

Workflow 8 : Best Practices for Creating Starting Rules

White Paper

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Laserfiche®

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Summary

This paper details starting rule best practices that will help you avoid workflows that:

- Fail to start.
- Are triggered by the wrong events.
- Run continuously.

Before reading this paper, you should be familiar with the general concept of starting rules and the process of building and publishing workflows and starting rules.

In addition to general best practices, solutions to these specific problems will be addressed.

1. If the creation of a shortcut triggers a workflow that is designed to create shortcuts to the starting entry, the workflow will terminate ([page 5](#)).
2. A workflow that moves entries may not perform correctly if it is also triggered whenever an entry is moved ([page 7](#)).
3. A workflow that changes entries may not perform correctly if it is also triggered whenever an entry is changed ([page 11](#)).
4. A workflow that creates entries may not perform correctly if it is also triggered when an entry is created ([page 13](#)).
5. If the Workflow Subscriber has been configured to monitor multiple repositories, an event that takes place inside any monitored repository has the potential to satisfy any starting rule on the Workflow Server. Since the connection information associated with the workflow is specific to one repository, workflows will terminate when the starting event occurs in all but a single repository ([page 16](#)).

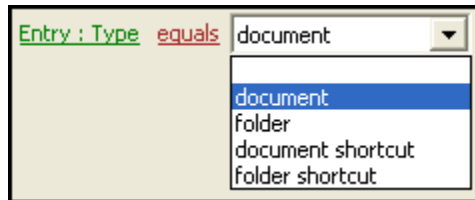
General Best Practices

It is important that starting rules target the desired entry and exclude all others. If a starting rule is not specific enough, it may be performed on the wrong entry, cause a runaway workflow, or conflict with other starting rules and/or workflows. Consider the following best practices when creating a starting rule.

- If your Workflow Subscriber is configured to monitor multiple repositories, always define the repository where the starting event must take place.

```
Repository equals <Your Repository Name>
```

- If a workflow should only be triggered by a specific entry type (e.g., document, folder, document shortcut, or folder shortcut), exclude all others.



- If a workflow should only be triggered by a starting event initiated in a specific folder, exclude all other repository locations.

```
Entry : Parent Name equals <Folder Name>
```

- For each workflow definition, you must define a Laserfiche user account that Workflow 8 will use to perform the workflow. This user is referred to as the Workflow User. Workflow Users are defined using connection profiles. In most cases, you should configure a starting rule to ignore events initiated by the Workflow User. Doing so will prevent workflows from inadvertently triggering other workflows.

```
User does not equal <WFUser>
```

- In most, but not all, situations you should only select a single starting event. Doing so will prevent multiple workflow instances from being performed on the same entry.

Select Starting Event(s): when an entry is created
 when an entry is moved
 when an entry is copied
 when an entry is changed
 when an entry is deleted

- In most, but not all, situations a workflow should only have one active starting rule at any given time. This will prevent the workflow from being triggered multiple times by the same event.

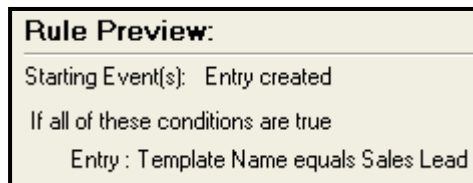
Shortcuts to Shortcuts

Problem

If the creation of a shortcut triggers a workflow designed to create shortcuts to the starting entry, the workflow will terminate.

For example, Workflow A:

- Creates a shortcut to the document that starts a workflow.
- Routes the shortcut to Tina's working folder.
- Has a starting rule that allows for it to be triggered when a document is created that has the **Sales Lead** template assigned to it.



In this scenario, the following events will take place.

1. A document that satisfies the starting rule is scanned into the repository and Workflow A is triggered.
2. Workflow A creates a shortcut to the document (Shortcut A) and routes it to Tina's working folder.
3. Since the creation of Shortcut A satisfies Workflow A's starting rule, Workflow A will be triggered again immediately.
4. Workflow A will attempt to create a shortcut to Shortcut A. Since Laserfiche shortcuts cannot reference other shortcuts, this instance of Workflow A will terminate.

Solution

For workflows designed to create shortcuts to starting entries, the assigned starting rule should be configured to ignore starting entries if they are shortcuts.

Rule Preview:

Starting Event(s): Entry created

If all of these conditions are true

- Entry : Template Name equals Sales Lead
- Entry : Type does not equal document shortcut
- Entry : Type does not equal folder shortcut

Entry Moved Conflicts

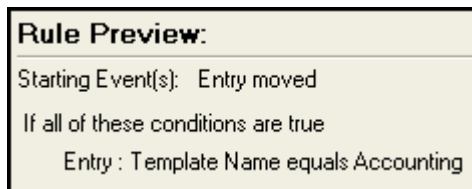
Problem

A workflow that moves entries may not perform correctly if it is also triggered when an entry is moved.

