Deny Wireless Client Session Establishment Using Calendar Profiles

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Information About Denial of Wireless Client Session Establishment

Denial of client session establishment feature allows the controller to stop client session establishment based on a particular time. This helps control the network in efficient and controlled manner without any manual intervention.

In Embedded Wireless Controller, you can deny the wireless client session based on the following recurrences:

- Daily
- Weekly
- Monthly

The Calendar Profiles created are then mapped to the policy profile. By attaching the calendar profile to a policy profile, you will be able to create different recurrences for the policy profile using different policy tag.

Note You need to create separate Calendar Profile for Daily, Weekly, and Monthly sub-categories.

The following is the workflow for denial of wireless client session establishment feature:

- Create a calendar profile.
- Apply the calendar profile to a policy profile.

Note A maximum of 100 calendar profile configuration and 5 calendar profile association to policy profile is supported.

Points to Remember

If you boot up your controller, the denial of client session establishment feature kicks in after a minute from the system boot up.

If you change the system time after the calendar profile is associated to a policy profile, you can expect a maximum of 30 second delay to adapt to the new clock timings.

Note You cannot use the **no action deny-client** command to disable action while associating the calendar profile to a policy profile.

If you want to disable the action command, you need to disassociate the calendar profile from the policy profile, and re-configure again.

Configuring Daily Calendar Profile

Procedure

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 2	**wireless profile calendar-profile name** *name* **Example:** `Device(config)# wireless profile calendar-profile name daily_calendar_profile`	Configures a calendar profile. Here, *name* refers to the name of the calendar profile.
Step 3	**start** *start_time* **end** *end_time* **Example:**	Configures start and end time for the calendar profile.

	Command or Action	Purpose
	`Device(config-calendar-profile)# start 09:00:00 end 17:00:00`	Here, *start_time* is the start time for the calendar profile. You need to enter start time in **HH:MM:SS** format. *end_time* is the end time for the calendar profile. You need to enter end time in **HH:MM:SS** format.
Step 4	**recurrence daily** **Example:** `Device(config-calendar-profile)# recurrence daily`	Configures daily recurrences for a calendar profile.
Step 5	**end** **Example:** `Device(config-calendar-profile)# end`	Returns to privileged EXEC mode. Alternatively, you can also press **Ctrl-Z** to exit global configuration mode. **Note** When the calendar profile kicks in, the AP power profile rules (for example, radio state and USB device state) that are defined for the Ethernet speed are not applied and continue to be as per the fixed power profile.

Configuring Weekly Calendar Profile

Procedure

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 2	**wireless profile calendar-profile name** *name* **Example:** `Device(config)# wireless profile calendar-profile name weekly_calendar_profile`	Configures a calendar profile. Here, *name* refers to the name of the calendar profile.
Step 3	**start** *start_time* **end** *end_time* **Example:** `Device(config-calendar-profile)# start 18:00:00 end 19:00:00`	Configures start and end time for the calendar profile. Here,

	Command or Action	Purpose
		start_time is the start time for the calendar profile. You need to enter start time in **HH:MM:SS** format. *end_time* is the end time for the calendar profile. You need to enter end time in **HH:MM:SS** format.
Step 4	**recurrence weekly** **Example:** `Device(config-calendar-profile)# recurrence weekly`	Configures weekly recurrences for the calendar profile.

Step 5	**day** {**friday** | **monday** | **saturday** | **sunday** | **thursday** | **tuesday** | **wednesday**}
	Example:
	`Device(config-calendar-profile)# day friday`
	`Device(config-calendar-profile)# day monday`
		Configure days when the weekly calendar needs to be active.
		Note You can configure multiple days using this command.

Step 6	**end** **Example:** `Device(config-calendar-profile)# end`	Returns to privileged EXEC mode. Alternatively, you can also press **Ctrl-Z** to exit global configuration mode.

Configuring Monthly Calendar Profile

Procedure

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 2	**wireless profile calendar-profile name** *name* **Example:** `Device(config)# wireless profile calendar-profile name monthly_calendar_profile`	Configures a calendar profile. Here, *name* refers to the name of the calendar profile.
Step 3	**start** *start_time* **end** *end_time* **Example:** `Device(config-calendar-profile)# start 18:00:00 end 19:00:00`	Configures start and end time for the calendar profile. Here,

	Command or Action	Purpose
		start_time is the start time for the calendar profile. You need to enter start time in **HH:MM:SS** format. *end_time* is the end time for the calendar profile. You need to enter end time in **HH:MM:SS** format.
Step 4	**recurrence monthly** **Example:** `Device(config-calendar-profile)# recurrence monthly`	Configures monthly recurrences for the calendar profile.
Step 5	**date** *value* **Example:** `Device(config-calendar-profile)# date 25`	Configures a date for the calendar profile. **Note** If the requirement is to perform denial of service in certain timing, such as, 2,10, and 25 of every month, all three days need to be configured using the **date** command. There is no range for date. You need to configure the dates as per your requirement.
Step 6	**end** **Example:** `Device(config-calendar-profile)# end`	Returns to privileged EXEC mode. Alternatively, you can also press **Ctrl-Z** to exit global configuration mode.

Mapping a Daily Calendar Profile to a Policy Profile

Procedure

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 2	**wireless profile policy** *profile-name* **Example:** `Device(config)# wireless profile policy default-policy-profile`	Creates policy profile for the WLAN. The *profile-name* is the profile name of the policy profile.
Step 3	**calender-profile name** *calendar-profile-name* **Example:**	Maps a calendar profile to a policy profile. The *calendar-profile-name* is the name of the calendar profile name created in #unique_1182.

