

Installation and Configuration Manual



EmailEncoder

Version 2.0.5

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Installation and Configuration Manual - EmailEncoder v2.0.5

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1. Introduction

Welcome!

EmailEncoder protects email addresses and Skype¹ links from being picked up by robots/sniffers by encrypting them or replacing them with a form for submitting messages. EmailEncoder can be applied to any ASP.NET solution without modifications, and works as a filter towards the web client. Hence the filter can be applied to an existing site without further changes.

1.1. How does it work?

EmailEncoder is added as a HTTP module on the IIS web server and scans all ASP.NET pages that are delivered to the clients. When an email, mailto or callto²-link is found, it is encoded and is not readable by normal means to the reader of the page.

This prevents retrieving email or Skype information by reading the source of the page since the email and Skype addresses are not visible in clear text. If a higher level of security is needed the link could be replaced with a link to a contact form, hence removing the email address completely.

All decrypt operations are performed on the server to prevent clients from interfering.

1.2. Manual conventions

Certain typographic conventions are used in this manual.

Running text is presented in the times font. Notes, tips and warnings are presented in bold.

Note! A note. Highlights important information.

Tips! A tip. Contains an advice or an easier way to do something.

Warning! A warning! Highlights that a problem might occur and how to avoid it.

2. Getting started

This chapter describes what you need to know to and install the product and get started using the default settings. In later sections we will get into more details about how the product works and the more advanced configuration options.

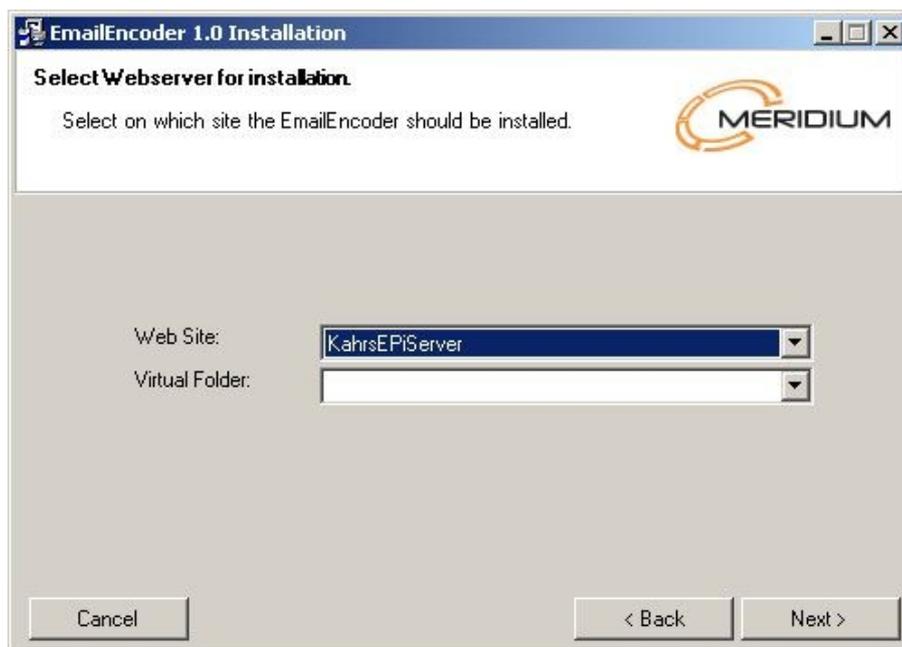
2.1. Installation

EmailEncoder is installed by running the installation application. The installation application copies the required files, and makes the necessary modifications to the system configuration. The system configuration is modified by adding some keys to the web.config. Some of these keys are configurable as explained below, see 6.4.

Note! Read thru section 9 if you are upgrading from a previous version of EmailEncoder.

2.1.1. Installation Step 1 – Choose web server

The installation application lets you choose on which web server you wish install EmailEncoder on by showing a drop down list with all the available web servers on the target computer.



2.1.2. Installation Step 2 – Choose license file

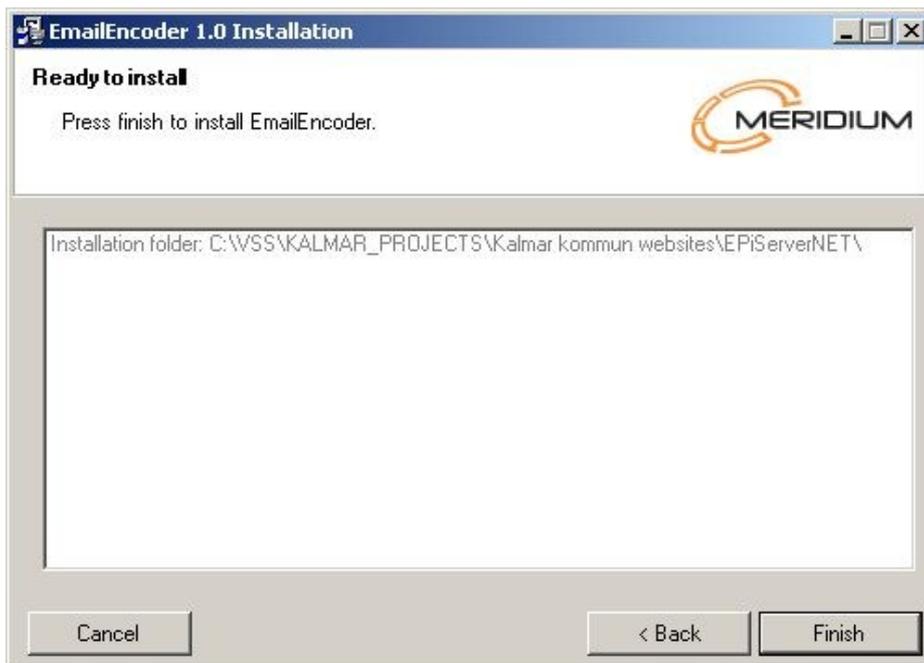
Browse to the license file that you received with the installation package and choose it. The license file is named meridiumLicense.config.

Tips! If you already have a valid license file you can skip this step. It is also possible to manually add the file meridiumLicense.config to the web root folder later.



