CLOUDSWITCHED

FREE RESOURCE — AUDIT CHECKLIST

VoIP System Readiness Audit

A comprehensive audit of your VoIP infrastructure covering network readiness, bandwidth & QoS, hardware, platform configuration, call quality, security and disaster recovery. Score each section out of 10 and build an action plan for anything scoring below 6.

7	61	/10	Fillable
AUDIT AREAS COVERED	AUDIT ITEMS TO CHECK	SCORE EACH SECTION	TICK & TYPE IN ANY VIEWER

NETWORK & QOS · HARDWARE · CALL QUALITY · SECURITY · DISASTER RECOVERY

PREPARED FOR	PREPARED BY	VERSION	FORMAT
Cloudswitched Knowledge Library	Cloudswitched Ltd.	2026 Edition	Interactive PDF

00

How to use this checklist

Work through each of the seven sections with your IT team or VoIP provider. Tick every checkpoint that is **fully in place** — in production and verifiable today, not partial and not planned. Then award each section a score out of 10. This is an **interactive PDF** — tick the boxes and type your scores, owners and notes directly in any modern viewer.

WHAT THIS CHECKLIST IS

A practical pre-deployment and in-life self-assessment for any business running or planning a hosted VoIP / SIP telephony system. It covers the everyday hygiene that determines whether calls are clear and reliable — network readiness, QoS, hardware, platform configuration, quality monitoring, security and disaster recovery.

HOW TO USE IT

Complete this audit with your IT team or VoIP provider. Test call quality using **real calls to external numbers**, not just internal extensions. Score each section out of 10 and create an action plan for any area scoring below 6.

The seven audit areas

- **01 Network Infrastructure Assessment** — bandwidth, VLANs, latency, jitter, packet loss, SIP ALG.
- **02 Bandwidth & QoS Configuration** — DSCP, traffic shaping, WAN handover, asymmetric links.
- **03 Hardware & Handset Inventory** — handsets, firmware, headsets, ATAs, spares, PoE.
- **04 VoIP Platform Configuration** — IVR, routing, ring groups, voicemail, DDIs, DR routing.
- **05 Call Quality Monitoring** — MOS, alerts, CDRs, multi-site, test calls, root-cause.
- **06 Security & Compliance** — SIP auth, toll fraud, SRTP/TLS, MFA, 999/112, GDPR.
- **07 Disaster Recovery & Failover** — DR plan, mobile failover, redundancy, UPS, RTO, porting.

01

Network Infrastructure Assessment

VoIP performance is entirely dependent on your network. A poor network guarantees poor call quality regardless of the VoIP platform. Test before you deploy, not after users complain.

- ☐ Internet connection has **sufficient bandwidth** for concurrent voice calls plus data traffic *(allow 100 Kbps per concurrent call minimum)*.
- ☐ A **dedicated VLAN for voice traffic** separates VoIP from data traffic to prevent congestion impacting call quality.
- ☐ Network switches support **802.1p/Q VLAN tagging** and are configured to prioritise voice traffic on the dedicated voice VLAN.
- ☐ The **firewall is configured to prioritise SIP and RTP traffic** with appropriate QoS markings applied at the network edge.
- ☐ All network equipment between the phones and internet connection supports **Power over Ethernet (PoE)** for IP handsets.
- ☐ Network **latency is measured at below 150ms** end-to-end to the VoIP provider's data centre *(target: below 80ms for best quality)*.
- ☐ **Jitter is consistently below 30ms** and ideally below 15ms during peak business hours.
- ☐ **Packet loss is at or near 0%** — even 1% packet loss causes audible quality degradation on voice calls.
- ☐ SIP ALG (Application Layer Gateway) is **disabled on the router and firewall** as it commonly causes VoIP registration and audio issues.
- ☐ The network has been tested with a **VoIP readiness assessment tool** *(e.g. Ooma, VoIP Spear, or provider-specific tools)*.

