ClassifyIt 6.0

ADMIN GUIDE

ClassifyIt, an Add-In for Outlook, Word, Excel, PowerPoint

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Table of Contents

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ClassifyIt 6.0 – Technical Manual

This technical manual is for administrators to manage and distribute ClassifyIt (pronounce as: "classify it"). It contains installation aspects to understand how ClassifyIt behaves during boot time and where it expects its configuration parameters to enforce your classification markings to Office documents.

The reader should start with the Overview which provides a step-by-step best practise guide of configuring and deploying ClassifyIt linking to the important chapters. Many details in later chapters are of less importance for a typical deployment.

ClassifyIt is an Add-In for Outlook, Word, PowerPoint and Excel of the Microsoft Office 2010 Suite and later products. The main testing has been conducted on the Office 2019 Suite. Compatibility should be with higher versions from Office 2010 onwards. Office 365 and Microsoft 365 versions should be compatible provided the Windows based version is installed (web-based versions will not work).

ClassifyIt is SHAREWARE software and must be licensed when used after the test-period. The normal test-period is 3 months however, longer test-periods can be granted if requested. Please contact us under: support@ugarbe.de

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Article I.   Overview

The following describes a typical best practise installation path of ClassifyIt. Whenever problems or questions occur, please contact your support team at: support@ugarbe.de

Please note that most details of this document are not required by your team for a typical ClassifyIt deployment. The deployment is an interactive process between your administrator and ugarbe.de. The deployment is straight forward and requires an administrator of your Windows and or Microsoft Office installations and for the security markings an information management expert (or someone who understands the classification markings of your company/organisation.

(a) Preparation Phase

The preparation has the aim of establishing the base configuration of your ClassifyIt implementation and consider how to deploy ClassifyIt to your users.

During this phase **technical administrator** knowledge and **information management** knowledge is necessary.

#	Who	What
1	Administrator	Familiarise with installation details: - Article II *Installation* - Article III *Initialisation Process*
2	Info Manager	Provide details of classifications: See Article XI Information Manager - Provide some examples of classification markings; - Provide list of classifications; - Provide list of release markings (optional); - Consider release groups (optional); - Provide default classification and release marking (this will be added to a new document/email by default); - Consider most common used classification and release markings (used for quick select);

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#	Who	What
3	Administrator	Consider Data Leakage Protection (DLP) options: - ClassifyIt encodes the classification and release marking of each email in the X-Header. Gateway mail-servers can set mail-flow rules to allow, reject or log the sending of emails. As such you could reject sending higher classified information without encryption, or restrict the distribution without release markings, or … .
4	Administrator	Finalise the configuration: - Contact support@ugarbe.de with the details from the Information Manager (#2); - ugarbe.de will provide you with the configuration file; - Test the received configuration and coordinate with the Information Manager if things need to be changed/updated; - Finalise the configuration in coordination with support@ugarbe.de;

(b) Deployment Phase

The administrator needs to decide how to deploy ClassifyIt to the users' workstations. It is recommended to use the same deployment as used for the Microsoft Office.

Running the ClassifyIt setup program installs the ClassifyIt add-on to Office on the workstation where executed.

For mass deployment:

#	What
1	Deploy the plug-in: - Copy the ClassifyIt.dll to a folder on the users' workstations; Example: %PROGRAM FOLDER%\ClassifyIt\

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#	What
2	Register the plug-in: - Execute the following command in the command shell with **administrator rights**: regsvr32 <FOLDER>\ClassifyIt.dll Example: regsvr32 C:\Program Files\ClassifyIt\ClassifyIt.dll
3	Deploy the ClassifyIt.json configuration file: - Consider a network share or a web-server, where the configuration file is stored for the ClassifyIt plug-in. ClassifyIt loads the configuration file during the startup of the Office application (Outlook, Word, PowerPoint, Excel). Two file locations should be selected, so if the primary location is not reachable, the secondary will be used; - Deploy the ClassifyIt.json configuration file to the two locations, <LOCATION_1> and <LOCATION_2>
4	Register the locations of the configuration file on the key: \HKEY_LOCAL_MACHINE\SOFTWARE\CLASSIFY_IT - Entry: ConfigFile - Type: REG_SZ - Value: <LOCATION_1> - Entry: AlternateConfigFile - Type: REG_SZ - Value: <LOCATION_2> Examples for Value: - C:\Program Files\ClassifyIT\ClassifyIt.json - http://ugarbe.de/ClassifyIt.json
5	Ensure ClassifyIt cannot be disabled by Users or Office Set the registry keys as described in Article X *Prevent Disabling of ClassifyIt*

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Article II. Installation

Before installing ClassifyIt, please ensure that the version of Microsoft Office and ClassifyIt match. Microsoft Office can be installed as a 64-bit version or 32-bit version. **ClassifyIt has to be of the same version as your Office installation**, otherwise ClassifyIt will not be able to be executed! To check open any of the Office applications, like Word, and do the following:

In Office 2010 check with: *File → Help*	**About Microsoft Word** Version: 14.0.7015.1000 (64-bit)
In Office 2016 check with: *File → Account → About Word*	About Microsoft® Word 2019 Microsoft® Word 2019 MSO (16.0.12130.20382) 64-bit

Before installing ClassifyIt, please ensure that all Office applications are closed to permit ClassifyIt to properly register as an Add-In to Outlook, Word, Excel and PowerPoint. The registration could fail if any of the applications is still running. If you encounter problems please check with the Windows TaskManager if really all Office applications are closed, and if required end the application through the TaskManager – afterwards reinstall ClassifyIt.

