

# Data Collection Guideline for CSCF

## Call Session Control Function

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### OPERATING INSTRUCTIONS

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# 1 Introduction

The purpose of this document is to instruct what troubleshooting data is to be collected and enclosed in a Customer Service Request (CSR) in case a problem is experienced with the Call Session Control Function (CSCF). Additional information can be requested by Ericsson support personnel.

This document also describes the procedure to collect the needed information.

## 1.1 Prerequisites

This section describes the prerequisites for performing the data collection procedure.

To use this document, the following conditions must apply:

- The user is familiar with performing CSCF Operation and Maintenance (O&M) operations.
- The user is authorized to access the CSCF with `sudo/root` privileges for the required actions.





## 2 Workflow

This section describes the workflow for data collection.

### 2.1 Mandatory Data

The following items are mandatory when composing a CSR:

- Software version
- Configuration and logs
- Crash dumps
- Components versions

### 2.2 Collect Troubleshooting Data

To collect troubleshooting data:

1. Collect the mandatory data that is needed to attach to a CSR. For data collection, use the `CSCF Aggregated CSR Data Collection (ACDC)` script, see Section 3 on page 5.
2. Collect other useful information in case it is available within an acceptable amount of time and effort. See Section 4 on page 11.

### 2.3 Obtain Persistent Storage Area Paths

To obtain the different persistent storage area paths for the system:

1. Enter these commands on the node:

```
<configuration-path> = cmwea config-location-get  
  
<storage-path> = cmwea no-backup-location-get
```







## 3 Data Collection Using the CSCF Aggregated CSR Data Collection Script

This section describes the data collection process using the CSCF Aggregated CSR Data Collection (ACDC) script.

### 3.1 Overview

`CscfACDC` is a script that fetches data from the system. The script is used for CSCF troubleshooting purposes.

`CscfACDC` by default starts the script `CscfHealthCheck` to collect basic health check information in the CSCF. For more information, refer to *CSCF Health Check*.

`CscfACDC` also fetches CSCF configuration, data, and logs according to the following predefined groups:

- `cdclsv-pack` (Crash Dump and Console Log Collection Service)
- All CSCF configuration
- PM (Performance Management)
- Core MW (Core Middleware)
- System (different system information)

### 3.2 Execute `CscfACDC`

To execute the `CscfACDC`:

1. Log on to the node, System Controller (SC), or Payload (PL).

```
ssh -A <username>@<OAM IP>
```

2. Run the script without any command line options:

```
> CscfACDC
```

**Result:**

The first time, the user is prompted for different parameters which are stored in the configuration file.

The second time, the user is only prompted for the passwords.



**Note:** If the default values need to be altered for a particular session, use the command line options. For more information, see Section 3.4 Command Line Options on page 6.

### 3.3 Fetch the CscfACDC Logs

The script writes all fetched information to the directory in the persistent storage area.

The CscfACDC reports are located in `<storage-path>/cscfv_cxp9023140_2/acdc/reports/`

The CscfACDC logs are located in `<storage-path>/cscfv_cxp9023140_2/acdc/logs/`. The log-files are packed and compressed in one or several tar files based on the defined `output-max-tarfile-size`.

Attach the files created by CscfACDC to the CSR.

**Note:** It is important to clean up the files from the directory after they have been attached to the CSR (for example deleting files to avoid storage issues). For more information, refer to *Configure Preventive Maintenance Policy Deleting Files in Logical File System*.

Data Collection report and log files can be fetched using File Management. For more information, see Section 5 on page 13.

### 3.4 Command Line Options

By default, the CscfACDC script does not need any command line options, the values from the configuration files are used instead. When using command line options, the options are overruling the configuration file but are not overwriting it.

For information regarding the command line options for the CscfACDC script, see Table 1.

*Table 1 Command line Options for the CscfACDC Script*

Option	Description
-h, --help	Show this help message and exit
-r <i>REPORT</i> , --report = <i>REPORT</i>	Specify the location to save the report. Otherwise the default is used.
-f <i>FILENAME</i> , --filename = <i>FILENAME</i>	Filename prefix for generated files.
-q, --quiet	Print quietly, suppresses details.
--cluster-port = <i>CLUSTER_PORT</i>	Use this option to input Cluster Port.
--cluster-user = <i>CLUSTER_USER</i>	Use this option to input Cluster User.



