

# Glossary

Core terms from this campus. Each in-app entry also has a config note and a fault. Accessed 14 October 2026.

- **Microsoft 365 tenant** — The boundary that holds Entra ID, licenses, Teams policies, and verified domains for one organization.
- **Verified domain** — A domain added and proven in the tenant. Direct Routing SBC FQDNs must live on one of these domains.
- **onmicrosoft.com domain** — The default tenant domain. It is not a supported domain for a Direct Routing SBC FQDN.
- **Homed online** — Direct Routing users must be homed in Microsoft 365, not left on a Skype for Business on-premises registrar.
- **Islands mode** — A coexistence mode. Direct Routing is not supported for users in Islands mode.
- **Entra ID** — The identity directory for the tenant. Teams users, resource accounts, and admin roles are Entra objects.
- **Resource account** — A disabled-for-sign-in Entra account that represents an auto attendant or a call queue. It is not a human login.
- **Cloud Voicemail** — The Teams voicemail service. It deposits messages in the user's Exchange mailbox.
- **Teams Phone** — The license capability that lets a user use Teams as a phone system. It is not, by itself, a PSTN carrier.
- **Calling Plan** — A Microsoft-operated PSTN option. Domestic, international, and pay-as-you-go are the usual flavors. It is an extra license on top of Teams Phone.
- **Audio Conferencing** — The license that provides dial-in numbers for meetings. It is not Teams Phone.
- **Teams Premium** — An add-on for advanced meetings and related features. It does not replace Teams Phone or a Calling Plan.
- **Teams Phone Resource Account license** — The license each auto attendant or call queue resource account needs, even when the account has no phone number. Subscriptions with Teams Phone include a zero-cost allotment you still have to acquire.
- **Pay-as-you-go Calling Plan** — A Calling Plan billed on use. Also the funding pattern, with communications credits, for some voice-app outbound calls.
- **Communications credits** — A balance used when a call is not covered by a Calling Plan minute. Voice apps use it for some outbound cases.
- **Shared Calling** — A pattern where users place outbound PSTN calls through a resource account's number instead of each having a number.
- **Common area phone** — A shared handset. On Direct Routing it does not need a Calling Plan license.

- **Teams Rooms license** — Rooms use their own SKU family, not a borrowed user Calling Plan. Names such as Basic and Pro change. Check the current name.
- **Conditional Access** — Entra policy that can block a phone or a room that is not in the trusted device set.
- **Shortest media path** — Microsoft's network guidance prefers a short path to the Microsoft network, without a proxy in the media path.
- **VPN and real-time media** — Microsoft recommends that you avoid sending real-time Teams media through a VPN. QoS on the VPN does not fix the extra delay.
- **ExpressRoute is optional** — Teams does not require ExpressRoute. Local internet egress is the usual design. If you do use ExpressRoute, follow the current network article rather than assuming media is happier there.
- **QoS markers enabled** — The Teams admin center setting that allows clients to insert DSCP. Without it, a correct ACL still sees unmarked client traffic from managed endpoints that honor the policy.
- **Three to five hops** — Microsoft's planning note: keep the client-to-network-edge path short, on the order of three to five hops, and the ISP-to-Microsoft edge short as well.
- **Layer-3 G.711** — G.711 at 20 ms is 160 bytes of payload plus 40 bytes of IP, UDP, and RTP. That is 80 kbit/s per direction.
- **Ethernet G.711** — Add an 18-byte Ethernet header to the G.711 20 ms packet and the figure is 87.2 kbit/s per direction.
- **Operator Connect** — A certified carrier manages PSTN for you inside the tenant. You need Teams Phone. You do not need a Microsoft Calling Plan or your own SBC.
- **Operator Connect for India** — The India-specific operator model. It exists because India PSTN rules are not the same as a generic Operator Connect deployment.
- **Teams Phone Mobile** — The user's mobile SIM number is also their Teams number, through a certified mobile operator. Teams Phone is required.
- **Direct Routing** — You connect a certified SBC to Teams and bring your own carrier. Users need Teams and Teams Phone. They must be homed online. Islands mode is not supported.
- **Mixing PSTN options** — One tenant may use Calling Plans, Operator Connect, Teams Phone Mobile, and Direct Routing at the same time for different users.
- **SIP proxies** — For commercial Microsoft 365, signal to sip.pstnhub.microsoft.com, then sip2, then sip3, on TCP 5061. GCC High and DoD use different names.
- **Media ports for Direct Routing** — UDP 3478–3481 and 49152–53247 between the SBC and the media processors, unless media bypass keeps the media off that path.
- **Media re-targeting** — Microsoft does not support changing the media target in the middle of an active Direct Routing call.
- **Two media ports per call** — Microsoft's planning tip: allocate at least two media ports on the SBC for each concurrent call.
- **Normalization** — The dial plan rewrites what a person dialed into a number the routes can match, usually E.164. The first matching rule wins.
- **Tenant dial plan** — A set of normalization rules you assign to users. A user can have a more specific plan than the tenant default.