During the installation process the ClassifyIt Add-In application and configuration files are installed in the %PROGRAM FOLDER%\ClassifyIt directory (e.g. C:\Program Files\ClassifyIt). This program directory can not be changed.

After the installation the Add-In is directly usable, however the configuration file (default: ClassifyIt.json) must be changed to support the classification requirements of your company. If help is needed please see section Configuration or contact support@ugarbe.de.

After installation the ClassifyIt toolbar is available on all opened or new created emails, Word documents, Excel spreadsheets and PowerPoint presentations.

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Article III. Initialisation Process

The ClassifyIt Add-In is a library which runs in the Microsoft Office context, as such it is programmed as a Dynamic Link Library (DLL). After the installation (running the setup executable) this add-in is in the following file:

> %PROGRAM FOLDER%\ClassifyIt\ClassifyIt.dll

> Note: it is possible to change the folder and the name of the DLL – in this case the registration of the ClassifyIt.dll needs to be done using the 'regsvr32' Windows command. (please seek support from ugarbe.de).

When the ClassifyIt Add-In is started (within the Office context) it needs to load it's configuration file, which is formatted in a JSON syntax – by default the configuration file is the following file:

> %PROGRAM FOLDER%\ClassifyIt\ClassifyIt.json

The file-name and location of the configuration file is set by the Registry key HKEY_LOCAL_MACHINE\SOFTWARE\CLASSIFY_IT\ConfigFile – the key can be a URL or file-system path.

When the ClassifyIt Add-In starts for the first time (e.g. by starting Outlook, Word, Excel or PowerPoint) the following files are created under the users CSIDL_APPDATA folder (e.g. C:\Documents and Settings\username\Application Data\Roaming):

- ClassifyItUserData.json

    > *Used for ClassifyIt User Data*

- ClassifyIt.log

    > *Used for logging information of ClassifyIt*

- ClassifyIt.json

    > *local copy of the configuration file. This file is overwritten whenever the applications are started (Outlook, Word, Excel, PowerPoint) and the central configuration file is available.*

- cli_certs

    > *folder storing user's digital certificate (private and public key) and recipients public keys, needed for the CryptIt module.*

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Article IV. Prepare ClassifyIt

Note: For a typical best-practice installation the details of this chapter are not important, as ugarbe.de provides all input. This chapter is a technical reference for those who procured the signature tool and want/have to configure ClassifyIt themselves.

After the installation there are 2 steps which need to be done. First the configuration file ClassifyIt.json needs to be adjusted to the required classification schema and second sign the updated configuration file. Both steps are to be done by an administrator. The adjustment of the configuration file is most critical, contact support@ugarbe.de whenever in doubt or if problems are encountered.

Section 4.01   Configuration of ClassifyIt.json

The adjustment of the ClassifyIt.json configuration file is the most critical step in your deployment of ClassifyIt. The syntax of the JSON file is very sensitive and must be absolutely correct, otherwise ClassifyIt will not work properly. The configuration, based on your requirements will be done by ugarbe.de. The JSON file is signed to ensure its integrity, so that neither users nor anyone else can change your classification schema. **If you do the configuration yourself, please ensure you have the signature tool procured.**

To make your own configuration file you could use the following guidelines:

a) understand your classification schema;

b) use an editor which understands the JSON format, for instance Notepad++ with the JSON Viewer plugin;

c) start with the original configuration file and adjust it in small steps to understand the changes;

d) most Office applications must be restarted to read the new configuration file. But in Outlook there is the possibility to use the admin_mode, then in Outlook the configuration file can be reloaded through an extra button in the menu;

e) check the JSON format with a tool (see b);

f) sign the JSON file (see next section)

g) test the configuration thoroughly.

Section 4.02   *Integrity of Configuration-File (ClassifyIt_Signer)*

The ClassifyIt.json configuration-file has a tamper protection to ensure its integrity through a signature, so that only authorised persons can change the configuration. The signature value is verified by the ClassifyIt plug-in when the configuration-file is loaded. The signature value must be calculated by the **ClassifyIt_Signer.exe**. This signing application is usually only used by ugarbe.de. Only in exceptional cases it is useful for the customer to procure the signer tool.

1. Start the ClassifyIt_Signer application (the application might have to be executed with administrator privileges, if the configuration file is in a protected folder, like a program folder).

2. Select the configuration-file.

3. The configuration file gets properly signed and a success message is shown.

4. If unsuccessful the syntax of the JSON file is not correct. Correct the syntax and then sign the file.

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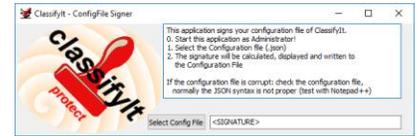
Article V. Configuration

Section 5.01   Introduction

The proper configuration of the tool is the most critical and requires most attention during the deployment of ClassifyIt.

Section 5.02   Registry and Configuration File

ClassifyIt is controlled by a Registry Key and a Configuration-File:

```
   1. Locator of Configuration-File
      1. Registry Key: HKLM\SOFTWARE\CLASSIFY_IT [holds two values with
         the path or URL and name to the Configuration-File]
         Note: for the 32-bit version of ClassifyIt the key is stored
         at: HKLM\SOFTWARE\Wow6432Node\CLASSIFY_IT
         1. ConfigFile: [first try of ClassifyIT Add-In to load the
            Configuration-File]
         2. AlternateConfigFile: [alternative if file specified by
            ConfigFile does not exist, is not reachable or is corrupt]
1) Configuration-File
   <classifyIt.json>   [holds all configuration parameters of
      ClassifyIt in a JSON formatted file]
```

Section 5.03   Registry Keys

HKLM\SOFTWARE\CLASSIFY_IT\

Two keys specify the fully qualified file-name of the <classifyIt.json> file.

