

The MasterKey Admin Console: an introduction

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Introduction

Overview

MasterKey systems, including MasterKey Connect, are administrated by means of a web-based Admin Console system known as MKAdmin, or sometimes just as the Console when the context is clear. Typically, the Console lives in the /console/ area below the top level of the web-site that it administers.

Technical background

MKAdmin is written in Perl, and runs under the Apache2 web-server using mod_perl.

It can be readily installed from packages on Debian-based and Red Hat-based Linux operating systems such as Debian itself, Ubuntu, RHEL and CentOS. It can easily be made to run on other Unix operating systems such as MacOS X, but packages are not made available for these platforms.

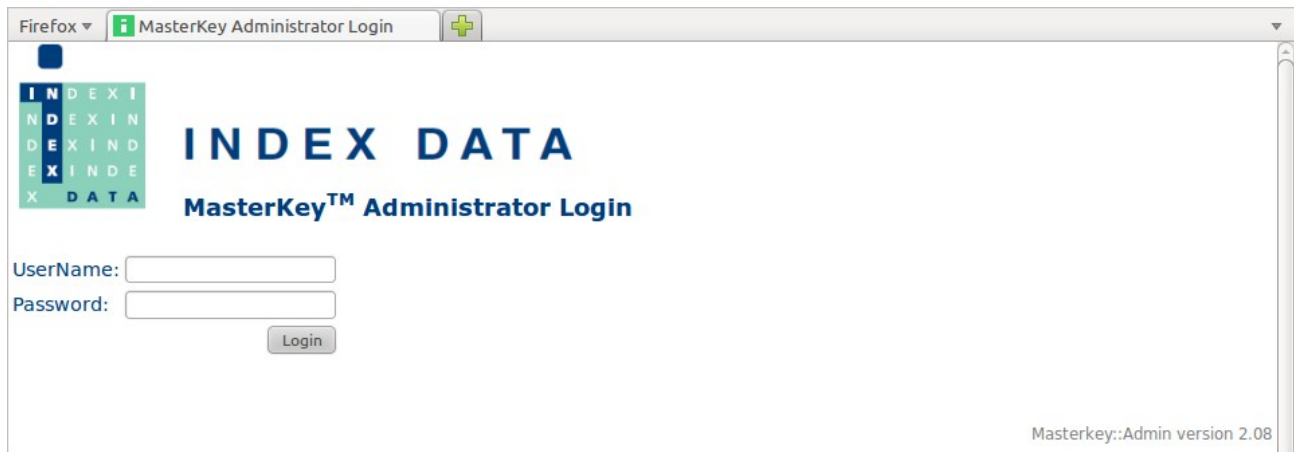
Demonstration system

A demonstration installation of the Admin Console is available at <http://mk2.indexdata.com/console/>. Credentials for accessing this Console are available from Index Data on request.

Using the Admin Console

Front page

The front page of MKAdmin prompts for a username and password. These are used to determine the identity of the administrator and the level at which he operates.



In a typical configuration, there are two levels of administrator: consortium-level and library-level. (MKAdmin can be configured to provide more or fewer administrative levels than two, but since two-level systems account for the great majority of existing installations, that is what will be described in this document.)

Whether you log in as a consortium-level or library-level administrator, it is possible to switch back and forth between the roles, as described below. When promoting yourself from library-level to consortium-level for the first time in a session, it is necessary to provide consortium-level credentials.

Tabs

Once logged in to MKAdmin, each page has the same structure.



The top banner presents a title and an optional logo for the installation. Below this, a user menu specifies who you are logged in as, and offers logout and help links. Below the top banner is a set of tabs, which govern what is displayed in the remainder of the page. The selected tab is highlighted in bold with a white background.

The set of tabs shown in the screenshot above are those of the consortium administrator in the MKAdmin demo installation. The set of available tabs remains the same whatever actions you perform as a consortium administrator; a different set of tabs is available to library-level administrators. The colour schemes used for consortium-level and library-level administration are typically configured to be subtly different, providing a visual cue. In the example system, consortium-level pages use a green scheme while library-level pages use a blue scheme as shown

below:



The consortium-level and library-level tabs are similar, but not identical:

- It is possible at both levels to maintain sets of targets (also known as “databases” or “resources”) and the categories that those targets belong to.
- Consortium-level administrators maintain a set of the libraries that belong to the consortium, whereas library-level administrators maintain end-user accounts that may be used for searching via the MasterKey UI. (Systems that do not use the MasterKey UI may omit these.)
- At both levels, the information about the administrator himself can be maintained, and the password changed.
- Reports are available at both levels.