WHAT GOOD LOOKS LIKE

Latency below 80ms, jitter under 15ms, packet loss at 0%, a dedicated voice VLAN, SIP ALG disabled, and a documented VoIP readiness test on file before any handset is shipped.

SECTION 01 SCORE _____ / **10** *Aim for 8+. Below 6 = network not VoIP-ready.*

REMEDIATION PRIORITY ☐ H ☐ M ☐ L **OWNER / NEXT ACTION** _____

02

Bandwidth & QoS Configuration

Quality of Service ensures voice traffic gets priority over data traffic, preventing call quality issues during busy periods. QoS that stops at the LAN edge is only half a policy.

- ☐ A **bandwidth capacity plan** documents the number of concurrent calls required and the bandwidth allocated for voice.
- ☐ QoS is configured on the **firewall or router** to give VoIP traffic highest priority using DSCP markings *(typically EF/46 for voice)*.
- ☐ QoS is configured on all **network switches** in the voice path to honour DSCP markings and prioritise voice frames.
- ☐ A **bandwidth reservation** is configured for voice traffic to guarantee minimum bandwidth even during network saturation.
- ☐ Upload bandwidth is specifically assessed — **asymmetric connections** (FTTC) may bottleneck outbound voice traffic before download is affected.
- ☐ Call quality testing has been performed during **peak bandwidth usage** *(e.g. while running backups, large downloads, or video conferences)*.
- ☐ A **traffic shaping policy** limits non-essential traffic (streaming, social media) to prevent it consuming bandwidth needed for voice.
- ☐ QoS markings are **preserved across the WAN connection** — some ISPs strip DSCP markings at the handover point.

WATCH OUT FOR

Asymmetric FTTC links where download looks healthy but a saturated upload starves outbound voice, and ISPs that silently strip DSCP markings at the WAN handover so your carefully tuned LAN QoS counts for nothing.

SECTION 02 SCORE _____ / 10 *Aim for 8+. Below 6 = QoS / bandwidth gap.*

REMEDIATION PRIORITY ☐ H ☐ M ☐ L **OWNER / NEXT ACTION** _____

03

Hardware & Handset Inventory

Document all VoIP hardware to ensure compatibility, firmware currency, and adequate spares for the organisation. An inventory that lives in someone's head does not count.

- ☐ A complete **inventory of all IP handsets** exists including model, firmware version, MAC address, and assigned extension.
- ☐ All handsets are from the **VoIP provider's supported hardware list** — unsupported handsets may lose functionality after platform updates.
- ☐ Handset **firmware is current** and provisioned centrally via the VoIP platform's auto-provisioning system.
- ☐ **Headsets** used with softphones or desk phones are certified compatible with the VoIP platform *(e.g. Jabra, Poly, EPOS)*.
- ☐ Spare **handsets are available** for rapid replacement — at least 5% of the deployed fleet or a minimum of 2 units.
- ☐ Conference room **speakerphones or conference units** are inventoried and tested for audio quality in their installed locations.
- ☐ Analogue devices (fax machines, door entry, lift phones) are connected via **Analogue Telephone Adapters (ATAs)** that are documented and monitored.
- ☐ Desk phone **power supplies** are via PoE from managed switches — no separate power adapters that could be accidentally disconnected.

SPARES MATHS

Hold at least 5% of the deployed fleet as spares, or a minimum of two units — whichever is greater. A failed handset with no swap-out is an avoidable outage for that user.

SECTION 03 SCORE _____ / 10 *Aim for 8+. Below 6 = inventory / spares gap.*

REMEDIATION PRIORITY ☐ H ☐ M ☐ L **OWNER / NEXT ACTION** _____

04

VoIP Platform Configuration

Verify that the VoIP platform is configured correctly for call routing, voicemail, and business requirements — including what happens when the primary system is unreachable.

