SSH.COM

Secure Forms

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Product Description

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Contents

1. Introduction

Secure Forms is a secure form solution that enables you to electronically publish your organization's forms easily and securely. Publishing does not require programming skills.

As for the user, Secure Forms works so that the forms can be filled and sent electronically directly – without downloading or printing files. If needed, the use of the service can be restricted and users can be authenticated strongly (Suomi.fi YPA/Suomi.fi/BankID/NemID) or more flexibly, for example, with a password or with a PIN code sent to GSM number.

The form solution can be integrated with backend systems so that the information can be transferred directly to internal systems without laborious steps in between.

The service is used over protected TLS connection with browser. Secure form platform guarantees the information security and data protection in electronic services.

2. Secure form platform

2.1 Form Manager

Form Manager Page is the main interface of Secure Forms Editor showing the overview of all forms. Overview includes the form name and ID, public URL, authentication method, availability times and opening hours. It is possible to create new forms and edit existing ones as well as manage different templates that can be used in all the forms. Forms can be sorted by name or ID number. The search field also helps to find the form needed.

The following actions are available to all forms individually:

Table 1. Actions available to all forms individually

✏️	Edit	Manages form's questions.
🔧	Settings	Manages configuration parameters of the form.
👥	User access	Edits the form's user access rights.
▯▯	Page manager	Manages the pages of the form.
🗐	Copy form	Copies an existing form.
📊	Statistics	Possibility to download the form's stored answers.
👁️ 👁️‍🗨️	Enabled. Click to disable. Disabled. Click to enable.	Enables or disables the form. Only an enabled form can be accessed via the form URL.
❌	Delete	Deletes the selected form.

It is also possible to manage different templates that can be used in all the forms.

•   **Configure Selection Question Types:** New types of questions with predetermined selections can be added and edited. Question types can be localized to all allowed languages. Note that these are templates, and altering the entries here will not affect pre-existing questions made using these templates.

•   **Configure Specific Text Question Answer Types:** Specific restrictions to questions in the form of regular expressions can be added and tested. For example the answer must be date (dd.mm.yyyy) or an e-mail address. By default, all entries specified here are allowed to contain letters, numbers and basic punctuation characters. Text Field questions will have their Regular Expression Restriction set to the selected regular expression template.

•   **Schedule Template Editor:** Different schedule templates can be managed. For example a form can only be accessed during weekdays from 9 am to 4 pm and on weekends from 10 am to 2 pm. Templates can be used in all forms.

- **Form Layout Template Editor:** It is possible to create different CSS templates and thus giving all your forms a unified appearance. The templates can be utilized with both new and old forms.

- **Statistics on total answers given:** The total amount of answers can be seen in statistics. Form statistics can be viewed as total answers given to each forms or cumulative sum of answers in a specific form.

System can have multiple administrators with different permissions.

- **Admin privileges:** The administration privileges can be set individually to all users. Options are: may edit form questions, may change form settings, may use form user editor, may see form statistics and may delete form. In addition it can also be set who has global privileges and has the right to edit these admin privileges.

- **Admin password strength (default: none):** Administrator can change own password in user interface. It is possible to set instance-specific requirements for password strength, such as length and type of characters needed.

It is possible to make a quick list of chosen forms that can then be embedded to company's web site to enable easy access to available forms. With form listing view it is possible to make multiple lists and define what forms are included in that list. Each list has own URL.

2.2 Form Editor

In Form Editor it is possible to manage and edit the form's pages and questions as well as see a form preview.

By default, the form will be created and edited in the default language which is selected when form is created. Different languages can be added afterwards and default language can then be changed.

Question editor pop-up opens when adding a new question or clicking a title of existing question. Besides the question title field, other available fields depend on the selected question type. The following parameters are available to customize the form's look:

- Align choices horizontally

- Allow HTML: enable HTML format in question

- Allow multiple selections

- Allowed file extensions: use a comma to separate allowed extensions

- Choice type

- Data type: allows only certain type of characters

- Expand question text above input

- Font style

- Hide on receipt: hides the text when final answers are shown in PDF format

- Indent

- Maximum size of a single file given

- Maximum size of all given files

- Maximum length: the amount of characters one can enter to the field at most

- Minimum length: the amount of characters one must enter to the field

- Parameter name: parameter names can be seen in XML and HTTP Post reports

- Required: marks a mandatory field

- Give only warning: gives a warning of a field not being filled

- Restriction Regular Expression: defines allowed text in answer

- Size of input box

Depending on the question's field type the following parameters are available to customize the choices and child questions:

- Allowed file extensions: use a comma to separate allowed extensions

- Data type: allows only certain type of characters

- Field type: alternatives are text field, text area or file upload

- Input size: defines length of text field

- Maximum file size: defines maximum size of a single file given in megabytes

- Maximum file size for all files: defines maximum size of all given files in megabytes

- Maximum value: defines maximum value that can be entered to the field, for example 100

- Minimum value: defines minimum value that can be entered to the field, for example 1

- Parameter name: parameter names can be seen in XML and HTTP Post reports

- Required: marks a mandatory field

- Restriction: defines allowed text in answer

- Upload image

Question dependency can be added or edited. This way a question becomes visible only if all chosen questions have been previously answered to.

