Conventions for Submitting Data and Product Files to the IVS Data Centers

Valid as of August 2, 2021; Updated January 5, 2023

Introduction

The IVS is supported by three **Primary Data Centers** (DCs) that have identical holdings of all IVS data and product files. The DCs are the Crustal Dynamics Data Information System (**CDDIS**), the Federal Agency for Cartography and Geodesy (**BKG**), and the Paris Observatory (**OPAR**). They serve as the main method for disseminating IVS data and products. To ensure common holdings among the three centers, the DCs mirror each other several times per day.

To fulfill their main purpose, the data centers furnish two principal functions:
- *Download:* Provide access and public availability of files to all users (e.g., via ftp or https).
- *Upload:* Allow the submission of files by IVS components (e.g., via ftp or cURL) for **ingest** into the repository.

The download of files can be accomplished fairly easily using a web browser and does not require the user to know the ins and outs of the file format or naming. For the upload, however, the submitter needs to be aware of the conventions and rules regarding filenames, compression, and file formats.

After some developing time, the DCs use a *new ingest software* as of **August 2, 2021**. This document describes the conventions and rules that the data and product submitters have to adhere to in order for their files to be accepted and ingested into the IVS data holdings. A filename mismatch, wrong compression type, or failure of the validation check (e.g., missing header/footer or block structure issue in SINEX files, missing start or stop times in session related files) results in the rejection of the file. The strict enforcement of the filename conventions and the stricter quality checks of the file content will cause some files that used to pass with the old ingest system to be rejected in the new one.

Description of file types, compression types, and naming conventions

The following table covers the file types of IVS data files (ivsdata), IVS product files (ivsproducts), and product description files (ivsdocuments). For the file name convention, we use the following key:
- `aaa`   Analysis Center 3-letter code
- `ccccc`   solution 5-character code
- `CC`   2-character database code as in master file
- `<ssssss>`   session code (max. 12 characters) as in master file
- `<GPSweek>`   GPS week
- `d`   day of the GPS week (as in <GPSweek>d)
- `dd`   day of the month
- `hhmm`   hours and minutes (of report submission)
- `mm`   month of the year
- `MMM`   month of the year in 3 uppercase letters
- `nn`   2-character station code (as in ns-codes.txt control file)
- `nnn`   3-digit version number for database
- `<nnnnnnnn>` up to 8-character station code (as in ns-codes.txt control file)
- `<SUBM>`   Submitting agency
- `yy`   2-digit year
- `yyyy`   4-digit year

File type	Name convention	Compression	Example
schedule file	`<ssssss>.skd`		r11002.skd
session notes	`<ssssss>.txt`		r11002.txt
vex file	`<ssssss>.vex`		r11002.vex
correlator notes	`<ssssss>.corr`		r11002.corr
log files	`<ssssss>nn.log`		r11002ht.log
full log files	`<ssssss>nn_full.log`	`.bz2`	r11002k2_full.log.bz2
cable files	`<ssssss>nn.cb`		r11002ht.cb
wx files	`<ssssss>nn.wx`		r11002ht.wx
PRC files	`<ssssss>nn.prc`		r11002yg.prc
SNAP files	`<ssssss>nn.snp`		r11002ht.snp
OPS summary	`<ssssss>-sumops.txt`		r11002-sumops.txt
analysis reports	`<ssssss>-<SUBM>-analysis-report-yyyymmdd-hhmm.txt`		r11002-IVS-analysis-report-20210622-1451.txt
spool files	`<ssssss>-<SUBM>-analysis-spoolfile-yyyymmdd-hhmm.txt`		r11002-USNO-analysis-spoolfile-20210625-0939.txt
SWIN files	`yyyymmdd_<ssssss>_vnnn_swin.tar`	`.bz2`	20210607_r11002_v001_swin.tar.bz2
MK3 database	`yyMMMddCC_Vnnn`	`.gz`	21JUN07XA_V001.gz
NGS cards	`yyMMMddCC_Nnnn`	`.gz`	21JUN07XA_N001.gz
vgosDB	`yyyymmdd-<ssssss>`	`.tgz`	20230102-i23002.tgz
CRF	`aaaccccc.crf`	`.gz`	opa2021a.crf.gz
	`aaaccccc.stats.crf`	`.gz`	opa2021a.stats.crf.gz
EOPI	`aaaccccc.eopi`	`.gz`	usn2020d.eopi.gz
	`aaaccccc.stats.eopi`	`.gz`	usn2020d.stats.eopi.gz
EOPS	`aaaccccc.eops`	`.gz`	gsf2020a.eops.gz
	`aaaccccc.stats.eops`	`.gz`	gsf2020a.stats.eops.gz
	`aaaccccc.eoxy`	`.gz`	gsf2020a.eoxy.gz
	`aaaccccc.stats.eoxy`	`.gz`	gsf2020a.stats.eoxy.gz
TRF	`aaaccccc.trf`	`.gz`	asi2019a.trf.gz
	`aaaccccc.stats.trf`	`.gz`	asi2019a.stats.trf.gz
Int SINEX	`yyyymmdd-<ssssss>_aaaccccc.sni`	`.gz`	20230102-i23002_bkg2022a.sni.gz
Daily SINEX	`yyyymmdd-<ssssss>_aaaccccc.snx`	`.gz`	20230103-r11084_bkg2022a.snx.gz
TROP	`aaa<ssssss>.tro`	`.gz`	vier4773.tro.gz
	`aaa<GPSweek>d.stat`	`.gz`	ivs20192.stat.gz
	`aaa<GPSweek>d.trc`	`.gz`	ivs20192.trc.gz
	`<nnnnnnnn>_<GPSweek>d.eps`	`.gz`	hart15m_20192.eps.gz
	`aaacccc<ssssss>.trl`	`.gz`	bkg2020at2113.trl.gz
DOCS	`aaaccccc.crf.txt`		opa2021a.crf.txt
	`aaaccccc.eopi.txt`		usn2020d.eopi.txt
	`aaaccccc.eops.txt`		gsf2020a.eops.txt
	`aaaccccc.trf.txt`		asi2019a.trf.txt
	`aaaccccc.dsni.txt`		bkg2020a.dsni.txt
	`aaaccccc.dsnx.txt`		bkg2020a.dsnx.txt

Note that the extension used for the compression type needs to be added to the filename, as indicated in the examples. When submitting a file, the conventions outlined in this table need to be met for a successful ingest.