Option	Description
<code>--oam-host =OAM_HOST</code>	Use this option to input OAM Host Address (that is, Hostname or IP Address)  If the OAM Movable IP (MIP) is configured on the system, the OAM Host Address is automatically retrieved and not prompted for user input.
<code>--oam-ecliport =OAM_ECLIPT</code>	Use this option to input OAM ECLI Port.
<code>--oam-user =OAM_USER</code>	Use this option to input the OAM user.
<code>--cpu-load-threshold = THRESHOLD_CPULOAD</code>	During execution, monitor the CPU load to make sure that it does not exceed a certain value. The threshold is set with this option, the value is given in %.
<code>--diskspace-threshold = THRESHOLD_DISKUSAGE</code>	During execution, monitor the partition disk space to make sure that it does not exceed a certain value. The threshold is set with this option, the value is given in %.
<code>--memory-threshold = THRESHOLD_MEMORYUSAGE</code>	During execution, monitor the memory used to make sure that it does not exceed a certain value. The threshold is set with this option, the value is given in %.
<code>--execution-time = THRESHOLD_EXECUTIONTIME</code>	The maximum time the script can execute before it is stopped. The value is given in seconds.
<code>--oam-netconfport = OAM_NETCONFPORT</code>	Use this option to input OAM NETCONF Port.
<code>--skip-cscf-healthcheck</code>	This option allows ACDC to skip CscfHealthCheck
<code>--skip-cscf-configuration</code>	This option allows ACDC to skip collection of the CSCF configuration.
<code>--skip-cmw-logs</code>	This option allows ACDC to skip collection of Core Middleware logs.
<code>--skip-pm-logs</code>	This option allows ACDC to skip collection of performance measurement logs.
<code>--skip-cdclsv-logs</code>	This option allows ACDC to skip collection of cdclsv logs.



Option	Description
<code>--skip-system-logs</code>	This option allows ACDC to skip collection of System logs.
<code>--pm-data-timeframe = PMF_TIMEFRAME</code>	This option allows the user to specify the timeframe, in hours, of the performance measurement files that are collected.
<code>--output-max-tarfile-size = OUTPUT_MAXTARFILESIZE</code>	This option allows the user to specify the maximum file size, in MB, of the output log files containing the collected data.

## 3.5 Configuration File

When `CscfACDC` is executed for the first time, it creates the configuration file `<user-name>.config`. The user is prompted to enter values for some of the parameters which are stored in the configuration file (except passwords). When the `CscfACDC` script is executed, it behaves according to the configuration file `<user-name>.config` which is available in the persistent storage area `<configuration-path>/cscfv_cxp9023140_2/acdc/`. The users can modify the configuration file to fit their specific needs.

### 3.5.1 Configuration File Syntax

For information regarding the syntax in the configuration file, see Section 3.4 Command Line Options on page 6. For a description of the entries in the configuration file, see Table 2.

Table 2 Configuration File Syntax

Configuration File Entry	Description
<code>cluster.port = &lt;cluster port&gt;</code>	Is option <code>--cluster-port</code>
<code>cluster.user = &lt;cluster user&gt;</code>	Is option <code>--cluster-user</code>
<code>oam.host = &lt;oam host&gt;</code>	Is option <code>--oam-host</code>
<code>oam.ecliport = &lt;ecli port&gt;</code>	Is option <code>--oam-ecliport</code>
<code>oam.netconfport = &lt;netconf port&gt;</code>	Is option <code>--oam-netconfport</code>
<code>oam.user = &lt;O&amp;M user&gt;</code>	Is option <code>--oam-user</code>
<code>threshold.cpuload = &lt;CPU limit in %&gt;</code>	Is option <code>--cpu-load-threshold</code>
<code>threshold.memoryusage = &lt;memory limit in %&gt;</code>	Is option <code>--memory-threshold</code>