	Command or Action	Purpose
	`Device(config-wireless-policy)# calender-profile name daily_calendar_profile`	**Note** You need to disable Policy Profile before associating a calendar profile to a policy profile. The following needs to be done: `Device(config-wireless-policy)# shutdown`
Step 4	**action deny-client** **Example:** `Device(config-policy-profile-calender)# action deny-client`	Configures deny client session establishment during calendar profile interval. **Note** Client associations are denied daily between timeslot 9:00:00 to 17:00:00. For start and end time details, see #unique_1182.
Step 5	**end** **Example:** `Device(config-policy-profile-calender)# end`	Returns to privileged EXEC mode. Alternatively, you can also press **Ctrl-Z** to exit global configuration mode.

Mapping a Weekly Calendar Profile to a Policy Profile

Procedure

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 2	**wireless profile policy** *profile-name* **Example:** `Device(config)# wireless profile policy default-policy-profile`	Creates policy profile for the WLAN. The *profile-name* is the profile name of the policy profile.
Step 3	**calender-profile name** *calendar-profile-name* **Example:** `Device(config-wireless-policy)# calender-profile name weekly_calendar_profile`	Maps a calender profile to a policy profile. The *calendar-profile-name* is the name of the calendar profile name created in #unique_1184. **Note** You need to disable Policy Profile before associating a calendar profile to a policy profile. The following needs to be done: `Device(config-wireless-policy)# shutdown`

	Command or Action	Purpose
Step 4	**action deny-client** **Example:** `Device(config-policy-profile-calender)# action deny-client`	Configures deny client session establishment during calendar profile interval. **Note** Client associations are denied daily between timeslot 9:00:00 to 17:00:00. For start and end time details, see #unique_1184. On Monday and Tuesday, clients are denied between 17:30:00 and 19:00:00 besides regular time 9:00:00 to 17:00:00. On 25th of every month, clients are denied between 18:00:00 and 19:00:00 besides regular time 9:00:00 to 17:00:00.
Step 5	**end** **Example:** `Device(config-policy-profile-calender)# end`	Returns to privileged EXEC mode. Alternatively, you can also press **Ctrl-Z** to exit global configuration mode.

Mapping a Monthly Calendar Profile to a Policy Profile

Procedure

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 2	**wireless profile policy** *profile-name* **Example:** `Device(config)# wireless profile policy default-policy-profile`	Creates policy profile for the WLAN. The *profile-name* is the profile name of the policy profile.
Step 3	**calender-profile name** *calendar-profile-name* **Example:** `Device(config-wireless-policy)# calender-profile name monthly_calendar_profile`	Maps a calender profile to a policy profile. The *calendar-profile-name* is the name of the calendar profile name created in #unique_1186.
Step 4	**action deny-client** **Example:** `Device(config-policy-profile-calender)# action deny-client`	Configures deny client session establishment for the defined calendar profile interval. **Note**

	Command or Action	Purpose
		Every day client associations are denied between timeslot 9:00:00 to 17:00:00. For start and end time details, see #unique_1186. On Monday and Tuesday, clients are denied between 17:30:00 and 19:00:00 besides regular time 9:00:00 to 17:00:00. On 25th of every month, clients are denied between 18:00:00 and 19:00:00 besides regular time 9:00:00 to 17:00:00.
Step 5	**end** **Example:** `Device(config-policy-profile-calender)# end`	Returns to privileged EXEC mode. Alternatively, you can also press **Ctrl-Z** to exit global configuration mode.

Verifying Calendar Profile Configuration

To view the summary of calendar profiles, use the following command:

```
Device# show wireless profile calendar-profile summary
Number of Calendar Profiles: 3

Profile-Name
--------------------------------
monthly_25_profile
weekly_mon_profile
daily_calendar_profile
```

To view the calendar profile details for a specific profile name, use the following command:

```
Device# show wireless profile calendar-profile detailed daily_calendar_profile
Calendar profiles                          : daily_calendar_profile
-------------------------------------------------------------------
Recurrence                                 : DAILY
Start Time                                 : 09:00:00
End Time                                   : 17:00:00
```

Verifying Policy Profile Configuration

To view the detailed parameters for a specific policy profile, use the following command:

```
Device# show wireless profile policy detailed default-policy-profile
Tunnel Profile
  Profile Name                      : Not Configured
Calendar Profile
  Profile Name                      : monthly_25_profile
  Wlan Enable                       : Not Configured
  Client Block                      : Client Block Configured
  ------------------------------------------------
  Profile Name                      : weekly_mon_profile
```

```
  Wlan Enable                      : Not Configured
  Client Block                     : Client Block Configured
  ---------------------------------------------------
  Profile Name                     : daily_calendar_profile
  Wlan Enable                      : Not Configured
  Client Block                     : Client Block Configured
  ---------------------------------------------------
Fabric Profile
  Profile Name                     : Not Configured
```

To view the configured calendar profile information under policy profile, use the following command:

```
Device# show wireless profile policy all
Tunnel Profile
Profile Name : Not Configured
Calendar Profile
Profile Name : daily_calendar_profile
Wlan Enable : Not Configured
Client Block : Client Block Configured
---------------------------------------------------
Profile Name : weekly_calendar_profile
Wlan Enable : Not Configured
Client Block : Client Block Configured
---------------------------------------------------
Fabric Profile
Profile Name : Not Configured
```

Note The anchor priority is always displayed as local. Priorities can be assigned on the foreign controller.