Honeywell

eSIM Bulk Provisioning

User Guide

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To search our knowledge base for a solution or to log in to the Technical Support portal and report a problem, go to honeywell.com/PSStechnicalsupport.

CHAPTER

1 INTRODUCTION

About eSIM Provisioning

Honeywell mobile devices use either a nano-SIM card or embedded SIM (eSIM) to activate the phone and connect to a mobile network. To connect to a mobile network using embedded SIM, the eSIM must be provisioned by downloading and enabling an operational profile. The eSIMOperation task in Enterprise Provisioner can be used to support bulk provisioning of eSIMs.

Requirements

Devices must meet the following requirements to allow eSIM provisioning using Enterprise Provisioner. Additionally, some information will be required from the Mobile Network Operator for eSIM activation.

Device Requirements

The eSIM Provisioning function is supported for the following Honeywell Mobility Edge devices.

- CT30 XP, CT45 XP (HON4290): Android 11 and higher
- CT47 (HON6490): Android 12 and higher

Activation Codes

Adding a profile to an eSIM requires the cooperation of the Mobile Network Operator (MNO) the customer has selected to provide mobile data service for their devices.

The MNO must provide the eSIM activation codes, which include the activation URL. Depending on the MNO, this could be provided as:

- An activation code for each device
- A single activation code for all devices
- A method to register the devices in SMDS in the back end. The customer needs to share the EID/IMEI of the device to the MNO for this option.

Depending on the activation method, the customer will need to provide device identifier information to the MNO such as:

- Device serial number
- Device IMEI
- eSIM EID

These device identifiers can be obtained from SAP.

Depending on the MNO, a flat file containing activation codes may be returned. The flat file returned may vary in format and content based on the MNO; however, Enterprise Provisioner expects the flat file to follow a Honeywell specified format. If you are working with an MNO that provides a flat file, contact engineering for assistance converting the MNO provided file to the format Provisioner expects.

Download Software

Enterprise Provisioner can be downloaded from the Software Downloads portal. You will need to create a login account for portal access.

Note: *Customers using Honeywell Operational Intelligence can access Enterprise Provisioner within Op Intel without installing a local version.*

1. Go to honeywell.com/PSSsoftware-downloads.
2. Create a login account if you have not already created one.
3. Install the Honeywell Download Manager tool. See “Note” on the portal page. This tool is required for downloads.
4. Locate the software in the Software directory. Enterprise Provisioner can be obtained under **Software > Software and Tools > Device Management > Enterprise Provisioner**.
5. If prompted, enter additional information, and click **Submit**.
6. Select **Download**. Follow the prompts to download the file.

Create XML

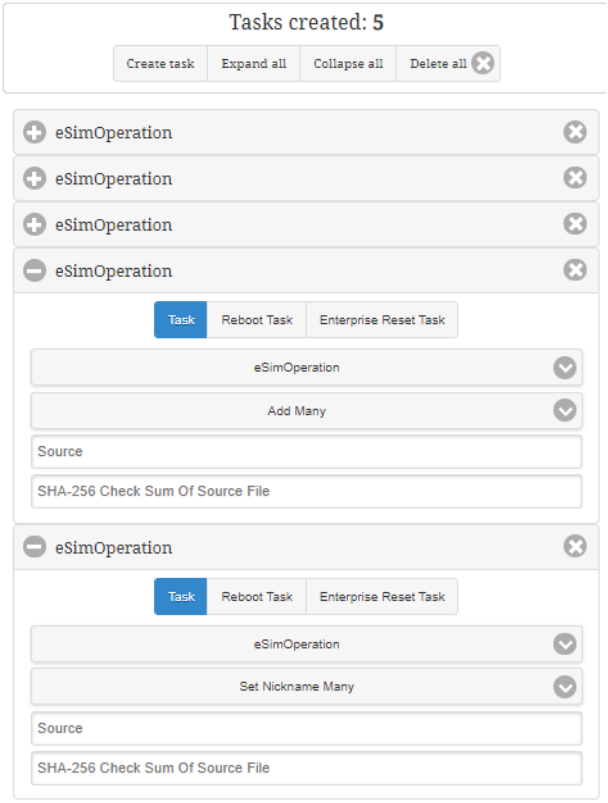
Use Enterprise Provisioner to create a set of tasks that will be used to provision the eSIM card. Enterprise Provisioner creates a file called Provision.xml that can be pushed to mobile devices.

Refer to the user guide included with Enterprise Provisioner for more information on working with tasks.

