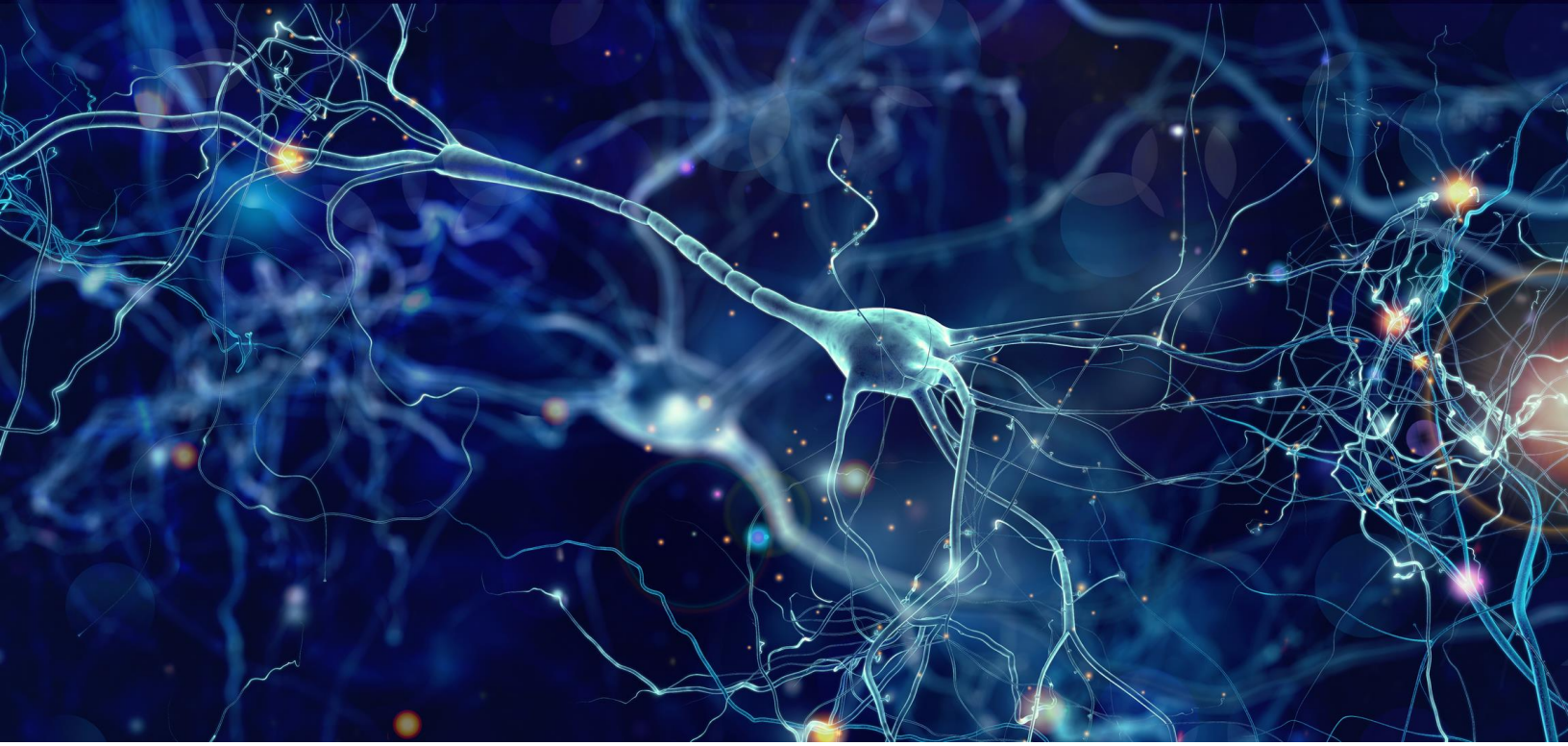

The Anatomy of an Outsourced Service Desk – Part 1 “The Nerve Center”

