

Business Ecosystems

Create The Future With Us

Business Ecosystems Overview

BE Console Management System

Business Continuity Problems

Continuous Monitoring

In the event of a failure that leads to the inaccessibility of the corporate network for the remote site, the continuity of monitoring will be disrupted.

Out-of-band independent monitoring over wireless communication channels will avoid time intervals when IT infrastructure elements are unavailable for monitoring.

Reducing Recovery Time Objective

As a result of the failure of individual elements of the IT infrastructure, the network may become unavailable for remote recovery and require the physical presence of specialists.

To reduce the recovery time, it is important to provide reliable remote access after a failure.



Fault Localization

To take the necessary measures to eliminate the accident, it is necessary to accurately localize and classify a failure. Incorrect localization and classification of the failure does not allow taking measures aimed at its elimination.

Point-based monitoring of IT infrastructure elements through independent channels allows quick action to eliminate the failure.

Root Cause Analysis

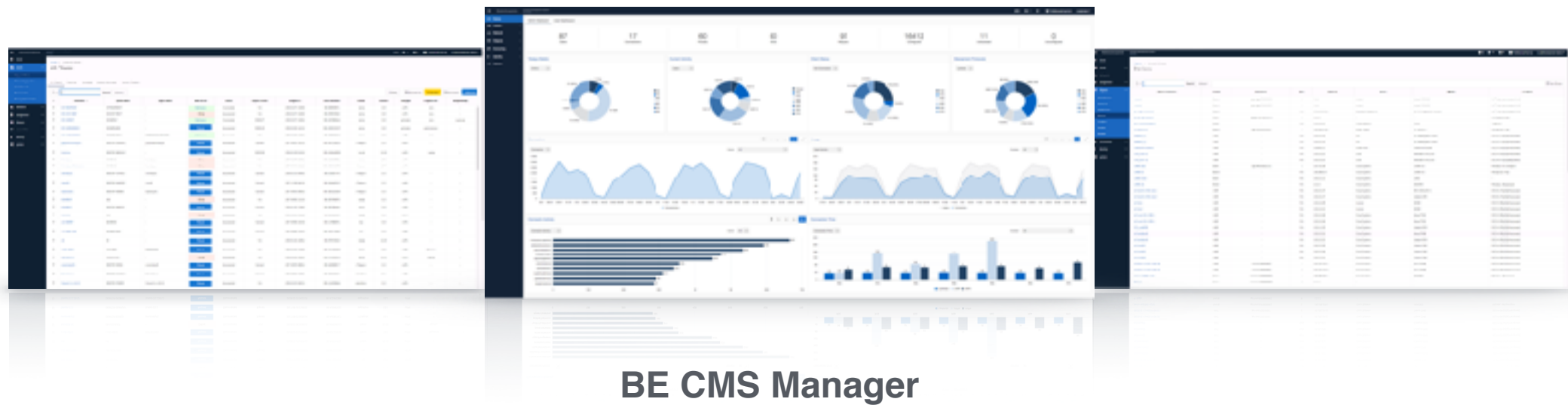
A software failure eliminates the possibility of establishing its cause for traditional monitoring systems.

The access to equipment via RS-232 console ports during a failure allow the tracking of the status of the device at the moment of failure.

Our Solution — BE Console Management System

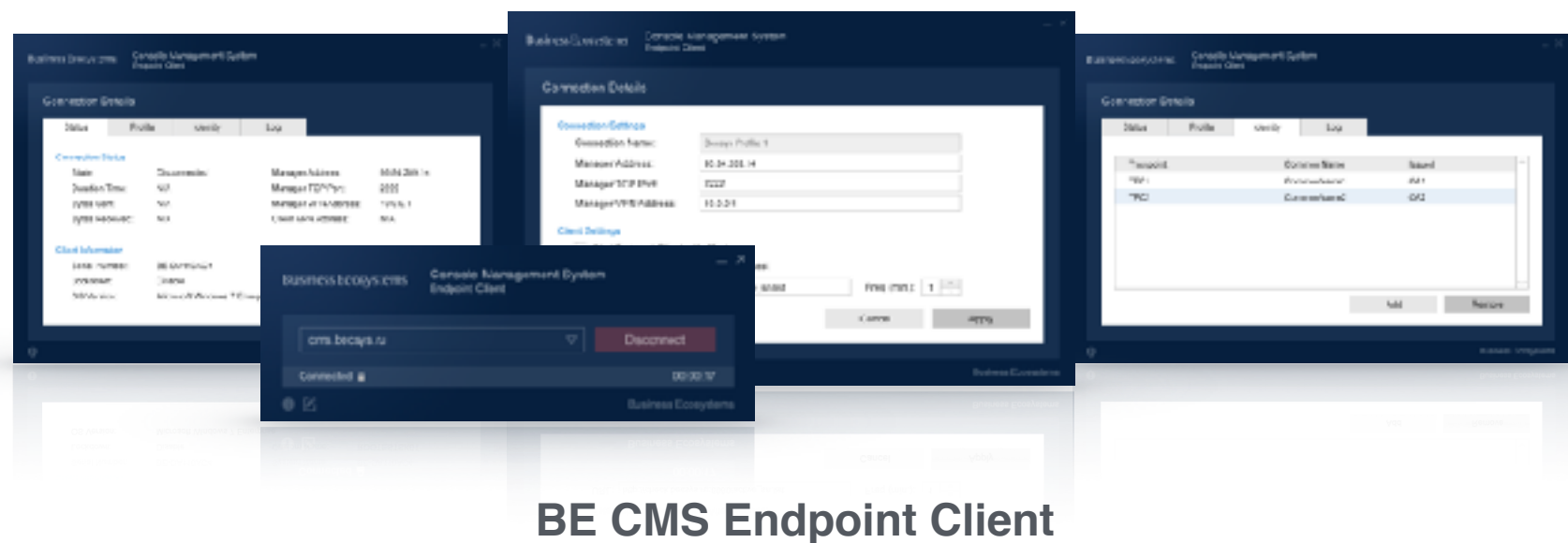
Manager

BE CMS Manager is a management component that allows you to manage settings of BE CMS Appliances and monitor the status of the management network, allowing users to receive a guaranteed network and console access to equipment and IT infrastructure applications with the ability to power management from a single console.



Endpoint Client

BE CMS Endpoint Client provides access to servers, work stations and preinstalled applications. This component allows access to corporate network hosts and Internet hosts.



