

RealMe

Consent Service Physical Data Model



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Document control

Revisions

Version	Date	Owner	Changes
1.0	10/09/2012	Richard Bergquist, Venkat Maddali	Final Version

Reference Documents

Ref	Document	Version
1	RealMe High-Level Architecture	1.2

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1 Consent Service Physical Data Model

1.1 ATTRIBUTE_AVAILABILITY_TYPE

Database: MySql, *Stereotype:* «table», *Package:* RealMe Consent Data Model-v3.0

Detail: Created on 10/08/12. Last modified on 26/10/12.

Notes: A codes table to store the types of attribute availability. Future phase use.

Possible values are: User Session, User Offline, On Demand, On User Submission

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
True	ID	BIGINT	True	False	0	0	0		Primary key of the codes table.
False	CODE	VARCHAR	True	False	50				Human readable name of the type.
False	EFFECTIVE_FROM	DATETIME	True	False	0	0	0		The datetime the codes table entry is in effect.
False	EFFECTIVE_TO	DATETIME	True	False	0	0	0		The datetime the codes table entry expires.

Constraints

Name	Type	Columns	Initial Code	Notes
PK_ATTRIBUTE_TYPE	Public	ID		

Relationships

Columns	Association	Notes
	<anonymous>. ATTRIBUTE_AVAILABILITY_TYPE.	
(ATTRIBUTE_AVAILABILITY_TYPE_ID = ID)	0..* CONSENT_TERM.FK_CONSENT_TERM_ATTRIBUTE_AVAILABILITY_TYPE 1 ATTRIBUTE_AVAILABILITY_TYPE.PK_ATTRIBUTE_TYPE	

1.2 ATTRIBUTE_SOURCE

Database: MySql, *Stereotype:* «table», *Package:* RealMe Consent Data Model-v3.0

Detail: Created on 25/10/12. Last modified on 31/10/12.

Notes:

An reference to the identity attributes source of a Service Provider. A Service Provider may supply one or more identity attribute sources. The reference will be opaque to avoid being able to deduce the attributes if full access to the data model is gained.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
True	ID	BIGINT	True	False					The primary key of the Attribute Source.
False	SERVICE_PROVIDER_ID	BIGINT	True	False					The Service Provider that the Attribute Source belongs to.
False	ATTRIBUTE_SOURCE_REF	VARCHAR	True	False	50				An external reference to the identity attribute source provided by the Service Provider. The reference should be opaque and non guessable. The reference to the Service Provider's identity attribute source will be passed in to the Consent data model via the Consent Service. It will avoid being able to deduce the identity attribute source involved in the consent by gaining full access to the data model.
False	EFFECTIVE_FROM	DATETIME	True	False					The date time the entity becomes into effect.
False	EFFECTIVE_TO	DATETIME	True	False					The date time the entity expires.

Constraints

Name	Type	Columns	Initial Code	Notes
FK_ATTRIBUTES_SOURCE_SERVICE_PROVIDER	Public	SERVICE_PROVIDER_ID		
PK_RESOURCE	Public	ID		

Name	Type	Columns	Initial Code	Notes

Relationships

Columns	Association	Notes
	<anonymous>. ATTRIBUTE_SOURCE.	
(SERVICE_PROVIDER_ID = ID)	0..* ATTRIBUTE_SOURCE.FK_ATTRIBUTES_SOURCE_SERVICE_PROVIDER 1 SERVICE_PROVIDER.PK_PROVIDER	
(ATTRIBUTES_SOURCE_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_ATTRIBUTES_SOURCE 1 ATTRIBUTE_SOURCE.PK_RESOURCE	

1.3 ATTRIBUTE_TRANSFER_TYPE

Database: MySQL, *Stereotype:* «table», *Package:* RealMe Consent Data Model-v3.0

Detail: Created on 10/08/12. Last modified on 30/10/12.

