



Secure Software Defined (SD) WAN and Solution Proposal

Proposal for: PACOFS
SCM100ITC2025
February 2025



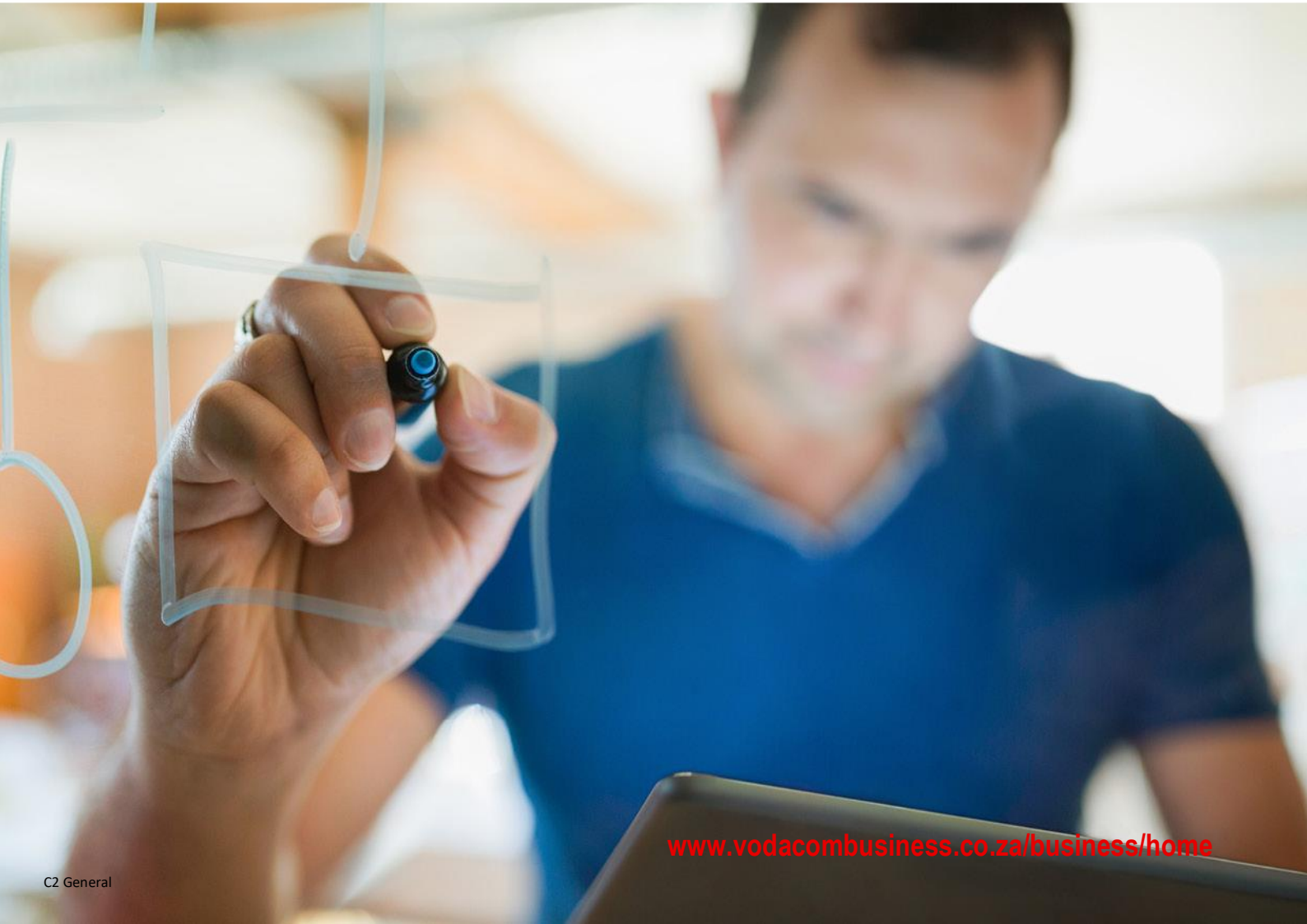
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vodacom
business



Thank you for considering us

Vodacom is truly pleased to be submitting this proposal to regarding the solution required for. Vodacom is confident it understands the objectives and are providing a high quality, value-based proposal.

The services provided by Vodacom to under this proposal are provided in terms of the concluded or to be concluded Technology Partner Agreement with Vodacom in terms of which have/will be appointed as a reseller of Vodacom product and Services. For avoidance of doubt, the terms and conditions set out in the Technology Partner Agreement between Vodacom and will govern the relationship between Vodacom and does not constitute an agency relationship, partnership, joint venture or similar arrangement.