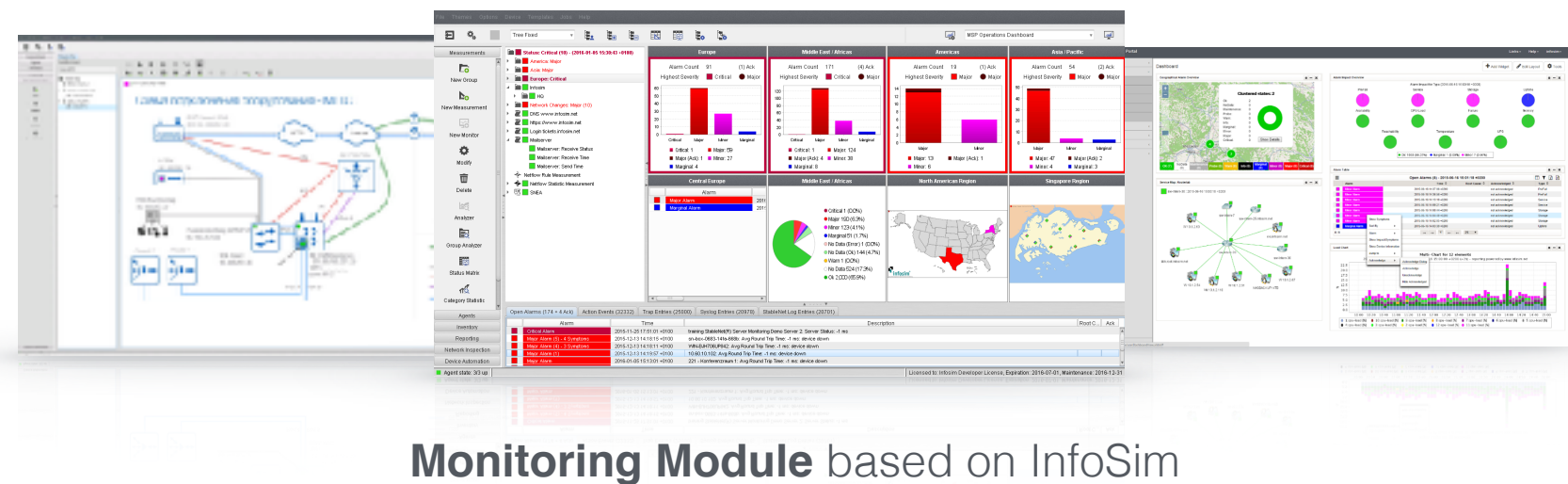
Appliances and Power Distribution Units

BE CMS Appliance provides up to 12 simultaneous connections to consoles and equipment up to 1000 simultaneous connections to applications through the available network links such as Ethernet, Wi-Fi or GSM with the ability to automatically select the optimal communication channel. BE PCS Power Distribution Unit is a high-tech unit designed to intelligently manage AC and DC power supply networks with automatic backup voltage (AVR) and monitoring of the load.



Monitoring Module

The **monitoring module** of BE CMS is designed to generate events (alerts) about failures and identify the source of the incident, analyze the performance of equipment, servers and applications. The component performs control of service level agreement (SLA) of channels and generates reports.



BE CMS Manager

Key Features

The management system (BE CMS Manager) provides secure management of the BE CMS Appliance from a single console.

BE CMS Manager allows you to differentiate access, manage administrator access, perform logging and auditing management sessions for hardware devices and applications and to monitor the status of BE CMS Appliances.

Advantages

- BE CMS Manager allows users to receive guaranteed network and console access to the equipment and IT infrastructure applications with the ability of power management from a single console.
- To Manage BE CMS Appliance parameters and to monitor the status of the management network.

Graphic Interface



BE CMS Manager

BE CMS Endpoint Client

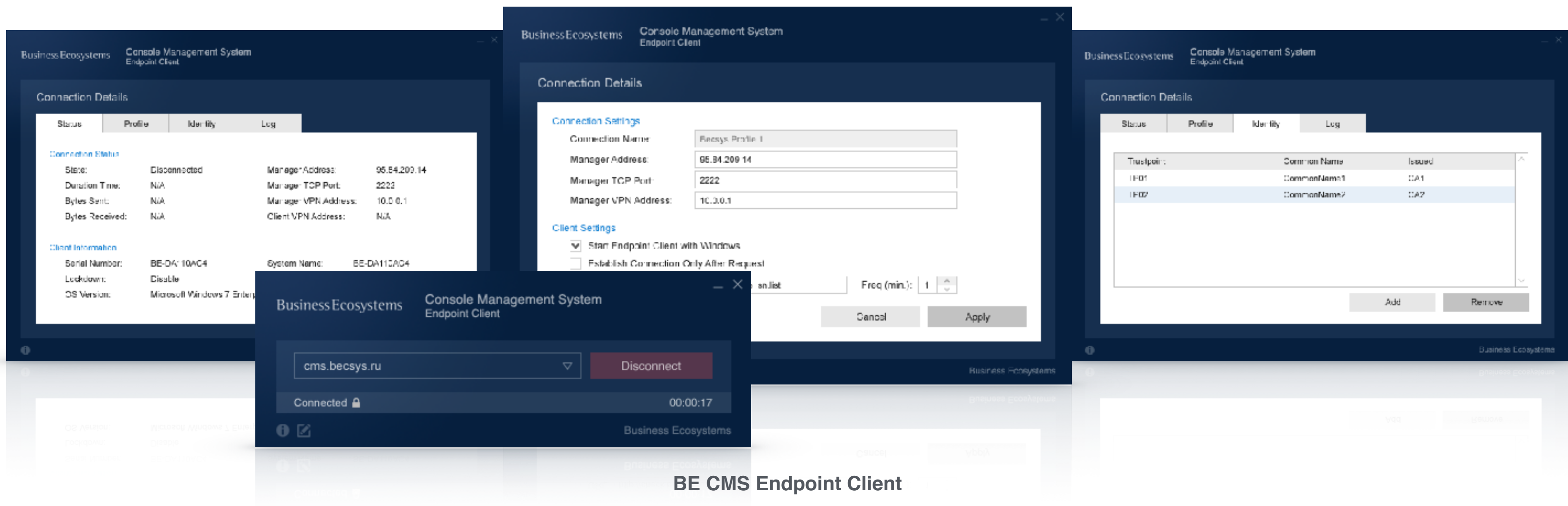
Assignment

- **Remote Services.** Allows the maintenance of workstations and servers at the corporate network and the Internet.
- **User Support.** Allows increased effectiveness of user support service, reducing maintenance time.
- **Remote Access.** Reduces the number of visits for maintenance by remote access to workstations and servers.

Graphic Interface

Advantages

- **Economical.** Saves time and money for the organization. Payback Period is usually less than 1 year providing a quick return of investment.
- **High Security.** Data is not transmitted via third-party services. The system is deployed on existing infrastructure. All transmitted data is encrypted.
- **Centralized Management.** Management functions are integrated into a single console BE CMS Manager.



BE CMS Appliances

Functions

- The portable unit BE CMS Appliance P6 is designed for reliable management of the IT infrastructure of small offices or branches, as well as the rescue and recovery operations and commissioning.
- The rack mount unit BE CMS Appliance R12 is designed to provide a reliable IT infrastructure management of large offices, data centers and service providers.

Models



BE CMS Appliance R12



BE CMS Appliance P6

Additional Components

- Server and workstation control appliance **BE CMS KVM**;
- Unified port connectors to RS-232 (DB-9, RJ-45, USB A/B, mini/micro USB), etc. interfaces;
- Temperature, humidity, pressure, light, telecommunication rack door opening sensors;
- Mounting kit (for vertical and horizontal instalment into the portable model rack).
- Webcam and headset for receiving consultations from remotely located specialists during transfer switch and commissioning works.

Advantages

- Automatic switching of communication channels in accordance with the selected priority.
- Secure access to applications in accordance with access control lists.
- Unified console access to the equipment with connectors RJ45, mini/micro USB and DB9.
- Ability to connect WEB-cameras and Bluetooth headsets.
- Protection against short-circuit due to external ground presence.
- Increased reliability in rack mount series equipment due to failover mechanism.
- Possibility of independent operation for 2 hours due to integrated battery in portable series devices.

BE CMS Power Distribution Units

Key Features

- Ability to manage DC and AC power systems.
- Flexible deployment of power distribution units BE CMS PDU due to SNMP management.
- Ability to connect sensors for environmental parameters monitoring for implementation of specific business tasks.
- Local management for power outlets with lockdown function for local management.
- Granular management in every equipment connection point.
- Outlet status preservation after restarting.
- Automatic switching between power input (AVR).
- Zero down time during firmware upgrade.
- Guaranteed voltage supply to terminals, even in case of failure of the control board.

Advantages

- **Reliable access.** Power management network based on several channels such as Ethernet, Wifi and GSM.
- **Management interface.** Gaining access to power management comes from a single console with a quick search functionality.
- **AC/DC power systems support.** Equipment supports both AC and DC power systems with on schedule management.
- **Intelligent management.** Power management, depending on the parameters of environment, monitored by special sensors.
- **Security.** Role based access control, encryption of management channel, auditing management sessions and integration with SIEM-systems.
- **Monitoring.** Tracking the status of power management and integration with the monitoring systems of third-party vendors.

