



INFRASTRUCTURE TRANSFORMATION SOLUTIONS





The basic rules of success in the business world are being rewritten, and the first rule is digitalization!

Digital transformation, which we, as KoçSistem, prioritize more and more every passing year, changes the corporate experience from top to toe, and even much faster than the previous topics of change. Digital transformation and mega trends create an unlimited world before us.

We call this world full of brand new opportunities NoW - New Opportunities World and invite you, our esteemed business partners, to benefit from these opportunities right now by experiencing the genuinetechnology!

Discover NoW | New Opportunities World!



We are living an era where the disruptive competition is forcing companies to transform at an unprecedented pace. Strategies developed by ignoring information technologies are no longer sufficient for success in today's business world.

KoçSistem, with its wide range of product/service portfolio, experience of over 70 years and staff who are subject-matter experts, integrates the unique technology infrastructure that your company needs into your business, enabling you to reach your goals much faster.



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Installation and Consultancy Services

**Business
Partners**

AVAYA
Diamond partner

CISCO
Gold partner

CITRIX
Gold partner

DELL
Premier partner

f5
Silver partner

HUAWEI
3 Stars

JUNIPER
Elite rising star

riverbed
Premier partner

vmware
Premier partner

NETWORK SOLUTIONS

Data Center Consultancy, Installation and Maintenance Services

- Subject and time based consultancy services
- Creation of physical and logical topology of Data Center
- Analysis and design of Data Center Network topology
- Data Center Overlay Network analysis and design
- Inter-Data Center Active-Active or Active-Passive, redundancy and disaster scenario design and analysis
- Hardware and software analysis of Network devices
- Network configuration and protocol analysis
- Network redundancy technologies analysis
- Network health check
- Network management analysis
- 7 x 24 remote and on-site maintenance support services
- Reporting of all work done under maintenance services

Migros Data Center Improvement / Renovation Solution



Requirements

Transfer the existing Data Center infrastructure in the Migros General Directorate to a new structure created based on high-level continuity, efficiency, scalability, security and easy manageability criteria by implementing new generation technologies used in modern data centers. Project contains device, line and power redundancy, and an end-to-end 10G communication network infrastructure.

Goal

The goal is the fast transfer of the existing structure to a newly designed structure with minimum interruption.

Solution

Installation of CiscoN7K switches and peripherals

- Physical installation of N7Ks
- Upgrading the operating systems of the devices to the pre-defined level
- Cabling for vPC, VDC connections as required and performance of the respective configuration on the active devices
- Cabling between the existing switches running VSS, and N7Ks as required, and performance of the respective configuration on the active devices
- Physical installation of FEXs
- Cabling between FEX and N7Ks as required, and performance of the respective configuration on the active devices
- Cabling between newly purchased B22 blade switches and N7Ks as required, and performance of the respective configuration on the active devices

- Cabling between the existing 3120 blade switches and N7Ks as required, and performance of the respective configuration on the active devices
- Cabling from rack servers to FEXs and performance of the respective configuration on the active devices
- Testing the newly installed system under PoC by the defined scenario

Transition phase

- Setting up a L2 connection between the existing structure and the new structure
- Moving the SVIs used in the Data Center from VSS to N7K (L3 transition) and transferring the relevant physical termination to N7K environment
- Transferring the VSS switches to the Campus VDC structure formed in N7Ks and performance of the respective configuration on the active devices

Result

With minimum interruption

- Migros Data Center and the campus network were separated to create a more secure configuration with VDC technology and achieve a more efficient traffic within the Data Center.
- The physical servers were consolidated in the switches positioned with ToR structure, and thereby, significant advantages were achieved both in redundancy and structured cabling.
- End-to-end 10G backbone network infrastructure was achieved.
- With a modular structure designed, the data center was rendered available for growth.
- End-to-end redundant backup was provided for all network components in the Data Center to achieve high availability

Local / Wide Network Consultancy, Installation and Maintenance Services

- Design of physical and logical topologies
- LAN / WAN topology analysis and design
- Multiple location analysis and design
- Hardware and software analysis of Communication Network devices
- Communication Network configuration and protocol analysis
- Analysis of Communication Network backbone redundancy technologies
- WAN optimization analysis and design
- Communication Network health check
- Communication Network management analysis
- Service provider independent line subscription / cancellation and transfer services
- Service provider independent product and line installation / maintenance / support service
- 7x24 remote and on-site maintenance support services
- Reporting of all work done under maintenance
- Subject and time based consultancy services

ALLIANZ Insurance

New System Room and Network Infrastructure Project



■ Requirements

Install a Network Security and Data Center infrastructure in the newly constructed Allianz Tower building. Move Allianz Headquarters and Istanbul offices to the new building with minimum interruption and perform the Allianz Global Network (AGN) integration.

