Rittal – The System.
Faster – better – worldwide.

RiZone – Data Centre Infrastructure Management
RiZone – Data Centre Infrastructure Management

What can the RiZone Data Centre Infrastructure Management Software do?

1. The management platform for all components in the physical data centre infrastructure.
   - Fast configuration, automatic detection of all active Rimatrix components.
   - Precise adaptation to requirements, a modular licence model.
   - Efficient administration of the physical infrastructure (from the “single-enclosure data centre” through to the redundant data centre), with a high level of flexibility.

2. RiZone can communicate with a server management system. This allows the server management system to receive new information that has not been acquired previously and so permits optimum management of the data centre.

3. Support of the SNMP protocol for connecting and monitoring all equipment in the physical IT infrastructure.
**RiZone is modular and scalable. For small companies through to large data centres**

- Administration, monitoring and control of: access, climate control, power supply and safety. It does not matter whether a single rack or one or more data centres at different locations are involved.

**RiZone – From monitoring, to administration, to response**

- The automated functions permit automated monitoring of the data centre.
- Mathematical equations can be used to link arbitrary data.
- The graphically created workflows specify the automated mechanisms that generate warnings or intervene directly in the infrastructure.

**Why choose Rittal RiZone?**

RiZone is Rittal’s DCIM solution that enables easy and efficient monitoring and control of the physical infrastructure of a data centre. This improves the efficiency of the data centre.

The high availability demands of data centre users necessitates a comprehensive security management system. The prerequisite for this is that all components and parameters of the building, server room and data centre which are relevant for security and availability must be monitored. The brand new feature in RiZone is the implementation of all messages, sensor values and actuators in the IT infrastructure and server environment into a plausible message chain. The formulaic correlation in RiZone Editor transforms individual warnings, data or signals into logical information and actions, for protection of the data centre’s availability.

**RiZone – The data centre management platform supports standardised protocols**

- The integration into a management environment is supported by SNMP. RiZone offers the option of using the IT management protocol to forward messages. On the active component side, SNMPv1, v2 and v3 are supported.

**RiZone communicates with third-party devices**

- RiZone uses the optional module for the SNMP support of third-party equipment to communicate with SNMP-compatible devices made by any manufacturers (prerequisite: device MIB available).

Such imported data and values can be further processed in the same manner as the values for Rittal devices.
RiZone – Outstanding benefits for users
See your IT in context from now on

Mindful of availability, rationalisation and future orientation, the physical infrastructure of the IT landscape must be viewed in context. RiZone offers this context in a new, user-friendly format.

Key for security:
Take preventive action
RiZone identifies hot-spots on servers or pending phase overloads early on. Immediate changes to the climate control or power supply ensure a considerably enhanced level of reliability in day-to-day operation.

Key for resource planning:
Identifying trends
Extensions to IT may be implemented transparently using RiZone. Permanent monitoring supplies clear data on any trend developments, enabling the user to respond promptly to any bottlenecks, and reliably plan the expansion or improvement of the IT infrastructure.

Key for energy efficiency:
Optimise functions
RiZone represents the energy consumption of individual racks right through to complete data centres. Consumption is related to the corresponding infrastructure. RiZone supplies the PUE ratio (Power Usage Effectiveness) of all components in the IT infrastructure as the basis for energy optimisation of the data centre.

Efficiency example:

Assume the servers in your data centre have a maximum power consumption of \( X \) kW. Correspondingly, the cooling output must be designed for this maximum output in unfavourable ambient temperatures. As this diagram of weekly operation shows, unless properly managed, a typical cooling system is oversized most of the time. Here, RiZone saves energy by intelligently adapting the cooling output of all components in the “cooling chain” (free cooling, chillers, UKS, LCP) to power consumption and ambient temperature.
RiZone – Simple incorporation of all components

RiZone – Perfect support of Rittal IT infrastructure components

Rittal components – from server enclosures to climate control, from power supply to security and monitoring technology – receive optimum support during integration and in the operational phase, thanks to coordinated sensors and control.

- The physical data centre infrastructure is incorporated into a data centre infrastructure management system.
- Simple configuration

- Automatic detection of Rittal components
- Workflow editor for user-defined scenarios (what happens if …)
- Increased security and reliability
- Energy optimisation in the data centre
- Integration of SNMP-compatible third-party equipment

RiZone plus Rittal components – the Rittal system solution with maximum energy efficiency.
Rittal RiZone

**RiZone Visualisation**
- Alarms overlay schematic or photographic representations. The complete overview is customised for each application.