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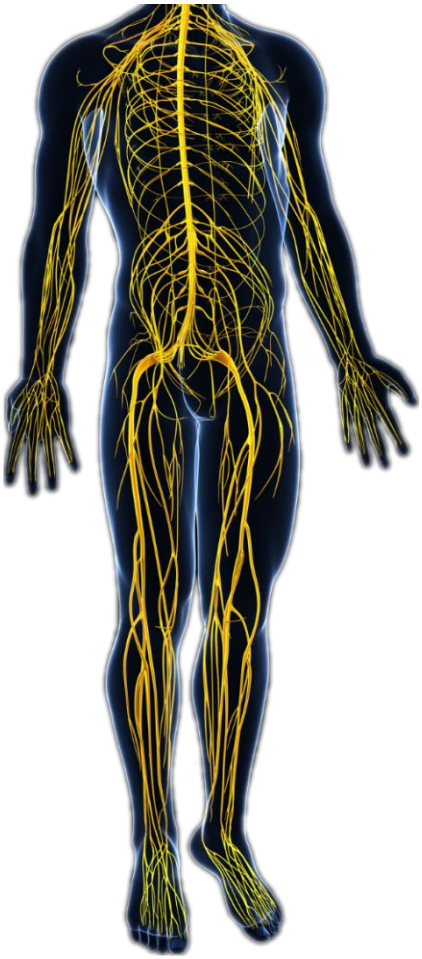
A well-run and effective outsourced service desk relies on key systems to function, much like the human body. In this whitepaper series, we are going to break down the "anatomy" of a professional service desk and how four critical facets support its overall function. First, we will look at the "nerve center" of any service desk – the Contact Center. The Contact Center connects users with the support team which then reacts with feedback and analysis of communication.



What is a Contact Center?

When we refer to the term "Contact Center" it can often mean two different things depending on the context. It may refer to a physical site or the system-level infrastructure responsible for receiving and delivering calls. From the perspective of a site, there are two distinct types of contact centers: brick-and-mortar or virtual:

- A brick-and-mortar contact center involves a space staffed by a team of agents all working in close quarters to receive incoming contacts.
- A virtual contact center is one in which agents can be distributed around the world and are connected back to the central "hub" or server infrastructure by a VOIP softphone client.

Brick-and-Mortar Contact Centers

Advantages: A physical contact center enables better team engagement as they are working alongside others. This can include casual socialization that improves morale and establishes a sense of unity and being a part of a team. It also allows for more personal interaction between direct managers and agents for more immediate feedback on performance.

Disadvantages: A key disadvantage is potential outage scenarios. If the Internet connectivity to that site is offline or if inclement weather impacts power or the ability to access the building, the contact center is now effectively shut down.

Virtual Contact Centers

Advantages: virtual contact centers allow for a distribution of agents across the world which limits the impact of any individual outage. If a particular agent is offline, this generally does not impact the rest of the team in other geographic locations allowing for consistency of service. A recent real-world example of a virtual environment advantage was COVID-19. When employees around the world were forced to shelter in place, the continuity of a well-established virtual contact center remained intact.

Disadvantages: Working virtually can create a sense of isolation from one's peers and less personal interaction from direct management. A virtual agent may also not be able to engage in the same socialization that takes place during an in-person environment. This could have the effect of limiting morale and job satisfaction.

Infrastructure

When we refer to system-level infrastructure, the contact center system has evolved to be more than just a "phone system." It is the network of nerve connections necessary for communication across the support team. It doesn't just have to be for the IT-centric Service Desk but it could also

be for an HR department or a medical scheduling department, etc. A Service Desk will be the focus of our discussion as it relates directly to IT support.

A contact center system is connection to the Service Desk supporting multiple incoming media channels. These media channels could be Voice over IP (VOIP), email, chat, video or even fax. It's possible for a contact center to also receive non-electronic forms of communication such as traditional mail, walkup, or kiosk-type interactions. Depending on the type of contact center involved, the decision on which media types to accept will vary based on customer experience and access. In most IT support operations, the most common contact types will be the voice call, voicemail, email or chat.

What elements make up an IT Services Contact Center's Infrastructure?

Interactive Voice or Video Response

An Interactive Voice or Video Response (IVVR) connection system and Automated Call Distribution (ACD) are important elements of a contact center system. The ACD system works in conjunction with the IVVR system to handle and route incoming calls.

The IVVR system is the front-end or first point of contact for an incoming VOIP call. The IVVR automates the gathering of information from callers such as: where they are calling from, who they are calling, or Dual-tone multi-frequency (DTMF) touch tones that might indicate a menu selection choice to route a call to the appropriate agent or team. The IVVR component also allows for programmatic scripting or decision handling of inbound calls. For example:

- Certain calls may trigger specific greeting responses
- Automated outage notifications
- Development of complex decision trees that allow identification of specific language needs of the caller (ie. Spanish versus English) and play alternate greeting messages in the native language along with identifying available agents who are tagged to support the native language to route the call to.
- Dynamic determination of after-hours call handling which may play different greeting messages, alter the handling flow of a call or even forward that call to another team or even contact system.
- Evaluation of estimated wait time before a caller reaches an agent and can announce that to the caller for a better on hold experience.