ConfigFile=<PATH\FILE_NAME> or

<URL>

AlternateConfigFile=<PATH\FILE_NAME> or

<URL>

(a)   Description:

The ConfigFile key specifies the location of the preferred location of the <classifyIt.json> file. If the preferred file is not available (or corrupt) the alternative configuration file will be loaded during the start of Outlook, Word, PowerPoint or Excel. The configuration file could be on a local or shared drive, or on a web-server where the URL is to start with 'HTTP://'.

If no configuration file is available, ClassifyIt will try to load a previous copy of the configuration file in the user's CSIDL_APPDATA folder.

If none of the files is available then an error message is displayed to the user. If any of the

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files is not available or corrupt, an error/warning is written in the classifyit.log file.

Note: A configuration file is corrupt if either the JSON syntax is incorrect, or if the integrity of the file (provided through ClassifyIt_Signer) is incorrect.

(b)   Example:

```
ConfigFile='http://classifyit.eu/ClassifyIt.json'
AlternateConfigFile='c:\configData\classifyit.json'
```

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Section 5.04   Configuration File

The <classifyIt.json> file controls content and behaviour of the ClassifyIt Add-In.

Note: The standard setup uses the filename: "ClassifyIt.json", however any other name can be used as specified by the Registry (see Section 5.03).

The following describes the Format and then the different sections within the configuration file.

(i) Encoding

The configuration file should be encoded as: UCS-2 LE BOM

With this language special characters are displayed properly.

(ii) Format

The configuration file is JSON formatted (www.json.org/). This is a very easy, powerful, text-based and human readable format.

It is important that the syntax of the configuration file is fully JSON compliant. Use a syntax checking editor to modify or generate the configuration file (e.g. Notepad++, notepad-plus-plus.org/, with a JSON plug-in, nppjsonviewer).

(iii)   "classifyit_control"

Is a record of values controlling the overall behaviour of ClassifyIt:

```
"admin_mode"        <boolean>   specifies if in Outlook the
            configuration file can be reload, which might be
            useful during the creation of the configuration file
            by the administrator.
"use_default_marking"  <Boolean>   specifies if in Outlook a
            default marking should be put on emails when
            generated. The other applications automatically add
            the default marking when a new document is generated.
"default_marking"       <record strings>  specifies the default
            marking. The marking is defined by the "x-class" and
            "x-rel" values:
            "x-class"  <string>    x-classification value which
                  must be the same as in the "classifications" section.
            "x-rel"    <string>    x-release value which must be
                  the same as in the "release_markings" section.
"form_layout"   <string>    specifies the layout of the Release
            Form. This only works for customer specific versions
            of ClassifyIt. The normal value is "default".
```

Example:
```
"classifyit_control":
        {"admin_mode":          false,
```

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```
        "use_default_marking": true,
        "default_marking": {
            "x-class":  "U",
            "x-rel":    []},
        "form_layout":          "default"}
```

(iv)   "version_control"

Is a list of objects which define the date, time, version number and signature of the configuration file. Only the signature value is of importance for the correct functioning of ClassifyIt and is set by the ClassifyIt_Signer tool (see Section 4.02):

```
"date"      <STRING> date of the configuration file.
"time"      <STRING> time of the configuration file.
"versionNumber"  <STRING> version number of the configuration
            file.
"signature" <STRING> integrity string for the configuration file.
            Whenever the configuration file is changed the
            signature is to be recalculated. (new with version
            5.0). Note: the signature is to be calculated with the
            'ClassifyIt_Signer.exe' program, which is provided to
            administrators.
```

Example:

```
{"date":            "20160321",
 "time":            "220415",
 "versionNumber": "5",
 "signature":
"87C00A514B34E725C24A1A75B2E3072B7B9A53AC"},}
```

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(v) *"classifications"*

Is a list of objects which define each available classification. Each classification is defined through the following attributes:

```
"real"       <STRING> the real classification name as it will
             appear on the document (email) when selected.
"additional" <STRING> text which might be required in addition to a
             classification.
"trans"      <STRING> the translated classification name as it will
             appear on the document (email) when the classification
             is selected and when a translation is required
             (controlled through "requiresTranslatedLabel" of the
             "classification_formatting" settings).
"color"      <STRING> the color value (RGB) of the classification.
"x-class"    <STRING> the X-Header value of the classification
             which will be inserted to the 'email envelope'.
"descr"      <STRING> a description of the classification which
             will be shown in the ClassifyIt classification menu as
             a 'hint'.
"enabled"    <BOOLEAN> defines if the classification can be
             selected by the user – this is normally true.
"class-level"    <INTEGER> (new with version 5.8) defines if the
             classification level of the classification. In earlier
             versions the classification level was given by the
             order of the classifications – first lowest level, …
             last highest level. Now class-level defines this –
             lower number is a lower classification level and
             higher number is a higher classification level.
"sensitivity"    <STRING> corresponding Outlook sensitivity
             (Normal=0, Personal=1, Private=2, Confidential=3). The
             outlook_control setSensitivityLevel value defines if
             the sensitivity level is actually applied to the
             email.
```

Example:

```
[{"real":     "UNCLASSIFIED",
  "trans":    "",
  "color":    "0x000000",
  "x-class": "U",
  "descr":    "information can be distributed without restrictions
(subject to copyright restrictions)",
  "enabled": true,
  "class-level":  0,
  "sensitivity":  "0"},
```

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(vi)   *"release_markings"*

Is a list of objects which define each available release marking. Each release marking is defined through the following attributes:

"real"   <STRING> the real release marking as it will appear on the document (email) when selected.

"trans"   <STRING> the translated release marking as it will appear on the document (email) when a translation is required (controlled through "requiresTranslatedLabel" of the "classification_formatting" settings).

"x-rel"   <STRING> the X-Header value of the release marking which will be inserted to the 'email envelope'.

"descr":   <STRING> a description of the release marking which will be shown in the ClassifyIt classification menu as a 'hint'.

"as"   [<STRING>] (list of strings) can be used for more complex classifications which require release markings in a format related to the classification. IMPORTANT, if used this list needs to have as many entries as classifications in the "classifications" section. The feature is controlled through the "requiresRelAs" variable of the "classification_formatting" section.

Example:

```
{"real":    "MANAGEMENT",
 "trans":   "LEITUNG",
 "x-rel":   "MAN",
 "descr":   "Senior Management Staff of Company",
 "as":      ["MANAGEMENT OPEN", "MANAGEMENT RESTRICTED"]}
```

(vii)   *"release_groups"*

Is a list of objects which define groups of release markings. Each release marking group is a collection of release_markings. Each release marking group is defined through the following attributes:

"display" <STRING> the display name for the group.

"group"   [<STRING>] (list of strings) important this value(s) must be one of the "real" values of the "release_markings" section. The group is then representing all the release markings. Examples:
                    ["MANAGEMENT", "HUMAN RESOURCES"]

"descr"   <STRING> a description of the release group which will be shown in the ClassifyIt classification menu as a 'hint'.

Example:

```
{"display":     "GROUP1",
 "group":       ["FINANCE", "ENGINEERING"],
 "descr":       "add release markings for FINANCE and
ENGINEERING"},
 {"display":    "GROUP2",
 "group":       ["PUBLIC", "FINANCE", "HUMAN RESOURCES"]}
```

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(viii) *"quick_select"*

A list of objects which define the entries of the Quick-Select Menu of ClassifyIt. The following attributes are defined per quick-select menu entry:

```
"display"    <STRING> the entry shown in the quick-select menu.
             (Note: should be short and easily remembered).
"marking"    <RECORD> defining the classification and release of
             the quick select value.
```

Example:

```
{"display":             "Restricted rel Finance and Management",
 "marking": {
    "x-class"    "R",
    "x-rel"      ["FIN", "MAN"]}
```

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(ix) "classification_formatting":

A list of attributes which define the formatting of the construction of the classification text which will be inserted by ClassifyIt. The following attributes define the appearance of the classification. Note that a line break must be inserted through <BR>, do not use \n

The following shows how the formatting of a PowerPoint is applied to the marking (CONFIDENTIAL is a classification and SALES and CYBER release markings):

before_ppt before_all **<u>CONFIDENTIAL</u> afterClass** *befRelStr SALES betwRelStr CYBER afterRelStr* **beforeTransClass CONFIDENTIALafterTransClass beforeTransRelStr SALESbetwTransRelStr CYBERafterTranRelStr afterComplClass**

```
"beforeClassification"  <STRING> text before the classification.
"beforeClassificationEmail"  <STRING> text which is put in front
          of the classification, but only for Outlook emails.
"beforeClassificationWord"  <STRING> text which is put in front
          of the classification, but only for Word documents.
"beforeClassificationExcel"  <STRING> text which is put in front
          of the classification, but only for Excel sheets.
"beforeClassificationPPT"  <STRING> text which is put in front
          of the classification, but only for PowerPoint slides.
"afterClassification"  <STRING> text after the classification.
"beforeAdditionalClassification"  <STRING> text before an
          additional classification, only if the additional
          marking is not empty.
"afterAdditionalClassification"  <STRING> text before an
          additional classification, only if the additional
          marking is not empty.
"beforeReleaseStrings"  <STRING> text before the release
          marking, only if the release marking is not empty.
"betweenReleaseStrings"  <STRING> text/character between the
          release markings, only if the release marking is not
          empty and if more than 2 release markings.
"afterReleaseStrings"  <STRING> text after the release marking,
          only if the release marking is not empty.
"afterCompletedClass"  <STRING> text/character after the
          completed classification and release marking.
"requiresRelAs"  <BOOLEAN> (default false) to specify if the "AS"
          markings defined in the "release_markings" section
          will be used. (new with version 4.7)

"requiresTranslatedLabel"  <BOOLEAN> to specify if a
          translation of the classification and release markings
          is added to the overall marking.
"beforeTranslatedClassification"  <STRING> <see
          beforeClassification>
"afterTranslatedClassification":  <STRING> <see
          afterClassification>
"beforeTranslatedReleaseStrings"  <STRING> <see
          beforeReleaseStrings>
"betweenTranslatedReleaseStrings"  <STRING> <see
          betweenReleaseStrings>
"afterTranslatedReleaseStrings"  <STRING> <see
```

```
             afterReleaseStrings>
"afterTrlanslatedCompletedClass"    <STRING> <see
             afterCompletedClass>
```

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The following formatting statements define the formatting of the text:

```
"formatBeforeClassification" list of formatting attributes for
          the classification string
    "font"       <STRING>    defines the font style. E.g.
                 "Arial", "Courier", "Times New Roman"
    "fontSize"  <INT>         defines the size of the font
    "fontColor" <STRING> the font color value in RGB format. A
                 value of "0x000000" specifies to use the value
                 of the classification in the Section
                 5.04(v)"classifications". If black should be
                 specified please us 0x000001
    "fontStyle" list of <STRING> defining the font style, like
                 "bold", "italic", "underline", ...
    "paragraphAlignment"   <STRING> alignment of the paragraph,
                 like "left", "center", "right"

