



Internet in a Box

For Education
Tim Moody

What is Internet in a Box?

- A small Wifi hotspot to make Internet content available where Internet access is unavailable, or limited due to cost or other restrictions.
- A collective of people who develop that device
- An aggregate of free/open software and content
- Used in both Medical and Educational settings

A Brief History

One Laptop per Child

XS School Server
2007

Internet in a Box

Braddock Gaskill
2012

XSCE

Community Version of XS
2012

Two Projects Merge

IIAB
2016

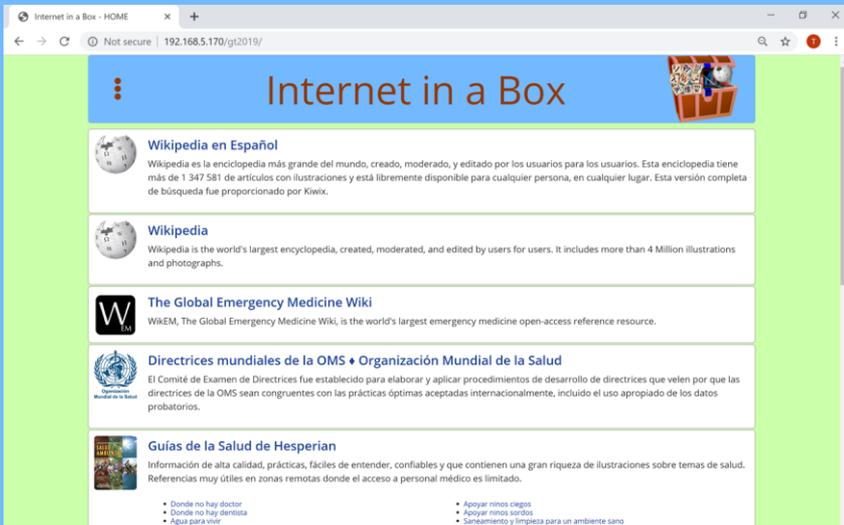
What does it look like?

- Often based on Raspberry Pi
- 'W' for low cost deployments
- Full model 3 B + and new 4
- Also Intel NUC for more capacity



How do I access it?

- Wifi is Internet in a Box
- Usually no password
- Many devices go directly to home page
- For others put <http://box.lan> in browser



Internet in a Box - HOME

← → 🔍 Not secure 192.168.5.170/gt2019/

Internet in a Box

-  **Wikipedia en Español**
Wikipedia es la enciclopedia más grande del mundo, creado, moderado, y editado por los usuarios para los usuarios. Esta enciclopedia tiene más de 1 347 581 de artículos con ilustraciones y está libremente disponible para cualquier persona, en cualquier lugar. Esta versión completa de búsqueda fue proporcionado por Kiwix.
-  **Wikipedia**
Wikipedia is the world's largest encyclopedia, created, moderated, and edited by users for users. It includes more than 4 Million illustrations and photographs.
-  **The Global Emergency Medicine Wiki**
WikEM, The Global Emergency Medicine Wiki, is the world's largest emergency medicine open-access reference resource.
-  **Directrices mundiales de la OMS • Organización Mundial de la Salud**
El Comité de Examen de Directrices fue establecido para elaborar y aplicar procedimientos de desarrollo de directrices que velen por que las directrices de la OMS sean congruentes con las prácticas óptimas aceptadas internacionalmente, incluido el uso apropiado de los datos probatorios.
-  **Guías de la Salud de Hesperian**
Información de alta calidad, prácticas, fáciles de entender, confiables y que contienen una gran riqueza de ilustraciones sobre temas de salud. Referencias muy útiles en zonas remotas donde el acceso a personal médico es limitado.
 - Donde no hay doctor
 - Donde no hay dentista
 - Agua para vivir
 - Apoyar niños ciegos
 - Apoyar niños sordos
 - Saneamiento y limpieza para un ambiente sano



1:26 26% 70%

← 🔍 192.168.5.170/gt2019/ 26

Internet in a Box

-  **Wikipedia en Español**
-  **Wikipedia in English without Videos**
-  **The Global Emergency Medicine Wiki**
-  **Directrices mundiales de la OMS • Organización Mundial de la Salud**
-  **Guías de la Salud de Hesperian**
-  **Hesperian Health Guides**
-  **Stanford Emergency Medicine Videos**

What's in the Box?

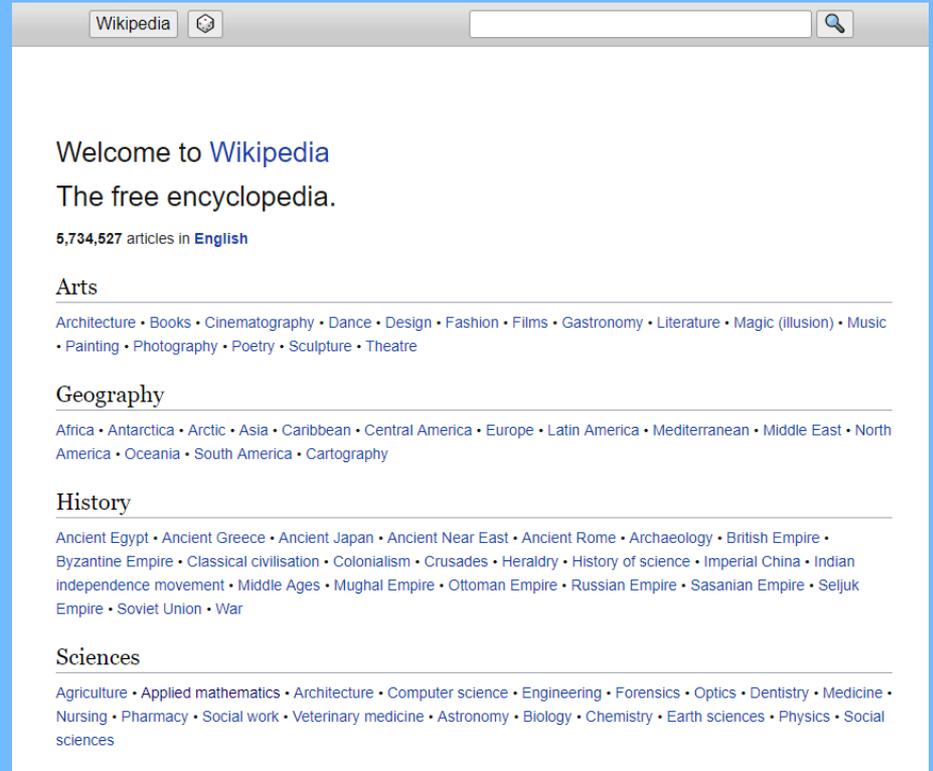
- Depends on the curator, but commonly for the Medical version
- The Medical Wikipedia in various languages
- The full Wikipedia in whatever languages are needed
- The Global Emergency Medicine Wiki
- CDC Web Site in English and Spanish
- Material from the WHO
- Other content packages from OER2G0

What Services are Available?

- Medical version only uses Kiwix
- For Education version there are many more.

Kiwix

- Used by Everyone
- Main use is Wikipedia and other Wikis
- Searchable
- ZIM Files: proprietary compression
- English Wikipedia in 80G
- Source for downloading



KA Lite

- Server for Khan Academy
- Used by Most Educational Installs
- Both Videos and Exercises
- Optional Progress Tracking

Add 2-digit numbers (no regrouping)

Practice solving problems like $24 + 45$.

$$61 + 23 = \square$$

Answer

Check Answer

Show Keypad

Need help?

I'd like a hint

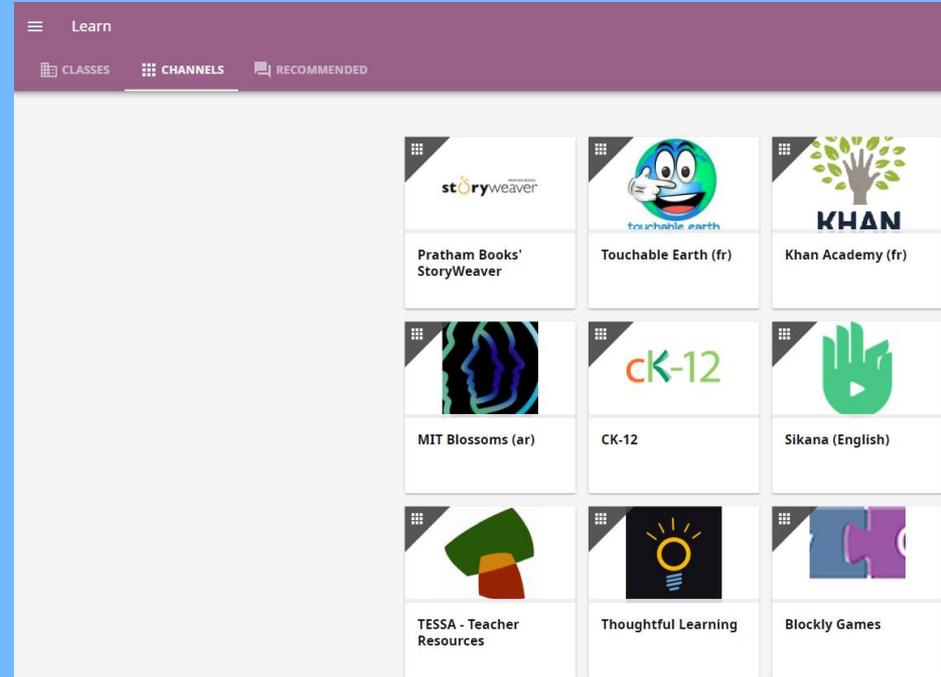
(will mark current answer as incorrect)

