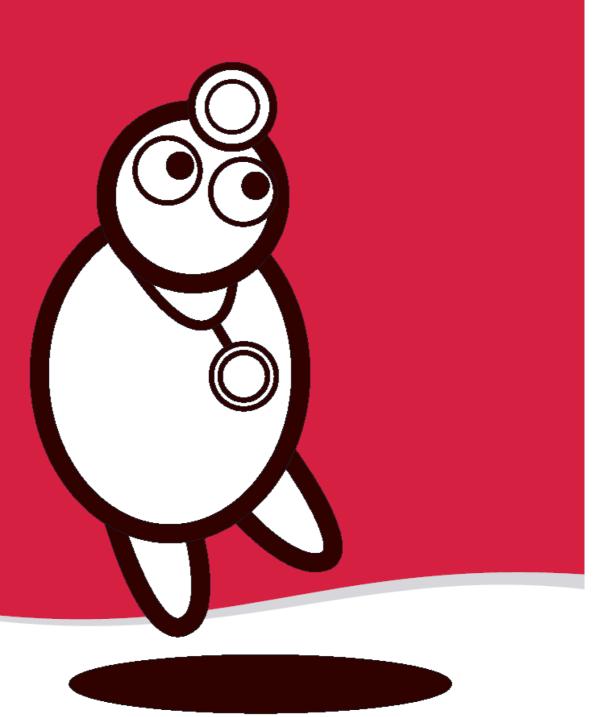
DocCheck*

Technical Manual

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1 DocCheck® Login – Your online access to healthcare professionals

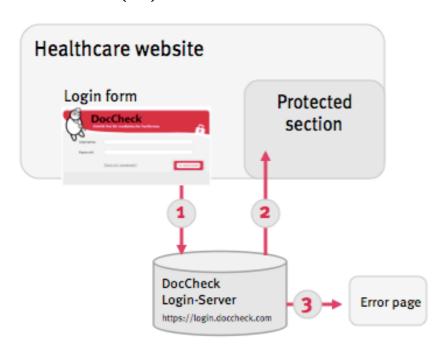
1.1 What is the DocCheck Login?

With the DocCheck login system you can easily create a secure area on your website which is only accessible to healthcare professionals. With the free-of-charge Basic License you can use the DocCheck infrastructure for user registration, support, and profession check. All you need to do is create and configure a DocCheck Login at the online platform DocCheck CReaM. Just integrate the HTML code for the IFRAME containing the login form into your website and you are done.

1.2 Functionality

Logging in to a protected area of a website triggers the following process:

1. The visitor enters his login credentials in the DocCheck login form. User name and password are transferred to the DocCheck login server via an encrypted connection (SSL).



2. DocCheck validates the login credentials and checks if the visitor's profession is allowed to enter the protected area. If both checks are positive, the visitor is transferred to the target URL.

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3. In case the login credentials are not valid or the visitor's profession is not allowed to enter the site, the visitor is shown an error page explaining why he canot enter.

Please note: The Basic license secures the protected area of the website only by redirecting the visitor to the landing URL after checking the profession. Additional security (e.g. passing a session ID through the login) is possible with the Economy and Business licenses (see 4., 5. and 6.).

1.3 Upgraded licenses and additional functions

The DocCheck login offers more than just a password protection for your website. You can also learn more about your website visitors - either anonymously as a statistical analysis or personally by transferring your visitors' data - with their consent - to your website. This information is invaluable for adjusting your marketing, website and field service activities perfectly to your target group.

The Basic license can be upgraded and extended by purchasing the following licenses and functions:

- The Economy license includes all features of the Basic license. In addition it
 offers increased security by passing (encrypted/hashed) website parameters
 through the login. Also included is the transfer of a unique key for each visitor
 who logs in on your website, as well as a sorted routing of visitors after login
 to different target URLs according to profession, language or country.
- The **Business license** features all functions of the Basic and Economy license. In addition you can ask your website visitors for their consent to transfer their profession and contact data to your website for personalised services, e.g. as recipients of your newsletter or for your own CRM. Also it is possible for your own company employees to access your websites even if the profession "pharmaceutical company employee" is not allowed to enter. The feature Alias shows the visitor a single domain before and after login, even if the protected area is accessible from multiple domains.
- The **function Pool** collects the data transferred to your website with the Business license in an easily accessible database.
- The **function statistics** can be used with any Login license. It allows a statistical analysis of the login on your website according to frequency and unique users as well as profession, discipline, activity and country.



