



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/ITI/DSUBm> and changes regularly. See the [Directory of published versions](#).

## Artifacts Summary

This page provides a list of the FHIR artifacts defined as part of this implementation guide.

### Behavior: Capability Statements

The following artifacts define the specific capabilities that different types of systems are expected to have in order to comply with this implementation guide. Systems conforming to this implementation guide are expected to declare conformance to one or more of the following capability statements.

DSUBm Resource Notification Broker Actor	<p>The DSUBm Resource Notification Broker Actor CapabilityStatement requirements expresses the requirements that shall be provided.</p> <ul style="list-style-type: none"> <li>Using FHIR R4B</li> <li>Shall support both json or xml encoding</li> <li>Should use a security framework. Recommend <a href="#">ATNA</a>, encouraged <a href="#">IHE-IUA</a> or <a href="#">SMART-app-launch</a></li> <li>Shall support the ITI-110 transaction</li> <li>Shall support the ITI-111 transaction</li> <li>Shall implement the ITI-112 transaction</li> <li>Shall support the ITI-113 transaction</li> <li><a href="#">Search Parameters that shall be supported</a> <ul style="list-style-type: none"> <li>contact</li> <li>criteria</li> <li>payload</li> <li>status</li> <li>type</li> <li>url</li> <li>custom-channel</li> <li>filter-criteria</li> <li>payload-type</li> <li>topic</li> </ul> </li> <li>Shall support the DSUBm \$status operation</li> <li>Should support the DSUBm \$events operation</li> <li>Shall support the ITI-114 transaction                             <ul style="list-style-type: none"> <li><a href="#">Search Parameters that shall be supported</a> <ul style="list-style-type: none"> <li>resource</li> <li>derived-or-self</li> <li>status</li> <li>url</li> </ul> </li> </ul> </li> </ul>
DSUBm Resource Notification Broker Actor with update option	<p>The DSUBm Resource Notification Broker Actor CapabilityStatement requirements expresses the requirements that shall be provided when the update events option is used.</p> <ul style="list-style-type: none"> <li>Using FHIR R4B</li> <li>Shall support both json or xml encoding</li> <li>Should use a security framework. Recommend <a href="#">ATNA</a>, encouraged <a href="#">IHE-IUA</a> or <a href="#">SMART-app-launch</a></li> <li>Shall support the ITI-110 transaction</li> <li>Shall support the ITI-111 transaction</li> <li>Shall implement the ITI-112 transaction</li> <li>Shall support the ITI-113 transaction</li> <li><a href="#">Search Parameters that shall be supported</a> <ul style="list-style-type: none"> <li>contact</li> <li>criteria</li> <li>payload</li> <li>status</li> <li>type</li> <li>url</li> <li>custom-channel</li> <li>filter-criteria</li> <li>payload-type</li> <li>topic</li> </ul> </li> <li>Shall support the DSUBm \$status operation</li> <li>Should support the DSUBm \$events operation</li> <li>Shall support the ITI-114 transaction                             <ul style="list-style-type: none"> <li><a href="#">Search Parameters that shall be supported</a> <ul style="list-style-type: none"> <li>resource</li> <li>derived-or-self</li> <li>status</li> <li>url</li> </ul> </li> </ul> </li> </ul>
DSUBm Resource Notification Publisher Actor	<p>The DSUBm Resource Notification Publisher Actor CapabilityStatement requirements expresses the requirements that shall be provided.</p> <ul style="list-style-type: none"> <li>Using FHIR R4B</li> <li>Shall support both json or xml encoding</li> <li>Should use a security framework. Recommend <a href="#">ATNA</a>, encouraged <a href="#">IHE-IUA</a> or <a href="#">SMART-app-launch</a></li> <li>Shall support the ITI-111 transaction</li> </ul>
