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Article

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## How to determine why a message didn't get routed by a message router routing rule.

When testing a new routing rule, one frequently encountered problem is that messages that seem like they should be getting routed to a target component are not getting routed. This article aims to describe how to determine why the message didn't get routed.

1. Check the Event Log for the router to make sure there wasn't an error evaluating the rule or running any transformations referenced by the rule. If there was, debug that error first.
2. Verify the settings on the general tab in the rule editor.
  - 2a. Make sure "Rule Type" is correct. For HL7 messages, it should be "HL7 Message Routing Rule". For other types, it should be "General Message Routing Rule".
  - 2b. Make sure "Rule Assist Class" and "Context Class" are correct. Setting "Rule Type" will automatically set both of these fields, so if either are correct, just reset the "Rule Type" field to the correct value.  
For Rule Type "HL7 Message Routing Rule", Rule Assist Class should be `EnsLib.HL7.MsgRouter.RuleAssist` and Context Class should be `EnsLib.HL7.MsgRouter.RoutingEngine`.  
For Rule Type "General Message Routing Rule", Rule Assist Class should be `EnsLib.MsgRouter.RuleAssist` and Context Class should be `EnsLib.MsgRouter.RoutingEngine`.
  - 2c. "Production Name" does not affect a running production. It only affects the lookups when editing a rule. Set it to the name of the production in which the rule will be used.

Below is a screenshot of these settings on the general tab:

The screenshot shows the 'general' tab of a rule editor. At the top, there are tabs for 'general' and 'ruleSet (#1)'. Below the tabs is a toolbar with icons for undo, redo, and search. The main area contains several fields:

- Description: (empty)
- Rule Type: `HL7 Message Routing Rule`
- Rule Assist Class: `EnsLib.HL7.MsgRouter.RuleAssist`
- Context Class: `EnsLib.HL7.MsgRouter.RoutingEngine`
- Rule Alias: (empty)
- Temporary Variables: (empty)
- Production Name: `Scratch.Production`

At the bottom, there is a table with two columns: 'ruleSet name' and '(not specified)'. The first row has the value '1' in the first column.

For the following steps, you will need to find a message in the message viewer which was sent to the router without being routed. To find such a message, search for messages that have the router as a target, as in the example

extended criteria in this screenshot:

Menu

Home | About | Help | Logout

Ensemble > Messages

Message Viewer

Serv User

Search

Cancel

Reset

Resend

Previous

Sort Order

Newest First

Page Size

100

Time Format

Time Only

Page

1

Basic Criteria

Status

All

Type

All

Start Time

Start ID

End Time

End ID

Source

Target

Extended Criteria

Add Criterion

Add OR

Ens.MessageHeader

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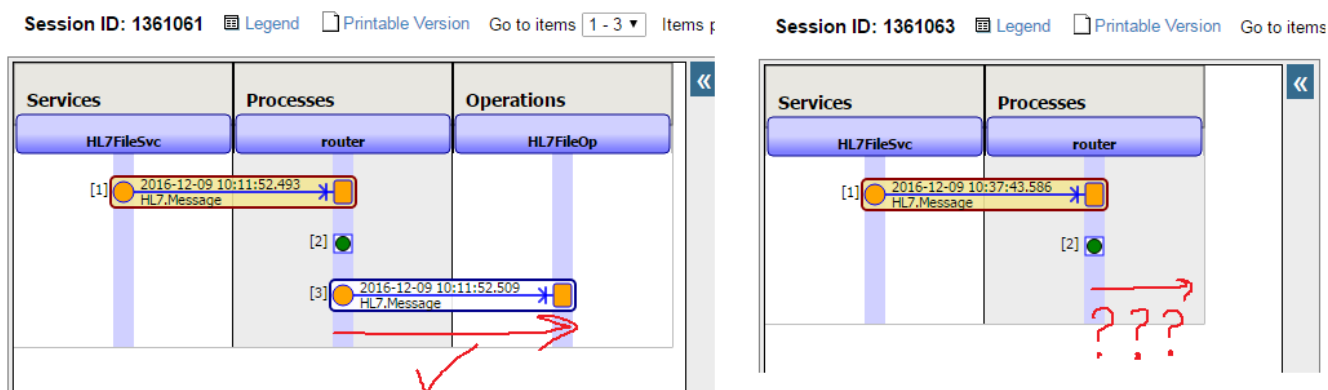
☐