■ Goal

The goal is to provide end-to-end design, installation and activation of all network security infrastructures of all Allianz Insurance users within the new Allianz Tower building in compliance with the specified project schedule.

■ Solution

- Performance of all fiber optic and UTP cabling in Allianz Tower and connection of the mirroring cabinets
- Installation and configuration of 2 x Cisco Nexus 7K backbone switches
- Installation of 10 x top of rack Nexus switches for the Data Center
- Activation of wireless controllers and more than 100 access points on the wireless network side with redundancy back-up
- Activation of 2 x Cisco 6807 backbone switches and 100 x side switches to be managed by T-systems within the scope of AGN.
- Activation of 6 x routers to be used in WAN connections
- Data Center migration and activation
- Installation and activation of 3 x Checkpoint firewalls and 1 x management server
- Installation and activation of Cisco Sourcefire IPS device

■ Result

All systems were activated in the new Allianz Tower building with end-to-end redundant back-up and in a secure manner. Thanks to the redundancy and security, on-going works were enabled to be uninterrupted, data was better secured and Allianz Turkey was integrated with Allianz Global Network.

Wireless Network Consultancy, Installation and Maintenance Services

- Wireless Network structure analysis
- Data collection in the coverage area through the campus map by using an analysis software
- Access Points planning on the campus map by using an analysis software
- Mapping of available access points
- Coverage area and performance analysis
- Signal / noise ratio analysis
- Detection of coverage area initiatives
- Physical and logical detection of topology
- Hardware and software analysis of wireless devices
- Configuration analysis of the wireless LAN controller device
- Communication Network health check
- Communication Network management analysis
- 7x24 remote and on-site maintenance support services
- Reporting of all work done under maintenance
- Subject and time based consultancy services

Yeditepe University



■ Requirements

In Yeditepe University dormitories and guest houses, a secure Internet connection is requested by logging the wireless Internet connections of the students and guests under the law 5651 in such manner as not leaving any blind spots in seven buildings.

■ Goal

In line with the request of Yeditepe University, the goal is to register user information in accordance with law and provide Internet service with the best possible connection quality in all parts of the seven buildings.

■ Solution

- Survey was conducted for access point devices to be used for wireless networks in the seven buildings. After the survey, building access point maps were created. It was determined that a total of 427 devices were required.
- Infrastructure survey was conducted for the switch connections of the devices at access points. After the survey, the entire cabling was prepared and terminated at the patch panels in the cabins that had the switches.
- All access point devices were installed at the specified points.
- Ruckus R600 was used as AP and Ruckus SZ 100 devices were used as WLAN Controller.
- 2 x Ruckus SZ 100 were activated with active-active redundancy structure. Configurations were completed.
- Separate SSIDs were created for each building.
- All SSIDs were directed to the external hotspot application serving on Logsign.
- Logsign was integrated with the Active Directory where the user information was stored and all students were enabled to log into the system with the user name password registered in the student system of the university.
- As per the law 5651, Internet connection logs were rendered available for reception by LogSign.
- Secure Internet access was enabled for guests through the accounts created through the guest account creation interface on Logsign.
- Wireless network coverage, SNR and interference values were measured in all buildings with Ekahau. Detailed reports were presented to the University's information technology authorities.

■ Result

In accordance with such schedule as requested by Yeditepe University, coverage area and signal quality were achieved without any blind spot in seven buildings. Secure connection to the Internet was provided for the students and guests in dormitories and guest houses subject to registration by law.

Software Defined Network (SDN)

- Implementation of overlay technologies (VxLAN)
- Control Plane / Data Plane separation
- Responsiveness to orchestration and automation needs
- Network programming
- Network automation
- Dynamic scaling
- Provisioning/Re-provisioning/Segmentation
- Micro Segmentation
- Capacity optimization
- Multi-tenancy
- Systems Integration - load balancing, firewall and Intrusion Detection Systems (IDS)
- Traffic engineering / Bandwidth management

SDN Experience Center

Solution

- 4 x Host (ESX 6) were installed to create a Management Cluster and Compute Cluster.
- A server was created for Active Directory and DNS on the Management Cluster and vCenter was installed again on the Management Cluster.
- A LUN was created on EqualLogic to allow for a shared storage space for all hosts.
- A Distributed-Switch was created on vCenter to isolate Storage, Management and vMotion Port groups from each other.
- NSX Manager 6.2.2 was installed on the Management Cluster.
- 3 x NSX Controllers were formed for redundancy purposes.
- 2 x Web and 2 x App test servers were created on the Compute Cluster.
- Hosts were added by means of hardware VTEP configuration on Juniper and VXLAN configuration on NSX.
- Logical Switch, Distributed Logical Router and Edge Services Gateway were formed on NSX.
- Web/App servers on the Compute Cluster were connected to the Internet over NSX, vDS and Juniper Hardware VTEP.
- Virtual competences such as Micro Segmentation and Load Balancing were tested to be successful.

