

**COMMUNICATIONS  
ALLIANCE LTD**



**INDUSTRY GUIDANCE NOTE IGN 019**

**IPND RECONCILIATION DATA EXTRACT AND DATA  
PROVIDER UPLOAD VALIDATION PROCESSES**

**IPND RECONCILIATION DATA EXTRACT AND DATA  
PROVIDER UPLOAD VALIDATION PROCESSES Industry  
Guidance Note IGN 019**

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## VERSION HISTORY

This document constitutes: **Version 1 of Industry Guidance Note IGN 019**

<b>Date</b>	<b>Version</b>	<b>Comments/Changes</b>
August 2020	1	First release
July 2021	2	Inclusion of Data Upload Validation processes

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## 1 BACKGROUND

The Integrated Public Number Database (IPND) is an industry-wide database of all Public Number Customer Data (PNCD) which facilitates the provision of information for purposes specified in the Carrier Licence Conditions (Telstra Corporation Limited) Declaration 1997 (Licence Conditions) including the provision of Directory Assistance Services and the publication and maintenance of Public Number Directories.

The IPND Code underwent a revision in 2019/20 which sought to deliver on three Code deficiencies identified by the Australian Communications and Media Authority. Broadly these were to:

- 1) clarify that all Numbers Issued to a Customer by a Carriage Service Provider (CSP) are required to be listed in the IPND and give greater clarity of the number types that are required to be in the IPND;
- 2) set out what a CSP must do to reconcile PNCD against their own Customer data, including a mandatory obligation to review and action Changed Data Provider Reports issued by the IPND Manager; and
- 3) make reconciliation of PNCD compulsory between a CSP's customer system and the IPND at least once every six months.

This Industry Guidance Note (IGN) has been developed to assist CSPs in the implementation of processes which have arisen from delivery of recommendation 3.

### **2021 Revision**

In 2021 the IPND Manager undertook a review into the inactivity of CSP's / Data Provider's (DPs) updating PNCD records into the IPND. This review found that the overwhelming majority of this inactivity stemmed from incidents where a previous PNCD file uploaded by the CSP / DP failed to be updated into the IPND due to errors, at a file level, and the subsequent .err file produced by the IPND was not actioned appropriately by the CSP / DP.

These errors have led to subsequent files that were uploaded by the CSP / DP to be rejected by the IPND due to them being sent "out of sequence", often without the CSP / DP being aware of the issue. In most cases the CSP / DP did not identify the issue when carrying out data reconciliations, and any remediation activity as a result of the reconciliation also failed to update in the IPND.

Remediation of long term unsuccessful file uploads to the IPND may require the CSP to carry out a reconciliation of their records and obtain a full data extract of their PNCD in the IPND to understand their current status before they can carry out any remediation / realignment activity.

This Industry Guidance Note (IGN) has been updated to assist CSPs and DPs in the implementation of processes or controls that will ensure the validation and success of their IPND PNCD Upload Files , correct processing of their PNCD records and reconciliation processes

## 2 OBJECTIVES OF THIS GUIDANCE NOTE

This IGN is intended for DPs and CSPs only and should be read in conjunction with the obligations set out in the *C555:2020 Integrated Public Number Database Industry Code* (the Code).

The objectives of this IGN are to set out an industry process to:

- assist DPs in requesting Full Data Extracts of PNCD from the IPND Manager;
- provide information on how the IPND Manager will manage these PNCD data extract requests from DPs;
- provide guidance to CSPs in meeting reconciliation obligations as per the Code;
- assist DPs in validating the successful upload of their PNCD records to the IPND each and every time by using existing reporting provided to them in their download areas by the IPND Manager;
- provide information on how DPs can verify that their files and PNCD records were successfully uploaded and processed by the IPND using the Data Users and Data Providers Technical Requirements for IPND document – See clause 5.2.1 which provides DPs information about File Upload functional requirements and Error Processing and clause 6.1.3 IPND error file Report to DPs; and
- provide guidance to CSPs as to how to remediate instances of long-term failures of PNCD file uploads via reconciliation of their records in the IPND

### 2.1 Definitions

For the purposes of this Guidance Note:

#### **Change Data Provider Report**

means the Change Data Provider report provided to CSP's / DPs by the IPND generated on the first day of each month.

*NOTE: As per the Data Users and Data Providers Technical Requirements document, the purpose of the Change Data Provider report is to provide Data Providers with information regarding lost and gained Services. This is necessitated by the fact that Services may be transferred between DPs any number of times during the previous month.*

#### **Data Provider**

means a CSP or a person acting on behalf of a CSP, who is registered with the IPND Manager and has received authorisation from the IPND Manager to send PNCD to the IPND.

