Tie-RBAC
An application of RBAC to Social Networks

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Access control models

- Discretionary Access Control
- Mandatory Access Control
- Role-based access Control
- Other (Task/workflows, etc)

RBAC

User <-> Admin <-> Permissions

- User
- Role
- Admin
- Permissions
  - Actions
  - Objects
RBAC advantages

- Policy neutral
- Simplified security administration
- Administrative roles to manage other roles
- Separation of duties
- Least privilege

Social Network Analysis

- Understanding the linkages between social entities

Tie

Sender Actor A

Relation "Friend"

Receiver Actor B
Tie-RBAC
Tie-RBAC

Sender Actor → Relation defined by A → Receiver Actor

A

"Friend"

Permissions assigned by A

Actions

Objects

B
Tie-RBAC
Advantages from RBAC

- Policy neutral
- Simplified security administration
- Administrative roles to manage other roles
Tie-RBAC advantages

- Relations are similar to roles
- Managing security while building the network
Implementation: Social Stream

- Core for building social network websites
- Ruby on Rails plug-in
- User, groups, post and comments
- Free / open source
- http://social-stream.dit.upm.es/
Looking for scholar visit!
Questions?

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