Company Profile

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Tirzok Private Limited

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Why Tirzok?

Tirzok guarantees unrivalled efficiency to deliver solutions. With diverse expertise we have already shown our acumen in varied industries and solving different problems. Our Telecom Products have already shown their superior capabilities in real world scenarios by serving thousands of customers per second. Our Integrated ERP suits are proving its worth in Small and Medium enterprises. We are working vigorously to increase accessibility and ease of use options in our ERP product line so that even the smallest of shops can be brought under the digital revolution. It generates not only business value but also social value by increasing access to business software for untapped small enterprises.

Our main strength is our cloud products for both private and public settings. Private cloud products are making organisations more streamlined and efficient. Our cloud storage product line is dedicated to making the organizational nightmare around keeping collaborative documents versioned and tracked.

In this new era of data ubiquity, success for an organization depends on the ability to move among this data deluge with precision. That means to be able to process huge amounts of data in a reasonable time, and to generate intelligent insight. Tirzok also possesses the unique ability to guide your big data strategy and provide both a platform and solution for your Data Problem.

Tirzok also accumulated years of specialized knowledge ranging from software development, infrastructure management, Architecture design, Data Storage optimization, Big Data, Data Analytics etc. Tirzok offers these diverse experiences to various clients as consultancy service. We provide system architecture, both High Level and Low Level design, Technical Audit and other related consultancy services. If your system needs tuning, optimization, automation, you can also get Tirzok's proven managed services offer. Tirzok will manage your system with improved optimization, automation and will ensure the uptime mentioned in SLA.

Overall Tirzok will deliver solutions to problems in a unique and intelligent way without compromising quality and reliability.

Our Vision

Our Vision is an integrated and end to end cloud ready IT landscape where ease of use and enhanced accessibility will remove barriers to entry for the next generation of innovators.

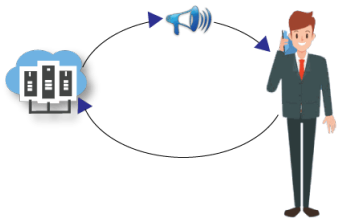
Our Mission

To become an industry leader in Cloud Computing and Data Driven Solution provider.

Products

SIGTRAN Protocol Stack

(Distributed Signaling and Media Interface Protocol Stack)



Proven **BICC-SIP, BICC-IVR, BICC-Beep** Solution. VAS providers may design their product using TBS (Tirzok BICC Solution), Asterisk/FreeSwitch etc.

This protocol stack includes **SCTP, UDP, M3UA, BICC, SIP, HTTP, RTP, IuUP** etc.

Additionally we provide:

- Setup and installation of **Asterisk**, **FreeSwitch** and make dial-plan according to need.
- Vulnerability Assessment (VA) and Security Hardening.
- Monitoring and alerting with Nagios
- CDR (Call Delivery Report), CCR (Concurrent Call Report) with compression
- Continuous reporting with influxdb, graphite, grafana etc.
- Standalone Virtualization using **KVM**.
- Data-centre Virtualization using **Ovirt/RHEV**.
- Integration of various storage infrastructure (Like **Ceph**) with KVM and Ovirt/RHEV.

Tirzok Cloud

We have a full-fledged public cloud system. The data center is in Bangladesh. Currently we provide only Virtual Machine.

Payroll Management System

- Dynamic Tax Calculator
- Dynamic Salary Structure Adjustment
- Dynamic Tax, Slab & Investment Rule Adjustment
- Informative Reporting system
- Employee Loan Processing
- Employee Salary, Bonus and Others Benefit and adjustment Processing.

Tirzok ERP

Tirzok ERP helps you to improve your collaboration & workflow, standardized business process, facilitated regulatory compliance, Improved supply chain management, superior scalability, improved reporting & planning with data security & quality.

BazaarIdea

BazaarIdea integrates SaaS based ERP/Ecommerce to Marketplace.

Software Development

We provide any kind of cloud-based software solution, analytics, and big-scale software design and development. Our specialty is in cloud technologies and we also work on integration services to make traditional software cloud-ready, e.g.,

- Cloud-based Healthcare
- E-file Cloud Storage
- Data Processing
- Business Automation
- Geo-location & Mapping Application
- Blockchain based Application
- E-commerce

Consultancy

Tirzok Consulting offers more than just technical expertise. We are strategic advisers who take a big-picture view of your organization, analyze your challenges, and help you overcome them with comprehensive, cost-effective solutions. Our area of expertise:

- Infrastructure Design
- Network Design
- Data Management
- Solution Design

Services

Tirzok provides both on premise and cloud hosted services to our customers. We also provide consultancy services for application and system architecture.

Virtualization Services

1. Standalone Virtualization using KVM.
2. Data-centre Virtualization using Ovirt/RHEV.
3. Integration of various storage infrastructure (Like Ceph) with KVM and Ovirt/RHEV.
4. Integration with OpenStack (private cloud).

