

# **Unica Journey V12.1.1 Hardware Sizing Guide**



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# Chapter 1. Unica Journey Hardware Sizing Details

This hardware sizing guide provide information on the hardware requirements for installing Unica Journey. The calculations mentioned are based on assumptions related to application configuration and tuning. The guidelines shared are for information purpose only.

**Disclaimer** - This guide illustrates the varying hardware sizing requirement, based on various assumptions. This guide does not replace the need for specific Infrastructure details before the deployment. The mentioned consumptions are based on a specific scenario and hardware. Proper estimation should be done before buying the hardware. On top of the suggested hardware, appropriate buffer should be added for any expected peak/future load.

This document provides general guidelines for Journey deployment at your on-premise data centre or virtualized cloud environment.

## Journey Sizing Guidelines

- Define Marketing Objectives
- Define Marketing Use Cases
- Define Marketing Processes
- Define IT environments & IT Integrations
- Implementation Planning & Execution
- Steady-State Operations – Journey design, execution & performance reviews
- Periodic Reviews of marketing campaigns, processes & outcomes

## Recommended Journey Components Deployment

You can refer to Journey Installation guide for information related to deployment of Unica products with Unica Journey. Journey includes different components which can be deployed on same or distributed servers. It is recommended to install all Journey components on different server for optimized performance. This guide can be used for sizing exercise for below Journey components.

- Journey - Web
- Journey - Engine
- Kafka Server
- Kafka (Zookeeper)

## Factors to Consider in Journey Sizing

- Number of simultaneous Journeys
- Average Audiences per Journey
- Average number of Control Points in each Journey
- Average Delay in each Journey
- Average number of Touch Points – Email, SMS, CRM – that require external integrations
- Number of Data Definition fields containing Journey data.

## Journey Complexity

This sizing recommendations are based on Journey complexity. Following factors to be considered for performance calculations.

### 1. Small Journey

Based on the usage of below components we can size Journey as Small:

- Number of audiences: Upto 20
- Number of control touch points: Upto 20
- Number of delay touch points: Upto 10
- Number of decision split: Upto 10

### 2. Medium Journey

Based on the usage of below components we can size Journey as Medium:

- Number of audiences: 20-40
- Number of control touch points: 20 - 40
- Number of delay touch points: 10-20
- Number of decision split: 10-20

### 3. Large Journey

Based on the usage of below components we can size Journey as Large:

- Number of audiences: 40-60
- Number of control touch points: 40-60
- Number of delay touch points: 20-30
- Number of decision split: 20-30

## Calculating Journey Sizing Requirement

Based on the above Journey complexity, you can calculate the Journey environment hardware requirements using below link: **Will add link here:**

## Disclaimer

The above does not consider any backup and archiving needs. Persistent storage - file and database - shall increase rapidly. Any available hardware cache shall improve performance.

## Recommended configuration for replication of kafka messages

Based on the number of Kafka brokers you are planning to deploy in your environment, you will need to update the replication factors in Journey configuration:

Number of Kafka Broker	Replication factor
1	1
2	1
3	2
5	3

Number of Kafka Broker	Replication factor
7	5



**Note:** Property `offsets.topic.replication.factor` governs the value of kafka replication.

No of partitions of kafka topic should always be equal to max number of engine service instances.

For enabling Kafka security, required configuration in below file

1. Journey web : `application.properties`
2. Journey engine : `journey_master_config.properties` & `log4j2.xml`

### Journey Engine Configuration

Data Size	OS	CPU	Default Instances of Engine Services	Data Batch size(Recommended)
1,00,000	Windows	6	Data Clean -2	<code>databatch.timeout =10</code>
	Linux	4	Data Batch -2 Data Map -2  *Explicit Service default max instance should be 1"	<code>databatch.batchSize =100</code>
5,00,000	Windows	6	Data Clean -4	<code>databatch.timeout =10</code>
	Linux	4	Data Batch -3 Data Map -3  *Explicit Service default max instances should be 2	<code>databatch.batchSize =100</code>
10,00,000	Windows	12	Data Clean -5	<code>databatch.timeout =15</code>
	Linux	8	Data Batch -5 Data Map -5  *Explicit Service default max instances should be 5	<code>databatch.batchSize =200</code>



**Note:** Following three properties `topic.partitions`, `topic.max.instance` and `default.instance` controls the Journey instances. A service cannot have max instances more than `topic.partitions` and `default.instance` cannot go less than 1.

### **Guidelines for Changing Assumptions**

Journey is a database-centric application and performance of database server is very critical. Running workflows, segmentation, tracking data uploads, inbound Interactions, analytics and other activities all generate database activity. The size and frequency of these operations determine the size of your database servers. Assumptions illustrated in the scenarios have significant impact on the hardware requirement and deployment architecture. This section discusses about the various guidelines for different assumptions.

## Chapter 2. Assumptions

Consider the following assumptions.

- The resource consumption suggested by this document consumes 100% on the given load. Add appropriate buffer for resources consumed by OS and other software installed. For example: If 4 CPU cores and 8 GB of RAM are suggested, then all the 4 CPU cores and 8 GB will be consumed for the given load.
- When number of audiences Per Journey Per Day is selected it assumes that all audiences may come in a batch or may come in real time through the day. It calculates for heaviest load, assuming all input audiences come in a batch for processing.
- The suggested consumption is based on a specific scenario and hardware. Proper estimation must be done before buying the hardware.