*NOTE: A CSP or a person acting on behalf of a CSP is not classified as a DP until this authorisation process is completed.*

**Data Provider Code**

means a unique Data Provider Code, generated and allocated by the IPND Manager, on receipt of an application from a DP.

**Data Provider Query File (DPQF)**

means the file created by a DU when errors are discovered in PNCD uploaded to the IPND by DPs.

*NOTE: The DPQF is deposited into the respective DPs download area for them to review. The purpose of the DPQF is to provide a mechanism for DUs to provide feedback to DPs regarding their PNCD data quality issues for remediation.*

**Full Data Extract**

means the PNCD held by the IPND Manager associated to that particular CSP, or DP, including connected, disconnected and pending records.

**IPND error file Report (.err report)**

means the file report generated automatically by the IPND when a DP sends an upload file to the IPND for processing, which contains details of processing for the associated IPND upload file.

*NOTE: One error file will be created for each upload file. A DP is responsible for downloading the corresponding .err file each time they upload a file to the IPND. They are to review the .err file for any errors their upload file may contain and remediate them within 1 business day under Section 5.1.5 of the Code.*

**IPND Manager**

means the person or association or delegate(s) that manages, maintains and administers the IPND.

**Reconciliation**

means the comparison and correction by a CSP, or DP, of the PNCD held by the IPND Manager associated to that particular CSP, or DP, with the CSP, or DPs own data for a Number that is: -

1. associated with an active service in its customer records data base that does not have a corresponding customer 'connected' PNCD record in the IPND for that Number;
2. associated with an active service in its customer records data base for which the corresponding PNCD record in the IPND for that Number has a 'disconnected' status;
3. associated with a disconnected service in its customer records data base for which the corresponding PNCD record in the IPND has a 'connected' status in the IPND; and

4. associated with a service not present in its customer records data base for which there is a PNCD record for that Number in a 'connected' status in the IPND.

***Technical Requirements for the IPND – Data Users and Data Providers***

means the document produced by the IPND Manager to assist DPs and Data Users with understanding the technical and operational requirements of providing and using data in the IPND.

### **3 DATA PROVIDER / CSP PNCD FILE UPLOAD**

The following is an extract from the Code, relating to section 4.2 – Rules for data provision to the IPND Manager:

- Clause 4.2.14 Data Providers must ensure that all PNCD records provided to the IPND Manager include the unique Data Provider Code, CSP Code and file source combination as assigned by the IPND Manager
- Clause 4.2.15 Data Providers must ensure that all PNCD transferred to the IPND Manager is in the format specified in the IPND Technical Requirements
- Clause 4.2.16 Each CSP must ensure that the PNCD provided to the IPND Manager is accurate, complete and up to date.
- Clause 4.2.17 A Data Provider or any other party in the chain of suppliers leading from the CSP to the Data Provider, acting on behalf of a CSP must ensure that the PNCD that is supplied to the IPND Manager is an accurate reflection of the PNCD supplied by the CSP.