Container based Services

1. Docker
2. Kubernetes
3. Platform as a service on OpenShift origin.
4. Reliable storage integration (Ceph, GlusterFS etc)

Clustering Services

1. High-Availability Clustering with pacemaker and corosync.
2. Load Balanced Clustering with HAProxy and keepalived.

Networking Services

1. Network Architecture design for small to medium sized networks.
2. Fault tolerant and high performance network design.
3. Network security
4. VPN connectivity

Storage Services

1. DrBD replication service for iSCSI, cheap alternative for dedicated specialized SAN.
2. GlusterFS petabyte scalable NAS services on commodity hardware with Geo-Replication support, alternative for dedicated specialized NAS.
3. Ceph distributed Block+File+Object storage on commodity hardware with Multi-Region Support.
4. Object storage services on commodity hardware using OpenStack Swift with Multi-Region support.

Caching Services

1. Varnish for content caching.
2. Nginx Reverse Proxy
3. Memcached/Redis integration and clustering.

Database

Generic Services

1. Schema Design for optimum performance and accessibility.
2. Optimization for Report generation (Query optimization).
3. Table Indexing in Elasticsearch/SOLR for fulltext search.

Postgresql Services

1. Replication Architecture : We provide both Master Slave and Streaming replication services
2. Automated backup restoring system based on filesystem snapshot.
3. Vertical sharding based on FDW.
4. Provide Fault Tolerance services for multi node clusters.

MySQL/MariaDB services

1. Designing Multi-Master Galera Cluster.
2. Designing NDB based cluster with sharding.
3. Design multi storage engine based database setup(Write Heavy tables will go to RocksDB, report workload will go into innodb).
4. Master Slave based replication services

5. Automatic Backup and Restore system
6. Designing MariaDB ColumnStore for analytic workloads
7. Implementation of query routing using ProxySQL

Oracle Services

1. Setting up Oracle 11g/12c servers, with ASM and RAC infrastructure.
2. Scheduled backup, restore and recovery policy.
3. Database security.
4. Storage infrastructure design.

Cassandra/SyllaDB services

1. Designing Cassandra/SyllaDB for Scalable high write-throughput unstructured workloads.
2. Integration with KairosDB for Time Series Database.

Hadoop Services

1. Designing Impala(Query Engine)+Kudu(Columnar Storage) for providing SQL services at petabyte scale
2. Designing Spark/Spark-ML for Machine Learning workloads
3. FullText search services (with search suggestion and spelling correction) with SOLR
4. Network intrusion and anomaly detection with Apache SPOT(based on Spark)

Monitoring Services

1. Nagios
2. PCP
3. TICK stack (Telegraf, InfluxDB, Chronograf, Kapacitor)
4. ELK stack (ElasticSearch, Logstash, Kibana)
5. Integration and setup with BigData infrastructure (Hadoop, cassandra) for anomaly detection.
6. Forecasting for resource allocation
7. Automated Alert services

Identity Services

1. Setting up and integration of Microsoft Active Directory Directory Services (ADDS)
2. Setting up FreeIPA for Red Hat variant Linux distributions.
3. FreeIPA and Active Directory integration.
4. Integration of LDAP based servers with applications.

Email Service

1. Setting up and Installation of Zimbra.
2. Email data backup & restore.
3. Flexible and scalable options.
4. Unlimited number of accounts.

Instant Messaging Service

1. Setting up and Installation of Mattermost, which is a flexible, open source messaging platform that meets even the most demanding privacy and security standards
2. Data backup & restore.
3. Setting up plugins for Video, Audio, and Screen Sharing, push notification etc.

File Sharing Service

1. Setting up and Installation of OwnCloud, which is a flexible, open source file-sharing platform that meets even the most demanding privacy and security standards
2. Data backup & restore.
3. Integrated with ceph, swift, glusterfs etc. for scalable storage.

Software Development Related Service

1. Setting up and Installation of Gitlab (version control system)
2. Setting up and Installation of Redmine (issue tracker) .
3. Setting up and Installation of Jenkins (build system).

Private Cloud Solution (Openstack)

Tirzok Private Limited is highly specialized in architecture design, deployment and automation of Private Cloud Solutions based on OpenStack. We offer multi-region, highly available, fault tolerant and load balanced design of the cloud infrastructure.

OpenStack Services

1. Virtualization/Compute Service with OpenStack Nova.
2. Containerization Service with OpenStack Magnum and Zun.
3. Block Device Service with OpenStack Cinder (backed by DRBD, Ceph etc.).
4. Image Storage Service with OpenStack Glance.
5. Object Storage Service with OpenStack Swift, Ceph etc.
6. Networking Service with OpenStack Neutron (with VPN, Firewall, Load Balancing).
7. Bare Metal Service with OpenStack Ironic.
8. Shared Storage Service with OpenStack Manila.
9. Telemetry Service with OpenStack Ceilometer, Gnocchi, AODH and Panko.
10. Database Service (RDBMS like PostgreSQL, MariaDB etc. and NOSQL like Cassandra, etc.) with OpenStack Trove.
11. Data Processing Service with OpenStack Sahara (uses Hadoop, Solr, Spark etc.)
12. Orchestration Service with OpenStack Heat.
13. Identity Service with OpenStack Keystone (with integration with AD, FreeIPA etc.)
14. Dashboard Service with OpenStack Horizon.
15. Clustering Service with OpenStack Senlin.
16. Backup, Restore and Disaster Recovery Service with OpenStack Freezer.