It is also possible to use the DocCheck Login as an authentication system for mobile Apps (see 7.).



2 Integrating the DocCheck® Login into your website

2.1 Create a company account for DocCheck CReaM

The online platform DocCheck CReaM (http://crm.doccheck.com) is your tool for creating and configuring the password protection for your website. Please register your company first (https://crm.doccheck.com/com/registration) to create a company account. To access the company account you will also need a personal DocCheck password, so please register after creating your company account.

If you register as an agency please note that agencies can only create logins for their customers. If your customer already has an account in CReaM you can link your agency account to it. Otherwise, please create a new account for your customer at "Administration – Standing data".

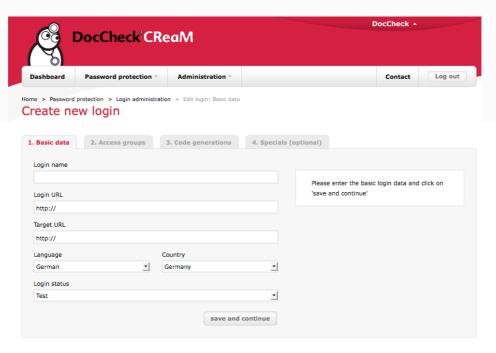
2.2 Create a login for your website

After creating a company account please log in to DocCheck CReaM (http://crm.doccheck.com). Go to "Password Protection – Login administration" to create a new login or edit existing ones.

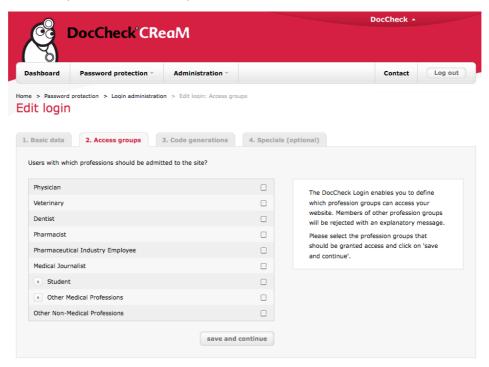
To create a login you first need to create a folder for it. Click "create new folder", enter a folder name and save. Then you can create a login within that folder by clicking "create login" next to the folder name. Your login is configured in three easy steps:

- 1. In the first tab please enter the basic data of your login:
 - Name: Name of your login (for your internal use only)
 - Login URL: URL of the page which contains the login form
 - Target URL: URL of the landing page after successful login
 - Language: language of the login form and the accompanying pages (password forgotten, registration, access not allowed)
 - Country: Country which is targeted by your website
 - Login status: Please choose between test, active and locked. Only active pages work properly live.





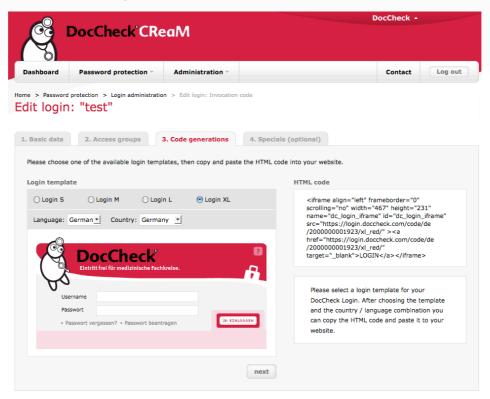
2. In the second tab you can specify which profession groups are allowed to access the protected area of your website:



3. In the third tab you can choose the design of the login form for your website from four standard sizes. In the box on the right you will get the HTML code for the IFRAME which contains the login form. A customization of the design



of the login form template to match your site design is possible. Please contact us for a quote.



4. In the fourth tab you can see the license functions that are currently activated for this login and configure them.

2.3 Implementation guidelines

Please adhere to the following guidelines when integrating the DocCheck login into your website:

- 1. The HTML code for the IFRAME provided by DocCheck must not be changed, if
 - the functionality of the login form or of the login action is changed or limited in any way
 - the login form is not displayed or only partially displayed
 - the SRC attribute or the alternative link is changed
 - the login form is not directly displayed as provided by the DocCheck server
- 2. Reading or saving of login credentials constitutes a breach of the terms of use and privacy agreement and is strictly prohibited.
- 3. The login form has to be easily accessible on your website.

