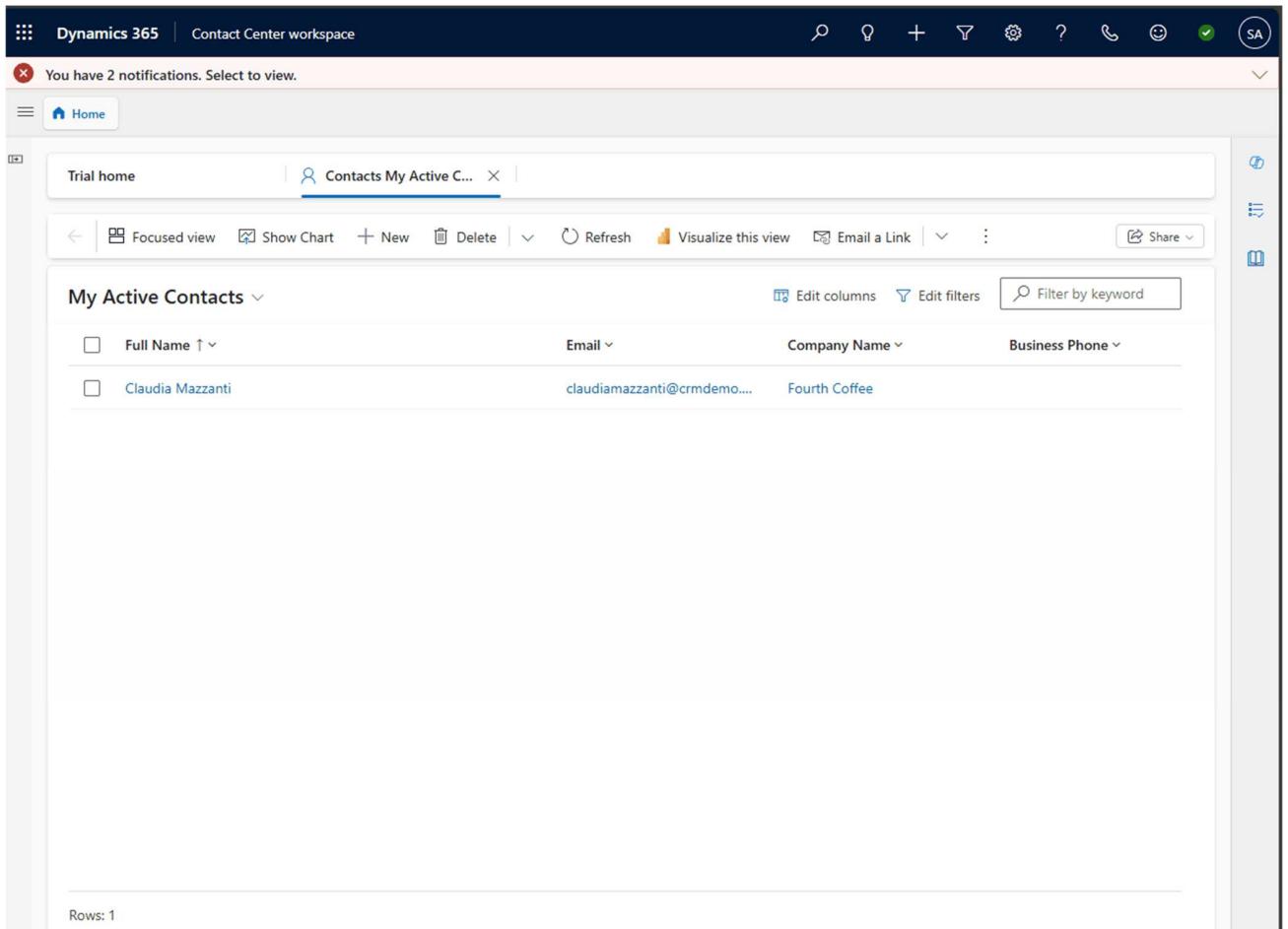


Dynamics 365 Call Center Data Model

I have been digging into the data model for the Dynamics 365 Call Center solution. It is interesting to understand how a call ends up in the Customer Service Workspace and what entities are at play.

If anyone wants the Mermaid code for the ERD diagrams, please just ask and I will find a place to upload them. IF I am wrong anywhere please let me know and I will fix it 😊



The screenshot shows the Dynamics 365 Contact Center workspace. At the top, there is a navigation bar with icons for Home, Search, Filter, New, Refresh, Visualize this view, Email a Link, and Share. Below the navigation bar, a message通知 says "You have 2 notifications. Select to view." The main area displays a list titled "My Active Contacts" under a view named "Trial home". The list includes columns for Full Name, Email, Company Name, and Business Phone. One contact is listed: Claudia Mazzanti with email claudiamazzanti@crmdemo.... and company Fourth Coffee. The bottom of the screen shows a footer with the text "Rows: 1".