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1. Executive Summary

Understanding requirement

Vodacom appreciates the opportunity to address the requirements for BMA. We aim to assist in modernizing the highlighted technologies. seeks a service provider to provision, implement, and support the following solutions, leveraging best-of-breed technologies on behalf of:

- Last mile internet services
- Cloud managed software defined – wide area network (SD-WAN)
- Network Security
- WiFi Access Points
- O365

The proposed solutions will be implemented across all sites in the country. Vodacom will ensure that these technologies are cost-effective, scalable, and, where necessary, redundant. Additionally, they will be designed with flexibility to accommodate future expansion for SIU.

Helping you to stay ahead of the game.

We have designed a solution to meet the stipulated requirements using the One Network principle, One Service Support Centre, and One Entity, who will be responsible for meeting your required Service Levels. Risk and complexity have been factored in and reduced to mitigate risk in provisioning your network of the future. Vodacom follows the ITIL Service Management Methodologies and Agile Organizational Principles as a result, the SD-WAN, security, will have the benefits of a centralized management and consistent network with comprehensive reporting capabilities.

In our offer, we can transition from the current network to a SD-WAN network. We will work with your teams to ensure a smooth transition and migration onto your new SD-WAN that keeps you moving forward.

Vodacom understands that needs a service provider it can trust to deliver the network solutions:

- Robust Network.
- Secure Network.
- Scalable.
- Intelligent routing that adapts to network changes.
- Application Aware traffic steering.
- Bandwidth flexibility, utilizing for available site bandwidth.
- Real-time accessible and accurate Reporting and proactive troubleshooting.
- Operational simplicity.
- Single point of contact for 24/7/24 Service Support

Committed to your success.



Vodacom Business would like to help achieve its key objectives. We continually invest in infrastructure, technology, people, and processes to provide our customers with the best possible user experience.

We understand the needs of and we know that it is the quality of after-sales service that is key for long-term sustainable growth. Therefore, we have created a dedicated team to service and support. This initiative will create a unified sales and service structure led by the Account manager and supported by a Sales Manager, Service Manager, Solution Architect, Project Management, and a host of technical resources.

The complex multi-disciplinary nature of business processes and solutions makes it extremely important for to choose the right service provider. We believe that Vodacom Business is uniquely positioned to meet and service your needs now and in the future.



2. Proposed Network Solution

2.1 SDWAN Proposed Architecture

To be provided when awarding of tender and finalization.

2.2 Connectivity (Undelay)

The following has been proposed as the access technologies for the various sites:

Site Name	Primary Link	Backup	Proposed SLA
Head office – 300Mbps	Fibre / Microwave	Microwave	99.99%

All of the proposed connectivity is dependent on a final onsite feasibility being completed. Should the site not be found as feasible then an alternate option will need to be quoted which could have different commercials.

The redundant links will be installed, with a primary Microwave backup link and or LTE. The Meraki CPE devices will automatically manage the failover between links, should a link fail.

All links are 1:1 with no contention and will be provided with Public IP Addresses

The SLA for the head office will be 99.99 % up time per month for the duration of the contract.

All links will cater for video, voice, and data traffic.

2.3 SD-WAN Overlay

Software-defined WAN (SD-WAN) is a suite of features designed to allow the network to dynamically adjust to changing WAN conditions without the need for manual intervention by a network administrator or service provider. By providing granular control over how certain traffic types respond to changes in WAN availability and performance, SD-WAN can ensure optimal performance for critical applications and help to avoid disruptions of highly performance-sensitive traffic, such as VoIP.

In order to meet the stated requirement of a Secure Access Service Edge (SASE), end-to-end single vendor, best of breed Secure Software Defined Networking (SDN) and infrastructure solution, Vodacom have proposed the Cisco range of products. This allows for network management from a “single-plane-of-glass”.



The proposed Cisco Meraki SD-WAN solution is a fully Vodacom managed solution and involves the deployment of a single Meraki MX 67 appliance at all branches, the head office will receive 2x Meraki MX 95 appliances. These devices will securely auto-provision IPsec VPN tunnels between sites. The solution caters for the automatic negotiation of VPN routes, authentication and encryption protocols, and key exchange for all Meraki MX appliances in the Chieta network- thus creating a hub-and-spoke VPN topology. Traffic between sites will be logically and securely separated from Internet traffic. **Note the final design of VLANs, routing, QoS, and Security will be done in the initial project phase in consultation with Vodacom.**

Security

The MX platform has an extensive suite of security features including IDS/IPS, content filtering, web search filtering, anti-malware, geo-IP based firewalling, IPsec VPN connectivity, and Cisco Advanced Malware Protection while providing the performance required for modern, bandwidth-intensive networks.

