IBM Cúram Social Program Management
Version 7.0.10

Designing Evidence

IBM

Note

Before using this information and the product it supports, read the information in

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Chapter 1. Designing evidence

Before you design your evidence, analyze the structural and characteristic requirements for evidence that are required by your organization. Consider whether to use static or dynamic evidence, and the evidence types that your organization requires.

Dynamic and static evidence

Dynamic evidence is the most recent offering for designing and implementing evidence, and is the recommended approach. Dynamic evidence offers an integrated, intuitive approach to editing evidence through the dynamic evidence editor in the administration application. In some rare instances, for example the need to encrypt data, static evidence might be more suitable than dynamic evidence.

When you are designing evidence, the first question to address is whether to use dynamic or static evidence. The main difference between dynamic and static evidence is how the data is stored in the database. Otherwise, each evidence type has its own application infrastructure that provides customer tools and capabilities to simplify the implementation of evidence. Static evidence has an evidence generator that uses configuration files to generate all the server-side implementations, including the entity, service and facade layer, and also the client-side implementations. Dynamic evidence provides a better overall user experience because it permits configuring and publishing an evidence type from within the administration application. Dynamic evidence supports the effective date of change feature, which is used to protect the data elements that can change in this way. For more information, see the *Understanding dynamic evidence type versions* related link. As static evidence does not support the effective date of change feature, hand-crafted validations must be applied. For more information, see the *Validations* related link.

The configuration of dynamic evidence requires less technical input. Through the editor that is provided in the application, a business analyst can configure dynamic evidence, and can integrate validation and usage of the evidence in eligibility and entitlement rule sets. The difference in data storage between dynamic and static evidence is an example of a consideration that might influence the decision to choose either dynamic or static evidence. Static evidence stores data in individual relational database tables, whereas dynamic evidence uses only two tables to store all evidence types together. The storage mechanism is a consideration in the necessity to encrypt data. To meet this requirement, use static evidence because the data that is being encrypted is isolated in its own entity. The need to encrypt data is one example of where static evidence might be more suitable than dynamic evidence.

Developing static evidence, whether manually or by using the Evidence Generator, takes more time than developing dynamic evidence. For example, when you develop evidence manually the evidence metadata entity, which contains metadata about each evidence type, must be populated before evidence maintenance can proceed. When you use the Evidence Generator, static specific entity modeling is required because the Evidence Generator relies on certain, attributes, structs, and aggregations within the generated code.

Related information

Understanding dynamic evidence type versions

Validations

Modelling real-life data as evidence

Consider the real-life data that you want to store, and how best to represent that data in the system as evidence. Evidence types can vary from very simple types to complex evidence types whose hierarchy includes parent, child, and grandchild records. As well as standard parent-child hierarchy design considerations, some design considerations that are specific to IBM Cúram Social Program Management also apply.

Examples of data that you might want to capture as evidence include personal details (name, address, phone numbers, and so on), employment details, income details, and tax status. The data that you want to represent as evidence defines the attributes that an evidence type needs to include, and the data type of each attribute. For example, to capture income details, you might define an income evidence type that has attributes for source of income, income amount, income frequency, and income start date.

To capture identification evidence for a program participant, you might define an identification evidence type that includes the participant's names, the start date and end date for which the evidence is valid, and an ID type. Name attributes can be stored as string types and date attributes can be stored as integer types, while the ID type might be stored as a codetable type, where codetable values are mapped to ID types in a codetable. Valid ID types might include a social security number, passport, and so on. For codetable types, you must define each required value.

After you have analyzed what data you need to capture as evidence, consider the following questions:

How do you want to group the data?
To determine how to group the data, analyze the data to determine where hierarchical patterns occur that can be mapped to parent and child evidence types. For example, employment evidence could have child income evidence. However, income could also be related to other evidence types, such as tax status, or household expense. Many factors affect the grouping of your data, for example, the rules that your organization uses to determine benefits.

Do you want to extend the evidence types that are provided in a default installation?
If the evidence types that are provided in a default IBM Cúram Social Program Management installation broadly match your requirements, consider reusing or customizing the default evidence types to suit the needs of your organization.

Will a person require more than one instance of a type of evidence record at any time?
Evidence must relate to at least one person. For some evidence types, a person can have more than one instance. For example, a person can have more than one employment. However, a person can have only one date of birth or date or death. For evidence types where only one instance is valid, apply validation to verify that multiple concurrent instances of the evidence record do not exist.

Are some evidence attributes likely to change during the lifetime of an evidence record?
Configure the **Effective Date of Change** feature on an evidence type so that if only some attributes are changed on an evidence record, caseworkers need only to enter the changed data. Otherwise, to update some attributes on a record, a caseworker must end the evidence record and re-enter all the evidence attributes in a new record.

