

## Event Notifications

### Overview

You can use Device Management Notifications to receive webhooks and e-mail notifications regarding specific events, such as when a new payment device is boarded, activated or deleted or any other status update regarding a device. This feature allows you to get status updates on certain events/actions you subscribe to, which are then posted to the hosted web endpoint of your choice.

### Events

Events are the topics a notification would be 'listening' to. The notifications will be triggered as soon as there is an event happening for one of the selected topics.

Event Type	Description	Details
EstateDeviceStatusUpdated	Status of Device is Changed	Any change in the status of the device.  See more details in the <a href="#">Device Status</a> section.
EstateDeviceDeleted	Device is Deleted	The Device is deleted temporarily (SOFT) or permanently (HARD).  In the case of a SOFT deletion, the device is no longer displayed in Device Management. The data can be retrieved by undeleting the device.
EstateDeviceSwapped	Device is Swapped	An existing device at the merchant is swapped with a new device.
EstateDeviceActivated	New Device is Activated	A new device is registered and is actively managed on the Device Management System (DMS).
EstateDeviceBoarded	New Device is Boarded	A new device is configured on the DMS.  <b>Note:</b> The physical device is not yet registered with DMS.

Event Type	Description	Details
EstateDevicePaired	Device is Paired	<p>A new device with a specified Serial Number is paired with a device configured on DMS.</p> <ol style="list-style-type: none"> <li>1. The new device is configured on DMS identified by Device Id. The Device Id is a logical identifier of a device, i.e., associated with the merchant.</li> <li>2. Once the physical device arrives at the merchant store, as part of the initial setup, the merchant/operator specifies the Device Id assigned to the merchant and initiates the registration of the Device with DMS.</li> <li>3. The Device registers with DMS.</li> <li>4. The physical device identified using a Serial Number is paired with Device configured on DMS.</li> </ol>
EstateDeviceParametersUpdated	Device Parameters are Updated	<p>Parameters of the device are changed.</p> <p>Parameters could be added, updated or deleted on the GUI portal, using APIs or updated on the physical device.</p>

Event Type	Description	Details
EstateDeviceRebooted	Device has Rebooted	<p>The Device has rebooted.</p> <p><i>rebootType</i> indicates the reason/source initiating the reboot:</p> <ul style="list-style-type: none"> <li>• PCI - Device is rebooted automatically by the system as part of PCI compliance.</li> <li>• AGENT - Device is rebooted by the DMS Agent.</li> <li>• SYSTEM - Device is rebooted automatically by the Operating system.</li> </ul>
EstateDeviceTampered	Device is Tampered	<p>The security of the Device is compromised. This could be a physical tamper (someone trying to open the case) or a soft tamper (invalid security keys or temperature out of normal range).</p>
EMVVersionMismatch	EMV Version Mismatch	<p>The EMV Version of Payment device and PINpad do not match</p>
EstateDeviceHierarchyUpdated	Device Hierarchy is Changed	<p>The Device is moved to a different Hierarchy</p>
EstateDeviceGroupUpdated	Device Group is Changed	<p>The Device is added or moved to one or more groups.</p> <p>The Device is removed from one or more groups.</p>

Event Type	Description	Details
SoftwareVersionUpdated	New software version is available or An existing software version is not available anymore	A new software package is uploaded to DMS and is available for use. or An existing software package is deleted.
HierarchyUpdated	New hierarchy is added	A new hierarchy is added.
GroupDeleted	Device Group is deleted	The Device Group is deleted.
EstateDeletedDeviceContacting	Deleted Device is trying to communicate with DMS	Devices deleted from DMS are marked as Deleted.  Such devices are expected to be out of service and no longer in use for any transactions. Any communication from deleted devices indicates potential malicious activity.
EstateDeviceMissing	Device missing	The Device has not communicated with the DMS for quite some time ( > 2 times heartbeat interval).  E.g., The Device is expected to send heartbeats to the server once every 15 mins and device hasn't sent any communication in last 30 minutes.
EstateDeviceUpdated	Device updated	One or more of the device attributes have been changed: <ul style="list-style-type: none"> <li>• Device IP Address</li> <li>• Location</li> </ul>