Models



BE PCS Low Amper PDU P4

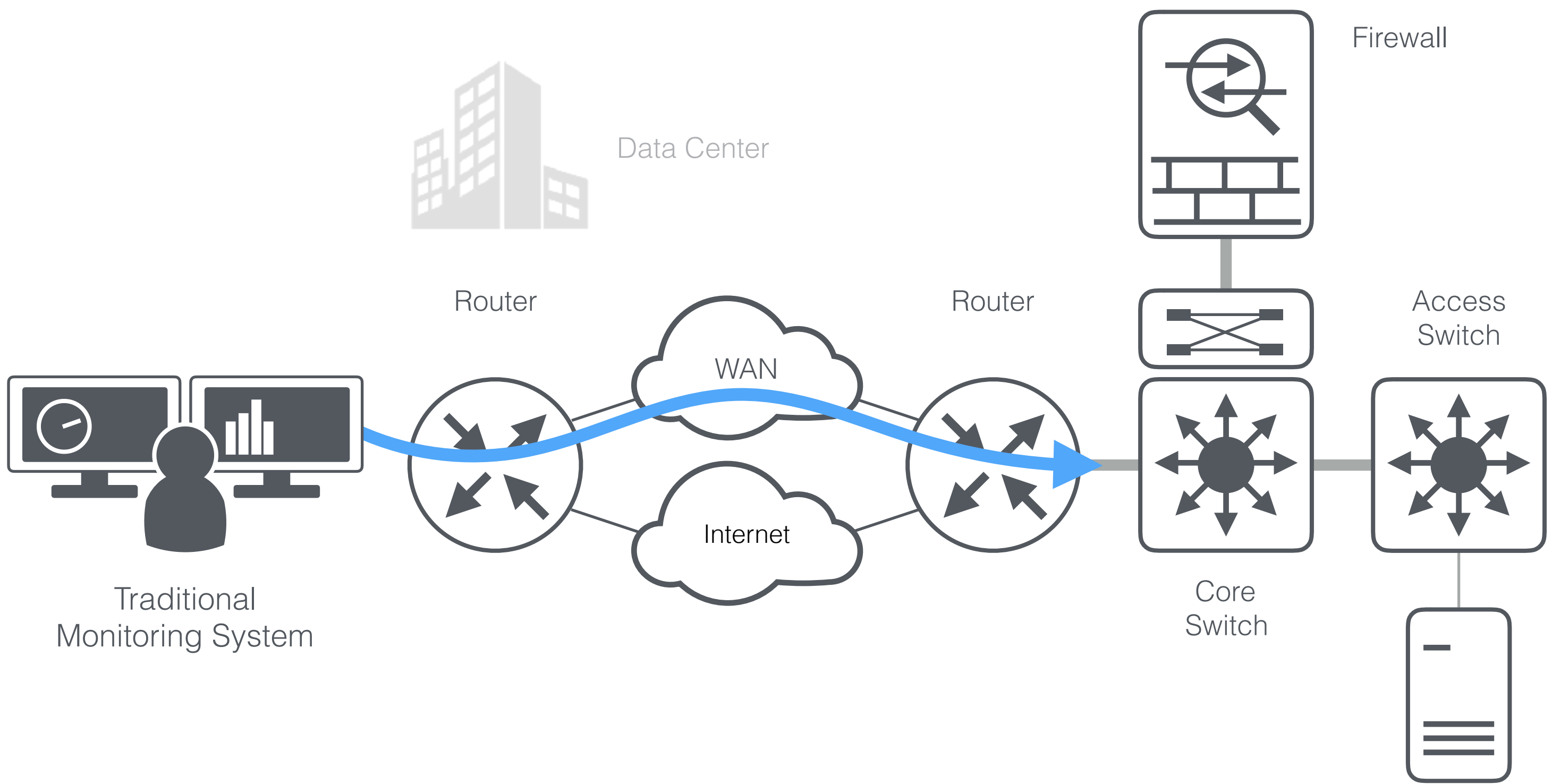


BE PCS Middle Amper PDU R8

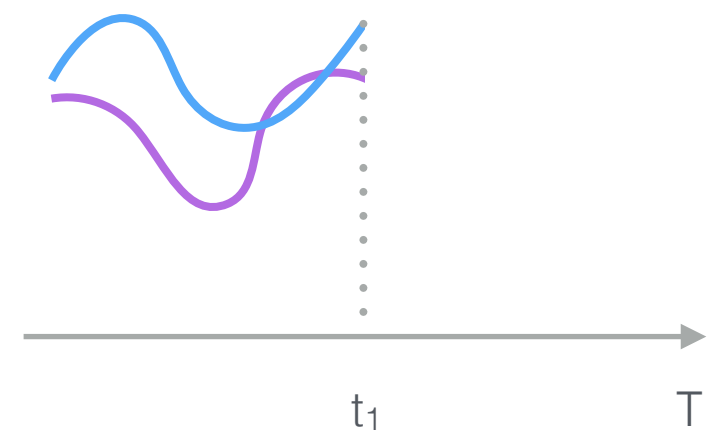


BE PCS High Amper PDU R8

Key Problems of High Availability

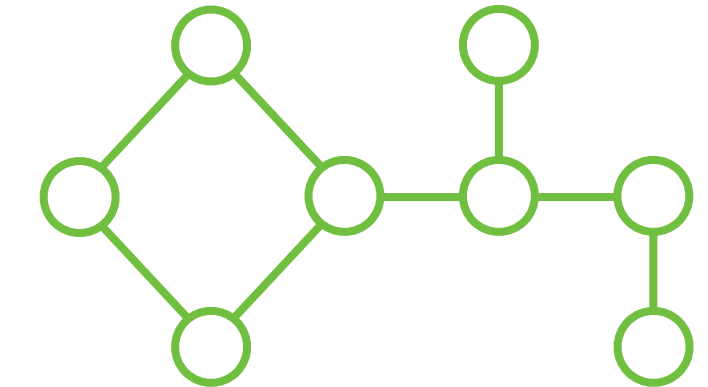


1. Continuous Monitoring



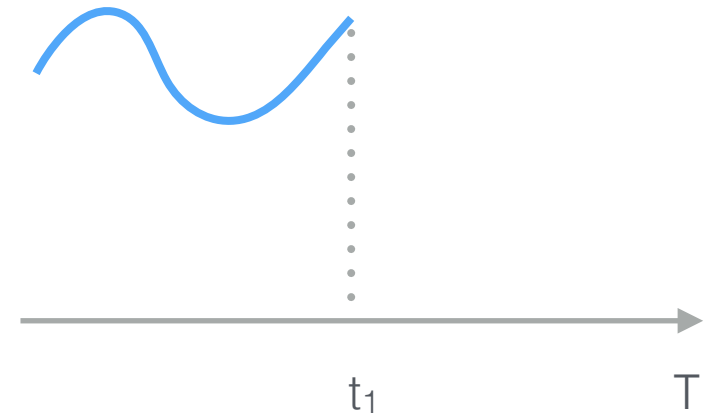
Events proceed continuously.

2. Fault Localization



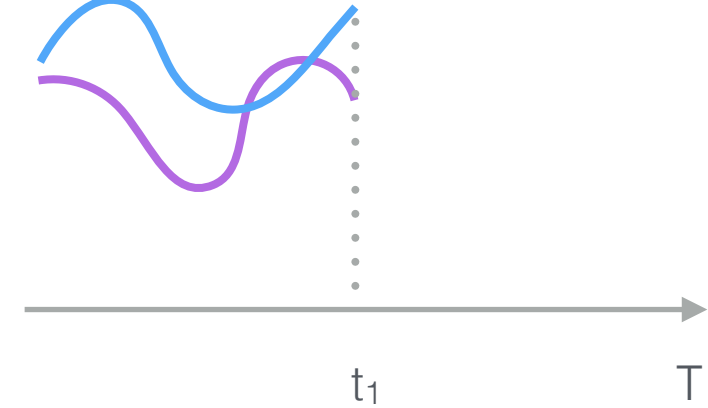
Events proceed continuously.