Is the evidence type part of an evidence group?
Consider whether the evidence type should be assigned to an evidence group and where you want the evidence to be displayed in the evidence dashboard. An example of an evidence dashboard group is one to add a member of an integrated case. For more information about evidence dashboard groups, see the *Configuring an Evidence Dashboard Group* related link. A caseworker can use the evidence dashboard to view evidence groups, and to filter the evidence to display only the evidence types that are part of a particular group.

Can evidence apply to multiple participants?
Evidence must relate to at least one participant, but it can relate to multiple participants. If records of the evidence type can apply to multiple participants, for example, members of a family who share an address, enable the Multiple Participant Evidence Update function for the evidence type.

Note: The underlying evidence structure is used to capture an individual participant. The system uses one record for each participant, not one record for all participants. However, from a user perspective multiple evidence records can be created at the same time.

If the Multiple Participant Evidence Update function is enabled, it's possible for caseworkers to create, modify, and discard dynamic evidence that applies to multiple participants all in one go.

Does the evidence need to be verified?
Consider which attributes of your evidence types require verification and what forms of verification are accepted. For example, a pay slip could be required to verify income. For more information, see the *Verification guide* related link.

Does the evidence need to be shared between cases?

Evidence can be captured and maintained on the person tab and at the case level. Person tab evidence captures and maintains standard person information, for example person name evidence, that applies across all applications or programs. Case level evidence captures any change of circumstances, for example a change in income evidence, that affects clients during the lifetime of the case. If the evidence is maintained at case level, does it need to be shared between cases, for example, from an application case to an integrated case? For more information about sharing evidence, see the *Sharing evidence by using the evidence broker* related link. To make evidence that is captured on the person tab and the at case level available to use to caseworkers, the evidence must be configured. For more information about making evidence that is captured on the person tab and the at case level available to use to caseworkers, see the *Configuring evidence types* related link.

For information about how real-life evidence design considerations are reflected in sample evidence type configurations, see the *Evidence design examples* related link.

Related concepts

Configuring evidence types

Configuring an Evidence Dashboard Group

Updating evidence for multiple participants

Customizing multiple participant evidence

Verification guide

Sharing evidence by using the evidence broker

Related information

Configuring an Evidence Dashboard Group

Configuring evidence types

Evidence design examples

Evidence design examples

Examples of how real-life evidence design considerations are reflected in sample configurations for four evidence types.

Table 1 lists sample configurations for the following four evidence types:

- Address
- Employment
- SSN details
- Medical condition details

For example, an address is a common piece of information about a client that needs to be captured. The table shows an example of how address evidence can be modeled as evidence. The attributes that are listed store the address details for a client for a particular period. The other configuration settings relate to which case types the evidence can be stored in, and how the evidence is verified and shared. A definition of the configuration settings is provided after the table.

Table 1. Sample evidence configurations						
Evidence type and attributes	**Case configuration**	**Verification item**	**Verification case type**	**Verification mapping**	**Identical evidence mapping**	**Logically equivalent evidence mapping**
Address • Address • fromDate • toDate • addressType	• Application • Person • Integrated case	Utility bill for address	• Application • Integrated case	Yes, everywhere it is used	• Person - application • Application - person • Integrated case - application • Application - integrated case • Integrated case - person • Person - integrated case	Not applicable
Employment • employmentName • EmpoyerID • Position • fromDate • toDate • Wage • frequency	• Application • Person • Integrated case	Salary certificate for income	All	Yes, everywhere it is used	• Person - application • Application - person • Integrated case - application • Application - integrated case • Integrated case - person • Person - integrated case	Not applicable

Evidence type and attributes	Case configuration	Verification item	Verification case type	Verification mapping	Identical evidence mapping	Logically equivalent evidence mapping
Table 1. Sample evidence configurations (continued)						
SSN details • SSNDetails • alternateID • altIDType • SSNStatus • fromDate • toDate	• Application • Person or prospect person • Integrated case	Social security card for alternateID	• Application • Person or prospect person • Integrated case	Yes, everywhere it is used	• Person - application • Application - person • Integrated case - application • Application - integrated case • Integrated case - person • Person - integrated case	Identification • alternateID • altIDType • fromDate • toDate
Medical condition details • conditionName • ICDCode • severity • impact	• Application • Person or prospect person • Integrated case	Doctor or hospital certificate: • conditionName • severity • impact	• Application • Person or prospect person • Integrated case	Yes, everywhere it is used	• Person - application • Application - person • Integrated case - application • Application - integrated case • Integrated case - person • Person - integrated case	Not applicable

Evidence type and attributes
> The evidence type name and the names of its attributes.

Case configuration
> The cases or locations where evidence of the specified type can be maintained.