- **PSTN usage** — A name that links a voice routing policy to one or more voice routes. The policy's ordered list of usages is the permission to place those calls.
- **Voice route** — A number pattern plus an ordered list of SBC gateways. It does nothing until a PSTN usage on the user's policy points at it.
- **Voice routing policy** — The per-user list of PSTN usages, in order. Teams walks that order when it looks for a route.
- **Gateway priority** — Each voice route lists SBCs with a priority. Lower priority number is tried first in this campus's teaching model. Confirm the current article before you depend on a tie.
- **Emergency short code** — 999, 112, and 911 must be normalized on purpose. A general rule that runs first can swallow them.
- **Auto attendant** — A voice app that answers, plays a greeting, and routes by schedule, menu, directory, or operator.
- **Call queue** — A voice app that holds callers and offers them to agents by attendant, serial, round robin, or longest idle routing.
- **Conference mode** — A queue behavior where the caller stays in the conference while agents are tried, so the transfer is faster and the greeting is not replayed the same way.
- **Overflow** — Where the call goes when the queue is full or the timeout expires. It can be a person, another voice app, voicemail, or an external number.
- **Directory search** — An attendant feature that lets a caller reach a person by name or extension.
- **Holiday schedule** — A calendar the attendant uses to play the closed greeting. It is not the same object as business hours.
- **Dynamic emergency calling** — Teams picks a civic address from the network location it can see: trusted IP, site, and subnet in the usual design.
- **Civic address** — The street address you validate for emergency calling. A dispatchable location is specific enough for responders.
- **Trusted IP** — An address that means 'this client is inside our network.' It is how Teams decides the client is on a site you mapped.
- **Emergency calling policy** — Controls notification and how the client looks up location. It is not the PSTN route.
- **Direct Routing emergency** — You, the SBC, and the carrier deliver the emergency call. Microsoft does not become the emergency carrier because Teams is the client.
- **Calling Plan emergency** — With Microsoft Calling Plans in supported countries, Microsoft's emergency calling service is part of the plan. You still configure locations.
- **Location-based routing** — Stops a user in a regulated site from placing a PSTN call through a gateway in another site. It is a toll-bypass control.
- **Survivable Branch Appliance** — A Direct Routing appliance that can keep local PSTN calling when the branch cannot reach Microsoft 365.
- **Media bypass** — Media can flow between the Teams client and the SBC, skipping Microsoft's media processors. Signaling still goes through Teams.
- **Local media optimization** — A Direct Routing pattern with internal and external SBC interfaces so a branch user stays on the local media path.

- **SIP Gateway** — Microsoft's front end for certain compatible analog and SIP devices that are not Teams phones.
- **Teams-certified phone** — A handset in Microsoft's certified device program, signing in as a Teams user.
- **SRTP** — The media encryption Direct Routing uses. Signaling is TLS. A successful INVITE with plaintext RTP is not the design.
- **TLS 1.2** — Direct Routing signaling expects modern TLS. TLS 1.0 is not a compatible offer.
- **Certificate SAN** — The name on the SBC certificate must match the FQDN you paired. Wildcards are allowed when they follow RFC 2818.
- **Microsoft trusted root** — The SBC certificate must come from a CA in Microsoft's trusted root program. A private lab CA is not enough for production pairing.
- **Server Authentication EKU** — The certificate should include the server authentication extended key usage.
- **Call Analytics** — The per-user, per-call quality view in the Teams admin center. Use it when one person had one bad call.
- **Call Quality Dashboard** — The aggregate quality report. Use it for subnets, buildings, and trends.
- **Poor stream clues** — Teach yourself to look at jitter, packet loss, and round-trip time separately. A mark of DSCP 0 plus high jitter is a different fault from 12% loss with EF still set.
- **SIP ladder** — A time-ordered picture of requests and responses between client, proxy, SBC, and carrier, joined by Call-ID.
- **One hypothesis** — Change one thing, then collect the same evidence again. A reboot plus a dial-plan edit plus a firewall change teaches nothing.
- **Dynamics 365 Contact Center** — Microsoft's contact-center product. It can stand alone or sit with Customer Service. Voice uses Azure Communication Services under the covers.
- **Customer Service workspace** — The representative experience in Dynamics. Contact Center can embed there or run as its own product surface.
- **Workstream** — The intake pipe in unified routing. It classifies work and sends it to a queue.
- **Work classification** — Rules that set skills, intent, or priority on a work item before assignment.
- **Capacity profile** — How many items of each type a representative can hold. A voice call usually consumes more than a chat message.
- **Representative** — The human on the contact-center side. AB-250 calls the console the representative experience.
- **Copilot in the contact center** — Assistive summaries, suggested replies, and knowledge inside the representative experience. It is not the PSTN route.
- **AB-250 channels weight** — The published AB-250 study guide weights channel implementation at about 30–35 percent, the largest slice.
- **Connect model** — A certified contact center attaches to Teams through certified SBCs and Direct Routing.