Notes:

A codes table to store the type of transfer of the attributes as they are sent between Service Providers. The only value for RealMe usage is : PULL

Possible future values are:

PUSH : where consent is required to push attributes to attribute receivers.

EMAIL : where consent is required to email attributes between attribute receivers.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
True	ID	BIGINT	True	False	0	0	0		Primary key of the codes table.
False	NAME	VARCHAR	True	False	50	0	0		Human readable name of the attribute
False	EFFECTIVE_FROM	DATETIME	True	False	0	0	0		The datetime the codes table entry is in effect.
False	EFFECTIVE_TO	DATETIME	True	False	0	0	0		The datetime the codes table entry expires.

Constraints

Name	Type	Columns	Initial Code	Notes
PK_ATTRIBUTE_TYPE	Public	ID		

Relationships

Columns	Association	Notes
(ATTRIBUTE_TRANSFER_TYPE_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_ATTRIBUTE_TRANSFER_TYPE 1 ATTRIBUTE_TRANSFER_TYPE.PK_ATTRIBUTE_TYPE	
	<anonymous>. ATTRIBUTE_TRANSFER_TYPE.	

1.4 CONSENT_DECISION_TYPE

Database: MySql, *Stereotype:* «table», *Package:* RealMe Consent Data Model-v3.0

Detail: Created on 10/08/12. Last modified on 26/10/12.

Notes:

A codes table to store the types of Consent decisions. E.g. Accept, Decline

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
True	ID	BIGINT	True	False	0	0	0		Primary key of the codes table.
False	CODE	VARCHAR	True	False	50	0	0		Human readable name of the type
False	EFFECTIVE_FROM	DATETIME	True	False					The datetime the codes table entry is in effect.
False	EFFECTIVE_TO	DATETIME	True	False					The datetime the codes table entry expires.

Constraints

Name	Type	Columns	Initial Code	Notes
PK_ATTRIBUTE_TYPE	Public	ID		

Relationships

Columns	Association	Notes
	<anonymous>. CONSENT_DECISION_TYPE.	
(CONSENT_DECISION_TY PE_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_CONSE NT_DECISION_TYPE 1 CONSENT_DECISION_TYPE.PK_ATTRIBUTE_TY PE	

1.5 CONSENT_EVENT

Database: MySQL, *Stereotype:* «table», *Package:* RealMe Consent Data Model-v3.0

Detail: Created on 23/10/12. Last modified on 29/10/12.

Notes:

The Consent Event is the core entity of the Consent Schema. It is responsible for auditing the consent decisions made by a Subject about how their attributes are transferred between provides and recipients.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
True	ID	BIGINT	True	False					The event primary key.
False	CONSENT_TYPE_ID	BIGINT	True	False					Foreign key to CONSENT_TYPE.
False	EVENT_DATETIME	BIGINT	True	False					The instant in date and time the consent was stored.
False	SUBJECT_ID	BIGINT	True	False					FK to the Subject that granted the consent.
False	ATTRIBUTE_PROVIDER_ID	BIGINT	True	False					FK to Service Provider to point to the attribute provider. In the RealMe pull-from-AP usage this will be a IAP.
False	ATTRIBUTE_RECIPIENT_ID	BIGINT	True	False					FK to Service Provider to point to the attribute receiver. In the RealMe pull-from-AP usage this will be a Client or RealMe.