## Events Specifications

Every event payload contains the following:

<https://verifone.cloud/docs/device-management/device-management-user-guide/devices/event-notifications>

Updated: 19-Feb-2024

- A set of standard attributes that are common across all events
- A set of attributes specific to the event that has occurred - part of the 'content' section

## Standard attributes

Attribute	Description
eventId	Unique identifier of the event, used for audit and logging purposes.
eventDateTime	The date and time when the event occurred, usually set at local time.
itemId	Unique identifier of the object that the event is related to. <b>Note:</b> This may be a JSON object if the item has a composite key. If the item has a single key, then the key should be used directly.
entityUid	Unique identifier of the entity for which event is generated. Assigned by Verifone.
eoEntityUid	Unique identifier of the owner/customer/merchant of the event. Assigned internally by the merchant.
source	Name of the source application sending the event
component	The source component sending the event
received	Date and time (per UTC time zone) when the event notification sent by the device was received by the server. This is only set when the event is received and is not provided by the merchant.
eventType	String naming the type of the event
objectType	DeviceEvent or StandardEvent
content	The associated event data. Optional and varies according to event type.

Attribute	Description
userId	Unique identifier of the user that triggered this event (if applicable) Needed only if it is relevant.
deviceType	Device model
estateManagementId	Terminal device ID
serialNumber	Device serial number
estateManagementHierarchyId	The Hierarchy ID of the terminal in the device management system

## Event Parameters and Sample Payloads

Event	Parameter	Type	Description	Sample payload
Status of Device is Changed	newStatus	String	New status of the device	<pre> {   "content": {     "newStatus":     "Active",     "oldStatus":     "Inactive"   },   "eventType":   "EstateDevicesS tatusUpdated",   "objectType":   "DeviceEvent" } </pre>
	oldStatus	String	Old status of the device	

Event	Parameter	Type	Description	Sample payload
Device Is Deleted	Type	String	Indicates the mode of device deletion: <ul style="list-style-type: none"> <li>• SOFT - Soft deleted</li> <li>• HARD - Permanently deleted</li> </ul>	<pre> {   "content": {     "type": "SOFT"   },   "certificates": [     {       "certificate": "-----BEGIN CERTIFICATE-----\nMIIECjCCAvKgAwIBAg+O0a7ha0HtNAoRS0GTNLsi ck982I\n-----END CERTIFICATE-----\n"     },     {       "certificate": "-----BEGIN CERTIFICATE-----\nMIIECjCCAvKgAwIBAg+O0a7ha0HtNAoRS0GTNLsi ck982I\n-----END CERTIFICATE-----\n"     }   ],   "eventType": "EstateDeviceDeleted",   "objectType": "DeviceEvent" } </pre>

Event	Parameter	Type	Description	Sample payload
Device is Swapped	newDeviceModel	String	Device model name of the new device	<pre> {   "content":   {     "oldSerialNumber": "123-459-789",     "oldDeviceModel": "CM5P",     "newSerialNumber": "111-111-111",     "newDeviceModel": "CM5P"   },   "eventType": "EstateDeviceswapped",   "objectType": "DeviceEvent" } </pre>
	newSerialNumber		Serial number of the new device	
	oldDeviceModel		Device model name of the device being replaced	
	oldSerialNumber		Serial number of the device being replaced	



Event	Parameter	Type	Description	Sample payload
New Device is Activated	hierarchy	String	Hierarchy path of the device	<pre> {   "content":   {     "hierarchy":     "Root &gt;&gt;     Region &gt;&gt; City     &gt;&gt; Store",     "newStatus":     "Active",     "oldStatus":     "PendingRegist     ration"     },     "eventType":     "EstateDeviceA     ctivated",     "objectType":     "DeviceEvent"   } </pre>
	newStatus		New status of device	
	oldStatus		Old status of device	
New Device is boarded	hierarchy	String	Hierarchy path of the device	<pre> {   "content":   {     "hierarchy":     "Root &gt;&gt;     Region &gt;&gt; City     &gt;&gt; Store "     },     "eventType": "     EstateDeviceBo     arded",     "objectType":     "DeviceEvent"   } </pre>