For example, at the Acme Corporation:

- Documents are stored in the **Processing** folder while users process them.
- After processing, users manually move the documents to the **Processed** folder.
- Workflow B moves the documents out of the **Processed** folder and into specific archive folders. The particular archive folder a document is moved to depends on a complex criterion that takes into consideration the date, time, user who processed the document, and a series of field values.
- After moving the document, Workflow B assigns a series of tags to it.

Workflow B's starting rule allows for it to be triggered when a document is moved that has the **Accounting** template assigned to it.



In this scenario, the following events will take place.

1. A user finishes processing a document and manually moves it to the **Processed** folder. This event satisfies Workflow B's starting rule and Workflow B is triggered.
2. Workflow B moves the document into the appropriate archive folder. Since this event also satisfies Workflow B's starting rule, Workflow B is immediately triggered again.

3. Two separate instances of Workflow B are now being performed on the same document, one of which is extraneous and may interfere with the original instance's performance.

Solution

There are two ways to configure a starting rule so that you are not attempting to both move entries and trigger the workflow when an entry is moved.

Solution #1

Configure the starting rule to only trigger the workflow if the document is moved into a specific parent folder. For example, only trigger the workflow if the document is moved into the **Processed** folder.

Rule Preview:
Starting Event(s): Entry moved
If all of these conditions are true
Entry : Template Name equals Accounting
Entry : Parent Name equals Processed

The above starting rule will only be triggered if a document is moved directly into the **Processed** folder. Documents moved into sub-folders will be ignored. To include sub-folders, use the following starting rule.

Rule Preview:
Starting Event(s): Entry moved
If all of these conditions are true
Entry : Template Name equals Accounting
Entry : Path starts with \Processed

Solution #2

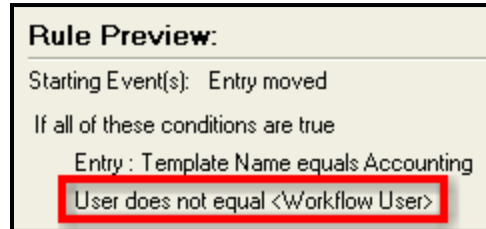
Configure the starting rule to only trigger the workflow if the document is moved by someone other than the Workflow User. A workflow logs into the repository and performs its actions using a specific Laserfiche username and password. The user you want designated as the Workflow User is defined using connection profiles.

The screenshot shows the 'Workflow Profile Manager' dialog box. At the top, it says 'Choose the connection profiles that are available for this workflow:'. Below this is a list box containing 'LF8 Repository (LF8Repository; <WF...'. To the right of the list are 'Add' and 'Remove' buttons. Below the list is a 'Copy from:' dropdown menu and a 'Manage Connections...' link. The 'Profile Details' section contains several fields: 'Name' (LF8 Repository), 'Server' (mylfserver.com), 'Repository' (LF8Repository), 'User' (<WFUserName>), and 'Password' (masked with asterisks). The 'User' and 'Password' fields are highlighted with a red border. At the bottom are 'Validate', 'OK', 'Cancel', and 'Help' buttons.

Tip: We recommend you create a new Laserfiche user and designate it as the default Workflow User. This user should have all rights, privileges, and security tags.

By configuring a starting rule to ignore events triggered by the Workflow User, the following events will take place.

1. Ted manually moves a document from the **Processing** folder into the **Processed** folder. This event satisfies Workflow B's starting rule and Workflow B is triggered.
2. Workflow B moves the document into the appropriate archive folder. Since this event was initiated by the Workflow User, it does not satisfy Workflow B's starting rule.



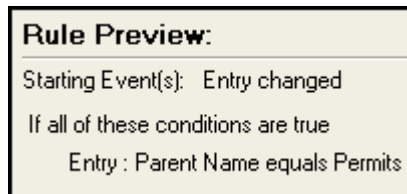
Entry Changed Conflicts

Problem

A workflow that changes entries may not perform correctly if it is also triggered whenever an entry is changed.

For example, Carol needs a way to quickly determine who edited her documents and when they were edited. She builds Workflow C to populate a document's **Modified By** field with the modifier's name and the modification date. In this scenario, the **Modified By** field has been enabled to accept multiple values.

Workflow C's starting rule allows for it to be triggered when a document inside the **Permits** folder is changed.



In this scenario, the following events will take place.

1. Bob changes the name of a document in the **Permits** folder. This event satisfies Workflow C's starting rule and Workflow C is triggered.
2. Workflow C populates the document's **Modified By** field with **Bob – 04/25/08**. Since this event also satisfies Workflow C's starting rule, Workflow C is immediately triggered again.
3. Workflow C populates the document's **Modified By** field with **Workflow User – 04/25/08**. Since this event also satisfies Workflow C's starting rule, Workflow C is immediately triggered again.
4. This process will continue over and over again, creating a runaway workflow (where folders continue to be created until the starting rule is manually disabled). Until this workflow can be redesigned and republished, its starting rule should be disabled.

Solution

For workflows designed to both modify entries and be triggered when an entry is modified, the starting rule should be configured to only trigger the workflow if the document is moved by a user other than the Workflow User, which is the user associated with a workflow's connection information.