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- 4. The option to login via DocCheck in order to access the protected area has to be easily identifiable for the DocCheck user.
- 5. The login form always has to contain the DocCheck logo and brand name, the fields "username" and "password" and the links "Password forgotten?" and "Sign up for free".

2.4 Technical details

2.4.1 Login-URL

This is an example of the structure of the URL for the login-template. It is placed in the SRC attribute and alternative link of the IFRAME:

https://login.doccheck.com/code/12345/com/xl_red/

The string of numbers '12345' is the ID of the login (attribute "login_id"), the two-to four-character code specifies the language of the login form ("de", "com", "fr", "es", "it", "nl") and the free text parameter specifies the name of the template.

2.4.2 Frames

The target page of the login form is by default opened in the top frame. If the target is supposed to open in the parent frame, the IFRAME itself or in a new window, you can control this behaviour by appending "parent", "self" and "blank", respectively:

https://login.doccheck.com/code/12345/de/xl_red/_parent/

2.4.3 Website parameters

In order to pass on additional parameters of your website through the login you just need to append these to the URL:

https://login.doccheck.com/code/12345/de/xl_red/session_id=abcd/ok=1

If a value contains a slash ("/"), it must be encoded as "{slash}":

 $https://login.doccheck.com/code/12345/de/xl_red/\textbf{x=a{slash}b}$

In general, it is recommended to encode all non-alphanumeric characters via their respective hex codes as defined by the respective RFC:

https://login.doccheck.com/code/12345/de/xl_red/x=y%20%3Fz%3E

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Please note: access to the protected area should not be made dependent on any of the following parameters:

- the referrer URL being login.doccheck.com
- the IP addresses of the DocCheck servers
- the presence of any additional parameters which are not documented in this manual (e.g. "dc=1")



3 DocCheck CReaM – manage your logins online

DocCheck CReaM (http://crm.doccheck.com) is the online platform for creating, configuring and analysing the DocCheck Login. Within CReaM you can

- create and configure logins for the protected areas of your websites
- · configure licensed functions such as routing
- · create company and test passwords to access your own websites
- analyse the login behaviour of your visitors with the function "statistics"
- access your collected user data which are stored in your dedicated database with the function "pool"

3.1 Change the configuration of a login

In order to change the configuration of an existing login, please go to "Password protection – login administration". In the list of logins please click on the name of the login you wish to configure. In the following view you can edit the URLs and the allowed professions of the login (see also 2.2).

3.2 Configuration of the function "routing"

To configure the different target URLs for the function "routing" from the Economy or Business license, please see 5.3.

3.3 Create company or test passwords

As the owner of a website you can create username/password combinations which allow you to access only the protected areas of your own websites. DocCheck offers two types of access: company passwords and test passwords.

Company passwords

Company passwords grant access to websites which belong to your own company. You can use them to allow non-HCPs to access the protected area of your website, e.g. your developers or field service.

To create a company password go to "Password protection – Company passwords" and click on the button "create new company password". Afterwards select the logins for which the password shall be valid. Now enter a username and password and an optional expiry date.



Test passwords

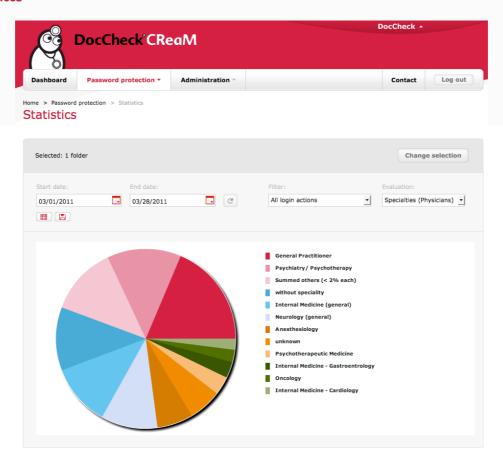
Test passwords allow you to test functions of your website or the login which are dependent on profession, discipline or activity as well as language or country of the user. This is useful to test routing functions or the user data transferred with the "Personal" function (Business license).

