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Verification of Secure Cloud-based Workflow Services

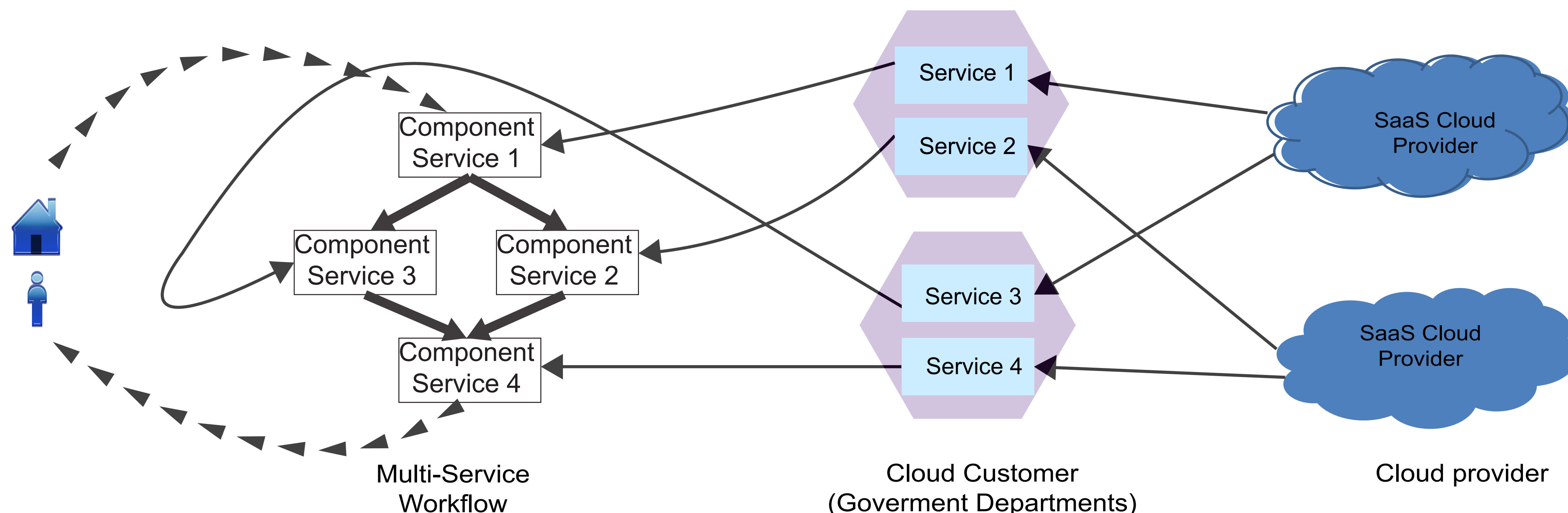
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Objective

Verification of composition of cloud based service workflows for conflicts with time dependant domain security policies