Layer 7 fingerprinting technology lets administrators identify unwanted content and applications and prevent recreational apps like BitTorrent from wasting precious bandwidth.

Meraki's Layer 7 security engines and signatures are always kept up to date via the cloud, simplifying network security management and providing peace of mind. The following are other features that are included:

- Stateful firewall, 1:1 NAT, DMZ
- Identity-based policies
- Auto VPN: automated site-to-site (IPsec) VPN for hub-and-spoke or mesh topologies.
- Client (IPsec L2TP) VPN
- Multiple WAN IP, PPPoE, NAT
- VLAN support and DHCP services
- Static routing
- User and device quarantine

Management

Management is conducted by Vodacom using the cloud-based Cisco Meraki dashboard. This is a Single pane-of-glass into managing wired and wireless networks. Cisco Meraki MX devices cater for zero-touch remote deployment – i.e. no staging needed. All firmware upgrades and security patches can be automated via the dashboard. Role-based administration with change logging and alerts will be implemented.

Chieta will have access to the Vodacom NPM portal to view network health.

Monitoring and Reporting

In terms of monitoring and reporting, the following will be available to via the Vodacom Service Management team:

- Throughput, connectivity monitoring and email alerts
- Detailed historical per-port and per-client usage statistics.
- Application usage statistics
- Org-level change logs for compliance and change management.
- VPN tunnel and latency monitoring
- Network asset discovery and user identification
- Periodic emails with key utilization metrics
- Device performance and utilization reporting



- Netflow support
- Syslog integrations

Vodacom will also provide access to a Network Management Portal to view and report on all access links provided.

<https://ossi.vodacom.co.za/login>

Remote Diagnostics

- Live remote packet capture
- Real-time diagnostic and troubleshooting tools.
- Aggregated event logs with instant search

WAN Performance Management

WAN performance will be optimized using the following:

- Automatic Layer 3 failover
- Application level (Layer 7) traffic analysis and shaping.
- Ability to choose WAN uplink based on traffic type.
- SD-WAN: VPN with policy based routing and dynamic path selection.

The Meraki Secure SD-Plus Licence will be provisioned for each site. Please see the list of features for the license below:

Feature	Enterprise	Advanced Security	Secure SD-WAN Plus
Centralized management	✓	✓	✓
Zero-touch firmware updates	✓	✓	✓
True zero-touch provisioning	✓	✓	✓
24x7 enterprise support	✓	✓	✓
Open APIs	✓	✓	✓
Automatic WAN failover	✓	✓	✓



Sub-second site-to-site VPN failover	✓	✓	✓
Sub-second dynamic path selection	✓	✓	✓
Stateful firewall	✓	✓	✓
VLAN to VLAN routing	✓	✓	✓
Advanced Routing	✓	✓	✓
Uplink Load Balancing/failover	✓	✓	✓
3G / 4G cellular failover	✓	✓	✓
Traffic shaping/prioritization	✓	✓	✓
Site-to-site VPN	✓	✓	✓
Client VPN	✓	✓	✓
MPLS to VPN Failover	✓	✓	✓
Splash pages	✓	✓	✓
Configuration templates	✓	✓	✓
Group Policies	✓	✓	✓
Client connectivity alerts	✓	✓	✓
Essential SD-WAN	✓	✓	✓



Source-Based Routing	✓	✓	✓
Local Breakout (IP based)	✓	✓	✓
Geography based firewall rules		✓	✓
Intrusion detection & prevention		✓	✓
Content filtering		✓	✓
YouTube Content Restriction		✓	✓
Web Search Filtering		✓	✓
Cisco Advanced Malware Protection (AMP)		✓	✓
Umbrella DNS Integration**		✓	✓
Threat Grid Integration**		✓	✓
Web App Health Analytics			✓
WAN Health Analytics			✓
VoIP Health Analytics			✓
Smart breakout			✓
SD-Internet			✓