Depending on what confirmation style is chosen, the texts or redirecting link must be added to the last page of the form called confirmation page. The text on this page can be edited from form localization editor.

2.3 Configuration Editor (Settings)

Configuration parameters of each form can be managed.

A confirmation page style determines what will happen after the form is sent. The user can be alternatively shown a page with customizable title and message (HTML formatting is possible), a summary based on pre-defined rules, the sender of the form can review the filled data before the form is sent and thus make sure that the data is correct or the user is redirected to another page (back to the company's website, for example).

The summary page can show different text based on answers given to radio buttons, checkboxes and dropdowns in the form. The summary page can also calculate a score. A different text can be shown for different value ranges of the calculated score. This enables scenarios like grading.

- **Require signature (default: off):** Form user may be required to authenticate electronically (Suomi.fi/FINeID-smart card/BankID/NemID/Trust network banking recognition with Signicat or Telia OIDC authentication) before the filled form can be sent. It is possible to choose if the identity number will be shown fully or truncated.

Access to the form can be limited so that users are required to authenticate or that the form is only available within a defined period (for example only open on January from 9am to 5pm on weekdays).

- **Authentication method (default: open for all):** Form users may be required to authenticate before filling a form. Available authentication styles are: user must enter any user name, user must enter an existing user name (that has been previously created for the form), user must enter their mobile

    phone number (to which a PIN code is sent that allows access to the form), a registration link with access to the form is sent to user given e-mail address or electronic authentication is required (Suomi.fi YPA/Suomi.fi/BankID/NemID/Trust network banking recognition with Signicat or Telia OIDC authentication).

- **Validity period (default: always open):** It is possible to determine the date range when the form is open for answers. A start and end date can be chosen from the pop-up calendars

- **Schedule template (default: always open):** Form's opening times can be limited by using a template created in Schedule Template Editor.

- **Restricted access by IP address (default: off):** It can be defined that a form can be accessed from a specific IP addresses only. For example, access is allowed from company's internal network. Multiple IP addresses can be separated by comma (,).

- **Allowed addresses/domains (default: all):** Allowed addresses and/or domains can be defined when a form uses e-mail registration as authentication method. This can be utilized with allowing internal e-mail addresses or specific customers or partners to use the form without having to add individual users.

Each form can have individual layout options and other general settings.

- **Maximum answers (default: no limit):** Total number of answers allowed for the form can be determined. For example only the first 50 can register to an event. After that the form is closed and no more answers can be given.

- **Embedding allowed (default: off):** The form can be embedded on other pages, for example to company's web site.

- **Form alias (default: none):** It is possible to choose an alias name for the form (e.g. https://secure.example.com/formname).

- **Registration email address:** The e-mail address that is used as a sender address in all e-mails containing a personal user link can be defined.

- **Allow saving (default: Allow authenticated users to save unfinished forms):** In situations where the form has an authentication method defined, saving of unfinished answer can be used. By default, Authenticated users are allowed to save the unfinished form. The form will display a "Save and log out" button. A user can open the unfinished form again by using the same authentication method. The setting can be disabled or set so that users can save multiple drafts of answers. Following options are available;

- Disabled

- Allow authenticated users to save unfinished forms (only one version per user per form)

- Allow authenticated users to save drafts (one user can have multiple drafts per form)

- **Allow forward (default off):** In situations where one person might not have all the necessary information to fill a form, it can be allowed that the form can be forwarded. All the answers previously given will remain on the form and can be seen and edited by the next person. A form can be forwarded as many times as necessary. When the last person is finished it will be sent to the receiver defined in settings. The first person who forwards the form can also request to view the form before it is sent to the company. If fields are still missing it can be edited or forwarded again.

Several options regarding message forwarding are configurable on a form by form basis. These options include;

- Requiring forwarder to enter receiving address twice to avoid typos

- Whether to allow forwarder to select receiver authentication method

- Whether forwarder is allowed to have a final review for approval before finally submitting the form

- Entering a default subject and/or body of the sent e-mail message

- **CAPTCHA check (default: off):** Captcha can be added to prevent spam messages generated by computers. To ensure that the data is not generated by a computer, user must enter the automatically generated challenge, such as numbers or characters.