DSUBm Resource Notification Publisher Actor with update option	<p>The DSUBm Resource Notification Publisher Actor CapabilityStatement requirements expresses the requirements that shall be provided when the update events option is used.</p> <ul style="list-style-type: none"> <li>Using FHIR R4B</li> <li>Shall support both json or xml encoding</li> <li>Should use a security framework. Recommend <a href="#">ATNA</a>, encouraged <a href="#">IHE-IUA</a> or <a href="#">SMART-app-launch</a></li> <li>Shall support the ITI-111 transaction</li> </ul>
DSUBm Resource Notification Recipient Actor	<p>The DSUBm Resource Notification Recipient Actor CapabilityStatement requirements expresses the requirements that shall be provided.</p> <ul style="list-style-type: none"> <li>Using FHIR R4B</li> <li>Shall support both json or xml encoding</li> <li>Should use a security framework. Recommend <a href="#">ATNA</a>, encouraged <a href="#">IHE-IUA</a> or <a href="#">SMART-app-launch</a></li> <li>Shall support the ITI-112 transaction</li> </ul>
DSUBm Resource Notification Subscriber Actor	<p>The DSUBm Resource Notification Subscriber Actor CapabilityStatement requirements expresses the requirements that shall be provided.</p> <ul style="list-style-type: none"> <li>Using FHIR R4B</li> <li>Shall support both json or xml encoding</li> <li>Should use a security framework. Recommend <a href="#">ATNA</a>, encouraged <a href="#">IHE-IUA</a> or <a href="#">SMART-app-launch</a></li> <li>Shall implement the ITI-110 transaction</li> <li>Should implement the ITI-113 transaction; if implemented:                             <ul style="list-style-type: none"> <li><a href="#">Search Parameters that shall be supported</a> <ul style="list-style-type: none"> <li>contact</li> <li>criteria</li> <li>payload</li> <li>status</li> <li>type</li> <li>url</li> <li>custom-channel</li> <li>filter-criteria</li> <li>payload-type</li> <li>topic</li> </ul> </li> <li>Should support the DSUBm \$status operation</li> <li>Should support the DSUBm \$events operation</li> </ul> </li> <li>Should implement the ITI-114 transaction; if implemented:                             <ul style="list-style-type: none"> <li><a href="#">Search Parameters that shall be supported</a> <ul style="list-style-type: none"> <li>resource</li> <li>derived-or-self</li> <li>status</li> <li>url</li> </ul> </li> </ul> </li> </ul>
DSUBm Resource Notification Subscriber Actor with update option	<p>The DSUBm Resource Notification Subscriber Actor CapabilityStatement requirements expresses the requirements that shall be provided.</p> <ul style="list-style-type: none"> <li>Using FHIR R4B</li> <li>Shall support both json or xml encoding</li> <li>Should use a security framework. Recommend <a href="#">ATNA</a>, encouraged <a href="#">IHE-IUA</a> or <a href="#">SMART-app-launch</a></li> <li>Shall implement the ITI-110 transaction</li> <li>Should implement the ITI-113 transaction; if implemented:                             <ul style="list-style-type: none"> <li><a href="#">Search Parameters that shall be supported</a> <ul style="list-style-type: none"> <li>contact</li> <li>criteria</li> <li>payload</li> <li>status</li> <li>type</li> <li>url</li> <li>custom-channel</li> <li>filter-criteria</li> <li>payload-type</li> <li>topic</li> </ul> </li> <li>Should support the DSUBm \$status operation</li> <li>Should support the DSUBm \$events operation</li> </ul> </li> <li>Should implement the ITI-114 transaction; if implemented:                             <ul style="list-style-type: none"> <li><a href="#">Search Parameters that shall be supported</a> <ul style="list-style-type: none"> <li>resource</li> <li>derived-or-self</li> <li>status</li> <li>url</li> </ul> </li> </ul> </li> </ul>