Show scratchpad

Math	Early math	Counting	Adding 1s and 10s	Adding 2-digit numbers without regrouping 1 Sal adds $71 + 24$.
Science	Class 5 (India)	Addition and subtraction intro	Subtracting 1s and 10s	Adding 2-digit numbers without regrouping 2 Sal adds $23 + 45$ thinking about place value.
Economics and finance	Class 6 (India)	Place value (tens and hundreds)	Intro to addition with 2-digit numbers	Add 2-digit numbers (no regrouping) Practice solving problems like $24 + 45$.
Arts and humanities	Class 7 (India)		Intro to subtraction with 2-digit numbers	Breaking apart 2-digit addition problems Sal thinks about different ways to break up addition
Computing	Class 8 (India)	Addition and subtraction within 20	Strategies for adding and subtracting	Break apart 2-digit addition problems Practice breaking apart problems like $23+45$ into problems like $20+40+3+5$.
Test prep	Class 8 (India)	Addition and subtraction within 100	Learn to add and subtract two-digit numbers within 100.	
Partner content	Class 9 (India)		Addition within 100	
College, careers, and more	Class 10 (India)	Addition and subtraction within 1000		
	Class 11 (India)			

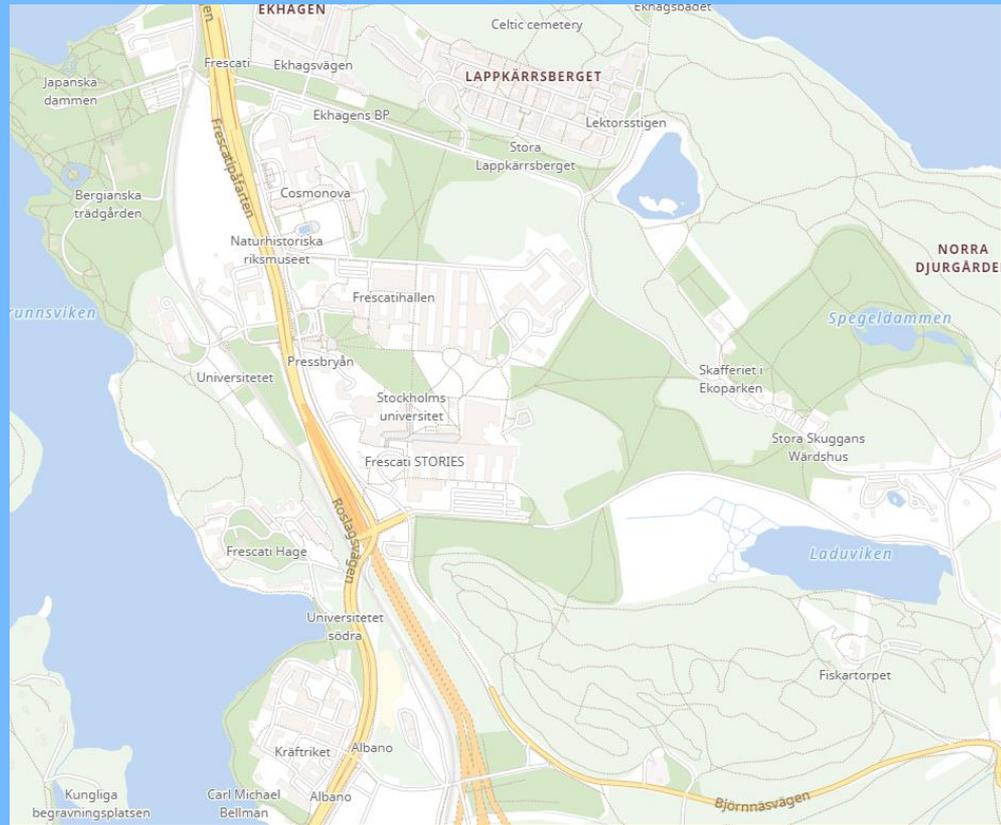
Kolibri

- The Successor to Kalite
- Has a Broader Range of Channels
- Dynamic Scraping of Content Web Sites
- Supports Sneaker Net for Content Distribution



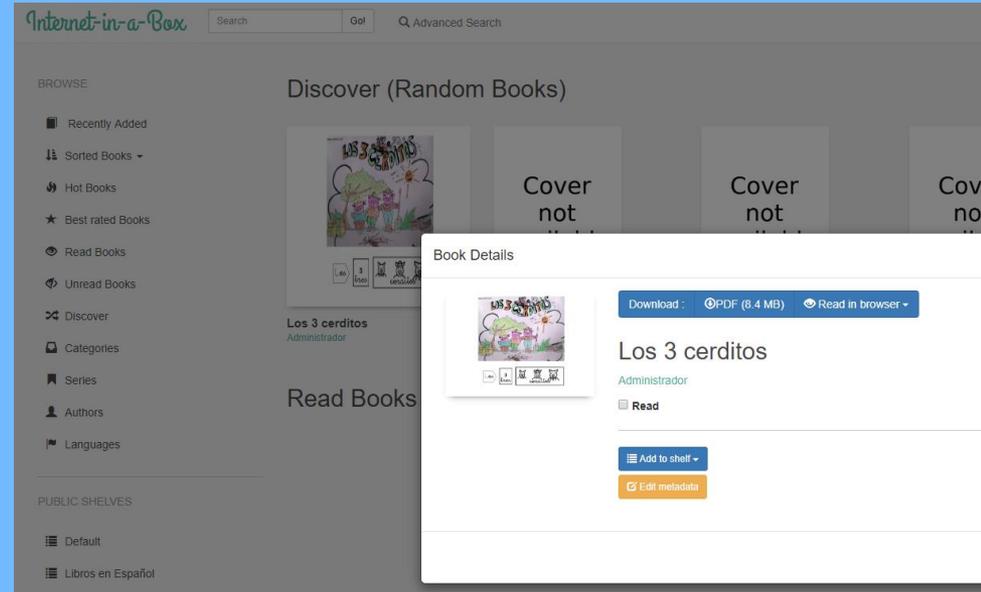
OpenStreetMap

- World Maps
- Zoom to 11 Levels
- Can download individual regions with 15 levels of zoom that scale to 18 levels (about 4-to-23 GB each).
- Also includes satellite photos (10 levels of zoom) from Sentinel.
- Search for cities/towns/settlements that have more than 1000 people.



Calibre-Web

- Store and Access electronic books (e-pub, pdf, mobi, etc.).
- Downloaded books, documents and images can be added using browser.
- Creates thumbnail automatically.
- Students can also create accounts to track reading progress.



MediaWiki

- Well known server
- Use for Local Information:
- Calendar
- Medical Protocols
- School Web Site

Main page [Discussion](#)

Main Page

MediaWiki has been installed.

Consult the [User's Guide](#) for information on using the wiki software.

Getting started [\[edit\]](#)

- [Configuration settings list](#)
- [MediaWiki FAQ](#)
- [MediaWiki release mailing list](#)
- [Localise MediaWiki for your language](#)
- [Learn how to combat spam on your wiki](#)

This page was last edited on 25 February 2019, at 14:23.

[Privacy policy](#) [About Community Wiki](#) [Disclaimers](#)

WordPress

- Also well known server
- Use for Local Information:
- Calendar
- Medical Protocols
- School Web Site

The screenshot shows the WordPress Dashboard. At the top, it says "Dashboard". Below that is a "Welcome to WordPress!" message with a sub-message: "We've assembled some links to get you started:". There are two main sections: "Get Started" and "Next Steps".

Get Started

- Customize Your Site (button)
- or, change your theme completely

Next Steps

- Write your first blog post (pencil icon)
- Add an About page (+ icon)
- Set up your homepage (house icon)
- View your site (eye icon)

At a Glance

- 1 Post (star icon)
- 1 Page (document icon)
- 1 Comment (speech bubble icon)
- WordPress 5.2.2 running Twenty Nineteen theme.
- Search Engines Discouraged

Activity

Recently Published

Today, 1:17 pm Hello world!