Automated Call Distribution

The ACD system is what actually handles the call routing based on the information gathered from the IVVR component. ACD has visibility into which agents are online and available to take a call; it understands how to handle routing to another agent if the first doesn't pick up the call. Call distribution intelligently looks to see which agents have been underutilized, meaning they have received a lower volume of calls than other agents and will direct new calls their way. In this manner, the ACD system manages the overall distribution so any single agent is not repeatedly directed calls while others are sitting idle.

Mail Connection System

The mail connection system works in the background to receive inbound email contacts from users and delivers that as a “call” to an available agent on their softphone client using routing scripts and the ACD system to deliver the "call." In many cases, the underlying mail system infrastructure is powered by technologies such as Microsoft Exchange or other systems to receive and deliver email.

Chat Connection System

A chat connection system works to connect popular social connection platforms, such as Slack, Teams, Facebook, Twitter, and others to the ACD system in order to route chat "calls" to available agents in a similar decision tree fashion as the IVVR handles VOIP calls. This media is often used to engage users that prefer a more modern method of communication versus the traditional phone call. Chat is often a preferred medium for mobile devices as well.

How is ACD different from a bank of phones assigned to agents?

A legacy contact center approach often included a bank of phones in a large office space, all of which were connected to a central Private Branch Exchange (PBX) system. With this configuration, calls are distributed in a “round-robin” fashion to all phones connected to the system. If a phone was not in use by an agent, it might ring that phone twice, for example, before moving on to the next phone until it found an available agent. This was a very inefficient way of distributing calls to the agent pool. It also increases hold times for callers, delivering a less than satisfactory experience.

How Does Typical Call Routing Work?

VOIP Routing

In a typical inbound voice call, a user dials a toll-free number (TFN) to reach the Service Desk. The TFN then redirects the user’s call to a Direct Inward Dial (DID) number associated with the contact center system. The contact center receives the voice call through the IVVR and leverages the ACD component to deliver the call to the appropriate agent with the necessary training, access and documentation to resolve the issue.

Email Routing

In a typical inbound email contact, a user sends an email to a designated IT support address. A pro tip is to make the address easy for the user base to remember. For example, “servicedesk@companydomain.com.” The message is then received by the contact center system’s mail connector and leverages the ACD component to deliver the call to the appropriate agent. The receiving agent can optionally respond to the email "call" directly from their softphone client.

Chat Routing

In a typical inbound chat call, a user initiates a chat request to the IT support address from their preferred social connection tool. This engages the system’s chat connector which is monitoring

the media outlet and leverages the ACD component to deliver the chat to the appropriate agent. An agent is then able to respond to the user in real-time in a chat window in their softphone client.

Why is a Contact Center System Important to a Service Desk?

1. From the perspective of IT support, the contact center system is the single point of contact for all IT services. In a typical Service Desk model, a call will first be handled by a Level 1 agent who will document the relevant information, create a case in a ticketing system, attempt to perform troubleshooting, triage, and/or escalate to the next team as necessary.
2. It allows for the conveyance of critical IT notifications to callers via the IVVR system.
3. When properly designed, it allows for more efficient routing and handling of caller issues by ensuring the appropriate individual or team receives the relevant call first.
4. It provides a way to collect and analyze metrics for service enhancement such as Service Level Agreements (SLAs) or individual agent Key Performance Indicators (KPIs).

How Does a Contact Center System Aid in Call Avoidance?

Call avoidance is important to reduce the unnecessary volume of contacts to the Service Desk in times of known outages or other circumstances that impact multiple users. With the capability of the IVVR, outage messages can be programmed into the initial greeting to inform users of an ongoing situation such as an email outage or a business application being down. When a caller hears this message and realizes that the problem they are encountering is widespread, many callers will hang up without the need to speak to a live agent. This reduces call demand and lets available agents focus on more urgent support issues.

Reminders can also be incorporated into the IVVR greeting to instruct users to try self-service options. Users can be directed to an online ITSM portal where they can look up knowledge articles about their issues. Another option is enabling users to submit a case themselves; this creates a ticket for the Service Desk without the need to speak to a live agent. These are often referred to as “self-service” contacts.

Another example might be to introduce menu options in the IVVR that can redirect calls for specific issues to other teams or even external organizations, thus reducing that call volume on the Service Desk.