☐

TargetConfigName = router

Saved Searches

This screenshot illustrates the difference between visual traces for a message that was routed correctly (left) and a message that got stuck at the router (right):



Once you find the message that wasn't routed, make note of the following message header fields on the 'Header' tab:

SourceConfigName  
MessageBodyClassName  
MessageBodyId

Header	Body	Contents
<ObjectId>	1361066	
SourceBusinessType	BusinessService	
Type	Request	
Invocation	Queue	
CorrespondingMessageId		
Session Id	1361066	
SourceConfigName	HL7FileSvc	
TargetConfigName	router	
TargetBusinessType	BusinessProcess	
BusinessProcessId		
TargetQueueName	router	
ReturnQueueName		
MessageBodyClassName	EnsLib.HL7.Message	
MessageBodyId	1331807	
Description		
SuperSession		
Resent		
Priority	Async	
TimeCreated	2016-12-09 14:39:11.221	
TimeProcessed	2016-12-09 14:39:11.237	
Status	Completed	
Is Error?	0	
Error Status	OK	
Banked	0	

If this is an HL7 message, then also make note of the following fields on the Body tab:

DocType  
Name

»	Header	Body	Contents
<b>EnsLib.HL7.Message</b>			
<Objectid>	1331807		
ParentId			
TopParentId			
Cache SegsGotten	1		
TimeCreated	2016-12-09 14:39:11.221		
Source	C:\InterSystems\HL7Messages\In\ADT_A01.txt		
IsMutable	0		
OriginalDocId			
BuildMapStatus			
AutoBuildMap	0		
DocType	2.3.1:ADT_A01		
Envelope			
Separators	^~\&		
FS			
CS	^		
RS	~		
ESC	\		
SS	&		
SegmentTerminator			
MessageTypeCategory	2 3 1		
Name	ADT_A01		
TypeVersion	2.3.1		
Identifier	000001		
SegCount	22		
ChildCount	0		
ParentIds			
RawContent	MSH ^~\& REGADT MCM  FENG  199601061253  ADT^A01 0...		
DocTypeCategory	2.3.1		
DocTypeSecondary	ADT_A01		
DocTypeName	ADT_A01		
FullSize	712		

3. Verify the constraints. Below is each possible constraint, and which field it should match.

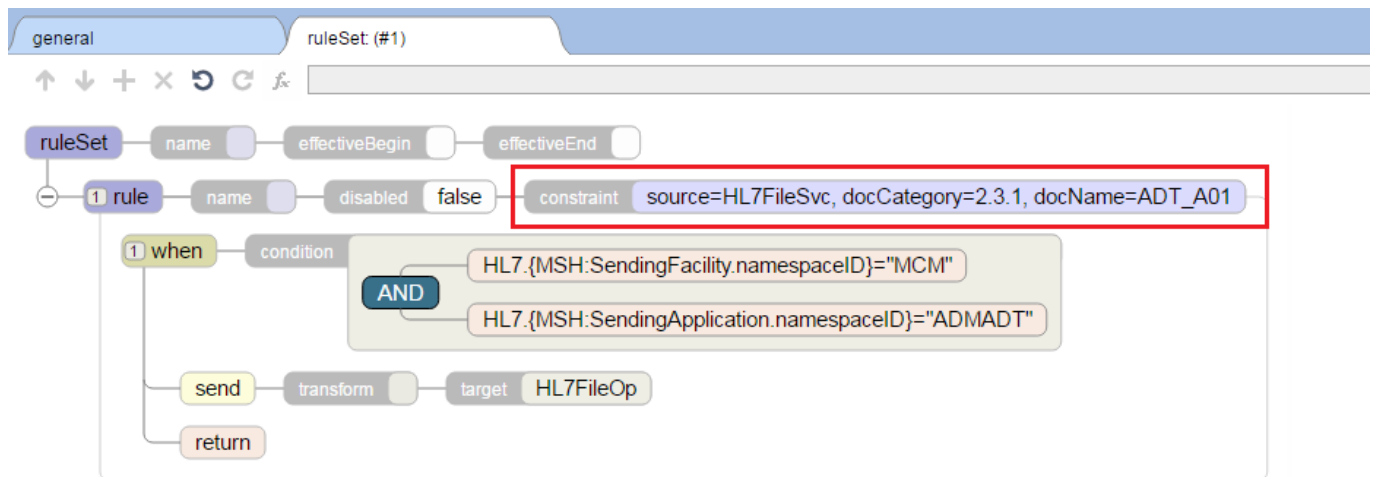
3a. Source constraint should match SourceConfigName header property