Main Categories:

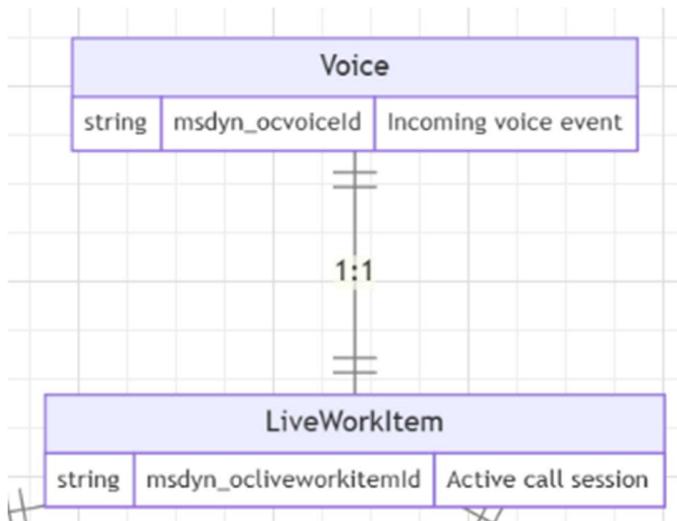
When I boil everything down to a simple overview these main areas are:

- Configure Work Streams + Unified Routing

- Step 1: Voice
- Step 2: Live Work Item(Conversation)
- Step 3: Routine Request + Voice Context
- Step 4: Work Stream + Advanced Queues
- Step 4a: Work Stream + Session Templates Components
- Step 5: User + Distribution
- Step 5a :User + Presence
- Step 6: Accept Call + Session

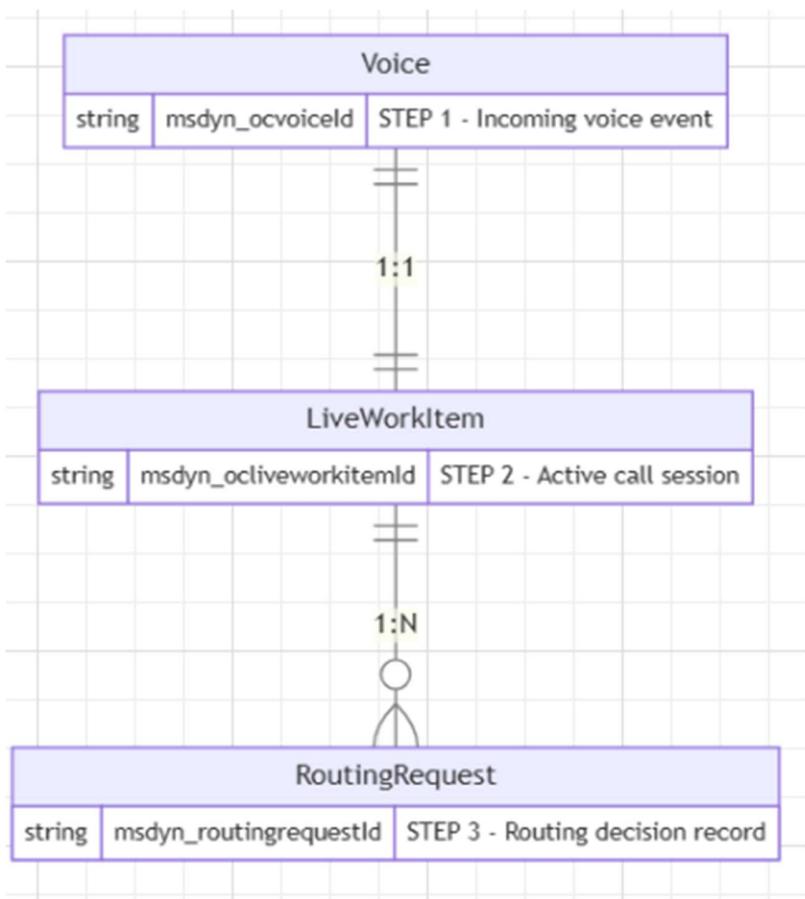
Step 1 + 2: Voice Event and The Call Session

This once is quite simple - these are entities that hold the incoming voice event and the active voice session.



