

## HCL Unica Supported Environments



# Contents

- Chapter 1. Unica Products..... 3**
  - Environment Planning..... 3
  - Installation Setup..... 4
  - Supported Locales..... 4
  - Unica Products Minimum System Requirements..... 5
  - Supported Environments Matrix..... 5
  - HCL Unica Link Environment Support Details..... 7
- Chapter 2. Unica+ Products..... 13**
  - Overview..... 13
  - Minimum Hardware Requirements..... 13
  - Supported Environments Matrix..... 13
  - MaxAI CDM Apache Airflow Requirements..... 14
  - MaxAI Supported LLMs..... 15
- Chapter 3. CDP System Requirements..... 17**
  - CDP Hardware Requirements..... 17
  - CDP Software Requirements..... 18
- Chapter 4. Other Software Support and Configurations..... 20**
  - Client Web Browser Support..... 20
  - Adobe Acrobat Support..... 20
  - Supported Screen Resolution..... 20
  - Directory Server Support..... 20
  - Authentication Provider Support..... 21
  - Kafka Support..... 21
  - Open SSL Configurations..... 22
  - Caching Solutions Supported..... 22
  - Reporting Server Support..... 22
  - Virtualization Software Support..... 23
- Chapter 5. Supported Environments Revisions..... 25**
  - Newly Supported Software Versions..... 25
  - Discontinued Support Software Versions..... 25

# Chapter 1. Unica Products

This chapter covers system requirement details for HCL Unica products.

## Overview

This document lists the software environments and minimum system requirements recommended for the following HCL Unica products:

- Unica Platform
- Unica Campaign and Unica Optimize
- Unica Interact
- Unica Plan
- Unica Centralized Offer Management
- Unica Journey
- Unica Deliver
- Unica Collaborate
- Unica Marketing Central
- Unica Link

## Environment Planning

This section provides an overview of software and hardware prerequisites and general environment considerations required for deploying HCL Unica products.

### Product Dependencies

Several products in the HCL Unica suite require the installation of other products as pre-requisites. For additional information, see the product-specific installation guide.

Installed Product	Required Companion Installation	
If you want to install this product...	you must also install the product marked with ✓ in the same row	
	Unica Platform	Unica Campaign
<b>Unica Campaign (includes Optimize)</b>	✓	
<b>Unica Interact</b>	✓	✓
<b>Unica Plan</b>	✓	
<b>Unica Platform</b>	✓	
<b>Unica Centralized Offer Management</b>	✓	✓
<b>Unica Journey</b>	✓	
<b>Unica Deliver</b>	✓	✓

Installed Product	Required Companion Installation	
Unica Collaborate	✓	✓
Unica Marketing Central	✓	✓
Unica RTP	✓	✓
Unica Detect	✓	
Unica MaxAI Assistant	✓	
Unica MaxAI Workbench	✓	
Unica MaxAI CDM	✓	✓
Unica CDP	✓	



**Note:** Unica 26.1.0 supports Unica Collaborate 12.1.7.

## Installation Setup

Terminal clients and SSH or telnet clients used to connect to UNIX command-line must be configured with UTF-8 character encoding.

Using any other character encoding may result in information being missing or displayed incorrectly. See the 26.1.0 product installation guides for additional details.



**Note:** In case of Unica Campaign and Unica Platform, ensure that you have installed the following package before installation of the products: `fontconfig-2.14.0-2.e19_1.x86_64`

## Supported Locales

Unica and Unica+ products support a range of locales for their user interfaces.

Unica and Unica+ products support the following locales:

- English
- French (France)
- German (Germany)
- Japanese
- Korean
- Portuguese (Brazil)
- Spanish (Spain)
- Chinese (Simplified)
- Chinese (Traditional)

- Italian
- Russian

**Note:**

- The locales mentioned are Unica Platform locales. In addition to the Unica Platform locales, HCL MaxAI supports three additional locales: Greek, Turkish, and Hebrew. These locales are specific only to HCL MaxAI and its features.
- Unica Platform supports only limited localization of product configurations.
- HCL MaxAI Workbench does not support Japanese locale.
- Unica Detect only supports English locale.

## Unica Products Minimum System Requirements

The minimum system requirements are provided as guidance for hardware sizing for deployment of HCL Unica products in a non-production environment.

The minimum system requirements are provided as guidance for hardware sizing for deployment of HCL Unica products in a non-production environment.