"formatClassification"  list of formatting attributes for the
          release marking. (same as formatBeforeClassification)

"formatReleaseMarking"  list of formatting attributes for the
          release marking. (same as formatBeforeClassification)

"formatTranslation"    list of formatting attributes for the
          release marking. (same as formatBeforeClassification)
```

Example:

```
{"beforeClassification":       "",
 "beforeClassificationEmail": "Classification: ",
 "beforeClassificationWord":  "",
 "beforeClassificationExcel": "",
 "beforeClassificationPPT":   "",
 "afterClassification":       " ",
 "beforeAdditionalClassification": "<BR>",
 "afterAdditionalClassification":   "<BR>",
 "beforeReleaseStrings":      "REL TO: ",
 "betweenReleaseStrings":     "\\\\",
 "afterReleaseStrings":       "",
 "afterCompletedClass": "<BR>",
 "requiresRelAs": false,

 "requiresTranslatedLabel":              true,
 "beforeTranslatedClassification": "Einstufung: ",
 "afterTranslatedClassification":  " ",
 "beforeTranslatedReleaseStrings": "FREIGABE AN: ",
 "betweenTranslatedReleaseStrings": ", ",
 "afterTranslatedReleaseStrings":   "",
 "afterTrlanslatedCompletedClass": "<BR>"}

"formatBeforeClassification":
          {"font":    "Courier",
           "fontSize":     12,
           "fontColor":    "0x000000",
           "fontStyle":    ["bold"],
```

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```
                            "paragraphAlignment":  "left"},

    "formatClassification":
                    {"font":     "Courier",
                     "fontSize":      12,
                     "fontColor":     "0x000000",
                     "fontStyle":     ["bold"],
                     "paragraphAlignment":  "left"},

    "formatReleaseMarking":
                    {"font":     "Times New Roman",
                     "fontSize":      10,
                     "fontColor":     "0x005500",
                     "fontStyle":     ["italic", "underline"],
                     "paragraphAlignment":  "center"},

    "formatTranslation":
                    {"font":     "Arial",
                     "fontSize":      7,
                     "fontColor":     "0x550000",
                     "fontStyle":     ["bold", "italic"],
                     "paragraphAlignment":  "right"}
```

(x)   *"x_header_config"*

A list of attributes which define the namespace for ClassifyIt DLP (Data Leak Prevention) information. For Emails those are used for the X-Header namespace and for the other formats (word, spreadsheet, slides) a custom property with that namespace is created, representing the classification and releasability of the document (more details at more details in Article VIII. The following attributes are defined:

```
"xMarkingName"    <STRING> the name which will appear in the
            email's envelope as an X-Header for the
            classification. (this is the name of the name/value
            pair) – more details in Article VIII.
"xReleaseCodeDelimiter" <STRING> which will separate release
            statements in the xRelease string.
```

Example:

```
{"xMarkingName":             "Classification",
 "xReleaseCodeDelimiter":     "-"}
```

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(xi)   "outlook_control"

A list of attributes which defines specific Outlook application behaviour. The following attributes are defined:

> **"banned_filetypes"**   [<STRINGS>] (list of strings) defining
>   filetypes which the user is not allowed to send by
>   email. IMPORTANT is to specify the preceding '.' as
>   well.
> **"allowLowerClassification"**   <BOOLEAN> specifies if a forward or
>   reply to an email could have a lower classification
>   than the original email.
> **"warnLowerClassification"**   <BOOLEAN> specifies if for a forward
>   or reply to an email with a lower classification than
>   the original email the user should get a warning
>   message. This setting is only effective if
>   "allowLowerClassification" is true.
> **"allowLowerAttachmentClassification"**   <BOOLEAN> specifies if
>   an attachment to an email could have a lower
>   classification. IMPORTANT, only Word, Excel and
>   PowerPoint attachments are checked, and PDF
>   attachments which have been generated through
>   ClassifyIt. IMPORTANT, if set to 'false' this value
>   will stop emails from being sent if there are Word,
>   Excel or PowerPoint files without a classification (or
>   with a lower classification than the email itself).
> **"warnLowerAttachmentClassification"**   <BOOLEAN> if it is
>   allowed to send emails with attachments which have a
>   lower classification the user would at least receive a
>   warning message. IMPORTANT, only Word, Excel,
>   PowerPoint and PDF attachments are checked.
> **"automaticallyEncryptAllAttachments"**:   <BOOLEAN> specifies if
>   attachments are automatically encrypted. Use with
>   care, since the attachments can only be de-crypted if
>   the recipient also uses ClassifyIt. The user can also
>   encrypt attachments manually.
> **"showXMarkingButton"**   <BOOLEAN> specifies if the button for
>   showing xMarkings added to the email is visible and
>   usable. (Note: normally this is not required).
> **"markSubject"**   <BOOLEAN> specifies if the classification should
>   be added in the Subject line of the email. If true the
>   classification will be shown within [ ] brackets.
> **"markSubjectWithRealName"**   <BOOLEAN> specifies if the subject
>   marking uses the real name of the classification or
>   the xClassification.
> **"setSensitivityLevel"**   <BOOLEAN> specifies if ClassifyIt will
>   change the Email Sensitivity field.