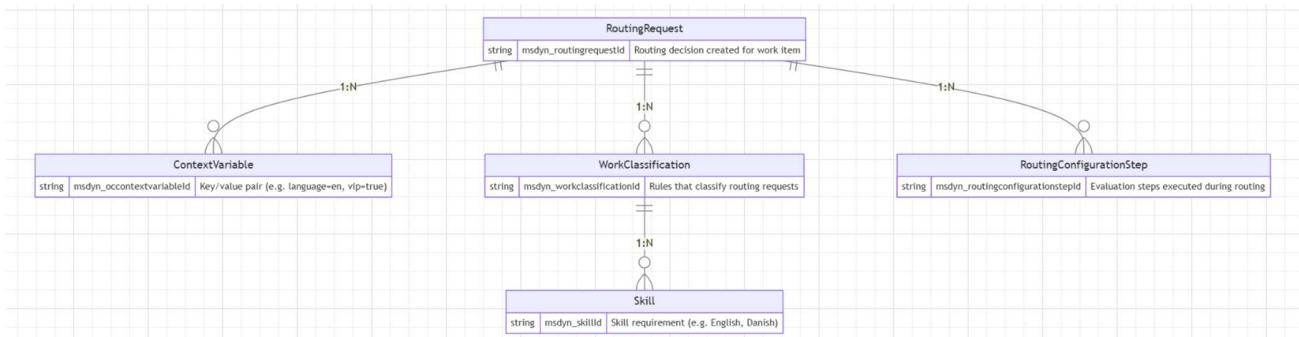
Step 3: Routing Request

When we expand the model this call needs to be routed to somewhere. This routing takes places via **Unified Routing** using the **Workstream**(preconfigured) and its rules to place the call in the right advance queue.



Step 3a: Routing Requests

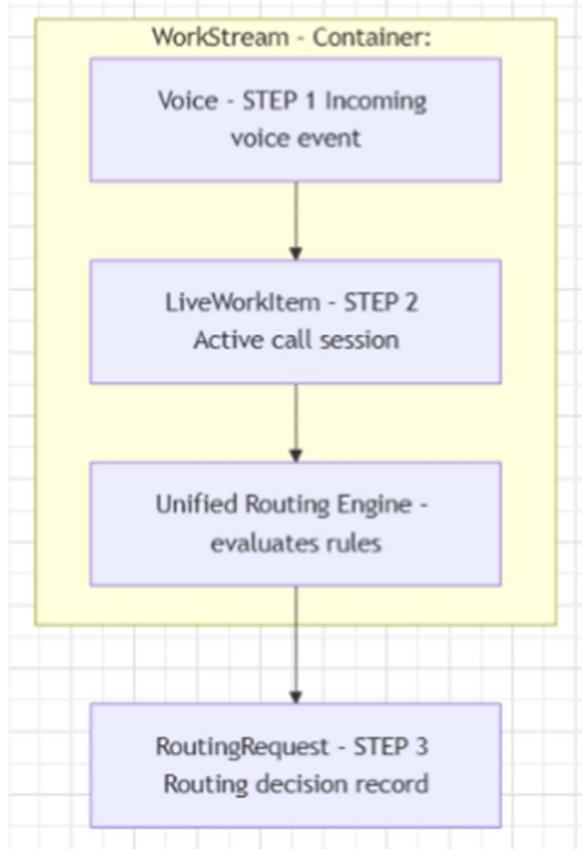
Routing Requests are the routing decision created for a workitem and used to find the proper workstream. It contains the Voice Context, Rule Classification, Skills and Evaluation Steps.



How Does This Relate to Unified Routing?

Unified Routing is the Routing engine and the **Routing Request** is the unit of work the engine creates and processes.

