How Evergreen Notices Work

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How Notices Work

This is all about notices. We are not going to get into everything that can be done with action triggers. However, once you learn notices a lot will be transferable to other kinds of action triggers.

This could easily be four hours so we are going to skim over a few things.

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Fundamental Parts of an Action Trigger

Hook
Validator
Reactor
Delay
Max Delay
Opt In Setting
Template
Granularity
Group Field
Messages

The Very Very Abstract

Step 1. Have a hook that says "this is the condition that starts the notice."

Step 2. Have a reactor that responds and validates.

Step 3. Have the action trigger gather information and put it somewhere.

Step 4. Send notices.

Warning: We will talk about exceptions.

so let's start with hooks …

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Hooks

Passive versus active triggers

Local Admin Notifications/Action Triggers

| Event Definitions | Hooks | Reactors | Validators |

Non-Passive triggers will have their Passive setting set to No
Passive triggers will have their Passive setting set to Yes

An active trigger (non-passive) is one that automatically fire off based on an action done in Evergreen. They are built straight into the code.

Hooks

Some Hooks That Are Non-Passive
- checkin   -   An Item Was Checked In
- checkout   -   An Item Was Checked Out
- damaged   -   An Item Was Marked As Damaged
- hold.captured   -   An Item Was Captured For A Hold

Some Hooks That Are Passive
- au.expired   -   A Patron Account Is Past Their Expire Date
- checkout.due   -   An Item Is Overdue
- hold_request.shelf_expires_soon   -   A Hold Is About To Expire

Reactor

Notice reactors:

- ProcessTemplate - process through Template Toolkit (usually XML)

- SendEmail - ProcessTemplate + Send Email

- SendSMS - Process Template + Send Email Through SMS Gateway

- NOOP_True

Validator

Validators make sure that notices are

still valid when they are sent. When

they are sent is an important detail.

Delays & Max Delay

Little known fact: holds are picked up at

88 miles per hour.

So, sometimes we want to delay when

the notice is sent.

GREAT SCOTT

THAT WAS FAST

themegenerator.net

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Opt-In

A per user way to validate if a user should receive a notice with a user setting.

Common ones:

circ.send_email_checkout_receipts

opac.default_sms_notify

Messages

Obligatory cat picture.

Messages are notices that stay inside.

WHAT IF I TOLD YOU

I ACTUALLY ENJOY STAYING HOME

Templates

Templates are what create your notice content, whether it is plain text, HTML,

XML or whatever else you want to create.

Templates

Dear [% user.first_given_name %] [% user.family_name %],

Thank you for being a great library user!

vs

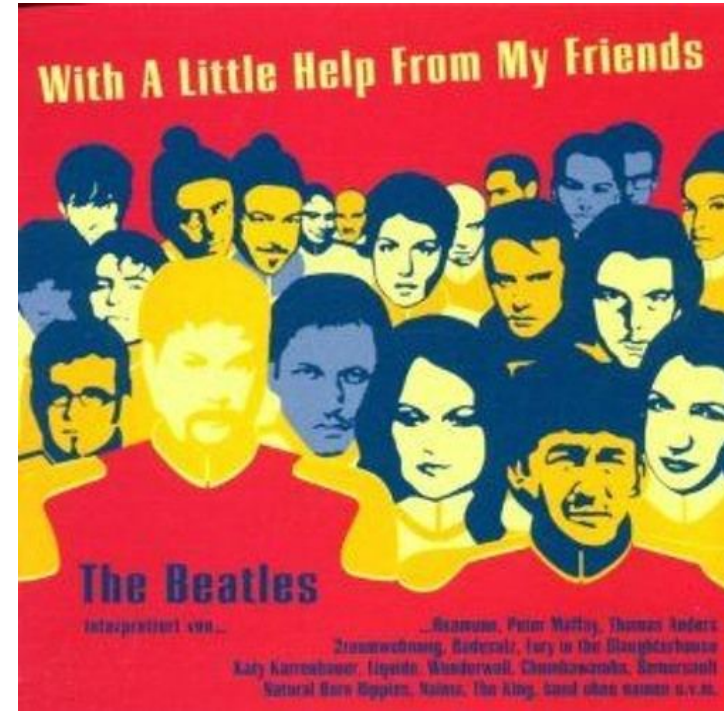<first_name>[% helpers.escape_xml(user.first_given_name) %]</first_name>

Templates

The two helper functions you must know:

helpers.get_org_setting(target.0.circ_lib.id,
      'lib.info_url')

helpers.escape_xml(wholenamenocap.trim)

And many more.

Templates

You can do logic too:

 [% IF circ.usr.first_given_name == 'Rogan' %]

   Its cool man, turn it back in when it makes you happy.

[% ELSE %]

   Your item is overdue, the library police are en route now.

