



Manage your app in the background

KEEPING YOUR APP ALIVE WITH BACKGROUND TASKS



Background Tasks

- ▶ What are background tasks?
- ▶ Common uses
- ▶ Limitations
- ▶ Demo

What are background tasks?

- ▶ Lightweight classes that the operating system runs in the background on a separate process than your application
- ▶ Provide functionality when your application isn't running

Triggering background tasks

Trigger	Description	Lock Screen Required
ControlChannelTrigger	Enables real time notifications to be received.	Yes
DeviceUseTrigger	Access sensors and peripheral devices in the background.	No
DeviceServicingTrigger	Represents an event that an application can trigger to initiate a long-running update (firmware or settings) of a device.	No
LocationTrigger	Represents a location event that triggers a background task. This is used for Geofencing.	No
MaintenanceTrigger	Schedule a background task to run at a time interval (AC Only).	No
NetworkOperatorHotspotAuthenticationTrigger	Represents a mobile network operator hotspot authentication trigger.	No
NetworkOperatorNotificationTrigger	Represents a mobile network operator notification trigger.	No
PushNotificationTrigger	Represents an object that invokes a background work item on the app in response to the receipt of a raw notification.	Yes
SystemTrigger	Represents a system event that triggers a background task to run.	Yes*
TimeTrigger	Schedule a background task to run at a time interval.	Yes

System Event Trigger

Member	Lock Screen Required
SmsReceived	No
UserPresent	Yes
UserAway	Yes
NetworkStateChanged	No
ControlChannelReset	Yes
InternetAvailable	No
SessionConnected	Yes
ServicingComplete	No
LockScreenApplicationAdded	No
LockScreenApplicationRemoved	No
TimeZoneChanged	No
OnlineIdConnectedStateChange	No
BackgroundWorkCostChange	Yes

Common uses

- ▶ Live tile and badge updates
- ▶ Data synchronization
- ▶ Lock screen
- ▶ Push and toast notifications

Limitations

► CPU

	CPU Usage Quota	Refresh Time
Windows App not on lock screen	1 second	2 hours
Windows App on the lock screen	2 seconds	15 minutes

CPU usage is based on code execution. If a task is waiting for a server's response this time is not counted towards the quota.

► Network

Refresh Period	15 minutes	2 hours	Daily
Data Limit (lock screen)	0.469 MB	n/a	45 MB
Data Limit	n/a	0.625 MB	7.5 MB

Note: network limitations are lifted when the device is on AC power.

Limitations

- ▶ Lack of advanced inter-process communications
 - ▶ Background Task Events
 - ▶ Completed
 - ▶ Progress
 - ▶ Local storage
 - ▶ Database
- ▶ Connected Standby
 - ▶ PCs that implement the connected standby power model run at very low power levels, but stay connected and up-to-date, even when they appear to the user to be turned off.

Demo

- ▶ Background Task Project
- ▶ Registering background tasks
- ▶ Maintenance Task
- ▶ Timer Task
- ▶ Update badge
- ▶ Send toast notification
- ▶ Monitor background downloads from foreground application



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