- **Extend model** — The contact center uses the Teams client, Graph, and Cloud Communications APIs. Teams Phone is the calling system and the agent works in Teams.
- **Unify model** — The model Microsoft Learn names, as of 14 October 2026, for a native experience. Partner material describes it as ACS-based applications on Teams calling infrastructure. Older decks say Power. Ask which current model a vendor holds.
- **Teams Phone extensibility** — A way for a contact center, including Dynamics 365 Contact Center, to use a customer's existing Teams Phone for the agent's telephony.
- **CUBE as a bridge** — Cisco Unified Border Element can be the certified SBC between Teams and CUCM or a carrier. The IOS-XE release you run has its own guide.
- **One normalization owner** — During coexistence, either Teams or CUCM should transform numbers, not both.
- **Tromboning** — A call from a user who stayed on CUCM to a user who moved to Teams hairpins through the SBC. It is normal during dual-running and expensive as a steady state.
- **Webex calling bridge** — A SIP trunk through a local gateway or CUBE can carry calls between Webex Calling users and Teams users during a split estate.
- **UCCE coexistence** — Contact-center agents can stay on CVP and Finesse while knowledge workers move to Teams. The SBC sends contact-center numbers one way and user numbers another.
- **Genesys and Teams** — Genesys sells contact-center integrations with Teams. The certification model, Connect, Extend, or Unify, decides the media path and the licenses.
- **Amazon Connect and Teams** — A customer pattern uses an SBC between Teams Direct Routing and Amazon Connect or a SIP voice connector. It is a bridge you design, not a Microsoft Calling Plan feature.
- **Call Automation** — The ACS server-side calling API. Your app answers, plays, recognizes DTMF or speech, and transfers. You receive events. You do not drive a desktop click.
- **Calling SDK** — The ACS client SDK for a human in a browser or a mobile app. Different from Call Automation, which is the server.
- **Recognize step** — The Call Automation action that collects DTMF or speech. It needs a timeout and a path for 'none of the above.'
- **Azure AI Speech** — Microsoft's speech-to-text and text-to-speech service. Copilot Studio and custom IVRs can use it. It is not emergency calling.
- **Copilot Studio voice agent** — A bot built in Copilot Studio that can front a voice channel, including Dynamics contact-center voice, using topics or generative orchestration.
- **Azure AI Foundry** — The Azure portal family for models, agents, and evaluations. The earlier name was Azure AI Studio. It does not route PSTN.
- **Teams interop with ACS** — ACS can be set up to call Teams users and to join Teams meetings when the interop prerequisites are met.
- **MS-700** — MS-700 is still live, with a skills update on Oct 27 2026; it is NOT retired and has no replacement. It is the exam for Microsoft 365 Certified: Teams Administrator Associate.
- **MB-280 retired** — MB-280 retired Jul 31 2026, with AB-210 as its successor; AB-210 is in beta. It covered Sales and Customer Insights, not the contact-center product.

- **AB-210** — Dynamics 365 Sales AI Consultant Associate. AB-210 is the successor to MB-280 and is in beta. It is not a replacement for MS-700.
- **AB-250** — Transforming Contact Center Experiences with AI in Dynamics 365. It earns Dynamics 365 Contact Center AI Engineer Associate. Pass mark is 700. The public page allows 120 minutes.
- **AZ-900** — Azure Fundamentals. It was not on the retirement list reviewed on 14 October 2026.
- **SC-900** — Security, Compliance, and Identity Fundamentals. The English certification is scheduled to update on 21 October 2026.
- **MS-900 retired** — Microsoft 365 Fundamentals retired on 31 March 2026.
- **AI-900 retired** — Azure AI Fundamentals retired on 30 June 2026.
- **Passing score 700** — Microsoft role-based exams, including MS-700 and AB-250, require 700 out of 1000.
- **Convenience recording** — A user starts a recording of a call, meeting, or event. Policy can allow it. The user can stop it. Storage follows meeting rules.
- **Compliance recording** — A third-party recorder is invited by policy into new calls, meetings, and events. The user does not start it and participant consent is not the control. Notification is enforced.
- **Compliance recording application** — The bot instance of a certified recorder. The policy references it. Without it, granting the policy does not record.
- **Existing calls are unaffected** — When you grant a compliance recording policy, calls and meetings already up are not swept in. Test with a new call.
- **Quality management** — Listening to and scoring recorded interactions. Often the same vendor as compliance recording, sometimes a separate one.
- **Workforce management** — Scheduling and adherence for a queue. It eats interval stats, handle time, and shrinkage. It is not a feature of a Teams user policy.
- **Shrinkage** — The fraction of paid time that is not available for contacts: leave, training, meetings, breaks.
- **Occupancy** — Handle time divided by handle time plus available time. High occupancy feels efficient and burns people out.
- **Service level** — The fraction of contacts answered inside a target, for example 80 percent in 20 seconds. Erlang C is one teaching model of it.
- **Power BI and CQD** — Power BI can sit on top of Call Quality Dashboard data. It does not replace Call Analytics for one call, and it inherits a bad subnet map.
- **Screen pop** — The CRM opens the contact that matches the caller. Teams does not do this by itself for an ordinary PSTN call.
- **E.164** — The international form of a number, starting with + and a country code. Routes and CRM lookups should use it after normalization.
- **Call-ID** — The SIP header that identifies one dialog. It is the join key between an SBC capture, a carrier ticket, and a CRM note.
- **Integration seam** — A named place where another system is allowed to attach: a policy, a queue overflow, a subnet list, an event, an identifier.