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### Behavior: Search Parameters

These define the properties by which a RESTful server can be searched. They can also be used for sorting and including related resources.

search on the IHE defined extension for SourceId	This SearchParameter enables finding Lists by the SourceId of a submissionSet.
search on the IHE defined extension for designationType	This SearchParameter enables finding Lists by the designationType code in a submissionSet or folder.

### Structures: Resource Profiles

These define constraints on FHIR resources for systems conforming to this implementation guide.

Bundle response for \$events	Profile on the Bundle resource for the response of \$events operation.
DSUBm DocumentReference Minimal	The same profile of MHD <a href="#">DocumentReference Minimal</a> reported in R4B Fhir version
DSUBm Folder Minimal	The same profile of MHD <a href="#">Folder Minimal</a> reported in R4B Fhir version
DSUBm SubmissionSet Minimal	The same profile of MHD <a href="#">SubmissionSet Minimal</a> reported in R4B Fhir version
DSUBm common List with designationType	The same profile from MHD <a href="#">common List with designationType</a> reported in R4B Fhir version
Event Notification Bundle	Profile on the Bundle resource for transaction ITI-112 Resource Notify for Event Notification.
Handshake Notification Bundle	Profile on the Bundle resource to enable R5-style topic-based subscription Handshake Notification.
Heartbeat Notification Bundle	Profile on the Bundle resource to enable R5-style topic-based subscription Heartbeat Notification.
R4B Bundle response for \$status	Profile on the R4B Bundle resource for the response of \$status operation.
R4B Resource Publish Bundle	A profile for the Bundle used in the ITI-111 Resource Publish transaction. This profile extends the MHD <a href="#">Minimal.ProvideBundle</a> profile. The DSUBm Actors should consider the following entry in the Bundle: <ul style="list-style-type: none"> <li>SubmissionSet</li> <li>DocumentRefs</li> <li>Folders</li> <li>Patient (if present)</li> </ul> and the update or delete of DocumentReference and/or Folders
Subscription Deactivation Notification Bundle	Profile on the Bundle resource for Subscription Deactivation Notification.
Subscription for DocumentReference Multi-Patient	Resource Subscription for DSUBm profile for DocumentReference without the indication of the patient <ul style="list-style-type: none"> <li>the criteria element shall contain the URL of an instance of SubscriptionTopic from the 'DSUBm-SubscriptionTopic-DocumentReference-MultiPatient' profile</li> </ul>
Subscription for DocumentReference Multi-Patient with update option	Resource Subscription for DSUBm profile for DocumentReference without the indication of the patient <ul style="list-style-type: none"> <li>the criteria element shall contain the URL of an instance of SubscriptionTopic from the 'DSUBm-SubscriptionTopic-DocumentReference-MultiPatient' profile</li> </ul>
Subscription for DocumentReference Patient-Dependent	Resource Subscription for DSUBm profile for DocumentReference with the indication of the patient <ul style="list-style-type: none"> <li>the criteria element shall contain the URL of a canonical instance of SubscriptionTopic from the 'DSUBm-SubscriptionTopic-DocumentReference-PatientDependent' profile</li> </ul>
Subscription for DocumentReference Patient-Dependent with update option	Resource Subscription for DSUBm profile for DocumentReference with the indication of the patient <ul style="list-style-type: none"> <li>the criteria element shall contain the URL of a canonical instance of SubscriptionTopic from the 'DSUBm-SubscriptionTopic-DocumentReference-PatientDependent' profile</li> </ul>
Subscription for Folder Patient-Dependent	Resource Subscription for DSUBm profile for Folder with the indication of the patient <ul style="list-style-type: none"> <li>the criteria element shall contain the URL of an instance of SubscriptionTopic from the 'DSUBm_SubscriptionTopic_Folder_PatientDependent' profile</li> </ul>
Subscription for Folder Patient-Dependent with update option	Resource Subscription for DSUBm profile for Folder with the indication of the patient <ul style="list-style-type: none"> <li>the criteria element shall contain the URL of an instance of SubscriptionTopic from the 'DSUBm_SubscriptionTopic_Folder_PatientDependent' profile</li> </ul>
Subscription for SubmissionSet Multi-Patient	Resource Subscription for DSUBm profile for SubmissionSet without the indication of the patient <ul style="list-style-type: none"> <li>the criteria element shall contain the URL of an instance of SubscriptionTopic from the 'DSUBm_SubscriptionTopic_SubmissionSet_MultiPatient' profile</li> </ul>
Subscription for SubmissionSet Patient-Dependent	Resource Subscription for DSUBm profile for SubmissionSet with the indication of the patient <ul style="list-style-type: none"> <li>the criteria element shall contain the URL of an instance of SubscriptionTopic from the 'DSUBm_SubscriptionTopic_SubmissionSet_PatientDependent' profile</li> </ul>
SubscriptionStatus for the \$events operation	Profile on the SubscriptionStatus resource for the \$events operation
SubscriptionStatus for the Subscription Deactivation Notification event	Profile on the SubscriptionStatus resource the Subscription Deactivation Notification
SubscriptionStatus for the handshake event	Profile on the SubscriptionStatus resource to be used in the handshake notification
SubscriptionStatus for the handshake event	Profile on the SubscriptionStatus resource for the handshake notification
SubscriptionStatus for the notification event	Profile on the SubscriptionStatus resource for the event notification
SubscriptionStatus for the status operation	Profile on the SubscriptionStatus resource for the \$status operation

