

CAPITA



Configuring CCS Enterprise Workflow

last updated for the Spring 2013 (3.50) release

Technical Guide



Revision History

Version	Published on
Spring 2013 (3.50) - 1.0	22/02/2013

Doc Ref

Configuring CCS Enterprise Workflow Technical Guide/Spring 2013 (3.50)/2013-02-22

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# 01 | Configuring CCS Enterprise Workflow

## Purpose

This document is intended to describe how to maintain workflow rules using the ExemplarWorkflowRules.xml file.

## Workflow Overview

The workflow rules system is based around exemplars. When an exemplar is saved to the database, or signed or countersigned, the workflow rules can specify a set of actions to be performed. These rules are defined in an XML file, ExemplarWorkflowRules.xml. The 'Home Page' of the Integrated Children's System software contains a 'My Workflow Messages' panel – as shown below:

| My Workflow Messages                |                     |              |             |                                                                           |
|-------------------------------------|---------------------|--------------|-------------|---------------------------------------------------------------------------|
| Delete                              |                     |              |             |                                                                           |
| Name                                | Due                 | Assigned By  | Assigned On | Message                                                                   |
| Not Due                             |                     |              |             |                                                                           |
| <input type="checkbox"/> * J Aarons | 08/11/2006 13:19:15 | Zoe Halstead | 01/11/2006  | M07: You've set Janet Aarons's Expected Date of Completion to 10/11/2006. |

In this screenshot, we can see that Zoe Halstead saved an exemplar for Janet Aarons on the 1<sup>st</sup> November 2006. This message is the result of the answer to the "Expected Date of Completion" question being set to the 10<sup>th</sup> November. The message recipient is expected to have acted on the message by the 8<sup>th</sup> November. The user can delete an individual message by pressing the delete button within the row holding the message. Multiple messages can be deleted by setting the checkboxes to true for the messages to be deleted and then pressing the delete button in the toolbar. Clicking on the name of the subject will cause the details page for that person to be opened; clicking on the message will cause the exemplar that triggered the message to be opened.

Messages are grouped according to whether they are overdue, due today or not due. Overdue messages are shown with the Due Date in red.

The workflow rules allow the following actions to be performed when the rule is triggered:

A message can be sent to a post, the supervisor of the person who saved the data, the case owner or the case owner's supervisor.

The exemplar can be forwarded. This is performed by sending a message to the recipient. This message will consist of the message specified in the rule along with some text stating that the exemplar is being forward to 'you'.

A case note can be added.

Rules can also specify that they should be triggered when the exemplar is created, signed off or counter signed.

A 'Completed By' date can be specified in the rule – this shows up in the user interface as the 'Due Date'. This 'completed by' can be measured in hours, days or weekdays. The 'weekdays' calculation ignores public holidays and counts from the next weekday. So, if the rule is triggered on a Saturday then the weekdays commence on the Monday.

## Workflow rules file location

The workflow rules are specified in the ExemplarWorkflowRules.xml file which is stored in the ICSFormServices\Config folder of the installation on the server. It is not stored on the client. This does mean that if the installation is scaled out to a number of application servers then the file will need to be present in each servers ICSFormServices\Config folder.

## Specifying rules in the XML file

The XML file contains the set of rules. Rules can not be disabled in the file, to disable a rule it must be deleted from the file.

A sample rule is shown below:

```
<Rule>
  <ExemplarCode>ZM-Cypplan</ExemplarCode>
  <QuestionCode>ZM002</QuestionCode>
  <AnswerValue>10/11/2006</AnswerValue>
  <Outcomes>
    <Outcome>
      <WorkflowMessage>
        <To>Self</To>
        <Text>You've set [Subject]'s Expected Date of Completion to
[AnswerValue].</Text>
      </WorkflowMessage>
    </Outcome>
  </Outcomes>
</Rule>
```

This rule specifies that when an exemplar based on the **Child/Young Person's Plan** – which has the exemplar code ZM-Cypplan – is saved and the answer to question ZM002 – the **Date of Expected Completion** – is set to the 10<sup>th</sup> of November 2006, then the following message is sent to the user who saved the exemplar stating:

You've set [Subject]'s Expected Date of Completion to [AnswerValue].

The previous screenshot of the workflow messages panel shown earlier shows an example of the message sent by this rule. In the screenshot, the subject of the exemplar was J.... A.....

In this example rule, we can see that the ExemplarCode is specified, along with the QuestionCode and a specific AnswerValue. A single outcome is specified. Multiple outcomes can be specified by simply including more 'Outcome' nodes within the 'Outcomes' node for the rule.

