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Cell Consistency Check User Guide

User Guide

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Contents

1 Cell Consistency Check User Guide

Short Description

Cell Consistency Check audits the LTE network managed by ENM to identify inconsistencies with the WCDMA network managed by OSS-RC, where OSS-RC is regarded as the master for the WCDMA cell data being audited.

A file containing OSS-RC cell data is used as input to an audit. The audit consists of the following activities:

— Parsing the input file.

— Comparing the data in the input file with the WCDMA cell data on the LTE nodes managed by ENM.

— Generating an import file containing all the updates needed to make the LTE nodes consistent with the WCDMA network.

The import file is in Ericsson Dynamic File Format (EDFF).

Note: The import of the generated import file is a separate activity and is not performed by Cell Consistency Check.

There are two use cases supported:

— Traffic Consistency Check - The input is a maximum of five BCG export files that contain data for some or all the WCDMA cells managed by an OSS-RC instance. If inconsistencies are found, the generated import file contains the changes needed to update the relevant cell parameters and the cell frequency.

— Re-Parenting Audit - The input is a maximum of five RRPM output files, each of which contains up to 180 WCDMA cells, which have been moved from one RNC to another RNC. If inconsistencies are found, the generated import file contains the changes needed to update the relevant cell parameters.

2 Display Cell Consistency Check Help

Context Description

This task shows how to display the command line help for Cell Consistency Check.

Prerequisites

— User has either the `Scripting_Operator` role assigned or Scripting Access CLI capability assigned to a custom role. This allows access to the general scripting VMs and permissions to use Cell Consistency Check.

— User has either the `CM_REST_Operator` or the `CM_REST_Administrator` role assigned, or Cell Management NBI read capability assigned to a custom role. This is required because Cell Consistency Check uses the Cell Management application to perform the audit.

— User has `Cmedit_Administrator` role assigned. This allows the import of the generated file.

— User has logged on to one of the general scripting VMs using SSH.

Note: To connect to the general scripting VMs, see *Log on to a Scripting KVM* in the ENM Operators Guide.

Expected Result

Command line help for the Cell Consistency Check utility is displayed on the terminal.

Steps

1. Run the following command to display the command line help:

```
[<user>@scp-1-scripting ~]$ cellcc --help

usage: cellcc -at {tcc,rep} -f FILE [FILE ...] [-ar AUDIT_RESULTS_FILE]
              [-u USERNAME] [-p PASSWORD] [--url URL] [-h]

Cell Consistency Check utility.

Mandatory arguments:
  -at {tcc,rep}, --audittype {tcc,rep}
                        The audit type
  -f FILE [FILE ...], --file FILE [FILE ...]
                        Path to the file (OSSRC BCG export file can be xml o →
r
                        gz. Re-parenting file can be text file)

Optional arguments:
  -ar AUDIT_RESULTS_FILE, --audit-results-file AUDIT_RESULTS_FILE
                        The file name of the resulting import file containin →
g
                        changes identified by the auditing
  -u USERNAME, --username USERNAME
```

```
                        User name to authenticate against ENM
  -p PASSWORD, --password PASSWORD
                        Password to authenticate against ENM
  --url URL             ENM's domain url
  -h, --help            show this help message and exit
```

3 Run Traffic Consistency Check

Context Description

This task shows how to run the traffic consistency check using the Cell Consistency Check utility.

Prerequisites

— User has either the `Scripting_Operator` role assigned or Scripting Access CLI capability assigned to a custom role. This allows access to the general scripting VMs and permissions to use Cell Consistency Check.

— User has either the `CM_REST_Operator` or the `CM_REST_Administrator` role assigned, or Cell Management NBI read capability assigned to a custom role. This is required because Cell Consistency Check uses the Cell Management application to perform the audit.

— User has the `Cmedit_Administrator` role assigned. This allows the generated file to be imported.

— User has logged on to one of the general scripting VMs using SSH.

Note: To connect to the general scripting VMs, see *Log on to a Scripting KVM* in the ENM Operators Guide.

— The 3GPP Bulk Export file from OSS-RC that contains the WCDMA cells to be audited has been transferred to the general scripting VM.

