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Abbreviations

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Introduction

GSMA Network Settings Exchange as defined in TS.36 is to be used to enable the efficient transfer of settings, for the automatic technical configuration of mobile devices, not sold through the MNO sales channels, to ensure that the device can provide the customer with the services being promoted and offered by the MNO.

GSMA Network Settings Exchange will contain settings from all mobile network operators (MNOs), including mobile virtual network operators (MVNOs) and provide them to all Original Equipment Manufacturers (OEMs) in order to allow for the appropriate customisation of their devices, through one database.

This document helps an MNO / MVNO user to register for an account and understand how to upload and share their settings with the OEMs.

Registration for an Enterprise Licence

MNOs and MVNOs who require an Enterprise Licence (rather than a Multi-affiliate Licence) must register in the GSMA IMEI Database to access the GSMA Network Settings Exchange service.

Follow the steps below to register for the network settings exchange account.

Note: If you already have an account with the IMEI Database, you will need to register separately to open a GSMA Network Settings Exchange service account.

To get started, enter the IMEI Database URL https://imeidb.gsma.com in your web browser and click through to the GSMA Network Settings Exchange product page or go directly to the GSMA Network Settings Exchange product home page.

Click the relevant MNO / MVNO “GET IN TOUCH” button.

(see below Fig 1: GSMA Network Setting Exchange product home page)
The GSMA Network Settings Exchange has been developed in collaboration with manufacturers and network operators around the world, through the GSMA Terminal Steering (TS) Group.

An industry first, this new service provides operators’ one location to distribute their latest network settings information to manufacturers around the world. This allows accurate configuration of non-provisioned / open market mobile devices to ensure they can support the customer with the services being promoted and offered by the MNO / MVNO from the first insertion of a SIM.

**Figure 1:** GSMA Network Settings Exchange Homepage
Fill in the contact form as displayed on Figure 2 and a member of the GSMA Client Relations Outreach team will contact you to discuss your requirements.
Enterprise Licence process

The GSMA will issue an invoice for the annual licence fee. Once payment is received, the GSMA helpdesk will send a link to register your organisation.

a. Once you select the link, the registration form will be displayed as shown below:

![Registration Form](image)

Figure 3: MNO/MVNO Organisation Registration form

b. Provide the mandatory details and submit the form.

c. If there are any errors with the information provided, the system will alert you and allow you to make revisions. Resolve any issues identified by the system and click submit.

d. Once the form is complete, click submit to complete the registration.

On successful completion of the registration, the main contact will receive a system generated e-mail acknowledgement.

Once the registration request is received, the helpdesk will activate your account. An organization ID will be generated, and your service account will be created. The organization ID along with the username and system generated password will be sent in an email to the main contact of the organisation. The username and the password should be used to login and access the service.
Multi-Affiliate Licence process

If you require a multi-affiliate license, fill in the contact form as displayed on Figure 2 and a member of the GSMA Client Relations Outreach team will contact you to discuss your requirements. PLEASE NOTE TO QUALIFY FOR A MULTI-AFFILIATE DISCOUNT THERE CAN ONLY ONE SINGLE CENTRAL PROCUREMENT AND BILLING ADDRESS. The main contact will be licensed to add settings for their affiliates rather than just for their own network.
Login

To login to the service you can navigate through the IMEI Database URL and through to the GSMA Network Settings Exchange product page or by entering the link below directly in your web browser

https://imeidb.gsma.com/nsx

The GSMA Network Settings Exchange homepage will be displayed as shown below

Figure 5: GSMA Network Settings Exchange homepage
Enter your username and password provided at the time of registration.

If the user ID and password does not match the details available in the database, the system will display an error 'Invalid Username / Password'.

On successful entry of user ID and password, the system will redirect to the Account Security Question page as shown in Figure below. You must give a correct security answer to login successfully into the system.

![Account Security Question](image)

**Figure 6: Account Security Question**

On successful authentication, the system will log in to the GSMA Network Settings Exchange and the dashboard will be displayed.
**Login for the first time**

On the first login after the registration, you will be prompted to change the system generated password provided at the time of registration as shown in Figure below.

The system will allow access to other functions only after successfully changing the password and setting Security Question & Answers.

![Figure 7: Change Password & Security Questions](image)

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Forgot Password

If the password is forgotten or lost, it can be retrieved by selecting the Forgot Password option from the login screen as shown in Figure 9. The user Id for the account is required to begin the password retrieval process.

