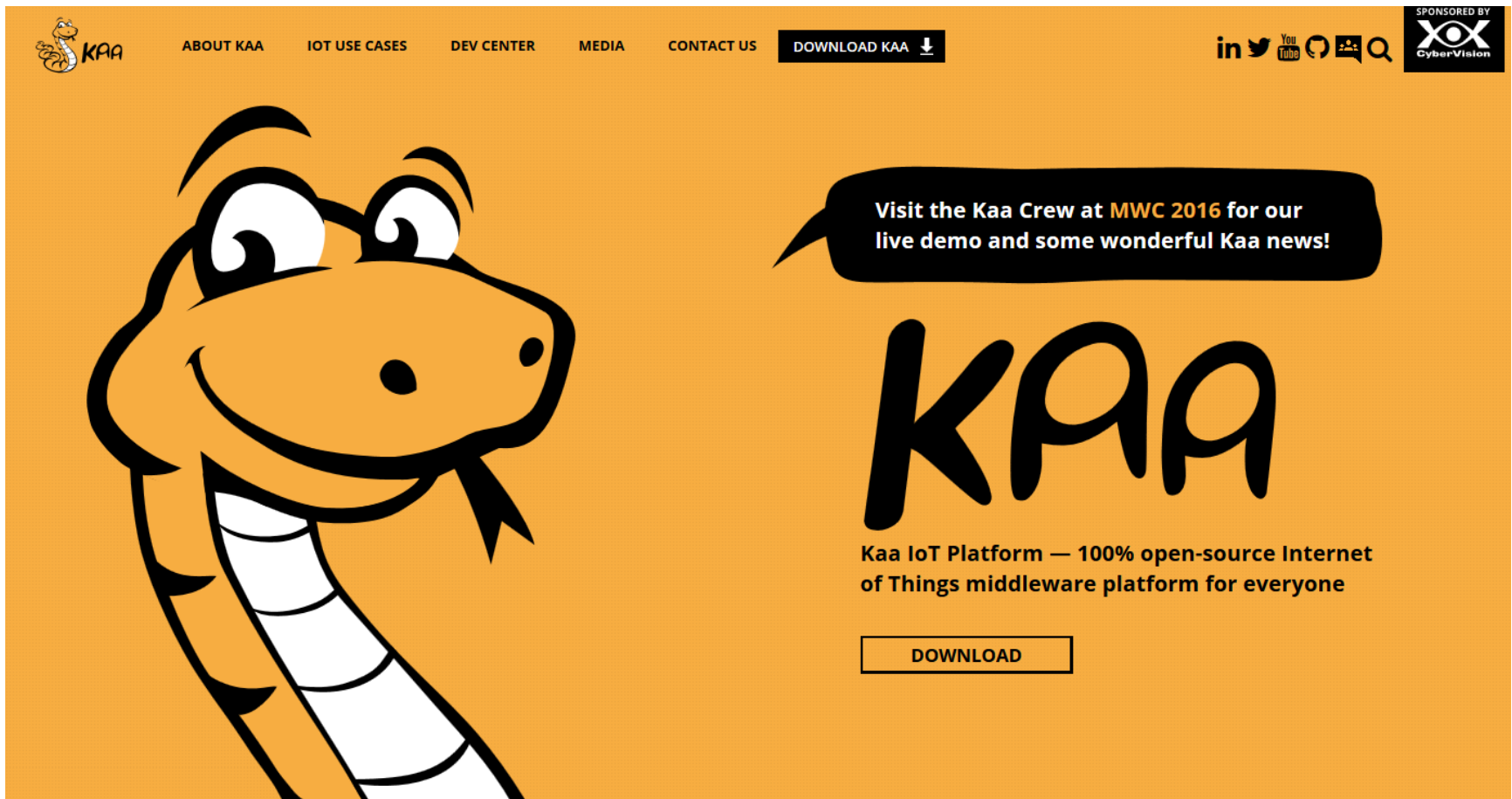
GNU Health

WINNER OF
FSF AWARD
FOR PROJECTS OF
SOCIAL BENEFIT
2011

Free Software Foundation
www.fsf.org

GNU Health
GNU OFFICIAL PACKAGE

Internet of Things IoT open source middleware



The screenshot shows the Kaa IoT Platform website with an orange background. On the left is a large cartoon illustration of a smiling orange snake with a white and black striped underbelly. The top navigation bar includes links for ABOUT KAA, IOT USE CASES, DEV CENTER, MEDIA, CONTACT US, and a DOWNLOAD KAA button with a download icon. Social media icons for LinkedIn, Twitter, YouTube, GitHub, and Facebook are on the right, along with a search icon and a 'SPONSORED BY X CyberVision' logo. A black speech bubble contains the text: 'Visit the Kaa Crew at MWC 2016 for our live demo and some wonderful Kaa news!'. Below this is the large 'KAA' logo, followed by the text 'Kaa IoT Platform — 100% open-source Internet of Things middleware platform for everyone'. At the bottom right is a 'DOWNLOAD' button.

ABOUT KAA IOT USE CASES DEV CENTER MEDIA CONTACT US DOWNLOAD KAA

Visit the Kaa Crew at **MWC 2016** for our live demo and some wonderful Kaa news!