- **Printer (default: PDF):** It is possible to determine if the user can save/print the form in PDF, PDF for archive (PDF/A-1B) or HTML format. The same format will be used when sending e-mail reports with PDF attachment.

- **PDF printer (default: wkhtmltopdf):** It is possible to choose the pdf output service from two choices; wkhtmltopdf and PhantomJS.

- **Required indicator (default: *):** Indicator for required field can be changed. The indicator is shown after a question if the question is mandatory.

- **Show question numbers (default: on):** Automatic question numbers are visible on the form. Question numbers are only shown in e-mail report if they are also enabled on the form.

- **Show back button (default: on):** If the form has more than one page, the user can go back to previous pages in the form.

- **Show page numbers (default: on):** Page numbers are shown on the top of the form.

- **Show Help message after question input field (default: off):** If this setting is chosen, all help messages for the users are visible on the form. Help texts are automatically placed after the question input field. Help text can also be added directly inside the input field when question types of text field or text area is used. If this setting is disabled the help messages will be shown in a tooltip that opens from the help message indicator. It can be chosen if help texts on a form are placed to the top, bottom, right or left side of the cursor.

- **Help Message indicator (default: ?):** Indicator for help message can be changed. The help message indicator is shown after a question if help text has been added to the question and the "Show help" option is disabled.

- **Disabled form message:** Possibility to customize the form disabled message. The message can be localized and is form specific.

- **Enable user answer saving (default: on):** Allows user to save answers after form is completed and sent (PDF, PDF/A or HTML).

- **Form default logo:** Logo for the form can be added/changed for each form individually. Logo will be placed on the upper left corner of the form.

- **Form logos by enabled languages:** Different logo for each enabled language can be added/changed for each form individually. The logo will be placed on the upper left corner of the form.

- **Form style sheets:** The form style sheets can be edited (CSS). Layout can be custom-made to individual form or different templates can be used to fit into organization's image.

- **Form JavaScript:** It is possible to include custom JavaScript to a form. For example this can be used for adding tracking JS to a form.

The user interface language is set according to browser's language settings. For example, a user with English set as the default language in their browser can have the interface shown in English. User of the form can also choose to change the interface's language from a dropdown box. Supported languages are English, Finnish, Swedish, Norwegian, Danish, Estonian, Latvian, Lithuanian, Russian and Deutsch. All supported languages can be disabled entirely or made to be the only enabled language.

- **Default language:** If the form is created in more than one language, the default language can be changed.

- **Enabled languages:** It is possible to choose which languages are enabled in the form. A language will be shown only when all required fields have been filled.

- **Language selector (default: dropdown menu):** Language selector can be configured to be links, flags or a dropdown menu.

Form data can be sent to the determined recipient by e-mail or as HTTPS Post request (configuration needed). Reporting options can be determined individually for each form.

- **Store answers in database (default: on):** Form answers can be stored in database and they can be downloaded as CSV or Excel sheet. Also a possibility to delete all form answers from database after a specified time, for example, answers to forms will be stored only for 30 days.

- **CSV separator:** Character to separate data in CSV files can be set. Usually the character used is either a semicolon (;) or a comma (,).

- **Email reporting options (default: none):** Answers on a filled form can be attached to the report email as a formatted plaintext (text can be customized), CSV, Excel sheet, PDF or XML.

- **Report sending address:** Reports are sent from the e-mail address determined (for example noreply@example.com). Report sender address can also be defined to be a parameter. For example, the form data can be sent using the address of the person who has filled the form. It is then easier to reply to that person directly if additional information is needed.

- **Report recipient address:** Filled forms and their attachments are sent to the determined e-mail address. Reports can be sent to multiple addresses, if needed. Report recipient address can also be defined to be a parameter. For example, a copy of the form can be sent to an address defined by the person filling the form.

- **Localized report subject:** Report subject may be localized to use the same language as the filled form. For this to function, the localized subject values need to be entered in supported languages. Question parameters can also be used to automatically determine the subject. Answers can be separated by using individual values in subject (for example "$form_title $user_name" shows the title and user name in the e-mail subject field).

- **Pre-filled form based on another form's data:** A form can be pre-filled based on another form's data. It is also possible to transfer value from a hidden field to a visible field, and vice versa, in a subsequent step in the process.

- **Report Handling Modules:** Extra modules for handling form data can be customized. For example, CSV layout can be horizontal so that each answer is placed on a single row. Also a question can decide the recipient of the report.

- **Reminder of the form not being filled:** It is possible to send an automatic reminder message to the users who have not filled the form to complete it. Both the administrator and the user can be notified

that the form is not filled. The date the notification message is sent can be set, for example, a week after the original message was sent. It is also possible to change the setting individually.