Quick Draft

Title

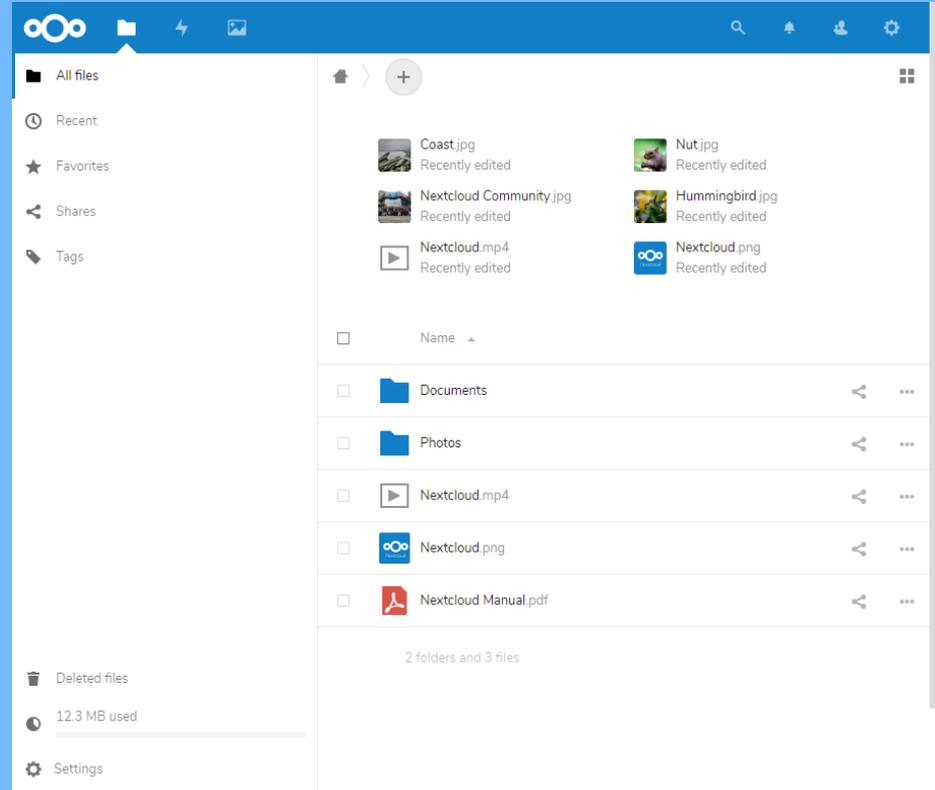
Content

What's on your mind?

Save Draft (button)

Nextcloud

- Media Sharing
- Nextcloud puts your data at your fingertips, under your control. Store your documents, calendar, contacts and photos on your local server.
- Collaboration between Phones (Android and iOS apps available) and Laptops
- Can make materials available to group of students.



Other Interactive Apps

- MineTest
 - Open Source Game
 - Similar to Minecraft
 - Default is Creative Mode
- Elgg
 - Media Sharing
 - Collaboration

Communications and Infrastructure

- Lokole – Local email
- PBX – Local telephony
- Transmission – BitTorrent client
- Samba – Windows File Sharing
- CUPS – Printer services

Management and Analysis

- AWStats – Usage Statistics
- Munin – Server Monitor
- vnStat – Network Monitor
- OpenVPN – Support VPN

How do I Customize it for My Audience?

- The short answer is using the Admin Console
- Let's look at it briefly

Admin Console

- Control
- Configure
- Install Content
- Content Menus
- Utilities
- Help
- About

Control Server

Control Server

Warning

Actions

REBOOT Server

POWER OFF Server

WARNING

Please use caution in rebooting or powering off the server.
Please make sure that no one is using it.

PLEASE NOTE

After you have made **Changes to Hardware** you should probably **Reboot**.
After you have **Installed New Content or Features** please **Refresh your Browser**.

Starting Application

7/16/2019, 11:05:43 AM: Init Finished Successfully
 7/16/2019, 11:05:43 AM: GET-EXTDEV-INFO SUCCEEDED (45 ms)
 7/16/2019, 11:05:43 AM: GET-SPACE-AVAIL SUCCEEDED (40 ms)
 7/16/2019, 11:05:43 AM: GET-OER2GO-STAT SUCCEEDED (10 ms)
 7/16/2019, 11:05:43 AM: procOneCatalog found empty data
 7/16/2019, 11:05:43 AM: GET-ZIM-STAT SUCCEEDED (13 ms)
 7/16/2019, 11:05:43 AM: GET-VARS SUCCEEDED (25 ms)
 7/16/2019, 11:05:43 AM: GET-WHLLIST SUCCEEDED (55 ms)
 7/16/2019, 11:05:43 AM: GET-CONF SUCCEEDED (31 ms)

Internet in a Box - HOME x Admin Console x +

← → ↻ Not secure | 192.168.3.51/admin/ ☆ T ⋮

Admin Console

Control Configure **Install Content** Content Menus Utilities Help About

Install Server Content

Installation Tasks

- Get Started
- Get ZIM Files from Kiwix**
- Get OER2Go(RACHEL) Modules
- Get Map Region
- Download Khan Academy Videos
- Manage Content

Actions

Install Kiwix ZIM Files

Kiwix has a large number of files containing compressed content which you can select by language.

Select Languages Library Space Available : **40.55 GB** Estimated Space Required: **0** **Install Selected ZIMs**

English (English)

XSCE

- test (test.zim)** **Date: 2015-07-10** **Size: 52.00 kB - INSTALLED**

Gutenberg

- Project Gutenberg Library (en) with epub,html,pdf (gutenberg_e... **Date: 2018-10-22** **Size: 53.38 GB**

Other

- A Wiki of Ice and Fire (westeros_en_all) **Date: 2018-10-14** **Size: 221.92 MB**
- A Wiki of Ice and Fire (westeros_en_all_nopic) **Date: 2019-04-01** **Size: 20.81 MB**
- A Wiki of Ice and Fire (westeros_en_all_novid) **Date: 2019-04-01** **Size: 92.57 MB**

192.168.3.51/admin/#instConStart

Windows taskbar: ENG 11:06 AM

Select Languages ✕

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> English (English) [eng] | <input checked="" type="checkbox"/> Español (Spanish) [spa] | <input type="checkbox"/> Français (French) [fra] |
| <input type="checkbox"/> Português (Portuguese) [por] | <input type="checkbox"/> العربية (Arabic) [ara] | <input type="checkbox"/> हिन्दी (Hindi) [hin] |
| <input type="button" value="More Languages"/> | | |
| <input type="checkbox"/> Afar (Afar) [aar] | <input type="checkbox"/> Afrikaans (Afrikaans) [afr] | <input type="checkbox"/> Akana (Akan) [aka] |
| <input type="checkbox"/> Aragonés (Aragonese) [arg] | <input type="checkbox"/> Arpitan (Franco-Provençal/Arpitan) [frp] | <input type="checkbox"/> Asturianu (Asturian) [ast] |
| <input type="checkbox"/> Avañe'ẽ (Guarani) [grn] | <input type="checkbox"/> Aymar (Aymara) [aym] | <input type="checkbox"/> Azərbaycanca (Azerbaijani) [aze] |
| <input type="checkbox"/> Bahasa Banjar (Banjar) [bjn] | <input type="checkbox"/> Bahasa Indonesia (Indonesian) [ind] | <input type="checkbox"/> Bahasa Melayu (Malay) [msa] |
| <input type="checkbox"/> Bahsa Acèh (Acehnese) [ace] | <input type="checkbox"/> Bamanankan (Bambara) [bam] | <input type="checkbox"/> Basa Banyumasan (Banyumasan) [map-bms] |
| <input type="checkbox"/> Basa Jawa (Javanese) [jav] | <input type="checkbox"/> Basa Sunda (Sundanese) [sun] | <input type="checkbox"/> Basa Ugi (Buginese) [bug] |
| <input type="checkbox"/> Bikol (Central Bicolano) [bcl] | <input type="checkbox"/> Bislama (Bislama) [bis] | <input type="checkbox"/> Boarisch (Bavarian) [bar] |
| <input type="checkbox"/> Bosanski (Bosnian) [bos] | <input type="checkbox"/> Brezhoneg (Breton) [bre] | <input type="checkbox"/> Bân-lâm-gú (Min Nan) [zh-min-nan] |
| <input type="checkbox"/> Català (Catalan) [cat] | <input type="checkbox"/> Chamoru (Chamorro) [cha] | <input type="checkbox"/> Chavacano de Zamboanga (Zamboanga Chavacano) [cbk-zam] |
| <input type="checkbox"/> Chichewa (Chichewa) [nya] | <input type="checkbox"/> Choctaw (Choctaw) [cho] | <input type="checkbox"/> Corsu (Corsican) [cos] |
| <input type="checkbox"/> Cuengh (Zhuang) [zha] | <input type="checkbox"/> Cymraeg (Welsh) [cym] | <input type="checkbox"/> Dansk (Danish) [dan] |
| <input type="checkbox"/> Deitsch (Pennsylvania German) [pdc] | <input type="checkbox"/> Deutsch (German) [deu] | <input type="checkbox"/> Deutsch (German) [gsw] |
| <input type="checkbox"/> Deutsch (German) [de] | <input type="checkbox"/> Diné bizaad (Navajo) [nav] | <input type="checkbox"/> Dolnoserbski (Lower Sorbian) [dsb] |
| <input type="checkbox"/> Dzhudezmo (Ladino) [lad] | <input type="checkbox"/> Ebon (Marshallese) [mah] | <input type="checkbox"/> Eesti (Estonian) [est] |
| <input type="checkbox"/> Emiliàn e rumagnòl (Emilian-Romagnol) [eml] | <input type="checkbox"/> Englisc (Anglo-Saxon) [ang] | <input type="checkbox"/> Esperanto (Esperanto) [epo] |