3. Root Cause Analysis



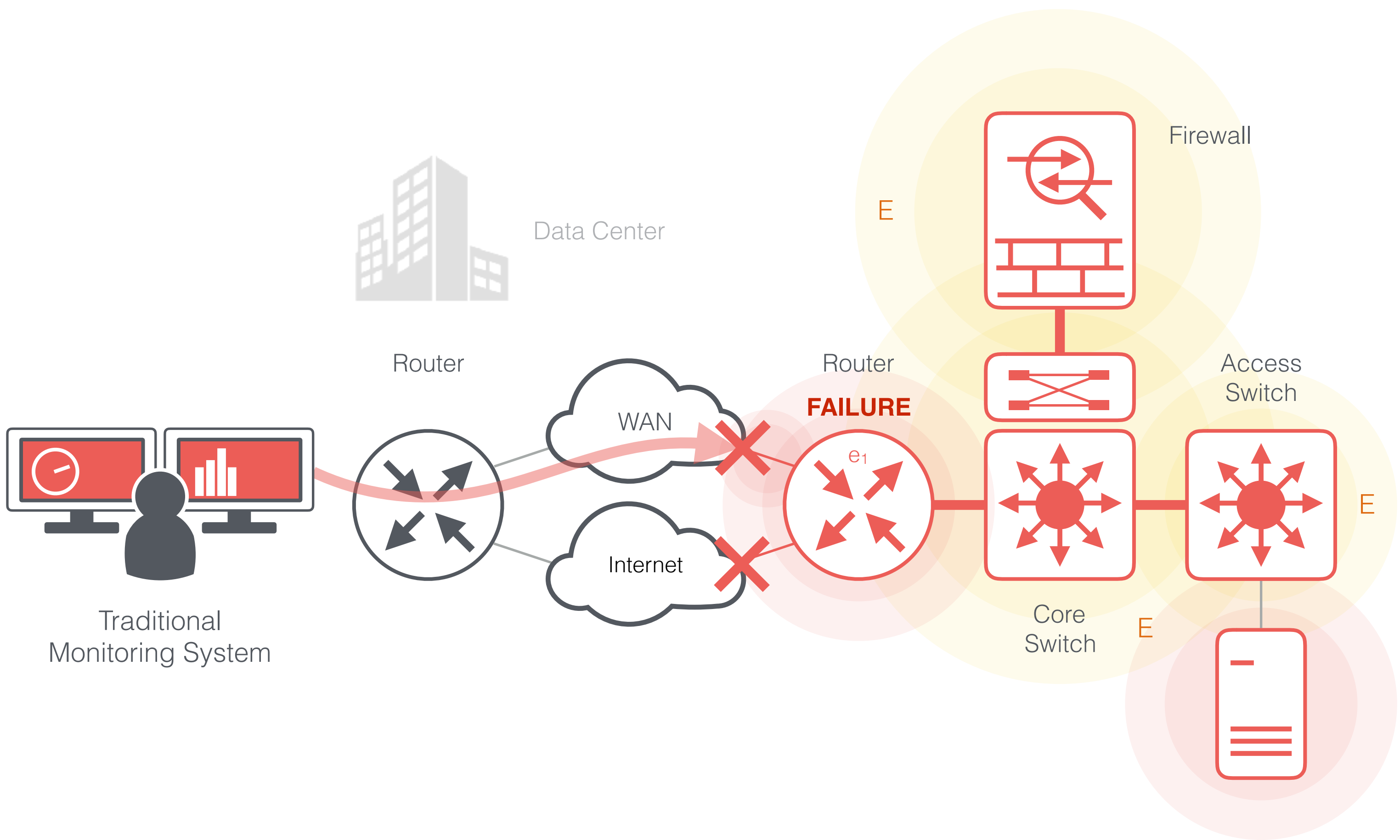
Normal mode of operation.

4. Recovery Time Objective

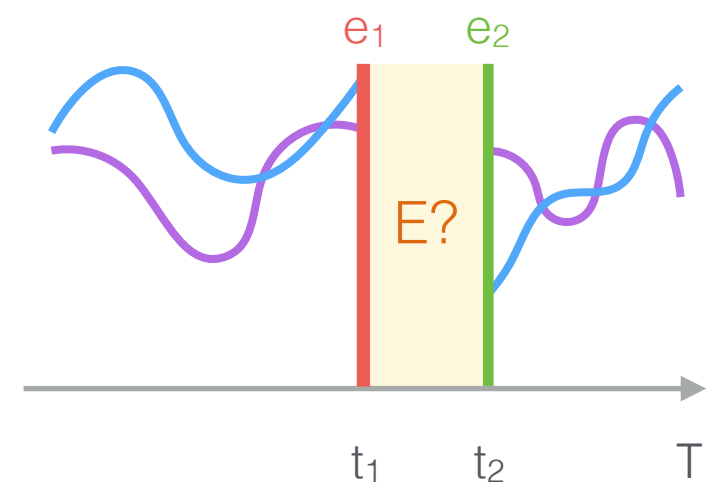


Normal mode of operation.

Key Problems of High Availability

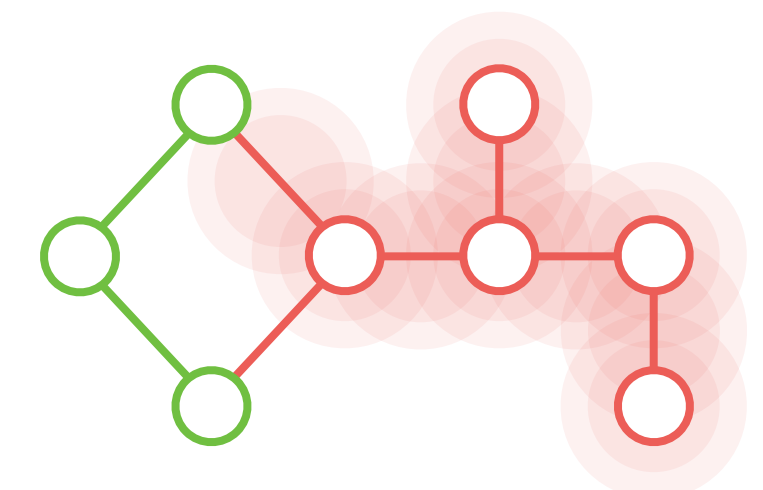


1. Continuous Monitoring



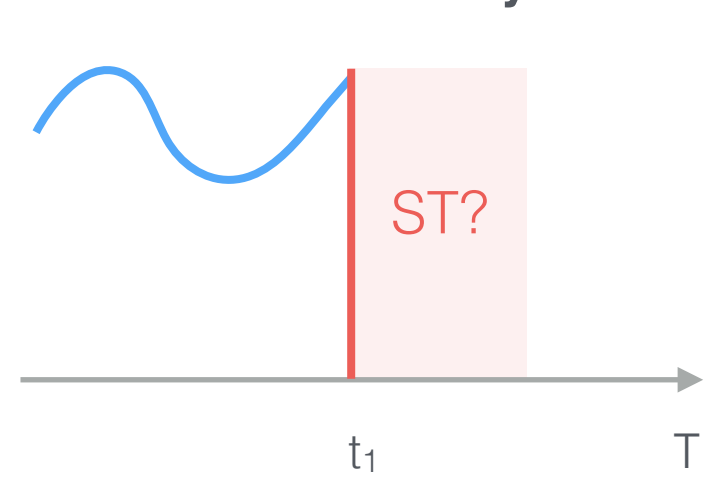
Incomplete status information from other devices after the failure.