The final tabs, enclosed in square brackets, are special. They enable an administrator to switch back and forth between consortium-level and library-level administration. Since consortium administrators may on occasion act on behalf of several different libraries, when switching to the library level the identity of the most recently used library is assumed.

Consortium-level administration

The consortium administrator is responsible for:

- Curating a set of targets that will be of interest to member libraries.
- Maintaining a set of categories into which those targets can be classified.
- Adding new libraries to the consortium, setting up their initial state, and making library-level administration facilities available.
- Keeping information about the consortium administrator up to date.
- Running reports.

There is a separate tab for each of these activities.

Target curation

The consortium provides access to a set of targets from which individual libraries may choose. (Libraries may also access targets not included in this list, if so configured). This set of targets is maintained in the **Targets** tab:

Firefox MasterKey Admin Console: The Bi...

INDEX DATA
MasterKey Admin Console: The Big Sky Consortium

MKAdmin Global Administrator Logout | Help

Targets Categories Libraries Administrator Reports [Library Admin]

All Targets
Selected Targets
New Target
Manage Parents

Service Provider
EBSCO (294)
Wilson (78)
Gale (55)
Index Data (7)
Ovid Technologies, Inc. (3)
Oxford University Press (2)
JSTOR/ITHAKA (2)
ABC-CLIO (2)
Emerald Group (2)
Zentralblatt MATH (1)
New England Journal of Medicine (1)
Cambridge University Press (1)
Business Insights (1)
Knovel (1)
CSA (1)
NASA (1)
U.S. GPO (1)
NBII (1)
Oxford Analytica (1)
NBER (1)

Categories
Subscription Databases (428)
Library Catalogs (14)
Open Access (10)
Journal Articles (4)
SOLR targets (2)

Target Checklist

Search

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

Records 501-550 (of 1914)

<< Prev ... 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 ... Next >>

Name	Provider	Selected	Edit
East Chicago Public Library		<input type="checkbox"/>	
Eastern Cluster of Lutheran Seminaries		<input type="checkbox"/>	
Ebrary Discover (shop)		<input type="checkbox"/>	
EBSCO	EBSCO	<input type="checkbox"/>	
EBSCO Business Basics	EBSCO	<input checked="" type="checkbox"/>	
EBSCO Eldercare Search	EBSCO	<input checked="" type="checkbox"/>	
EBSCOhost ECONOMIA Y NEGOCIOS	EBSCO	<input type="checkbox"/>	
EBSCOlearn Ranger Rick	EBSCO	<input type="checkbox"/>	
EBSCO MegaFILE	EBSCO	<input checked="" type="checkbox"/>	
ecd [article]		<input type="checkbox"/>	
ecd [book]		<input type="checkbox"/>	
ecd [conference]		<input type="checkbox"/>	
ecd [patent]		<input type="checkbox"/>	
ecd [thesis]		<input type="checkbox"/>	
Ecole Normale Superieure Paris		<input type="checkbox"/>	
École Polytechnique de Montréal		<input type="checkbox"/>	
Bibliothèque		<input type="checkbox"/>	

Beneath the row of tabs, the page is divided into two parts: on the left, a pane used for menu items and facets; and on the right, the target list itself. (The menu pane is used in all tabs: the specific set of available menu items changes between panes, and facets do not appear in all tabs.)

Each consortium has access to a large set of target profiles – 1914 of them in this case – which may be drawn from a variety of different sources, known as “parents”. Parents are typically maintained elsewhere – for example, the demo installation uses the set of targets known by IRSpy (<http://irspy.indexdata.com/>), the set of targets in the “public” Connector Platform repository (<http://cfrepo.indexdata.com/repo.pl/public>) and a global set of known targets maintained by Index Data (<http://mkhome.indexdata.com/searchable/>).

The list of targets can be navigated in various ways: by paging through the long list – in groups of 50 by default, though this is configurable; by searching for key words (truncated keyword searches require an asterisk); or by narrowing the list to those beginning with a specific letter.

Not all of the available targets will be relevant to all consortia, so the consortium administrator

selects the relevant targets using the checkboxes.

Targets that have been selected may be edited: doing so affects the consortium's own copy only, not the parent's copy. Reasons for editing include addition of a local note, changing the display-name of the target to something more appropriate to a particular community, or adding authentication tokens. On-line help buttons provide descriptions of the fields within the target profile.