 **Screenshot Added**
A screenshot was added to your Dropbox.
Dropbox

Internet in a Box - HOME x Admin Console x +

← → ↻ ⓘ Not secure | 192.168.3.51/admin/ ☆ ⓧ ⋮

<input type="checkbox"/> Wikinews (wikinews_en_all_nopic)	Date: 2019-06-04	Size: 60.75 MB
<input type="checkbox"/> Wikinews (wikinews_en_all_novid)	Date: 2019-06-05	Size: 211.79 MB
Wikipedia		
<input type="checkbox"/> Basketball (wikipedia_en_basketball_novid)	Date: 2019-05-13	Size: 452.82 MB
<input type="checkbox"/> Basketball (wikipedia_en_basketball_nopic)	Date: 2019-05-13	Size: 384.56 MB
<input type="checkbox"/> Bollywood (wikipedia_en_bollywood_novid)	Date: 2018-10-09	Size: 382.47 MB
<input type="checkbox"/> Bollywood (wikipedia_en_bollywood_nopic)	Date: 2018-10-09	Size: 154.20 MB
<input type="checkbox"/> Chemistry (wikipedia_en_chemistry_novid)	Date: 2019-05-13	Size: 354.38 MB
<input type="checkbox"/> Chemistry (wikipedia_en_chemistry_nopic)	Date: 2019-05-13	Size: 224.47 MB
<input type="checkbox"/> Comics by Wikipedia (wikipedia_en_comics_novid)	Date: 2019-04-25	Size: 576.20 MB
<input type="checkbox"/> Comics by Wikipedia (wikipedia_en_comics_nopic)	Date: 2019-04-25	Size: 545.89 MB
<input type="checkbox"/> Cricket (wikipedia_en_cricket_novid)	Date: 2019-05-13	Size: 297.28 MB
<input type="checkbox"/> Cricket (wikipedia_en_cricket_nopic)	Date: 2019-05-13	Size: 261.96 MB
<input type="checkbox"/> Football by Wikipedia (wikipedia_en_football_novid)	Date: 2019-04-17	Size: 2.17 GB
<input type="checkbox"/> Football by Wikipedia (wikipedia_en_football_nopic)	Date: 2019-04-18	Size: 1.29 GB
<input type="checkbox"/> Geography (wikipedia_en_geography_novid)	Date: 2019-05-13	Size: 985.61 MB
<input type="checkbox"/> Geography (wikipedia_en_geography_nopic)	Date: 2019-05-13	Size: 690.98 MB
<input type="checkbox"/> History by Wikipedia (wikipedia_en_history_novid)	Date: 2019-06-02	Size: 1.59 GB
<input type="checkbox"/> History by Wikipedia (wikipedia_en_history_nopic)	Date: 2019-06-02	Size: 976.88 MB
<input type="checkbox"/> Mathematics (wikipedia_en_mathematics_novid)	Date: 2019-05-13	Size: 705.62 MB
<input type="checkbox"/> Mathematics (wikipedia_en_mathematics_nopic)	Date: 2019-05-13	Size: 424.10 MB
<input type="checkbox"/> Movies by Wikipedia (wikipedia_en_movies)	Date: 2019-07-09	Size: 54.51 GB
<input type="checkbox"/> Physics (wikipedia_en_physics_novid)	Date: 2019-05-13	Size: 867.94 MB
<input type="checkbox"/> Physics (wikipedia_en_physics_nopic)	Date: 2019-05-13	Size: 580.60 MB
<input type="checkbox"/> Ray Charles (wikipedia_en_ray_charles_novid)	Date: 2019-06-04	Size: 868.00 kB

Admin Console

- Control
- Configure
- Install Content
- Content Menus
- Utilities**
- Help
- About

Server Utilities

- ### Menu Options
- Change Password
 - Display Job Status**
 - Display Commands Log
 - Admin Tools
 - Display Ansible Facts
 - Display IIAB.INI File
 - Display System Memory
 - Display System Storage
 - Perform Internet Speed Test

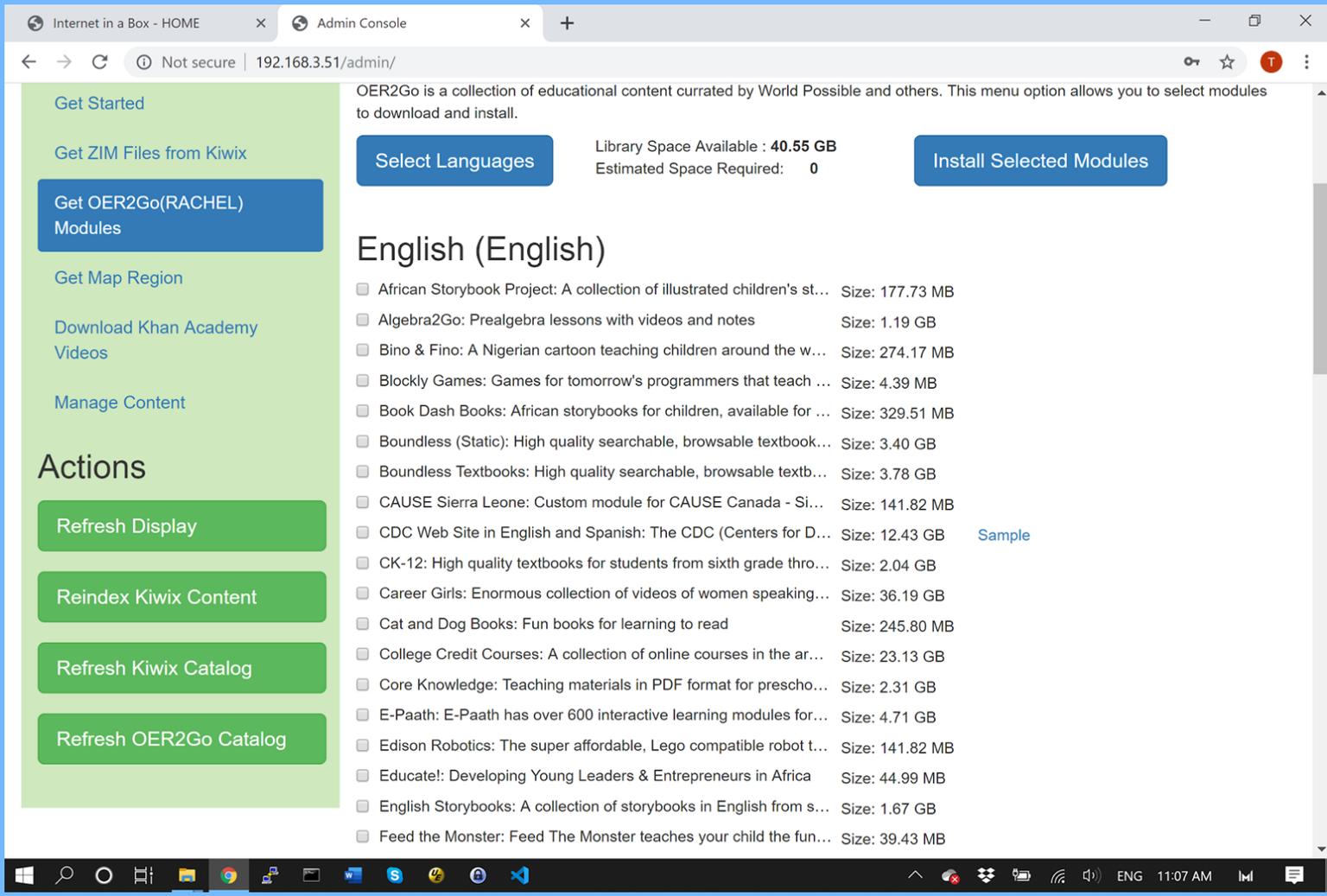
Job Status

Cancel Checked Jobs

Last Refreshed: 7/16/2019, 11:08:42 AM

Refresh Status

#	Command	Result	Status
2	scripts/zim_install_move.sh wikipedia_es_molcell_novid_2019-05.zim	u'wikipedia_es_molcell_novid_2019-05', u'article_count': u'3918', u'zim_date': u'2019-05-13', u'size': u'144M'}) creating /library/www/html/js-menu/menu-files/menu- defs/es-wikipedia_es_molcell_novid.json Updating iiab installed services' menus	SUC
1	/usr/bin/wget -c --progress=dot:giga http://download.kiwix.org/zim/wikipedia/wikipedia_es_molcell_novid_2019-05.zim -O /library/working/zims/wikipedia_es_molcell_novid_2019-05.zim	98304K 85% 20.9M 1s 131072K 100% 6.79M=7.9s 2019-07-15 16:39:53 (18.2 MB/s) - /library/working/zims/wikipedia_es_molcell_novid_2019-05.zim saved [151351450/151351450]	SUC