[% END %]

https://template-toolkit.org/

Templates

Oh yeah, a little trick :

[% user.family_name %]

vs

[%- user.family_name -%]

Parameters

Values you pass in.

editor   '1' (not a notice)

xml_notice_last_processed_id 115761

Templates - Data and Environments

[%- SET user = target.usr -%]

[% user.first_given_name %] = target.usr.first_given_name

[% user.card.barcode %]

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Data and Environments

[%- SET user = target.usr -%]

[% user.first_given_name %] = target.usr.first_given_name

[% user.card.barcode %]

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Data and Environments

circ_lib.billing_address

circ_lib.mailing_address

target_copy.call_number

target_copy.location

usr.billing_address

usr.card

usr.mailing_address

Group Fields

Cron Stuff

Granularity is a method for scheduling triggers to run at the times you want them to run.

Granularity

(Unset)

7DayOverdueEmail

Maybe you want to…

- Send Emails/SMS messages only during business hours
- Organize notices into categories to keep organized

Cron Stuff

Cron examples,

Standard Granularities

```
*/2 * * * * . ~/.bashrc && /openils/bin/action_trigger_runner.pl --osrf-config $SRF_CORE --run-pending
0 * * * *   . ~/.bashrc && /openils/bin/action_trigger_runner.pl --osrf-config $SRF_CORE --process-hooks --run-pending --granularity hourly
--granularity-only
5 3 * * *   . ~/.bashrc && /openils/bin/action_trigger_runner.pl --osrf-config $SRF_CORE --process-hooks --run-pending --granularity daily
--granularity-only
10 3 * * 1-5 . ~/.bashrc && /openils/bin/action_trigger_runner.pl --osrf-config $SRF_CORE --process-hooks --run-pending --granularity weekdays
--granularity-only
15 3 * * 0   . ~/.bashrc && /openils/bin/action_trigger_runner.pl --osrf-config $SRF_CORE --process-hooks --run-pending --granularity weekly
--granularity-only
20 3 1 * *   . ~/.bashrc && /openils/bin/action_trigger_runner.pl --osrf-config $SRF_CORE --process-hooks --run-pending --granularity monthly
--granularity-only
25 3 1 1 *   . ~/.bashrc && /openils/bin/action_trigger_runner.pl --osrf-config $SRF_CORE --process-hooks --run-pending --granularity yearly
--granularity-only
```

Cron Stuff

Cron examples,

Different Granularities
0 2 * * *   . ~/.bashrc && /openils/bin/action_trigger_runner.pl --osrf-config $SRF_CORE --process-hooks --run-pending --granularity OverDues --granularity-only
0 3 * * *   . ~/.bashrc && /openils/bin/action_trigger_runner.pl --osrf-config $SRF_CORE --process-hooks --run-pending --granularity PreDues --granularity-only
0 4 * * * . ~/.bashrc && /openils/bin/action_trigger_runner.pl --osrf-config $SRF_CORE --process-hooks --run-pending --granularity LostNotices --granularity-only
15 10-17 * * *   . ~/.bashrc && /openils/bin/action_trigger_runner.pl --osrf-config $SRF_CORE --process-hooks --run-pending --granularity SMSNotices --granularity-only

Cron Stuff

Action_trigger_runner.pl parameters,

- --process-hooks - Follow the rules set for the hook to create the notice up to the pending state.
- –run-pending - Process all the events in a "Pending" state to completion.
- –granularity <granularity> - Process only those hooks using this granularity.
- –granularity-only - Only run the pending triggers using provided granularity
- –lock-file <name> - Provide a specific lock file to prevent duplicate running.
- –custom-filters <name> - Provide a custom filter to use for hook
- –verbose and –debug-stdout - Used for debugging problems.

Filter Example

When to use filters,

- Setting certain items to lost earlier than others
- Creating a notice for a specific circulation modifier
- Creating a notice for a specific profile group
- Modifying existing hooks to do more (or less)

Filter Example

Sample filter file can be found in
./Open-ILS/examples/action_trigger_filters.json.example

Example stock filter for the hook checkout.due (JSON)
```
"checkout.due" :
   { "context_org" : "circ_lib",
    "filter"      :
        { "checkin_time"  : null,
         "-or"           :
             [ { "stop_fines"  : ["MAXFINES"] },
              { "stop_fines"  : null }
             ]
        }
   },
```

Filter Example

Add LONGOVERDUES and CLAIMSRETURNED to the checkout.due hook

Change,
    [{ "stop_fines" : ["MAXFINES"] },
To
    { "stop_fines" : ["MAXFINES", "LONGOVERDUE", "CLAIMSRETURNED "] },

5 2 * * *   . ~/.bashrc && /openils/bin/action_trigger_runner.pl --osrf-config $SRF_CORE --process-hooks --run-pending --granularity 7DayOverdue --granularity-only /openils/a_t_filters/custom_overdue_filter.json