3.4 Statistics for your login

The additional function **Statistics** can be combined with any of the standard licenses. It allows you to analyse the login behaviour of your website visitors directly in DocCheck CReaM. Go to "Password protection – Statistics" to see the frequency and unique visitors according to profession, discipline, activity, country and gender. This information helps you to systematically improve your websites.







3.5 Access your collected user data within your pool database

The additional function **Pool** can be used with the Business license. It collects the personal data of the visitors who gave their consent to transferring the data to your website in a web-accessible database (for information on the Business license please refer to 6.). You do not need to set up and maintain an additional database. Furthermore your data is always up to date, as whenever a DocCheck member changes their data at DocCheck, during his next login to your site he is asked again to agree to the transfer and the changes are automatically saved in your pool.

You can access the data in your pool (name, address, email address, profession, discipline) anytime via DocCheck CReaM. Go to "Password protection – DocCheck Pool". First you need to select the pages whose visitors you want to see. Then choose the time constraints and data format, and click "Retrieve data" to download the user data.



4 Increased security for your login

The DocCheck login offers more than just access control at the entrance - these security measures make unauthorized access to your website even more difficult.

4.1 Session variable within a cookie

In order to use a session variable you need a dynamic website, e.g. based on PHP, JSP etc. The session variable needs to be created on your website.

When the user first enters your website your website creates a session ID and saves it in a cookie. After the visitor has entered the protected area, your website checks the session ID in the cookie and can deny access if it is missing or has been manipulated. The downside: visitors who do not allow cookies are not able to enter your protected area.

4.2 Transfer of parameters: Passing on a session ID through the login

As an alternative to 4.1 the session ID can be passed on as a parameter. This even works if a visitor does not allow cookies. Transfer of parameters and protecting them against manipulation are available with the Economy and Business license (see 5 and 6).

Accessing the protected area via a bookmark or a passed-on link is possible if the current session ID is still valid. If you bind the session to the visitor's IP address, then a passed-on link usually does not work, even if the session is still valid.

4.3 Hashing of parameters

The session ID can be further secured with a checksum. This prevents a visitor from hijacking a valid session and using it to access the protected area.

If you wish to use hashing of parameters with the Economy or Business license, you will receive a key from DocCheck, e.g. "L337P455". Upon login an MD5-checksum for the parameter session ID is created this way: MD5 (session_id . "L337P455"). This checksum is passed on to the website after login as "session_id_enc" in addition to the original session ID. Now your website can perform the same hashing and check if the result matches the passed hash value.



4.4 Not recommended security measures

Since it varies with different browsers, we do not recommend using a referrer check. Furtermore we do not recommend a .htaccess protection, as most current browsers do not support a bypass via the URL

http://login:password@www.webserver.xy.



5 The Economy license

In addition to the features of the Basic license, the Economy license allows you to use transfer and encryption of parameters, an anonymous unique key for each visitor and the automatic routing of visitors to different landing pages.

5.1 Transfer and encryption of parameters

This function allows you to pass on any parameters which are generated on your website through the DocCheck login and back to your website.

The parameters are appended as "variable=value"-pairs to the URL in the iframe:

https://login.doccheck.com/code/test=1/anderertest=abcde

See 2.4.3 for details. After login the passed parameters are appended to the target URL as GET parameters. The parameters can also be hashed with an MD5 checksum (see also 4.3).

5.2 Unique Key

The unique key allows you to anonymously identify returning visitors. Every time a visitor logs in to your website his personal unique key (an alphanumeric string of max. 50 characters) is passed on to your website. You can use the unique key as a primary key to offer a more personalized web experience.

At every login the unique key is appended to the target URL as a GET parameter:

http://www.bioboxx.com/secure/script?uniquekey=a1b2c3

The unique key does not contain any personal information. Acquiring personal information about your website visitors with their consent is possible with the Business license (see 6.1).

