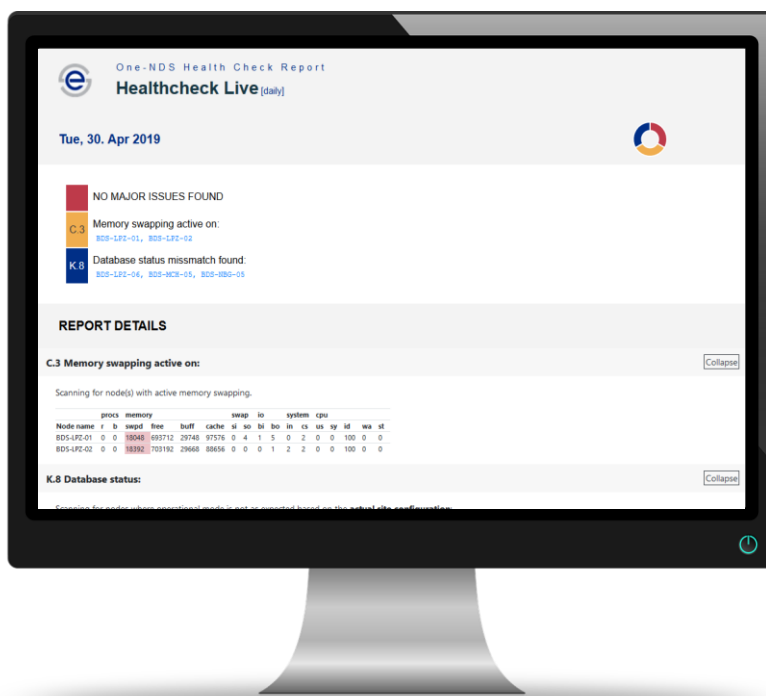


One-NDS Health Checks

product sheet



One-NDS Health Checks

One-NDS is an indispensable part of the telecommunication infrastructure and therefore needs special attention when it comes to maintenance and care. As a central directory service, it manages the subscriber data, their services and interfaces with other applications, e.g. HLR (Home Location Register) or HSS (Home Subscriber Server) of the operator. A failure of the One-NDS - or already a limited availability or functionality - causes the service provider to fail because the access to the subscriber data no longer works or only to a limited extent. The provisioning system of the network operator is also dependent on One-NDS and would also be affected by a failure.

One-NDS Health Checks and the resulting findings enable you to identify potential problems in One-NDS at an early stage and to take timely appropriate countermeasures. The software package provided by SilverEngine serves to supplement the monitoring provided by the manufacturer.

Regular *One-NDS Health Checks* and the systematic evaluation of the results of the review runs provide a significant, additional component for running One-NDS, which reduces the likelihood of a disaster – i.e. a failure or a service restriction – of One-NDS and thus for the One-NDS-running applications and services in the mobile network.

Whether your One-NDS system is smaller or larger, replacing manual routine tasks with fully automated verification and evaluation, allows your employees to focus on important tasks. The specially designed reports of the *One-NDS Health Check* are provided with the necessary detailed information to facilitate the rapid detection and elimination of potential risks.

One-NDS Health Checks are highly configurable and flexible, and can be easily adapted to any One-NDS system. Combined with minimal requirements for the target system and the automatic evaluations, it is the right toolset for your One-NDS system.

PRODUCT OVERVIEW

One-NDS Health Checks provide a variety of checks for immediate use. The following checks are currently included:

Basic Checks	Automatic topology detection Database software version Provisioning Gateway module versions Security hardening list check on Provisioning Gateway Checks of HP Blade Firmware Versions (Bios, NIC)
Database Key Parameter Checks	DB running processes DB process memory and CPU usage Process restarts Server Restarts Disk capacity usage Database memory utilization Database status
Alarm-Log Analysis	Scanning of Alarm-Logs based on patterns and repeating occurrences of events on routing and backend database servers
Configuration Checks	Shared Memory In-Memory Journal

Network Checks	Linux swap and cron Jobs
	Network connections
	Linux bonding configuration Packet fragmentation
Database Checks	Backup consistency Database traffic utilization Subscriber Statistics based on customer defined queries

The individual checks can be executed either daily, weekly or manually at any time, as desired. For this purpose, so-called run profiles are created, which are then automatically executed by means of configuration at the desired time. At the end of each run, you get an interactive report in HTML format, which lists the existing problems ordered by priority (Major, Minor, Information), efficiently and clearly organized.

REPORT DETAILS

C.3 Memory swapping active on:

Scanning for node(s) with active memory swapping.

Node name	r	b	swpd	free	buff	cache	si	so	bi	bo	in	cs	us	sy	id	wa	st
BDS-LPZ-01	0	0	38048	693712	29748	97576	0	4	1	5	0	2	0	0	100	0	0
BDS-LPZ-02	0	0	38392	703192	29668	88656	0	0	0	1	2	2	0	0	100	0	0

K.8 Database status:

Scanning for nodes where operational mode is not as expected based on the **actual site configuration**:

Site configuration is evaluated on each run of health check to define:

- Primary Site = most nodes are Primary
- Primary Standby Site = most nodes are Primary Standby

Node name	Current site	Expected site	Operation mode
BDS-MCH-05	B	C	Primary
BDS-NBG-05	C	B	Primary Standby
BDS-LPZ-06	A	B	Primary Standby

The HTML report files can be sent via E-Mail and/or secure file transfer to external systems. It is also possible to archive the HTML report files on the Health Check Server and comfortably access it via a HTML WebGUI.

In addition to the *Health Checks*, we also provide an analysis tool that can help post-analysis in case of network failures/incidents. The tool analyzes symptoms and creates a report in which the database link states and server states are graphically displayed (HTML format) showing the situation at the required time. These reports can be generated backwards in time with a second granularity.

REQUIREMENTS

One-NDS Health Checks expect only minimal requirements on the target system. The checks run on any Linux-based server, if Bash is available. No additional software is required on the One-NDS nodes or on the Health Check Server. *One-NDS Health Checks* use SSH to connect to One-NDS nodes, and (optionally) SMTP for distribution of HTML reports.

One-NDS Health Checks read and process only data available in the system, but do not make any changes to the system itself. Therefore, read only access is enough.

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