The example specifies that the message will be sent to 'Self'. This means 'the person who made the change to the data'. The rule can alternatively specify posts, the supervisor of 'Self', the owner of the case and the supervisor of the owner of the case – as demonstrated in the 'Outcomes' node shown below:

```
<Outcomes>
  <Outcome>
    <WorkflowMessage>
      <To>Teacher</To>
      <Text>Person change 6 (surname, forename middlename) correctly
detected.</Text>
    </WorkflowMessage>
  </Outcome>
  <Outcome>
    <WorkflowMessage>
      <To>Supervisor</To>
```

```

        <Text>Your team member, [Self], has updated question [QuestionCode]
to have an answer of [AnswerValue].</Text>
    </WorkflowMessage>
</Outcome>
<Outcome>
    <WorkflowMessage>
        <To>CaseOwner</To>
        <Text>One of your cases has had the answer to question [ZM009]
changed..</Text>
        <CompleteBy>10</CompleteBy>
        <CompletedByDuration>Weekdays</CompletedByDuration>
    </WorkflowMessage>
</Outcome>
<Outcome>
    <WorkflowMessage>
        <To>CaseOwnerSupervisor</To>
        <Text> A case owned by [CaseOwner] has had the answer to question
'ZM009' changed.</Text>
        <CompleteBy>10</CompleteBy>
    </WorkflowMessage>
</Outcome>
</Outcomes>

```

This 'Outcomes' node shown above states that a message will be sent to the 'Teacher' post, another message will be sent the supervisor of 'Self', a separate message will be sent to the owner of the case and final message will be sent to the supervisor of the owner of the case. The message to the case owner has been defined so that the recipient is expected to action this message within 10 weekdays.

## Text Substitutions

The text element defines the message that will be sent. A set of substitutions are supported so that a more detailed instance-specific message can be sent. The available substitutions are shown below; the testing for these substitutions is case-sensitive:

| Substitution Code | Purpose                                                                                                               |
|-------------------|-----------------------------------------------------------------------------------------------------------------------|
| [QuestionCode]    | The user interface description of the Question referred to by the QuestionCode value in the related QuestionCode tag. |
| [ExemplarCode]    | The user interface description of the Exemplar referred to by the ExemplarCode value in the related ExemplarCode tag. |
| [Subject]         | The compound name of the person the exemplar refers to.                                                               |
| [Self]            | The name of the user triggering the workflow.                                                                         |
| [CaseOwner]       | The name of the owner of the case.                                                                                    |
| [AnswerValue]     | The value of the answer that the outcome belongs to.                                                                  |
| [Date]            | Today's Date.                                                                                                         |
| [Time]            | The current Time - without the date.                                                                                  |
| [Now]             | The current Date/Time.                                                                                                |

## Example Outcomes

The outcome node shown below describes an outcome that would add a case note with the text shown in the text node:

```
<Outcome>
  <AddCaseNote>
    <Text>M09: [Subject]'s Expected Date of Birth set to [AnswerValue] by
[Self].</Text>
  </AddCaseNote>
</Outcome>
```

The outcome node shown below describes an outcome that would cause the exemplar to be forwarded to the supervisor of the person who saved the exemplar:

```
<Outcome>
  <ForwardExemplar>
    <To>Supervisor</To>
    <Text>M10: [Subject]'s Expected Date of Birth set to [AnswerValue]
by [Self].</Text>
  </ForwardExemplar>
</Outcome>
```

The rule shown below describes a message to lbe sent when exemplar ZM-Cypplan is signed off:

```
<Rule>
  <ExemplarCode>ZM-Cypplan</ExemplarCode>
  <Action>Signoff</Action>
  <Outcomes>
    <Outcome>
      <WorkflowMessage>
        <To>Supervisor</To>
        <Text>[Self] has signed off Exemplar [ExemplarCode] for
[Subject].</Text>
      </WorkflowMessage>
    </Outcome>
  </Outcomes>
</Rule>
```

The rule shown below describes a message to be sent when exemplar ZM-Cypplan is counter-signed:

```
<Rule>
  <ExemplarCode>ZM-Cypplan</ExemplarCode>
  <Action>CounterSignOff</Action>
  <Outcomes>
    <Outcome>
      <WorkflowMessage>
        <To>Supervisor</To>
        <Text>[Self] has signed off Exemplar [ExemplarCode] for
[Subject].</Text>
      </WorkflowMessage>
    </Outcome>
  </Outcomes>
</Rule>
```