1. Go to GSMA Network Settings Exchange homepage.
2. Click on Forgot Password link displayed below the login form.
3. The system would change the display to enter user ID.
4. Provide the username in the ‘User ID’ field
5. As an additional security, a Captcha text must be entered as shown in Figure 6.
6. Click ‘Send me reset instruction’.

Figure 8: Forgot Password
Once you submit the information, the system verifies the details and sends the reset password instructions to your registered email id. The message ‘Forgot Password request successful’ will be displayed as shown in Figure 11 below.

![Forgot Password request successful](image)

Figure 10: Forgot Password request success

On receiving the reset email, you can click on the reset link and change your password by following the instructions
Change Password

The user can also change the password anytime using the menu 'User Management > Change Password'. The screen below will be displayed

1. Enter the old password
2. Enter the new password
3. Enter the new password again in the Confirm Password field
4. Click Confirm.

The new password should follow the IMEI Database password rules mentioned on the password policy as shown in Figure 12 below.

![Change Password](image-url)

Figure 11: Change Password & Security Questions
On successful change of new password, the system will display a confirmation message as shown in Figure below.

![Password Change](image)

**Figure 12: Password Changed**

The password will be valid for a period of 60 days. After 60 days, the password will expire, and the user is required to change the password after login.
Dashboard

The processes described in this section can also be viewed by watching the Service Demo here.

Once you login to your account, you will see the dashboard as shown in figure below.

From the dashboard you can download the latest TS.32 settings file template) and the reference files of both TS.32 and TS.36

The dashboard also provides links to view the registered and unregistered OEMs and de-select them from receiving your settings file on upload.

Once you click on the link, the system will display list of OEMs as per the selected category as shown in the image below.

**Review OEM list**

This page lists all the OEMs that are currently registered to the Network Settings Exchange and the new OEMs registered in the IMEI Database who are prospects to gain access to Network Settings Exchange.

**Review unregistered OEM list**

This page lists all the OEMs that are currently registered to the IMEI database but not yet to the Network Settings Exchange.

By default, all OEMs who have access to Network Settings Exchange can view and download the settings uploaded by your organisation. You can restrict the availability of your settings file by providing the download privilege only to OEMs you select during the upload process (Refer section "MNO Upload settings form").

This page allows you to reject the OEMs who are currently registered and who may register to NSX so that they don’t appear in the list of the OEMs when you upload the settings.
The list of OEMs is shown in two pages

1. First page lists the OEMs registered in the NSX
2. Second page lists the OEMs from IMEI Database who are prospects to register to NSX

You can reject the OEMs one by one or by selecting multiple organisations and click Reject.

To list all OEMs in each page, click List All.

To find an organisation you can search by organisation name or by country
Upload Settings and share to OEMs

To upload settings, go to menu Settings Management and select ‘Upload Settings’

The form in Figure 15, as shown below, will be displayed.

Before uploading the settings ensure you have filled in the Settings file with the necessary setting details. In case you do not have the settings template, you can download the template from the link below:


The upload settings form will accept the settings file in the .xls or .xlsx format only

Provide the Mobile Country Code (MCC) and Mobile Network Code (MNC) supported by the settings. **Note, the MCC and MNC are listed based on the values provided during registration. These fields are mandatory to be filled when uploading the file.**

You can also provide other identifiers for the file, the Service Provider Name, Group Identifier Level_1 (GID_1), International Mobile Subscriber Identity (IMSI) MSIN Start, International Mobile Subscriber Identity (IMSI) MSIN Stop, Integrated Circuit Card Identifier (ICCID). These are optional fields.

To add multiple identifiers for the file, click the + sign after adding an identifier.

Select the file from your system and click upload. In case of any validation issues, the system will display the error message. Please correct the information and upload the file again.

![Image of MNO Upload Settings Form](image.png)

**You can download the latest settings file template by clicking the link here**

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**Figure 14: MNO Upload Settings Form ➔ Upload Form**

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Once successfully uploaded, you can select the OEMs to whom the settings file can be shared. By default, all OEMs approved by you can receive the file, however, you can uncheck any OEM to whom you do not want to share the settings. Similarly, you can also select any OEM from the rejected list to receive the settings file.