Note: Use the following MO type filter to reduce the file size when exporting from OSS-RC. A full export file is also supported but takes longer to parse.

```
RncFunction,UtranCell
```

Expected Result

An Ericsson Dynamic File Format (EDFF) import file has been generated. The name of the file is in this format:
`<input_filename>_results_tcc_<timedatestamp>.txt`

Steps

1. Run the following command to perform the Traffic Consistency Check:

```
[<user>@scp-1-scripting ~]$ cellcc --audittype tcc --file <path to OSS-RC ex →
port file>
```

Note: To save disk space, remove the OSS-RC export file and the generated import files when they are no longer required.

Example 1

```
[<user>@scp-1-scripting ~]$ cellcc --audittype tcc --file rncOssExport.xml.gz
   ____     _ _    ____                _     _
  / ___\___| | |  / ___\___  _ __  ___(_)___| |_ ___ _ __   ___ _   _
 / /  / _ \ | | / /  / _ \| '_ \/ __| / __| __/ _ \ '_ \ / __| | | |
/ /__|  __/ | |/ /__| (_) | | | \__ \ \__ \ ||  __/ | | | (__| |_| |
\____/\___|_|_|\____/\___/|_| |_|___/_|___/\__\___|_| |_|\___|\__, |
                                                              |___/
                  ____ _               _
                 / ___\ |__   ___  ___| | __
                / /   | '_ \ / _ \/ __| |/ /
               / /___ | | | |  __/ (__|   <
               \_____/|_| |_|\___|\___|_|\_\


Testing connection to ENM                                                    →
  [     Ok     ]


Audit source file: rncOssExport.xml.gz


Opening session(s) to ENM                                                    →
  [     Ok     ]
Executing audit type: tcc                  96 cell(s) found. Processing...   →
  [     Ok     ]
Processing results                                                           →
  [     Ok     ]


Summary Report:
[    96    ] total number of cells
[    96    ] cells audited
[    0     ] cells not audited
[    96    ] cells with inconsistencies
[    0     ] operations failed, please see error file for details

Please find results at: rncOssExport_results_tcc_2017-01-25_134636.txt


Auditing completed.
```

4 Run Re-Parenting Audit

Context Description

This task shows how to run the re-parenting audit using the Cell Consistency Check utility.

Prerequisites

— User has either the `Scripting_Operator` role assigned or Scripting Access CLI capability assigned to a custom role. This allows access to the general scripting VMs and permissions to use Cell Consistency Check.

— User has either the `CM_REST_Operator` or `CM_REST_Administrator` role assigned or Cell Management NBI read capability assigned to a custom role. This is required because Cell Consistency Check uses the Cell Management application to perform the audit.

— User has the `Cmedit_Administrator` role assigned. This allows the import of the generated file.

— User has logged on to one of the general scripting VMs using SSH.

Note: To connect to the general scripting VMs, see *Log on to a Scripting KVM* in the ENM Operators Guide.

— The RRPM Re-Parenting log file from OSS-RC that contains the WCDMA cells to be audited has been transferred to the General Scripting VM.

Expected Result

An Ericsson Dynamic File Format (EDFF) import file has been generated. The name of the file is in this format: -
`<input_filename>_results_rep_<timedatestamp>.txt`

Steps

1. Run the following command to perform the Re-Parenting Audit:

```
[<user>@scp-1-scripting ~]$ cellcc --audittype rep --file <path to RRPM Re-P →
arenting log file>
```

Note: To save disk space, remove the RRPM Re-Parenting log file and the generated import files when they are no longer required.

Example 2

```
[<user>@scp-1-scripting ~]$ cellcc --audittype rep --file rrpmfile.log
  / __\___| | |   / __\___  _ __  ___(_)___| |_ ___ _ __   ___ _   _
```

```
  / /  / _ \ | | / /  / _ \| '_ \/ __| / __| __/ _ \ '_ \ / __| | | |
 / /__|  __/ | |/ /__| (_) | | | \__ \ \__ \ ||  __/ | | | (__| |_| |
 \____/\___|_|_|\____/\___/|_| |_|___/_|___/\__\___|_| |_|\___|\__, |
                                                                |___/
              ___ _              _
             / __\ |__   ___  ___| | __
            / /  | '_ \ / _ \/ __| |/ /
           / /___| | | |  __/ (__|   <
           \____/|_| |_|\___|\___|_|\_\


Testing connection to ENM                                                  [
    Ok     ]


Audit source file: rrpmfile.log


Opening session(s) to ENM                                                  [
    Ok     ]
Executing audit type: rep                  96 cell(s) found. Processing... [
    Ok     ]
Processing results                                                         [
    Ok     ]


Summary Report:
[    96    ] total number of cells
[    96    ] cells audited
[    0     ] cells not audited
[    96    ] cells with inconsistencies
[    0     ] operations failed, please see error file for details

Please find results at: rrpmfile_results_rep_2017-01-25_134636.txt


Auditing completed.
```