2. Fault Localization



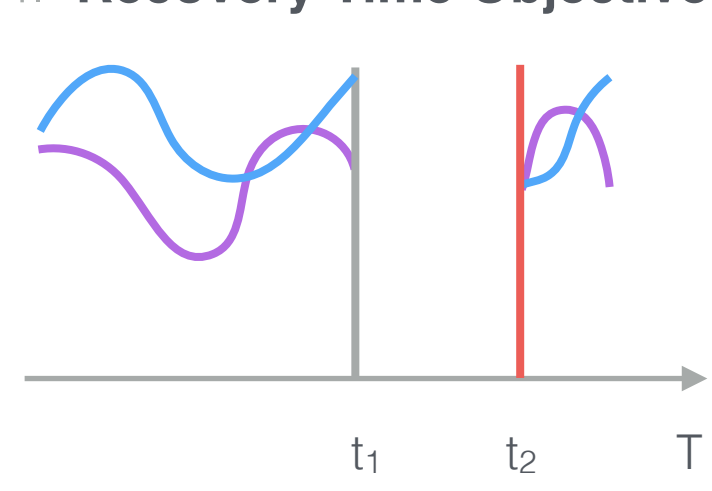
It is impossible to identify the cause of the failure if it was behind a router.

3. Root Cause Analysis



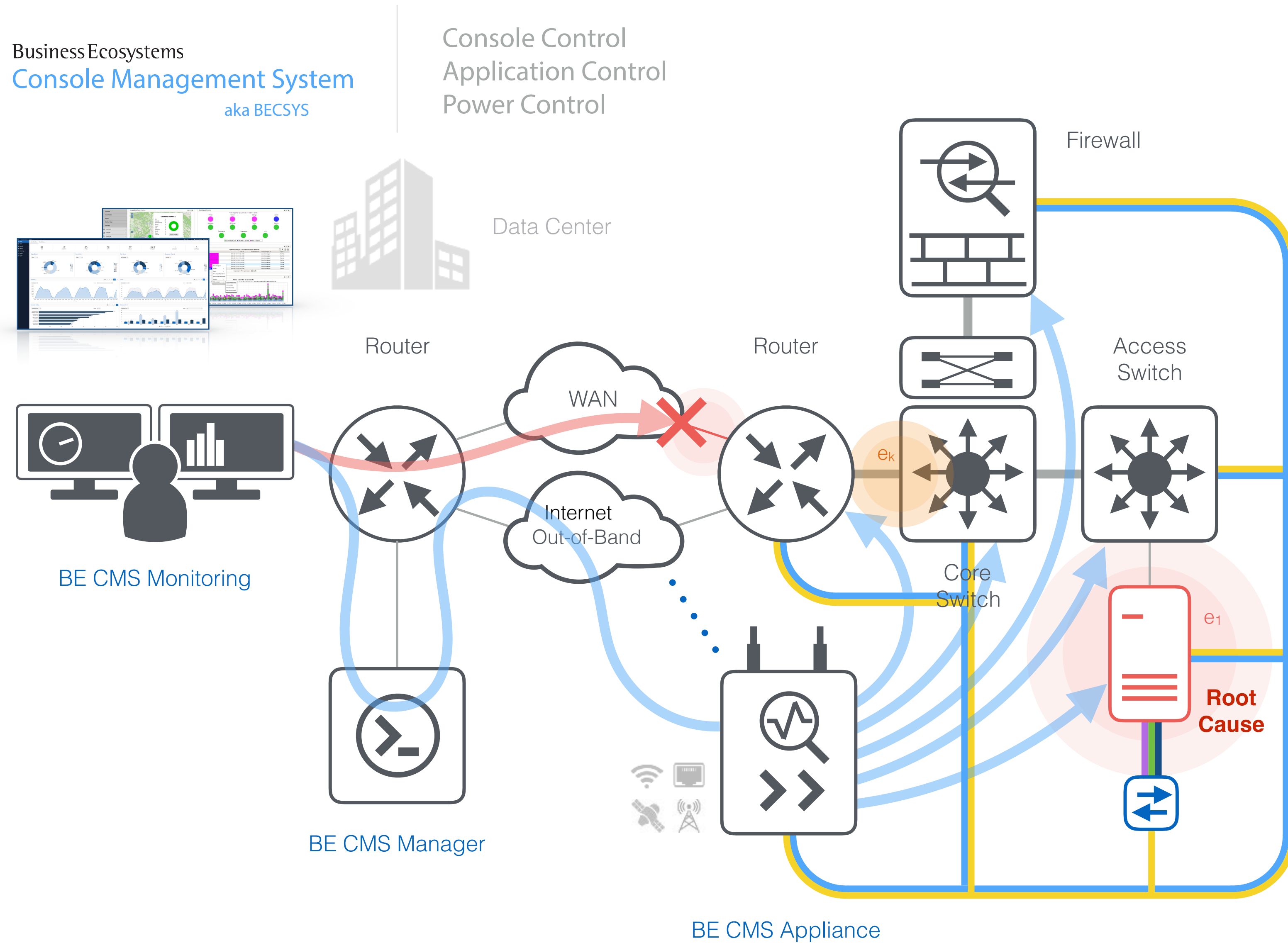
It is impossible to determine the state of the device at the time of failure.

4. Recovery Time Objective

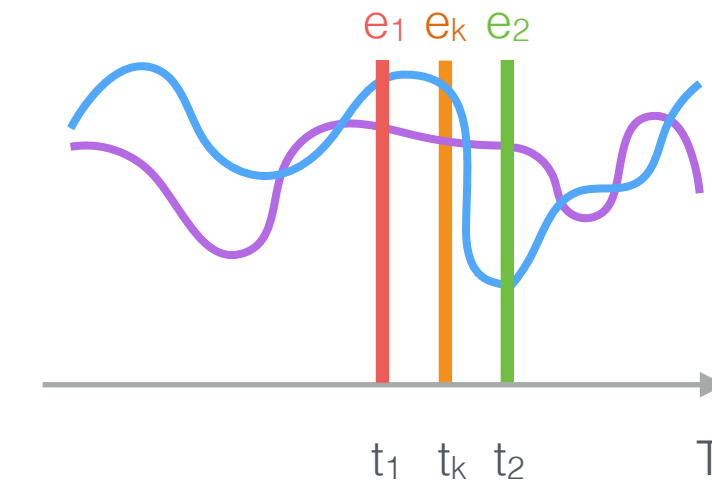


It is impossible to start recovery immediately after a failure.

Problems and Solutions of High Availability

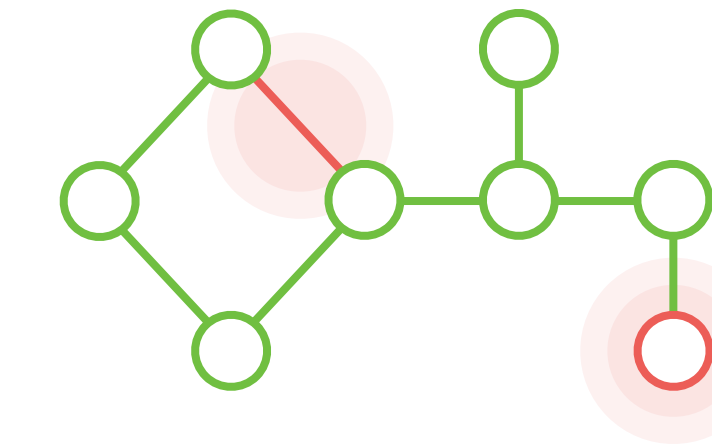


1. Continuous Monitoring



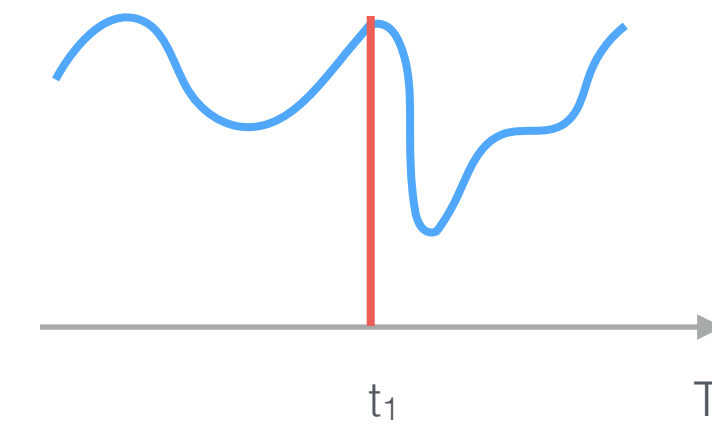
The *state* of other devices is available after a failure.

