RFI

Request for Information

for

Unified GNOC Solution

RFI No. EA/02-06-2025

Etisalat Afghanistan

BACKGROUND:

Etisalat Afghanistan is a leading telecommunications company in Afghanistan, providing mobile, internet, and data services. The company offered services to millions of customers, including voice, SMS, VAS, 4G data, etc.

REQUIREMENTS AND SCOPE OF WORK:

Etisalat Afghanistan is seeking proposals from qualified vendors to provide a Unified GNOC Solution.

1. Centralized Monitoring and Management

- Unified visibility across all network layers (access, aggregation, and core) and technologies (Access network, Core network, BSS & OSS, IP/MPLS, SD-WAN, cloud).
- Integration of multi-vendor network elements into a single system for streamlined operations.
- Real-time health status of devices, links, and services through a consolidated view.

2. Advanced Dashboard Features

Types of Network Elements

- Routers, switches, firewalls, load balancers, base stations, data centers, cloud services, and IoT devices.
- Icons or graphical representations for quick identification and status monitoring.

Major KPIs (Key Performance Indicators):

- **Availability**: Network uptime percentage, SLA compliance.
- **Performance**: Latency, jitter, packet loss, throughput, and bandwidth utilization.
- **Reliability**: Mean Time to Repair (MTTR), Mean Time Between Failures (MTBF).
- **Incident Metrics**: Number of incidents, resolution time, and root cause trends.
- **SLA Metrics**: Real-time and historical SLA compliance monitoring.

Utilization Metrics:

- **Bandwidth**: Per device, link, and application usage trends.
- **CPU/Memory**: Resource consumption of critical devices like firewalls, servers, and routers.
- **Port Utilization**: Availability of free/used ports on switches and routers.
- **Storage Utilization**: Data center storage and backup system monitoring.

End-of-Life (EOL) and End-of-Support (EOS) Management

- Automated tracking of hardware/software nearing EOL/EOS.
- Proactive alerts for upgrades or replacements.
- Integration with asset management systems for lifecycle monitoring.

Traffic and Fault Analysis

- Heatmaps for traffic patterns across geographies and time.
- Fault isolation and impact analysis on critical business services.

Visualization Tools

- Customizable graphs, charts, and widgets for specific KPIs and performance metrics.
- Geographic maps with overlays for outages, maintenance zones, or high-utilization regions.

Service Monitoring

- Application-level performance monitoring (VoIP, ERP systems and etc.).
- SLA tracking for both internal services and third-party providers.

Troubleshooting and Ticketing Solution

- **Integrated Trouble Ticketing System**: Automated ticket generation for incidents and issues detected.
- **Ticket Prioritization and Assignment**: Based on severity, automatically assign to appropriate teams for swift resolution.
- **Ticket Tracking and Updates**: Real-time tracking and updates on ticket status for transparency.
- **Resolution and Reporting**: Comprehensive documentation of issue resolution and post-incident analysis.

- **Integration with CMDB**: To link incidents with affected assets for efficient impact analysis.

Preventive Maintenance Solution

- **Scheduled Maintenance Tasks**: Automated scheduling of regular maintenance activities, such as software updates, hardware checks, and system optimizations.
- **Health Checks and Audits**: Routine system diagnostics to identify potential weaknesses before they cause outages.
- **Proactive Configuration Management**: Ensure all configurations are up-to-date and compliant with security policies.
- **Automated Alerts**: Notifications for preventive maintenance needs based on performance thresholds or usage trends.
- **Documentation and Compliance**: Maintain detailed records of all preventive actions for audit purposes.

Corrective Maintenance Solution

- **Issue Identification**: Real-time detection of malfunctions and service degradation.
- **Root Cause Analysis (RCA)**: Automated and manual RCA tools to determine the underlying cause of recurring issues.
- **Automated Remediation**: Pre-configured scripts for common fixes and recovery actions to minimize downtime.
- **Change Management Integration**: Ensure all corrective maintenance actions align with change management policies for minimal disruption.
- **Feedback and Continuous Improvement**: Post-resolution analysis and feedback loop for refining maintenance processes.

Security Monitoring

- Real-time intrusion detection and mitigation.
- Integration with SIEM (Security Information and Event Management) for compliance and threat management.
- Monitoring of encryption protocols, DDoS attack patterns, and firewall breaches.

Operational Efficiency

- **Standardized Processes**: ITIL-based incident, problem, and change management.
- Automated backups and disaster recovery validations.
- Efficient coordination between preventive and corrective maintenance schedules.

High Availability and Redundancy

- Geographically distributed GNOCs for failover and redundancy.
- Multi-region redundancy for monitoring critical sites.
- Disaster recovery plans with regular drills and validations.

Enhanced Reporting and Data Analysis

- On-demand and scheduled reports for:
    - Monthly SLA performance.
    - Traffic trends and future capacity planning.
    - Incident root cause analysis.
- Integration with BI tools for custom insights and predictive modeling.

Unified Communication and Collaboration

- Seamless integration with chat, email, and video conferencing tools.
- Incident war rooms for critical outages, enabling cross-team collaboration.
- Real-time status updates and notifications for stakeholders.

System Monitoring (Linux and Windows Servers)

- Live monitoring of Linux and Windows servers.
- Metrics: CPU, memory, disk (Utilization, IO and Partitioning), and network utilization displayed in real-time dashboards.

Virtualization Integration

- Monitoring of virtualization platforms with detailed insights into:
- Virtual Machine (VM) status (running, stopped, suspended).
- Resource utilization for VMs, including CPU, memory, disk, and network.
- Support for hypervisors like VMware, Hyper-V, and others.

Storage Integration

- Live monitoring of storage systems with alerting mechanisms.
- Graphical representation of storage utilization trends and real-time health.

SNMPv3 Support

- Compatibility with SNMPv3 for enhanced security in server monitoring for both Linux and Windows systems.
- The tool must support multiple protocols (SNMP, NetFlow, sFlow, etc.) and be compatible with our multi-vendor environment as (ZTE, Huawei, Cisco, Fortinet, DNS BOX, Linux, Microsoft)
- Advanced analytics capabilities, including AI/ML for predictive maintenance and anomaly detection.
- Compliance with industry standards and security protocols.
- User-friendly interface for both technical and non-technical users

Database Monitoring

- Integration for database performance monitoring (e.g., Oracle, MariaDB, MySQL, SQL Server, PostgreSQL).
- Metrics: Query performance, connection health, resource utilization, and replication status.

Advanced Notification Mechanisms

- Notifications via multiple channels, including SMS, email, and chat integrations.
- Escalation policies for critical alerts.

Multi-Tenancy Support

- Separate monitoring views for different departments or business units.
- Segregation of data and access control.

User Experience and Accessibility

- Role-based access controls to ensure secure, tailored access for operators, engineers, and managers.
- Mobile and web-friendly dashboards for remote monitoring.
- Multilingual support for global teams.

12. Cost Optimization

- Use of open-source tools where applicable to reduce costs.
- Intelligent capacity management to delay unnecessary capital expenditures.

Submission Guidelines:

- Responses should be submitted no later than **10 February 2025 Afghanistan time.**
- Please send your responses to [ashalizi@etisalat.af and copy Ihsanullah@etisalat.af].

6. Contact Information

For any questions or clarifications, please contact:

Ahmad Shikib Shalizi

+93 781204040

ashalizi@etisalat.af