Production deployments with higher performance requirements or data volumes require thorough sizing to estimate suitable configuration. The minimum system requirements listed in this document for each HCL Unica product are typically for Windows-based systems; comparable hardware configurations are required for supported UNIX-based and LINUX-based systems.

	Infrastructure Element			
Hardware Configuration	Browser Client	Web Application Server	Campaign Analytical (listener) Server	System Table Database Server
Processor	2 GHz	2 GHz, 2 CPUs	2 GHz, 2 CPUs	2 GHz, 4 CPUs
RAM	512 MB	2 GB per CPU	2 GB per CPU	2 GB per CPU
Disk Space	N/A	10 GB	100 GB	200 GB

## Supported Environments Matrix

This section provides an overview of the supported software components for deploying the HCL Unica suite of products.

## Windows Server Environment

Application Server (with embedded Web Server)	Operating System	System Table Database <sup>(3)</sup>	Campaign User Table Database <sup>(1,3,6)</sup>
<ul style="list-style-type: none"> <li>• Tomcat<sup>(13)</sup> <b>v10.1.55</b></li> <li>• JBoss EAP <b>v8.1.0</b></li> </ul>	<p>Windows Server 2016, 2012R2, <b>2019, 2022</b></p>	<ul style="list-style-type: none"> <li>• DB2<sup>(5)</sup> 11.1, 11.5, 11.5.9, <b>12.1.4</b></li> <li>• Oracle 12.1.0.1, 12.1.0.2, 12.2.0.1, 19(12.2.0.3)<sup>(11)</sup>, 19.3.0.0.0, 21c (21.3.0.0.0), Oracle RAC 19c (19.0.0.0), <b>Oracle 23ai</b></li> <li>• SQL Server<sup>(5)</sup> 2014, 2016 SP1, 2017, 2019, <b>2022</b></li> <li>• MariaDB 10.4.x<sup>(14)</sup>, 10.5.9, 10.6, <b>11.8.2</b></li> <li>• PostgreSQL 13.1, 14.1<sup>(17,18)</sup></li> </ul>	<ul style="list-style-type: none"> <li>• DB2<sup>(5)</sup> 11.1, 11.5, 11.5.9, <b>12.1.4</b>, DB2 (z/OS)<sup>(9)</sup> 10.1, 11.0</li> <li>• Oracle 12.1.0.1, 12.1.0.2, 12.2.0.1, 19(12.2.0.3)<sup>(11)</sup>, 19.3.0.0.0, 21c (21.3.0.0.0), Oracle RAC 19c (19.0.0.0), <b>Oracle 23ai</b></li> <li>• SQL Server<sup>(5)</sup> 2014, 2016 SP1, 2017, 2019, <b>2022</b></li> <li>• Netezza NPS 7.2.x</li> <li>• Teradata<sup>(12)</sup> 15.0, 15.10, 16.10, 16.20, 17.0, 17.20</li> <li>• MariaDB 10.4.x<sup>(14)</sup>, 10.5.9, 10.6, <b>11.8.2</b></li> <li>• Amazon Redshift</li> <li>• dashDB<sup>(9)</sup> 10.6</li> <li>• Apache Hive, Impala-based Hadoop Big Data<sup>(4)</sup></li> <li>• Actian-vector-5.1.0<sup>(15)</sup></li> <li>• PostgreSQL<sup>(17,18)</sup> database 14.1-1</li> <li>• Singlestore 7.3</li> </ul>
<ul style="list-style-type: none"> <li>• Tomcat<sup>(13)</sup> <b>v10.1.55</b></li> <li>• JBoss EAP <b>v8.1.0</b></li> </ul>	<ul style="list-style-type: none"> <li>• AIX 7.2 TL4, 7.1 TL5, 7.2 TL5</li> <li>• RHEL 8.6.x, 9.x<sup>(2,7)</sup></li> <li>• <b>SUSE 15.5</b></li> </ul>	<ul style="list-style-type: none"> <li>• DB2<sup>(5)</sup> 11.1, 11.5, 11.5.9, <b>12.1.4</b></li> <li>• Oracle 12.1.0.1, 12.1.0.2, 12.2.0.1, 19(12.2.0.3)<sup>(11)</sup>, 19.3.0.0.0, 21c (21.3.0.0.0), Oracle RAC 19c (19.0.0.0), <b>Oracle 23ai</b></li> <li>• SQL Server<sup>(5)</sup> 2014, 2016 SP1, 2017, 2019, <b>2022</b></li> </ul>	<ul style="list-style-type: none"> <li>• DB2<sup>(5)</sup> 11.1, 11.5, 11.5.9, <b>12.1.4</b>, DB2 (z/OS)<sup>(9)</sup> 10.1, 11.0</li> <li>• Oracle 12.1.0.1, 12.1.0.2, 12.2.0.1, 19(12.2.0.3)<sup>(11)</sup>, 19.3.0.0.0, 21c (21.3.0.0.0), Oracle RAC 19c (19.0.0.0), <b>Oracle 23ai</b></li> <li>• Netezza NPS 7.2.x</li> </ul>

