

This is the list of permission defined in the script.

*****Permission List*****

PERMISSION_ID	PERMISSION_DESCRIPTION
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control_oven	Full Control of Oven
control_window	Full Control of Window
user_admin	Create Update Delete Users
control_thermostat	Full Control of Thermostat
control_door	Full Control of Door
control_light	Full Control of light

This is the list of role defined in the script.

It also show all the entitlements (permission or role) added to this role.

*****Role List*****

ROLE_ID: admin_role

ROLE_DESCRIPTION: Has all permissions of an administrator

ENTITLEMENTS ASSOCIATED:

- Control Oven
- Control Window
- User Administrator
- Control Thermostat
- Control Door
- Control light

ROLE_ID: adult_resident

ROLE_DESCRIPTION: Has all permissions of an adult resident

ENTITLEMENTS ASSOCIATED:

- Control Oven
- Control Window
- Control Thermostat
- Control Door
- Control light

ROLE_ID: child_resident

ROLE_DESCRIPTION: Has all permissions of a child resident

ENTITLEMENTS ASSOCIATED:

- Control Window
- Control Door

This is the list of users defined in the script. It shows the users info, hashed credential, all entitlements and resource role associated with the user.

Note: admin user resource role by default is has universal power.

Note: the shown hashed credential is only for grading purpose, indicating hashing is used successfully.

*****User List*****

ID: debra
NAME: Debra Smart
CREDENTIAL TYPE: password
CREDENTIAL VALUE:
vSsar3708Jvp9Szi2NWZZ02Bqp1qRCFpbCTZPdBhnWgs5WtNZKncXdhztmeD2cmW192CF5bDuf
KRpayrW/isg==
RESOURCE ROLE:
ENTITLEMENTS ASSOCIATED:
Control Oven
Control Window
User Administrator
Control Thermostat
Control Door
Control light

ID: jimmy
NAME: Jimmy
CREDENTIAL TYPE: voice_print
CREDENTIAL VALUE:
Hmq1a76sF40eSUTG2hkniC2VNgk99GulQmhHgSo+4MyHE94hvvZA9dvCmszMww0guNBU5Rui
DWR9/KUq8eFKw==
RESOURCE ROLE:
house1_child_resident
ENTITLEMENTS ASSOCIATED:
Control Window
Control Door

ID: sam
NAME: Sam
CREDENTIAL TYPE: voice_print
CREDENTIAL VALUE:
NUus1OFuDq3p1ZjNRQe9yNFQVCKL3LiHxNjXN6V2uXX/XIBXPNBQ53T8EUo1hyox1ly2oauqidrx9
BnMt97Bnw==
RESOURCE ROLE:
house1_adult_resident
ENTITLEMENTS ASSOCIATED:

Control Oven
Control Window
Control Thermostat
Control Door
Control light

This is the result by running house setup after the above rules defined

In the housesetup Debra (admin) jimmy(child) sam(adult) execute the same set of commands

If access denied, an exception message is shown demonstrate the line number and the reason.

If user want to change what the child or adult access it can be done by changing the authData script.

debra logged in successfully

The temperature of the oven is now 150 *(debra is the admin, no exception showed)*

(jimmy is the child, can not use define command, can use limited set appliance command)

jimmy logged in successfully

Exception #20 line:

AccessDeniedException: need user_admin role to access define house

Exception #21 line:

AccessDeniedException: need user_admin role to access define room

Exception #22 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #23 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #24 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #25 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #26 line:

AccessDeniedException: need user_admin role to access define sensor

Exception #27 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #28 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #30 line: AuthenticationException: no control_light access

Exception #31 line: AuthenticationException: no control_thermostat access

Exception #32 line: AuthenticationException: no control_oven access

Exception #33 line: AuthenticationException: no control_oven access

The temperature of the oven is now 150

(here jimmy has the show oven command access)

(sam is adult, no access to define command, has access to most of the set appliance command)

sam logged in successfully

Exception #38 line:

AccessDeniedException: need user_admin role to access define house

Exception #39 line:

AccessDeniedException: need user_admin role to access define room

Exception #40 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #41 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #42 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #43 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #44 line:

AccessDeniedException: need user_admin role to access define sensor

Exception #45 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #46 line:

AccessDeniedException: need user_admin role to access define appliance

(here no set appliance exception because as an adult sam has access to use them)

The temperature of the oven is now 150

(here sam has the show oven command access)