Requirements

Create demo environments for new technologies in the Communication Network and IT Security, and document and offer a Live PoC environment to our customers.

Goal

The goal is to create a demo environment where new technologies in the Network Virtualization are implemented and different scenarios are realized.

Result

KoçSistem has created network virtualization solutions as well as a convenient set-up to actualize the scenarios requested by the customers thanks to the demo environment it has provided.

Business Partners



CYBER SECURITY SOLUTIONS

We improve and develop your existing information technologies security infrastructure with certified subject-matter consultants, technical experts and offer post-project maintenance and support services

Network Security

The services offered within the scope of consultancy, installation and maintenance for Firewall, NAC, HotSpot, DDoS, IPS, Firewall Analyzer solutions;

- Design and analysis of physical and logical topology
- Actual situation analysis and targeted situation design
- Network Security health check
- Network security management analysis
- Result analysis of penetration studies
- Risk identification
- Customized solutions tailored to your needs and requests
- Security policy optimization
- Network and system consultancy support
- 7x24 remote and on-site maintenance support services and reporting
- Subject and time based consultancy services

New Generation Intrusion Prevention Project

■ Requirements

Our client operating in the finance sector owns different operating systems for Internet and local network infrastructure usage. In addition to the traditional border security solutions to guard against intrusions into these systems, the client requests protection with new generation intrusion prevention solutions and prevention, displaying and detailed reporting of intrusions without causing any service interruption.

■ Goal

With the new generation intrusion prevention system (NGIPS), the goal is to guard against local and Internet intrusions and achieve high performance, easy management and protection service against new generation intrusions.

■ Solution

- With the new generation intrusion prevention solution (NGIPS) listed by Gartner and NSS Labs as a high performance security solution, an inline (transparent) mode positioning was made to achieve protection of the concerned networks against intrusions.
- The solution that automatically performed attack signature updates by learning the inventory on the network infrastructure with the automatic policy update feature reduced management time to minimum
- By means of the active network analysis feature, information on the inventory and vulnerabilities in the network infrastructure was provided to achieve a detailed view of the system infrastructure based on the vulnerability, risk and effect level by providing a detailed information about the generated traffic.

■ Result

With the implementation of the solution, our customer achieved protection of the systems against intrusions in its network infrastructure at minimum cost.

NAC Project



■ Requirements

Our customer operating in the manufacturing sector requests that the users in its Headquarters and plants have secure access to the company resources from the corporate or personal devices.

■ Goal

Enable users to securely access corporate resources and manage their activities in a controlled manner.

■ Solution

- Physical installation of 30 x Cisco NAC 3315, 3355, 3395 and SNS 3415, 3495 devices at the Headquarters building and plants.
- Upgrading the operating systems of devices to the defined level
- Designing a topology where devices can run with redundancy backup
- Performance of configurations related to authentication
- Pilot testing the ISE system with the specified scenarios
- Performance of 802.1x configurations on the corporate computers
- Performance of the necessary configurations on the Switch and Wireless LAN Controllers at the locations to be activated
- Performance of log analysis of the system after activation

■ Result

An easy-to-manage and centralized control mechanism was set up, ensuring that all users were able to securely access company resources with corporate or personal devices within their authority limits.

SECURITY

Data and Content Security

The services offered within the scope of consultancy, installation and maintenance services for WAF, APT, Email & Web Security, DLP solutions;

- Design and analysis of physical and logical topology
- Actual situation analysis and targeted situation design
- Data security health check
- Result analysis of penetration studies
- Risk identification
- Customized solutions tailored to your needs and requests
- Creation of work flows matching your infrastructure
- Solution integration matching your business processes
- Security policy optimization
- Network and system consultancy support
- 7X24 remote and on-site maintenance support services and reporting
- Subject and time based consultancy services

WAF

■ Requirements

Our client operating in the manufacturing sector requests that the Oracle Weblogic and Microsoft based web services and HTTPS traffic in the Internet and local network environment are secured.

■ Goal

The goal is to provide security against zero day attacks at the application layer in today's technology where conventional border security solutions and server security for web services used in the Internet and local network environment fail to suffice.