Get Started

[Get ZIM Files from Kiwix](#)

[Get OER2Go\(RACHEL\) Modules](#)

[Get Map Region](#)

[Download Khan Academy Videos](#)

[Manage Content](#)

Actions

[Refresh Display](#)

[Reindex Kiwix Content](#)

[Refresh Kiwix Catalog](#)

[Refresh OER2Go Catalog](#)

OER2Go is a collection of educational content curated by World Possible and others. This menu option allows you to select modules to download and install.

Select Languages

Library Space Available : **40.55 GB**
Estimated Space Required: **0**

Install Selected Modules

English (English)

- African Storybook Project: A collection of illustrated children's st... Size: 177.73 MB
- Algebra2Go: Prealgebra lessons with videos and notes Size: 1.19 GB
- Bino & Fino: A Nigerian cartoon teaching children around the w... Size: 274.17 MB
- Blockly Games: Games for tomorrow's programmers that teach ... Size: 4.39 MB
- Book Dash Books: African storybooks for children, available for ... Size: 329.51 MB
- Boundless (Static): High quality searchable, browsable textbook... Size: 3.40 GB
- Boundless Textbooks: High quality searchable, browsable textb... Size: 3.78 GB
- CAUSE Sierra Leone: Custom module for CAUSE Canada - Si... Size: 141.82 MB
- CDC Web Site in English and Spanish: The CDC (Centers for D... Size: 12.43 GB
- CK-12: High quality textbooks for students from sixth grade thro... Size: 2.04 GB
- Career Girls: Enormous collection of videos of women speaking... Size: 36.19 GB
- Cat and Dog Books: Fun books for learning to read Size: 245.80 MB
- College Credit Courses: A collection of online courses in the ar... Size: 23.13 GB
- Core Knowledge: Teaching materials in PDF format for prescho... Size: 2.31 GB
- E-Paath: E-Paath has over 600 interactive learning modules for... Size: 4.71 GB
- Edison Robotics: The super affordable, Lego compatible robot t... Size: 141.82 MB
- Educate!: Developing Young Leaders & Entrepreneurs in Africa Size: 44.99 MB
- English Storybooks: A collection of storybooks in English from s... Size: 1.67 GB
- Feed the Monster: Feed The Monster teaches your child the fun... Size: 39.43 MB

[Sample](#)

Internet in a Box - HOME Admin Console +

← → ↻ ⓘ Not secure | 192.168.3.51/admin/ ☆ ⓘ ⋮

Installation Tasks

- [Get Started](#)
- [Get ZIM Files from Kiwix](#)
- [Get OER2Go\(RACHEL\) Modules](#)
- Get Map Region**
- [Download Khan Academy Videos](#)
- [Manage Content](#)

Actions

- Refresh Display
- Reindex Kiwix Content
- Refresh Kiwix Catalog
- Refresh OER2Go Catalog

Install Map Region

Please select regions to download and install (each region also includes at least 10 levels of zoom for the entire world — and a 25 MB searchable database of cities/settlements worldwide with populations larger than 1000). Then click "Install Selected Region" to start the jobs.

Library Space Available : **40.55 GB**
Estimated Space Required: **0**

Install Selected Region

- North America 17.00 GB
- Central America 3.77 GB
- South America 6.60 GB
- Europe 22.62 GB
- Africa 10.56 GB
- Middle East 7.66 GB
- North Asia 14.20 GB
- South Asia 9.14 GB
- Oceania 4.37 GB
- World 53.17 GB



The map displays a world map with regional boundaries highlighted in a light tan color. A grid of latitude and longitude lines is overlaid on the map. A zoom control is visible in the top-left corner of the map area, showing a plus sign (+) and a minus sign (-).

Adjust Menu Order and Text

- Out of the Box the Menu has stuff we Don't Want
- We can delete it by dragging it off
- Zims and OER2Go content are automatically added
- But we may want thing in a Different Order
- We can drag a Menu Item to the Position in which we want it
- We can also edit the text of the Menu Item

Internet in a Box - HOME x Admin Console x +

Not secure | 192.168.3.51/admin/

Manage Content Menus

Content Menu Tasks

[Edit Content Menu](#)

[Edit Menu Items](#)

Actions

[Refresh Lists](#)

Edit Content Menus

This menu option allows you to define home page menus.

Menu Folder [Load Menu](#) [Save Menu](#) [Select Languages](#)

[Menu Properties](#) [Content Item List](#)

Properties of Current Menu

Select Mobile Header Font <input type="text" value="Open Sans"/>	Select Desktop Header Font <input type="text" value="Finger Paint"/>
<input type="checkbox"/> Check to Show Description for Mobile Users.	<input checked="" type="checkbox"/> Check to Show Description for Desktop Users.
<input type="checkbox"/> Check to Show Extra Description for Mobile Users.	<input checked="" type="checkbox"/> Check to Show Extra Description for Desktop Users.
<input type="checkbox"/> Check to Show Sub-menu for Mobile Users.	<input checked="" type="checkbox"/> Check to Show Sub-menu for Desktop Users.
<input type="checkbox"/> Check to Show Footnote for Mobile Users.	<input checked="" type="checkbox"/> Check to Show Footnote for Desktop Users.

Select Default Language

- Check to Have the Menu Automatically Updated.
- Check to Allow Kiwix Cross Zim Search.

Windows taskbar: 11:08 AM

Manage Content Menus

Content Menu Tasks

[Edit Content Menus](#)

[Edit Menu Items](#)

Actions

[Refresh Lists](#)

Edit Content Menus

This menu option allows you to define home page menus.

Menu Folder: [Load Menu](#) [Save Menu](#) [Select Languages](#)

[Menu Properties](#) [Content Item List](#)

Menu Items in Current Menu

-  **Add content to this page + use drag-and-drop to re-order it**
-  **Put a short, one line name for the item here. Ideally it would be unique.**
-  **Insert a USB Stick/Drive to Publish Files Here**
-  **Khan Academy Lite**
-  **OpenStreetMap Test Page**

Available Menu Item Definitions

-  **GCF2015**
-  **African Storybook Project**
-  **African Storybooks - South Africa**
-  **Algebra2go**
-  **Medical Information**
-  **Bino & Fino**

Manage Content Menus

Content Menu Tasks

[Edit Content Menu](#)

[Edit Menu Items](#)

Actions

[Refresh Lists](#)

Edit Content Menu Items

This menu option allows you to define individual items on home page menus.

[Select Menu Item](#) [Edit Menu Item](#)

Select a Menu Item

- [Edit](#) [Clone](#) en-oob  **Add content to this page + use drag-and-drop to re-order it**
- [Edit](#) [Clone](#) en-sample  **Put a short, one line name for the item here. Ideally it would be unique.**
- [Edit](#) [Clone](#) en-usb  **Insert a USB Stick/Drive to Publish Files Here**
- [Edit](#) [Clone](#) en-kalite  **Khan Academy Lite**
- [Edit](#) [Clone](#) en-map_test  **OpenStreetMap Test Page**

Screen A screenshot of a screen with a Dropbox logo and text.

Content this Menu Item Shows

Menu Item Code

Optional Code Suffix

Create a New Menu Item Definition

Change New or Existing Menu Item Definition

Title

Name of Icon File - must be in /library/www/html/js- menu/menu-files/images

Select Icon

Upload Icon

Optional Start URL - Only change this if the the blank default
doesn't work.

Description

Se trata de una colección completa de todos los temas de Wikipedia sobre los cuidados relacionados con la salud, la anatomía y la medicación, en un formato que no necesita conexión a Internet.