Application Server (with embedded Web Server)	Operating System	System Table Database <sup>(3)</sup>	Campaign User Table Database <sup>(1,3,6)</sup>
		<ul style="list-style-type: none"> <li>• MariaDB 10.4.x<sup>(14)</sup>, 10.5.9, 10.6, <b>11.8.2</b></li> <li>• PostgreSQL 13.1, 14.1<sup>(17,18)</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Teradata<sup>(12)</sup> 15.0, 15.10, 16.10, 16.20, 17.0, 17.20</li> <li>• MariaDB 10.4.x<sup>(14)</sup>, 10.5.9, 10.6, <b>11.8.2</b></li> <li>• Amazon Redshift</li> <li>• dashDB<sup>(9)</sup> 10.6</li> <li>• Apache Hive, Impala-based Hadoop Big Data<sup>(4)</sup></li> <li>• Actian-vector-5.1.0<sup>(15)</sup></li> <li>• PostgreSQL<sup>(17,18)</sup> database 14.1-1</li> <li>• Google Big Query<sup>(p)</sup> (Supported only on RHEL OS and AIX OS)</li> <li>• HP Vertica 7.1,9.0.1<sup>(h)</sup>, 12.0.2, 25.4</li> <li>• Singlestore 7.3</li> <li>• Trino Build 429 399</li> <li>• Hive 3.1.2 version, Hive 3.1.3000.7.1.9.0-387</li> <li>• DataBricks<sup>(f)</sup></li> </ul>

It is recommended to use software versions that appear in bold in the tables below. Starting with Unica 12.0, the end-of-service (EOS) date for HCL Unica products is 3 years after the initial release (official EOS dates are announced approximately 1 year prior to EOS). Products listed as recommended have EOS dates that are on or beyond the EOS date of the HCL Unica product version, and thus will be supported throughout the full-service life of this release.

### Supported Database Drivers

JDBC or ODBC drivers are neither bundled nor shipped with Unica products; customers are required to procure and configure them. Support for Oracle database includes both Standard and Enterprise editions.

## HCL Unica Link Environment Support Details

HCL Unica Campaign and Journey 26.1.0 supports HCL Unica Link version **1.3.2** and earlier supported connectors.

26.1.0 introduces 11 new target connectors spanning CRM, Cloud Storage, Analytics, Email, Push, and Survey:

- **CRM:** HubSpot CRM and Zoho CRM enable bidirectional contact and lead sync.
- **Cloud Storage:** GCS, Amazon S3, and Azure Blob Storage for file-based data staging and exchange.
- **Analytics:** GBQ Event, GA4 User Events, and AppsFlyer for event tracking and mobile attribution.
- **Channels:** Infobip Direct Email, CT Push, and SurveyMonkey for email, push, and survey response capture.

Application Server	Operating System	Kafka	Java/JRE
<ul style="list-style-type: none"> <li>• Apache Tomcat 10.1.29 or later</li> <li>• Node.js 20.10 or later</li> <li>• Redis (Linux) 7.0.15 or later</li> <li>• Redis (Windows) 5.0.14 or later</li> <li>• MongoDB 7.0.15 or later</li> </ul>	<ul style="list-style-type: none"> <li>• Windows 10 Enterprise</li> <li>• Windows 10 Pro</li> <li>• Windows 10 or later</li> <li>• Windows Server 2016 or later</li> <li>• Windows Server 2019;</li> <li>• Linux Red Hat 8</li> <li>• Linux Red Hat 9; Ubuntu Focal 20.04</li> <li>• Ubuntu Jammy 22.04</li> <li>• Ubuntu 20x or later</li> </ul>	<p>Apache Kafka 3.4.0, 3.9.0</p>	<p>openjdk "17.0.15" 2025-04-15</p> <p>OpenJDK Runtime Environment Temurin-17.0.15+6 (build 17.0.15+6)</p> <p>OpenJDK 64-Bit Server VM Temurin-17.0.15+6 (build 17.0.15+6, mixed mode, sharing)</p>