## 4 DATA PROVIDER / CSP PNCD FILE UPLOAD VALIDATION

### 4.1 Upload File and Success Validation - Process Flow

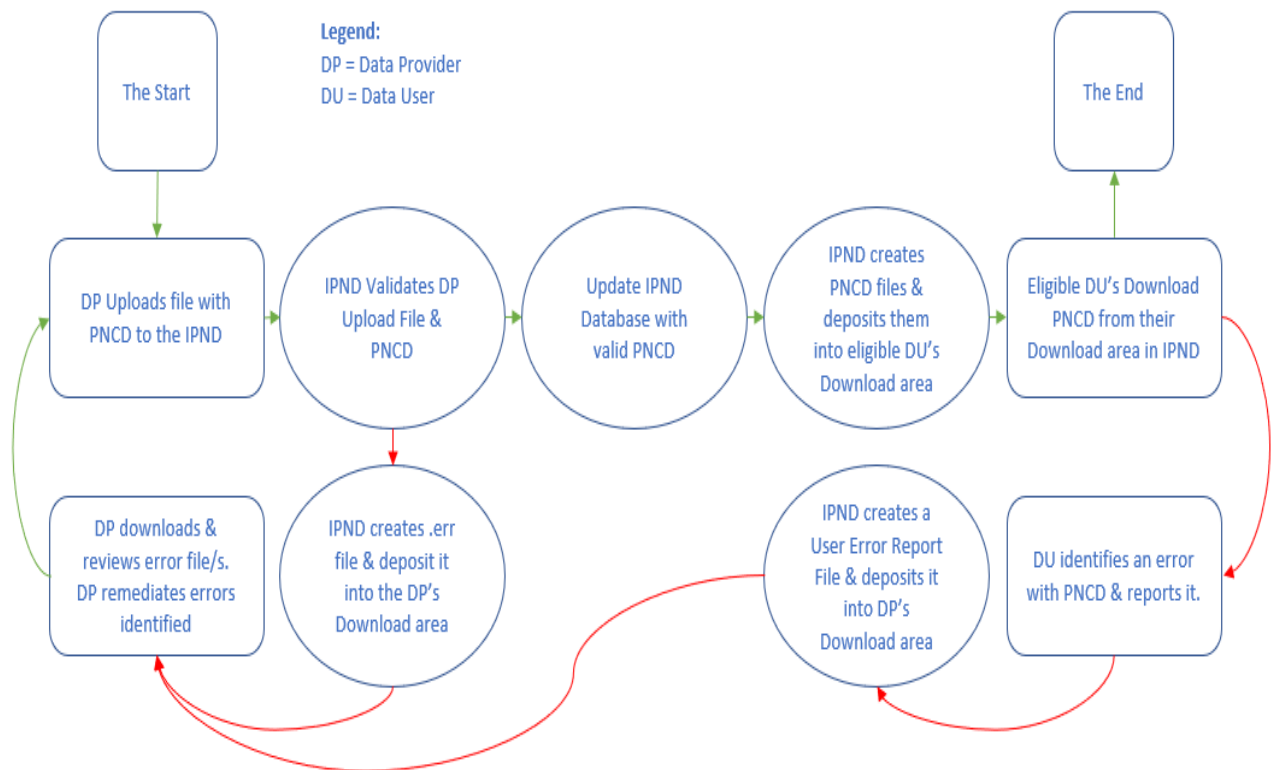
This IGN describes the recommended processes which can be used by DPs / CSP's to validate the successful upload of their PNCD to the IPND.

Each time a DP carries out an upload of PNCD data to the IPND, the IPND Manager will make available an .err report which will be located in the DP's download area within the IPND.

It is the responsibility of DPs to validate the success of each of their Uploads and each PCND contained in the files uploaded to the IPND by downloading and reviewing the content of the corresponding .err report.

*NOTE: Only CSPs who are their own DP will be able to access the download area within the IPND.*

#### **Basic Process Flow:**



## 4.2 IPND Manager's Responsibilities

- 4.2.1 The IPND Manager may formally appoint a delegate(s) to undertake some or all of its actions under this IGN. If this occurs, references to "IPND Manager" in this IGN include references to its delegate.
- 4.2.2 As per clause 5.1.5 of the Code, the IPND Manager must make available feedback with error notifications to DPs in response to each file uploaded which contains errors
- 4.2.3 As per clause 5.2.2.73 of the IPND Technical Requirements Document, for each source file uploaded by a DP a corresponding error file (.err file) will be generated by the IPND Manager.
- 4.2.4 As per clause 5.2.1.1 of the IPND Technical Requirements Document, DPs will not be directly notified of any data processing errors identified. DPs are required to connect to the IPND and look for an Error File in their IPND download area to determine the results of processing the corresponding upload file.

*NOTE: The IPND Manager is required to provide regular reports to the ACMA on CSP / DP IPND upload and download activity and file / PNCD error performance, ensuring the ACMA are aware of CSP / DP compliance / non-compliance with their obligations.*

## 4.3 CSP and Data Provider Responsibilities

- 4.3.1 It is the responsibility of DPs to connect to IPND and look for an Error File in their IPND download area to determine the results of processing the corresponding upload file.

The generation of an Error File signifies that the Upload File has been processed by the IPND.

**NOTE:**

The fact that a file has been "processed" does not necessarily mean that the file has been "accepted" by the IPND. The file may have been rejected with file level errors.

An Error File may only contain a single Header and Trailer record. This will be the case when:-

- a) no errors are encountered. In this case the error and warning counts in the trailer would be zero and the Success Record count would equal the total number of records read from the upload file; and
- b) an empty file is uploaded. In this case the Success Record Count would be zero. In general, loading of empty files should be avoided.

The .err Error File provided by the IPND Manager is a critical tool to assist DPs in validating the success or failure of the IPND to process their Upload file and the PNCD contained in the Upload file.

4.3.2 As per clause 5.1.6 of the Code, a DP must download from their IPND download area the information referred to in clauses 5.1.1, 5.1.4 and 5.1.5 of the Code on the same Business Day as being made available by the IPND Manager.