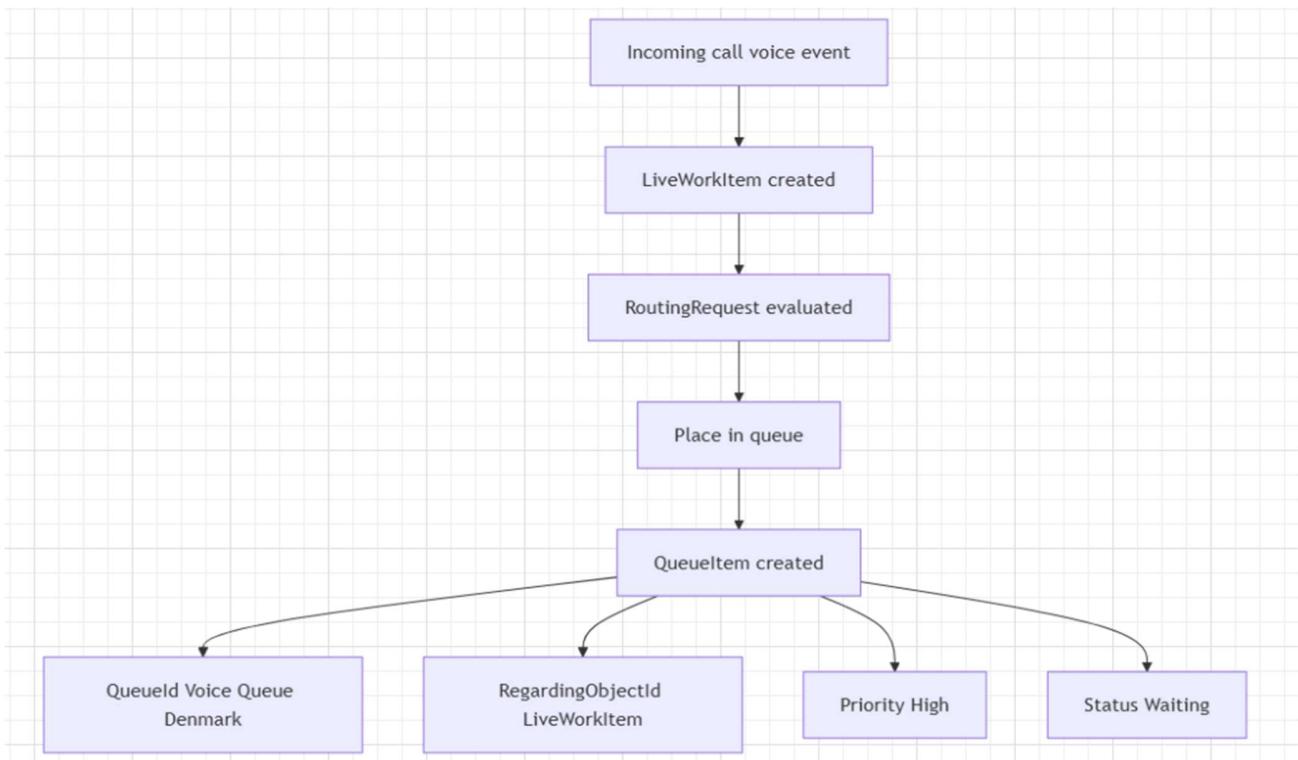
Unified Routing produces many routing requests (one per incoming item). The logical rules that the engine(Unified Routing) uses as mentioned above are found in the workstream. The workstream like unified routing are preconfigured waiting to be triggered.



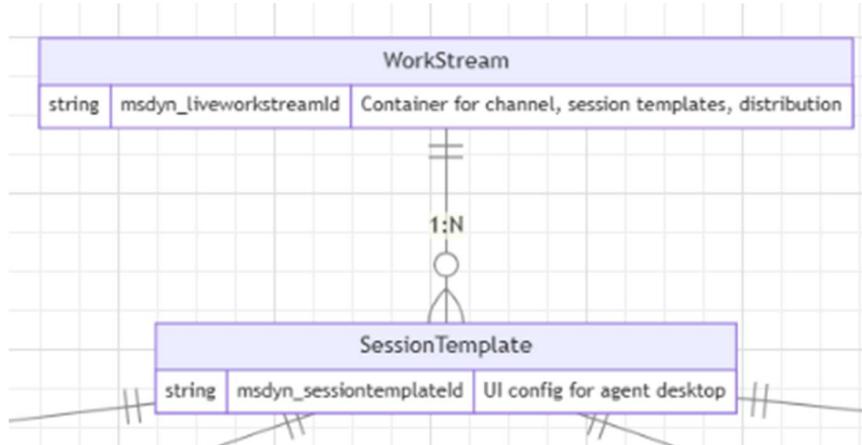
Step 4: Workstreams + Queues

Workstreams are channel based and we using the voice channel in this scenario. As mentioned above it contains rules that push the voice event to the right agent. The workstream is tied to advanced queues where through the routing request regards the live work item to the queue item in the queue.