The smaller set of selected targets can be viewed and edited using the **Selected Targets** link in the menu pane; the **All Targets** link returns to the main list. New target profiles that are not inherited from any parent can be created using the **New Target** link. Targets created within MKAdmin are counted among the “Selected Targets” set.

(The set of parents from which candidate targets are inherited can be viewed and maintained using the **Manage Parents** link, but this is an advanced feature not covered by this introductory manual.)

Category maintenance

Each target belongs to zero or more categories, which can be chosen in a multi-select box when editing the target record. The set of available categories, from which the selection is chosen, is maintained in the **Categories** tab:

Firefox MasterKey Admin Console: The Bi...

INDEX
INDEX
INDEX
INDEX
X DATA

INDEX DATA

MasterKey Admin Console: The Big Sky Consortium

MKAdmin Global Administrator [Logout](#) | [Help](#)

Targets **Categories** Libraries Administrator Reports [Library Admin]

All Categories
Selected Categories
New Category
Manage Parents


Categories

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

Records 1-12 (of 12)

<< Prev
Next >>

Category	Selected	Edit
Ecology and Biology Resources	<input checked="" type="checkbox"/>	
Free eBooks & AudioBooks	<input checked="" type="checkbox"/>	
Journal Articles	<input checked="" type="checkbox"/>	
Library Catalogs	<input checked="" type="checkbox"/>	
Library Utilities	<input checked="" type="checkbox"/>	
New category	<input checked="" type="checkbox"/>	
News	<input checked="" type="checkbox"/>	
Open Access	<input checked="" type="checkbox"/>	
SOLR targets	<input checked="" type="checkbox"/>	
Subscription Databases	<input checked="" type="checkbox"/>	
Test Targets	<input type="checkbox"/>	
Union Catalogs	<input checked="" type="checkbox"/>	
Create		

<< Prev
Next >>

The structure of this tab is similar to that of the **Targets** tab: a set of categories is made available, and those relevant to the consortium are selected from that set using checkboxes. (In this case, all the available categories are selected.)

Categories can be edited to change the human-readable name by which they appear. The category membership of targets is specified by each target record having a list of opaque target identifiers, each of which links to one of the categories in this tab.

The list of selected categories can be viewed; new categories can be added.

(The parents from which candidate categories are inherited can be managed, but this is an advanced topic.)

Library management

Each library in a consortium has a name, an administrative account with username and password, and lists of targets, categories and end-user identities. The first two of these are

maintained by the consortium administrator in the **Libraries** tab; the last three, by the appropriate library-level administrator. The **Libraries** tab initially displays a list of libraries in the consortium:

The screenshot shows the MasterKey Admin Console interface. The top navigation bar includes 'Targets', 'Categories', 'Libraries' (selected), 'Administrator', 'Reports', and '[Library Admin]'. The 'Libraries' tab displays 'Library Administrator Accounts'. On the left sidebar, there are links for 'List Libraries' and 'New Library', along with W3C XHTML 1.0 and CSS validation icons. The main content area features a search bar and a list of library accounts. The table below shows the first 15 records of the 28 total records.

Name	Edit	Delete	Act as this user
ALA New Orleans 2011			
Boston Midwinter Library			
Capital District Library Council Administrator			
CL Connector Testing			
Content Proxy Library			
DB ILS testing			
Dennis' Library			
Eastern Academic Consortium			
EBSCO USI Demo			
Inno360			
Jakub's Library			
LYRASIS			
MasterKey FastTrack			
MasterKey MetaFind			
Mike's Library			
Mike's Private Library (not really used)			
Mike9			
MK Demo			

Since libraries are not inherited as targets and categories are, there are no checkboxes, and no **Selected Libraries** link. Library accounts can be edited to change the display-name, the library administrator's username/password, etc. In addition, clicking on the green “Go” arrow to the right of a library name allows the consortium administrator to act as the specified library's administrator (see below). When acting as a library administrator, clicking on the **[Consortium Admin]** tab returns to consortium-level administration.

Administrator maintenance

The consortium administrator can maintain his own details, including display-name and login credentials, in the **Administrator** tab:

Firefox ▾ MasterKey Admin Console: The Bi... +

I
N
D
E
X
D
A
T
A

INDEX DATA

MasterKey Admin Console: The Big Sky Consortium

MKAdmin Global Administrator

Logout | Help

TargetsCategoriesLibrariesAdministratorReports[Library Admin]

W3C XHTML 1.0 ✓

W3C CSS ✓

Update your personal details

Name:

Project Manager:

Email Address:

Phone Number:

Comment:

Update

Change Password

Please re-enter your current password, and choose a new one:

* Current password:

* New password:

* Re-enter new password:

Update

Powered by Index Data

Reports

The **Reports** tab provides links to generate several reports (e.g. targets by library, IP address ranges by library). Each report is provided in CSV format, for import into Excel or a similar spreadsheet program.