False	ATTRIBUTES_SOURCE_ID	BIGINT	True	False	0	0	0		FK to ATTRIBUTES_SOURCE to the identity source and the code of attributes involved in the consent
False	CONSENT_DECISION_TYPE_ID	BIGINT	True	False					The foreign key to CONSENT_DECISION_TYPE. Stores the Subject's consent decision.
False	CONSENT_ATTRIBUTES	VARCHAR	False	False	100				A coded string value to represent the set of attributes that the Subject has given consent to.
False	EFFECTIVE_FROM	DATETIME	True	False					The date time the consent becomes into effect. May be in the future and is not necessarily the EVENT_DATETIME.
False	EFFECTIVE_TO	DATETIME	True	False					The date time the consent expires.
False	CONSENT_TERM_ID	BIGINT	True	False					FK to CONSENT_TERMS. The ServiceProvider's terms that are effective for this consent.
False	CONSENT_CAPTURED_AT	VARCHAR	False	False	50				The name of the service or application where the consent was captured at. For RealMe usage, this will always be 'RealMe'.
False	CONSENT_CONTEXT	VARCHAR	False	False	100				The business process where the consent was captured.
False	ATTRIBUTE_TRANSFER_TYPE_ID	BIGINT	True	False					FK to ATTRIBUTE_TRANSFER_TYPE.
False	PROVIDER_RESOURCE_REF	VARCHAR	True	False	50				A reference to the Provider's transaction that supplied the Resource's identity information. Used to reference consent back

Columns	Association	Notes
(CONSENT_DECISION_TYPE_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_CONSENT_DECISION_TYPE 1 CONSENT_DECISION_TYPE.PK_ATTRIBUTE_TYPE	
(CONSENT_TYPE_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_CONSENT_TYPE 1 CONSENT_TYPE.PK_ATTRIBUTE_TYPE	
(ATTRIBUTE_TRANSFER_TYPE_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_ATTRIBUTE_TRANSFER_TYPE 1 ATTRIBUTE_TRANSFER_TYPE.PK_ATTRIBUTE_TYPE	
(CONSENT_TERM_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_CONSENT_TERM 1 CONSENT_TERM.PK_RESOURCE_PROVIDER_TERM	
(ATTRIBUTE_PROVIDER_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_SP_PROVIDER 1 SERVICE_PROVIDER.PK_PROVIDER	
(ATTRIBUTE_RECIPIENT_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_SP_RECIPIENT 1 SERVICE_PROVIDER.PK_PROVIDER	
(ATTRIBUTES_SOURCE_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_ATTRIBUTES_SOURCE 1 ATTRIBUTE_SOURCE.PK_RESOURCE	
	<anonymous>. CONSENT_EVENT.	

1.6 CONSENT_TERM

Database: MySQL, *Stereotype:* «table», *Package:* RealMe Consent Data Model-v3.0

Detail: Created on 25/10/12. Last modified on 26/10/12.

Notes:

A codes table of the set of Terms that exist for a consent to share information.

Use for reference and display on the Consent Sharing Label.

A Service Provider may have multiple Terms, but only one should be in effect at any point in time.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
True	ID	BIGINT	True	False					The primary key.
False	SERVICE_PROVIDER_ID	BIGINT	True	False					FK to the Service Provider the Term applies to.
False	CONSENT_TERM_S_CODE	VARCHAR	True	False	50				A short name of the Term.
False	EFFECTIVE_FROM	DATETIME	True	False					The date time the Term becomes into effect.
False	EFFECTIVE_TO	DATETIME	True	False					The date time the Term expires.
False	ATTRIBUTE_AVAILABILITY_TYPE_ID	BIGINT	False	False					FK to ATTRIBUTE_AVAILABILITY_TYPE.
False	LOCATION	VARCHAR	False	False	255				Sharing label attribute.
False	CONTACT	VARCHAR	False	False	255				Sharing label attribute.
False	MASTER_AGREEMENT	TEXT	False	False					Sharing label attribute.
False	AUTHOR	VARCHAR	False	False	100				Sharing label attribute.
False	THIRD_PARTY_RATINGS	VARCHAR	False	False	255				Sharing label attribute.
False	RECORD_PERSISTED_AT	VARCHAR	False	False	100				Sharing label attribute.
False	ADDITIONAL_TERMS	VARCHAR	False	False	255				Sharing label attribute.
False	REDISTRIBUTION_ACCESS	VARCHAR	False	False	50				Sharing label attribute.
False	VERSION	INTEGER	True	False					The version of the terms entry. New terms can be created from old terms which

									are then expired. The version indicator will be incremented.
False	FOR_HOWLONG	VARCHAR	False	False	100				Sharing label attribute.
False	REVOCATION	VARCHAR	False	False	50				Sharing label attribute.
False	PURPOSE	VARCHAR	False	False	100				Sharing label attribute.
False	OUTPUT_TO	VARCHAR	False	False	100				Sharing label attribute.