Example:

```
{"banned_filetypes":    [".dll", ".exe", ".bat"],
 "allowLowerClassification": true,
 "warnLowerClassification": true,
 "allowLowerAttachmentClassification": false,
 "warnLowerAttachmentClassification":  true,
 "automaticallyEncryptAllAttachments": false,
 "showXMarkingButton":              true,
```

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```
"markSubject":                              false,
"markSubjectWithRealName":        true,
"setSensitivityLevel":            false}
```

(xii)   "word_document_control"

A list of attributes which define for the Microsoft Word application where the classifications should be added and if those are to be enforced. The following attributes are defined:

```
"addToHeader"     <BOOLEAN> if true the classification will be
            added to the header of the document.
"addToFooter":    <BOOLEAN> if true the classification will be
            added to the footer of the document.
"enforceMarking":      <BOOLEAN> specifies if the user can save
            or print Word documents without a security marking. If
            set on true the document must have a security marking.
```

Example:

```
{"addToHeader":         true,
 "addToFooter":         true,
 "enforceMarking":         false}
```

(xiii)   "excel_control":

A list of attributes which define for the Microsoft Excel application where the classifications should be added. The following attributes are defined:

```
"addToHeader"     <BOOLEAN> if true the classification will be
            added to the header of the document.
"addToFooter"     <BOOLEAN> if true the classification will be
            added to the footer of the document.
"enforceMarking"       <BOOLEAN> specifies if the user can save
            or print Excel sheets without a security marking.
```

Example:

```
{"addToHeader":         true,
 "addToFooter":         true,
 "enforceMarking":      true}
```

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(xiv) *"powerPoint_control":*

A list of attributes which define for the Microsoft PowerPoint application where the classifications should be added. The following attributes are defined:

```
"enforceMarking"        <BOOLEAN> specifies if the user can save
                or print PowerPoint slides without a security marking.
"posLeft"    <INTEGER> specifies the left position of the
             classification text on the slide.
"posTop"     <INTEGER> specifies the top position of the
             classification text on the slide.
```

Example:

```
{"enforceMarking":     true}
```

(xv) *"crypto_control":*

A list of attributes which define if email attachments could be encrypted. The following attributes are defined:

```
"allowEncryption" <BOOLEAN> if true the attachments to emails can
             be encrypted, and decrypted. Encrypted attachments
             have the file extension .cit
```

Example:

```
{"allowEncryption":          true}
```

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Article VI. ClassifyItUserData.json

This file is located in the users' roaming Application Data directory (CSIDL_APPDATA, typically: C:\Documents and Settings\username\Application Data\Roaming).

If not existing, the file is created by ClassifyIt during its startup. The file is edited by ClassifyIt when the users adds or removes preferences to the content of some functions. The file can be edited, however it is important that a JSON compliant file is created/maintained, otherwise ClassifyIt will not work properly.

The following sections are defined in the ClassifyItUserData.json file:

In Word Application – ClassifyIt Property Menu:

Section 6.01   "categories"

```
"categories"        An array of strings which can be selected for
              adding categories to the CATEGORIES_PROPERTY
Example: "categories": ["CONTRACT", "INVOICE", "REPORT"]
```

Section 6.02   "keywords"

```
"keywords"  An array of strings which can be selected for adding
              keywords to the KEYWORDS_PROPERTY
Example: "keywords": ["TEMPLATE", "DOCUMENT"]
```

Section 6.03   "templates"

```
"templates" An array of records which the user can use to add
              multiple properties to all property fields. Each
              template has a unique name.
Example: "templates": [
              {"templateName:   "Temp1",
               "subject":       "Subject",
               "title":         "Title",
               "keywords":      "Keyword1, Keyword2",
               "category":      "Cat1, Cat2",
               "comments":      "Comment",
               "lastauthor":    "Last Author",
               "manager":       "Manager",
               "format":        "Format",
               "company":       "Company",
               "hyperlinkbase": "LinkBase",
               "author":        "Author"}
```

Section 6.04   "ECC"

```
"ECC"        A list of Elliptic Curve Cryptographic information.
              Currently only "myCert" is defined which names the
              users certificate name. The sub-folder 'cli_certs'
              holds the users certificate (private/public keypair)
              and imported public keys from other users.
Example: "ECC": {"myCert", "bob@ugarbe.de"]
```

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Section 6.05   "quickSelect"

`quickSelect`   An array of Quick-Select records, with with
              "display", "classification" and "release" attributes.
              The values for "classification" and "release" must be
              the same as the X-Class and X-Rel markings. Multiple
              release markings are separated by the
              "xReleaseCodeDelimiter".
Example: "quickselect": [
              {"display": "Open rel Management/Finance",
              "classification": "O",
              "release": "MAN-FIN"}]

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Article VII.   Manual Installation

ClassifyIt can be installed without running the setup executable. To do so, you would need the following files:

>ClassifyIt.dll

>ClassifyIt.json

First you would need to register the ClassifyIt.dll to the Windows Operating System and second provide link information to the ClassifyIt.json file.

Section 7.01   Registering ClassifyIt.dll

Copy the file anywhere in the file system and if needed rename the file, but keep the .dll extension. The path and filename would be <PATH>\<FILENAME>.

Start the Windows Command Prompt in administrator mode

Execute: regsrv32 <PATH>\<FILENAME>

If successful you will see:

```
RegSvr32                                    ×

    (i)   DllRegisterServer in classifyit.dll succeeded.

