CleverView® for TCP/IP on Linux 2.7

One Monitor for all Your Linux Platforms

IBM z, IBM LinuxONE, IBM Power, and Open Systems

CLEVER® Business Cloud Service Management

The majority of IT departments are in the midst of redesigning their data centers and in many cases moving to a cloud centric infrastructure. The use of Linux on z System is a common element of an enterprise cloud centric data center. This interest is driven primarily by the desire to reduce cost while simultaneously implementing the ability to support an increasingly virtualized, cloud enabled, and dynamic data center.

One of the most important characteristics of the contemporary data center is that an ever-increasing amount of the traffic is between servers, and a majority of these servers are Linux/UNIX based. As such, a critical goal of the next generation data center is to facilitate high availability and performance tuned server-to-server communications.

IT staff need access to server performance and availability details from not only their browser desktops, but also their cell phones, and they need a more concise way to view server status. With the CLEVER Mobile® for Linux app they have access anytime, anywhere!

Linux plays a major role in the cloud marketplace, but the application environment still has many problems across the life cycle. Length of time to develop and excessive resource utilization have been two major problems during application development and rollout. DOCKER containers make it easy for developers, system administrators, support teams, and others to quickly test, ship and run an application in a container streamlining the development lifecycle.

Monitoring DOCKER containers and the performance of container based applications can be challenging because of the large number and dynamic nature of containers running different microservices. Keeping track of key metrics and events like container details and container resource utilization are critical to gain visibility into the performance of the applications inside your container. Leveraging this information enables detection of anomalies in the container behavior, microservices and resource bottlenecks.

The resulting high performance and agile environment is popular for digital transformations and blockchain implementations, helping clients embrace the new digital and hybrid cloud workloads.

Key Features

- **Supports Linux/UNIX on all platforms** including IBM's z Systems, Power Systems, and LinuxONE

- **Mobile and browser interfaces** ensure real-time notification of problems leading to increased Linux service availability

- Integrates Linux/UNIX details with IBM z System metrics via the **SMF Host Utility**

- Identifies performance bottlenecks for standalone and virtual servers with **LinuxView, KVMView,** and **Dashboard**

- Aggregates Linux/UNIX hosts with **ClusterView** providing crisp and clear view allowing trend, pattern, and anomaly identification

- Interrogates resource CPU and memory consumption for each Linux process and container with **ProcessView** and **DockerView™**

- Alerts on TCP/IP protocol and applications with **Connect Expert** and **PortMon**

- Warns of data slow-down and potential data transfer failures with **LinkView** and **OSA-Express**

- Zoom in on specific items being monitored such as ports, and resources using **PinPoint**

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Applied Expert Systems - The Business Cloud Service Management Company
Highlights of CleverView® for TCP/IP on Linux

- **LinuxView** and **LinuxView Dashboard** provide centralized, customizable overview of activity with information on Linux/UNIX servers, alerts, workload, connections, ports, devices, diagnostic/alert data, and more providing users the insight needed to make performance improvements using either a dashboard or text report views.
- **ClusterView** aggregates Linux/UNIX hosts providing crisp and clear consolidation of metrics allowing trend, pattern, and anomaly identification.
- **LinkView** shows the traffic and status of links associated allowing quick response to any slowdowns in information movement.
- **ProcessView** maintains real-time resource utilization for Linux processes, such as CPU and memory, resulting in impact identification of Linux systems issues.
- **Connect Expert** checks ports and connectivity to all sessions running over TCP/IP in real-time, as well as showing real-time UDP data yielding details on connection failures.
- **PinPoint**, with its user-friendly tabular menu, provides a quick, easy way to zoom in on a specific resource or activity providing additional details leading to problem resolution.
- **OSA-Express Monitoring** analyzes extensive metrics on Ethernet Adapter throughput, LPAR throughput, and overall adapter utilization which provides a dynamic health- check of OSA-Express in support of Linux running on a System z environment.
- The **Alert** reports alarm users with diagnostic information on the performance and availability of Links, Ports, Processes, Critical Resources, and Protocols allowing immediate response to major problems.
- **Real-Time Monitoring** provides a continuous, interactive awareness of response times and availability for critical resources that require communication to/from Linux based Business Services, including servers, routers, and desktops, all on one screen.
- **Snapshot Thru24** reports show near-time IP throughput data for Links, Processes, Ports, and Critical Resources exposing near-real time changes in monitored resources.
- **History** reporting allows the user to monitor IP workload and customer SLAs, to track response times historically, and to investigate specific performance issues.
- **Commands with security options** provide the diagnostic power needed to easily diagnose potential problems and resolve them quickly.
- **CLEVER Mobile for Linux app** is an optional feature providing access to CleverView for TCP/IP on Linux from a mobile device.
- **SMF Host Utility** integrates Linux monitored metrics with z/OS SMF records expanding enterprise insight into performance and availability.
- **Alert Notification Report** summarizes alert information based on alert initiation and alert clear functions providing clear and concise information to the enterprise knowledge worker.
- **KVMView** providing state, CPU count, memory used, max memory, and CPU used along with the ability to drill down into the TCP/IP statistics for the KVM selected.

CleverView for TCP/IP on Linux v2.7 introduces the following new features:

- **DockerView™** – New function includes:
  - Container details including resource utilization and process information with drill down capability.
  - Image details including repository and image ID with historical details.
  - System Info displaying Docker system-wide details for a given Linux node.
- Enhanced Dashboard – Several new options have been added including the ability to download a graph image, manipulate graph formats, display raw data, and a zoom features with one click navigation to view Alert Details from the Alerts Summary graph

CleverView for TCP/IP on Linux v2.7 is in managed availability as of April 14, 2017.

System Requirements
- **Linux Servers:** SUSE Linux Enterprise Server 11 or above, or Red Hat® Enterprise Linux® 6 or above, Ubuntu 16.04 LTS or above, Docker 1.10 or above..
- **Hardware/Processor Platforms:** IBM z Systems, IBM LinuxONE, IBM Power, x86(64-bit)
- **Database:** MySQL™ Server 5.0 or above (distributed with Linux)
- **MIB Agent:** Net-SNMP Version 5.3 (distributed with Linux)
- **Java Web Server:** Apache Tomcat 8.5 or above, and JDK/JRE Version 7 or above
- **Web Browser:** IE 8.0 or above, Edge, Mozilla Firefox 40.x or above, or Chrome
- **OSA-Express**: OSA-Express Direct SNMP subagent (Required for OSA collection on Linux on z System)

Optional feature CLEVER Mobile for Linux System Requirements
- **Android:** 4.0 or above
- **iOS:** 5.0 or above