Example:



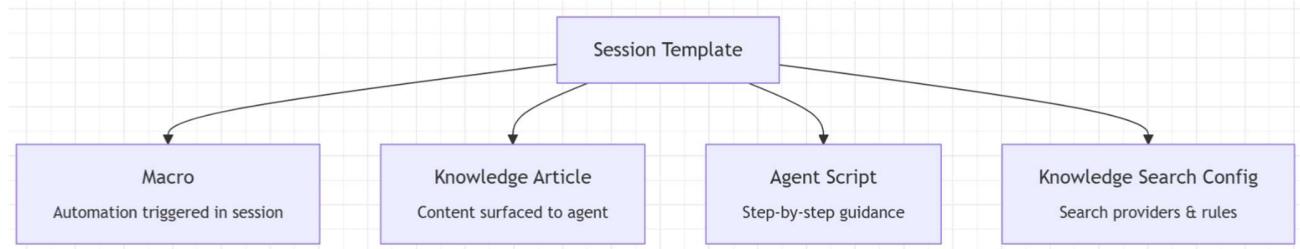
The **work stream** contains the session template that will be used when a session is created. The **session template** contains everything the agent will see in the UI. For example, which tabs open, agent script, macros, etc.



Step 4a: Work Stream + Session Templates Components

The **session template** is the predefined components that will populate the UI when a session is triggered by the user. There are also Application Table Template, Conversion Form Template,

Voice Call Experience and Notifications Template that are tied to the Session Template. These will be explained in a later blog post.



Macro:

Macro		
string	msdyn_macroId	Automation triggered in session

KB Article:

KnowledgeArticle		
string	knowledgearticleId	Knowledge article surfaced to agent

Agent Script:

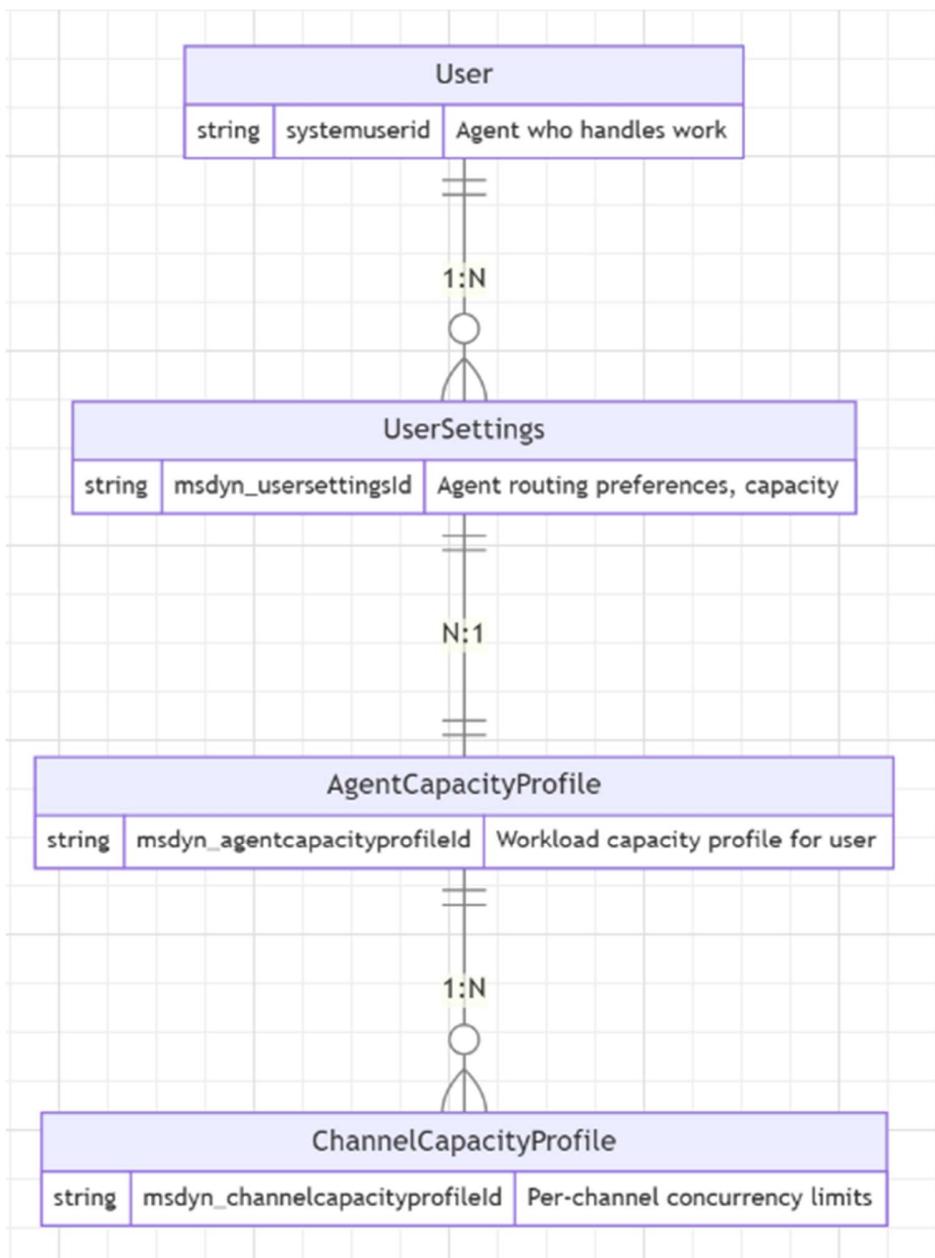
AgentScript		
string	msdyn_agentscriptId	Step-by-step scripted guidance for agents