2.1.3. Installation Step 3 - Finish

Click on Finish to complete the installation.



2.1.4. Done!

The installation is now completed and your site should be protected by the default protection which is Mail form math problem protector, see 4.7.

Note! It is recommended to read thru section 4, and decide which protector that best meets your requirements.

Note! In order to get the best possible protection you need to generate a unique encryption key. See section 6.4.21.

Tips! It is a good idea to enable logging to log any problems that might occur. See section 6.6.

3. Requirements

3.1. Browser software supported

EmailEncoder will work best using a web browser that supports JavaScript, but will also work without JavaScript.

EmailEncoder can be used on all Web browsers supporting JavaScript (according to the ECMA 262 specification³) and W3C DOM specification⁴ (Core version 2.0 and Events version 2.0⁵).

EmailEncoder will work both with and without javascript enabled.

3.2. Server software supported

EmailEncoder can be installed on any website running asp.net on a machine running Internet Information Services (IIS). EmailEncoder require that the site is run under version 2.0 or later of the dot net framework.

3.3. Web Accessibility Initiative (WAI⁶) support

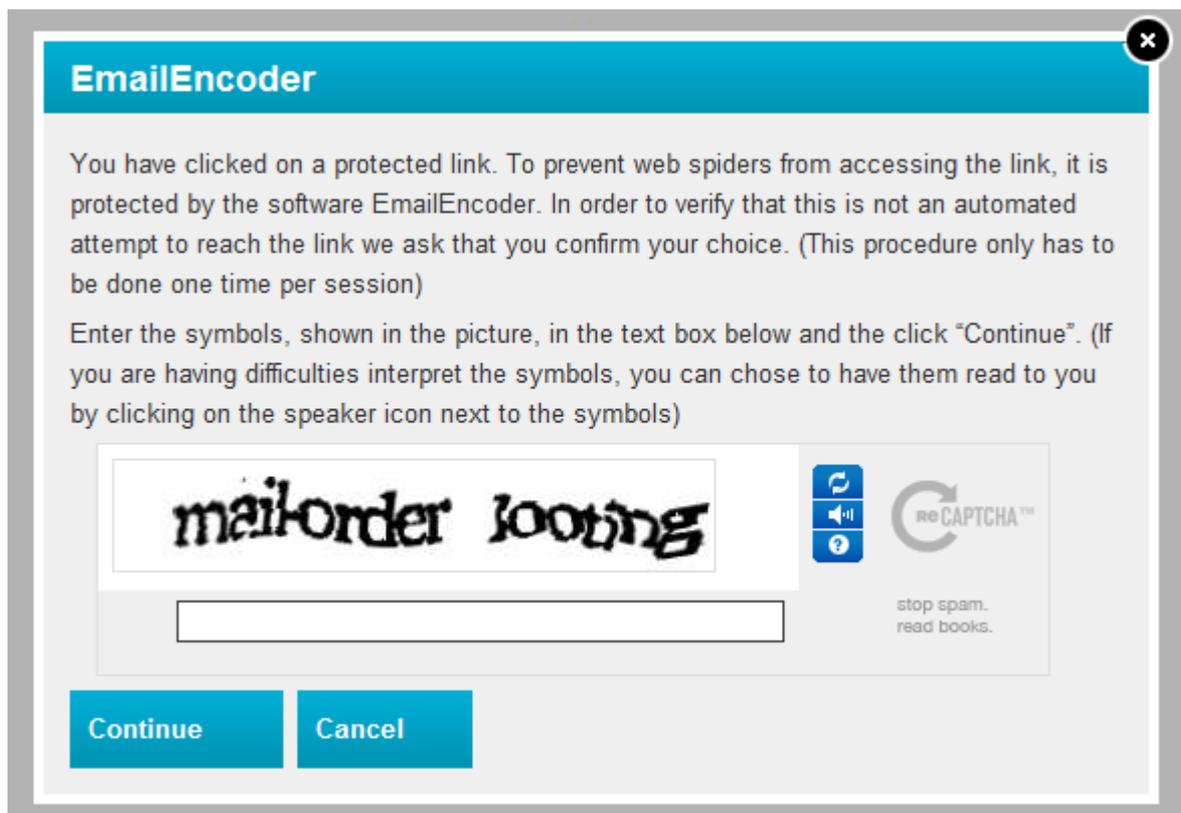
EmailEncoder does not alter the encoded pages support for WAI in any way. If you choose to configure EmailEncoder to use generated images replacing the visible emails, you will hamper WAI support a bit, since no information besides the static alt text is added to the images.

4. Email Protectors

In version 2.0, the concept EmailProtectors was introduced. This allows the administrator of a web site to configure the degree of protection needed for the site. The following protectors are available.

4.1. Captcha protector

All email addresses in text will be replaced by text/images (according to the Email encoding modes setting (see 6.4.12)) and mailto links will be replaced by a dialog that shows a distorted text that the user have to type in to a textbox. If the text matches the user will be redirected to the mailto link and the email will also be shown in clear text.



Pros

The captcha is difficult for a non human to solve so the email address is well protected.

Cons

Adds dependency to a third part⁷.

Non javascript effect

If javascript is disabled the captcha will require one extra step and it will be shown on a new page instead of in a dialog. The translations will not work, all texts will be shown in English.