**RiZone Charts**
- All values imported or calculated by RiZone can be grouped and shown in diagrams as required.

**RiZone Autodiscovery**
- Rimatrix components and SNMP-compatible third-party devices (optional) are detected in the network.

1. The main low-voltage distributor
2. Uninterruptible power supply (UPS)
3. Air/water heat exchanger Liquid Cooling Package (LCP)
4. Chiller for IT cooling
5. Aisle containment
6. PDR rack
7. Rack monitoring system Rittal CMC III
RiZone – The solution for your data centre, from the very first rack

Application example for monitoring and control of the infrastructure in individual server racks

The requirements governing the control algorithms of RiZone are identical, whatever the size of the data centre. This means that RiZone is designed for use in any IT application. It supports the management of any IT infrastructure components.

RiZone is composed of several licence modules.

The user can choose between a “Software Appliance” or “Hardware Appliance” licence depending on whether RiZone should run on a true server or in a virtual environment.

The second element in the modular licence system is the number of monitored nodes (IP addresses). Depending on requirements, users can choose between licences ranging from 10 to 1000 nodes.

RiZone adapts ideally to the needs of small and large companies.
The availability of the IT infrastructure must be protected regardless of the size of the company, be it a “one-rack data centre” or a large “server farm”. Big or small, RiZone always offers full functionality for controlling and monitoring all IT components. RiZone can be adapted to the size of the company with a flexible licence model.

Application example for monitoring and control of the IT infrastructure in small and medium-sized data centres

RiZone adapts ideally to all the requirements of a data centre, enabling it to keep pace with a company’s IT requirements.

- The Workflow Engine allows the representation of automated monitoring and control scenarios.
- The Calculation Engine allows the mathematical linking of the data centre components. This gives users a view of their data centres which is not possible with an isolated consideration of the individual components.
RiZone – Outstanding transparency for complex applications
Application example for monitoring and control of the entire IT infrastructure with a complex data centre and a cooling concept for efficient use of electricity, water and air.

High heat loads in modern data centres, maximum availability, and the most energy-efficient climate control system available. To accommodate all three of these requirements, you need an individual concept.

Room and rack technology, low-voltage distribution and UPS, cooling generation and targeted distribution can operate reliably and efficiently if coordinated by an all-in-one administration, monitoring and control concept.

The main aim of RiZone:
Maximum cost savings!

Security in the event of damage
The powerful RiZone core means that all messages are reliably processed, even in the event of damage to the data centre. The core selects according to message levels and ensures that these are represented in the GUI and the user is not unnecessarily supplied with redundant information.

Management of a distributed company-wide infrastructure
RiZone is capable of managing complex infrastructures, making it possible to monitor a company-wide IT landscape (even distributed over several locations). The geographical layout of the project (corresponding to the sites) facilitates easy browsing through a company's IT infrastructure.

The IT infrastructure is adapted to the IT load
For the first time, the opportunity of forwarding data from RiZone into a management tool for the server, operating system, visualisation and application allows data centre operators to adapt the IT infrastructure to the IT load.

In conjunction with RiZone, parts of the data centre may be switched to idle mode, and activated as and when needed. When the required computing capacity drops off, e.g. during the evening or at weekends, RiZone in conjunction with a superordinate management system (e.g. SCOM) is able to consolidate individual servers or server enclosures. This permits the concentration of the IT load onto a few selected enclosures, and thus increases the data centre's efficiency.

Rittal RiZone ensures optimum use of the data centre infrastructure and reduced energy costs.
A node licence model for up to 1000 IP addresses covers even large-scale infrastructure installations.
Licences

RiZone Appliance Standard
RiZone is supplied as an appliance or a software appliance.
As an appliance, RiZone is supplied with global support, installed on a powerful server. The software appliance is available as a virtual server which can easily be used on existing hardware in the data centre.

| Standard version | Model No. DK
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<tr>
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<tbody>
<tr>
<td>Hardware appliance</td>
<td>Server with Windows RiZone software RiZone graphics tool</td>
</tr>
<tr>
<td></td>
<td>7990.101 7990.201 7990.301</td>
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<tr>
<td>Software appliance</td>
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<tr>
<td></td>
<td>7990.103 7990.203 7990.303</td>
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</tbody>
</table>

1) All Model Nos. on the same line belong together, and must always be ordered together.

Also required:
RiZone Appliance IP node licence according to the number of IP nodes available.

