

Document Subscription for Mobile (DSUBm), published by IHE IT Infrastructure Technical Committee. This is not an authorized publication; it is the continuous build for version 1.0.0-ballot. This version is based on the current content of <https://github.com/IHE/ITI.DSUBm/> and changes regularly. See the [Directory of published versions](#)

2:3.114 Resource SubscriptionTopic Search [ITI-114]

This section corresponds to the Resource SubscriptionTopic Search [ITI-114] transaction of the IHE Technical Framework.

2:3.114.1 Scope

The Resource SubscriptionTopic Search [ITI-114] is used by the Resource Notification Subscriber to Resource Notification Broker actors, in order to search the SubscriptionTopic **needed** for a Subscription.

2:3.114.2 Actors Roles

Table 2:3.114.2-1: Actor Roles

Actor	Role
Resource Notification Subscriber	Sends the query request to the Resource Notification Broker
Resource Notification Broker	Receives the query and responds

- 2:3.114.1 Scope
- 2:3.114.2 Actors Roles
- 2:3.114.3 Referenced Standards
- 2:3.114.4 Interactions
- 2:3.114.5 Resource SubscriptionTopic Search Request Message
- 2:3.114.6 Resource SubscriptionTopic Search Response Message
- 2:3.114.7 CapabilityStatement Resource
- 2:3.114.8 Security Considerations

2:3.114.3 Referenced Standards

FHIR-R4B HL7 FHIR Release 4.3.0

2:3.114.4 Interactions

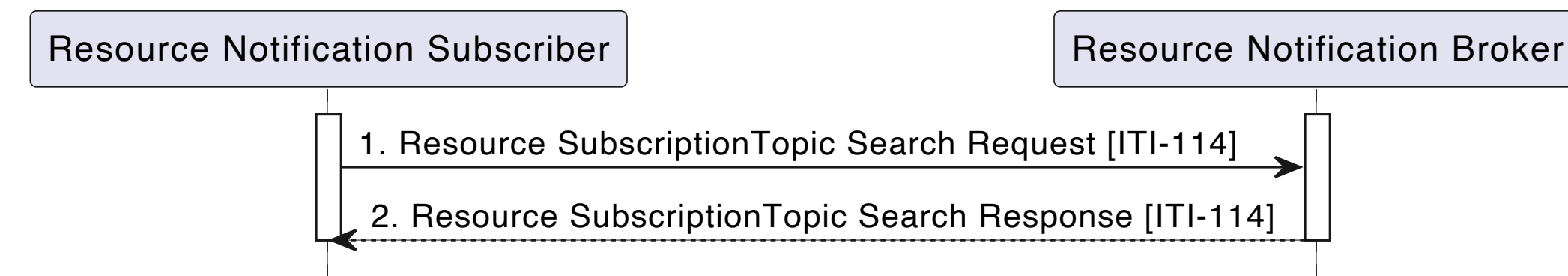


Figure 2:3.114.4-1: Resource SubscriptionTopic Search [ITI-114] interactions

2:3.114.5 Resource SubscriptionTopic Search Request Message

The Resource Notification Subscriber Request Message is a parametrized HTTP GET that allows to search for a list of SubscriptionTopic resources managed by the Resource Notification Broker, based on a set of search parameters.

2:3.114.5.1 Trigger Events

A Resource Notification Subscriber sends this message to the Resource Notification Broker when it needs to discover a SubscriptionTopic resource. This normally happens before the Subscriber creates a subscription.

2:3.114.5.2 Message Semantics

The Resource Notification Subscriber sends an HTTP GET request to the Resource Notification Broker. This request shall comply with requirements specified in the HL7® FHIR® standard <https://hl7.org/fhir/R4B/http.html#search>.

The Resource Notification Subscriber Request Message shall be expressed by addressing the SubscriptionTopic Resource in the path as follows:

```
GET [base]/SubscriptionTopic?[Parameters]
```

The Resource Notification Subscriber may provide the optional parameter “_format” to specify the desired MIME-types in the response message. The Resource Notification Broker should accept `application/fhir+xml` and `application/fhir+json` as `_format` parameters. For example, indicating `application/fhir+json` could result in the response from the Resource Notification Broker being a json FHIR Bundle with all the content encoded as FHIR resources.