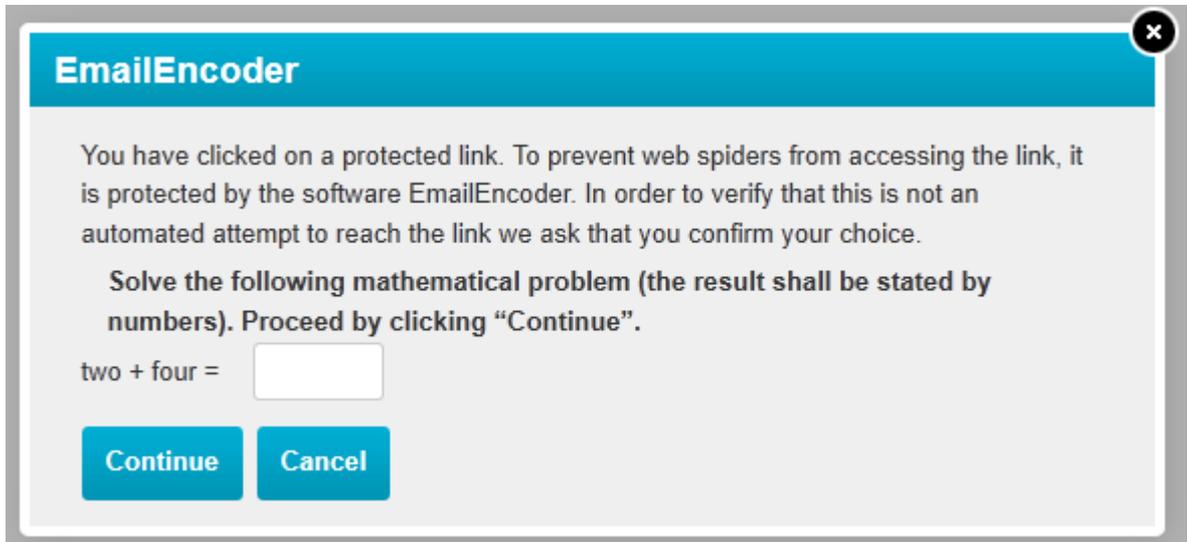
Configuring

Set the EmailProtector to "EmailEncoder.Core.EmailProtector.CaptchaProtector, EmailEncoder" (see 6.4.20)

Register an account at [recaptcha.net](https://www.recaptcha.net)⁸ to receive the necessary keys. Add the keys to web.config according to 6.4.26.

4.2. Math problem protector

All email addresses in text will be replaced by text/images (according to the Email encoding modes setting (see 6.4.12)) and mailto links will be replaced by a dialog with a simple math problem. If the math problem is solved the user will be redirected to the mailto link and the mail address will be shown.



Pros

Offers good protection against crawlers and spiders.

Cons

Vulnerable against targeted attacks.

No javascript effect

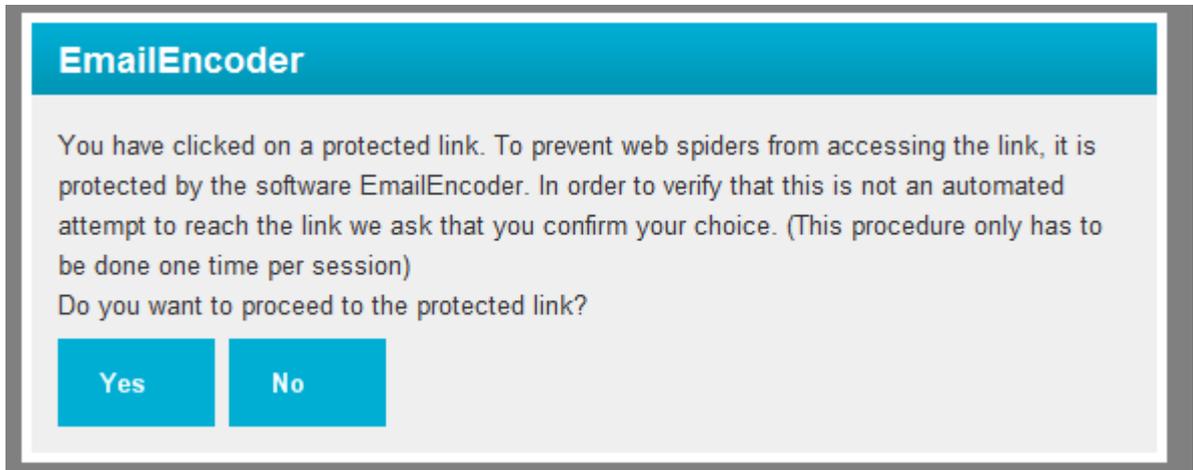
The dialog is shown on a new page instead of in a dialog.

Installation

Set the EmailProtector to "EmailEncoder.Core.EmailProtector.MathProblemProtector, EmailEncoder" (see 6.4.20)

4.3. Confirm protector

Email addresses will be replaced by text/images (according to the Email encoding modes setting (see 6.4.12)) and mailto links will open a dialog with a yes and no question. The yes button will open the mailto link and the no button will close the dialog.



Pros

The extra steps will stop most spiders.

Cons

Vulnerable against targeted attacks

No javascript effect

The dialog is shown on a new page instead of in a dialog.