- **Human escape** — A digit or intent that always reaches a person. Voice agents need one. Emergency numbers need a real route, not a bot.
- **Certificate expiry seam** — The date the SBC certificate stops being valid. It is an integration hook because every carrier and every proxy will notice it on the same morning.
- **Subnet as a shared list** — The same subnet definitions should feed emergency location, location-based routing, and the CQD building report.
- **Queue interval** — A 15-minute or 30-minute bucket of offered, answered, and abandoned contacts. WFM and Erlang C both assume you know the bucket.
- **Abandon** — A caller who hangs up before an agent answers. Whether short abandons count is a business rule.
- **Average handle time** — Talk time plus after-call work, unless your definition says otherwise. Erlang traffic is calls times handle time divided by the interval.
- **PIDF-LO** — A location object that can be carried in a SIP INVITE for an emergency call so the far end sees where the caller is.
- **On-site notification** — An emergency calling policy can notify people on site when an emergency call is placed.
- **GCC High SIP** — Office 365 GCC High uses sip.pstnhub.gov.teams.microsoft.us. Do not copy the commercial three-proxy list into a government tenant.
- **DoD SIP** — Office 365 DoD uses sip.pstnhub.dod.teams.microsoft.us.
- **IPv6 SIP proxies** — The plan page also lists sip.ipv6.pstnhub.microsoft.com and the sip2 and sip3 IPv6 names, resolving into 2603:1063:400::/40.
- **Early offer** — Teams Direct Routing presents media in the INVITE. An SBC or CUBE that waits for a delayed offer will negotiate badly.
- **AudioCodes** — A certified SBC family. Mediant devices and their management tools are common in Direct Routing designs. The Microsoft certified list is the support boundary, the vendor guide is the config.
- **Ribbon SBC** — Ribbon's certified session border controllers are a Direct Routing option. Core and software editions differ.
- **Oracle SBC** — Oracle Communications Session Border Controller can be certified for Direct Routing on specific releases. Check the Microsoft list for the release, not the logo.
- **Cisco CUBE** — Cisco Unified Border Element on IOS-XE, when the release is certified, is a normal Direct Routing SBC and the usual bridge to CUCM.
- **Vendor-first support** — Microsoft's Direct Routing support boundary: you call the SBC vendor, they escalate to Microsoft if they must. Non-certified SBCs can be refused.
- **Analog via Direct Routing** — Fax, door phones, and elevators usually stay on an SBC or SIP Gateway, not on a Teams client.
- **Presence-based routing** — A queue can skip agents whose Teams presence says they are busy or in a meeting.
- **Opt out of a queue** — Agents can be allowed to leave a queue. If you forbid it, staffing math must include breaks or they will dodge in other ways.
- **Callback** — A queue feature that calls the customer back. The prerequisite article treats callback as a case that needs funding on the resource account.

- **Graph communications** — Microsoft Graph APIs used by Extend and by recording and presence integrations. They are not a SIP trunk.
- **Policy recording bot join** — The recorder joins as an application because the user's policy names it. If the bot fails to join, you have a policy, an ID, or a media problem, in that order.
- **Retention of recordings** — Compliance recordings are retained by the partner's system, not by Teams meeting storage. Convenience recordings follow meeting storage.
- **Evaluation form** — The QM scorecard. It should cite behaviors you can hear, not vibes.
- **Screen recording** — Often a QM vendor feature on the agent desktop. Teams compliance recording's documented media list is voice, video, and screen share inside the Teams session, which is not the same as a silent desktop recorder.
- **Building map** — The table that says which subnet is which building in CQD. It is only as good as the subnets you typed.
- **Admin roles for CQD** — CQD is an admin report, not a personal call history. The people who can open it are the roles you grant, not every user.
- **After-call work** — Time the agent spends in the CRM after the caller hangs up. Include it in handle time if your WFM definition says so.
- **Skill-based routing** — Assignment that prefers a representative who has the skill the classification step wrote on the work item.
- **Intent-based routing** — Classification that uses an intent, often from a bot or a model, to pick a queue.
- **Proactive outbound** — Contact-center campaigns that place calls outward. They need a number, a consent story, and a capacity plan.
- **Real-time translation** — A channel feature that can translate a conversation. It is not a substitute for a language queue when the policy says a human must speak the language.
- **Knowledge source** — The documents a Copilot or a generative agent is allowed to quote. If the source is wrong, the answer is wrong with confidence.
- **Generative orchestration** — The Copilot Studio mode that chooses topics and tools from the conversation, as opposed to a rigid topic tree.
- **Classic topics** — The menu-like Copilot Studio design. Predictable and easier to test. Weaker on paraphrase.
- **Event Grid** — One way ACS delivers call events to your app. If the subscription is wrong, your IVR never sees RecognizeCompleted.
- **DTMF relay** — Digits in the audio path or as telephone-events. IVRs fail when the SBC strips them.
- **Comfort noise and SID** — Silence suppression changes the average bitrate. Do not size a link only from a G.711 average that assumed comfort noise you did not enable.
- **Packetization 20 ms** — The usual voice packet interval in these bandwidth figures. A 10 ms interval doubles the header tax.
- **Jitter buffer** — The client waits a little so late packets can still be played. Too small and you hear gaps. Too large and you talk over each other.
- **Round-trip time** — How long a packet takes to go and come back. Long RTT with low loss means distance or hairpin, not a dirty cable.