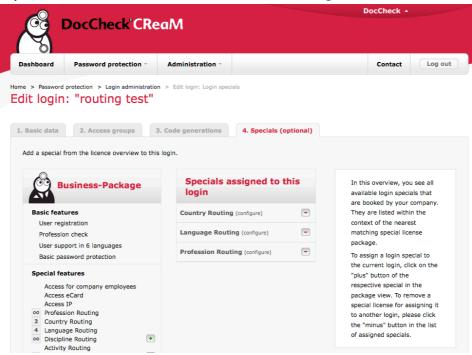
5.3 Routing of visitors according to profession, country or language

The function **routing** offers an automatic redirection to different target URLs for different groups of visitors. Routing is an ideal function if

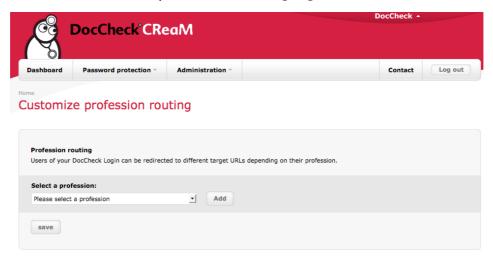
- your website has different areas for different professions (e.g. physicians and pharmacists)
- · your website is available in different languages
- your website provides localized content for different countries



To use the routing function your website has to provide different URLs or URL parameters for the groups between which you want to differentiate. Please go to "Password protection – Login administration" to assign the URLs to the respective groups. In the list of logins please click on the login for which you want to set up the routing. Go to tab number 4 "Specials (optional)" and check if the routing function you want to use is activated. If not, either assign it or contact us.



If the function is activated you can click on the link "configure" and specify the URLs for different countries, professions or languages.





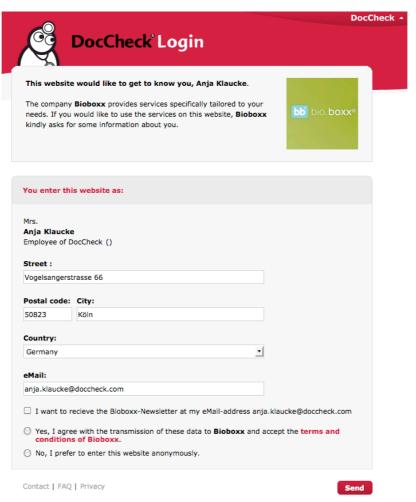
6 The Business license

The Business license allows you to use all the features of the Basic and Economy license. In addition you can get in touch personally with your website visitors.

6.1 DocCheck Personal – Transfer of personal visitor data

The function **DocCheck Personal** allows you to ask visitors for their consent to transfer their personal data (name, address, email-address, profession, discipline) to your website. This data can be integrated into your customer relationship management (CRM) system.

After logging in visitors are shown one page with a form displaying their data and a short explanation why the website asks for the data. The visitors can agree to transfer their data or decide to access the site anonymously.





Update of visitor data

Per default the personal form is shown once upon the first login of a visitor. The decision is saved and the visitor is not asked again. The data is transferred once appended to the target URL as GET parameters. From the second login on only the unique key (see 5.2) is transferred and can be used to link the visitor to the personal data you stored.

Additionally it is checked upon every login whether a visitor has updated their profile information at DocCheck since his last visit on your site. In case of an update the visitor is asked for his consent again, and the updated data is transferred to your website. This way your database stays up to date.

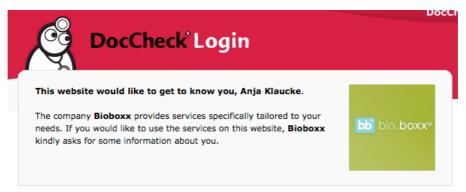
6.1.1 Pool – your web database for personal user data

The additional function **pool** creates a database to collect the personal data transferred to your website. The data are accessible via DocCheck CReaM (see 3.5).

6.1.2 Customization of the personal form

Greet users with a customized and branded text

The standard text above the form can be changed to a text provided by you. It is also possible to integrate a logo into the text box.



Additional opt-in checkbox

You can add a checkbox to the form, e.g. to ask visitors to subscribe to a newsletter. When checked the value "dc_company_info_1=1" is transferred to your website.



☑ I want to recieve the Bioboxx-Newsletter at my eMail-address anja.klaucke@doccheck.com	
 Yes, I agree with the transmission of these data to Bioboxx and accept the terms and conditions of Bioboxx. 	
No, I prefer to enter this website anonymously.	

One option checked per default

In the standard configuration none of the two options is checked. It is possible to set one of them as checked per default.

6.1.3 Adjusting the display of the personal form

The form which asks the visitors for their agreement is per default displayed only once per visitor, and their decision whether they wish to transfer their personal data or not is saved. The following options are available to change the display frequence of the form. Please contact us regarding these changes.