2. Fault Localization



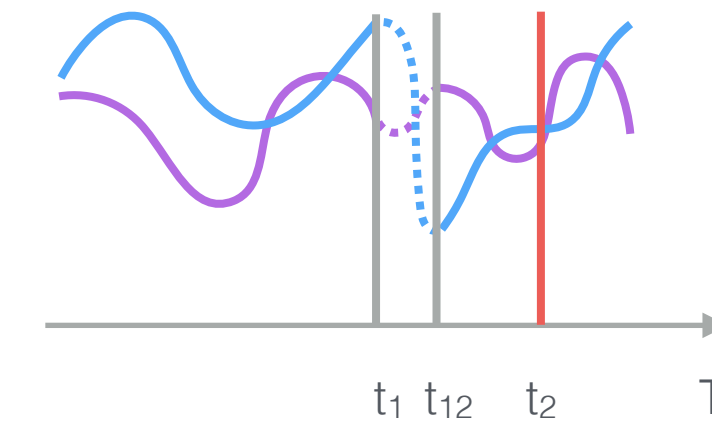
*It is possible to localize
an accident, even if it was
behind a router*

3. Root Cause Analysis



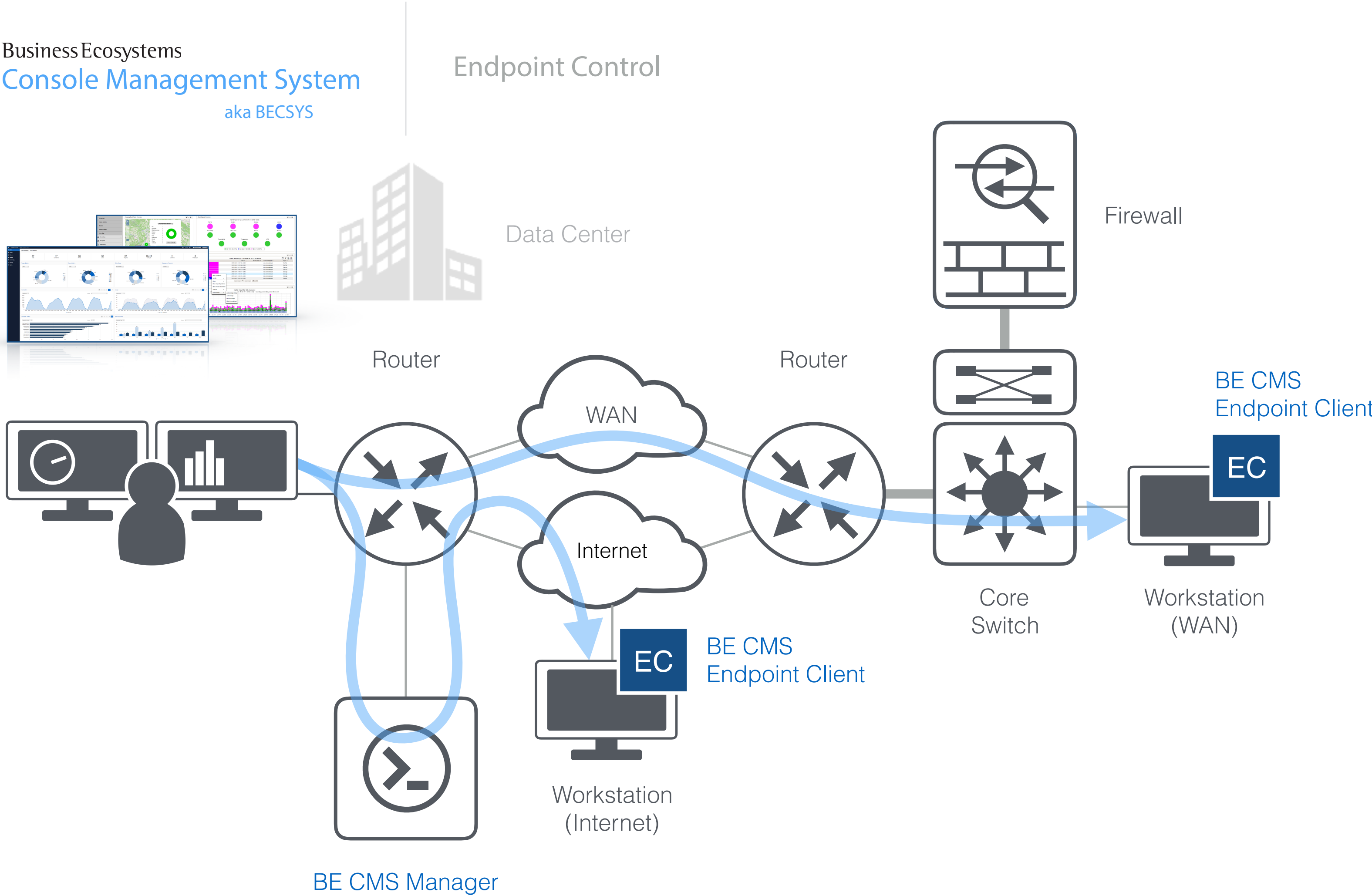
It is possible to find out the state of the device at the time of the failure

4. Recovery Time Objective



It is possible to start recovery immediately after the failure.

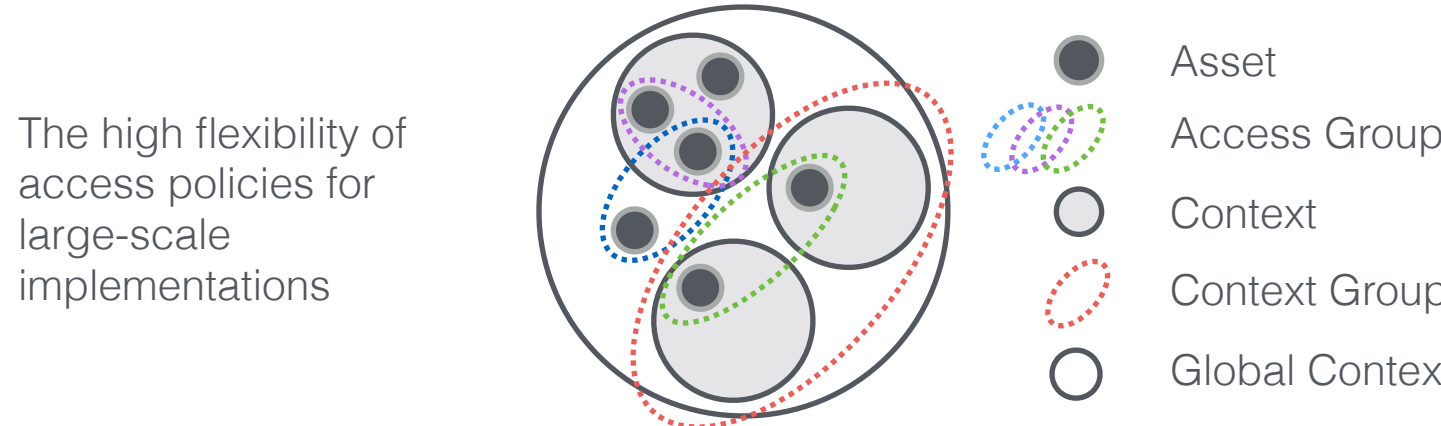
Problems and Solutions of User's Workstations Support