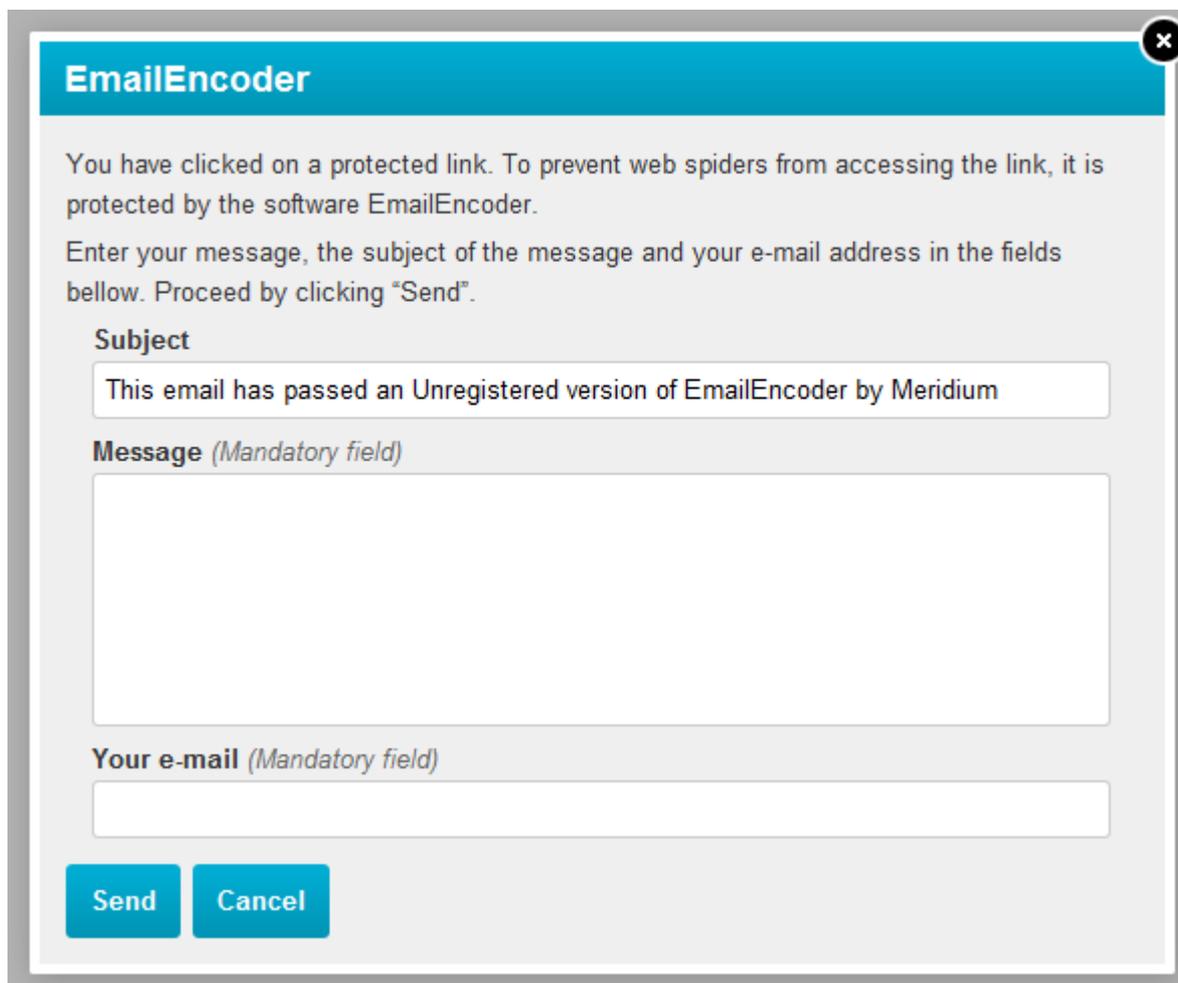
Installation

Set the EmailProtector to "EmailEncoder.Core.EmailProtector.ConfirmProtector, EmailEncoder" (see 6.4.20)

4.4. Mail form protector

Email addresses in text are replaced with text/images (according to the Email encoding modes setting (see 6.4.20)) and mailto links are replaced with a link to a form that the user can fill out. The form is then mailed to the address from the mailto link.

If EmailEncoder finds a callto link or a link that contains email/callto (see 6.4/6.4.2) addresses inside the link, the email form will not be used for these links. These links will be protected using the Confirm protector (see 4.3).



The screenshot shows a dialog box titled "EmailEncoder" with a close button in the top right corner. The text inside the dialog reads: "You have clicked on a protected link. To prevent web spiders from accessing the link, it is protected by the software EmailEncoder. Enter your message, the subject of the message and your e-mail address in the fields bellow. Proceed by clicking 'Send'." Below this text are three input fields: "Subject" with the text "This email has passed an Unregistered version of EmailEncoder by Meridium", "Message (Mandatory field)" which is an empty text area, and "Your e-mail (Mandatory field)" which is an empty text box. At the bottom of the dialog are two buttons: "Send" and "Cancel".

Pros

The content in mailto links is never shown to clients so neither humans nor crawlers can abuse it.

Cons

There are crawlers that automatically fill out and post forms.

No javascript effect

The dialog is shown on a new page instead of in a dialog.

Installation

Set the EmailProtector to "EmailEncoder.Core.EmailProtector.MailFormProtector, EmailEncoder" (see 6.4.20). The mail form has two specific setting that should be considered, which sender address the mail should be sent from (6.4.22) and if a copy should be sent to the sender (6.4.24). It's also needed to configure an smtp server (see 6.8).

4.5. Default protector

Works the same way as version 1 of EmailEncoder. It will decode the encoded e-mail address using javascript. Email addresses will look and work the same way as they would without EmailEncoder.

Pros

Easy for visitors.

Cons

Crawlers that can run javascript will find the email address.

No javascript effect

The email address will be replaced by an image or a default text.

Installation

Set EmailEncoder mode to Text, Image or TextAndImage (see 6.4.12). The protector should be set to "EmailEncoder.Core.EmailProtector.DefaultProtector, EmailEncoder" (see 6.4.19).

4.6. Mail form captcha protector

Works the same way as the mail form protector but it adds a captcha protector to it to prevent spiders from posting information.

Fallback for non email addresses uses the Captcha protector (see 4.1).

Installation

Set the EmailProtector to

“EmailEncoder.Core.EmailProtector.MailFormCaptchaProtector, EmailEncoder” (see 6.4.20)

Also see the installation notes for the captcha protector 4.1 and the mail form protector 4.4 because they apply to this protector too.

4.7. Mail form math problem protector

Works the same way as the mail form protector but it adds a math problem protector to it to prevent spiders from posting information.

Fallback for non email addresses uses the Math problem protector (see 4.2).

This protector is the default selected when installing a new EmailEncoder.

EmailEncoder

You have clicked on a protected link. To prevent web spiders from accessing the link, it is protected by the software EmailEncoder.

Enter your message, the subject of the message and your e-mail address in the fields bellow. Proceed by clicking "Send".

Subject

This email has passed an Unregistered version of EmailEncoder by Meridium

Message (Mandatory field)

Your e-mail (Mandatory field)

Solve the following mathematical problem (the result shall be stated by numbers). Proceed by clicking "Send".

4 plus 2 =

Send **Cancel**

Installation

Set the EmailProtector to "EmailEncoder.Core.EmailProtector.

MailFormMathProblemProtector, EmailEncoder" (see 6.4.20). Also see the installation notes for mail form protector 4.4 because they apply to this protector too.

5. Protector customization

This section describes how the protectors can be customized to fit the design used on the target web site.

5.1. Design

Design changes to the dialog should primarily be made in the css file (/emailencoder/styles/eeStyle.css). If changes in the html are needed they can be made in the usercontrols that are found in /emialencoder/forms/ and /emialencoder/controls/. Be careful with changes to the html because it may affect the behavior of the dialog. And remember to back up the changes before updating EmailEncoder.