4.3.3 As per clause 5.2.1.1 of the IPND Technical Requirements Document, DPs are to review the contents of the .err file. Errors resulting from Upload File inconsistencies, at a file level, will result in an error code being written to the error file indicating that the Upload File was rejected, and no changes were applied to IPND.

*NOTE: Hard errors resulting from Upload File inconsistencies, at a record or field level, will result in the record in question being rejected and written to the error file with an appropriate error code.*

*Soft errors resulting from Upload File inconsistencies, at a record or field level, will result in the record in question being applied to the database, tagged as having a Soft Error, and written to the error file with an appropriate error code.*

4.3.4 DPs are responsible for actioning feedback received from Data Users regarding PNCD data quality issues by checking the DPQF available in the DP's download area.

4.3.5 As per clause 5.1.7 of the Code, a DP must either take reasonable steps to resolve the matter referred to in clause 5.1.6 and supply the corrected PNCD to the IPND Manager within one Business Day or pass the information to the relevant CSP within the same Business Day.

4.3.6 Clause 5.1.8 of the Code states that: Where a CSP has been provided information referred to in clause 5.1.7 they must take reasonable steps to resolve the matter and supply the corrected PNCD to the IPND Manager within one Business Day.

*NOTE: A reconciliation of your PNCD may be required if you have experienced an extended period of unsuccessful file uploads of PNCD to the IPND. This will be necessary before you attempt to carry out any remediation activities to realign your PNCD records. See section 5 for reconciliation processes.*

## 5 DATA RECONCILIATION

The following is an extract from the Code, particularly relating to section 5.3 – Data Reconciliation.

Clause 5.3.1 - For Reconciliation purposes, DPs must obtain an extract of their PNCD as a full set of records or as a subset of records based on criteria agreed between the DP and the IPND Manager at least once every six months.

Clause 5.3.2 - Where a DP performs the role of providing PNCD to the IPND on behalf of a CSP, the DP must:

- a) obtain an extract of the relevant CSP, PNCD as a full set of records or as a subset of records based on criteria agreed between the CSP, DP and the IPND Manager at least once every six months;
- b) provide the relevant CSP with their PNCD extract, as soon as practicable, after the extract has been made available to the DP by the IPND Manager.

Clause 5.3.3 - The IPND Manager must extract PNCD referred to in clause 5.3.1 and 5.3.2 at a time agreed to with the DP and provide the PNCD to the DP within a reasonable timeframe, not exceeding 5 Business Days from the agreed time of the PNCD extract.

Clause 5.3.4 - CSPs must undertake a Reconciliation of the extract of the PNCD referred to in clause 5.3.1 and 5.3.2 and amend any discrepancies between the PNCD held by the IPND Manager and the CSP's own data by sending updated PNCD to the IPND Manager within 30 Business Days of the PNCD extract being downloaded.

Clause 5.3.5 - CSPs must keep records for each PNCD extract Reconciliation referred to in clause 5.3.4 and retain that data for at least the past year. The records must contain the:

- a) total number of Numbers associated with a CSP's active service that do not have a corresponding customer record in the IPND;
- b) total number of Numbers associated with a CSP's active services for which the corresponding customer record in the IPND has a 'disconnected' status;
- c) total number of customer records associated with a CSP with a 'connected' status in the IPND for which the Number is designated as 'disconnected' in a CSP's Customer Systems; and
- d) total number of customer records associated with a CSP with a 'connected' status in the IPND for which the Number is not present in a CSP's Customer Systems.

## 6 PNCD RECONCILIATION REQUEST PROCESS

### 6.1 Full Data Extract Request - Process Flow

This IGN describes the recommended processes which can be used by DPs to obtain their own, (or on behalf of another CSP) PNCD Full Data Extract from the IPND.

The IPND Manager will make available Full Data Extracts in the DPs download area within the IPND – based on filesource and or DP Code.

*NOTE: Only CSPs who are their own DP will be able to access the download area within the IPND.*

For CSPs whose Full Data Extract request is managed by a DPs agent, Full Data Extract records for individual CSPs based on provider code will be provided to them by the DP agent.