Optional Extra Description

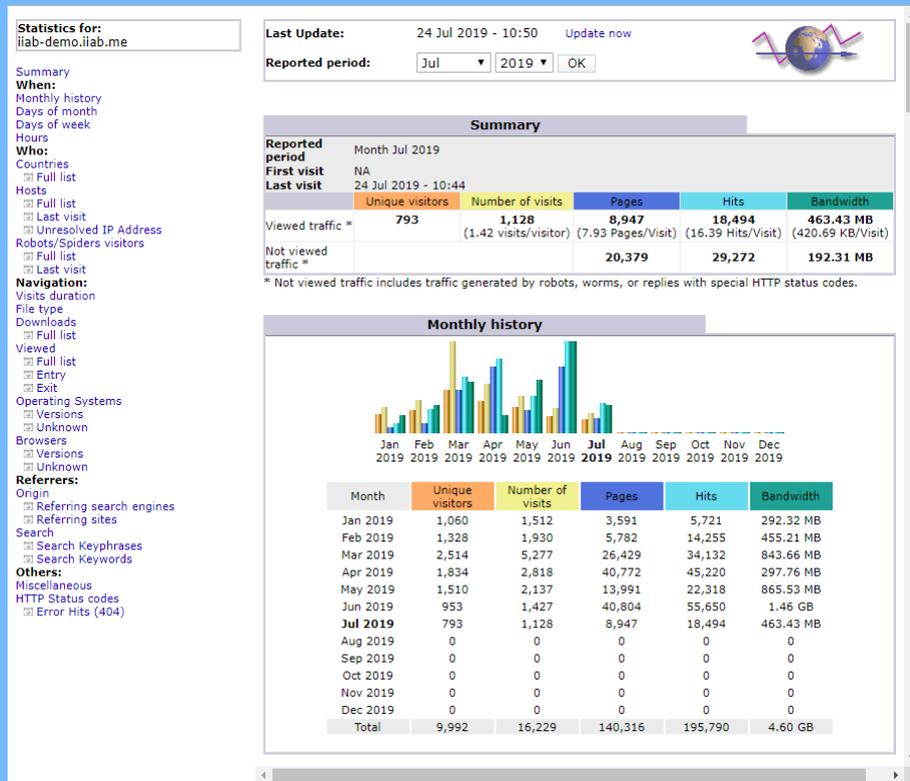
Metrics

- Offline Connections
- Usage Statistics - AWStats
- Not Tracked - Pseudo Links
- Time Problems



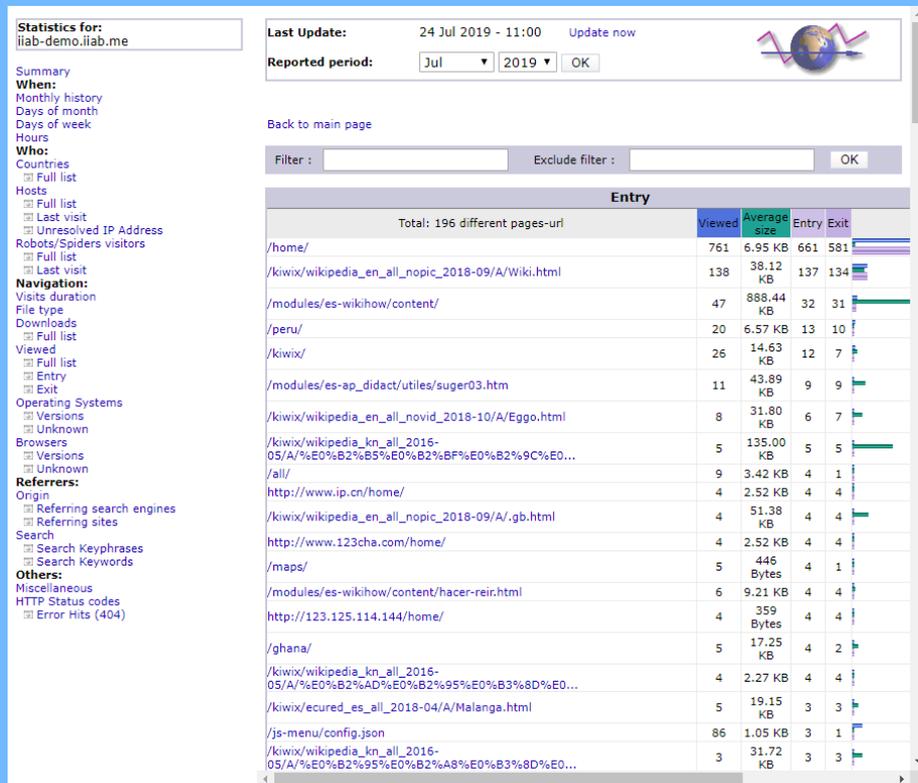
AWStats

- Very Popular Web Statistics App
- Been around a Long Time
- Number of Users
- Most Visited Pages
- Entry and Exit Page
- How Long on Site
- Mostly by Month



AWStats - Pages

- These are Entry Pages
- Note /home/
- English Wikipedia
- Spanish wikihow
- Need some expertise to read these urls



AWStats - Visitors

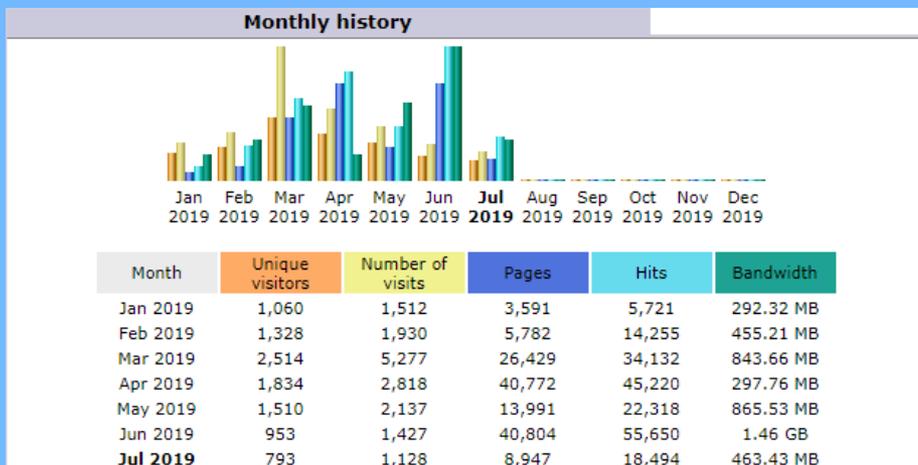
- Duration – how sticky
- Visitors and Visits – how much was the Server Used
- Various Time Frames

Summary

When:

Monthly history
Days of month
Days of week
Hours

Visits duration			
Number of visits: 1,128 - Average: 82 s		Number of visits	Percent
0s-30s		1,054	93.4 %
30s-2mn		25	2.2 %
2mn-5mn		9	0.7 %
5mn-15mn		6	0.5 %
15mn-30mn		7	0.6 %
30mn-1h		14	1.2 %
1h+		6	0.5 %
Unknown		7	0.6 %



AWStats – Missing Pages

- Only knows Content that was accessed through Web Server
- Some Content is Accessed Directly
 - KA Lite
 - Kolibri
 - Sugarizer
- We create pseudo link in Web Log to be picked up by AWStats

AWStats – Reporting Period

- Uses Server Clock
- Raspberry Pi does Not have a Real Time Clock (can be added)
- Guatemala servers showed all activity on the same day
- So we learned to add a time capture when device accesses home page that we trust to have the correct time.
- (Turned on or off in Admin Console)

Feedback

- Experimental Feedback Form
- Not much has been done with it.
- Like AWStats we need to be able to get the data.

Configuration and Management

- Munin
 - Comprehensive set of Server and Networking Statistics
- phpMyAdmin – Not recommended
 - Can be used to edit MySQL data directly
 - Can be dangerous to turn on
- Open VPN
 - Support VPN can allow Administrators to Turn on Access for developers to troubleshoot problems.
 - Off by Default

Admin Console

Server Utilities

Menu Options

- Change Password
- Display Job Status
- Display Commands Log
- Admin Tools**
- Display Ansible Facts
- Display IIAB.INI File
- Display System Memory
- Display System Storage
- Perform Internet Speed Test

Administration Tools

- Munin - Drill down to monitor server performance.
- AWStats - Statistics on web server usage.
- Online IIAB Information copied for Offline Use
- Link to the same Online IIAB Information

Configure the Server

Configuration

- Network Parameters**
- Internet Caching/Filtering
- Internal Wi-Fi AP
- Server Portal
- Services Enabled
- Edit Permitted URLs

Actions

- Update Permitted URLs List
- Save Configuration
- Install Configured Options

Network Parameters

WARNING: If you change the Hostname or Domain Name, you will need to refresh the browser after clicking Install Configured Options.

Hostname **Domain Name (no initial dot)**

Server's Role in the Network

- Gateway - You need two or more network adapters, one of which must be connected to the Internet or a larger Network (WAN).
- Appliance - You only need one network adapter, which must be connected to the Internet or a larger Network (WAN).
- LAN Controller - You only need one network adapter. It is probably part of a standalone Network (LAN).