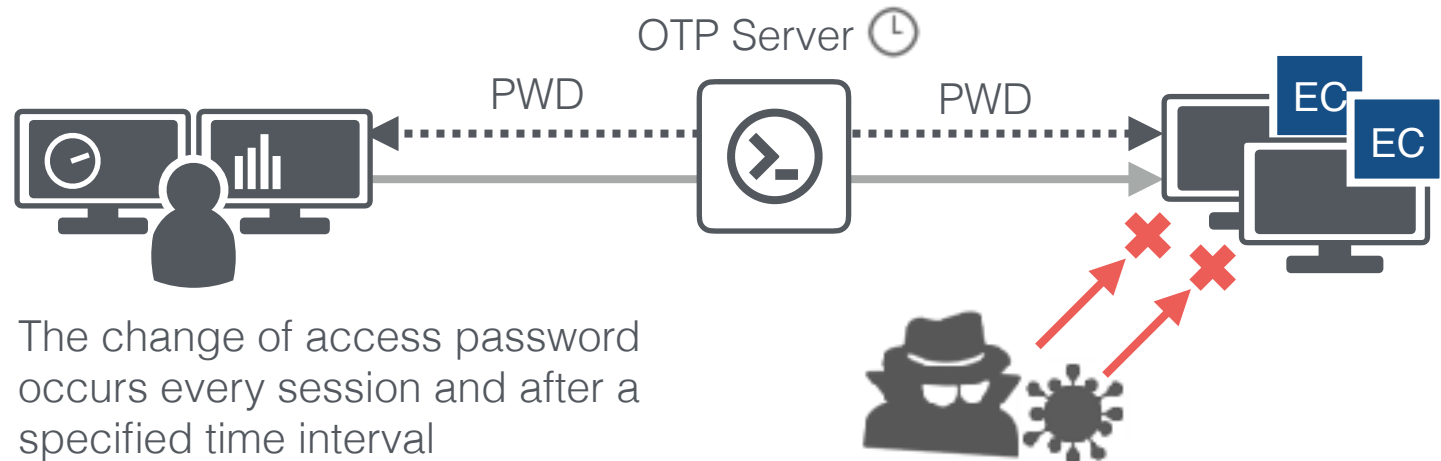
1. On-Premise Solution



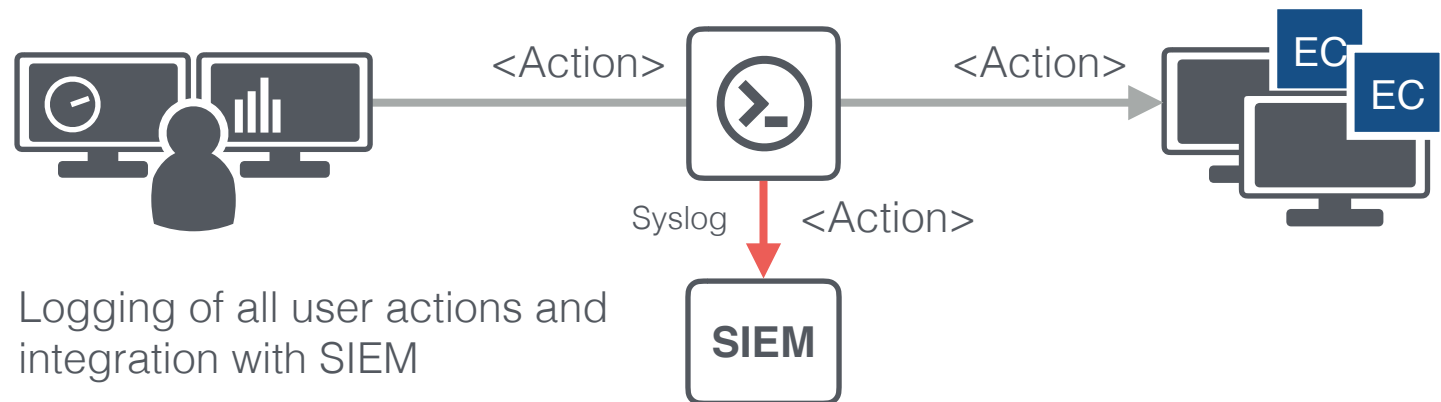
2. Flexibility of access control policies



3. One-time passwords for access



4. Advanced logging capabilities





Business Ecosystems



Success Story with
RUSSIAN POST

Goals and Objectives

The Russian Post Office

The *goal* of implementing a remote workstation administration for the Russian Post Office is reducing the cost of IT support and ensuring the required quality of the services.

To achieve this goal, the following *tasks* have been accomplished on the basis of the BE CMS product:

- **The cost of postal operator support has been reduced.**
- **The time of financial systems support** in the post offices has been reduced.
- **The average time for processing requests by the service companies** has been shortened by increasing the accuracy of classification of support requests.

IT Outsourcing Companies

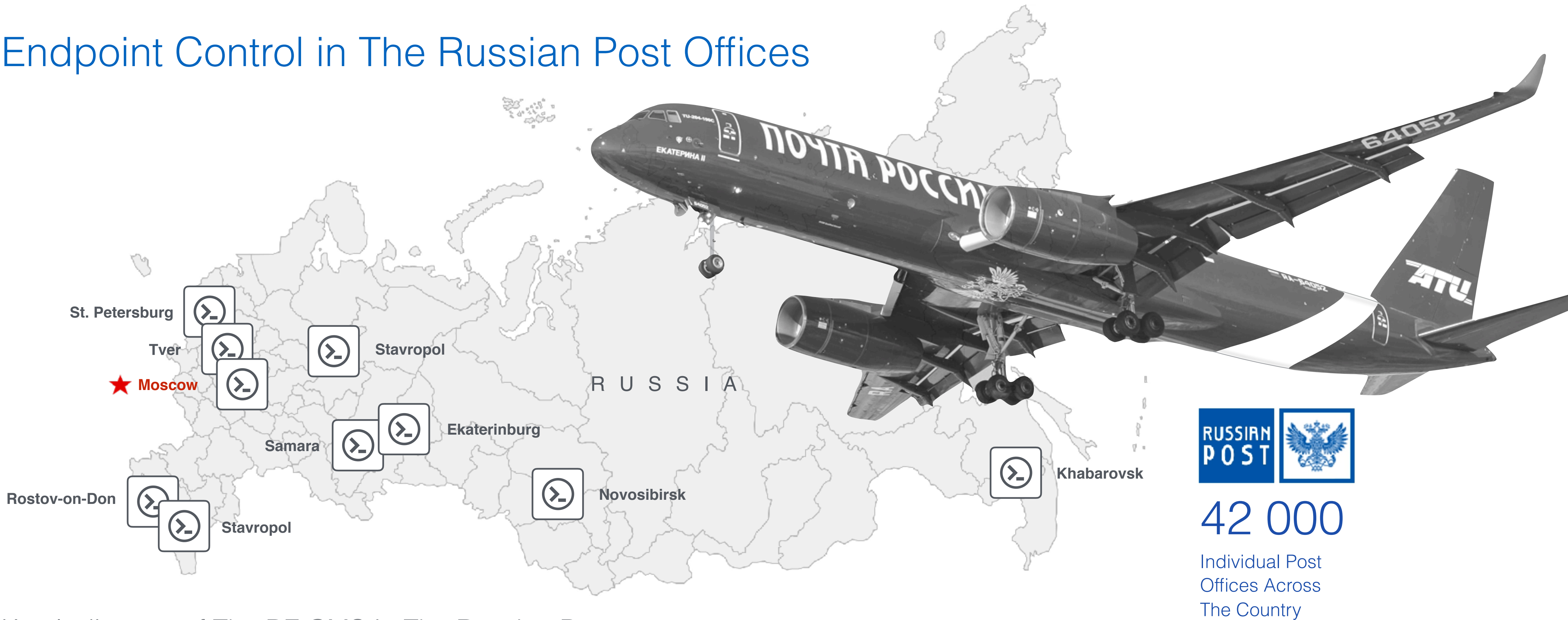
The *goal* of implementing a remote workstation administration system for IT outsourcing companies is to reduce the costs of servicing the information systems of the Russian Post Office.