Knowledge Search Configuration:

KnowledgeSearchConfig		
string	msdyn_knowledgesearchconfigurationId	Defines KB search providers and relevance rules

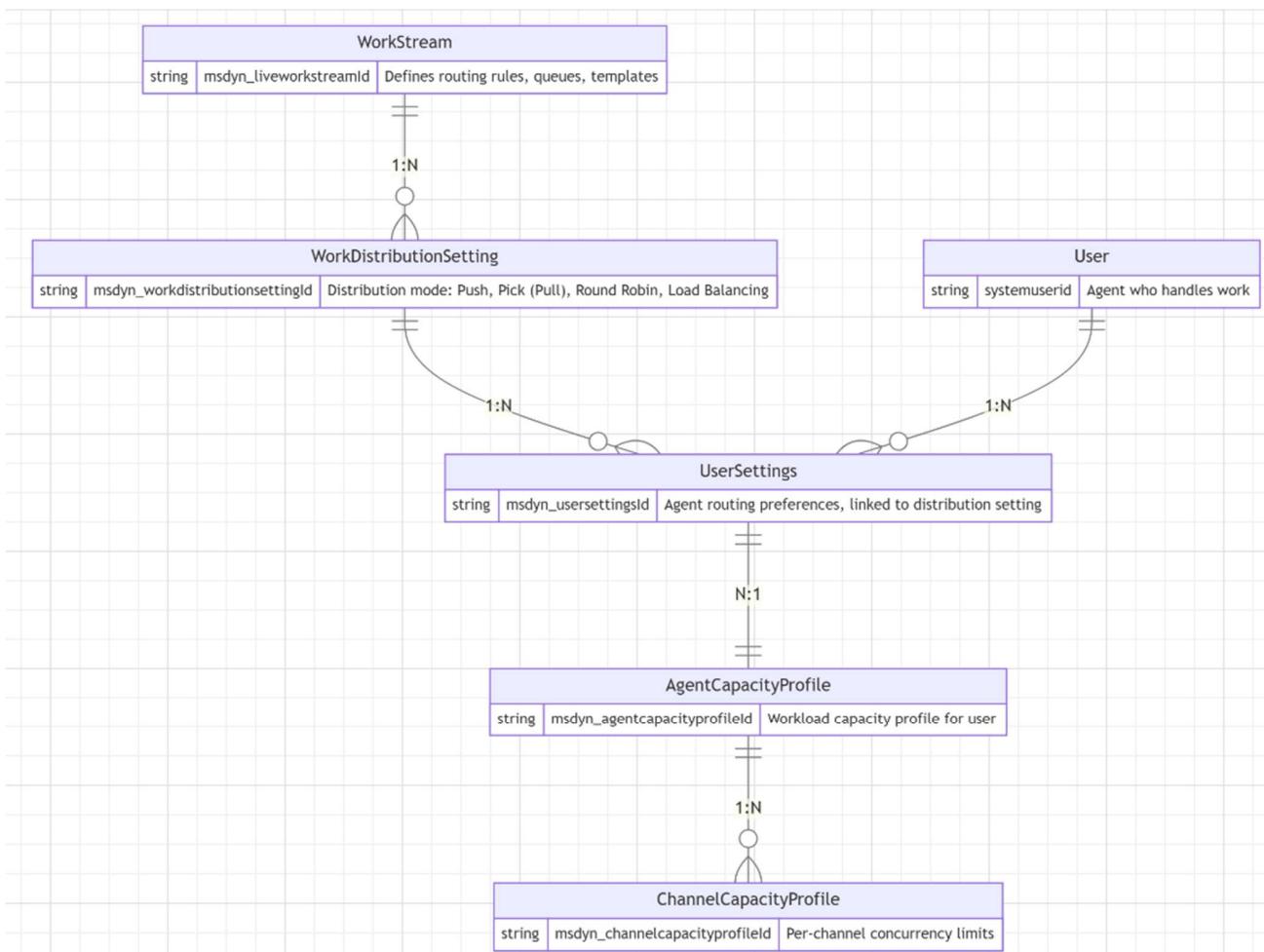
Step 5: User + Distribution

A **user** has a set of parameters that help drive voice events to them like skills and capacity per channel and language.