To create an XML file:

1. Launch Enterprise Provisioner.
2. Select the **Provisioning** tab.
3. Click the **Create task** button.
4. From the drop-down list, select **eSimOperation**.
5. Select a task from the drop-down list and enter any required information. See eSIM Operations for details on each task.
6. Repeat steps 3-5 for each required task. The tasks created will depend on your specific use case.
   For example, you might create tasks in this order:
   - Is eSIM Active - Check if eSIM is active on the device.
   - Set eSIM Active - Set the eSIM to active on the device if it is not.
   - Get EID - Get the EID of the device.
   - AddMany - Add the eSIM profile to many devices.
   - Set Nickname Many - Set the nickname for many devices.

   After creating all required tasks, Enterprise Provisioner will have a list like the following:



7. When you have created all required tasks, select **File > Export**.
8. Under Provisioning, select the **Tasks** check box.
9. Under Export Options, click **Export**.
10. Select the location for the Provisioner.xml file to be saved.
11. Click **Save**.

CHAPTER

2 ESIM PROVISIONING OPERATIONS

eSIM Operations

This section describes the operations that can be added to the eSIM Operations task in Enterprise Provisioner.

Is eSIM Active

Some Honeywell devices include multiple SIMs, and only one SIM can be active at a time.

Use this operation to check if the device's eSIM is the active SIM.

Note: *On Mobility Edge devices, the standard eSIM slot is SIM Slot 2.*

XML	<ConfigDoc name="Provisioner"> <Section name="Task"> <Key name="Action">eSimOperation</Key> <Key name="Operation">isEsimActive</Key> </Section> </ConfigDoc>
Output	Writes the state of the eSIM as an XML documeent to /sdcard/eSIM_STATE.xml
Sample	<?xml version="1.0" encoding="UTF-8"?> <eSim-State> <value>true</value> </eSim-State>

Set eSIM Active

Use this operation to make the eSIM the active SIM.

XML	<ConfigDoc name="Provisioner"> <Section name="Task"> <Key name="Action">eSimOperation</Key> <Key name="Operation">setEsimActive</Key> </Section> </ConfigDoc>
Output	The result of the operation is written as an XML document to /sdcard/ eSIM_RESULT.xml.
Sample	<eSim-RESULT> <operation>setEsimActive</operation> <result>true</result> <resultCode>0</resultCode> <detailedCode>0</detailedCode> <resultMessage></resultMessage> <timestamp>2022-11-02T15:05:29.334Z</timestamp> </eSim-RESULT>
Sample	<eSim-RESULT> <operation>setEsimActive</operation> <result>false</result> <resultCode>300</resultCode> <detailedCode>1</detailedCode> <resultMessage></resultMessage> <timestamp>2022-11-02T15:05:29.334Z</timestamp> </eSim-RESULT>

Get EID

Returns the eSIM's EID. To successfully retrieve the eSIM's EID, the eSIM must be active.

XML	<ConfigDoc name="Provisioner"> <Section name="Task"> <Key name="Action">eSimOperation</Key> <Key name="Operation">GetEID</Key> </Section> </ConfigDoc>
Output	Writes the state of the eSIM as an XML document to /sdcard/eSIM_EID.xml
Sample	<?xml version="1.0" encoding="UTF-8"?> <eSim-EID> <value>89033023425120000000002xxxxxxxxxx</value> </eSim-EID>

Sample	<?xml version="1.0" encoding="UTF-8"?> <eSim-EID> <value>Failed to get EID.</value> </eSim-EID>

List

Lists previously provisioned profiles. Writes the list as an XML document in internal storage.

XML	<ConfigDoc name="Provisioner"> <Section name="Task"> <Key name="Action">eSimOperation</Key> <Key name="Operation">List</Key> </Section> </ConfigDoc>
Output	Writes the list of previously provisioned eSIM profiles as XML to /sdcard/ eSIM_PROFILES.xml
Sample 1	<?xml version="1.0" encoding="UTF-8"?> <eSIMProfiles> <profile> <cardId>0</cardId> <subId>1</subId> <name></name> <nickName>FIRSTNET</nickName> <operator>Emergency calls only</operator> <mccmnc>313100</mccmnc> <isEnabled>false</isEnabled> </profile> <profile> <cardId>0</cardId> <subId>3</subId> <name></name> <nickName>Telekom.de</nickName> <operator>No service</operator> <mccmnc>26201</mccmnc> <mccmnc>true</mccmnc> </profile> </eSIMProfiles>

Sample 2	<eSim-RESULT> <operation>List</operation> <result>false</result> <resultCode>-1</resultCode> <detailedCode>-1</detailedCode> <resultMessage>No profiles found</resultMessage> <timestamp>2022-11-02T15:05:29.334Z</timestamp> </eSim-RESULT>

Add

Adds an eSIM profile to a single device.