![MNO Upload Settings Form](image)

Figure 15: MNO Upload Settings Form → OEM Access

After making the selections, you can submit the form. The settings are not uploaded to the GSMA Network Settings Exchange immediately. Rather the settings file is saved and queued for processing. You will see the success message as below

![Success Message](image)

Figure 16a: MNO Upload Settings Form → Success Message
You will be receiving an email acknowledging the file was uploaded to the GSMA Network Settings Exchange platform and that you will be receiving another email once the file process is complete. The format of the email is given below:

**Subject:** GSMA Network Settings Exchange – New File uploaded

Miss Joanna Fernandez,

This is to acknowledge the file **TS.32v3_upc at international.XLSX** has been received in the GSMA Network Settings Exchange.

The processing of the file is in progress and will be completed within a maximum of 24 hours. You will be notified through email once the file processing is complete.

Once the processing is successful, the approved OEMs will be notified of the new file.

For any clarifications please reach imeihelpdesk@gsma.com

Regards

GSMA IMEI Database Helpdesk

For and on behalf of GSMA Network Settings Exchange.

---

**Figure 16b: MNO Upload Settings Form → Email on file upload**
Settings File Processing

The GSMA Network Settings Exchange platform picks up the setting files uploaded and queued for processing. The system will parse the settings file for valid information and also capture each setting data to the database. This will allow the MNO to later edit the settings data using the ‘Edit Settings’ menu online rather than upload the file again for minor settings data updates.

Once all the setting data is successfully uploaded to the GSMA Network Settings Exchange platform, an email notification is sent to all OEMs approved to receive your data.

In case of any incorrect information or missing information, the system will reject the file and an email will be sent to the user with the reason for rejection. The email will contain an attachment of log file which lists the settings that failed along with the reason for failure. This should help you to correct the data and re-upload the file.

The processing of the file should be complete within a couple of hours, however, sometimes it may take up to 24 hours in case there are a more setting files uploaded by different operators. The format of the email when the file process is successful is shown below.

Subject: GSMA Network Settings Exchange – New File Processed Successfully

Content:

Miss Joanna Fernandez,

This is to acknowledge the file TS.32v3_upc at international.XLSX uploaded on 12 Dec 2019 has been processed successfully in the GSMA Network Settings Exchange.

The OEMs are then notified of the new file via the automated email service.

You can download a report of who accessed your settings using the below menu, after logging to GSMA Network Settings Exchange Settings Management --> File Download Report

For any clarifications please reach the Regards,
GSMA IMEI Database Helpdesk

For and on behalf of GSMA Network Settings Exchange

Note: This is a system generated email.

Figure 17.1 – Email to MNO on successful file processing
Below is the format of the email received when the file process failed due to some invalid data or file format.

**Subject:** GSMA Network Settings Exchange – Settings File Error

Miss Joanna Fernandez,

This is to let you know the settings file TS.32v3_upc at international.XLSX uploaded on 10 Dec 2019 had failed to process in the GSMA Network Settings Exchange.

The reasons for the reject are attached as a log file for your reference.

Refer the TS.32 v5 for instructions on valid data to be provided.

Please correct the data in the file and upload it again. The file is not yet shared with the selected OEMs.

For any clarifications please reach imeihelpdesk@gsma.com

Kind Regards,

GSMA IMEI Database Helpdesk - Network Settings Exchange.

*Note: This is a system generated email.*

Figure 17.2 – Email to MNO on failed file processing
View Uploaded File

You can view the status of the uploaded file via Settings Management -> View Uploaded Settings. The status will be indicated in orange where the file is still under processing. The indicator will change green once the file is successfully processed. File are not viewable until the case file failed as been validated and rejected. See image below. The list will display the files uploaded by you or any other contacts from your organisation. Click the ‘Selected OEMs’ icon to view the list of OEMs who were selected to receive the file.

You can also view the uploaded files of group companies. However, you will not be able to Delete or Edit files uploaded by group companies.

Similarly, you cannot perform any action on the file that is still in processing.

![List of Uploaded Files](image)

Figure 18: List of Uploaded Files

Delete Uploaded File

You can remove the file from the Network Settings Exchange platform by clicking the ‘Delete’ icon respective to the file. You will be requested to confirm the deletion. Once you confirm, the file will be removed from the Network Settings Exchange. The file will no longer be available for the OEMs to download.

In case of errors in the file or to modify the details in the file, you should remove the file first and upload a new file.

Download Uploaded File

You can download the file by clicking the ‘Download’ icon respective to the file. The file will be downloaded to your local system.

Edit Uploaded File

You can edit any settings data of a file by clicking the ‘Edit’ icon respective to the file. See ‘Edit Settings’ section for details.
Edit Settings

Once you click on Edit Settings icon under the action in the View uploaded files, you will see a screen like the figure below.