Event	Parameter	Type	Description	Sample payload
Device is paired	serialNumber	String	Serial number of the device	<pre> {   "content":   {     "serialNumber"     : "111-111-111",     "deviceId":     "111-111-111"     ,     "deviceModel":     "CM5P"     },     "eventType":     "EstateDeviceP aired",     "objectType":     "DeviceEvent"   } </pre>
	deviceId		Device ID of the device	
	deviceModel		Model name of the device	

Event	Parameter	Type	Description	Sample payload
Device Parameters are updated	applicationName	String	Application name	<pre> {   "content":   {     "applicationVersion":     "5.330.40",     "applicationName":     "com.android.settings",     "parameters":     {       "value": {         "Main": [           {             "tip": "false"           }         ]       },       "operation":       "update"     },     "eventType":     "EstateDeviceParametersUpdated",     "objectType":     "DeviceEvent"   } </pre>
	applicationVersion		Version of the application	
	parameters		Modified parameters of the application.  For more details refer to the <a href="#">Device parameters updated sample payload</a> section.	

Event	Parameter	Type	Description	Sample payload
Device has rebooted	rebootType	String	<p>Possible values:</p> <ul style="list-style-type: none"> <li>• PCI - Device is rebooted automatically by the system as part of PCI compliance.</li> <li>• AGENT - Device is rebooted by the DMS Agent.</li> <li>• SYSTEM - Device is rebooted automatically by the Operating system</li> </ul>	<pre>{   "content":   {"rebootType":   "SYSTEM"},   "eventType":   "EstateDeviceR   ebooted",   "objectType":   "DeviceEvent" }</pre>
Device is tampered	N/A	N/A	N/A	<pre>{   "content":   null,   "eventType":   "EstateDeviceT   ampered",   "objectType":   "DeviceEvent" }</pre>

Event	Parameter	Type	Description	Sample payload
EMV Version mismatch	N/A	N/A	N/A	<pre data-bbox="1247 466 1507 781"> {   "content":   null,   "eventType":   "EMVVersionMis   match",   "objectType":   "DeviceEvent" }</pre>
Device Hierarchy is changed	N/A	N/A	N/A	<pre data-bbox="1247 947 1507 1262"> {   "content":   null,   "eventType":   "EstateDeviceH   ierarchyUpdate   d",   "objectType":   "DeviceEvent" }</pre>

Event	Parameter	Type	Description	Sample payload
Device Group is changed	groupid	String	Comma separated list of all the Group IDs that the Device belongs to after the change.	<pre data-bbox="1247 470 1510 865"> {   "content":   {     "groupId":     "10,11"   },   "eventType":   "EstateDeviceG roupUpdated",   "objectType":   "DeviceEvent" } </pre>

Event	Parameter	Type	Description	Sample payload
New software version available  Or  An existing software version no more available	applicationName	String	Name of the package	<pre> {   "content":   {     "version":     "3.2.16-653",     "deviceModel":     "",     "softwareType":     "EngageAgent"     ,     "status":     "Updated",     "osType":     "VOS2",     "applicationName": ""     },     "eventType":     "SoftwareVersionUpdated",     "objectType":     "StandardEvent"   } </pre>
	version		Package version	
	deviceModel		Comma separated list of device models compatible with the Package.	
	softwareType		Software type of the package, e.g.: Android, Engage, etc.	
	status		status = Updated - a new package is added  status = Deleted - an existing package is removed.	
	osType		Package OS type, e.g., VX, VOS, VOS2, VOS3.	

Event	Parameter	Type	Description	Sample payload
New hierarchy is added	parentHierarchyId	String	Parent Hierarchy Id of the hierarchy	<pre> {   "content":   {     "parentHierarchyId": "6465"   },   "hierarchyId": "6466" }, "eventType": "HierarchyUpdated", "objectType": "StandardEvent" } </pre>
	hierarchyId		Hierarchy Id of the newly added hierarchy	
Device Group is deleted	groupId	String	Group Id of the deleted Group	<pre> {   "content":   {     "groupId": "10"   }, "eventType": "GroupDeleted", "objectType": "StandardEvent" } </pre>