17. Messaging Service with OpenStack Zaqar.
18. Root Cause Analysis Service with OpenStack Vitrage.
19. Load Balancer Service with OpenStack Octavia.
20. Networking Automation with Neutron Service with OpenStack Tricircle.
21. DNS Service with Designate.
22. Infrastructure Optimization Service with OpenStack Watcher.
23. Software Development Lifecycle Automation Service with OpenStack Solum.
24. Key Management Service with OpenStack Barbican.
25. Data Protection Orchestration Service with OpenStack Karbor.
26. Search Service with OpenStack Searchlight.
27. Application Catalog Service with OpenStack Murano.
28. Governance Service with OpenStack Congress.
29. Integration of Cloud Networking (Neutron) with SDN Controllers like OpenDayLight.
30. Integration of Block Storage Service with different storage backends.

Certifications and Courses

Our team members carry the following certificates:

1. Red Hat Certified Architect (RHCA)
2. Red Hat Certificate of Expertise in Server Hardening
3. Red Hat Certificate of Expertise in Clustering and Storage Management
4. Red Hat Certificate of Expertise in Hybrid Cloud Storage
5. Red Hat Certified System Administrator in Red Hat OpenStack 6
6. Red Hat Certified Virtualization Administrator (RHEV-3.5)
7. Red Hat Certified Engineer (RHEL 7)
8. Red Hat Certified System Administrator (RHEL 7)

And participated in the following courses:

- Cisco Certified Networking Associate (CCNA)
- Red Hat System Administration I(RH124),II(135),III(RH255)
- Red Hat Enterprise Clustering and Storage Management (RH436)
- Red Hat Enterprise Virtualization (RH318)
- Red Hat Enterprise Deployment and Systems Management (RH401)
- Red Hat Enterprise Linux Server Hardening (RH413)
- Red Hat Enterprise Linux Performance Tuning (RH442)
- Big Data Administration with Hadoop
- Red Hat Enterprise Linux Diagnostics and Troubleshooting (RH342)
- Oracle 11g Database Administration

Portfolio

Private Cloud setup for development purpose in CSE department of **BUET** and **Brac University**

Provided Cloud Services:

- Virtual machines
- Block Storage.
- Object Storage.
- Tenant/Project based Networking.
- Database.
- Data Processing.
- Shared File system Storage.
- Dashboard.

CoKreates

[CoKreates](#) is a consortium of many Top IT companies in Bangladesh.

- Private Cloud setup for **Government ERP** (**GRP**) in BCC Data Center
- Design & Deploy **GRP** in Staging, UAT & Production.
- CI/CD integration using Jenkins.

Bangladesh Bureau of Statistics (BBS) :

- Private Cloud setup for **Data Collection App** in BBS Data Center
- Design & Deploy **Data App** in UAT & Production.

Infrastructure Management of the [RingID](#) social networking platform, with its various software services & applications, with open source solutions like MariaDB Galera Cluster, Cassandra Cluster, Solr Cluster, Hadoop Cluster, OpenStack Swift based Object Storage Cluster, Varnish Cache, etc.

Infrastructure management of the private cloud platform (based on OpenStack) and management of the development & production instances. This platform runs 150+ instances and has 100TB+ storage platform based on Ceph, along with Swift as the Object Storage.

IVR Platform (BICC-SIP based) for **Live Technologies**, a VAS provider, integrated in **ROBI** and **Banglalink**.

IVR Platform (BICC-SIP-HTTP based) for **Channel VAS**, an UAE based VAS company, integrated in **ROBI**.

IVR Platform (BICC-IVR based) for **Miaki Media Limited**, a VAS provider, integrated in **ROBI**

Open Street Map based map server design and deployment. Integration and adjustment of Middle East based locations and integration with existing android applications.

Migration of Ecommerce Site hosted on a shared hosting platform to Cloud Environment, Database Optimization, Service Monitoring and Profiling etc. for **Styline Collection**

Dynamic rule-based payroll system with tax calculator. Front-end: javascript (reactjs), Backend: python(flask), DB: PostgreSQL

Requisition Digitization (web) application for Bangladesh Branch, Marks & Spencer

eCommerce and ERP Solutions for **askidashop.com**, a BD based Online Shopping company.

ERP Solutions for **Unique Haven** (**U.H.**) a BD based Online Shopping company.

eCommerce and ERP Solutions for **Virgo**, a BD based Online Shopping company and chain shop

eCommerce and ERP Solutions for **Top Quality**.

Executive Team Members

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4. **Md. Ariful Hossain**
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