**Requires a separate license

2.4 Cloud-based Security

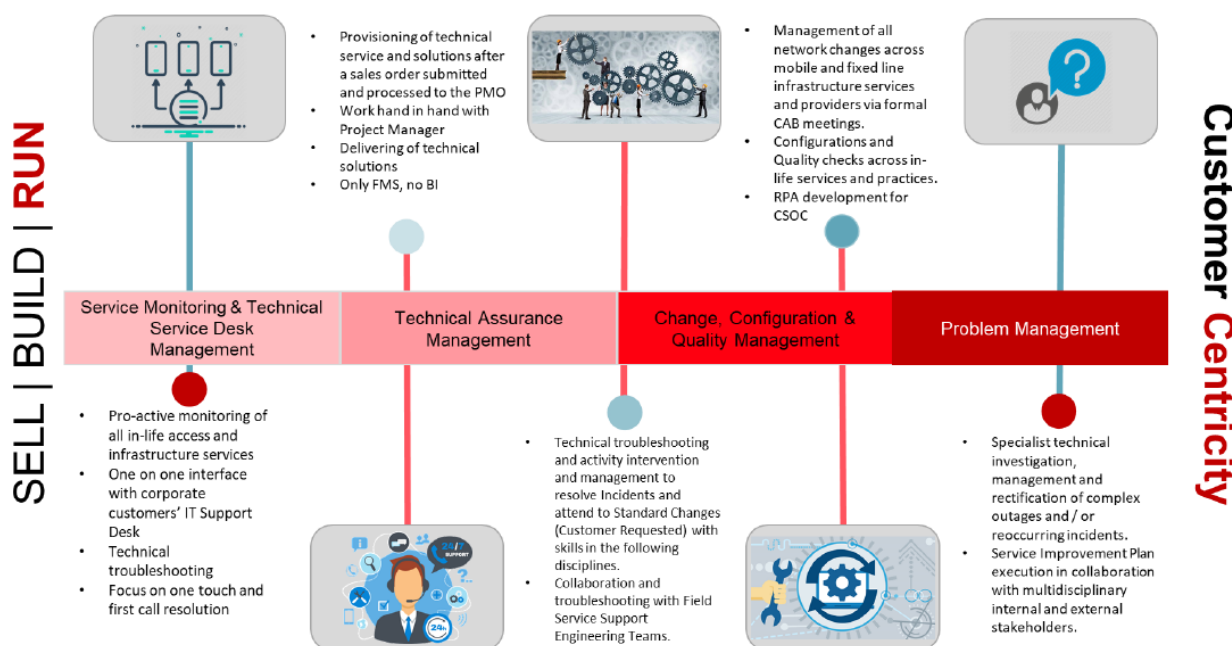
In addition to the Meraki Secure SD-Plus Licence solution we will integrate the following services for additional security:

- Cisco Umbrella's Secure Web Gateway (SWG) solution - <https://umbrella.cisco.com/products/secure-web-gateway>
- Cisco Secure Connect - Cloud Access Security Broker (CASB) - [https://documentation.meraki.com/CiscoPlusSecureConnect/Cisco_Secure_Connect_Now_-_Policies/Cisco_Secure_Connect_-_Cloud_Access_Security_Broker_\(CASB\)](https://documentation.meraki.com/CiscoPlusSecureConnect/Cisco_Secure_Connect_Now_-_Policies/Cisco_Secure_Connect_-_Cloud_Access_Security_Broker_(CASB))
- Cisco Secure Connect - Clientless Remote Access (ZTNA) - [https://documentation.meraki.com/CiscoPlusSecureConnect/Cisco_Secure_Connect_-_Clientless_Remote_Access_\(ZTNA\)](https://documentation.meraki.com/CiscoPlusSecureConnect/Cisco_Secure_Connect_-_Clientless_Remote_Access_(ZTNA))

The CSOC manage customers' services and the associated contracted service levels for all services offered within the Vodacom Business product range. The CSOC operates 24 hours per day, 7 days a week and 365 days of the year to manage customer services.

Vodacom Business Technology Solutions | Customer Service Operations Centre

Technical Build & Support of all Vodacom Business Products, Services and Solutions within the Fixed Managed (FMS) and Business Internet (BI) Service portfolio