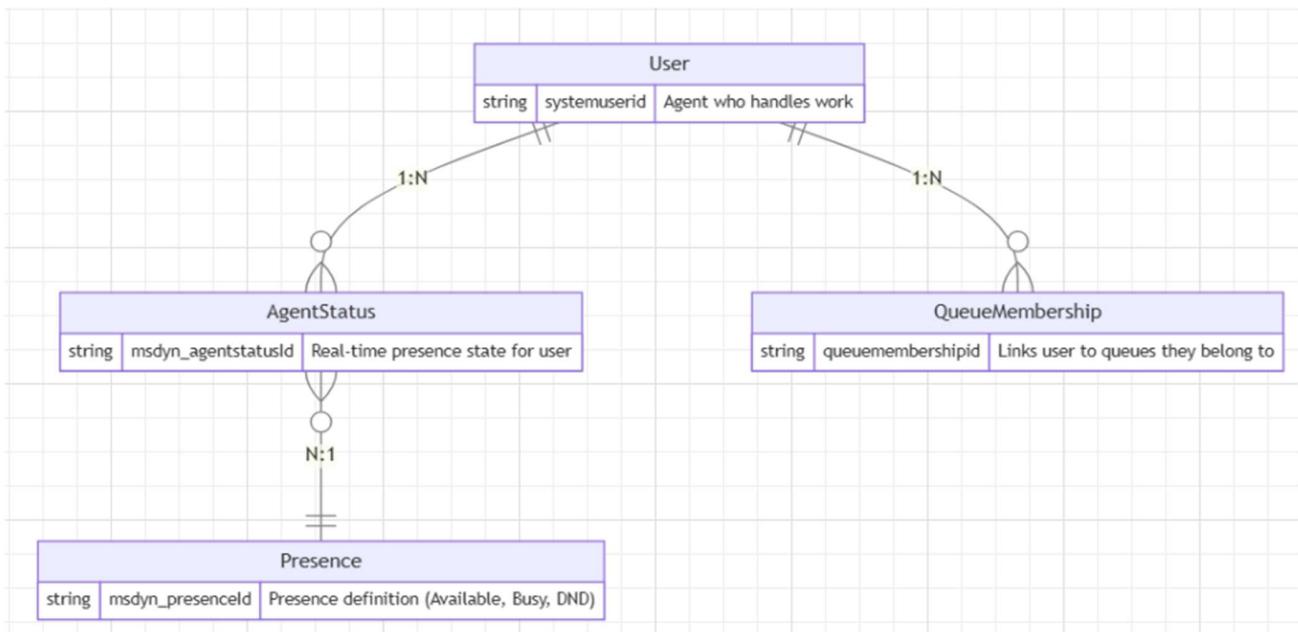
How Does This Tie Together With Work Streams?

The user settings is connected to the **work distribution setting**, which defines how work is distributed ie. round robin, load balancing, push/pull.