- **DSCP rewrite** — A router or VPN that sets the mark back to 0. The client did its job and the path undid it.
- **Browser join ports** — People who join meetings in a browser do not use the fixed 50000-range client ports. An ACL that only matches those ports misses them.
- **Mac and mobile DSCP** — Mac, iOS, and Android use hard-coded audio EF and a hard-coded video and sharing mark. They are not the Windows policy object.
- **ms-teams.exe** — The current Teams client process name used when you bind a Windows QoS policy. An old policy aimed at the classic client marks nothing.
- **Busy hour** — The hour you actually size. Average day divided by eight is not a busy hour.
- **Dual running** — Both PBX and Teams carry live numbers during a move. Rollback needs the old route left intact.
- **Number porting** — Moving a public number from one carrier to another. It has a date and a letter of authority. It is not a PowerShell metaphor.
- **Caller ID policy** — What outbound calls present. Resource-account outbound and user outbound are different policies.
- **Music on hold** — The audio a queue plays while a caller waits. Licensing and the file both matter, and silence is a choice you should make on purpose.
- **Voicemail overflow** — A respectable overflow target when nobody is left to answer. It depends on Cloud Voicemail and a mailbox for the account that owns it.
- **Pilot number** — The public number on the first voice app. Everything else can be an internal target.
- **Security group policy assign** — Compliance recording and many Teams policies can be assigned to a group. A user in the wrong group is recorded, or not, as a consequence.
- **Effective policy** — The policy the user actually has after direct assignment and group assignment are resolved. The one you edited may not be it.
- **Lab tenant** — A tenant that is not production. Pair a lab SBC there. Do not discover certificate behavior on the company trunk.
- **Get-Help before Set** — Cmdlet parameters move between MicrosoftTeams module versions. Read help in the version you are about to run.
- **Least privilege** — Use the telephony or communications role that can do the task. Global Administrator is not a voice habit.
- **Service number** — A number assigned to a resource account or conferencing, as opposed to a user's personal number. The inventory and the license follow the connectivity option.
- **Unassigned number treatment** — What Teams does with a number you own that is not assigned. Routing it to an attendant is a product choice you should make.
- **SIP options timer teaching model** — This campus treats repeated missed OPTIONS as a reason to pull a trunk. It does not publish Microsoft's internal counter as if it were a documented integer.
- **Failover rehearsal** — Pull the primary proxy or the primary SBC in a window and prove the next one takes calls.
- **Codec intersection empty** — If the SBC and Teams offer no codec in common, the call fails, often with 488.

- **G.711 law** — A-law and  $\mu$ -law are both G.711. A trunk that offers the wrong one still often interoperates, and sometimes does not. Offer both if the carrier is vague.
- **Comfort message** — The words the queue plays about position or wait. A lie ('your call is important') is still a design choice you can decline.
- **Recording disclosure** — Both convenience and compliance recording require participant notification. Compliance does not ask the participant for consent in the comparison Microsoft publishes.
- **Do not record emergency** — Know whether your recorder and your policy include emergency calls, and follow the rule you were given. Do not route emergency calls into a bot so they can be 'handled.'
- **CRM timeline** — The case note should carry the Call-ID, the number in E.164, the queue, and the agent. Then a later complaint can be found.
- **Future hook** — A seam left on purpose for a system you might add later, using a product that already exists. It is not a promise that Microsoft will ship a feature.
- **Power model wording** — Older conversation says Power for the third contact-center model. The Learn article maintained on 14 October 2026 says Unify, Extend, and Connect.
- **Certified list changes** — The list of SBCs and contact-center solutions changes. A campus page is not the list.
- **User transfer license** — In the Connect model, Microsoft's documentation says the contact-center side does not need a phone-system license, and the Teams user who receives a transferred call does need Teams Phone and a number.
- **Trial is not a design** — A Dynamics or Teams trial proves a click path. It does not prove emergency calling, recording retention, or a busy hour.
- **Rollback** — The numbers go back to the old route if the new path fails. If you deleted the old route, you do not have a rollback.
- **Evidence pack** — Call-ID, the policy you read, the ladder, and the CQD or Call Analytics row. One pack per hypothesis.
- **Contoso sample** — A fictional tenant name used in Microsoft samples and in this campus. It is not a customer.
- **Exam sandbox** — Microsoft's practice UI for what an exam looks like. It is not the product lab.
- **Renewal assessment** — Role-based certifications expire unless you pass the free renewal on Learn. Retirement is a different event from expiry.
- **Study guide wins** — When this campus and a study guide disagree, the study guide accessed the week you sit the exam wins.
- **Session border controller** — The device that speaks SIP to Teams and SIP or another protocol to the carrier or PBX, and enforces the edge.
- **SIP ALG** — A firewall feature that rewrites SIP. It breaks Direct Routing more often than it helps.
- **Public IP on the SBC** — Teams must be able to reach the SBC. A purely private address with no public path will not pair.