### Structures: Data Type Profiles

These define constraints on FHIR data types for systems conforming to this implementation guide.

entryUUID Identifier	entryUUID Identifier holding a UUID
uniqueId Identifier	uniqueId Identifier <ul style="list-style-type: none"> <li>see <a href="#">Appendix Z</a></li> </ul>
uniqueId Identifier for SubmissionSet	uniqueId Identifier holding a OID

### Structures: Extension Definitions

These define constraints on FHIR data types for systems conforming to this implementation guide.

Author organization of the SubmissionSet	When the author of the SubmissionSet is an Organization, this extension shall be used.
Clinical code of the List	Expresses contentType of submissionSet or the codeList of a Folder. Usually expressed in LOINC or SNOMED.
Intended recipient of the SubmissionSet	holds the identity of the organization or person the SubmissionSet is intended. For XDR and eMail (e.g. Direct) this tends to be a Practitioner or Patient with a telecom holding an email, but this is not strictly required.
Publisher organization identity of the SubmissionSet	The globally unique, immutable, identifier of the entity that contributed the SubmissionSet. When a broker is involved in sending SubmissionSets from a collection of client systems, it shall use a different sourceId for submissions from each separate system to allow for tracking. The format of the identifier is an OID.

### Terminology: Value Sets

These define sets of codes used by systems conforming to this implementation guide.

DSUBm DocumentReference status codes	ValueSet that does not include entered-in-error as that does not map
DSUBm List Types ValueSet	ValueSet of the DSUBm List Types allowed
DSUBm Update to document sharing resources actions ValueSet	A ValueSet of the allowed actions in a ITI-111 Resource Publish for the Folder List type and the DocumentReference resources.
DSUBm payload admitted Value Set	Codes to represent the admitted payload MIME type chosen when creating subscription

### Terminology: Code Systems

These define new code systems used by systems conforming to this implementation guide.

DSUBm List Types	To use the List resource for two different use-cases we define a code-system by the types of List needed in DSUBm
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### Example: Example Instances

These are example instances that show what data produced and consumed by systems conforming with this implementation guide might look like.

DocumentReference PatientDependent Subscription	R4 Example of a Subscription describing a PatientDependent 'DocumentReference' resource.
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### Other

These are resources that are used within this implementation guide that do not fit into one of the other categories.