                                  OK
```
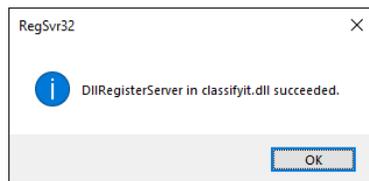
Section 7.02   Deregister ClassifyIt.dll

To de-register the ClassifyIt.dll execute: regsrv32 -u <PATH>\<FILENAME>

Section 7.03   Link ClassifyIt.json file

In the second step we need to tell ClassifyIt where to find the configuration file. Details for this are provided in Section **Registry Keys**

HKLM\SOFTWARE\CLASSIFY_IT\   (for 64-bit version of ClassifyIt.

Note: for   the   32-bit   version   of   ClassifyIt   the   key   is   stored   at: *HKLM\SOFTWARE\Wow6432Node\CLASSIFY_IT*

Article VIII.   Classification Properties (X-Header Information)

ClassifyIt adds Properties and X-Header information to documents and emails.

The properties and X-Header information are Name: Value pairs. The name is specified in the configuration file under the "x_header_config" section by the "xMarkingName". The value is a JSON string with the following structure:

    {"type": "Normal",

     "x-class": "U",

     "x-rel":   [],

     "app": "email"}

While "type" and "app" are purely used within ClassifyIt, "x-class" and "x-rel" can be used by Data Leak Prevention (DLP). The values in "x-class" and "x-rel" are those of the "classifications" and "release_markings" sections representing in the document the actual classification and release as assigned to the document.

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Article IX. Data Leak Protection (DLP)

Every document classified by ClassifyIt will, in addition to the human readable classifications, be tagged with machine readable property data. The [Classification Properties](#) section describes the data structure of the property data.

XML Guards or Application Guards can read the classification and release values to determine if the email or document can be transferred.

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Article X. Prevent Disabling of ClassifyIt

Section 10.01   *Prevent ClassifyIt being disabled by a user*

In general, Office add-ins can be disabled by a user. To prevent this for Office 2010, the following registry keys need to be created:

Outlook:

Key: HKEY_CURRENT_USER\Software\Microsoft\Office\14.0[1]\Outlook\Security

Value: DontDisplayHKLMAddins (REG_DWORD) set value on 1

---

[1] 16.0 for Office 2019 and Office 365

TLP:**WHITE**

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Section 10.02 Ensure ClassifyIt is loaded at all times

Office evaluates the health and loading time of add-ins. ClassifyIt sometimes is evaluated of loading too long. To prevent this set the following registry keys:

<ClassifyIt ID>:   ClassifyIt.ClassifyIt_class

Go to registry key:
HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\16.0\Outlook\Resiliency

Ensure the <ClassifyIt ID> is not listed in:
HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\16.0\Outlook\Resiliency\Crashin gAddinList

Add the <ClassifyIt ID> to:
HKEY_CURRENT_USER\SOFTWARE\Microsoft\Office\16.0\Outlook\Resiliency\DoNotD isableAddinList   as a DWORD with the value 1 (see below):

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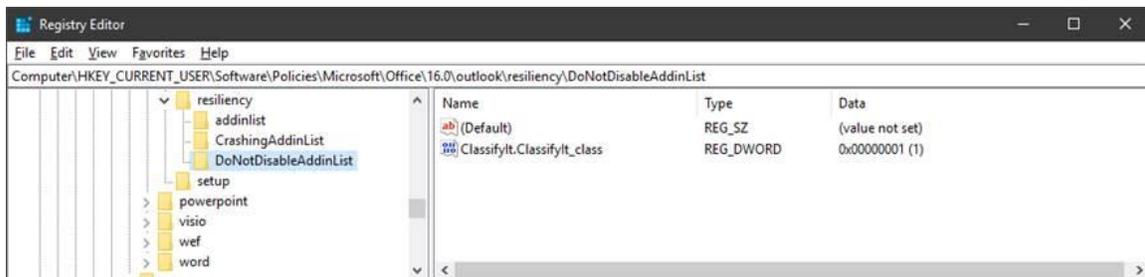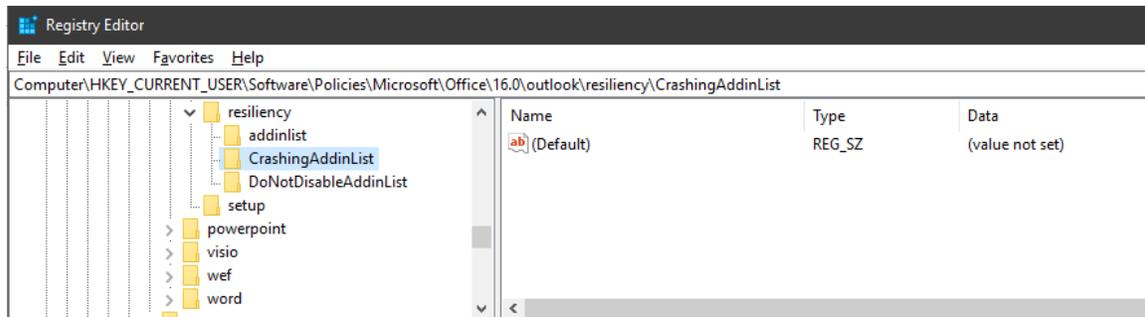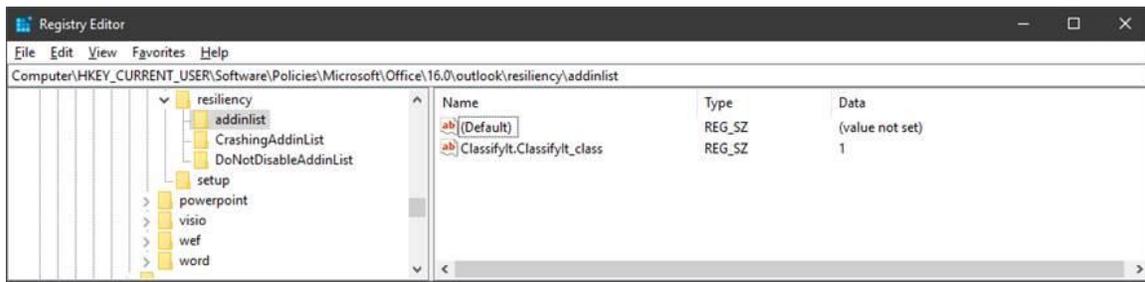
Article XI. Information Manager

Input from the information manager (office) is important so that ClassifyIt is properly configured to reflect your needs for information security and classification.

The below figure provides an idea of what should be defined by the information manager. The classifications your company/administration is using to classify documents and emails, release markings, if those are used, and if so wider release groups could be used.

Figure 1 – Traffic Light Protocol Classification Marking – White, no release

Figure 2 - TLP Marking - Green, with release

The figures above show the ClassifyIt Release Form with an example of the Traffic

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Light Protocol (TLP) markings (White, Green, Amber, Red). Other markings might be: Unclassified, Restricted, Confidential, Secret, Top Secret. ClassifyIt provides you with the option of any number of markings in any language and any Unicode character-set (UTF-8). ClassifyIt shows with the selection of classification and release how the actual marking looks like which could be inserted in the document the user is working on (below the selection areas).

The examples above also show a feature of ClassifyIt to provide a 'translation' of the markings. This is an important feature for information exchange between different companies or administrations, when not using the same classification marking. ugarbe.de suggests the use of a Global Standardised Classification Label (GSCL) which is well structured using standard classification markings in English language.