Constraints

Name	Type	Columns	Initial Code	Notes
FK_CONSENT_TERM_ATTRIBUTE_AVAILABILITY_TYPE	Public	ATTRIBUTE_AVAILABILITY_TYPE_ID		
FK_CONSENT_TERM_SERVICE_PROVIDER	Public	SERVICE_PROVIDER_ID		
PK_RESOURCE_PROVIDER_TERM	Public	ID		

Relationships

Columns	Association	Notes
	<anonymous>. CONSENT_TERM.	
(SERVICE_PROVIDER_ID = ID)	0..* CONSENT_TERM.FK_CONSENT_TERM_SERVICE_PROVIDER 1 SERVICE_PROVIDER.PK_PROVIDER	
(ATTRIBUTE_AVAILABILITY_TYPE_ID = ID)	0..* CONSENT_TERM.FK_CONSENT_TERM_ATTRIBUTE_AVAILABILITY_TYPE 1 ATTRIBUTE_AVAILABILITY_TYPE.PK_ATTRIBUTE_TYPE	
(CONSENT_TERM_ID = ID)	0..*	

Columns	Association	Notes
	CONSENT_EVENT.FK_CONSENT_EVENT_CONSENT_TERM 1 CONSENT_TERM.PK_RESOURCE_PROVIDER_TERM	

1.7 CONSENT_TYPE

Database: MySQL, *Stereotype:* «table», *Package:* RealMe Consent Data Model-v3.0

Detail: Created on 10/08/12. Last modified on 26/10/12.

Notes: A codes table to store the types of Consent. E.g. Release Consent, Integration Consent

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
True	ID	BIGINT	True	False	0	0	0		Primary key of the codes table.
False	CODE	VARCHAR	True	False	50				Human readable name of the type.
False	EFFECTIVE_FROM	DATETIME	True	False					The datetime the codes table entry is in effect.
False	EFFECTIVE_TO	DATETIME	True	False					The datetime the codes table entry expires.

Constraints

Name	Type	Columns	Initial Code	Notes
PK_ATTRIBUTE_TYPE	Public	ID		

Relationships

Columns	Association	Notes
	<anonymous>. CONSENT_TYPE.	
(CONSENT_TYPE_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_CONSENT_TYPE 1 CONSENT_TYPE.PK_ATTRIBUTE_TYPE	

1.8 SERVICE_PROVIDER

Database: MySQL, *Stereotype:* «table», *Package:* RealMe Consent Data Model-v3.0

Detail: Created on 25/10/12. Last modified on 31/10/12.

Notes:

A reference to a Service Provider. The reference will be opaque to avoid being able to deduce the Service Provider if full access to the data model is gained.

A Service Provider can act as an attribute provider or an attribute recipient. In pull scenario the attribute provider is a web service provider (IAP) and attribute recipient is browser based RealMe client.

In push scenario the attribute recipient is a web service provider (IAP) and the attribute provider is browser based RealMe client.

Generally in pull scenarios, the attribute recipient sets the consent terms for customer and the purpose for the pulling of data.

In push scenarios the attribute provider may set the consent terms.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
True	ID	BIGINT	True	False					The Provider primary key.
False	SERVICE_PROVIDER_REF	VARCHAR	True	False	50				An external reference to the Service Provider. The reference should be opaque and non guessable. The reference to the Service Provider will be passed in to the Consent data model via the Consent Service. It will avoid being able to deduce the party involved in the consent by gaining full access to the data model.
False	EFFECTIVE_FROM	DATETIME	True	False					The date time the Provider becomes into effect.
False	EFFECTIVE_TO	DATETIME	True	False					The date time the Provider expires.