Note! If you change the backgroundcolor of the protectors buttons, make sure you adjust the ProtectorButtonBackgroundColor setting in the configuration file accordingly (see 6.4.27).

The usercontrols for each protector can be found in the folders specified below.

5.1.1. Captcha protector

/emialencoder/controls/captcha.ascx and /emailencoder/forms/emptyform.ascx

5.1.2. Math problem protector

/emialencoder/controls/mathproblem.ascx and /emailencoder/forms/emptyform.ascx

5.1.3. Confirm protector

/emialencoder/controls/confirmform.ascx

5.1.4. Mail form protector

/emialencoder/forms/mailform.ascx

5.1.5. Mail form captcha protector

/emialencoder/forms/mailform.ascx and /emialencoder/controls/captcha.ascx

5.1.6. Mail form math problem protector

/emialencoder/forms/mailform.ascx and /emialencoder/controls/mathproblem.ascx

5.2. Language

All texts in the protectors can be changed and translated. The text strings are stored in .resx files and can be found in the App_GlobalResources folder. More information about the resx format can be found at msdn⁹. The files are standard xml and can be edited in any text editor. It is also possible to add new files to translate the protectors into another language. The languages that are installed by default are English, Swedish and Norwegian. If changes are made to any of these languages the files should be backed up before upgrading EmailEncoder.

6. Configuration

This section describes the configurations that could be added to web.config to configure the behavior of EmailEncoder.

6.1. ConfigSections

The ConfigSections need to contain two configuration sections for the EmailEncoder to work; one for the EmailEncoderModule and one for the EmbeddedHandler.

```
<configSections>
  <sectionGroup name="emailEncoder">
    <section name="embeddedHandler"
      type="System.Configuration.NameValueSectionHandler,
      System, Version=1.0.3300.0,
      Culture=neutral,PublicKeyToken=b77a5c561934e089"/>
    <section name="emailEncoderModule"
      type="System.Configuration.NameValueSectionHandler,
      System, Version=1.0.3300.0,
      Culture=neutral,PublicKeyToken=b77a5c561934e089"/>
  </sectionGroup>
</configSections>
```

6.2. Http Modules

This activates the EmailEncoder module. If you want to deactivate EmailEncoder, just comment this add tag.

```
<httpModules>
  <add name="EmailEncoderModule"
    type="EmailEncoder.Core.EmailEncoderModule, EmailEncoder" />
</httpModules>
```

Note! In IIS7 modules are configured under system.webServer/modules instead.

6.3. Http Handlers

This activates the EmbeddedHandler. Without this EmailEncoder cannot deliver any images for email addresses.

```
<httpHandlers>
  <add verb="*" path="EmailEncoderEmbed.aspx"
    type="EmailEncoder.Core.EmbeddedHandler, EmailEncoder" />
</httpHandlers>
```

Note! In IIS7 handlers are configured under system.webServer/handlers instead.

6.4. EmailEncoderModule section

The EmailEncoder section contains all configuration settings for the encoding process, what to encode and how to do it.

```
<emailEncoder>
  <emailEncoderModule>
    <!--insert configuration items here-->
  </emailEncoderModule>
</emailEncoder>
```

Below is a list of all keys that could be added to the emailEncoderModul section.

6.4.1. Activate loose mailto filtering

If activated, EmailEncoder will filter mailto links inside page links.

Example:

If value is set to true, the following text will be filtered.
href="mylink.aspx?action=mailto:nisse@mklsd.as"

```
<add key="LooseMailtoHref" value="True"/>
```

6.4.2. Activate loose callto filtering

If activated, EmailEncoder will filter callto links inside page links.

Example:

If value is set to true, the following text will be filtered.
href="mylink.aspx?action=callto://nisse_mklsd_as/"

```
<add key="LooseCalltoHref" value="True"/>
```

6.4.3. Activate strip not filtered mailto

If activated EmailEncoder will strip texts that contains a mailto address but not are links.

Example:

If value is set to true

```
<a href="www.meridium.se" orgurl="mailto:info@meridium.se"/>
```

Will be filtered to

```
<a href="www.meridium.se" orgurl=""/>
```

```
<add key="StripNotFilteredMailto" value="True"/>
```

6.4.4. Activate strip not filtered callto

If activated EmailEncoder will strip texts that contains a mailto address but not are links.

Example:

If value is set to true

```
<a href="www.meridium.se" callId="callto://meridium/">
```

Will be filtered to

```
<a href="www.meridium.se" callId="">
```

```
<add key="StripNotFilteredCallto" value="True"/>
```

6.4.5. Disable paths (start) for EmailEncoder

To disable the email encoding for one or more virtual paths set value to the paths that you want to disable EmailEncoder for, separated by &; Always start and end the path with a slash if it is a folder. Always start the path with a slash if it is a complete path to a document. Values are case insensitive.

Example:

```
<add key="DisableVirtualPathStartingWith" value="/edit/">
```

Disables EmailEncoder for all Requests to a path that starts with /edit/.

```
<add key="DisableVirtualPathStartingWith" value="/edit/&admin/default.aspx">
```

Disables EmailEncoder for all requests to a path that starts with /edit/ and requests for the file /admin/default.aspx.

```
<add key="DisableVirtualPathStartingWith" value="">
```

6.4.6. Disable files/types for EmailEncoder

To disable the email encoding for one or more files or file types the requested path is scanned and compared to the DisableVirtualPathEndingWith parameter. This parameter works like the DisableVirtualPathStartingWith and you can separate multiple values with an virtual paths set value to the paths that you want to disable EmailEncoder for, separated by & Values are case insensitive.