5 Run Cell Consistency Check with Multiple Input Files and Single Output File

Context Description

This task shows how to run the Cell Consistency Check utility with multiple input files. A single Ericsson Dynamic File Format (EDFF) import file is generated.

This task is valid for both the Traffic Consistency Check and Re-Parenting Audit.

Prerequisites

- User has either the `Scripting_Operator` role assigned or Scripting Access CLI capability assigned to a custom role. This allows access to the general scripting VMs and permissions to use Cell Consistency Check.
- User has either the `CM_REST_Operator` or `CM_REST_Administrator` role assigned, or Cell Management NBI read capability assigned to a custom role. This is required because Cell Consistency Check uses the Cell Management application to perform the audit.
- User has the `Cmedit_Administrator` role assigned. This allows the import of the generated file.
- User has logged on to one of the general scripting VMs using SSH.

  Note: To connect to the general scripting VMs, see *Log on to a Scripting KVM* in the ENM Operators Guide.

- Either the 3GPP bulk export files or the RRPM re-parenting log files that contain the WCDMA cells to be audited from OSS-RC have been transferred to the general scripting VM.

Note: Use the following MO type filter to reduce the file size when exporting from OSS-RC. A full export file is also supported but takes longer to parse.

```
RncFunction,UtranCell
```

It is not supported to mix the input file types. That is, only provide a list of export files or a list of RRPM files.

Expected Result

A single Ericsson Dynamic File Format (EDFF) import file has been generated. The name of the file is at the operators discretion.

Steps

1. Run the following command to perform the Cell Consistency Check. A maximum of five files are supported. (This example uses the Re-Parenting Audit.)

   ```
   [<user>@scp-1-scripting ~]$ cellcc --audittype rep --file <path to RRPM Re-P →
   arenting log file1> <path to RRPM Re-Parenting log file2> --audit-results-fi →
   le reparenting.txt
   ```

   Note: To save disk space, remove the OSS-RC export files, the RRPM re-parenting log files, and the generated import files when they are no longer required.

Example 3

```
[<user>@scp-1-scripting ~]$ cellcc --audittype rep --file rrpmfile_oss1.log rrpm →
file_oss2.log --audit-results-file reparenting.txt
   ___      _ _     ___                _     _
  / __\___| | |   / __\___  _ __  ___(_)___| |_ ___ _ __   ___ _   _
 / /  / _ \ | |  / /  / _ \| '_ \/ __| / __| __/ _ \ '_ \ / __| | | |
/ /__|  __/ | | / /__| (_) | | | \__ \ \__ \ ||  __/ | | | (__| |_| |
\____/\___|_|_| \____/\___/|_| |_|___/_|___/\__\___|_| |_|\___|\__, |
                                                               |___/
                    ___ _               _
                   / __\ |__   ___  ___| | __
                  / /  | '_ \ / _ \/ __| |/ /
                 / /___| | | |  __/ (__|   <
                 \____/|_| |_|\___|\___|_|\_\


Testing connection to ENM                                                    [ →
     Ok     ]


Audit source file: rrpmfile_oss1.log


Opening session(s) to ENM                                                    [ →
     Ok     ]
Executing audit type: rep                  96 cell(s) found. Processing...   [ →
     Ok     ]
Processing results                                                           [ →
     Ok     ]


Summary Report:
[    96    ] total number of cells
[    96    ] cells audited
[    0     ] cells not audited
[    96    ] cells with inconsistencies
[    0     ] operations failed, please see error file for details

Please find results at: reparenting.txt



Audit source file: rrpmfile_oss2.log


Opening session(s) to ENM                                                    [ →
     Ok     ]
Executing audit type: rep                  89 cell(s) found. Processing...   [ →
     Ok     ]
Processing results                                                           [ →
     Ok     ]


Summary Report:
[    89    ] total number of cells
[    89    ] cells audited
```

```
[    0     ] cells not audited
[    1     ] cells with inconsistencies
[    0     ] operations failed, please see error file for details

Please find results at: reparenting.txt


Auditing completed.
```

6 Run Cell Consistency Check with Multiple Input Files and Multiple Output Files

Context Description

This task shows how to run the Cell Consistency Check utility with multiple input files. Multiple Ericsson Dynamic File Format (EDFF) import files are generated.