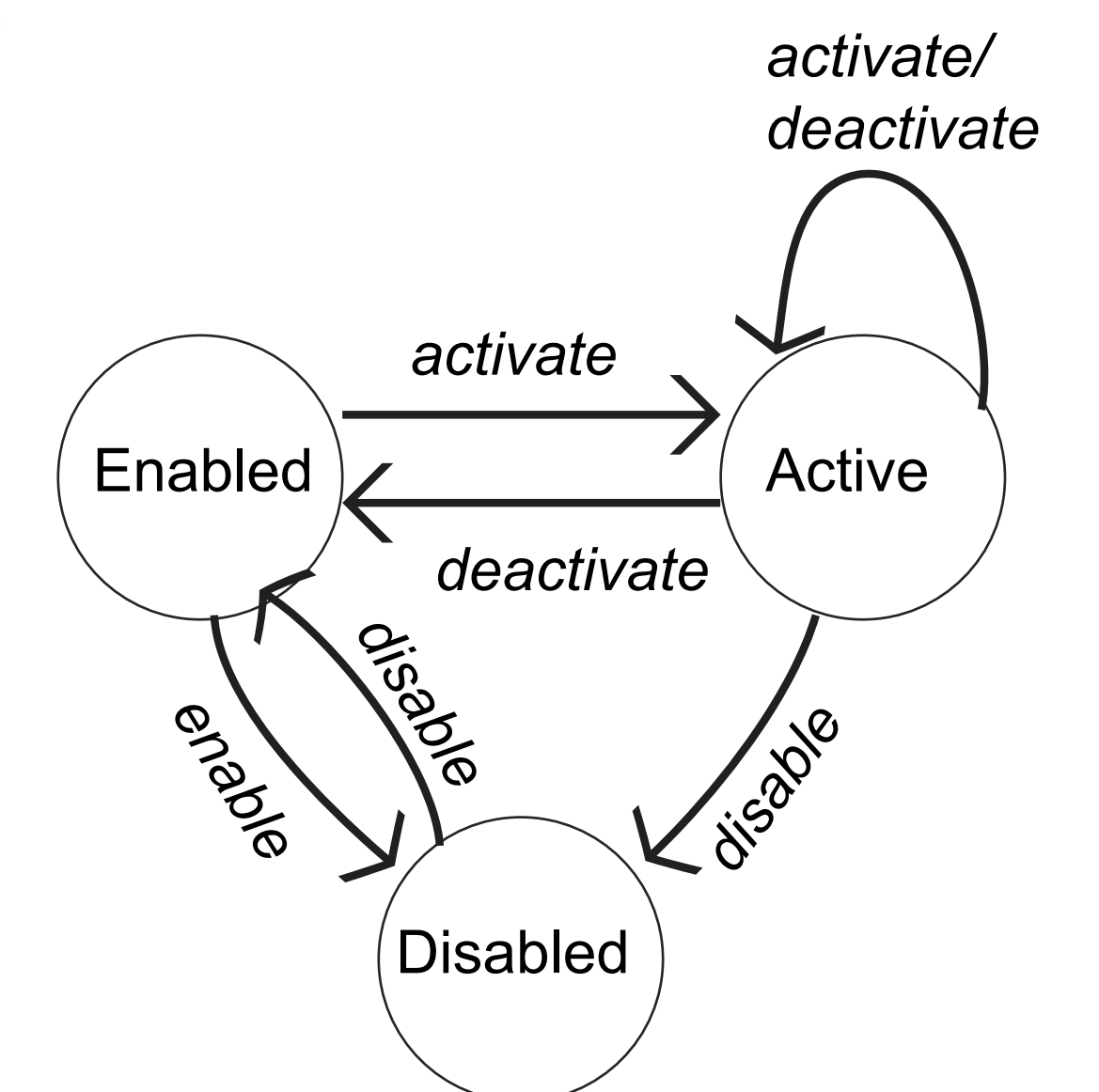


Challenges

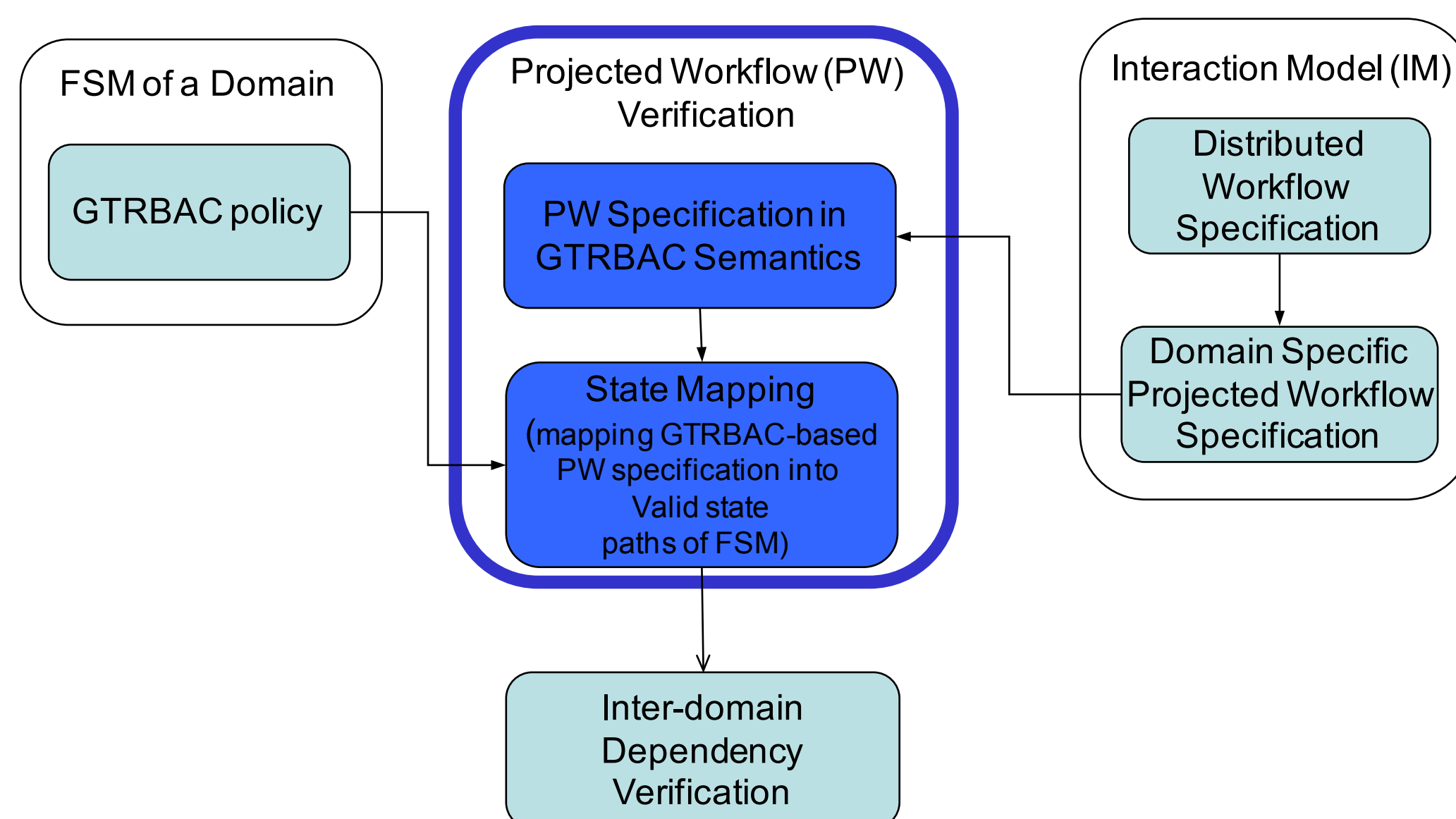
- Each cloud customer is an autonomous domain with its time dependant security policies expressed in GTRBAC
- The workflow has temporal constraints and assumed to be invoked on recurrent basis.
- Dynamic security policies for cloud customers to handle elasticity of cloud services

Generalized Temporal Role Base Access Control (GTRBAC)

- An extension of RBAC with temporal constraints.
- At any time a role can be one of three states
 - Disable state
 - Enable state
 - Active state



Proposed Approach



PW Verification of Domain's FSM