XML	<ConfigDoc name="Provisioner"> <Section name="Task"> <Key name="Action">eSimOperation</Key> <Key name="Operation">Add</Key> <! -- Required --> <Key name="Operator URL">1$thales1-livelab.prod.ondemandconnectivity.com</Key> <! -- Required --> <Key name="Eid">89033023425120000000002xxxxxxxxxx</Key> <! -- Optional --> <Key name="MatchingId">'matching id'</Key> </Section> </ConfigDoc>
Output	The result of the operation is written as an XML document to /sdcard/eSIM_RESULT.xml.
Sample	<eSim-RESULT> <operation>Add</operation> <result>false</result> <resultCode>300</resultCode> <detailedCode>1</detailedCode> <resultMessage></resultMessage> <timestamp>2022-11-02T15:05:29.334Z</timestamp> </eSim-RESULT>

Add Many

A method for applying an eSIM profile to many devices. Use of this operation requires the MNO to provide mobile data service for the customer's devices as a flat file containing activation codes.

XML	<ConfigDoc name="Provisioner"> <Section name="Task"> <Key name="Action">eSimOperation</Key> <Key name="Operation">AddMany</Key> <Key name="Source">The path to the flat file in Honeywell format. Must be in a location accessible by the Provisioner</Key> <Key name="SHA256">SHA256 of file in the "Source" argument</Key> </Section> </ConfigDoc>
Output	The result of the operation is written as an XML document to /sdcard/ eSIM_RESULT.xml.
Sample	<eSim-RESULT> <operation>AddMany</operation> <result>true</result> <resultCode>0</resultCode> <detailedCode>0</detailedCode> <resultMessage></resultMessage> <timestamp>2022-11-02T15:05:29.334Z</timestamp> </eSim-RESULT>

Add SMDS

A method for applying an eSIM profile to many devices. Use of this operation requires the MNO to provide mobile data service to provision their eSIM profile management system directly. MNOs have asked for the EIDs of all the devices as the device identifier added to their eSIM profile management system. In this use case, the MNO does not provide a flat file.

XML	<ConfigDoc name="Provisioner"> <Section name="Task"> <Key name="Action">eSimOperation</Key> <Key name="Operation">Add_SMDS</Key> </Section> </ConfigDoc>
Output	The result of the operation is written as an XML document to /sdcard/ eSIM_RESULT.xml.

Sample	<eSim-RESULT> <operation>Add_SMDS</operation> <result>true</result> <resultCode>0</resultCode> <detailedCode>0</detailedCode> <resultMessage></resultMessage> <timestamp>2022-11-02T15:05:29.334Z</timestamp> </eSim-RESULT>

Switch

A method for enabling or switching to an existing profile. Distribute the XML to each device that requires an eSIM profile switch operation. Use the List operation to obtain the value to use for the "ProfileNickName" field. See the SetNickNameMany operation for a method to set the nickname of an eSIM profile for all devices to a single value.

XML	<ConfigDoc name="Provisioner"> <Section name="Task"> <Key name="Action">eSimOperation</Key> <Key name="Operation">Switch</Key> <! -The name of the profile to enable or switch to --> <Key name="ProfileNickName">Telecom_1</Key> </Section> </ConfigDoc>
Output	The result of the operation is written as an XML document to /sdcard/ eSIM_RESULT.xml.
Sample	<?xml version="1.0" encoding="UTF-8"?> <eSim-RESULT> <operation>Switch</operation> <result>true</result> <resultCode>0</resultCode> <detailedCode>0</detailedCode> <resultMessage></resultMessage> <timestamp>2022-11-02T15:05:29.334Z</timestamp> </eSim-RESULT>

Delete

A method for deleting an existing profile. Distribute the XML to each device that requires an eSIM profile delete operation. Use the List operation to obtain the value to use for the "ProfileNickName" field. See the SetNickNameMany operation for a method to set the nickname of an eSIM profile for all devices to a single value.