- ☐ The **auto-attendant / IVR** is configured with current menu options, correct routing, and a professional greeting.
- ☐ **Call routing rules** are documented including business hours, out-of-hours, bank holidays, and emergency overrides.
- ☐ Ring groups and **hunt groups** are configured correctly for each department with appropriate ring strategies (simultaneous, sequential).
- ☐ **Voicemail** is configured for all users who require it, with voicemail-to-email delivery verified as working.
- ☐ **Call recording** is enabled where required for compliance, training, or quality purposes with appropriate GDPR notices.
- ☐ User **presence and status** features are configured and integrated with Microsoft Teams or other collaboration platforms.
- ☐ **Music on hold** and transfer announcements are professional, appropriately licensed, and not causing caller frustration.
- ☐ All **DDI (Direct Dial-In) numbers** route correctly to the intended extensions, ring groups, or auto-attendants.
- ☐ The platform is configured with a **disaster recovery routing plan** that redirects calls to mobiles or an alternative site if the primary system fails.

TEST THE ROUTING, NOT JUST THE CONFIG

Place real calls into every DDI, ring group and auto-attendant path. Configuration that looks right in the admin portal still routes wrong surprisingly often once a real caller is on the line.

SECTION 04 SCORE _____ / **10** *Aim for 8+. Below 6 = routing / config gap.*

REMEDIATION PRIORITY ☐ H ☐ M ☐ L **OWNER / NEXT ACTION** _____

05

Call Quality Monitoring

Proactive call quality monitoring catches issues before users complain. Reactive troubleshooting is always too late — by the time a ticket lands, the call is already lost.

- ☐ The VoIP platform provides **call quality metrics** (MOS scores, jitter, latency, packet loss) accessible via an admin dashboard.
- ☐ A **Mean Opinion Score (MOS) baseline** has been established — target 4.0 or above for acceptable quality *(5.0 is perfect)*.
- ☐ **Call quality alerts** are configured to notify the IT team when MOS scores drop below acceptable thresholds.
- ☐ Call quality is **monitored across all sites** including remote workers, not just the main office.
- ☐ Regular **test calls to external numbers** are made to verify inbound and outbound quality from the caller's perspective.
- ☐ **Call Detail Records (CDRs)** are retained and reviewed for patterns of dropped calls, short calls, or failed connections.
- ☐ A **user feedback mechanism** allows staff to report call quality issues with enough detail to diagnose the problem.
- ☐ Network monitoring tools provide **correlation between network events** and call quality degradation for root cause analysis.

MOS BASELINE

Establish a Mean Opinion Score baseline and target 4.0 or above (5.0 is perfect). Alert when MOS drops below threshold so you find degradation from monitoring, not from an angry caller.

SECTION 05 SCORE _____ / **10** *Aim for 8+. Below 6 = blind to quality issues.*

REMEDIATION PRIORITY ☐ H ☐ M ☐ L **OWNER / NEXT ACTION** _____

06

Security & Compliance

VoIP systems are targets for toll fraud, eavesdropping, and denial-of-service attacks. Protect them accordingly — a single compromised SIP trunk can run up thousands in fraudulent calls overnight.

- ☐ SIP trunk **authentication credentials** are strong, unique, and changed from any default values.
- ☐ **Toll fraud protection** is configured with call barring on premium-rate, international, and high-cost destinations unless explicitly required.
- ☐ **SRTP encryption** is enabled for voice media to prevent eavesdropping on calls traversing the network.
- ☐ **TLS encryption** is enabled for SIP signalling to protect call setup information and credentials.
- ☐ The VoIP platform's **admin interface** is protected with multi-factor authentication and accessible only from trusted networks.
- ☐ Voicemail PINs comply with **minimum complexity requirements** and are not set to default values (0000, 1234).
- ☐ **Emergency services (999/112)** are configured correctly with accurate location information transmitted to the emergency operator.
- ☐ Call recording and **GDPR compliance** requirements are met with appropriate retention periods and access controls.
- ☐ The system is included in regular **security audits and vulnerability assessments**.