- **DNS TTL and proxies** — Proxy addresses change inside the published ranges. A firewall object built from one lookup goes stale.
- **Mutual TLS option** — The plan page says that if you enable mutual TLS, install the Microsoft trusted roots on the SBC.
- **Media bypass flag** — The gateway setting that allows media to skip Microsoft's processors. It is not implied by a short ping.
- **Processor path** — The default media path through Microsoft media processors in the region closest to the call.
- **Region of media** — Media processors exist in multiple regions. Calls prefer a close one. You do not pick a street address for the processor.
- **Voice user disable** — A user can be licensed and still not be enabled for Enterprise Voice in the way the tenant expects. Read the user before you test.
- **Calling policy** — A Teams calling policy controls client calling features. It is not the voice routing policy that selects an SBC.
- **Caller ID substitution** — Presenting a service number instead of a personal mobile. It is a policy, not a hope.
- **Normalization translation tokens** — Teams translations use tokens such as \$1 for a capture group. The first matching rule applies the translation and stops.
- **Extension dialing** — A short rule can turn a 4-digit extension into E.164. It must not run before emergency codes.
- **Holiday call flow** — The attendant's holiday set replaces business hours for those dates.
- **Operator zero** — The attendant's operator is where zero, and many failures, should land.
- **Dial by name scope** — Directory search should list only the people you intend callers to reach.
- **Agent list order** — Serial routing uses the order of the agent list. Round robin does not.
- **Queue timeout seconds** — How long the caller waits before overflow. Too short and overflow is the product. Too long and they abandon.
- **Greeting rights** — The audio file must be one you have the right to play. A popular song is not a free hold track.
- **After hours target** — Where calls go when the attendant is closed. Voicemail, another number, or a message.
- **Network site object** — A named place in the Teams network topology. Subnets attach to it. Emergency addresses and LBR attach to that story.
- **Emergency address validation** — Civic addresses are validated. An unvalidated string is not a location you can trust.
- **Wireless location caution** — Wi-Fi clients can roam across subnets that do not match the building you think. The subnet you mapped is the location you will send.
- **SBA registration** — Clients must be able to use the appliance when the cloud path is gone. An appliance with no client configuration is a spare server.
- **Local SBC during survival** — The SBA still needs a PSTN path. That is the local SBC and carrier, not a cloud media processor you cannot reach.

- **Teams Rooms QoS** — Rooms need the same DSCP plan as PCs, using the rooms guidance for Windows and Android.
- **Common area identity** — The phone signs in as its own account. Voicemail and caller ID follow that account.
- **Device conditional access** — A policy that requires a compliant interactive PC will block a phone or a room.
- **Firmware on the list** — Certification is specific about software. 'We own AudioCodes' is not a version.
- **SRTP profile mismatch** — Both sides must agree the media is SRTP. A gateway forced to RTP/AVP will not complete a normal Direct Routing call.
- **Telephone-event** — The SDP way digits are carried so an IVR can see them even when the audio codec would hide tones.
- **Call-ID header** — The header that stays with a SIP dialog so two logs can be proved to be one call.
- **From and To headers** — Who the request claims to be, and who it is for. A normalization bug shows up here as a duplicated country code.
- **SDP offer** — The media description inside the INVITE when early offer is used. Codecs, ports, and SRTP live here.
- **Jitter over 30 ms teaching clue** — A commonly taught CQD clue is to treat sustained jitter around 30 ms as painful. Confirm the current data dictionary before you quote a threshold as policy.
- **Loss around 10 percent** — Packet loss near 10 percent is a widely used teaching line for a poor stream. Verify the current CQD definition before you automate an alert on it.
- **Subnet dimension** — CQD's subnet field is only useful if you built the building map from real subnets.
- **Work item** — The unit unified routing assigns: a call, a chat, a case. It is not a Teams message.
- **Queue membership** — Representatives receive work only from queues they belong to.
- **Security role in Dynamics** — The Dataverse role that lets a representative open the app and touch the rows they should.
- **Embedded versus standalone** — Contact Center can sit inside Customer Service or stand as its own app. Agents must be told which one they open.
- **Intent unknown bucket** — The classification result you get when the model or the rules do not know. It needs a queue.
- **Copilot summary** — A draft of the conversation for the representative. It can be wrong. The representative still owns what is sent.
- **Knowledge article freshness** — The date on the source the bot is allowed to quote. Retired prices stay retired only if you remove them.
- **Fallback topic** — The classic-topic path when nothing else matches. Empty fallback is silence.
- **DTMF zero** — The usual human escape. It has to be implemented, not merely printed on a slide.