How Does the Contact Center System Aid in Quality Assurance (QA)?

Quality Assurance is critical to delivering high levels of customer service to the user base. With this philosophy in mind, supervisors can review the performance of the support agents including the experiences users are having while they interact with the Service Desk. This access is often provided as a web interface, either a dashboard or a search tool, that supervisors can access and search with specific parameters.

Contact Recordings

In most enterprise-level contact center systems, contact recordings are one of the main staples of quality assurance. These recordings are initiated the moment a user connects with an agent and terminates when the call is disconnected. Using efficient compression CODECs, even long

calls of one hour or more can be easily stored for future review. Recordings help supervisors respond to a report of an unsatisfied user by validating the events that occurred during the call. Call recordings can be used as training tools by highlighting perfectly executed contacts as examples of what new agents should be doing. Many contact center systems also allow for call recordings to be exported into common audio formats such as MP3 or WAV allowing for sharing with other team members or stakeholders.

Screen Recordings

Screen recordings are another valuable tool for the QA process. Observing what the agent is doing on screen while they are assisting the user, simultaneously with the audio, provides full context about calls. Screen recordings capture everything an agent is doing during the support call enabling a supervisor to verify that proper processes are being followed. Much like an audio recording, screen recordings may also be exported into common formats to allow for offline review or sharing with appropriate stakeholders.

Supervisory Call Monitoring

With mature contact center systems, there are typically three forms of supervisory call monitoring options:

- **Silent**
  - A supervisor is able to listen to a live call without alerting the agent or the caller. This allows for real-time quality spot-checking of agents in active calls. This can also be used as a training method to allow a new agent to listen and learn from a more experienced teammate in a real-world scenario. While in silent mode, a supervisor has the ability to transition into “whisper” or “barge in” modes should it be necessary to intervene in the call.
- **Whisper**
  - A supervisor is able to speak to the agent on a live call without the caller hearing the supervisor’s voice. This is useful while training a new agent as it allows the supervisor to hear what’s happening and offer suggestions to the agent. As with “silent” mode, a supervisor has the ability to transition to “barge in” mode should it be necessary.
- **Barge In**
  - A supervisor makes themselves heard by both the agent and the caller and essentially creates a conference call. Used sparingly, this monitoring mode is helpful if an agent is struggling during the call or in the event a caller wishes to speak to the agent’s supervisor.

These supervisory call monitoring functions can be initiated remotely to allow for adherence to quality assurance with agents that may be located around the world.

How Does Reporting Play a Valuable Role in Service Delivery?

A professional service desk provider should establish a Service Level Agreement (SLA) that clearly outlines expected metrics for the performance of critical tasks. Examples of SLA metrics include the Average Speed of Answer (ASA) or Abandon Call percentage Performance. Metrics reporting is crucial information for client stakeholders. Initial reporting will establish benchmarks against which future Service Desk metrics are compared.

Reporting helps ensure the correct staffing levels and hours of coverage by examining call volume distribution over a 24-hour period, including trends over time. Live calls can be tracked in real-time via ACD dashboards that help supervisors understand the number of calls in the queue, which agents are busy versus available, and how long calls are actively sitting in the queue.

Reporting reveals outliers such as a caller that waited more than 10 minutes in the queue before reaching an agent. These situations might be easily explained but it's also important to understand in order to identify potential gaps in coverage. It can also be used in conjunction with the ASA to show stakeholders the percentage of outliers versus the average response time most users are experiencing.

Service level reporting can be used as a measure of agent performance by tracking statistics such as inbound calls received, outbound calls initiated, average time spent in-call, average time to answer a call, or time spent in the wrap-up. When reviewed together, these metrics help distinguish high-performing agents from those who require additional coaching or training. The ultimate goal is continually improving the caller experience.

Conclusion

The Contact Center acts as the nervous system of the service desk by enabling communication between different parts of an organization. Without this critical system, support teams and users would be disconnected with slow responses. This is just one of the main systems that support and underpin professional, outsourced service desks. In the following whitepapers, we will examine the other systems that make up the "Anatomy of a Service Desk."

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Our 100% US-based IT professionals offer a full range of IT support services including an ITIL best-practices driven service desk that enables end-users to get back to work quickly and improve the businesses for which they work. Mechdyne IT Services is a business unit of Mechdyne Corporation, a global technology leader creating distinctive electronic, software and service solutions that enable discovery.

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