



MidPoint Community Meetup 2025

Thinking in MidPoint

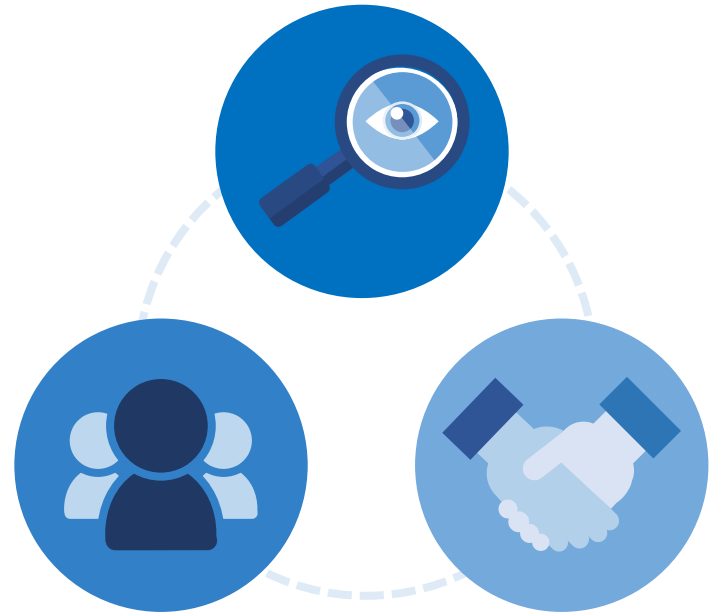
Motivation

- MidPoint is designed to fit in your needs
- Flexibility, customization, scripting, ...
- Architecture still matters
- MidPoint follows certain design principles
- Understanding it, help you achieve your goals
- Help midPoint to help you



State transformation vs. reacting to events

- State transformation is the key concept
 - Reconciliation
 - Applying new rules on the fly
 - There is no mapping only removing values
- Events are way harder to manage
 - Complicated debugging
 - New rules require deployment process
 - Useful for selected tasks (e.g. starting grace periods)
- **Think using state transformation whenever possible**



Per object processing in midPoint

- MidPoint processes single midPoint object at time
 - Can't process groups and it's members in a single step
- Parallel processing possible
 - Minimal collisions
- Modifying a role won't modify member
 - Triggers available
- Importing structures can be complicated
 - Reconcile all object types
 - Create on demand



Processing individual objects

- All changes are provisioned immediately
 - Useful for REST API integrations
- Everything is processed including inbound rules
- Optimization possible
 - Is it necessary?



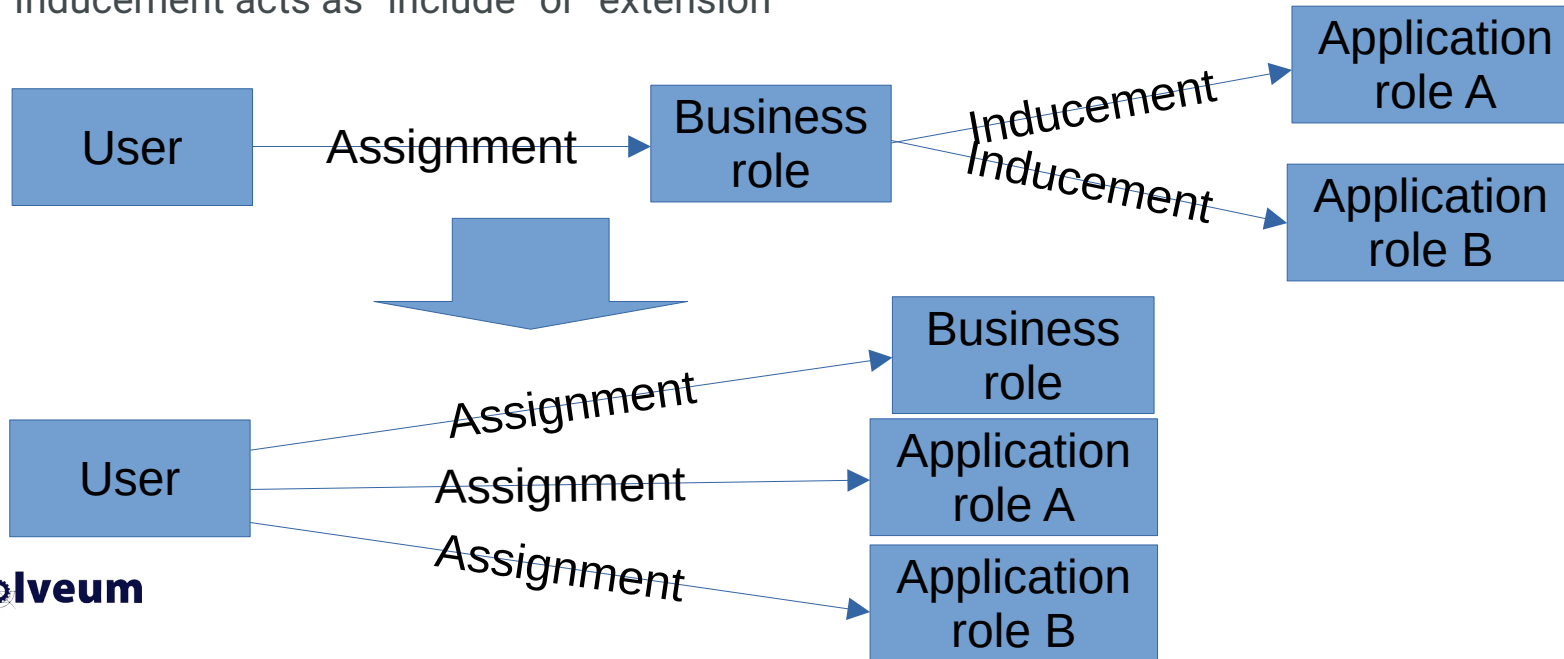
Assignments and associations processing

- Assignment are stored in source objects
 - User assignments < role members
- Processing users including their memberships
- Resource with users and role IDs -> fine
- Resource with role and user IDs -> problematic
 - Can't iterate over user objects -> can't process users
- Processing members of an object
 - Using queries -> slower



Assignments and inducements

- Assignment represent relation between objects
 - Typically membership
- Inducement acts as “include” or “extension”



Paradox of import and live-sync

- Import is optimized reconciliation
 - Using import for outbound resource
- Live-sync for outbound resources
 - Discover new resource objects
 - Run synchronization reactions



When role is not a role – are objects equivalent?

- Object types are rough guidelines
- Archetypes gives you flexibility
- Object can be processed in any manner
 - Can RoleType represents persons?
- Abstract role type
- Focus on your design



MidPoint's weak points

- Manual management
 - In combination with automated rules
- Reaction to source projection deletion
- Validity of inducements
 - Require focus recompute
- Multiple roles inducing a single access
- Negative roles
- **Feedback required. Improved in the future.**



Anti-patterns

- Hooks
 - Only when you have developer-like skills
 - ... and rather not even then
- Using generated assignment instead of inducement
 - Focus mappings, auto-assignments
- Messaging based connectors



Conclusions

- MidPoint has extreme flexibility
- Understanding midPoint will help you
- Read the documentation
- Do things your way
 - Avoid anti-patterns
- Let midPoint work for you





Thank you for your attention

Feel free to ask your questions now!



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