Setting the allowance for all logins of one company

If you have multiple websites that use the DocCheck login and the Business license, you probably do not want to ask your visitors for their agreement on every page. With this adjustment the visitors only need to give their agreement once, and it is applied to all websites of your company.

Display the form upon every login until the visitor agrees

If you want to get the agreement of visitors who first decided to enter your website anonymously, this adjustment displays the personal form every time a visitor logs in, until they give their agreement.

6.1.4 Technical aspects of the personal form

Transfer of data

The visitors' data is transferred to your website appended to the URL as GET parameters - additional encryption/hashing possible (see 1.4.3) -

http://www.xyz.de/script?dc_name=Miller&dc_vorname=John&dc_...

Also the unique key of the visitor is appended to the URL.



The following parameters can be transferred

Parameter	Name	Value
Address	dc_anrede	Mr. / Ms.
Gender	dc_gender	m / f
Title	dc_titel	e.g. Dr.
First name	dc_vorname	e.g. George
Last name	dc_name	e.g. Smith
Street	dc_strasse	e.g. Teststreet 14
ZIP code	dc_plz	e.g. 90210
City	dc_ort	e.g. Nowhere
Country	dc_land	ISO Code, e.g. "de", "uk"
Profession	dc_beruf	e.g. ID for physician, nurse etc.
Discipline	dc_fachgebiet	e.g. ID for Internal Medicine or Surgery
(physicians only)		
Email address	dc_email	e.g. example@company.com
Unique Key (s. 5.2)	uniquekey	e.g.a41a1938120325c75c8c1572b044

- List of profession IDs: http://service.doccheck.com/service/info/codes.php?language=com&scope=profession
- List of discipline IDs http://service.doccheck.com/service/info/codes.php?language=com&scope=discipline
- List of country IDs: http://service.doccheck.com/service/info/codes.php?language=com&scope=country

6.1.5 Testing the personal form – company and test passwords

If you log in on a website with a company password, the personal form is not displayed. In order to test the personal form, please use a test password (see 3.3). Upon login the personal form is filled with standard data which allows you to test the encoding of special characters. Changes to the data in the personal form are neither saved nor transferred to the website.

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6.2 Lock out competitors, invite your own employees

The profession groups which are allowed to access the protected area on your website are usually configured in the login administration in CReaM. Usually pharmaceutical companies decide not to grant access to the profession group "employees of pharmaceutical companies" because in this case competitors could enter the site. This way, you also lock out the employees of your own company, who might need to access the websites, e.g. your field service or product managers. This function solves the dilemma by automatically allowing in all employees of pharmaceutical companies who are registered with DocCheck under your company email domain or other domains specified by you.

Please note that locking out the profession group "employees of pharmaceutical companies" does not lock out DocCheck members who are registered as physicians but might work for a pharmaceutical company.

6.3 DocCheck Alias – Keep a single domain after login

If your website uses different domains with a login that directs the visitor to one single protected area, it is confusing for the visitor if the domain name changes after login. Per default you can only specify one target URL per login, so visitors arriving to your protected area via

- www.indication24.com
- www.Indication-online.com
- www.Indication.com

would arrive at the same domain after login, e.g. www.Indication.com/physician, no matter which domain they came from. With the Alias function the visitor always sees the URL from which he arrived.

Example:

User is redirected comes in via www.indication24.com, then to www.indication24.com/physician even though the target URL is set to www.indication.com/physician.



7 DocCheck Mobile Login

The DocCheck Login can also be used to authenticate HPCs in mobile apps. A framework for the integration of the login into iOS and Android apps is available upon request .

8 Contact

Your contact:



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9 Appendix A.

List of all available specials with examples

9.1 URL modifiers (additional info)

9.1.1 Hash session ID

Input values: session_id – your session ID

Output values: session_id - unchanged

session_id_enc - hashed session ID

Example IFRAME call:

https://login.doccheck.com/.../session_id=abc

Example return URL:

https://.../?session_id=abc&session_id_enc=xyz123xyz

Calculation of hash value:

Prefix: md5(SECRET_KEY.session_id)
Postfix: md5(session_id . SECRET_KEY)

Example calculation (postfix):

\$strSessionIdEnc = md5(\$strSessionId . "\$3CR3TK3Y");