Library-level administration

Library administrators can curate targets and manage categories for their users, just as consortium administrators can for their libraries. They can provide end-users with a means to log in by user/password, IP address or referrer URL, maintain their own details, and generate reports.

Target curation

The screenshot displays the MasterKey Admin Console: Library Administration interface. The top navigation bar includes 'Logout' and 'Help'. The main navigation tabs are 'Targets', 'Categories', 'Access', 'Administrator', 'Reports', and '[Consortium Admin]'. The 'Targets' tab is active, showing a sidebar with 'All Targets', 'Selected Targets', 'New Target', and 'Manage Parents'. The 'Manage Parents' section lists various service providers and their target counts, including EBSCO (294), Wilson (78), Gale (55), Index Data (8), Oxford University Press (2), Emerald Group (2), Encyclopedia Britannica (1), National Institutes of Health (1), Zentralblatt MATH (1), Springer (1), New England Journal of Medicine (1), IEEE (1), Business Insights (1), Knovel (1), CSA (1), American Museum of Natural History (1), NBII (1), Oxford Analytica (1), JSTOR/ITHAKA (1), and Ovid (1). The 'Categories' section lists [id_subscription] (428), Library Catalogs (14), [id_openaccess] (11), Journal Articles (4), and CIP targets (2).

The main content area is titled 'Target Checklist' and features a search bar and a search button. Below the search bar is a alphabetical index 'A B C D E F G H I J K L M N O P Q R S T U V W X Y Z'. The records are displayed in a table with columns 'Name', 'Provider', 'Selected', and 'Edit'. The table shows records 1-50 of 1830. The 'Selected' column contains checkboxes, and the 'Edit' column contains edit icons. The table lists various targets such as 'ABC CLIO (with proxy)', 'ABC-CLIO eBooks', 'AbeBooks', 'AbeBooks with ISBN', 'Aberdeen University', 'Abertay Dundee University', 'ABES', 'Abstracts in Social Gerontology', 'absysrebiun', 'Academic ASAP', 'Academica Sinica', 'Academic One File', and 'Academic Search Alumni Edition'.

Name	Provider	Selected	Edit
ABC CLIO (with proxy)		<input type="checkbox"/>	
ABC-CLIO eBooks	ABC-CLIO	<input checked="" type="checkbox"/>	
AbeBooks		<input type="checkbox"/>	
AbeBooks with ISBN		<input type="checkbox"/>	
Aberdeen University		<input checked="" type="checkbox"/>	
Abertay Dundee University		<input type="checkbox"/>	
ABES		<input type="checkbox"/>	
ABES		<input type="checkbox"/>	
ABES		<input type="checkbox"/>	
Abstracts in Social Gerontology	EBSCO	<input type="checkbox"/>	
absysrebiun		<input type="checkbox"/>	
Academic ASAP	Gale	<input type="checkbox"/>	
Academica Sinica		<input type="checkbox"/>	
Academic One File	Gale	<input type="checkbox"/>	
Academic Search Alumni Edition	EBSCO	<input type="checkbox"/>	

Target maintenance at the library level is similar to the consortium level in that targets are selected from a larger list inherited from parents, and selected targets may be edited to provide overrides that apply only at the local level.

The main difference is that one of the parents from which targets are inherited is the consortium-level list. In many cases, this will be the only source of candidate targets, and a library will select a strict subset of the targets chosen by the consortium. However, other schemes are possible depending on what parents are selected. In one common configuration, the consortium does not inherit target profiles from the “public” Connector Platform repository, but each library inherits profiles from its own Connector Platform repository.

(In the screenshot above, the library inherits targets from IRSpy and MKHome as well as from the consortium of which it is a member, hence the large number of available targets.)

Category maintenance

Categories can be maintained by each library much as they are by the consortium administrator. In general, the categories used by each library are a subset of those defined at and inherited from the consortium level, but libraries are free to modify this scheme as they wish.

Access management

In a standard MasterKey system, the primary purpose of profiling targets is to make them available for asynchronous metasearching using a MasterKey user interface or Drupal module. In order to obtain access to such a user interface, and therefore to subscribed resources, it is necessary that end-users identify themselves.