The following rule describes an action to be taken when the exemplar is signed off by a person who holds a particular post, in this case a teacher:

```
<Rule>
  <ExemplarCode>EXUT1</ExemplarCode>
  <SignOffPost>Teacher</SignOffPost>
  <Outcomes>
    <Outcome>
      <WorkflowMessage>
        <To>Supervisor</To>
        <Text> Teacher [Self] has signed off exemplar '[ExemplarCode]'.
        </Text>
      </WorkflowMessage>
    </Outcome>
  </Outcomes>
</Rule>
```

Here, a message will be sent to the teacher's supervisor when they sign off an exemplar based on exemplar EXUT1. The rule shown below is similar, but here the rule is triggered when a social worker counter signs an instance of exemplar EXUT1:

```
<Rule>
  <ExemplarCode>EXUT1</ExemplarCode>
  <CounterSignOffPost>Social Worker</CounterSignOffPost>
  <Outcomes>
    <Outcome>
      <WorkflowMessage>
        <To>Self</To>
        <Text>The Social Worker has counter signed off exemplar
        '[ExemplarCode]'.</Text>
      </WorkflowMessage>
    </Outcome>
  </Outcomes>
</Rule>
```

The rule below would be triggered when an instance of exemplar ZM-Cypplan is linked to the case with the reference number 2222:

```
<Rule>
  <ExemplarCode>ZM-Cypplan</ExemplarCode>
  <CaseReferenceNumber>2222</CaseReferenceNumber>
  <Outcomes>
    <Outcome>
      <WorkflowMessage>
        <To>Self</To>
        <Text>M16: Case reference 2222 has been linked to an instance of
        [ExemplarCode].</Text>
      </WorkflowMessage>
    </Outcome>
  </Outcomes>
</Rule>
```



## Answer Matching

Rule outcomes will be triggered when the answer given for a question changes and it matches the required answer. The 'AnswerValue' element is optional – if it is not specified then the outcomes will be triggered whenever the answer changes and the data is saved.

Matching answers to required answers for non-simple types is performed, non case-sensitive, as follows:

### Person

A name given in the rule is deemed to match the person specified in the answer if one of the following is true:

- The compound name matches the name in the AnswerValue.
- The person's name in 'forename + " " + middlename + " " + surname matches the AnswerValue.
- The surname is the same as the AnswerValue.
- The person's name in 'surname+', "+ forename matches the AnswerValue.
- The person's name in 'surname+', "+ forename + " "+middlename matches the AnswerValue.

### Address

An address given in the rule is deemed to match the address specified in the answer if one of the following is true:

- The address string is the same as the address in the AnswerValue.
- The single-line form of the address is the same as the text in AnswerValue.
- The comma-separated single-line form of the address is the same as the text in AnswerValue.
- Just the postcode is supplied in the AnswerValue, and this is the address' postcode.
- The address wholly contains the value in AnswerValue – for example if the AnswerValue is a town name.
- The AnswerValue matches the first line of the address.
- The AnswerValue is comma-separated and each line of the AnswerValue is in the address.

### Agency

An agency supplied as an answer to a question is deemed to match if the AnswerValue contains the description of the agency.

## Extension Points

There may be situations in which the rule and answer values outlined above do not enable the user to fully describe the conditions that they wish to trap. To provide for this, an extension point facility is provided, as demonstrated below:

```
<Rule>
  <ExemplarCode>ZM-Cypplan</ExemplarCode>

  <ExtensionPoint>TestForContactsOnChildProtectionRegistrar.exe</ExtensionPoint>
</Rule>
```

Here, we call an external application, TestForContactsOnChildProtectionRegistrar.exe whenever an exemplar based on form ZZ-Cypplan is saved to the database. This external program takes two parameters:

/CurrentFile:

/PreviousFile:

Each of these parameters will provide a filename which will contain an XML representation of the exemplar - /CurrentFile: contains the exemplar as just saved, /PreviousFile: contains the exemplar as it was before it was saved to the database. The two filenames provided will be in the Temp directory, the files will be deleted when the extension point application exits. The application itself will be stopped if it takes “too long” to complete its execution – this is to help prevent a long slow or hanging process for adversely affecting the system performance. A setting in the “application.ini” configuration file in the config folder is used to determine this maximum life span of the external application. The setting is called “ExternalProcessLifeSpan”, it is in the “ApplicationServer” section and is measured in seconds. The default is sixty seconds. This means that any external applications that take more than sixty seconds to execute will be terminated after sixty seconds.