- **Transfer target license** — The Teams user who receives a PSTN transfer needs Teams Phone and a number in the Connect model's description.
- **Multitenant SBC caution** — Some Connect providers share SBC infrastructure across customers. Your routing must still isolate your numbers.
- **Letter of authority** — The carrier document that allows a number to move. Porting without it does not happen.
- **Rollback route** — The old path left in place so numbers can return. Deleting it is not a cleanup. It is the removal of the safety.
- **Group policy assignment** — Many Teams policies, including compliance recording, can target a group. Membership changes the effective policy without a click on the user.
- **Zero-cost allotment** — Teams Phone subscriptions include a number of free resource-account licenses you still have to acquire in the admin center.
- **At least one Teams Phone** — The prerequisite article says the tenant needs Teams Phone licensing for the voice-app services to exist.
- **Do not share global admin** — A shared Global Administrator account erases the audit of who changed a route.
- **Sample 555 numbers** — Use 555 numbers and example domains in labs. They are not a customer directory.
- **Renewal versus retirement** — A certification you forget to renew expires for you. A retirement means Microsoft withdrew the exam. They are different calendars.
- **Official practice assessment** — Microsoft's practice questions, when published, match the exam more honestly than a random PDF.
- **Busy-hour interval** — The half hour you staff, not the daily average divided into imaginary hours.
- **Adherence** — Whether the agent was in the state the schedule promised. It needs a real state feed from the contact center.
- **Service level target** — A pair: a percent and a number of seconds, plus the abandon rule. 'Eighty twenty' means nothing until both are defined.
- **Hold music licensing** — The hold file is a copyrighted work unless you made it or licensed it.
- **Notification group** — The people the emergency policy emails or messages when an emergency call starts.
- **Dispatchable location** — A location specific enough for a responder to find the caller. A city name is not enough for a campus.
- **Carrier test number** — The number or process the carrier gave you for emergency tests. It is not the public emergency number.
- **Split tunnel** — VPN configuration that sends only corporate apps through the tunnel and lets Teams media go direct.
- **Port mirroring** — A switch copy of packets so you can see DSCP at the egress without standing on the user's keyboard.
- **ACL mark** — A router rule that sets DSCP based on the port range, useful for devices that will not mark for themselves.

- **Two directions** — A call has media each way. Sizing one direction and forgetting the other undersizes a symmetric policer.
- **G.722 header tax** — G.722 at 160 bytes every 20 ms pays the same header tax as G.711. Wideband does not remove IP headers.
- **Comfort noise sizing** — Silence suppression lowers the average and not the peak. Size the peak.
- **Pilot rollback week** — A quiet week on the new path before you delete the old trunk.
- **Expert wave** — Move people who call each other in the same migration wave so they do not trombone for a year.
- **IVR range split** — Contact-center numbers stay on UCCE. User numbers go to Teams. The SBC enforces the split.
- **Whisper and barge caution** — Supervisor features such as whisper and barge belong to the contact-center product, not to a Teams peer call.
- **Recording both sides** — If the contact center and Teams both record, you still need one Call-ID to know it is the same conversation.
- **Privacy review** — Recording, desktop capture, and directory search all need a privacy decision before go-live.
- **Restore test** — A retention setting you have never restored is a hope. Ask the recording partner for one file back.
- **Form the agent saw** — Quality scores should use a form published to the people being scored.
- **Export for WFM** — Queue totals have to be able to leave the contact center on a schedule the WFM tool can read.
- **Shrinkage labeled** — If shrinkage is a guess, say it is a guess. Thirty percent is not a law of nature.
- **Occupancy watch** — High occupancy next to rising abandons means the service level is being spent to look efficient.
- **Case timeline fields** — E.164, Call-ID, queue, agent. Four fields make a case auditable.
- **Bot eval set** — A list of utterances whose correct intent you already know. Run it before you publish a prompt change.
- **Unannounced feature risk** — A design that needs a product Microsoft has not shipped is not a hook. It is a bet.
- **Admin center SBC status** — The Direct Routing page that shows whether Teams considers the SBC healthy.
- **Test call both ways** — Inbound and outbound are different routes. A successful outbound call does not prove the carrier can deliver inbound.
- **Emergency both ways** — You care that the emergency call leaves, and that the location and notification are correct. Inbound to the queue is a different test.
- **Holiday and certificate calendar** — Two dates that take companies down: the holiday the attendant does not know, and the certificate that expires.
- **Contoso is fictional** — Contoso, Fabrikam, and 555 numbers in this campus are samples. They are not your tenant.