This task is valid for both the traffic consistency check and re-parenting audit.

Prerequisites

— User has either the `Scripting_Operator` role assigned or Scripting Access CLI capability assigned to a custom role. This allows access to the general scripting VMs and permissions to use Cell Consistency Check.

— User has either the `CM_REST_Operator` or `CM_REST_Administrator` role assigned, or Cell Management NBI read capability assigned to a custom role. This is required because Cell Consistency Check uses the Cell Management application to perform the audit.

— User has `Cmedit_Administrator` role assigned. This allows the import of the generated file.

— User has logged on to one of the general scripting VMs using SSH.

Note: To connect to the general scripting VMs, see *Log on to a Scripting KVM* in the ENM Operators Guide.

— Either the 3GPP Bulk Export files or the RRPM Re-Parenting log files that contain the WCDMA cells to be audited from OSS-RC have been transferred to the General Scripting VM.

Note: Use the following MO type filter to reduce the file size when exporting from OSS-RC, a full export file is also supported but takes longer to parse.

```
RncFunction,UtranCell
```

It is not possible to combine the input file types. That is, either a list of Export files or a list of RRPM files can be used.

Expected Result

Multiple Ericsson Dynamic File Format (EDFF) import files have been generated, one for each input file. The name of the files is in this format:
`<input_filename>_results_<audittype>_<timedatestamp>.txt`

Steps

1. Run the following command to perform the Cell Consistency Check. A maximum of five files are supported. (This example uses Traffic Consistency Check.)

```
[<user>@scp-1-scripting ~]$ cellcc --audittype tcc --file <path to OSS-RC ex
port file1> <path to OSS-RC export file2>
```

Note: To save disk space, remove the OSS-RC export files, the RRPM re-parenting log files, and the generated import files when they are no longer required.

Example 4

```
[<user>@scp-1-scripting ~]$ cellcc --audittype tcc --file rncOssExport.xml.gz cm
_exp_20161206_125703.xml
   ___     _ _    ___                _     _
  / __\___| | |  / __\___  _ __  ___(_)___| |_ ___ _ __   ___ _   _
 / /  / _ \ | | / /  / _ \| '_ \/ __| / __| __/ _ \ '_ \ / __| | | |
/ /__|  __/ | |/ /__| (_) | | | \__ \ \__ \ ||  __/ | | | (__| |_| |
\____/\___|_|_|\____/\___/|_| |_|___/_|___/\__\___|_| |_|\___|\__, |
                                                              |___/
                   ___ _               _
                  / __\ |__   ___  ___| | __
                 / /  | '_ \ / _ \/ __| |/ /
                / /___| | | |  __/ (__|   <
                \____/|_| |_|\___|\___|_|\_\


Testing connection to ENM
[     Ok     ]


Audit source file: rncOssExport.xml.gz


Opening session(s) to ENM
 [     Ok     ]
Executing audit type: tcc                 96 cell(s) found. Processing...
 [     Ok     ]
Processing results
 [     Ok     ]


Summary Report:
[    96    ] total number of cells
[    96    ] cells audited
[    0     ] cells not audited
[    96    ] cells with inconsistencies
[    0     ] operations failed, please see error file for details

Please find results at: rncOssExport_results_tcc_2017-01-25_134636.txt



Audit source file: cm_exp_20161206_125703.xml


Opening session(s) to ENM
 [     Ok     ]
Executing audit type: tcc                 89 cell(s) found.Processing...
 [     Ok     ]
Processing results
 [     Ok     ]


Summary Report:
[    89    ] total number of cells
[    89    ] cells audited
[    0     ] cells not audited
```

```
[    1     ] cells with inconsistencies
[    0     ] operations failed, please see error file for details

Please find results at: cm_exp_20161206_125703_results_tcc_2017-01-25_134644.txt


Auditing completed.
```

Reference List

[1] *ENM Operators Guide*, 1/1553-AOM 901 151