### 6.2 IPND Manager Responsibilities

- 6.2.1 The IPND Manager may formally appoint a delegate(s) to undertake some or all of its actions under this IGN. If this occurs, references to "IPND Manager" in this IGN include references to its delegate.
- 6.2.2 The IPND Manager will confirm the request for a Full Data Extract is from a nominated contact point for a CSP, or nominated CSP representative, who is a DP.
- 6.2.3 The IPND Manager will confirm that dates for a Full Data Extract requested for CSP PNCD from the IPND, by a DP, is for a viable date.
- 6.2.4 The IPND Manager will schedule the Full Data Extract to run with IPND Support.
- 6.2.5 The IPND Manager will confirm with the CSP contact point or nominated CSP representative that the Full Data Extract has been run successfully and is available in the DPs download area on the IPND.
- 6.2.6 The IPND Manager will ensure that requests from DPs for Full Data Extracts are processed in a timely manner and that relevant data extracts are supplied to the DP within 5 business days of receiving the Full Data Extract request.

### 6.3 CSP and Data Provider Responsibilities

- 6.3.1 Requests for Full Data Extracts must be made from a CSPs DP, unless the CSP is the DP in their own right.
- 6.3.2 CSPs are responsible for the management of their PNCD and should be liaising with a DP (if necessary) to determine an appropriate extract date for Full Data Extract requests.

- 6.3.3 CSPs are responsible for ensuring they receive the Full Data Extract from a DP if the DP manages the request on their behalf.
- 6.3.4 DPs will send a request to the IPND Manager to obtain a Full Data Extract of their own PNCD, or a Full Data Extract of PNCD on behalf of a CSP on a date agreed with the IPND Manager and for a DP Code that belongs to them.
- 6.3.5 DPs are to download the Full Data Extract file from the DPs download area once advised by the IPND Manager that the extract is complete.
- 6.3.6 DPs must separate the Full Data Extract into CSP codes (if applicable) and provide to the relevant CSP(s) via a secure encrypted channel.

## 6.4 Recommended CSP Reconciliation Process

- 6.4.1 Once a CSP has received their Full Data Extract from their DP the CSP will need to perform a reconciliation activity based on the 4 reconciliation requirements outlined by the ACMA below: (See example template in Appendix A for assistance)
  - CSPs are to record the Total number of Numbers associated with a CSP's active service that do not have a corresponding customer record in the IPND;
  - CSPs are to record the Total number of Numbers associated with a CSP's active service for which the corresponding customer record in the IPND has a 'disconnected' status;
  - CSPs are to record the Total number of customer records associated with CSP's with a 'connected' status in the IPND for which the number is designated as 'disconnected' in CSP's Customer Systems; and
  - CSPs are to record the Total number of customer records associated with CSP with a 'connected' status in the IPND which are not present in CSP's Customer Systems.
- 6.4.2 Following the activities undertaken in cl 4.4.1, a CSP must re-align records accordingly into the IPND and/or their source systems within the timeframes specified as per section 5.3 of the Code.

*NOTE: 1. Re-alignment can be done using existing BAU update processes or by providing a file to the IPND while maintaining the sequence of a CSP's upload files.  
2. There may be a variation between the date the Full Data Extract of PCND records was created by the IPND vs the date the Reconciliation against CSP's Systems, and the PNCD may have changed. It is important to refer to the **Change Data Provider** report created on the 1st day of each month to verify if PNCD has changed DPs in the interim until such time as an alternative source becomes available.*

## 6.5 Reporting

- 6.5.1 The reconciliation report is to include the total number of misalignments identified during initial compare of IPND record against source records.
- 6.5.2 The reconciliation report should include a breakdown of the re-alignment of records that were required and date performed, total outstanding, exemptions etc
- 6.5.3 Records which require re-alignment should be completed within 30 days of the data extract where practicable.
- 6.5.4 Reports to be completed twice a year on dates determined by the CSP falling within the first and the second half of a year or within the spirit of the Code.
- 6.5.5 Reconciliation reports must be retained for 12 months, be easily accessible and made available to the ACMA on request within a reasonable timeframe.

NOTE: See Appendix A for an IPND Reconciliation progress report example template.

**APPENDIX A : IPND RECONCILIATION PROGRESS REPORT EXAMPLE TEMPLATE.**

Interface Name / Data Provider Code	Date misalignment identified	Discrepancy Type	Total misaligned services	Total services exempted from remediation	Total services actioned	Total outstanding services requiring action	Description of action taken to resolve the misalignment	Date IPND was / will be updated	Status
		Total quantity of Numbers associated with an active service that do not have a corresponding customer record in the IPND							
		Total number of Numbers associated with an active service for which the corresponding customer record in the IPND has a 'disconnected' status							
		Total number of customer records associated with CSP with a 'connected' status in the IPND for which the Number is designated as 'disconnected' in CSPs Customer System							
		Total number of customer records associated with CSP with a 'connected' status in the IPND which are not present in CSPs Customer System.							



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