Constraints

Name	Type	Columns	Initial Code	Notes
PK_PROVIDER	Public	ID		

Relationships

Columns	Association	Notes
	<anonymous>. SERVICE_PROVIDER.	
(SERVICE_PROVIDER_ID = ID)	0..* ATTRIBUTE_SOURCE.FK_ATTRIBUTES_SOURCE_SERVICE_PROVIDER 1 SERVICE_PROVIDER.PK_PROVIDER	
(SERVICE_PROVIDER_ID = ID)	0..* CONSENT_TERM.FK_CONSENT_TERM_SERVICE_PROVIDER 1 SERVICE_PROVIDER.PK_PROVIDER	
(ATTRIBUTE_PROVIDER_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_SP_PROVIDER 1 SERVICE_PROVIDER.PK_PROVIDER	
(ATTRIBUTE_RECIPIENT_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_SP_RECIPIENT 1 SERVICE_PROVIDER.PK_PROVIDER	

1.9 SUBJECT

Database: MySql, *Stereotype:* «table», *Package:* RealMe Consent Data Model-v3.0

Detail: Created on 10/08/12. Last modified on 26/10/12.

Notes:

A subject that the consent is for. This corresponds to an end-user or 'Customer' in RealMe. The subject will be identified by their FLT in the privacy domain of the consent service.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
True	ID	BIGINT	True	False	0	0	0		Primary key
False	SUBJECT_TYPE_ID	BIGINT	True	False					The type of subject. For RealMe this will always be a Customer.

False	IDENTIFIER	VARCHAR	True	True	50				The federated identifier of the subject in the Consent Privacy Domain. For RealMe this is the Consent FLT.
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Constraints

Name	Type	Columns	Initial Code	Notes
FK_SUBJECT_SUBJECT_TYPE	Public	SUBJECT_TYPE_ID		
UQ_SUBJECT_IDENTIFIER	Public	IDENTIFIER		
PK_SUBJECT	Public	ID		

Relationships

Columns	Association	Notes
	<anonymous>. SUBJECT.	
(SUBJECT_TYPE_ID = ID)	0..* SUBJECT.FK_SUBJECT_SUBJECT_TYPE 1 SUBJECT_TYPE.PK_ATTRIBUTE_TYPE	
(SUBJECT_ID = ID)	0..* CONSENT_EVENT.FK_CONSENT_EVENT_SUBJECT 1 SUBJECT.PK_SUBJECT	

1.10 SUBJECT_TYPE

Database: MySQL, *Stereotype:* «table», *Package:* RealMe Consent Data Model-v3.0

Detail: Created on 10/08/12. Last modified on 26/10/12.

Notes:

A codes table to store the types of Subjects. Future phase use. For RealMe this will always be a Customer.

Columns

PK	Name	Type	Not Null	Unique	Len	Prec	Scale	Init	Notes
True	ID	BIGINT	True	False	0	0	0		Primary key of the

									codes table.
False	CODE	VARCHAR	True	False	50	0	0		Human readable name of the type.
False	EFFECTIVE_FROM	DATETIME	True	False	0	0	0		The datetime the codes table entry is in effect.
False	EFFECTIVE_TO	DATETIME	True	False	0	0	0		The datetime the codes table entry expires.

Constraints

Name	Type	Columns	Initial Code	Notes
PK_ATTRIBUTE_TYPE	Public	ID		

Relationships

Columns	Association	Notes
	<anonymous>. SUBJECT_TYPE.	
(SUBJECT_TYPE_ID = ID)	0..* SUBJECT.FK_SUBJECT_SUBJECT_TYPE 1 SUBJECT_TYPE.PK_ATTRIBUTE_TYPE	