3b. (General Message Routing Rule Only) Message Class constraint should match the MessageBodyClassName header property

3c. (HL7 Message Routing Rule Only) docCategory constraint should match the portion of DocType before the colon. E.g. if DocType is 2.3.1:ADT\_A01 then it will match docCategory 2.3.1

3d. (HL7 Message Routing Rule Only) docName constraint should match the Name body property

Below is a screenshot showing example constraints:

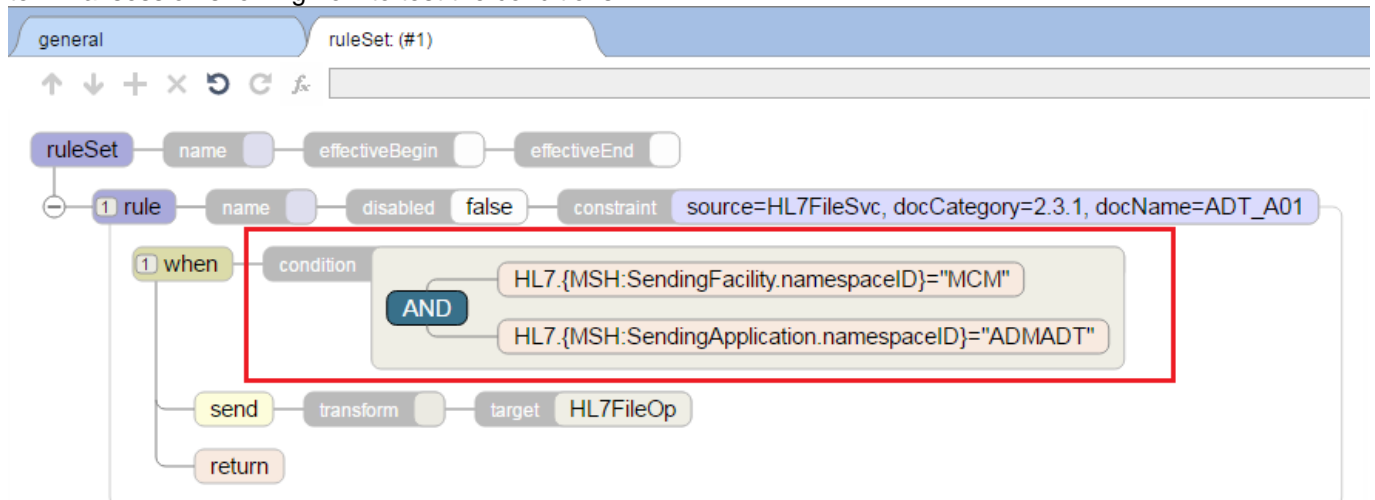


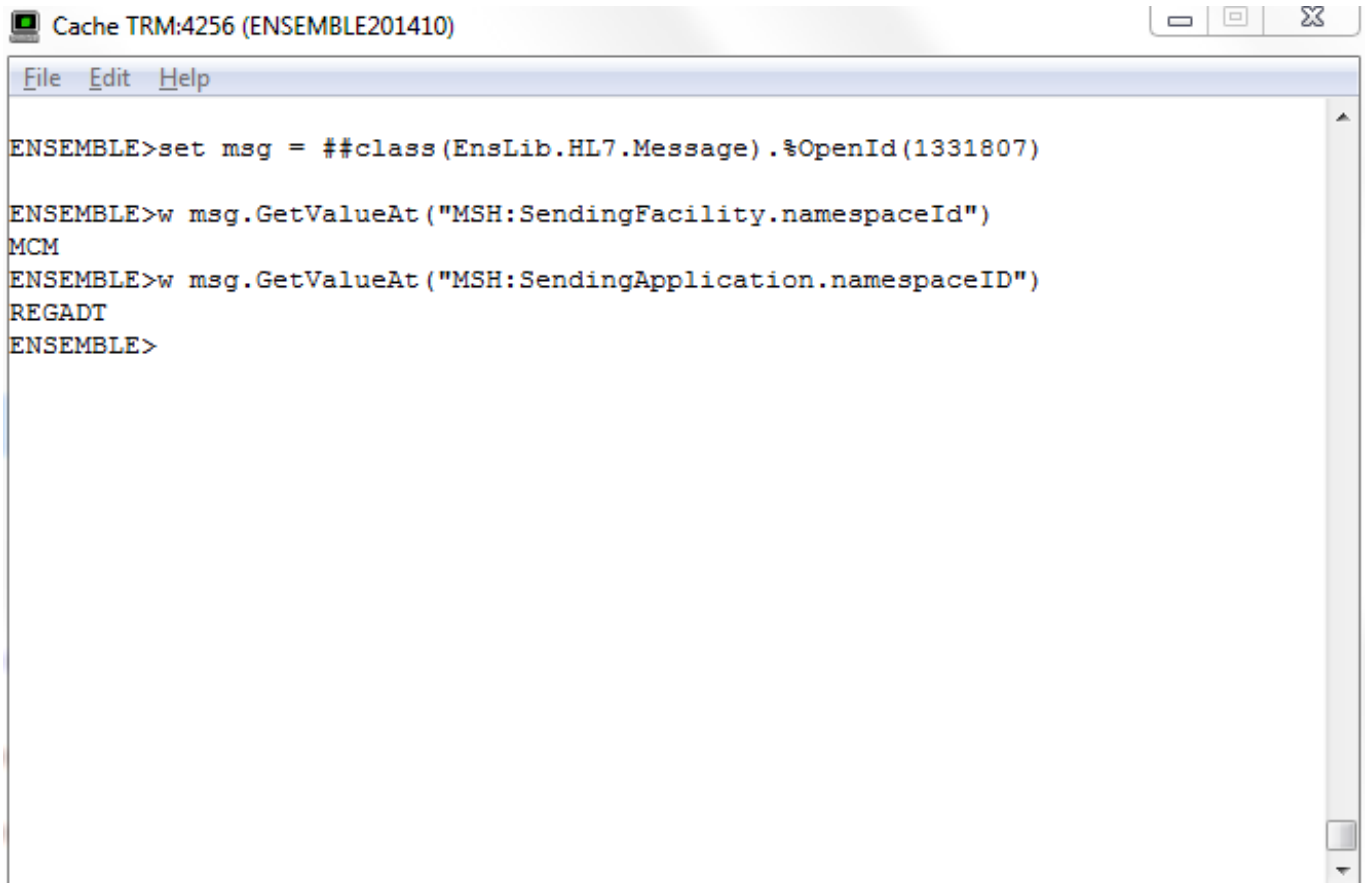
4. Verify the conditions. This should be done in terminal.

4a. First, use the MessageBodyClassName and MessageBodyId from above to open the message body in terminal: `set msg = ##class(<MessageBodyClassName>).%OpenId(<MessageBodyId>)`

4b. Multiple conditions will be separated in the rule by an AND or an OR. Test each condition individually in terminal.

4c. (HL7 Message Routing Rule Only) For conditions that reference specific HL7 fields, use the method `GetValueAt` on the message to extract the values of the fields. Below is an example screenshot of a rule and an example terminal session showing how to test the conditions.





```
Cache TRM:4256 (ENSEMBLE201410)
File Edit Help
ENSEMBLE>set msg = ##class(EnsLib.HL7.Message).%OpenId(1331807)
ENSEMBLE>w msg.GetValueAt("MSH:SendingFacility.namespaceId")
MCM
ENSEMBLE>w msg.GetValueAt("MSH:SendingApplication.namespaceID")
REGADT
ENSEMBLE>
```

In the terminal session, I can see that the SendingApplication of the message doesn't match what my condition is looking for. The message has REGADT but my condition is looking for ADMADT.

[#Terminal](#) [#Ensemble](#) [#Business Rules](#)

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Source

URL:<https://community.intersystems.com/post/how-determine-why-message-didnt-get-routed-message-router-routing-rule>