Verification item
> Items that are required to verify an evidence record; for example, a utility bill might be required to verify an address evidence record.

Verification case type
> Case types that require the evidence to be verified.

Verification mapping
In the evidence sharing configuration, you can specify whether to also share the verification documentation when evidence is shared.

Identical evidence mapping
If the evidence is stored in the same format between two case types, then the evidence can be seamlessly shared by using an identical flow.

Logically equivalent evidence mapping
If evidence is stored in a different format between two case types, then the evidence can be seamlessly shared by using a logically equivalent evidence flow.

Person evidence

IBM Cúram Social Program Management also includes evidence at person level that can be used to capture and maintain standard person information that is relevant across all applications or programs.

The following 10 evidence types are delivered as part of the product as evidence at person level. The evidence types can be used to capture and store person evidence that applies across all applications or programs. For more information about developing with person evidence, see the *Developing with Person and Prospect Person Evidence* related link.

Birth and death details

The attributes for the birth and death details evidence type do not change over time. A client has only one date of birth and one date of death. Therefore, any modification to the data occurs only if the data was originally incorrect and must be corrected. For any case, only one evidence record of this type can exist at any time. The date of birth effectively represents the start date and the date of death represents the end date. Birth and death details evidence can be corrected only.

Gender

For any case, only one evidence record can exist at any time and the existence of a record is mandatory for a person. Gender can change over time and a change, which is a succession, from a new effective date is appropriate. For gender, no start or end dates are captured because a client always has a gender but the gender type can change over time. So, any change that is made to the type can either be corrected in place if the original gender was recorded incorrectly, or modified from a new effective date if the client changed gender. Gender evidence can change over time and can be corrected.

Name

A client can have only one registered or preferred name type. Only one registered or preferred name type must always exist. For all other name "types", the client can have more than one overlapping name, for example, multiple "alias" names. To show changes of name of the same type over time, users must edit a record and enter an effective date of change. The system validates that only one registered name must exist. Name evidence can change over time and can be corrected.

Identifications

Identifications are represented by a single record that represents the period when the ID started and when the ID ended. For example, a passport with an identification has a start date, that is, the date that passport was issued, and an end date, that is, the date that the passport expired. Within that period, the passport number does not change. When a client is issued a new passport, the passport has a new issue date and a new end date. Identifications evidence can be corrected only.

Bank accounts

Typically, the bank account number for a type of account does not change over time. The date the bank account was opened represents the start date and the date the bank account was closed represents the end date. Bank accounts evidence can be corrected only.

Postal addresses

The people who are recorded as living at a postal address can change over time, but the address itself does not change. So, when a client changes address it means that the client is moving from one residence to another. The change is represented by ending the address where the client was living and adding an address. Postal addresses evidence can be corrected only.

Email address

While a client can have multiple email addresses over a lifetime, a client might have no email address at specific periods. The period of an email address is modeled as a correction only because each email address has one representation. The date that the client created the account is the start date. The date that the client stopped using the email address is the end date. Email address evidence can be corrected only.

Phone number

While a client can have multiple phone numbers over a lifetime, a client might have no phone number at specific periods. The period of a phone number is modeled as a correction only because each phone number has one representation. The date that the client started using the phone number is the start date. The date that the client stopped using the phone number is the end date. Phone number evidence can change over time and can be corrected.

Contact preferences

A client's preference for how an organization contacts the client or the language that the client wants to communicate in can change over time. For example, if a client speaks Spanish only the client might want to be communicated with in Spanish initially. However, the client might later become fluent in English after the client attended language courses. The client might then decide to change the preference for the language that the client wants to communicate in to English. Contact preferences evidence can change over time and can be corrected.

Relationships

Depending on a relationship type, some relationships types can change during the period of a relationship. For example, if a foster child is adopted by a foster parent or parents, the relationship changes from "Foster child-Foster parent" to "Child-parent". However, other relationship types don't change, for example, relationships like "Grandparent" or "Sibling". Even for a "spouse" relationship, the relationship might end but the fact that the person is a "spouse" doesn't change over time. The marital status can change during a "spouse" relationship. For example, the couple might be separated, divorced, or married. However, marital status is not part of relationship evidence.

In the previous foster child or child scenario, before the child is adopted, a period might exist where the child has no relationship with the client. For example, the child might temporarily be fostered by another family or might be in the care of another person. Therefore, using end dates for a relationship evidence type is not appropriate. The evidence for relationships is managed by using start and end dates only because it simplifies the process for users.

The other unique behavior of relationship evidence is that it allows for the auto creation and management of reciprocal relationships.

To keep the interface and maintenance of relationships simple, relationships are managed as corrections. Managing relationships as corrections ensures that different users manage the information in the same way. Relationships evidence can be corrected only.

Related information

Developing with Person and Prospect Person Evidence

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