![Edit Settings](image)

Figure 19: Edit Settings

The settings data parsed from the file will be displayed in the format of excel worksheet to look similar to the settings file.

You can click on the ‘Edit’ link respective to the settings value you want to change. The field will change to an editable format. The edit link will change as ‘Save’ and ‘Cancel’. You can make the change and click Save to save the change. After clicking Edit if you do not want to change the value click Cancel.

Once you edited and saved any one of the setting’s value, the buttons ‘Confirm the changes’ and ‘Reset the changes’ becomes active. Refer screen ‘Edit Settings – Confirm button is active’ below.

After editing and saving all the required changes you need to click on ‘Confirm the changes’ to push the changes to the database. In case Confirm the changes is not clicked all the edited and saved values will not be updated to the database. After editing and saving the changes, if you feel to revoke the changes all together, you can click ‘Reset the changes.’ This will rollback the saved changes to the previous value and does not push the changes to the database.
### Figure 19.1 – Edit Settings - Save and Cancel

![Edit Settings File](image1)

### Figure 19.2 - Edit Settings – Confirm the changes

![Edit Settings File](image2)
When you save the changes, in case the value provided does not match the required value or not in the right format, the system will reject the change and the alert stating the issue will be displayed as shown in the screen below.

![Figure 19.3 – Invalid data message](image)

Please note, the edit settings is available only for the files uploaded later than 15 December 2019. In case you click Edit for an old file, you will see a message as shown in the figure below. To make changes to the settings value in the old files, you need to delete the file and upload again.

![Figure 19.4 – Edit not allowed for old files message](image)
New OEM Onboards

When a new OEM registers to the GSMA Network Settings Exchange the main contact will receive an email notification. The new OEMs are approved by default to receive your settings file you’re your organisation choose to reject any new OEMs from receiving your settings, follow the steps below:

1. Login to your account
2. Go to Registered OEMs -> New OEMs
3. The list of new OEMs will be displayed as shown in the picture below
4. Click on Reject respective to the OEM you would like to reject. The rejected OEM will be removed from the list

The new OEMs will be shown in the list for a period of 15 calendar days after which there is no provision to reject the OEM. However, the OEM can be deselected from the ‘Approved’ list while uploading a settings file (Refer section “View All OEMs”).
View All OEMs

To view the complete list of OEMs registered to the GSMA Network Settings Exchange, go to menu Registered OEMs and click on ‘View All OEMs’.

The list as shown below will be displayed.

You can filter the list either by status (Approved or Rejected by your organisation) or search by name.

![List of OEMs](image)

Figure 20: List of OEMs
File Download Report

The File Download Report provides details on the OEMs who downloaded a settings file, when it was downloaded and how many times.

To view the details of the OEMs who download a settings file, click ‘Settings Management -> File Download Report’. The report as shown below will be displayed. The report lists the settings uploaded and the number of times the file was downloaded by OEMs.

Use the Search to filter the list of settings. You can filter the settings by period, based on the date the settings uploaded to the NSX or by providing the name of the settings file.

The report can be extracted to an excel file using ‘Export to Excel’. The system will create an excel file of the report displayed and download to the user local system.

Click on the number respective to the settings under the ‘Total Number of times OEMs Downloaded’, to view the list of OEMs who downloaded the file.

The report has shown below will be displayed. The report displays the name of the OEM, the date when the file was downloaded and how many times.

The report can download to an excel file using the ‘Export to Excel’ option.
**Update your Profile**

To view your account details, click ‘User Profile’ on the top right of your account once logged in. You can edit your details by clicking ‘Edit Profile’. The form as shown below will be displayed.

You can update the details below:

- Job Title
- Email Address
- Telephone Number
- Mobile Phone Number

Once submitted, the details will be reviewed and approved by the GSMA Helpdesk.

![Edit Profile](image)

Figure 23: Edit Profile

**Additional User Registration**

To add additional users, contact the GSMA IMEI Helpdesk at imeihelpdesk@gsma.com

**Annual Subscription Renewal**

You will receive a notification 90 days before the expiry of the annual subscription. GSMA will raise a new invoice for the renewal of the subscription. Once payment is cleared for the renewal your account subscription will be renewed for a period of one year.

In case the subscription renewal fee is not paid before the end of the subscription period, your account will be deactivated. You will not be able to login to your account and upload settings.

The account will be activated once the renewal payment is received by GSMA.