Advanced Network Parameters

Network Discovered at Last Boot

Gateway: Found
 WAN: 10.205.29.79 on wlan1
 LAN: on br0
 Network Mode: Gateway

Override IP Addresses

Check to use a static WAN IP Address instead of DHCP

Admin Console Control

- Control the Server
- WiFi, Bluetooth, and VPN
Raspberry Pi Only

The screenshot displays the Admin Console interface. At the top, the title "Admin Console" is centered. Below it is a navigation bar with tabs for "Control", "Configure", "Install Content", "Content Menus", "Utilities", "Help", and "About". The "Control" tab is active. The main content area is divided into two columns. The left column, titled "Control Server", contains a "Warning" box, links for "Wifi Control", "Bluetooth Control", and "VPN Control", and an "Actions" section with "REBOOT Server" and "POWER OFF Server" buttons. The right column, titled "Control Server", contains a "WARNING" message, a "PLEASE NOTE" section with instructions on hardware changes and browser refresh, and a "Starting Application" log showing various system events with timestamps and durations.

Admin Console

Control Configure Install Content Content Menus Utilities Help About

Control Server

Warning

Wifi Control

Bluetooth Control

VPN Control

Actions

REBOOT Server

POWER OFF Server

Control Server

WARNING

Please use caution in rebooting or powering off the server.

Please make sure that no one is using it.

PLEASE NOTE

After you have made **Changes to Hardware** you should probably **Reboot**.

After you have **Installed New Content or Features** please **Refresh your Browser**.

Starting Application

7/24/2019, 12:04:16 PM: Init Finished Successfully

7/24/2019, 12:04:16 PM: GET-EXTDEV-INFO SUCCEEDED (240 ms)

7/24/2019, 12:04:16 PM: GET-OER2GO-STAT SUCCEEDED (222 ms)

7/24/2019, 12:04:16 PM: GET-SPACE-AVAIL SUCCEEDED (330 ms)

7/24/2019, 12:04:16 PM: procOneCatalog found empty data

7/24/2019, 12:04:16 PM: GET-ZIM-STAT SUCCEEDED (325 ms)

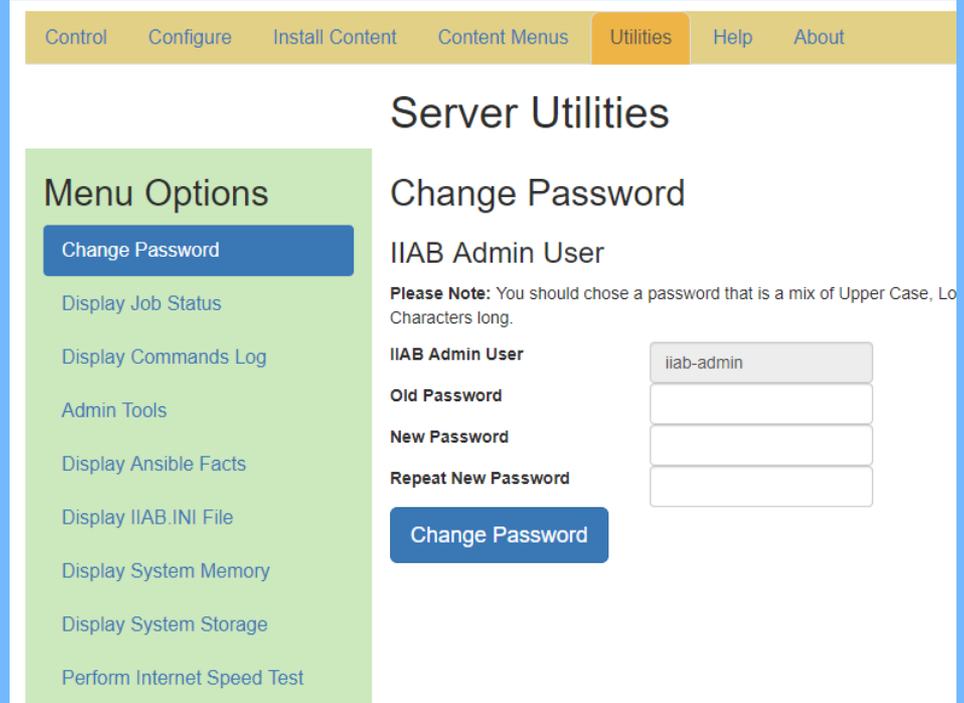
7/24/2019, 12:04:16 PM: GET-IIAB-INI SUCCEEDED (310 ms)

7/24/2019, 12:04:16 PM: GET-ANS SUCCEEDED (343 ms)

7/24/2019, 12:04:16 PM: GET-VARS SUCCEEDED (304 ms)

Other Admin Console

- View Configuration
- Other Utilities



The screenshot displays the IIAB Admin Console interface. At the top, a navigation bar includes links for Control, Configure, Install Content, Content Menus, Utilities (highlighted), Help, and About. The main content area is titled 'Server Utilities' and features a 'Change Password' section for the 'IIAB Admin User'. A 'Please Note' message states: 'You should chose a password that is a mix of Upper Case, Lower Case, Numbers and Special Characters long.' The form includes input fields for 'IIAB Admin User' (containing 'iiab-admin'), 'Old Password', 'New Password', and 'Repeat New Password'. A 'Change Password' button is located below the form. On the left, a 'Menu Options' sidebar lists various utility actions, with 'Change Password' highlighted in a dark blue box.

Control Configure Install Content Content Menus **Utilities** Help About

Server Utilities

Change Password

IIAB Admin User

Please Note: You should chose a password that is a mix of Upper Case, Lower Case, Numbers and Special Characters long.

IIAB Admin User

Old Password

New Password

Repeat New Password

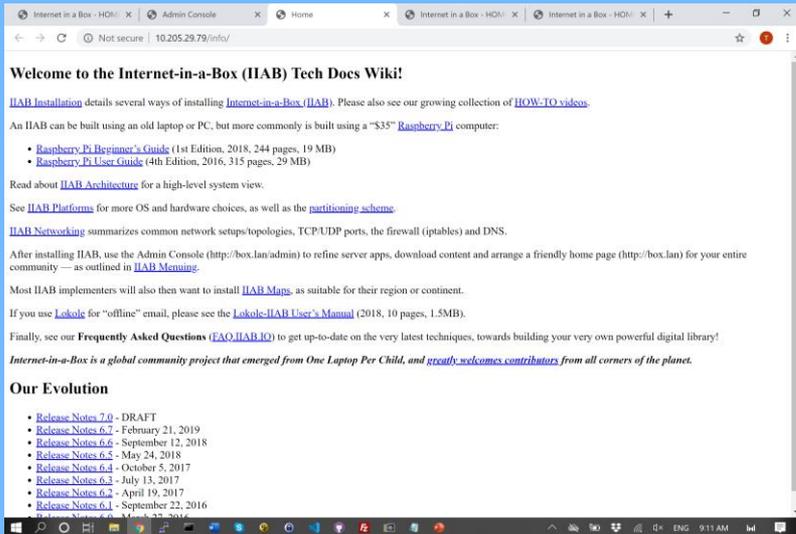
Change Password

Menu Options

- Change Password**
- Display Job Status
- Display Commands Log
- Admin Tools
- Display Ansible Facts
- Display IIAB.INI File
- Display System Memory
- Display System Storage
- Perform Internet Speed Test

Help

- Internet in a Box Info
- Admin Console Help



Welcome to the Internet-in-a-Box (IIAB) Tech Docs Wiki!

[IIAB Installation](#) details several ways of installing [Internet-in-a-Box \(IIAB\)](#). Please also see our growing collection of [HOW-TO videos](#).

An IIAB can be built using an old laptop or PC, but more commonly is built using a "S35" [Raspberry Pi](#) computer:

- [Raspberry Pi Beginner's Guide](#) (1st Edition, 2018, 244 pages, 19 MB)
- [Raspberry Pi User Guide](#) (4th Edition, 2016, 315 pages, 29 MB)

Read about [IIAB Architecture](#) for a high-level system view.

See [IIAB Platforms](#) for more OS and hardware choices, as well as the [partitioning scheme](#).

[IIAB Networking](#) summarizes common network setups/topologies, TCP/UDP ports, the firewall (iptables) and DNS.

After installing IIAB, use the Admin Console (<http://box.lan/admin/>) to refine server apps, download content and arrange a friendly home page (<http://box.lan/>) for your entire community — as outlined in [IIAB Menuing](#).

Most IIAB implementers will also then want to install [IIAB Maps](#), as suitable for their region or continent.