Filter Example

Filter By Circ Modifier

```
{
   "checkout.due" : {
      "context_org" : "circ_lib",
      "filter" : {
         "checkin_time" : null,
         "-or" : [
            { "stop_fines" : ["MAXFINES", "LONGOVERDUE"] },
            { "stop_fines" : null }
         ],
         "-and" : [
            { "-exists" : {
               "select" : {"acp" : ["id"]},
               "from"   : "acp",
               "where"  : {
                  "circ_modifier" : ["Best Seller", "New Fiction", "New Nonfiction", "Periodical", "DVD", "Video" ],
                  "id" : { "=" : {"+circ" : "target_copy"} }
               }
            }
         }]
      }
   }
}
```

Filter Example

Filter by User Profile

```
{
    "checkout.due": {
        "context_org": "circ_lib",
        "filter": {
            "checkin_time": null,
            "-or": [
                {"stop_fines": ["MAXFINES", "LONGOVERDUE", ]},
                {"stop_fines": null}
            ],
            "-and": [
                {
                    "-exists": {
                        "select": {"au": ["id"]},
                        "from": "au",
                        "where": {
                            "profile": [34, 35, 36],
                            "id": {"=": {"+circ": "usr"}}
                        }
                    }
                }
            ]
        }
    }
}
```

Filter Example

Filter by Shelving Location

```
{
    "checkout.due" : {
        "context_org" : "circ_lib",
        "filter" : {
            "checkin_time" : null,
            "-or" : [
                { "stop_fines" : ["MAXFINES", "LONGOVERDUE"] },
                { "stop_fines" : null }
            ],
            "-and" : [
                { "-exists" : {
                    "select" : {"acp" : ["id"]},
                    "from"   : "acp",
                    "where"  : {
                        "location" : ["6537"],
                        "id" : { "=" : {"+circ" : "target_copy"} }
                    }
                }
            }]
        }
    }
}
```

Filter Example

A filter for circ modifier, profile, and circulation library

```
{
    "checkout.due" : {
        "context_org" : "circ_lib",
        "filter" : {
            "checkin_time" : null,
            "-or" : [
                { "stop_fines" : ["MAXFINES", "LONGOVERDUE", "CLAIMSRETURNED"] },
                { "stop_fines" : null }
            ],
            "-and" : [
                { "-exists" : {
                    "select" : {"acp" : ["id"]},
                    "from"   : "acp",
                    "where"  : {
                        "circ_modifier" : ["Best Seller", "New Fiction", "New Nonfiction", "Periodical", "DVD", "DVD 2", "Video", "Video 2"],
                        "id" : { "=" : {"+circ" : "target_copy"} },
                                            "+circ" : { "circ_lib" : [154, 155, 156] }
                    }
                }
            }]
```

Filter Example

Continued

```
                    "-and" : [
        { "-exists" : {
         "select" : {"au" : ["id"]},
         "from"   : "au",
         "where"  : {
            "profile" : [34],
            "id" : { "=" : {"+circ" : "usr"} }
          }
         }
        }]
      }
    }
}
```

Filter Example

Custom filters are good for

- Fine tuning a hook for specific scenario / patron group / item type

Not good for

- Multiple versions of the same notice

Filter Example

IF statements are great for having multiple text for different libraries / profiles

[%- IF (user.profile == 6) or (user.profile == 7) %]
Take your time returning your item!
[%- ELSE %]
Please return your item immediately!
[%- END %]

Or

[%- IF (lib.shortname == 'LIBRARYA') or (lib.shortname == 'LIBRARYB') or (lib.shortname == 'LIBRARYC') %]
Thank you for using our library!
[%- ELSE %]
Please return your item immediately!
[%- END %]

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Troubleshooting

```
WITH source AS (
    SELECT ate.id AS ate_id, ated.active, ated.name, ated.id AS ated_id, ated.granularity,
        ated.reactor, ate.state, ate.template_output, LENGTH(COALESCE(ateo.data,'')) AS datalength
    FROM action_trigger.event_definition ated
    LEFT JOIN action_trigger.event ate ON ate.event_def = ated.id
    LEFT JOIN action_trigger.event_output ateo ON ateo.id = ate.template_output
    JOIN actor.org_unit aou ON aou.id = ated.owner
    WHERE aou.id IN (SELECT id FROM actor.org_unit_descendants((SELECT id FROM actor.org_unit WHERE shortname = 'FOO')))
)
SELECT COUNT(ate_id) AS events, ated_id, active, LEFT(name,25),
    granularity, reactor, state, COUNT(template_output) AS template_outputs,
    CASE WHEN datalength = 0 THEN 'zed' WHEN datalength BETWEEN 1 AND 500 THEN '<500' WHEN datalength > 500 THEN
'>500' END AS "length"
FROM source
GROUP BY 2, 3, 4, 5, 6, 7, 9
ORDER BY 6, 4;
```

Troubleshooting

select data from action_trigger.event_output where id in

     (select template_output from action_trigger.event where event_def = 136)

order by id desc;

select data from action_trigger.event_output where id in

     (select error_output from action_trigger.event where event_def = 136)

order by id desc;

Bonus!

But what about print notices!

Emails get emails. SMS gets emailed, unless you have an external service but what happenes to print?

SQL Query -> XML to XSLT with XSL -> PDF

Questions