- **Checked date** — 14 October 2026 is when this campus was compared with Learn. It is not a promise the page stays still.

## Sources and go deeper

- [Plan Direct Routing](#) — Microsoft Learn — last checked 2026-10.
- [Use Teams admin roles](#) — Microsoft Learn — last checked 2026-10.
- [Manage resource accounts](#) — Microsoft Learn — last checked 2026-10.
- **Cloud Voicemail** — confirm — last checked 2026-10. Did not open when checked.
- [Teams Phone licensing](#) — Microsoft Learn — last checked 2026-10.
- [Calling Plans](#) — Microsoft Learn — last checked 2026-10.
- [Teams add-on licensing](#) — Microsoft Learn — last checked 2026-10.
- [Teams Phone Resource Account licenses](#) — Microsoft Learn — last checked 2026-10.
- [Voice app prerequisites and licensing](#) — Microsoft Learn — last checked 2026-10.
- [Security, Compliance, and Identity Fundamentals](#) — Microsoft Learn — last checked 2026-10.
- [Prepare the network for Teams](#) — Microsoft Learn — last checked 2026-10.
- [QoS in Microsoft Teams](#) — Microsoft Learn — last checked 2026-10.
- [Plan Operator Connect](#) — Microsoft Learn — last checked 2026-10.
- **Plan Teams Phone Mobile** — confirm — last checked 2026-10. Did not open when checked.
- [Create and manage dial plans](#) — Microsoft Learn — last checked 2026-10.
- [Manage voice routing policies](#) — Microsoft Learn — last checked 2026-10.
- [Emergency locations, addresses, and routing](#) — Microsoft Learn — last checked 2026-10.
- [Set up an auto attendant](#) — Microsoft Learn — last checked 2026-10.
- [Set up a call queue](#) — Microsoft Learn — last checked 2026-10.
- [Location-based routing](#) — Microsoft Learn — last checked 2026-10.
- [Survivable Branch Appliance](#) — Microsoft Learn — last checked 2026-10.
- [SIP Gateway](#) — Microsoft Learn — last checked 2026-10.
- [Use Call Analytics](#) — Microsoft Learn — last checked 2026-10.
- [What is Call Quality Dashboard](#) — Microsoft Learn — last checked 2026-10.
- [Dynamics 365 Contact Center](#) — Microsoft Learn — last checked 2026-10.
- [Study guide AB-250](#) — Microsoft Learn — last checked 2026-10.
- [Teams contact center integration models](#) — Microsoft Learn — last checked 2026-10.
- [Teams Phone extensibility](#) — Microsoft Learn — last checked 2026-10.
- **Cisco Unified Border Element** — confirm — last checked 2026-10. Did not open when checked.

- [Azure Communication Services Call Automation](#) — Microsoft Learn — last checked 2026-10.
- [Azure AI Speech overview](#) — Microsoft Learn — last checked 2026-10.
- [Copilot Studio overview](#) — Microsoft Learn — last checked 2026-10.
- [Azure AI Foundry documentation](#) — Microsoft Learn — last checked 2026-10.
- [Study guide MS-700](#) — Microsoft Learn — last checked 2026-10.
- [Retired certification exams](#) — Microsoft Learn — last checked 2026-10.
- [Partner Center July 2026 announcements](#) — Microsoft Learn — last checked 2026-10.
- [Azure Fundamentals](#) — Microsoft Learn — last checked 2026-10.
- [Introduction to Teams recording](#) — Microsoft Learn — last checked 2026-10.
- [Set up compliance recording](#) — Microsoft Learn — last checked 2026-10.
- [New-CsTeamsComplianceRecordingPolicy](#) — Microsoft Learn — last checked 2026-10.
- **AudioCodes session border controllers** — confirm — last checked 2026-10. Did not open when checked.
- [Ribbon Communications](#) — Vendor — last checked 2026-10.
- **Oracle Session Border Controller** — confirm — last checked 2026-10. Did not open when checked.
- [Certified SBCs for Direct Routing](#) — Microsoft Learn — last checked 2026-10.
- [PSTN connectivity options](#) — Microsoft Learn — last checked 2026-10.
- [Set up Teams Phone](#) — Microsoft Learn — last checked 2026-10.
- [Teams Administrator Associate](#) — Microsoft Learn — last checked 2026-10.
- [Microsoft Teams](#) — Wikipedia — last checked 2026-10. Wikipedia fallback for background. Confirm the vendor page before you change a tenant.
- [RFC 3261](#) — RFC — last checked 2026-10.
- [Microsoft Teams blog index](#) — Community — last checked 2026-10. Community index for the Microsoft Teams blog. This is the index, not a claim that a post discusses this room.

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