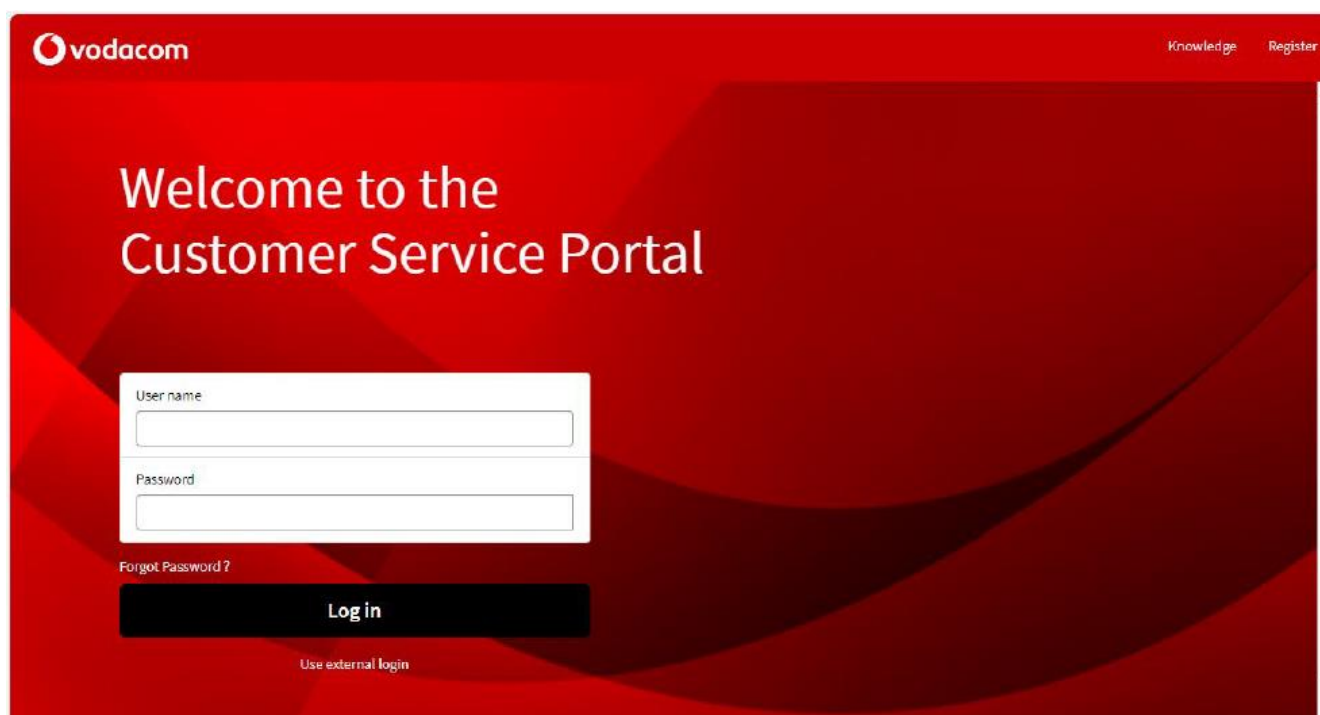
NPM (Network Performance Management) is designed and built for the monitoring of network/sites. A login feature for users is available and it will allow users to view a sites' Performance, Availability, Alarm, IP SLA, Class of Service, Top Talkers and Site Technical detail data.

Management Application. A user will be able to access all view relating to a sites' Performance, Availability, Alarm, IP SLA, Class of Service, Top Talkers and Site Technical detail data. A user will receive communication through SMS's and email.

- Portal: <https://ossi.vodacom.co.za/login>

Logging an Incident or Service Request

- Phone: 082 1951 (Local within RSA) and +27 82 241 9954 (International)
- Email: 0821951@vodacom.co.za
- NEW Portal: <https://vodacom.service-now.com/csm>



Customer Contact Management

a. It is the responsibility of the customer to:

- I. Provide Vodacom Business with the details of users that are authorised to order or request in-scope services and their level of authority.
- ii. Ensure that the list of authorised users is maintained.
- iii. Customers can maintain the list of authorised users by calling 082 1951 or emailing the CSOC, 0821951@vodacom.co.za

b. The Customer Service Desks or nominated party shall be the first point of contact (Level 1) as the Nominated and Authorized Users regarding incidents. This includes events that cause or may cause an interruption or reduction of service, as well as for problems and service requests.

c. The customer can also indicate whether it would be preferable to receive automated incident notifications.

The customer will have the option to select whether it is preferable to receive SMS or email notifications. Furthermore, a choice is available to receive these notifications during Business Hours, Extended Hours or 24/7/365.



3. Configuration and Reporting information

All configuration is stored on the cloud-based Meraki Dashboard, which keeps a record of all changes done for about 1 year. These Dashboards are maintained by Cisco and have redundancy built in. Dashboard access is controlled through a 2FA logon process, no access to CPE devices is allowed once provisioned.

All change requests will be driven through our CSOC and will follow a Change Control process. Specific policies can be created when required, based on 3 priority queues. Firmware updates are first evaluated and then deployed through a Change Control process. Security are updates done automatically.

All link reporting is available through our NMS portal.



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