



FREE RESOURCE — CAPACITY PLANNING WORKSHEET

Network Capacity Planning

Calculate bandwidth demand, document LAN and WiFi capacity, forecast 6/12/24 month growth and plan the upgrades that keep your network ahead of the business — in one structured worksheet. Fillable in any modern PDF viewer.

5

PLANNING
SECTIONS

80%

UPGRADE
THRESHOLD

24m

FORWARD
FORECAST

Free

TYPE & TICK
IN ANY VIEWER

BANDWIDTH DEMAND

LAN & WIFI

GROWTH FORECAST

UPGRADE PLAN

PREPARED FOR

Cloudswitched KnowledgeCloudswitched Ltd.
Library

PREPARED BY

VERSION

2026 Edition

FORMAT

Planning Worksheet

00

How to use this worksheet

Use this worksheet to plan ahead of network capacity hitting the wall. Complete each section with current usage data from your monitoring tools, project demand against headcount and roadmap, and identify the upgrades that need budget approval **before** the symptoms hit users.

The five sections together give you a complete capacity picture — **internet bandwidth, LAN, WiFi, growth forecast and upgrade plan** — on a single A4 print, with cells that stay fillable in any modern PDF viewer. Review quarterly to track growth trends and refresh the forecast.

WHAT THIS WORKSHEET IS

A structured snapshot of your network capacity position — the artefact your IT manager, a new MSP, a finance lead approving a circuit upgrade or a board member asking “why are we slow?” needs on day one. Pair it with the Cloudswitched Network Performance Monitoring Guide and Network Infrastructure Assessment for a full review cycle.

COMMON PITFALLS TO AVOID

Sizing the internet circuit for **average** demand instead of **peak** (Teams meetings, cloud backups, software-update windows all collide). Waiting for **100%** link utilisation before triggering an upgrade — user pain starts at **80%** sustained. Treating WiFi capacity as “an AP per room” without checking **client density**. Forecasting headcount but forgetting the per-user bandwidth growth that comes with new SaaS adoption.

The five planning sections

- **01 Internet Bandwidth Requirements** — demand per application, peak total, current circuit headroom.
- **02 LAN Capacity Assessment** — switch port use, PoE budget, uplink speed per location.
- **03 WiFi Capacity Assessment** — client counts, signal levels, channel and band per AP.
- **04 Growth Forecast** — headcount, bandwidth, ports, WiFi, storage and VPN across 6/12/24 months.
- **05 Upgrade Plan** — component-by-component upgrade options, costs and timelines.

THE 80% RULE

When any capacity metric — circuit utilisation, switch port count, PoE budget, WiFi client load — sits at or above **80%** during peak periods, plan the upgrade **now**. Procurement, install windows and change windows typically add 6–12 weeks; if you wait for 100% you are already late.

01

Internet Bandwidth Requirements

Calculate total bandwidth demand from all applications and users. Estimate **peak concurrent users** for each service, multiply by per-user demand, and roll up to the peak total. Compare against your circuit capacity to find the headroom — or the gap.

APPLICATION / SERVICE	PEAK USERS	BANDWIDTH PER USER	PEAK TOTAL	PRIORITY
Web browsing & email	_____	2 Mbps	_____	Medium
Microsoft Teams (video)	_____	4 Mbps up+down	_____	High
Cloud applications (SaaS)	_____	3 Mbps	_____	High
Cloud backup (daily upload)	_____	Varies	_____	Low (off-peak)
VoIP (internet-based)	_____	100 Kbps / call	_____	Critical
Software updates / patching	_____	Varies	_____	Low (schedule)
Guest WiFi	_____	1 Mbps (capped)	_____	Low
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Total peak demand			_____ Mbps	

CURRENT CIRCUIT & THRESHOLDS

Current internet bandwidth (down / up Mbps) _____

Current peak utilisation (% of circuit) _____

Headroom available (Mbps spare at peak) _____

Upgrade trigger threshold (% sustained, e.g. 80%) _____

Failover / secondary circuit present ☐ Yes ☐ No

02

LAN Capacity Assessment

Document every switch in the estate — **total ports**, **used ports**, **PoE budget** and **uplink speed**. Track utilisation per switch so you can see *which one* is the first to hit the 80% wall, not just an estate-level average.