Example:

```
<add key="DisableVirtualPathEndingWith" value=".asmx"/>
```

Disables EmailEncoder for all web services.

```
<add key="DisableVirtualPathEndingWith" value="news.aspx&amp;.asmx "/>
```

Disables EmailEncoder for all requests to files named "news.aspx" wherever they are located and all web services.

```
<add key="DisableVirtualPathEndingWith" value=".asmx "/>
```

6.4.7. Disable sessions for EmailEncoder

To disable the email encoding for one or more session keys and/or key-value pairs set value to the session keys and - if needed - their corresponding value that EmailEncoder should be disabled for, separated by &

Example:

```
<add key="DisableSession" value="user"/>
```

Disables EmailEncoder for all Requests that have a session key named user.

```
<add key="DisableSession" value="user=peter&amp;user=tom"/>
```

Disables EmailEncoder for all Requests that have a session key named user with value peter or tom.

```
<add key="DisableSession" value=""/>
```

6.4.8. Disable query string parameters for EmailEncoder

To disable the email encoding for one or more parameters and/or parameter-value pairs set value to the parameters and - if needed - their corresponding value that EmailEncoder should be disabled, for separated by &

Example:

```
<add key="DisableParam" value="editmode"/>
```

Disables EmailEncoder for all requests that have a query string parameter named editmode.

```
<add key="DisableParam" value="editmode=true&user=peter"/>
```

Disables EmailEncoder for all Requests that have a query string parameter named *editmode* with value true or a query string parameter named *user* with value *peter*.

```
<add key="DisableParam" value=""/>
```

6.4.9. Set alt text on mailto text-images

The text specified as value will appear as alt-text on the mailto text-image.

```
<add key="AltTextOnImages" value="This is a mailto link"/>
```

6.4.10. Set alt text on callto text-images

The text specified as value will appear as alt-text on the mailto text-image.

```
<add key="AltTextOnCalltoImages" value="This is a callto link"/>
```

6.4.11. Force Content Encoding

The content encoding of the encoding output can be forced if the automatic parsing fails.

```
<add key="ContentEncoding" value="iso-8859-1"/>
```

6.4.12. Email encoding modes

The way visible email/callto addresses are encoded can be configured to the following values.

Value	Description
PartOfOriginal	Encodes all visible email/callto addresses by replacing some of the address with three dots ... Example: johnwayne@example.com will be translated as johnw...@example.com callto://johnwayne will be translated as callto://johnw...
Text	Encodes all visible email/callto addresses as text (requires JavaScript support on the client and the default protector)
Image	Encodes all visible email/callto addresses as an image.
TextAndImage	Uses a combination of the above choices, when JavaScript is not supported by the client, the Email Address image is still visible. (will only work with the default protector)
None	Does not encode email addresses at all (disables EmailEncoder)

Default value is PartOfOriginal

```
<add key="EmailEncoderMode" value="TextAndImage"/>
```

6.4.13. Activate encoding on cached pages

Normally encoding is done to pages before they are added to the cache, and encoding is not needed for cached pages. If you want to force encoding on cached pages, set the EncodeCache configuration to true.

Example:

```
<add key="EncodeCache" value="True"/>
```

6.4.14. Add title to mailto links

To increase WAI support you can activate this option that will add a title attribute to a mailto link that will contain the linked <mailto:email@domain.com> text.

Example:

```
<add key="AddTitleOnMailtoLinks" value="True"/>
```

Note! This will only have effect in combination with the default protector since it performs decoding on the client. All other protectors will only add the title "Protected address" or equivalent.

6.4.15. Disable encoding for authenticated users

Sometimes you want to disable encoding for authenticated users since you have already taken steps to validate the user. In that case you can add the following option to the configuration. Default is false.

Example:

```
<add key="DisableEncodingForAuthenticatedUsers" value="True"/>
```

6.4.16. Remember validation

If the captcha or math problem control is used and a user passes the control, all email addresses will be decoded for the rest of the session. This is turned on as default but can be turned off by setting the RememberValidation key to false.

Example:

```
<add key="RememberValidation" value="False"/>
```

6.4.17. Disable ajax dialogs

EmailEncoder will by default open dialogs on the same page. If this setting is enabled dialogs will open in a separate window. EmailEncoder will behave in the same way as if javascript is turned off.

Example:

```
<add key="DisableAjaxDialogs" value="True"/>
```

6.4.18. Control css class of generated image tags

When EmailEncoder generates images for the visible addresses, the image is added without any attributes set to the image tag. Use the CssClass property to set the class attribute for the rendered image tags. The default class is emailEncoderImage.

Example:

```
<add key="CssClass" value="MyImageClass"/>
```

6.4.19. Continue on error

If encoding of a page results in an error, this error is logged (if the log file is activated) and the error is displayed on the page. These error pages can be suppressed and instead of breaking the page, the original, non encoded page can be displayed. To activate this behavior set the ContinueOnError setting to true.

Note! If this option is activated, use the logfile to keep track of pages that are failing and fix these errors in these pages so they aren't unprotected.

Example:

```
<add key="ContinueOnError" value="true"/>
```

6.4.20. Email protector type

EmailEncoder can be configured to use a specific email protector (see chapter 4) and this is set using the EmailProtectorType app setting. This value is the name of the protector type and assembly. If no configuration is present, the MailFormMathProblemProtector (see chapter 4.7) will be used.

Valid values are:

"EmailEncoder.Core.EmailProtector.CaptchaProtector, EmailEncoder"

"EmailEncoder.Core.EmailProtector.MathProblemProtector, EmailEncoder"

"EmailEncoder.Core.EmailProtector.ConfirmProtector, EmailEncoder"

"EmailEncoder.Core.EmailProtector.MailFormProtector, EmailEncoder"

"EmailEncoder.Core.EmailProtector.MailFormCaptchaProtector, EmailEncoder"

"EmailEncoder.Core.EmailProtector. MailFormMathProblemProtector, EmailEncoder"

"EmailEncoder.Core.EmailProtector. DefaultProtector, EmailEncoder"

Example:

```
<add key="EmailProtectorType"  
value="EmailEncoder.Core.EmailProtector.ConfirmProtector,EmailEncoder"/>
```

6.4.21. Email encryptor key

Many of the email protector types uses a key to encrypt the email addresses. This key is a 32 byte binary key and this is stored in the EmailEncryptorKey setting in a Base64 format. This key should not be changed once it is configured, because then all cached encoded pages will not be correctly decrypted.

If you would like to generate a key, go to the site where EmailEncoder is installed and enter the url <server>/EmailEncoderEmbed.aspx?gk=1 (for instance <http://www.example.com/EmailEncoderEmbed.aspx?gk=1>). This will return a randomly generated key on a suitable format for this setting.