In the request message the query parameters allowed from the [Search Parameters](#) of the [SubscriptionTopic](#) Resource are:

Table 2:3.114.5.2-1: Resource SubscriptionTopic Search Request Message Search Parameters

Name	Type	Description
resource	uri	Allowed Data type or Resource (reference to definition) for this definition, searches resourceTrigger, eventTrigger, and notificationShape for matches.
derived-or-self	uri	A server defined search that matches either the url or derivedFrom
status	token	Should be valued with <code>active</code>
url	uri	Logical canonical URL to reference this SubscriptionTopic (globally unique)

2:3.114.5.3 Expected Actions

The Resource Notification Broker who received the message shall process the request, according to application-defined rules, and also evaluate if the Resource Notification Subscriber can access the information.

If the access is granted, the Resource Notification Broker shall produce a response in which shall be present at least the following SubscriptionTopic Resources:

- Patient-Dependent DocumentReference SubscriptionTopic
- Multi-Patient DocumentReference SubscriptionsTopic
- Patient-Dependent Folder SubscriptionTopic
- Patient-Dependent SubmissionSet SubscriptionTopic
- Multi-Patient SubmissionSet SubscriptionTopic

If the Resource Notification Broker supports the [Updates to document sharing resources option](#), the following SubscriptionTopic resources shall also be present:

- Patient-Dependent DocumentReference SubscriptionTopic with updates to document sharing resources option to document sharing resources option
- Multi-Patient DocumentReference SubscriptionTopic with Updates to document sharing resources option
- Patient-Dependent Folder SubscriptionTopic with Updates to document sharing resources option

2:3.114.6 Resource SubscriptionTopic Search Response Message

The Resource Notification Broker returns an HTTP status code appropriate to the processing as well as a Bundle containing a list of the SubscriptionTopic resources.

2:3.114.6.1 Trigger Events

The Resource Notification Broker completed the processing of the request message.

2:3.114.6.2 Message Semantics

Based on the query results, the Resource Notification Broker will either return an error or success. Guidance on handling Access Denied related to the use of 200, 403, and 404 can be found in ITI TF-2x: [Appendix Z.7](#). When the Resource Notification Broker needs to report an error, it shall use HTTP error response codes and should include a FHIR OperationOutcome with more details on the failure. See FHIR <https://hl7.org/fhir/R4B/http.html> and <https://hl7.org/fhir/R4B/operationoutcome.html>.

If the Resource SubscriptionTopic Search message is processed successfully, the HTTP status code shall be 200. The Resource SubscriptionTopic Search Response message shall be a Bundle Resource containing the SubscriptionTopic Resources. If the Resource Notification Broker is sending warnings, the Bundle Resource shall also contain an OperationOutcome Resource that contains those warnings.

The response shall adhere to the FHIR Bundle constraints specified in ITI TF-2x: [Appendix Z.7](#)

2:3.114.6.3 Expected Actions

The Resource Notification Subscriber shall process the results according to application-defined rules and be aware of the SubscriptionTopic supported by the Resource Notification Broker.

2:3.114.7 CapabilityStatement Resource

The Resource Notification Subscriber implementing this transaction shall provide a CapabilityStatement Resource as described in ITI TF-2x: [Appendix Z.3](#) indicating the transaction has been implemented.

- FHIR Capability Statement for [Resource Notification Subscriber](#)
- FHIR Capability Statement for [Resource Notification Subscriber](#) that support the [Updates to document sharing resources option](#).

The Resource Notification Broker implementing this transaction shall provide a CapabilityStatement Resource as described in ITI TF-2x: [Appendix Z.3](#) indicating the transaction has been implemented.

- FHIR Capability Statement for [Resource Notification Broker](#)
- FHIR Capability Statement for [Resource Notification Broker](#) that support the [Updates to document sharing resources option](#).

2:3.114.8 Security Considerations

See [DSUBm Security Considerations](#).

2:3.114.8.1 Security Audit Considerations

The Resource Notification Subscriber, when grouped with [ATNA](#) Secure Node or Secure Application Actor, shall be able to record fundamental AuditEvents for:

- [BALP Query](#), when a search interaction is performed;
- [BALP Read](#), when a read interaction is performed.

The Resource Notification Broker, when grouped with [ATNA](#) Secure Node or Secure Application Actor, shall be able to record fundamental AuditEvents for:

- [BALP Query](#), when a search interaction is performed;
- [BALP Read](#), when a read interaction is performed.