SWITCH / LOCATION	TOTAL PORTS	USED PORTS	AVAILABLE	POE USED (W)	POE BUDGET (W)	UPLINK SPEED
-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----

LAN CAPACITY TESTS

Switch port utilisation under 80% at peak ☐ Yes ☐ No

PoE budget headroom of at least 20% on every switch ☐ Yes ☐ No

Uplink speeds sized for downstream peak (no 1G uplink, 24x1G access) ☐ Yes ☐ No

Stack / redundant uplinks in place on core ☐ Yes ☐ No ☐ N/A

Switch port utilisation upgrade threshold (% used) _____

LAN CAPACITY TIP

If a switch sits above 80% port utilisation, plan for an additional switch **before** the next desk move or hardware refresh — a hand-to-mouth single-port-left position turns into an outage the next time a user plugs in a hub or a printer. For PoE, account for both **budget** (total wattage) and **per-port class** (a 4-port 802.3bt run will exhaust budget before it exhausts ports).

03

WiFi Capacity Assessment

Document every access point — location, peak client count, signal level, channel and band. Capacity is rarely about coverage; it is almost always about **client density**, **co-channel contention** and how much **airtime** each device consumes.

ACCESS POINT	LOCATION	MAX CLIENTS	CURRENT PEAK	AVG SIGNAL (DBM)	CHANNEIBAND
-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----

WIFI CAPACITY TESTS

No AP averages more than 30–40 clients at peak ☐ Yes ☐ No

Average client throughput stays above 20 Mbps ☐ Yes ☐ No

Average client signal at or above -67 dBm in covered zones ☐ Yes ☐ No

5 GHz / 6 GHz preferred over 2.4 GHz for primary SSID ☐ Yes ☐ No

Client-load upgrade threshold (*peak clients per AP*) _____

WIFI CAPACITY TIP

When any AP consistently serves more than **30–40 clients** during peak periods, or average client throughput drops below **20 Mbps**, it is time to add capacity. That can mean additional APs, wider channel widths (if the interference picture allows), or moving to **WiFi 6 / 6E** for higher airtime efficiency. Don't solve a density problem by raising AP transmit power — you make the contention worse.

04

Growth Forecast

Project capacity requirements based on planned business growth. Use the headcount plan from HR / finance as the anchor, then derive the rest — bandwidth, ports, WiFi clients, storage and VPN — from a per-user multiplier. Refresh quarterly when the business plan changes.

METRIC	CURRENT	6 MONTHS	12 MONTHS	24 MONTHS	ACTION NEEDED
Headcount	-----	-----	-----	-----	-----
Internet bandwidth demand (Mbps)	-----	-----	-----	-----	-----
Switch ports needed	-----	-----	-----	-----	-----
WiFi clients (peak)	-----	-----	-----	-----	-----
Cloud storage (GB)	-----	-----	-----	-----	-----
VPN concurrent users	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----

FORECAST ASSUMPTIONS

Per-user bandwidth growth assumption (%/year) _____

WiFi clients per user (laptop + phone + tablet) _____

Forecast based on signed-off headcount plan ☐ Yes ☐ No

Office moves / new sites in window ☐ Yes ☐ No

Hybrid-work ratio in 24 months (% on-site at peak) _____

05

Upgrade Plan

For each component that the forecast says will hit its threshold, write down the **upgrade option**, an **estimated cost** and a **timeline**. This becomes the line items for next year's IT budget — and the cover memo when finance asks "why now?"

COMPONENT	CURRENT CAPACITY	REQUIRED CAPACITY	UPGRADE OPTION	EST. COST	TIMELINE
Internet circuit	_____	_____	_____	£_____	_____
Core switch	_____	_____	_____	£_____	_____
Access switch(es)	_____	_____	_____	£_____	_____
WiFi access points	_____	_____	_____	£_____	_____
Firewall throughput	_____	_____	_____	£_____	_____
VPN concentrator / SASE	_____	_____	_____	£_____	_____
Total upgrade budget				£_____	

UPGRADE GOVERNANCE

Budget approved for next 12 months ☐ Yes ☐ No ☐ Pending

Procurement lead time confirmed with supplier ☐ Yes ☐ No

Change windows agreed with the business ☐ Yes ☐ No

Upgrade owner _____

06

Sign-off & Next Steps

Capture the top priority capacity actions that come out of this plan and the people who own them. Three is enough — if the list runs longer, you have a programme, not a punch list. Pair this with a quarterly review date so the forecast does not drift from reality.

Top 3 priority actions

01

02

03

Additional notes

Sign-off

PREPARED BY

DATE

APPROVED BY

Need network capacity planning?

Our engineers analyse your current network usage, build a 12–24 month forecast and design the upgrade path that stays ahead of your business growth — fixed price, fixed window.

info@cloudswitched.com

cloudswitched.com/solutions/cloud-networking



CLOUDSWITCHED

CLOUD NETWORKING & IT INFRASTRUCTURE

info@cloudswitched.com

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