Event	Parameter	Type	Description	Sample payload
Deleted Device is trying to communicate with DMS	N/A	N/A	N/A	<pre data-bbox="1247 470 1507 802"> {   "content":   null,   "eventType":   "EstateDeleted   DeviceContacting",   "objectType":   "DeviceEvent" } </pre>
Device missing	N/A	N/A	N/A	<pre data-bbox="1247 942 1507 1274"> {   "content":   null,   "eventType":   "EstateDeviceM   issing",   "objectType":   "DeviceEvent" } </pre>

Event	Parameter	Type	Description	Sample payload
Device updated	delta	Object	<p>IP Address Change:</p> <p>It's an object that has details of IP Address.</p> <p>Location Change:</p> <p>It's an object that has details of location.</p>	<pre> {   "content": {     "delta": {       "ipAddress": {         "old":           "xx.xx.xx.xx"         "new":           "yy.yy.yy.yy"       },       "location": {         "old": "North Kennedy Blvd",         "new": "East Kennedy Blvd"       }     },     "eventType":       "EstateDeviceU pdated",     "objectType":       "DeviceEvent"   } } </pre>

## How to register for webhook events

To receive notifications on device management related events via webhooks, follow these steps:

1. Log a support ticket with Verifone support with these details:
  1. Organization name
  2. List of Events
  3. HTTPS Web endpoint URL to receive the notifications
    1. Authorization headers to be included (if any)
2. Verifone support will help you with the setup.
3. You will receive the webhook events at the URL of the Web endpoint.
4. You can verify the authenticity and integrity of the webhook event. For more details, read more on the [Notifications](#) documentation.

## References

### Device Status

This section is relevant to Status of Device is Changed event, listing the possible values of newStatus and oldStatus attributes.

The device status can have the following values:

- **Pending Registration:** Indicates the device was not registered with the server. When the devices are pre-boarded, by default, the devices are placed in Pending Registration
- **Pending Hierarchy Assignment:** Indicates the device is not successfully assigned to hierarchy after the registration. When the device is attached to the incorrect hierarchy or the hierarchy was not assigned during the key exchange process, the device can still be active but will be placed in Pending Hierarchy Assignment status.
- **Active:** Indicates the device was successfully registered and assigned to hierarchy and can be used. The device will be in active status once the key exchange is performed successfully.
- **Inactive:** Indicates a disabled device. The device is physically present in the system but is not in an active mode.
- **Deleted Devices:** Indicates the device was (soft) deleted. On undeleting, the device will be placed into its previous status. Note: Permanently deleted devices cannot be undeleted.

### Device parameters updated sample payload

The following logical operations can be used to add, update or delete parameters:

- **parameters > Operation = add** - indicates that parameters are added. Value indicates the set of newly added parameters.
- **parameters > Operation = update** - indicates that parameters are updated. Value indicates the set of updated parameters.
- **parameters > Operation = delete** - indicates that parameters are deleted. Value indicates the set of deleted parameters.

```
{
  "CONTENT": {
    "applicationName": "com.verifone.settings",
    "applicationVersion": "1.0",
    "parameters": [
      {
        "operation": "add",
        "value": {
          "Merchant": [
            {
              "MerchantId": "1",
              "MerchantSurcharge": [
                {
                  "MaxSurchargeableAmount": "0",
                  "SurchargeValue": "0",
                  "MaxSurchargeAdjAmount": "0",
                  "SurchargeValueInternational": "0"
                }
              ]
            }
          ]
        }
      }
    ]
  }
}
```

```
{
  {
    "operation": "update",
    "value": {
      "Terminal": [
        {
          "ChipMaxTriesBeforeFallback": "3",
          "MsrMaxTriesBeforeFallback": "3",
          "SAFEEnabled": "1",
          "SettlementContinueOnSAFQueueFlushFailure": "0",
          "EnvCtlsTerm": [
            {
              "TerminalType_9F35": "",
              "ToneVolume_DF62": ""
            }
          ]
        }
      ]
    },
    "operation": "delete",
    "value": {
      "Acquirer": [
        {
          "AcquirerId": "1"
        },
        {
          "AcquirerId": "2"
        }
      ]
    }
  }
}
```