To achieve this goal, the following *tasks* have been accomplished on the basis of the BE CMS product:

- **The recovery time has been reduced** due to remote access to Internet workstations of individual post offices.
- **The time of manual update** of information systems in case of failures of automatic updating has been reduced.



Endpoint Control in The Russian Post Offices



Key Indicators of The BE CMS In The Russian Post

> 230 000

Connections
through BE CMS per month

> 115 000

Workstations with installed
BE CMS Endpoint Client

> 3 500

Support specialists
use BE CMS on a daily basis

11

BE CMS Managers provide secure
remote access to workstations across
the country.

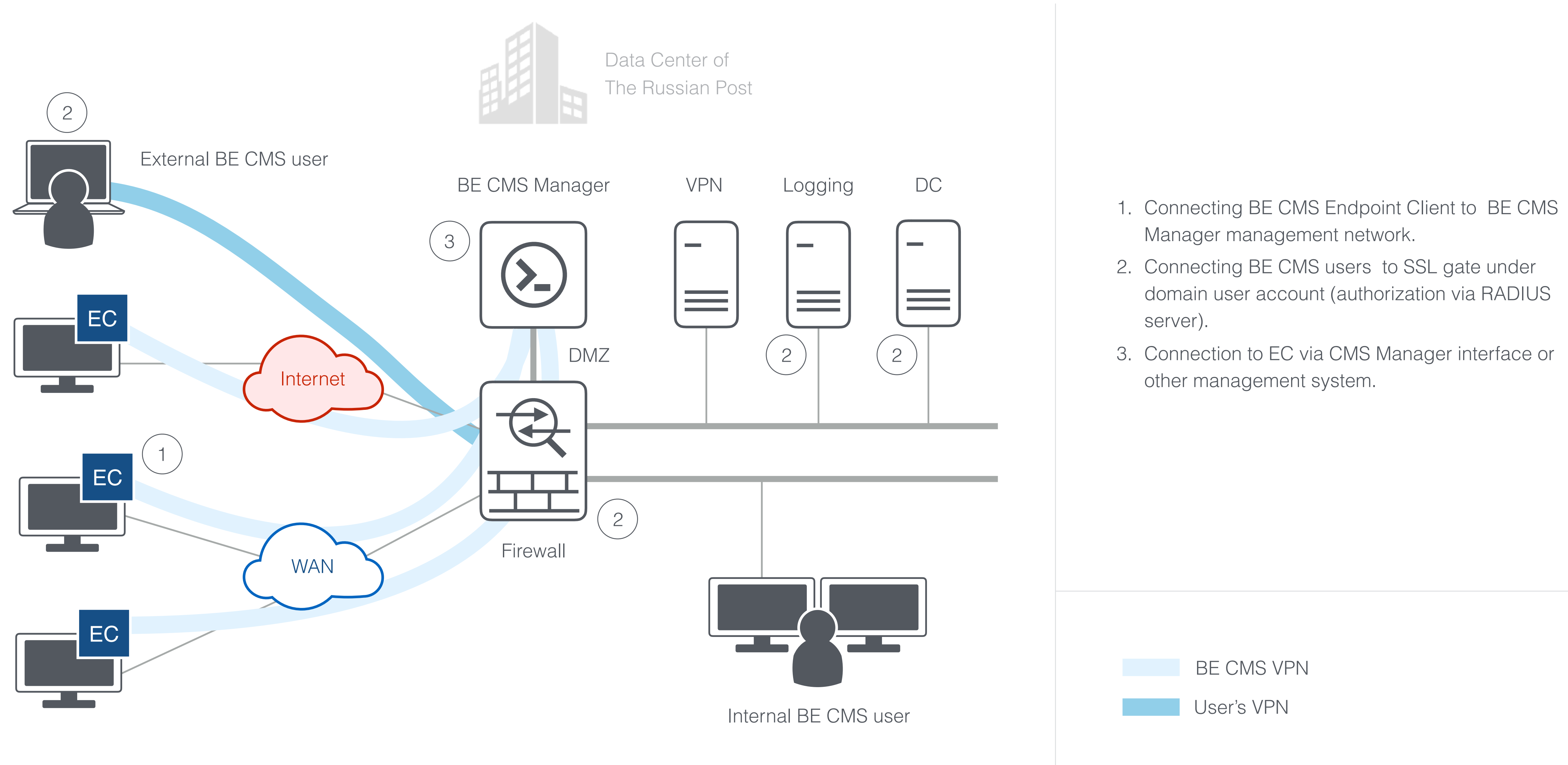
Competitors

Key Functions

	BusinessEcosystems	Remote Desktop / Remote Assistance	Microsoft Intune	Configuration Manager ¹	Ammyy Admin	DameWare	TeamViewer
Management via Internet	•	—	•	—	•	—	•
Corporate Gateway (On-Premise)	•	—	—	—	—	—	—
Cloud Gateway (SaaS)	•	—	•	—	•	—	•
The connection to a new session ²	•	•	—	—	—	—	—
The connection to the RDP session	•	•	—	—	—	•	•
Connecting to the console session	•	•	•	•	•	•	•
User monitor selection	•	—	•	—	•	•	•
Out of domain work	•	—	•	—	•	—	•
Transparent privilege escalation ³	•	—	—	—	—	•	—
Concurrent connections to the session	•	—	•	•	•	—	•
The use without connecting to the screen	•	—	—	—	—	•	•
Chat	•	•	•	—	•	•	•
File transfer accounting	•	—	—	—	—	—	—
Connection log	•	—	•	— ⁴	—	—	•
Segregation of duties	•	—	•	•	—	•	•

1 Microsoft System Center Configuration Manager.
2 Possibility of RDP connection to the computer in the absence of the active user.
3 Remote privileged start of the software without entering additional passwords.
4 The lack of access logging when running Remote Tools without specifying Site Server.

System Architecture



Benefits of Endpoint Control

Flexible Access Policy

- **Management via the Internet** allows to service workstations both in a corporate network (domain) and in the Internet (workgroup).
- **The management through the NAT** allows to connect to workstations that are in translated addresses spaces.
- **Low requirements to the quality of communication channels** to provide management in the presence of delays and losses in the channel; the ability to choose the quality of the session.
- **Simultaneous access to the session** of the remote user of several technical support specialists.

Logging and Auditing

- **Logging of sessions** of all user actions.
- **Tracking file transfers** including file operations, file names and location paths.
- **Auditing events** of remote launch of software, privilege escalation, executed command-line commands and launching utilities.

Accredited by Ministry of Communications

- **The inclusion the product in the register of the Ministry of Communications** is an additional advantage when choosing a solution for state enterprises.

Transparent Privilege Escalation of Access

- **The privileges escalation** allows the launch of system utilities without having local accounts on workstations.
- **Transparent remote launch of the software** with the necessary rights without additional password authentication makes it impossible to intercept passwords.

Using Utilities Without Connecting to the Screen

- **The remote terminal** allows executing the scripts and command line interface of the administration command.
- **Remote Task Manager and the registry** allows the management of processes, services and perform registry editing.
- **Message exchange service** to warn the user about the upcoming management session and provide additional information (company, application number and connection time).
- **File sharing allows the download of files in the background.** Protection against the interruption of communication while downloading files is supported.

