

xFOCE Configuration Domains

Platform

platform ID
name
description

Messaging

sds pri/sec addr:port
ps server addr:port
ps proxy?
gateway proxy

Syslog

segment size
segment count
detail

Streams

stream IDs
topic paths
processing rules
segment size

Sampling

supervisors
[name,period, timer]

Environment

xfhome
conf
arch
bin
logs
sysfiles (log, conf. json)

Services

type ID
instance ID
source ID
name
function
location

Power Managment
power policy
power on delay

Sampling
period msec
timeouts
retries
mode

Log
segment sz
segment count

Resources
io port
power port
other ports

Worker
name
supervisor
period

Properties
device specific options

Control

algorithm
parameters
constants

SNodes

srid
io_srid

Term IO

srid
speed
csize
par
stopb
device path

DIO

srid
dir, act, sig, init,
pulse_width

AIO

dir, [scale], [offset] [val]

SPI

speed, wlen,

TCP/IP ports

5554	GW proxy
5560	SD primary
sdp+1	SD primary
sdp+2	SD primary
sdp+3	SD primary
5564	SD backup
sdb+1	SD backup
sdb+2	SD backup
sdb+3	SD backup
5569	PUB
5570	SUB

```

{
  "platform":{
    "name":"gateway_0",
    "platform_id":1000,
    "description": "0.3 pH offset"
  },
  "debug":[
    {"module":"ALL","level":"INFO"},
    {"module":"XF_GATEWAY","level":"DEBUG"},
    {"module":"XF_CONFIG","level":"DEBUG"},
    /*{"module":"XF_PROXSVR","level":"DEBUG"},
    {"module":"XF_SDCLIENT","level":"DEBUG"},
    {"module":"TEST_TRACE","level":"DEBUG"},*/
    {"module":"SBE18S","level":"DEBUG"},
    {"module":"SBE52MP","level":"DEBUG"}
  ],
  // control: not implemented
  "control":{
    "algorithm":"PID"
  },
  "messaging":{
    "sdat_enabled":"true",
    "pubsub_enabled":"true",
    "sdat_pri":{"host":"localhost", "port":5556},
    "sdat_sec":{"host":"localhost", "port":5560},
    "pub_port":5569,
    "sub_port":5570,
    "proxy_port":5554,
    "pubsub_proxy":{"host":"quux.shore.mbari.org","port":5678}
  },
  "syslog":{
    "seg_size":"2M",
    "seg_count":20,
    "detail":"DEBUG"
  },
  "sampling":{
    "sync_supervisor":{"name":"sync supervisor","period_sec":0,"period_msec":250,"timer":0},
    "xfsys_supervisor":{"name":"xfsys supervisor","period_sec":4,"period_msec":0,"timer":1},
    "control_supervisor":{"name":"control supervisor","period_sec":1,"period_msec":0,"timer":2}
  },
  "streams":[
    {"dtype":"ersatz", "instance":0, "stream_id":401,"flags":"LOG|PUB", "post_topic":"-",
    "pub_topic":"/data/ersatz.0/a"},
    {"dtype":"ersatz", "instance":0, "stream_id":402,"flags":"PARSE", "post_topic":"-",
    "pub_topic":"-"},
    {"dtype":"ersatz", "instance":0, "stream_id":403,"flags":"POST", "post_topic":"/sdata/
    tref", "pub_topic":"-"},
    {"dtype":"sbe18s", "instance":0, "stream_id":301,"flags":"LOG|PUB", "post_topic":"-",
    "pub_topic":"/data/sbe18s.0/ph"},
    {"dtype":"sbe52mp", "instance":0, "stream_id":701,"flags":"LOG|PARSE", "post_topic":"-",
    "pub_topic":"/data/sbe52mp.0/ctdo"},
    {"dtype":"sbe52mp", "instance":0, "stream_id":702,"flags":"PUB|POST", "post_topic":"/sdata/
    tref", "pub_topic":"/data/sbe52mp.0/tref"},
    {"dtype":"dcraft", "instance":0, "stream_id":101,"flags":"LOG|PARSE", "post_topic":"-",
    "pub_topic":"/data/dcraft.0/stat"},
    {"dtype":"dcraft", "instance":0, "stream_id":102,"flags":"POST|PUB", "post_topic":"/sdata/
    dcy", "pub_topic":"/data/dcraft.0/dcy"},
    {"dtype":"proxr", "instance":0, "stream_id":601,"flags":"LOG", "post_topic":"-",
    "pub_topic":"-"},
    {"dtype":"DEVICE", "instance":-1,"stream_id":99, "flags":"LOG|PUB", "post_topic":"-",
    "pub_topic":"alarm"}
  ],

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"service":{
  "dtype":"sbe18s",
  "instance":0,
  "source_id":2001,
  "name":"sbe18s_0",
  "function":"pH",
  "location":"e.a.s",
  "power":{"policy":"ALWAYS","pon_delay_msec":0},
  "sampling":{"rlen":128,"wlen":128,"retries":3,"tmout_msec":5000,"dcon_capacity":
128,"mode":"DEFAULT"},
  "log":{"seg_size":"1M","seg_count":"100"},
  "resources":[
    {"rtype":"IO","index":0,"srid":"IO_PTY0"},
    {"rtype":"POW","index":0,"srid":"NONE"}
  ],
  "properties":{"cal_k":1.98416e-4,"cal_off":2.63,"cal_slo":4.25,"cal_cor":0.0, "ofmt":1,
"drain_msec":"5", "tref":"/XF_SDATA/TREF"},
  "worker":{"name":"sbe18s_0_sampler", "supervisor":"SYNC_SUPERVISOR", "period_msec":"2500"}
},

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"service":{
  "dtype":"sbe52mp",
  "instance":0,
  "source_id":5001,
  "name":"sbe52mp_0",
  "function":"CTD",
  "location":"e.a.s",
  "power":{"policy":"ALWAYS","pon_delay_msec":0},
  "sampling":{"rlen":128,"wlen":128,"retries":3,"tmout_msec":5000,"dcon_capacity":
128,"mode":"DEFAULT"},
  "log":{"seg_size":"1M","seg_count":"100"},
  "resources":[
    {"rtype":"IO","index":0,"srid":"IO_PTY1"},
    {"rtype":"POW","index":0,"srid":"NONE"}
  ],
  "properties":{"pump":"fast"},
  "worker":{"name":"sbe52mp_0_sampler", "supervisor":"SYNC_SUPERVISOR", "period_msec":"2500"}
},

