**MithrilAC**

Database model documentation

Created with Vertabelo.com

# 1. Model details

**Model name:** 
MithrilAC

**Version:** 
2.3

**Database engine:** 
mysql

# 2. Tables

## 2.1. Table requesters

**Description:** 
Table showing metadata for requesters of user data

2.1.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| id | int |  |  |
| name | text |  |  |

## 2.2. Table resources

**Description:** 
Table showing metadata for resource being requested

2.2.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| id | int |  |  |
| name | text |  |  |

## 2.3. Table contextlog

**Description:** 
Table showing log of current user context

2.3.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| id | int |  |  |
| identity | text |  |  |
| location | text | null |  |
| activity | text | null |  |
| temporal | text | null |  |
| time | timestamp |  |  |

## 2.4. Table apps

**Description:** 
Table showing metadata for apps

2.4.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| id | int |  |  |
| uid | int |  |  |
| description | text | null |  |
| assocprocname | text | null |  |
| targetsdkver | int |  |  |
| icon | blob |  |  |
| label | text |  |  |
| name | text |  |  |
| verinfo | text |  |  |
| installed | bool |  |  |
| type | int |  |  |
| installdate | timestamp |  |  |
| requesters\_id | int |  |  |

2.4.2. Alternate keys

|  |  |  |
| --- | --- | --- |
| **Key name** | **Columns** | **Description** |
| apps\_unique\_key | name |  |

## 2.5. Table actionlog

**Description:** 
Table showing actions taken for each context, resource, requester tuple

2.5.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| id | int |  |  |
| resources\_id | int |  |  |
| context\_id | int |  |  |
| requesters\_id | int |  |  |
| time | timestamp |  |  |
| action | int |  |  |

## 2.6. Table policyrules

**Description:** 
Table showing policy rules defined for apps and requested resources in given context

2.6.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| id | int |  |  |
| name | text |  |  |
| action | int |  |  |
| context\_id | int |  |  |
| requesters\_id | int |  |  |
| resources\_id | int |  |  |

## 2.7. Table permissions

**Description:** 
Table showing metadata for permissions

2.7.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| id | int |  |  |
| name | text |  |  |
| label | text |  |  |
| protectionlvl | text |  |  |
| permgrp | text | null |  |
| flag | text | null |  |
| description | text | null |  |
| icon | blob |  |  |
| resources\_id | int |  |  |

2.7.2. Alternate keys

|  |  |  |
| --- | --- | --- |
| **Key name** | **Columns** | **Description** |
| permissions\_unique\_name | name |  |

## 2.8. Table violationlog

**Description:** 
Table showing violations recorded by MithrilAC and subsequent user feedback

2.8.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| id | int |  |  |
| resources\_id | int |  |  |
| requesters\_id | int |  |  |
| context\_id | int |  |  |
| description | text |  |  |
| marker | bool | null |  |
| time | timestamp |  |  |

## 2.9. Table appperm

**Description:** 
Table showing apps and permissions

2.9.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| id | int |  |  |
| apps\_id | int |  |  |
| permissions\_id | int |  |  |

# 3. Views

## 3.1. View apppermview

**Description:** 
A view for showing a list of app and it's permission metadata

**SQL:** 
SELECT
a.name as apppkgname,
p.name as permname,
p.protectionlvl as protectionlevel,
p.label as permlabel,
p.permgrp as permgroup
FROM
apps a,
permissions p,
appperm ap
WHERE
ap.apps\_id = a.id
AND
ap.permissions\_id = p.id

3.1.1. Columns

|  |  |  |  |
| --- | --- | --- | --- |
| **Column name** | **Type** | **Properties** | **Description** |
| apppkgname | text |  | A view for showing a list of app and it's permission metadata |
| permname | text |  | A view for showing a list of app and it's permission metadata |
| protectionlevel | text |  | A view for showing a list of app and it's permission metadata |
| permlabel | text |  | A view for showing a list of app and it's permission metadata |
| permgroup | text |  | A view for showing a list of app and it's permission metadata |

# 4. References

## 4.1. Reference permissions\_resources

|  |  |  |
| --- | --- | --- |
| **resources** | **1..1** | **permissions** |
| id | <-> | resources\_id |

## 4.2. Reference apps\_requesters

|  |  |  |
| --- | --- | --- |
| **requesters** | **0..1** | **apps** |
| id | <-> | requesters\_id |

## 4.3. Reference appperm\_apps

|  |  |  |
| --- | --- | --- |
| **apps** | **0..\*** | **appperm** |
| id | <-> | apps\_id |

## 4.4. Reference appperm\_permissions

|  |  |  |
| --- | --- | --- |
| **permissions** | **0..\*** | **appperm** |
| id | <-> | permissions\_id |

## 4.5. Reference policyrules\_context

|  |  |  |
| --- | --- | --- |
| **contextlog** | **0..\*** | **policyrules** |
| id | <-> | context\_id |

## 4.6. Reference policyrules\_requesters

|  |  |  |
| --- | --- | --- |
| **requesters** | **0..\*** | **policyrules** |
| id | <-> | requesters\_id |

## 4.7. Reference policyrules\_resources

|  |  |  |
| --- | --- | --- |
| **resources** | **0..\*** | **policyrules** |
| id | <-> | resources\_id |

## 4.8. Reference actions\_resources

|  |  |  |
| --- | --- | --- |
| **resources** | **0..\*** | **actionlog** |
| id | <-> | resources\_id |

## 4.9. Reference actions\_context

|  |  |  |
| --- | --- | --- |
| **contextlog** | **0..\*** | **actionlog** |
| id | <-> | context\_id |

## 4.10. Reference actions\_requesters

|  |  |  |
| --- | --- | --- |
| **requesters** | **0..\*** | **actionlog** |
| id | <-> | requesters\_id |

## 4.11. Reference violations\_resources

|  |  |  |
| --- | --- | --- |
| **resources** | **0..\*** | **violationlog** |
| id | <-> | resources\_id |

## 4.12. Reference violations\_requesters

|  |  |  |
| --- | --- | --- |
| **requesters** | **0..\*** | **violationlog** |
| id | <-> | requesters\_id |

## 4.13. Reference violations\_context

|  |  |  |
| --- | --- | --- |
| **contextlog** | **0..\*** | **violationlog** |
| id | <-> | context\_id |

# 5. Subject areas

## 5.1. Subject area Request

5.1.1. Tables  
 - requesters  
 - apps

5.1.2. Views  
 - requesters  
 - apps

5.1.3. References  
 - requesters  
 - apps

## 5.2. Subject area Resource

5.2.1. Tables  
 - resources  
 - permissions

5.2.2. Views  
 - resources  
 - permissions

5.2.3. References  
 - resources  
 - permissions

## 5.3. Subject area Logs

5.3.1. Tables  
 - contextlog  
 - actionlog  
 - violationlog

5.3.2. Views  
 - contextlog  
 - actionlog  
 - violationlog

5.3.3. References  
 - contextlog  
 - actionlog  
 - violationlog