In the project, it was planned to create a solution against attacks from within the HTTPS traffic.

■ Solution

- Web Application Firewall (WAF) product, being the leader according to the Gartner report, was positioned as Reverse Proxy before the web services serviced to achieve a security solution between OSI 2-7 layers.
- The product provides protection against the attacks described by OWASP. With two different protection mechanisms (Negative and Positive), protection was provided against known attacks, as well as the zero day attacks through the policy formed by learning method.
- The vulnerabilities of the applications were explained to the system administrator who was also informed about software vulnerabilities and how to protect the systems. In addition, certificate management was provided for security solution with a policy against attacks coming from encrypted traffic (HTTPS).

■ Result

Our client was provided protection with a security solution in the application layer of the services provided and informed about the vulnerabilities in the infrastructure.

End Point Security Services

The services offered within the scope of consultancy, installation and maintenance services for SSL VPN, Strong Authentication, End Point AV & Encryption, Personnel FW & IPS, Web App Scanning solutions.

- Design and analysis of physical and logical topology
- Actual situation analysis and targeted situation design
- Risk identification
- Customized solutions tailored to your needs and requests
- Creation of scenarios matching your infrastructure
- Security policy optimization
- Network and system consultancy support
- 7X24 remote and on-site maintenance and support services, reporting
- Subject and time based consultancy services

SSL VPN



■ Requirements

Our customer operating in the retail sector requests that its employees have secure access to the company resources from the corporate or personal devices.

■ Goal

The goal is that users can securely access corporate resources and that their activities can be managed in a controlled manner.

■ Solution

In the Headquarters Building;

- Upgrading the physical installations and current versions of devices to the desired level
- Designing a topology where devices can run with redundancy backup
- Performance of configurations related to authentication (Performance of Active Directory and OTP Integrations)
- Performance of all SSL VPN configurations on the device
- Performance of system log analyses
- Instantaneous control monitor was commissioned.

■ Result

An easy-to-manage and centralized control mechanism was set up, ensuring that all users were able to securely access company resources with corporate or personal devices within their authority limits.

Business Partners

AVAYA

Genesys

TELEORTIX

TELSTRAT

VERINT

zoom



CALL CENTER TECHNOLOGIES

We offer installation, consultancy, transformation and version update services for Call Center Technologies that can meet the needs of your customers in the most effective way and with high quality in the increasing competition.



Call Center Installation Services

- Design of physical and logical topologies
- Hardware analysis of call center devices
- Reporting of all work done under installation
- Configuration and protocol analysis of call center communication network
- Provision of company-based consultancy services
- Voice Gateway setup services
- Call center health check
- Voice recording systems installation service

Civil Registry Office ALO 199 Call Center

Civil
Registry
Office

■ Requirements

The civil registry interaction center is in need of an end-to-end call center.

■ Goal

The goal is that a call center system with a capacity of 200 customer representatives and with CTI, IVR, Voice Recording and Quality Monitoring modules is activated within less than a month.

■ Solution

- Avaya Communication Manager, Call Management, Application Enablement Services, Call Recorder, Experience Portal Quality Monitoring products were installed.
- Integration with Signum desktop application was performed.
- A switchboard integration was performed to receive calls from 81 provinces.
- The IVR system was activated.

■ Result

The ALO 199 call center was activated with a capacity to serve 81 provinces and its efficiency was improved through detailed call center reporting and call recording evaluation reports.

Call Center Consultancy Services

- Analysis and support of call center redundancy technology
- Call center health check
- Call center management analysis
- Continuous remote and on-site support service
- Reporting of all consultancy services provided
- Backup, recovery analysis and support of call center products
- Voice Gateway consultancy services
- Wallboard-SDA consultancy services
- Voice recording systems consultancy services

Call Center Transformation Services

- Call Center product change analysis
- Call center products negative scenario design and analysis
- Hardware and replacement service for call center products
- Voice Gateway transformation services
- Voice recording systems transformation service

Arvato Avaya Call Center

arvato
BERTELSMANN

■ Requirements

- Render the existing Arvato call center operation user friendly
- Improve the implementation of call flows.
- Perform SIP integrations from a single server.
- Create Call Center redundancy backup.

■ Goal

The goal is to transform the existing Arvato call center infrastructure into Avaya infrastructure.

■ Solution

- Avaya Communication Manager, Call Management, Application Enablement Services,
- Call Recorder, Experience Portal, Quality Monitoring, Avaya Session Border Controller,
- Session Manager, System
- Manager, Communication Manager Messaging products were installed.
- The existing call center services was moved to Avaya infrastructure.
- With the Avaya Session Border Controller product, SIP connection was set up with all operators.

