

# XINA Struct Export

The XINA Struct Export utility processes archive files to produce data products for XINA's Export Tasks. There are 2 supported archive file formats: `xbin` and `xpf`. If the archive file is in the `xpf` format, processing is delegated to a mission specific tool. See the [Struct Extract Interface](#) that describes the interface the tool must implement.

## Arguments

Name	Req	Description	Default
task	?	task ID	
conf	?	JSON configuration file path	
temp	?	temp directory path for storing temporary files during execution	
import	?	import directory path (for file outputs)	
log	?	log file path	
out	?	[TBD] the ouptut directory path	
post	?	post directory path (for post-import outputs)	
cancellation		Path to the cancellation file for detecting cancel requests	
extract		Path to the <a href="#">struct_extract</a> app. Only used if the archive format is <code>xpf</code> .	
pkt_models		[TBD] models to use packet time by default	
plot	?	Path to app that generates plot PDFs	
python	?	Path to the Python executable used by the plot app	
host		tunnel host	<code>"localhost"</code>
port		tunnel port	<code>41746</code>

## JSON Configuration

Name	Type	Req	Description	Default
model	<code>utf8text</code>	?	path of model to export data from	

Name	Type	Req	Description	Default
label	utf8text		The text that will be used to name the files and final zip file. The format will be like <code>2024_06_12_00_00_00_2024_06_12_00_20_00_profile_label</code>	
profile	utf8text		The name of the Profile if the export was generated from one	
start	instant(us)	?	Start time of data to export	
end	instant(us)	?	End time of data to export	
ueid	UUID		Event UUID of interval if the export was requested for an interval. The event's start and end time will be used instead of <code>start</code> and <code>end</code> .	
auto_conf	struct_auto_conf		The <code>struct_auto_conf</code> that triggered the export. Only provided if the export was auto generated.	
plot_conf	struct_plot_conf		The plot configuration used to generate the plot PDF. See <a href="#">plot format</a> .	One mnemonic per plot, one plot per page, sorted by <code>mn_id</code> in ascending order.
data_conf	struct_data_conf	?	See <a href="#">struct_data_conf</a>	
disable_filter	boolean		If <code>true</code> , does not apply the filters defined in <code>data_conf</code> .	false
copy	boolean		[TBD REMOVE]	
multi	boolean		[TBD REMOVE] Has extract process all archives at once. This was added for performance reasons since loading the mnem def is slow.	

### Example conf:

*Note: The plot\_conf was truncated for brevity*

```
"model": "oci.fm",
"profile": "OPS_FLT_OCI_SDS",
"label": "test",
"start": 1718150400000000,
"end": 1718151600000000,
```

```
"ueid": null,
"copy": true,
"auto_confs": [
  {
    "users": [
      "johndoe",
      "alice"
    ],
    "mine": false,
    "daily": true
  }
],
"plot_conf": {
  "trend_series": [
    "avg"
  ],
  "pages": [
    {
      "plots": [
        {
          "title": "OCI Pri Power (15A)",
          "mnemonics": [
            "PSE.OM1.OCI_PRI_CURR"
          ]
        },
        {
          "series": [
            {
              "mnemonic": "oci.dau.ddc.FPGA.CcdOpMode",
              "plot_options": {
                "color": "k"
              }
            }
          ]
        }
      ]
    }
  ]
},
```

```
"data_conf": {
  "limit": false,
  "ids": "@[42316,42318-42322,43255,44243,45140,45187-45210,45233-
45236,45238,45240,45241,45245,45247,45248,45259,45260,45265-
45268,45270,45272,45273,45277,45279,45280,45291,45292,45442,45444,45446,45448,45450,45452,45454,4
5460,45462,45472,45538,45540,45542,45544,45546,45548,45550,45556,45558,45568,51908,51910,64097,64
109,64111,64113,64115,66333,66341,66349,66357,66365,66373,66381,67536,67537,69019,69024-
69026,69031,69032,69729,77534,77570,77696]sci",
  "dis": false,
  "fill": false,
  "columns": {
    "ts_utc_iso": true
  },
  "join": true,
  "pkt": true
}
```

# Operation

Extract data from archive files to produce Export Task products:

- Full resolution mnemonic data with a configurable format
- Mnemonic Statistics
- Configurable Plots of data
- Limit Report
- Events

Revision #9

Created 14 May 2024 19:31:51 by Bradley Tse

Updated 20 November 2024 19:29:29 by Bradley Tse