RiZone Appliance IP node licence
The flexible RiZone licence model allows optimum adaptation to any project size, while at the same time allowing the opportunity to grow with the data centre.

The volume licences for the IP nodes are graduated from 10 to 1000 nodes and may be adapted precisely to the size of the data centre. For each active component or other SNMP-compatible component to be covered, one node licence is required.

<table>
<thead>
<tr>
<th>For no. of IP nodes</th>
<th>Console licences included</th>
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<td>20</td>
<td>7990.211 7990.311</td>
</tr>
</tbody>
</table>

1) All Model Nos. on the same line belong together, and must always be ordered together.

RiZone module SNMP support for units from other manufacturers
For the incorporation of SNMP-compatible units from other manufacturers into RiZone. With MIB browser.

<table>
<thead>
<tr>
<th>Extension</th>
<th>Model No. DK</th>
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Microsoft Operations Manager Management Pack
For integrating RiZone into the Microsoft Operations Manager.

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<tr>
<td>Microsoft SCOM Management Pack</td>
<td>7990.012</td>
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RiZone – A completely new dimension of efficiency

Modular and scalable, Rittal IT infrastructure components for access, climate control, power supply and security are administered, monitored and controlled via RiZone. The building control system may also be integrated (e.g. via a BACnet SNMP gateway).

As well as SNMPv1 and v2, communication via SNMPv3 is now also supported. The encryption and authentication options with SNMPv3 produce major security benefits in the data centre.

With the optional RiZone module “SNMP support for third-party equipment”, any equipment from third-party manufacturers may be incorporated into RiZone, provided they support the SNMP as standard and the corresponding MIB is available. These readings are processed in exactly the same way as the readings from Rittal equipment, either via mathematical links, in workflows, or graphically processed into various diagrams.
RiZone – Customer-focussed, cost-efficient

Seven good reasons to choose RiZone

- Energy optimisation throughout the entire data centre
- Simple project management
- Automatic detection of Rittal components
- Increased security and reliability of the data centre
- Incorporation of building control system components via gateways
- Linking of the physical data centre infrastructure into a network management system
- Communication with third-party devices via SNMP

Combine the sum total of all RiZone benefits with the particular benefits offered by Rittal, whatever your requirements.

- Comprehensive consultation and services
- Holistic system concept
- Fast, immediate delivery service
- Global and local presence

Measurements of RiZone-compatible components (example)

**UPS**
- Inverter status
- Status of primary network
- Battery status

**CMC**
- Temperature
- Humidity
- Access

**PSM/PDU**
- Current measurement of PSM bars
- Measurement of the power consumption per socket with active PSM
- Switching of individual sockets

**Ri4Power**
- Current
- Voltage
- Energy
- Performance

**Dynamic Rack Control**
- Basic rack data (location etc.)
- Basic component data (manufacturer, type, U etc.)
- Extended component data (device category, electrical output data etc.)

**Cooling/LCP**
- Inlet temperature
- Setpoint (target value)
- Averaged air injection temperature

**Chiller**
- Inlet and return temperature
- Pump speed
- Operating mode
- Current consumption

Measurements of RiZone-compatible components (example)
The Bavarian State Office for Taxes/Data Centre North

The Bavarian State Office for Taxes with the Bavarian Tax Administration data centre (Data Centre North) provides IT services for 110 regional tax offices throughout Bavaria, Germany.

More than 470 CMC systems and 1200 PCU multiple-socket outlets serve as monitoring and control agents in the field. All environmental variables, such as temperatures, power, smoke, intrusion and fan functions, are acquired.

To manage this large number of systems, the IT infrastructure administrators require a tool that automatically detects and analyses faults and alarms and so can initiate subsequent measures. These include, for example, the automatic shutdown or – via the PCU multiple-socket outlets – the remote switch-on or switch-off of distributed servers if specified temperature limit values are overshot or undershot, and in the event of a power failure.

Consequently, the Bavarian State Office for Taxes decided on Rittal’s RiZone infrastructure monitoring software. This tool allows not only the simple and uncomplicated creation of analyses and reports but also effectively changes existing configurations and threshold values on all systems.

The graphical representation can be flexibly customised to the application. The active Rittal system components can be easily scanned in the network and assigned to the graphic.

This solution, in particular, brings the efficient automation for operating the modern IT infrastructure of the Bavarian State Office for Taxes.
Rittal – The System.

Faster – better – worldwide.

- Enclosures
- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services