TOLL FRAUD IS REAL MONEY

Bar premium-rate, international and high-cost destinations by default and only open what the business genuinely uses. Default SIP credentials and an unbarred trunk are the single most expensive mistake in VoIP.

SECTION 06 SCORE _____ / **10** *Aim for 8+. Below 6 = fraud / breach exposure.*

REMEDIATION PRIORITY ☐ H ☐ M ☐ L **OWNER / NEXT ACTION** _____

07

Disaster Recovery & Failover

When your VoIP system fails, your business is unreachable. Plan for every failure scenario — platform outage, internet loss, power cut, and total site unavailability.

- ☐ A **VoIP disaster recovery plan** is documented covering platform outage, internet failure, power failure, and site unavailability.
- ☐ **Call forwarding to mobile phones** is pre-configured and can be activated within minutes of a system failure.
- ☐ The VoIP provider offers **geographic redundancy** with automatic failover to a secondary data centre.
- ☐ An **internet failover connection** is in place to maintain VoIP service if the primary internet connection fails.
- ☐ **UPS (Uninterruptible Power Supply)** protects network switches, routers, and the internet connection to maintain VoIP during short power outages.
- ☐ A **softphone application** on mobile devices allows staff to make and receive calls on their business number from anywhere with internet access.
- ☐ The DR plan has been **tested within the past 12 months** with documented results and identified improvements.
- ☐ Recovery Time Objective (RTO) for **telephony restoration** is defined and achievable with current DR arrangements.
- ☐ **Number porting contingency** is understood — if the VoIP provider fails permanently, how quickly can numbers be ported to an alternative.

TEST THE PLAN

A DR plan that has not been tested within the past 12 months is a hypothesis, not a plan. Run a failover exercise, time the recovery against your RTO, and document what broke.

SECTION 07 SCORE _____ / **10** *Aim for 8+. Below 6 = unreachable when it fails.*

REMEDIATION PRIORITY ☐ H ☐ M ☐ L **OWNER / NEXT ACTION** _____

Σ

Audit score summary

Transfer the score for each section into the table. Set a priority (H/M/L) based on the gap to target. Anything below 6 is a candidate for the top-three actions on the next page.

#	AUDIT AREA	SCORE / 10	PRIORITY
01	Network Infrastructure Assessment	_____ / 10	☐ H ☐ M ☐ L
02	Bandwidth & QoS Configuration	_____ / 10	☐ H ☐ M ☐ L
03	Hardware & Handset Inventory	_____ / 10	☐ H ☐ M ☐ L
04	VoIP Platform Configuration	_____ / 10	☐ H ☐ M ☐ L
05	Call Quality Monitoring	_____ / 10	☐ H ☐ M ☐ L
06	Security & Compliance	_____ / 10	☐ H ☐ M ☐ L
07	Disaster Recovery & Failover	_____ / 10	☐ H ☐ M ☐ L
Σ	**TOTAL SCORE**	_____ / 70	—

Interpretation & priority actions

Translate your total score into a risk band, then commit to a small number of next steps. The goal is one page of decisions, not a wish list.

Score interpretation

56–70	**Excellent.** Your VoIP setup is well-managed and resilient. Focus on continuous improvement and emerging threats.
42–55	**Good foundation, gaps exist.** Prioritise any section scoring below 6 with named owners and deadlines.
Below 42	**Significant gaps** that put call quality, security or continuity at risk. Consider an urgent review with a VoIP specialist.

Top 3 priority actions

01 _____

02 _____

03 _____

Additional notes

_____

_____

_____

_____

AUDIT COMPLETED BY _____ DATE _____ NEXT REVIEW DUE _____

CLOUDSWITCHED

IT SUPPORT & PROJECT SERVICES

info@cloudswitched.com

New London House, 6 London St
London EC3R 7LP · United Kingdom