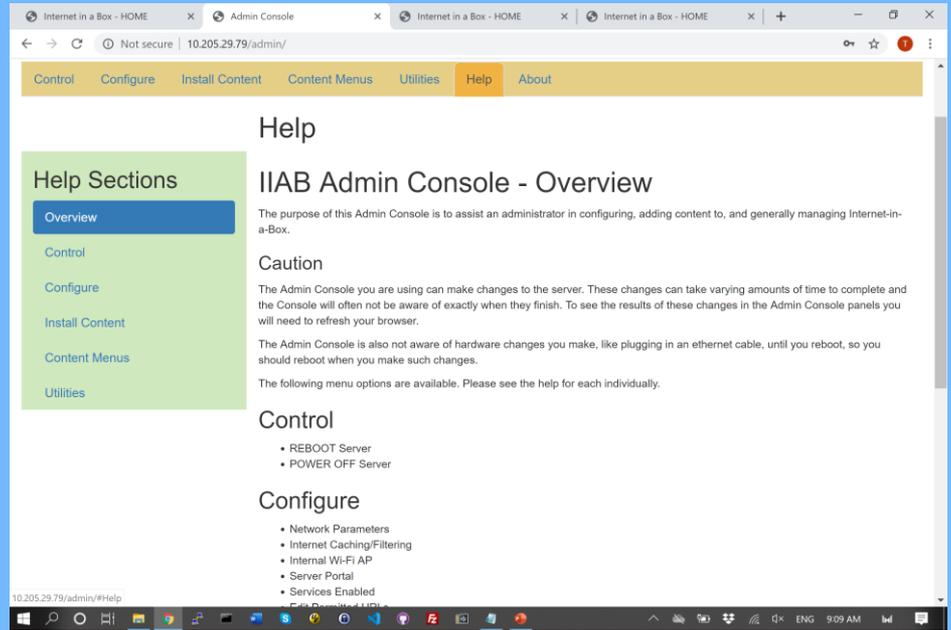
If you use [Lokole](#) for "offline" email, please see the [Lokole-IIAB User's Manual](#) (2018, 10 pages, 1.5MB).

Finally, see our [Frequently Asked Questions \(FAQ:IIAB.1Q\)](#) to get up-to-date on the very latest techniques, towards building your very own powerful digital library!

Internet-in-a-Box is a global community project that emerged from One Laptop Per Child, and [genuinely welcomes contributors from all corners of the planet.](#)

Our Evolution

- [Release Notes 7.0](#) - DRAFT
- [Release Notes 6.7](#) - February 21, 2019
- [Release Notes 6.6](#) - September 12, 2018
- [Release Notes 6.5](#) - May 24, 2018
- [Release Notes 6.4](#) - October 5, 2017
- [Release Notes 6.3](#) - July 13, 2017
- [Release Notes 6.2](#) - April 19, 2017
- [Release Notes 6.1](#) - September 22, 2016
- [Release Notes 5.0](#) - March 27, 2016



Internet in a Box - HOME x Admin Console x Internet in a Box - HOME x Internet in a Box - HOME x

Not secure | 10.205.29.79/admin/

Control Configure Install Content Content Menus Utilities Help About

Help

Help Sections

- Overview
- Control
- Configure
- Install Content
- Content Menus
- Utilities

IIAB Admin Console - Overview

The purpose of this Admin Console is to assist an administrator in configuring, adding content to, and generally managing Internet-in-a-Box.

Caution

The Admin Console you are using can make changes to the server. These changes can take varying amounts of time to complete and the Console will often not be aware of exactly when they finish. To see the results of these changes in the Admin Console panels you will need to refresh your browser.

The Admin Console is also not aware of hardware changes you make, like plugging in an ethernet cable, until you reboot, so you should reboot when you make such changes.

The following menu options are available. Please see the help for each individually.

Control

- REBOOT Server
- POWER OFF Server

Configure

- Network Parameters
- Internet Caching/Filtering
- Internal Wi-Fi AP
- Server Portal
- Services Enabled

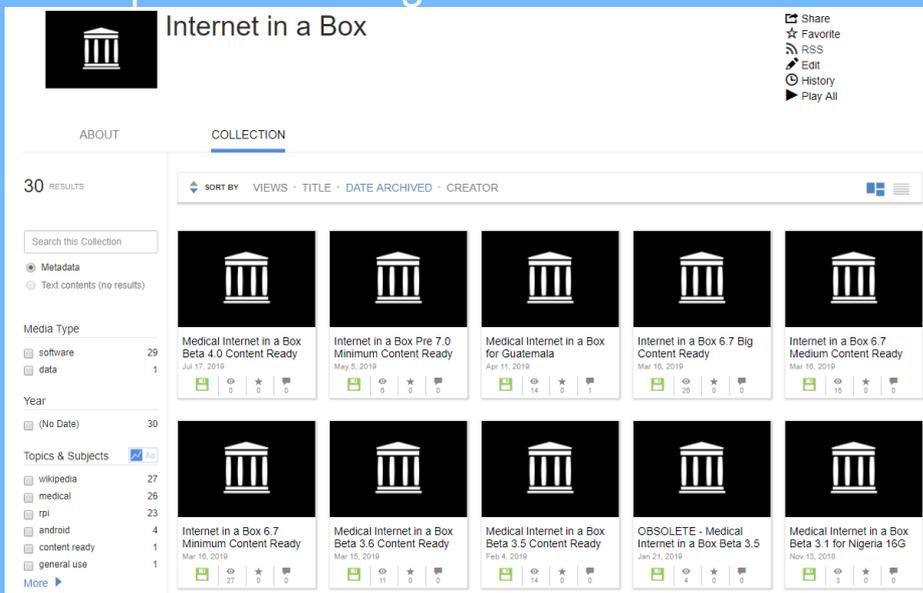
10.205.29.79/admin/#Help

How do I get it?

- Buy it with a curation for a particular audience:
 - James Heilman
 - Thingbits in India
 - Growing list of distributors
- Download a 'Content Ready' image from archive.org
 - Write to sd card and get started
 - Customize content
- DiY with scripts that do an entire install

Use Existing or Create New 'Content Ready' Image

- Create New using <http://download.iiab.io>
- Or Download from Internet Archive
- <https://archive.org/details/internetinabox>



The screenshot shows the 'Internet in a Box' website interface. At the top, there is a logo of a classical building and the title 'Internet in a Box'. Below the title are navigation links for 'ABOUT' and 'COLLECTION'. The 'COLLECTION' section displays a grid of 10 items, each with a thumbnail of the building logo and a title. The items include various versions of 'Medical Internet in a Box' and 'Internet in a Box' for different platforms and regions. A sidebar on the left shows search filters for '30 RESULTS', 'Metadata', 'Media Type', 'Year', and 'Topics & Subjects'.

Index of /

Name	Last modified	Size	Description
6.2/	2017-05-04 10:34	-	
6.3/	2017-07-21 12:52	-	
6.4/	2017-07-04 15:38	-	
6.5/	2018-06-14 18:42	-	
6.6/	2018-09-24 04:27	-	
6.7/	2019-02-26 20:55	-	
7.0/	2019-07-12 01:56	-	
7.1/	2019-06-15 06:23	-	
README.html	2019-07-12 01:56	2.0K	
content/	2019-02-26 21:52	-	
install.txt	2019-03-28 16:39	2.5K	
packages/	2019-07-10 23:50	-	
repos/	2016-02-01 00:29	-	
robots.txt	2018-08-22 12:46	154	

Internet-in-a-Box (IIAB) 7.0 pre-releases can be installed from this page.

Please read our DRAFT [IIAB 7.0 Release Notes](#). To install IIAB 7.0 onto [Raspbian Buster](#), [Ubuntu 18.04](#) or [Debian 10](#), run this 1-line installer:

```
curl d.iiab.io/install.txt | sudo bash
```

OS TIPS & TRICKS: click the above link (that ends in .txt) for important recommendations on how to PREPARE & SECURE YOUR OS.

WARNING: NOOBS IS "NOT" SUPPORTED, as its partitioning is very different. On a Raspberry Pi, you need to [INSTALL THE LATEST VERSION OF RASPBIAN](#). To attempt IIAB 7.0 on [another Linux](#) see the [full/manual instructions](#).

An Ethernet cable is HIGHLY RECOMMENDED during installation, as this is more reliable than Wi-Fi (and faster too!) If however you must install over Wi-Fi, remember to run "iiab-hotspot-on" after IIAB installation, TO ACTIVATE YOUR RASPBERRY PI'S INTERNAL WIFI HOTSPOT (thereby killing Internet connectivity!)

Thanks For Building Your Own Library To Serve One & All

Questions and some Resources

- Demo at <http://medbox.iiab.me/home/>
- Docs at <https://github.com/iiab/iiab/wiki>
- FAQ at <http://wiki.laptop.org/go/IIAB/FAQ>
- Code at <https://github.com/iiab/iiab>
- Wikipedia Support <https://meta.wikimedia.org/wiki/Internet-in-a-Box>
- <https://www.thingbits.net/products/medical-and-health-internet-in-a-box-south-asia-edition#>
- Images at archive.org <http://www.archive.org/details/internetinabox>
- DiY at <http://d.iiab.io>