If this setting is empty an error will be logged and a new key will be generated every time the web application is restarted.

Note! It is recommended to always generate a unique key for every web site.

Example:

```
<add key="EmailEncryptorKey"
value="t2pJJkoG1ySI7vMgup+HOWP0GmWWy072nsu3VMppky4=" />
```

6.4.22. Mail form sender

If one of the mail form protectors are used the mails are sent from the server. This key specifies which email address should be the sender of those mails.

Example:

```
<add key="MailFormSender" value="no-reply@meridium.se" />
```

6.4.23. Set sender as sender

If the mail form is used a visitor types in his or her own address. This setting specifies if that address should be set as the sender of the email that is sent. By default the setting is false, if it is set to true it will override the MailFormSender setting.

Example:

```
<add key="SetSenderAsSender" value="true" />
```

6.4.24. Show mail form info text

If enabled EmailEncoder will add a note at the bottom of the message stating that the message was sent by EmailEncoder.

Example:

```
<add key="ShowMailFormInfoText" value="true" />
```

6.4.25. Send mail form copy

If one of the mail form protectors are used this key specifies if a copy of the mail should be sent to the senders email. It is false by default.

Example:

```
<add key=" SendMailFormCopy" value="true" />
```

6.4.26. Captcha keys

If the captcha protector or the mail form captcha protector are used these keys needs to be set. The keys can be acquired by register an account at <http://recaptcha.net/>

Example:

```
<add key="CaptchaPublicKey" value="xxxxxxxxxxxxxxxxxxxxxxxxxxxx" />
<add key="CaptchaPrivateKey" value="yyyyyyyyyyyyyyyyyyyyyyyyyyyyyy" />
```

6.4.27. Set background color for Protector generated buttons

If you customize the css for the protectors so the buttons are another color, you have to change this configuration to the same color, otherwise the generated text images for the buttons will be quite ugly (same as 6.5.3below).

Example:

```
<add key="ProtectorButtonBackgroundColor" value="#00B4DC"/>
```

6.4.28. RenderScripts and RenderCss

If you want to make sure the required scripts and CSS files are loaded on the page yourself, e.g. in order to use a single minified script file, it is possible to disable the rendering of the script and link tags. In the example below neither script nor CSS files will be rendered by EmailEncoder, hence you would have to make sure it is included in the page in some other way.

Example:

```
<add key="RenderScripts" value="false"/>
<add key="RenderCss" value="false"/>
```

6.5. Embedded Handler section

The EmbeddedHandler is a part of email encoder that controls the images that is generated instead of visible email addresses. This section controls all settings regarding the image creation process.

```
<emailEncoder>  
  <embeddedHandler>  
    <!--insert configuration items here-->  
  </embeddedHandler>  
</emailEncoder>
```

6.5.1. Set font for mailto text-images

If the displayed text for a mailto link contains the character @, EmailEncoder replaces the text with a text-image. To specify the font to be used in these cases use the following format: font name, size, fontstyle1, fontstyle2, etc. Font styles can be bold, italic, underline or strikethrough.

Example:

Replaces the display text that contains @ for all mailto links with a text-image with font verdana 8pt bold italics.

```
<add key="Font" value="verdana, 8, bold, italics"/>
```

6.5.2. Set text color for mailto text-images

If the display text for a mailto link contains the character @ EmailEncoder replaces the text with a text-image. Set value to the text color that should be used in the text-image.

Example:

```
<add key="ForegroundColor" value="#c0c0c0"/>
```

6.5.3. Set background color for mailto text-images

The resulting image of a mailto link is created as a transparent gif. If the background of the page is another color than white, the resulting image can look jaggy or even disappear (especially if the foreground color is set to white). The solution is then to assign a background color to use when rendering the images.

Example:

```
<add key="BackgroundColor" value="White"/>
```

6.5.4. Set mailto text-images cache

If a special temporary path should be used for storing the email images cache. The ASPNET user's temp path is used by default.

Example:

```
<add key="TempPath" value="c:\temp"/>
```

6.6. Logging

Logging is using the log4net library from apache. To activate logging create a log4net configuration file named EmailEncoderlog4net.config in the web root folder. The log will contain information about configuration problems, or errors in the application and will be of great use if troubleshooting is needed.

Example:

An example log configuration that logs to a file can look like below.

```
<?xml version="1.0" encoding="utf-8" ?>
<log4net>
  <appender name="RollingFileAppender" type="log4net.Appender.RollingFileAppender">
    <file value="logs/eelog.txt" />
    <appendToFile value="true" />
    <rollingStyle value="Size" />
    <maxSizeRollBackups value="10" />
    <maximumFileSize value="100KB" />
    <staticLogFileName value="true" />
    <layout type="log4net.Layout.PatternLayout">
      <conversionPattern value="%date [%thread] %-5level %logger
[%property{NDC}] - %message%newline" />
    </layout>
  </appender>
  <root>
    <level value="WARN" />
    <appender-ref ref="RollingFileAppender" />
  </root>
</log4net>
```

Make sure that the asp.net/network service (or what user context the website is running under) has rights to write to the logfile.

For more information about how to configure the logging, please go to the apache log4net homepage¹⁰.

6.7. Localization

All texts in EmailEncoder are localized using resx files stored in the App_GlobalResources folder. Translations are dependent on the sites current ui culture. It is also possible to define a default culture in web.config as shown below. If culture is set to auto the culture will be the browsers preferred language.