```

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"service":{
  "dtype":"dcraft",
  "instance":0,
  "source_id":3001,
  "name":"dcraft_0",
  "function":"flow_thruster",
  "location":"e.a.s",
  "power":{"policy":"ALWAYS","pon_delay_msec":0},
  "sampling":{"rlen":128,"wlen":128,"retries":3,"tmout_msec":5000,"dcon_capacity":
128,"mode":"DEFAULT"},
  "log":{"seg_size":"1M","seg_count":"100"},
  "resources":[
    {"rtype":"IO","index":0,"srid":"IO_PTY3"},
    {"rtype":"POW","index":0,"srid":"NONE"}
  ],
  "worker":{"name":"dcraft_0_sampler", "supervisor":"SYNC_SUPERVISOR", "period_msec":"2500"}
},

```

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"snodes": [
    {"srid": "IO_SNODE0", "io_srid": "IO_TTY4"} /*,
    {"srid": "IO_SNODE1", "io_srid": "IO_TTY2"},
    {"srid": "IO_SNODE2", "io_srid": "IO_TTY4"},
    {"srid": "IO_SNODE3", "io_srid": "IO_TTY5"} */
],

"io": [
    {"srid": "IO_SNP0RT00", "speed": 9600, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_SNP0RT01", "speed": 9600, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_SNP0RT02", "speed": 9600, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_SNP0RT10", "speed": 9600, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_SNP0RT11", "speed": 9600, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_SNP0RT12", "speed": 9600, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_SNP0RT20", "speed": 9600, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_SNP0RT21", "speed": 9600, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_SNP0RT22", "speed": 9600, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_SNP0RT30", "speed": 9600, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_SNP0RT31", "speed": 9600, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_SNP0RT32", "speed": 9600, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_TTY1", "speed": 38400, "csize": 8, "par": "N", "stopb": 1, "path": "/dev/ttyUSB1"},
    {"srid": "IO_TTY2", "speed": 9600, "csize": 8, "par": "N", "stopb": 1, "path": "/dev/ttyUSB0"},
    {"srid": "IO_TTY4", "speed": 115200, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_TTY5", "speed": 115200, "csize": 8, "par": "N", "stopb": 1},
    {"srid": "IO_PTY0", "speed": 38400, "csize": 8, "par": "N", "stopb": 1, "path": "/dev/tty_dgrp_0_0"},
    {"srid": "IO_PTY1", "speed": 9600, "csize": 8, "par": "N", "stopb": 1, "path": "/dev/tty_dgrp_0_1"},
    {"srid": "IO_PTY2", "speed": 115200, "csize": 8, "par": "N", "stopb": 1, "path": "/dev/tty_dgrp_0_2"},
    {"srid": "IO_PTY3", "speed": 9600, "csize": 8, "par": "N", "stopb": 1, "path": "/dev/tty_dgrp_0_3"}
],

"dio": [
    {"srid": "DIO0", "dir": "0", "act": "L", "sig": "S", "init": "L"},
    {"srid": "DIO1", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO2", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO3", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO4", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO5", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO6", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO7", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO8", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO9", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO10", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO11", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO12", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO13", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO15", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO16", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO17", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200},
    {"srid": "DIO18", "dir": "0", "act": "L", "sig": "PH", "init": "L", "pw_msec": 200}
],

"aio": [
    {"srid": "AIO0", "dir": "I"},
    {"srid": "AIO1", "dir": "I"},
    {"srid": "AIO2", "dir": "I"},
    {"srid": "AIO3", "dir": "I"},
    {"srid": "AIO4", "dir": "I"},
    {"srid": "AIO5", "dir": "I"},
    {"srid": "AIO6", "dir": "I"},
    {"srid": "AIO7", "dir": "I"}
]
}

```