KAA

Kaa IoT Platform — 100% open-source Internet of Things middleware platform for everyone

DOWNLOAD

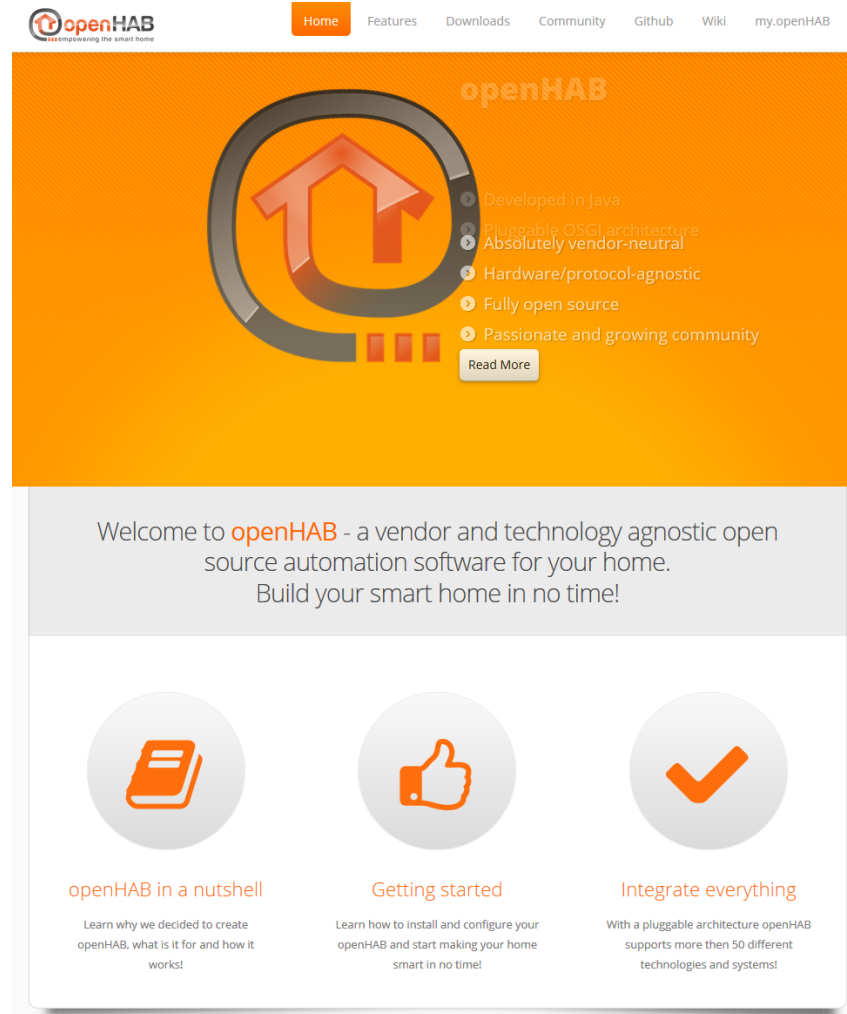
OpenRemote



Open Source Automation Platform

Integrate:	AMX, KNX, Lutron, Z-Wave, 1-Wire, EnOcean, xPL, Insteon, X10, Infrared, Russound, GlobalCache, IRTans, XBMC, VLC, panStamps, Denon AVR, FreeBox, MythTV, and more.
Design:	Customize control interfaces for each device, individualize user interfaces for each user
Control:	Control panels for Android and iOS devices, mobile web browsers, Desktop PCs
Automate:	Intelligent buildings with automated rules, scripts and events
Manage:	Remote updates, user interface changes, system diagnosis, import tools, device discovery
Cross-platform:	Install on Windows, Linux, Mac, Raspberry Pi, Alix, Synology, ReadyNAS, QNAP and others.

openHAB – Open Source for SMART Home



OpenStack – Open Source for the cloud



Open source software for creating private and public clouds.

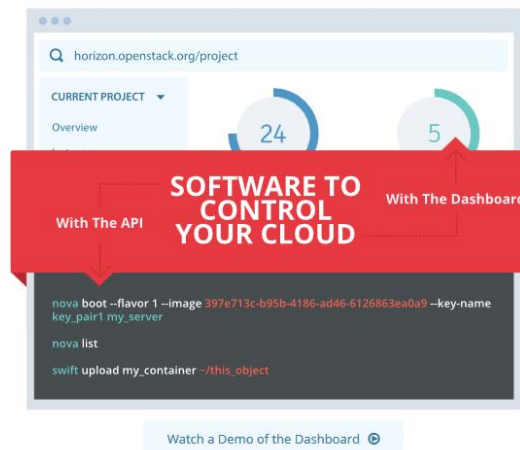
OpenStack software controls large pools of compute, storage, and networking resources throughout a datacenter, managed through a [dashboard](#) or via the [OpenStack API](#). OpenStack works with [popular enterprise and open source technologies](#) making it ideal for heterogeneous infrastructure.

[Hundreds of the world's largest brands](#) rely on OpenStack to run their businesses every day, reducing costs and helping them move faster. OpenStack has a strong [ecosystem](#), and users seeking commercial support can choose from different OpenStack-powered products and services in the [Marketplace](#).

The software is built by a [thriving community](#) of developers, in collaboration with users, and is designed in the open at our [Summits](#).

[HOW IT WORKS](#)
[GET THE SOFTWARE](#)

Latest Release: [Liberty](#) (October 2015)



Conclusions

- Over 300 FLOSS systems registered in the MedFLOSS database
- A working ecosystem is a sine qua non
- A challenge is the often missing business models
- FLOSS has a great potential to accelerate the development of high quality software in a community
- This lowers the total cost of ownership
- FLOSS prevents vendor-lock-in
- Some open questions: How open is the Apple ecosystem?
- What is the value of open source software in times of cloud software?
- „open“ has different meanings – have a look at the motivation
- Check the license ;-)

Welcome to the „Open Source Village at Med-e-Tel 2016“

ISfTeH CCTOS Working Group Chairs, Med-e-Tel 2015



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