Rule Preview:

Starting Event(s): Entry created

If all of these conditions are true

Entry : Parent Name equals Permits

User does not equal <Workflow User>

Entry Created Conflicts

Problem

A workflow that creates entries may not perform correctly if it is also triggered when an entry is created.

For example, whenever a permit is scanned into a repository, Workflow D creates a folder and moves the permit into the new folder. Permits are named **Permit X** when they are scanned in (where **X** equals a unique number). Workflow D names the folders it creates based on the name of the permit (e.g., **All Permit X Files**).

Workflow D's starting rule allows for it to be triggered when an entry with the word **Permit** is created.

Rule Preview:
Starting Event(s): Entry created
If all of these conditions are true
Entry : Name contains permit

In this scenario, the following events will take place.

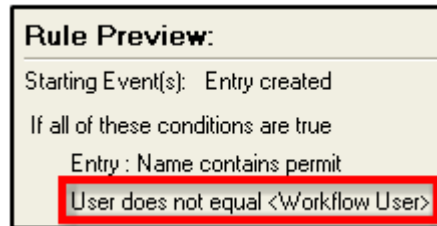
1. A permit is scanned into the **All City Permits** folder. This event satisfies Workflow D's starting rule and Workflow D is triggered.
2. Workflow D creates a folder for the new permit inside the **All City Permits** folder. Since this event also satisfies Workflow D's starting rule, Workflow D is immediately triggered again.
3. Depending on how Workflow D was designed, a series of unintended consequences may result, including the possibility of a runaway workflow.

Solution

There are three ways to avoid this issue.

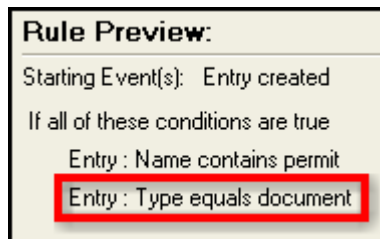
Solution #1

Configure the starting rule to only trigger the workflow if the document is moved by a user other than the Workflow User, which is the user associated with a workflow's connection information.



Solution #2

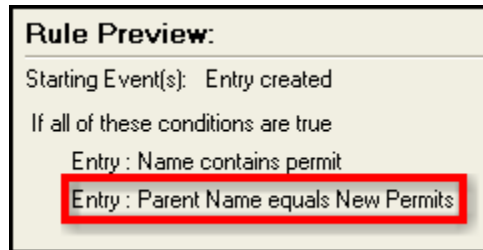
Configure the starting rule to only trigger the workflow if the entry created is a document.



Solution #3

If the creation of the document and the creation of the folder occur in separate folders, configure the starting rule to only trigger the workflow if the entry is created in a specific folder.

For example, permits are manually scanned into the **New Permits** folder. Workflow D creates a folder for each new permit inside the **Organized Permits** folder and places the new permit inside the new folder. In this scenario, configure a starting rule that excludes the creation of entries unless it occurs inside the **New Permits** folder.



Multiple Repository Conflicts

Problem

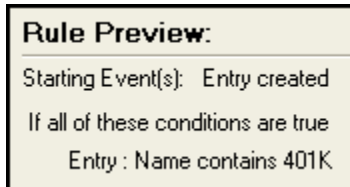
If the Workflow Subscriber has been configured to monitor multiple repositories, an event that takes place inside any monitored repository has the potential to satisfy any starting rule on the Workflow Server. Since the connection information associated with the workflow is specific to one repository, workflows will terminate when the starting event occurs in all but a single repository.

For example, the Fancy Corporation maintains three repositories, each of which is used to store different types of entries:

- Employee Travel Repository
- Customer Accounts Repository
- Employee Benefits Repository

Workflow E has been designed to route a shortcut of all 401k documents to the Benefits Coordinator. This workflow is designed to ensure that the Benefits Coordinator stays abreast of all issues relating to employee 401k plans.

Workflow E's starting rule allows for it to be triggered when a document is created that contains the word **401k** in the title.



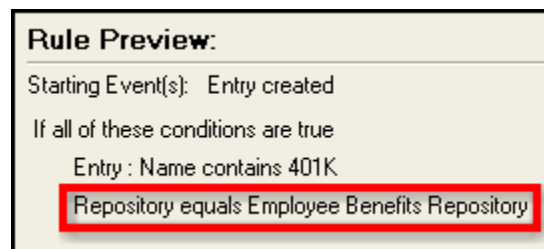
In this scenario, the following events may take place.

1. A sales order is scanned into the Customer Account's Repository. The customer's account number, which is included in the name of the sales order document, is **B54H82401KLB**. Since this particular sales order contains the phrase **401K**, Workflow E is triggered, despite the fact it has nothing to do with employee 401k plans.

2. Since the connection information associated with the workflow does not match the repository where the starting event took place, Workflow E will terminate when it attempts to route a shortcut to the Benefits Coordinator.
3. This event will continue to take place every time this customer places a sales order, leaving behind a series of terminated workflows.

Solution

If the Workflow Subscriber has been configured to monitor multiple repositories, all starting rules should limit starting events to the appropriate repository.





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