Example:

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <system.web>
    <globalization culture="auto" uiCulture="auto"/>
  </system.web>
</configuration>
```

6.8. Smtplib config

If one of the mail forms are used, a smtp server has to be configured in web.config. An example on how to do this is shown below.

Example:

```
<configuration>
  <system.net>
    <mailSettings>
      <smtp>
        <network host="smtp.domain.com" port="25" userName="" password=""/>
      </smtp>
    </mailSettings>
  </system.net>
</configuration>
```

7. EPiServer configuration

Use the following settings for EmailEncoder when running an EPiServer solution. (These settings are automatically configured if you use the installation package for EPiServer.)

7.1.1. Activate strip not filtered mailto

For EPiServer you want to set StripNotFilteredMailto to true in order to strip orgurl attributes on mailto links.

Example:

```
<add key="StripNotFilteredMailto" value="True"/>
```

7.1.2. Disable paths for EmailEncoder

For EPiServer you want to disable the admin, edit and util paths.

Example:

```
<add key="DisableVirtualPathStartingWith" value="/edit/&admin/&util/">
```

7.1.3. Disable encoding for authenticated users

For DOPE to function correctly with email addresses, we have to disable encoding for authenticated users.

Example:

```
<add key="DisableEncodingForAuthenticatedUsers" value="True"/>
```

8. Uninstallation

8.1. Disabling EmailEncoder

1. To disable EmailEncoder, just comment the EmailEncoder httpModule in the web.config file located at /configuration/system.web/httpModules

```
<add name="EmailEncoderModule" type="EmailEncoder.Core.EmailEncoderModule,
EmailEncoder" />
```

and /configuration/system.webserver/modules

```
<add name="EmailEncoderModule" type="EmailEncoder.Core.EmailEncoderModule,
EmailEncoder" preCondition="managedHandler"/>
```

8.2. Full uninstallation

Uninstallation can be performed manually by following the steps below.

8.2.1. Remove configuration entries in the web.config file.

1. Remove the EmailEncoder http module directives located at /configuration/system.web/httpModules

```
<add name="EmailEncoderModule" type="EmailEncoder.Core.EmailEncoderModule,
EmailEncoder" />
```

and /configuration/system.webserver/modules

```
<remove name="EmailEncoderModule"/>
<add name="EmailEncoderModule" type="EmailEncoder.Core.EmailEncoderModule,
EmailEncoder" preCondition="managedHandler"/>
```

2. Remove the EmailEncoder http handler located at /configuration/system.web/httpHandlers

```
<add verb="*" path="EmailEncoderEmbed.aspx"
type="EmailEncoder.Core.EmbeddedHandler, EmailEncoder" />
```

and /configuration/system.webserver/handlers

```
<remove name="EmailEncoderEmbed"/>
<add name="EmailEncoderEmbed.aspx_*" verb="*"
path="EmailEncoderEmbed.aspx" type="EmailEncoder.Core.EmbeddedHandler,
EmailEncoder" preCondition="integratedMode, runtimeVersionv2.0"/>
```

3. Remove configuration for emailEncoder located at /configuration/emailEncoder

```
<emailEncoder>
  <emailEncoderModule>
    <add key="EmailEncoderMode" value="TextAndImage" />
    <add key="AddTitleOnMailtoLinks" value="True" />
    ...
  </emailEncoderModule>
  <embeddedHandler>
    <add key="Font" value="Verdana, 14, underline" />
    <add key="ForegroundColor" value="#33ccaa" />
    ...
  </embeddedHandler>
</emailEncoder>
```

4. Remove the emailEncoder sectionGroup.
configuration/configSections/sectionGroup[name='emailEncoder']

```
<sectionGroup name="emailEncoder">
  <section name="emailEncoderModule"
type="System.Configuration.NameValueSectionHandler, System,
Version=1.0.3300.0, Culture=neutral,PublicKeyToken=b77a5c561934e089" />
  <section name="embeddedHandler"
type="System.Configuration.NameValueSectionHandler, System,
Version=1.0.3300.0, Culture=neutral,PublicKeyToken=b77a5c561934e089" />
</sectionGroup>
```

8.2.2. Remove installed files

1. Remove the EmailEncoder.dll and Recaptcha.dll file from the webservers bin folder.
2. Remove the folder EmailEncoder from the webservers root folder
3. Remove the EmailEncoder.*.resx files from the App_GlobalResources folder
4. Uninstall the following files from the Global assembly cache if they are not required by any other software.
 - Meridium.dll
 - Meridium.Web.dll
 - Meridium.Drawing.dll
 - Meridium.License.dll
 - Meridium.Mathematics.Algebra.dll
 - log4net.dll

Note! If you remove a dll from the global assembly cache dependent applications can stop to working. Only remove the dll:s if you are certain that no other applications needs them.

9. Upgrading from a previous version of EmailEncoder

If you want to upgrade to this version and have a previous version of EmailEncoder running on your system, follow the guide below.

If your current version of EmailEncoder is 2.0 or later, just run the installation application directly.

Note If you have done any customizations, like in the css or aspx/ascx files, backup these before upgrading otherwise they will be overwritten by the installation program. Restore the modification afterwards (make sure that the changes are compatible with the new version).

If your current version of EmailEncoder is prior to 2.0 (like 1.7 or earlier), first uninstall the previous version by following the uninstallation instructions for that version of the product.

When the uninstallation is completed, run the installation application.

10. Known issues

10.1. Server.Transfer (HttpServerUtility.Transfer)

If you use `Server.Transfer`¹¹ in your .net code to redirect from a page to another, no `IHttpModules` (and thus not `EmailEncoder` either) will affect the page that is being redirected to. So if you use `Server.Transfer` this will effectively bypass `EmailEncoder`. To use redirections on the server side use `Server.Execute`¹² instead or use `Response.Redirect`¹³ to perform a client redirection.

11. References

¹ Skype is software for IP-telephony. See www.skype.com for more information.

² Callto links are used by Skype.

³ <http://www.ecma-international.org/publications/standards/Ecma-262.htm>

⁴ <http://www.w3.org/DOM/>

⁵ <http://www.w3.org/2003/02/06-dom-support.html>

⁶ <http://www.w3.org/WAI/>

⁷ <http://recaptcha.net/learnmore.html>

⁸ <https://admin.recaptcha.net/accounts/signup/>

⁹ <http://msdn.microsoft.com/en-us/library/ekyft91f%28VS.80%29.aspx>

¹⁰ <http://logging.apache.org/log4net/index.html>

¹¹ <http://msdn.microsoft.com/en-us/library/system.web.httpserverutility.transfer.aspx>

¹² <http://msdn.microsoft.com/en-us/library/system.web.httpserverutility.execute.aspx>

¹³ <http://msdn.microsoft.com/en-us/library/system.web.httpresponse.redirect.aspx>