SubscriptionTopic for DocumentReference Multi-Patient resource	Profile for the resource SubscriptionTopic. The resource describe the topic of a creation of a DocumentReference. This topic shall be used in all DocumentReference subscriptions that have not a specific patient in the criteria element and are just focusing on the create event. Note that: <ul style="list-style-type: none"> <li>the trigger for this topic shall be the resourceTrigger (so the eventTrigger shall not be used).</li> <li>the resourceTrigger.resource element shall be a DocumentReference resource</li> <li>the canFilterBy.filterParameter does not include the patient parameter</li> <li>this topic only covers the create event</li> </ul>
SubscriptionTopic for DocumentReference Multi-Patient resource with update option	Profile for the resource SubscriptionTopic. The resource describe the topic of a creation/update/delete of a DocumentReference. This topic shall be used in all DocumentReference subscriptions that have not a specific patient in the criteria element. Note that: <ul style="list-style-type: none"> <li>the trigger for this topic shall be the resourceTrigger (so the eventTrigger shall not be used).</li> <li>the resourceTrigger.resource element shall be a DocumentReference resource</li> <li>the canFilterBy.filterParameter does not include the patient parameter</li> <li>this resource shall be used when the <a href="#">Updates to document sharing resources option</a> is supported.</li> </ul>
SubscriptionTopic for DocumentReference Patient-Dependent resource	Profile for the resource SubscriptionTopic. The resource describe the topic of a creation of a DocumentReference. This topic shall be used in all DocumentReference subscriptions that have a specific patient in the criteria element and are just focusing on the create event. Note that: <ul style="list-style-type: none"> <li>the trigger for this topic shall be the resourceTrigger (so the eventTrigger shall not be used).</li> <li>the resourceTrigger.resource element shall be a DocumentReference resource</li> <li>this topic only covers the create event</li> </ul>
SubscriptionTopic for DocumentReference Patient-Dependent resource with update option	Profile for the resource SubscriptionTopic. The resource describe the topic of a creation/update/delete of a DocumentReference. This topic shall be used in all DocumentReference subscriptions that have a specific patient in the criteria element. Note that: <ul style="list-style-type: none"> <li>the trigger for this topic shall be the resourceTrigger (so the eventTrigger shall not be used).</li> <li>the resourceTrigger.resource element shall be a DocumentReference resource</li> <li>this resource shall be used when the <a href="#">Updates to document sharing resources option</a> is supported.</li> </ul>
SubscriptionTopic for Folder Patient-Dependent resource	Profile for the resource SubscriptionTopic. The resource describe the topic of a creation of a Folder List Resource. This topic shall be used in all Folder subscriptions that have a specific patient in the criteria element and are just focusing on the create event. Note that: <ul style="list-style-type: none"> <li>the trigger for this topic shall be the resourceTrigger (so the eventTrigger shall not be used).</li> <li>the resourceTrigger.resource element shall be a Folder List resource</li> <li>this topic only covers the create event</li> </ul>
SubscriptionTopic for Folder Patient-Dependent resource with update option	Profile for the resource SubscriptionTopic. The resource describe the topic of a creation or update of a Folder List Resource. This topic shall be used in all Folder subscriptions that have a specific patient in the criteria element. Note that: <ul style="list-style-type: none"> <li>the trigger for this topic shall be the resourceTrigger (so the eventTrigger shall not be used).</li> <li>the resourceTrigger.resource element shall be a Folder List resource</li> <li>this resource shall be used when the <a href="#">Updates to document sharing resources option</a> is supported.</li> </ul>
SubscriptionTopic for SubmissionSet Multi-Patient resource	Profile for the resource SubscriptionTopic. The resource describe the topic of a creation of a SubmissionSet List resource. This topic shall be used in all SubmissionSet subscriptions that have not a specific patient in the criteria element and are just focusing on the create event. Note that: <ul style="list-style-type: none"> <li>the trigger for this topic shall be the resourceTrigger (so the eventTrigger shall not be used).</li> <li>the resourceTrigger.resource element shall be a SubmissionSet List resource</li> <li>the canFilterBy.filterParameter does not include the patient parameter</li> </ul>
SubscriptionTopic for SubmissionSet Patient-Dependent resource	Profile for the resource SubscriptionTopic. The resource describe the topic of a creation of a SubmissionSet List resource. This topic shall be used in all SubmissionSet subscriptions that have a specific patient in the criteria element and are just focusing on the create event. Note that: <ul style="list-style-type: none"> <li>the trigger for this topic shall be the resourceTrigger (so the eventTrigger shall not be used).</li> <li>the resourceTrigger.resource element shall be a SubmissionSet resource</li> <li>this topic only covers the create event</li> </ul>