

MithrilAC

Database model documentation

Table of contents

1. Model details	3
2. Tables	4
1.1. Table contextlog	4
1.2. Table apps	4
1.3. Table actionlog	5
1.4. Table policyrules	5
1.5. Table permissions	5
1.6. Table violationlog	6
1.7. Table appperm	6
1.8. Table context	7
3. Views	8
2.1. View apppermview	8
4. References	9
3.1. Reference appperm_apps	9
3.2. Reference appperm_permissions	9
3.3. Reference policyrules_context	9
3.4. Reference contextlog_context	9
3.5. Reference policyrules_apps	9
3.6. Reference actionlog_apps	9
3.7. Reference violationlog_apps	9
3.8. Reference policyrules_permissions	9
3.9. Reference actionlog_permissions	10
3.10. Reference violationlog_permissions	10
5. Subject areas	11

1. Model details

Model name:

MithrilAC

Version:

2.3

Database engine:

mysql

Description:

2. Tables

2.1. Table contextlog

Description:

Table showing log of current user context

2.1.1. Columns

Column name	Type	Properties	Description
id	int		
instance_id	int		
identity	text		
location	text	null	
activity	text	null	
temporal	text	null	
time	timestamp		

2.2. Table apps

Description:

Table showing metadata for apps

2.2.1. 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		

2.2.2. Alternate keys

Key name	Columns	Description
apps_unique_key	name	

2.3. Table actionlog

Description:

Table showing actions taken for each context, resource, requester tuple

2.3.1. Columns

Column name	Type	Properties	Description
id	int		
time	timestamp		
action	int		
apps_id	int		
permissions_id	int		

2.4. Table policyrules

Description:

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

2.4.1. Columns

Column name	Type	Properties	Description
id	int		
name	text		
action	int		
context_id	int		
apps_id	int		
permissions_id	int		

2.5. Table permissions

Description:

Table showing metadata for permissions

2.5.1. 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		

2.5.2. Alternate keys

Key name	Columns	Description
permissions_unique_name	name	

2.6. Table violationlog

Description:

Table showing violations recorded by MithrilAC and subsequent user feedback

2.6.1. Columns

Column name	Type	Properties	Description
id	int		
description	text		
marker	bool	null	
time	timestamp		
apps_id	int		
permissions_id	int		

2.7. Table appperm

Description:

Table showing apps and permissions

2.7.1. Columns

Column name	Type	Properties	Description
id	int		
apps_id	int		
permissions_id	int		

2.8. Table context

Description:

Table showing context instances

2.8.1. Columns

Column name	Type	Properties	Description
id	int		
location	text	null	
activity	text	null	
temporal	text	null	
presence_info	text	null	

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		
permname	text		
protectionlevel	text		
permlabel	text		
permgroup	text		

4. References

4.1. Reference appperm_apps

apps	0..*	appperm
id	<->	apps_id

4.2. Reference appperm_permissions

permissions	0..*	appperm
id	<->	permissions_id

4.3. Reference policyrules_context

context	0..*	policyrules
id	<->	context_id

4.4. Reference contextlog_context

context	0..*	contextlog
id	<->	instance_id

4.5. Reference policyrules_apps

apps	0..*	policyrules
id	<->	apps_id

4.6. Reference actionlog_apps

apps	0..*	actionlog
id	<->	apps_id

4.7. Reference violationlog_apps

apps	0..*	violationlog
id	<->	apps_id

4.8. Reference policyrules_permissions

permissions	0..*	policyrules
id	<->	permissions_id

4.9. Reference actionlog_permissions

permissions	0..*	actionlog
id	<->	permissions_id

4.10. Reference violationlog_permissions

permissions	0..*	violationlog
id	<->	permissions_id

5. Areas

5.1. Request subject area

5.1.1. Tables

- apps

5.1.2. References

- appperm_apps
- appperm_permissions
- policyrules_context
- contextlog_context
- policyrules_apps
- actionlog_apps
- violationlog_apps
- policyrules_permissions
- actionlog_permissions
- violationlog_permissions

5.2. Resource subject area

5.2.1. Tables

- permissions

5.2.2. References

- appperm_apps
- appperm_permissions
- policyrules_context
- contextlog_context
- policyrules_apps
- actionlog_apps
- violationlog_apps
- policyrules_permissions
- actionlog_permissions
- violationlog_permissions

5.3. Logs subject area

5.3.1. Tables

- contextlog
- actionlog
- violationlog

5.3.2. References

- appperm_apps
- appperm_permissions
- policyrules_context
- contextlog_context
- policyrules_apps
- actionlog_apps
- violationlog_apps
- policyrules_permissions
- actionlog_permissions
- violationlog_permissions