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## Voice Microservices Private Edition Guide

**Before you begin**

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Find out what to do before deploying Voice Microservices.

**Related documentation:**

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**RSS:**

- [For private edition](#)

## Limitations and assumptions

Not applicable

## Download the Helm charts

For information about how to download the Helm charts, see [Downloading your Genesys Multicloud CX containers](#).

The following services are included with Voice Microservices:

- Voice Agent State Service
- Voice Config Service
- Voice Dial Plan Service
- Voice Front End Service
- Voice Orchestration Service
- Voice Registrar Service
- Voice Call State Service
- Voice RQ Service
- Voice SIP Cluster Service
- Voice SIP Proxy Service
- Voice Voicemail Service
- Voice Tenant Service

See [Helm charts and containers for Voice Microservices](#) for the Helm chart version you must

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download for your release.

For information about the Voicemail Service, see *Before you begin* in the *Configure and deploy Voicemail* section of this guide.

For information about the Tenant service, also included with Voice Microservices, see the *Tenant Service Private Edition Guide*.

## Third-party prerequisites

For information about setting up your Genesys Multicloud CX private edition platform, see Software Requirements.

The following table lists the third-party prerequisites for Voice Microservices.

Third-party services

Name	Version	Purpose	Notes
Redis	6.x	Used for caching. Only distributions of Redis that support Redis cluster mode are supported, however, some services may not support cluster mode.	
Consul	1.13.x	Service discovery, service mesh, and key/value store.	For additional information, see Voice services configuration in Consul.
Kafka	2.x	Message bus.	
An SMTP relay		Facilitates email communications in an environment where GCXI reports or voicemails are sent as emails to contact center personnel. Genesys recommends PostFix, but you can use any SMTP relay that supports standard mail libraries.	Required for Voice Voicemail Service if you integrate voicemails with email.
A container image registry and Helm chart repository		Used for downloading Genesys containers and Helm charts into the customer's repository to support a CI/CD pipeline. You can use any Docker OCI compliant registry.	

## Storage requirements

### Voice Tenant Service

Persistent Volume	Size	Type	IOPS	Functionality	Container	Critical	Backup needed
log-pvc	50Gi	RWO	medium	storing log files	tenant	Y	Y

### SIP Cluster Service

Persistent Volume	Size	Type	IOPS	Functionality	Container	Critical	Backup needed
log-pvc	50Gi	RWO	medium	storing log files	voice-sip	Y	Y

### VoiceMail Service

Persistent Volume	Type	IOPS	Functionality Container	Critical	Backup needed
Azure blob storage v2	RWM	medium	storing voicemailbox settings and voicemail messages	tenant	Y
AWS S3 Bucket	RWM	medium	storing voicemailbox settings and voicemail messages	tenant	Y
File System	RWM	medium	storing voicemailbox settings and voicemail messages	tenant	Y

For more information, see Storage requirements in the *Configure and deploy Voicemail* section of this guide.

## Network requirements

For general network requirements, review the information on the suite-level Network settings page.

	Voice Voicemail Service	Voice Tenant Service
<b>Cross-region bandwidth</b>	Connect to other region Voicemail service to push MWI notification.	Need to connect to Tenant Service in other regions.

	<b>Voice Voicemail Service</b>	<b>Voice Tenant Service</b>
		Bandwidth for Redis cross-region connection.
<b>External connections</b>	Redis, Storage Account	Redis and Kafka: Supports secured (TLS) connection. Postgres: Supports secured (TLS, simple) connection between Tenant and Postgres server.
<b>Pod Security Policy</b>	All containers running as Genesys user (500) and non-root user	All containers running as Genesys user (500) and non-root user
<b>SMTP Settings</b>	SMTP enabled	Not applicable
<b>TLS/SSL Certificates configurations</b>	Not applicable	Not applicable
<b>Ingress</b>	Not applicable	Not applicable
<b>Subnet sizing</b>		Network bandwidth must be sufficient to handle the volume of data to be transferred into and out of Kafka and Redis. Subnet sizing to accommodate N+1 Tenant pods.
<b>CNI for Direct Pod Routing</b>	Not applicable	Not applicable

## Browser requirements

Not applicable

## Genesys dependencies

For detailed information about the correct order of services deployment, see Order of services deployment.

## GDPR support

### Multi-Tenant Inbound Voice: Voicemail Service

Customer data that is likely to identify an individual, or a combination of other held data to identify an individual is considered as Personally Identifiable Information (PII). Customer name, phone number, email address, bank details, and IP address are some examples of PII.

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According to EU GDPR:

- When a customer requests to access personal data that is available with the contact center, the PII associated with the client is exported from the database in client-understandable format. You use the **Export Me** request to do this.
- When a customer requests to delete personal data, the PII associated with that client is deleted from the database within 30 days. However, the Voicemail service is designed in a way that the Customer PII data is deleted in one day using the **Forget Me** request.

Both **Export Me** and **Forget Me** requests depend only on Caller ID/ANI input from the customer. The following PII data is deleted or exported during the **Forget Me** or **Export Me** request process, respectively:

- Voicemail Message
- Caller ID/ANI

GDPR feature is supported only when **StorageInterface' is configured as BlobStorage, and** Voicemail service is configured with Azure storage account data store.

Adding caller\_id tag during voicemail deposit

Index tag **caller\_id** is included in voicemail messages and metadata blob files during voicemail deposit. Using the index tags, you can easily filter the **Forget Me** or **Export Me** instead of searching every mailbox.

## GDPR multi-region support

In voicemail service, all voicemail metadata files are stored in master region and voicemail messages are deposited/stored in the respective region. Therefore, It is required to connect all the regions of a tenant to perform Forget Me, Undo Forget Me, or Export Me processes for GDPR inputs.

To provide multi-region support for GDPR, follow these steps while performing GDPR operation:

1. Get the list of regions of a tenant.
2. Ensure all regions storage accounts are up. If any one of storage accounts is down, you cannot perform the GDPR operation.
3. GDPR operates in the master region files, first.
4. Then, GDPR operates in all the non-master region files.