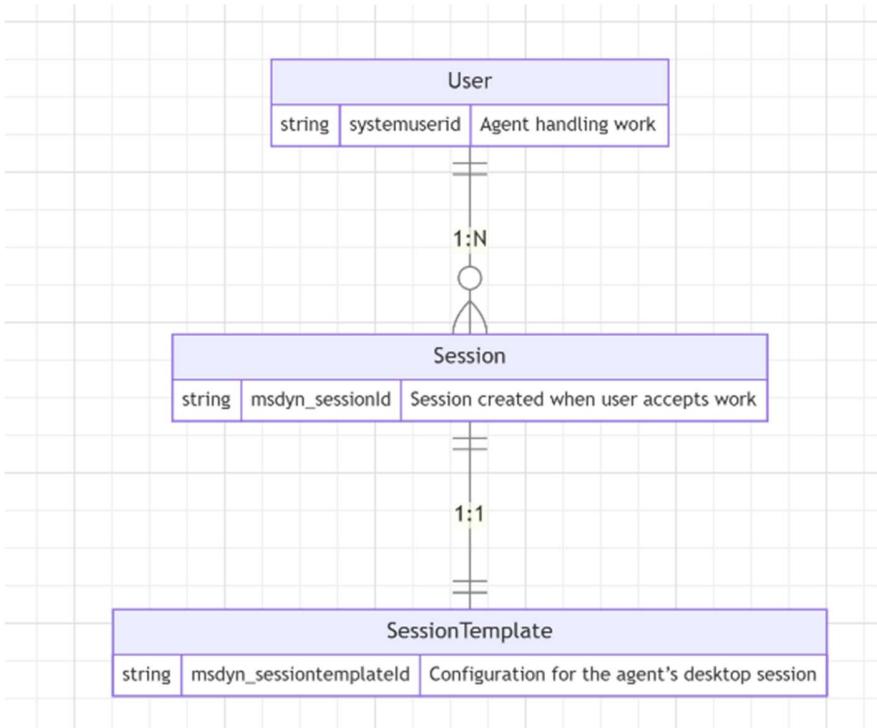
Step 5a: User + Presence

Because these voice events end up in **Queues**, Queue Membership is important. A user will only be able to work on voice events from the queues they belong too and of course agent status as a real time parameter is important. The **presence** of a user is visible in the UI and can be set automatically or manually.



Step 6: Accept Call + Session

When an **user** grabs a call and a **session** is created using the session template from the workstream and begins to do their work.



What The User Sees:

The **session** that is based on a **session template** and this is what user sees. There are more entities related to all of this including:

- Experience Profile
- Workspace(appmodule)
- Productivity Sessions

Not forgetting transcription, recording, the phone record itself. These will be explained in another post.

The screenshot shows the Dynamics 365 Customer Service workspace. At the top, there's a navigation bar with 'Home' and a search bar for 'Claudia Mazzanti'. Below the navigation bar is a 'Communication Panel' section. It displays a customer profile for 'Claudia Mazzanti' (Customer, CM, Neutral, 02:09), a transcript header with options like 'Summarize...', 'Take notes', 'Mark spam', and 'Link to Co...', and a message indicating the conversation was transferred from the 'Contoso Copilot'. The main area is titled 'New Conversation' and has a 'Details' tab selected. It includes a 'Drop files or smart paste for Copilot to make suggestions' input field. On the left, there's a sidebar with 'Search customer' (set to 'Claudia Mazzanti'), 'Linked records' (Contact), and a 'Timeline' section showing a recent voice call from 'Claudia Mazzanti' at 8:08 PM. The timeline also shows an auto-post on Contact Claudia Mazzanti at 9/22/2025, 6:30 AM, and a note about contact creation by 'System Administr...'. The main content area shows 'Customer Details' with fields for Company Name ('Fourth Coffee'), Email ('claudiamazzanti@crmdemo.dyn...'), Mobile Phone, Address 1 ('Seattle'), and Preferred Method of Co... ('Any'). A 'Recent' section lists 'Claudia Mazzanti' and a note about her being active. The bottom right corner of the main content area has a note about auto-posting on contact creation.

Note: I gladly used AI to help make my mermaid drawings and proper entity

I have created a GITHUB account and dumped everything there unorganized for now.

The screenshot shows a call center application interface. On the left, a transcript window for a customer named Claudia Mazzanti is displayed. The transcript includes several messages from a system administrator and a customer. On the right, a "New Conversation" window is open, showing the "Details" tab. It contains fields for Customer Details (Company Name: Fourth Coffee, Email: claudiamazzanti@crmdemo.dyn...), Address 1 (Seattle), and Preferred Method of Co... (not fully visible). Below the details, a "Timeline" section shows a recent activity entry: "Modified on: 8:08 PM Voice call from: Claudia Mazzanti Active". The timeline also has sections for "Search timeline" and "Enter a note...". A sidebar on the right provides various tools and links.

I have created a GITHUB account and dumped everything in there unorganized for now.

Please find it here [Call Center Mermaid Output](#)

The Download link is [Call Center Mermaid Output Download](#)

What do you get?

Downloadable Mermaid Files in MMD format for import elsewhere like at [Mermaid Live](#)

A matching Diagram in PNG

A ZIP folder with everything in it!



Call-Center-Mermaid-Output / User_agent_status.mmd

denmark98 Add files via upload

Code Blame 27 lines (23 loc) • 591 Bytes

```
1     erDiagram
2       %% USER
3       User ||--o{ AgentStatus : "1:N"
4       User ||--o{ QueueMembership : "1:N"
5
6       User {
7         string systemuserid
8         "Agent who handles work"
9       }
10
11      %% AGENT STATUS & PRESENCE
12      AgentStatus }o--|| Presence : "N:1"
13      AgentStatus {
14        string msdyn_agentstatusId
15        "Real-time presence state for user"
16      }
17
18      Presence {
19        string msdyn_presenceId
20        "Presence definition (Available, Busy, DND)"
21      }
22
23      %% QUEUE MEMBERSHIP
24      QueueMembership {
25        string queuemembershipid
26        "Links user to queues they belong to"
27      }
```