Configuration File Entry	Description
<code>threshold.diskusage = &lt;disk use limit in %&gt;</code>	Is option <code>--diskspace-threshold</code>
<code>threshold.executiontime = &lt;time in seconds&gt;</code>	Is option <code>--execution-time</code>
<code>cscf.healthcheck = &lt;yes/no&gt;</code>	Represented by option <code>-skip-cscf-healthcheck</code>
<code>data.cscfconfiguration = &lt;yes/no&gt;</code>	Represented by option <code>-skip-cscf-configuration</code>
<code>data.cmw_logs = &lt;yes/no&gt;</code>	Represented by option <code>--skip-cmw-logs</code>
<code>data.pm_logs = &lt;yes/no&gt;</code>	Represented by option <code>--skip-pm-logs</code>
<code>data.cdclsv_logs = &lt;yes/no&gt;</code>	Represented by option <code>--skip-cdclsv-logs</code>
<code>data.system_logs = &lt;yes/no&gt;</code>	Represented by option <code>--skip-system-logs</code>
<code>pmf.timeframe = &lt;duration in hours&gt;</code>	Is option <code>--pm-data-timeframe</code>
<code>output.maxtarfilesize = &lt;file size in MB&gt;</code>	Is option <code>-output-max-tarfile-size</code>

The configuration parameters in Table 3 are not available as command-line options. Also, the configuration parameters are not stored in the configuration file for security reasons:

**Table 3** Configuration Parameters Not Stored in the Configuration File and Not Available As Command Line Options

Configuration File Entry	Description
<code>cluster.password = &lt;cluster user password&gt;</code>	Use this parameter to input the cluster user password, to be used when SSH to the system controller on the cluster.
<code>oam.password = &lt;O&amp;M user password&gt;</code>	Use this parameter to input the O&M user password, to be used when SSH to ECLI on the cluster.

### 3.5.2 Configuration File Default Values

These are the default values for the configuration file:



```
cluster.port = 22
oam.ecliport = 2022
oam.netconfport = 830
threshold.cpubload = 30
threshold.memoryusage = 65
threshold.diskusage = 70
threshold.executiontime = 1800
cscf.healthcheck = yes
data.cmw-logs = yes
data.pm_logs = yes
data.cdclsv_logs = yes
data.system_logs = yes
data.cscfconfiguration = yes
pmf.timeframe = 72
output.maxtarfilesize = 50
```



## 4 Other Useful Information

This section describes data that is to be included in a CSR if it is easily available and there is enough time to collect it.

### 4.1 IP Addresses

Provide the following IP addresses to the CSR:

- Application Server IP addresses.
- Media Gateway Controller (MGC) IP addresses.
- Any other IP address with which the CSCF is communicating.

**Note:** Individual Client IP addresses are not needed, only the address range is needed.

### 4.2 Wireshark Trace

If possible and available, include a Wireshark® trace showing the failing scenario.

### 4.3 AppTrace

If AppTrace can be run, provide AppTrace logs of the issue to speed up troubleshooting.

For information about how to use AppTrace, refer to *CSCF AppTrace User Guide*.

If the issue is related to a certain user, the UserTrace can be used in production environment. Provide UserTrace logs of the issue to speed up troubleshooting.

For information about how to use UserTrace, refer to *CSCF User Tracing*.

### 4.4 Counters and PMF Files

If applicable, collect, and provide counter information within the Performance Management Function (PMF) files.



## 4.5 HSS User Profile

If the issue is related to a certain user, provide a printout of the Home Subscriber Server (HSS) user profile.

## 4.6 User Data in the CSCF

If the issue is related to a specific user, provide a user data printout of the user in the CSCF. For more information on how to make a user data printout in the CSCF, refer to *CSCF User Data Output Guideline*.





## 5 File Management

The Data Collection report and log files are exposed by File Management in the following file group structure:

- FileGroup=Cscf
  - FileGroup=DataCollection
    - FileGroup=ReportFiles
    - FileGroup=LogPackages

The file group `ReportFiles` includes reports (in `html` and `txt` file format) about how collecting of the different information and logs proceeded when the ACDC script was executed. The file group `LogPackages` includes tar files with information and logs that was fetched by the ACDC script when it was executed.

For more information on file groups, refer to *Handling Files*.