XML	<ConfigDoc name="Provisioner"> <Section name="Task"> <Key name="Action">eSimOperation</Key> <Key name="Operation">Delete</Key> <! -The name of the profile to delete --> <Key name="ProfileNickName">Telecom_1</Key> </Section> </ConfigDoc>
Output	The result of the operation is written as an XML document to /sdcard/ eSIM_RESULT.xml.
Sample	<?xml version="1.0" encoding="UTF-8"?> <eSim-RESULT> <operation>Delete</operation> <result>true</result> <resultCode>0</resultCode> <detailedCode>0</detailedCode> <resultMessage></resultMessage> <timestamp>2022-11-02T15:05:29.334Z</timestamp> </eSim-RESULT>

Disable

A method for disabling an existing profile. Distribute the XML to each device that requires an eSIM profile disable operation. Use the List operation to obtain the value to use for the "ProfileNickName" field. See the SetNickNameMany operation for a method to set the nickname of an eSIM profile for all devices to a single value. Use the Switch operation to enable a disabled eSIM profile.

XML	<ConfigDoc name="Provisioner"> <Section name="Task"> <Key name="Action">eSimOperation</Key> <Key name="Operation">Disable</Key> <! -The name of the profile to disable --> <Key name="ProfileNickName">Telecom_1</Key> </Section> </ConfigDoc>
Output	The result of the operation is written as an XML document to /sdcard/ eSIM_RESULT.xml.

Sample	<?xml version="1.0" encoding="UTF-8"?> <eSim-RESULT> <operation>Disable</operation> <result>true</result> <resultCode>0</resultCode> <detailedCode>0</detailedCode> <resultMessage></resultMessage> <timestamp>2022-11-02T15:05:29.334Z</timestamp> </eSim-RESULT>

Set Nickname

A method for changing the profile's nickname for a single device. Distribute the XML to each device that requires an eSIM profile disable operation. Use the List operation to obtain the value to use for the "ProfileNickName" field. See the SetNickNameMany operation for a method to set the nickname of an eSIM profile for all devices to a single value. Use the Switch operation to enable a disabled eSIM profile.

XML	<ConfigDoc name="Provisioner"> <Section name="Task"> <Key name="Action">eSimOperation</Key> <Key name="Operation">SetNickName</Key> <! -The name of the profile to change nickname --> <Key name="ProfileNickName">Telecom_1</Key> <Key name="NewProfileNickName">Updated nickname</Key> </Section> </ConfigDoc>
Output	The result of the operation is written as an XML document to /sdcard/ eSIM_RESULT.xml.
Sample	<?xml version="1.0" encoding="UTF-8"?> <eSim-RESULT> <operation>SetNickName</operation> <result>true</result> <resultCode>0</resultCode> <detailedCode>0</detailedCode> <resultMessage></resultMessage> <timestamp>2022-11-02T15:05:29.334Z</timestamp> </eSim-RESULT>

Set Nickname Many

A method to set the nickname of an eSIM profile for all devices to a single value. Distribute the XML to each device that requires an eSIM profile disable operation. Use the List operation to obtain the value to use for the "ProfileNickName" field. Use the Switch operation to enable a disabled eSIM profile.

XML	<ConfigDoc name="Provisioner"> <Section name="Task"> <Key name="Action">eSimOperation</Key> <Key name="Operation">SetNickNameMany</Key> <Key name="Source">The path to a flat file in containing a JSON array of the new nicknames. See the Sample entry for the format. Must be in a location accessible by the Provisioner</Key> <Key name="SHA256">SHA256 of file in the "Source" argument</Key> </Section> </ConfigDoc>
Sample Source File	{ "nickname_data": [{ "eid": "89033023425120000000002xxxxxxxxxx", "ProfileNickName": "Profile1", "NewProfileNickName": "Telecom" }, { "eid": "890330234251200000000xxxxxxxxxx", "ProfileNickName": "Profile1", "NewProfileNickName": "Telecom" }, { "eid": "89033023425120000000002xxxxxxxxxx", "ProfileNickName": " Profile1", "NewProfileNickName": "Telecom" }, { "eid": "89033023425120000000002xxxxxxxxxx", "ProfileNickName": "Profile1", "NewProfileNickName": "Telecom" }] }
Output	The result of the operation is written as an XML document to /sdcard/ eSIM_RESULT.xml.

Sample	<?xml version="1.0" encoding="UTF-8"?> <eSim-RESULT> <operation>SetNickNameMany</operation> <result>false</result> <resultCode>-1</resultCode> <detailedCode>-1</detailedCode> <resultMessage>SetNickNameMany returned incorrect action</resultMessage> <timestamp>2022-11-02T15:05:29.334Z</timestamp> </eSim-RESULT>

Troubleshooting

If an error occurs, an XML document with debugging details is written to /sdcard/eSIM_RESULT.xml. The logcat trace is also helpful in debugging errors.

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