Motivation 1

- Identity management solutions do not deal with ensuring consistency.

Motivation 2

- Many of the end resources do not support transactions or other traditional consistency mechanism.

Motivation 3

- Inconsistencies can harm the security of the system and can lead to the malfunction of the system.

Objectives

- Design and implementation of mechanism for ensuring the consistency in one of the open-source identity management solution.
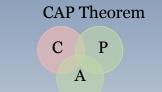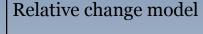
Consistency in the Identity Management

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Compensations

RECOMPUTE
STORE   RETRY
RUN   SYNCHRONIZE
RECONCILE

CAP Theorem

C   P
A

Relative change model

REPLACE: path, value
ADD: path, value
DELETE: path

1. Error Handling

- Compensations as reactions to the errors.
- Eliminates the formation of inconsistencies.
- Eliminates found inconsistencie.
- Temporary save unsuccessful operations

2. Reconciliation

- Automatic process.
- Finds differencies among different databases and merges them.
- Retry of unsuccessful operations

Results

Implementation and evaluation in the open-source solution called midPoint. Part of the official development.

Main benefits

- Support for online resources
- Compensations for automatically detected inconsistencies

Future work

- Extension of another identified problematic situations