- **Report Cover Letter:** The e-mail report message can include a cover letter. The cover letter text will be placed at the beginning of the e-mail message.

2.4 User Access

It is possible to create individual users who have access to the form. Users can have different authentication methods. Users may be added, edited and deleted one by one or in a bulk.

Individual link to the form can be sent to a user or to multiple users in bulk. It is possible to add text to the message and determine the language with which the form is shown (only enabled languages allowed).

- **Authentication method for users (default: open):** Form users may be required to authenticate before filling a form. Available authentication methods are: open (no authentication required), user name and password required, user name and GSM number required (PIN code will be sent to user's GSM when accessing the form), registration is required (registration link is sent to user's e-mail address) or electronic authentication is required. Depending on authentication method, the user's mobile phone number, e-mail address or social security number must be known.

- **Show authentication details on form (default: off):** If a form uses electronic authentication, the authentication details (name and personal identity number) can be shown in the beginning of the first page for the user to see. This information cannot be edited by the user.

- **Form availability for users (default: always open):** Form availability period per user can be set by choosing a start and end date from the pop-up calendars or choosing the opening hours (default: always open). It is also possible to limit how many times a user can answer to a form.

2.5 User Page Manager

The pages of a form can be managed. Overview shows all the form's pages in ascending order. It is also possible to add new pages at the bottom (before Confirmation page).

The following actions are available for each page, except Confirmation page (only Edit):

- **Move:** form's page order can be changed by moving pages up or down

- **Edit:** opens Form Editor page where form edition takes place

- **Copy:** makes a duplicate of the selected page and places it after the original page from which the copy was taken

- **Delete:** deletes the selected page

- **Dependency for entire page:** Entire pages can be dependent on previous answers. This enables more complex form structuring. The first and the last pages of a form cannot be dependent but the texts on those pages can be dependent on previous answers.

2.6 Form Statistics

It is possible to download the form's stored answers as an ordered file. NOTE: Answer database storing must be enabled for this to function.

The following options are available when generating a results file:

- **Date:** results can be limited by start and end date (format: dd.mm.yyyy)

- **Answers given in language:** results can be limited to one selected language

- **Include attached files:** if selected, attachments added by form users will be added in the results. NOTE: This will generate a zip archive and override the file type selection.

- **Character encoding:** the following encodings are available: "Windows Encoding", "UTF-8", "Latin1 (ISO-8859-1)".

- **File type:** the following file types are available: "Excel sheet", "CSV".

3. Requirements in operational environment

3.1 Hardware and operating system requirement

Operating system is either RedHat Enterprise Linux 8 or Centos 8 with postfix –mail delivery system and Apache Web Server.

Recommended virtual hardware 4 -n CPU (2000MHz), 8 GB RAM, 146 GB HDD, two network adapters (if clustered).

3.1.1 Network connections and IP addresses

Servers are placed in to the network (typically to DMZ). Sec@GW server requires one to three public IP addresses. If NAT is used in address translation, information of both public and network address translated addresses is needed.

3.1.2 Cluster net (duplicated system)

Servers are in constant contact with each other concerning data and setting replication as well as automated monitoring. In order for the two servers to monitor each other, a dedicated connection is required (minimum of 100mbit full-duplex). Connection can be made with direct cable connection or connection through clutches. Usually, network uses addresses 10.0.0.20 (node 1) and 10.0.0.50 (node 2).

3.1.3 SMS interface

Users who log in using SMS authentication received a SMS message to the mobile phone. Sec@GW server creates an SMS message and sends it to the customer's chosen SMS gateway in the net using email or http(s) interface. Next, customer's SMS gateway sends the message forward to the receiver's mobile phone.

3.1.4 Firewall settings

Firewall must allow the required connections. The following table shows requirements for basic installation; rules must be specified.

Table 2. Firewall settings

Connections to Sec@GW system (firewall settings)				
Port	Type	Source	Destination	Protocol / usage
443	TCP	*	Sec/c	HTTPS
25	TCP	Sec/c	SMTP GW	SMTP, secureForm answers (if SMTP used)

53	UDP	n1, n2	Nameservers	DNS
123	NTP	n1, n2	NTP servers	NTP
22	TCP	193.184.14.150	n1, n2	SSH, Reporting & updates, Deltagon's maintenance
443	TCP	n1, n2	193.184.14.150	Deltagon monitoring
443	TCP	n1, n2	193.184.14.151	Deltagon updateserver
80	TCP	n1, n2	Centos updateservers	CentOS updates
443	TCP	n1, n2	Redhat updateservers	Redhat updates