Authentication methods supported by the MasterKey UI include username/password credentials, IP address recognition and referring URL. Any of these methods may provide a match against an end-user account; once a match is found, the user has access to the targets configured for use by the library that the account is associated with.

The **Access** tab provides a means for library administrators to maintain end-user accounts, specifying any combination of a username/password pair, or a set of recognised IP-address ranges, and a referring URL.

Note: End-user accounts (which are maintained by library administrators) are not to be confused with library-administrator accounts (which are maintained by the consortium administrator).

Administrator maintenance

Just like the consortium administrator, library administrators can maintain their own details, including display-name and login credentials, in the **Administrator** tab.

Reports

The library-level **Reports** tab provides links to generate reports specific to individual libraries, as opposed to the entire consortium.

Configuration

Configuration of the Admin Console takes two forms. Configuration of the Apache2 web server is required in order to expose the console via the web. And application-level configuration of the console itself determines the layout of the pages, the set of available tabs, the relationships between the various realms of targets, categories and identities, and details of the functionality, as well as cosmetic styling.

Apache2 configuration

The Admin Console can be set up to run either as its own virtual host or, more commonly, under the **/console/** area of a virtual host used by the user-facing application. For example,

<http://mk2.indexdata.com/> is a demo metasearcher, and <http://mk2.indexdata.com/console> is used to administer it. These arrangements are specified by appropriate directives in the Apache2 configuration.

In general this is done using Apache2 directives similar to the following:

```
Alias /static/ /etc/masterkey/admin/conf.d/newmk2/web/
Alias /images/ /usr/share/masterkey/admin/htdocs/images/
AliasMatch ^/console$ /usr/share/masterkey/admin/htdocs/jump.html
AliasMatch ^/console/[^\/]*$ /usr/share/masterkey/admin/htdocs/jump.html
AliasMatch ^/console/[^\/]+/(.*) /usr/share/masterkey/admin/htdocs/$1

<Directory /usr/share/masterkey/admin/htdocs>
  <FilesMatch "\.(html|css|csv|txt)$">
    SetHandler perl-script
    PerlHandler HTML::Mason::ApacheHandler
  </FilesMatch>
  PerlAddVar MasonCompRoot "private =>
/usr/share/masterkey/admin/htdocs"
  PerlSetVar MasonDataDir /tmp/mkadmin-mason
</Directory>
```

The first line provides for application-specific images such as header logos; the second for the Admin Console's generic images, such as the Delete and Edit icons. The next three lines arrange for **/console/** itself to be the main login page, and for all URLs within the **/console/** area to be handled by the Console pages. Finally, the **<Directory>** stanza arranges for all URLs within that area to be interpreted as HTML::Mason components, by means of the **mod_perl** module.

In addition the Apache2 configuration is generally used to establish values of environment variables used by the Admin Console – principally, **MAconfigpath**, which tells it where to find its own configuration files, and **MAloglevel**, which controls what kinds of events are logged.

Although details of this configuration vary between applications and operating systems, the principles remain constant. Establishing an MKAdmin instance on a new machine is typically not onerous.

MKAdmin configuration

Configuration at the Apache2 level is restricted to that necessary to enable the console to run. The great majority of configuration is found in MKAdmin's own configuration files, named with the suffix **.config**. These are in a simple format similar to Java **.properties** files but extended by facilities such as file inclusion and macro definition and expansion.

MKAdmin configuration files are sought in one or more locations specified by the colon-separated components of the value of the **MAconfigpath** environment variable. Typically there are at least two locations: one specific to the application; and one provided by the MKAdmin distribution and containing a “standard” configuration. As a result, the application-specific configuration elements are generally few, as they consist only of overrides that modify the

functionality of the base configuration. Sometimes it is advantageous for the path to specify further directories: for example, one containing operating-system-specific overrides, or those necessary to mark a certain installation of an MKAdmin application as the testing, staging or production version.

At the simplest, there is a single **.config** file for each tab in the MKAdmin application. To avoid replication, however, it is typical to factor out configuration shared by all tabs into one file, configuration shared by all consortium-level tabs into another file, and so on. Main configuration files then include all relevant shared files.

Styling

In addition to the **.config** files discussed above, and HTML fragments containing context-sensitive help, a complete MKAdmin configuration contains files used to style the console. Most importantly, these include CSS stylesheets for the site as a whole, for the consortium-level pages, for the library-level pages, and for the console front page. Image files may also be provided, most obviously a logo used site-wide in the header. These image files may be included on pages by references from the CSS files.

The combination of these stylesheets and image files with certain MKAdmin-level configuration options allow the console to be styled with some freedom.