> http://ugarbe.de/ClassifyIt/2017%2012%20-%20Case%20Study%20-%20Interoperability%20of%20Classification%20Markings.pdf

Section 11.01   Classifications

List all classifications used by your organisation, in the order of lowest (e.g. public) level to the highest most protective level (e.g. secret). Optional, you could provide a screen tip the user would see when selecting a classification.

<please override the TLP example below with your policy>

1) White
   a) Screen Tip: Public Information, can be shared with everyone
   b) Translation: Unclassified
2) Green
   a) Screen Tip: Information can be shared with Peers and Partner Organisations
   b) Translation: Restricted
3) Amber
   a) Screen Tip: Information is critical and must be handled with care
   b) Translation: Confidential
4) Red
   a) Screen Tip: Information is very critical and if wrongly distributed would have grave damage to our organisation
   b) Translation: Secret

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Section 11.02   Release Markings

List all of the release markings your organisation uses, with a screen tip for the user. This is optional. If no release markings are necessary, please provide an empty list.

<please override the example below with your policy>

1) Management

    a) Screen Tip: Members of Management

    b) Translation:

2) Finance

    a) Screen Tip: Office of Finance

    b) Translation:

3) …

4) COMPANY_1

    a) Screen Tip: Company 1

    b) Translation:

5) COMPANY_2

    a) Screen Tip:

    b) Translation:

6) COMPANY_3

    a) Screen Tip:

    b) Translation:

7) …

Section 11.03   Release Groups

List the release groups which might be useful in your organisation. For a Release Group think about a named project your company has with other companies – for this named project you could define the project name as a Release Group, which would include the companies (e.g. COMPANY_1, COMPANY_3, COMPANY_8) – this makes it easier for the user to select the correct companies for sharing information. This feature is optional and only makes sense if you use Release Markings.
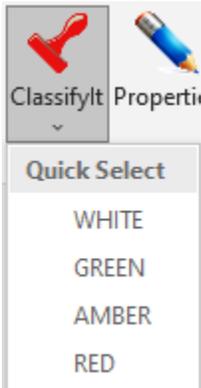
<please override the example below with your policy>

1) PROJECT_1

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     a) Members: COMPANY_1, COMPANY_3, COMPANY_8

     b) Screen Tip: Project 1 is about xxx

2) PROJECT_2

     a) Members: COMPANY_1, COMPANY_2, COMPANY_5, COMPANY_6

     b) Screen Tip: Project 2 is about xxx

3) …

Section 11.04　Quick Select

Provide your users a short list of frequently used classification markings. The marking has a display name and defines a classification and release marking – the release marking could be empty.

It is recommended to provide at least the classifications for this feature.

<please override the example below with your policy>

1)

     a) Display: WHITE

     b) Classification: White

     c) Release:

2)

     a) Display: GREEN

     b) Classification: Green

     c) Release:

3) …

4)

     a) Display: G rel M+F

     b) Classification: Green

     c) Release: Management, Finance

5) …

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Section 11.05   Default Marking

Select which default marking should be applied to a new document or email. Normally this is either the lowest classification without a release, or the highest classification without a release. However any defined classification and release could form the default marking.

<please override the example below with your policy>

1) Classification: White

2) Release: <>

Section 11.06   Formatting

Last but not least the formatting of the classification marking needs to be described. ClassifyIt provides extensive options to display classification markings in the way as required by your policy.

To best approach the definition of the formatting, consider some examples. Consider the following:

- A classification in Outlook, Word, PowerPoint and Excel could have a different preceding. This preceding can have its own colour, font size, etc.

  o Example: some customers prefer for Emails the expression "Classification:" in front of the classification.

  o Example: the classification of this document (WHITE) is preceded with the expression "TLP:" to indicate this is a TLP marking.

  o Preceding Outlook: < please fill >

  o Preceding Word: < please fill >

  o Preceding PowerPoint: < please fill >

  o Preceding Excel: < please fill >

  o Preceding Formatting:

-

-

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