■ Result

Arvato is able to control all of the SIP connections with all operators efficiently while quickly implementing all customer projects with the solution provided.

Call Center Application Development Services

- IVR application analysis/design/development
- CTI installation and application development
- IVR and CTI application maintenance services
- Maintenance services for customized applications
- IVR development on-site support service
- Call center customized reports and dashboard developments
- Customized software development activities tailored to customer needs
- Integration between call center systems and customer CRM/Backoffice systems
- Customized solutions services with API and SDK interfaces supplied by manufacturing companies in call center and integrated communication fields
- Analysis, examination and reporting of existing call center application infrastructures

Business
Partners

AVAYA

CISCO

Microsoft

zoom

UNIFIED COMMUNICATION TECHNOLOGIES

With the development of communication technologies, new generation communication tools have become an integral part of business life. As KoçSistem, we offer technological services where the complex structure arising from the diversification of audio-visual communication tools can easily be managed.



Installation and Consultancy Services

- Design of physical and logical topologies
- Analysis and design of audio-visual components topology pursuant to data center design guides
- Design and analysis of redundancy and disaster scenario
- Hardware and software analysis of audio-visual components
- Configuration and protocol analysis of audio-visual components
- Audio-visual components health check
- 7X24 remote and on-site maintenance support services
- Reporting of all work done under maintenance
- Subject and time based consultancy services
- Analysis and solution support services for customer problems other than maintenance services

Integrated Communication Project

arçelik

■ Requirements

- Minimize the voice call cost by providing an uninterrupted and centralized integrated communications service to all Arçelik A.Ş. locations across different countries
- Create a standard call greeting script
- Provide audio and video conferencing service

■ Goal

In line with the needs of Arçelik A.Ş., the goal is to create a structure that can offer an uninterrupted service with minimum license and maintenance cost, and implement a solution integrated with the existing systems and enhancing the user experience and the cooperation between the locations.

■ Solution

- A redundant structure was established in two physical locations (İstanbul ÇİM DC, Ankara KoçSistem DRM)
- CUCM was positioned as an IP PBX and Unity components were positioned as call greeting.
- A redundant CUBE structure reducing call cost with the integration of central service provider was established.
- Services providing user mobility (Jabber, Jabber Guest, Expressway) was activated.
- High-quality voice and video conferencing structure structure (Conductor, vTPS, MCI, Webex) was established.
- Booking and Reporting components (TMS) were activated.
- Router devices were positioned as integrated with the service providers in all locations.

■ Result

With the Integrated Communication Infrastructure established between all locations of Arçelik A.Ş., a free voice and video call facility was provided, cost was minimized and cooperation was enhanced through audio and video conferences.

About **KoçSistem**

Founded in 1945, KoçSistem is a member of the Koç Group and a leading, well-established information technologies company in Turkey. Throughout a history spanning seven decades, KoçSistem has raised technology to an ideal level and offered it to the business world to enhance the competitive edge and productivity of enterprises. KoçSistem offers unique technological solutions to its customers motivated by its vision, business practices and the value it places on its stakeholders. KoçSistem creates value for Turkey and maintains its leadership in the sector based on its vision to be a pioneering force.

KoçSistem plays a major role in the digital transformation of enterprises offering a great variety of smart solutions in mega trends including the Internet of Things, Big Data, Cloud Computing, Corporate Mobility and Smart Solutions. KoçSistem considers digital transformation “a world of opportunity” and calls this wave of transformation the “New Opportunities World – “NoW”. KoçSistem invites its customers to a full technological experience and calls on them to benefit from technological opportunities offered NoW during their digital transformation.

KoçSistem offers infrastructure transformation solutions, business applications and managed services solutions to its customers in a wide range of industries including finance, telecommunications, retail, energy, consumer durables, automotive, transportation as well as the public sector. The company meets the needs of its customers based on their demands and expectations in a reliable and integrated manner while ensuring unconditional customer satisfaction as a result of its strong strategic partnerships.

KoçSistem has sustainable relationships with the most important technology centers of the world through its R&D projects which act as a gateway to the global market. The R&D and Innovation Center of KoçSistem ranks first in software in Turkey and serves the development of the sector and the country at large with engineers producing solutions for the future and projects that create a competitive edge.

KoçSistem is ready for new transformations thanks to a market-oriented product management approach that creates value for its customers, a strategic perspective with a clear view of the future and an R&D and innovation power that spearheads technology.



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"Your imagination is our strength"