 **Note:**

- Refer to the NodeSource Node.js Binary Distributions page on GitHub for all supported versions of Node.js.
  - [nodesource.com/distributions: NodeSource Node.js Binary Distributions \(github.com\)](https://nodesource.com/distributions)
  - [node/BUILDING.md at c2e4b1fa9ad0b744616c4e4c13a5017772a630c4](#)
  - [.nodejs/node \(github.com\)](#)

 **Note:**



### 1. Support for system and user databases:

- The environment guide does not include supported environments or system requirements for installation of HCL Unica supported databases. Refer to the vendor documentation for the respective databases.
- Support for Oracle database includes both Standard and Enterprise editions.
- JDBC or ODBC drivers are neither bundled nor shipped with Unica products; customers are required to procure and configure them.
- The following are the supported database drivers:

Database	Supported Driver(s)
MS SQL Server 2014 SP1, 2016 SP1, 2017, 2019, <b>2022</b>	Version 11 (mssql-jdbc-11.2.4.jre11.jar)
PostgreSQL 13.1	PSQL ODBC 13.02 driver (postgresql-42.5.4.jar)
Oracle 12c Release (12.1.0.1, 12.1.0.2, 12.2.0.1) Oracle 19c Release (12.2.0.3) Oracle 23ai	Oracle 12c Driver – 12.x (ojdbc8.jar) Oracle 19c Driver – 19.x (ojdbc8.jar) Oracle 23.0.0.0.0 ODBC Driver (ojdbc8.jar)
IBM DB2 11.1.x, 11.5, 11.5.9, <b>12.1.4</b>	DB2JDBC type4 driver (db2jcc4.jar)
MariaDB 10.4.x, 10.5.9, 10.6	JDBC - MariaDB Connector/J for Java 8 version 2.5.2 ODBC - MariaDB ODBC Connector 3.1.6 for RHEL 8.6.x and Windows ODBC - MariaDB ODBC Connector 3.2.2 (for RHEL 9.x) ODBC - MariaDB ODBC Connector 3.1.9 for SUSE
Amazon Redshift	Amazon Redshift ODBC driver (1.4.11.1000 – 64-bit) Amazon Redshift ODBC driver version 2.0.0.3 Unix ODBC driver manager-2.3.7
Action Vector 5.1.0	Linux - action-vector-client-6.0.0-129-free-linux-ingbuildx86_64.tgz Windows - same version as Linux
Google BigQuery	SIMBA ODBC Driver – Version 2.1.23, 2.5.2.1004
Cloudera Impala	ODBC Driver 2.6.13
Singlestore	Singlestore ODBC Connector Driver 1.1.1



Database	Supported Driver(s)
Trino Build 429	SIMBA ODBC Driver – Version 2.3.6.1000
Hive Database	3.x
Hadoop	3.2.0
Hive ODBC Driver version	2.7.0.1002, 2.8.0.1000
Snowflake ODBC Driver	3.6.0

2. Only RHEL 8.6.x and 9.x versions are supported in Unica 26.1. HCL Unica does not support RHEL running on IBM PowerSystems.
3. This column is applicable for the Unica Campaign family of products. Unica Interact do not support Netezza, Teradata, Amazon Redshift, dashDB, HP Vertica, Databricks or Hadoop for customer profile tables. While using Interact, Campaign and Interact DBs must be of same type, for example, if Campaign system tables are in Oracle, all Interact DBs must also be in Oracle.
4. Support for Unica Campaign uses data sources on Big Data platforms:
  - Hive based Hadoop Big Data user data source is supported only on RHEL Operating Systems.
  - Hadoop Big Data instance running on Hive version 0.14 or higher is supported for the following vendors:
    - IBM BigInsights
    - Cloudera CDH
    - MapR
    - Apache HortonWorks
  - Connections to Hive based Hadoop Big Data instances are supported using select type of drivers and the drivers should be procured directly from the vendor. Following are the supported drivers:
    - Cloudera Hive ODBC Driver version 2.5.16 for Cloudera CDH
    - HortonWorks Hive ODBC Driver for Hadoop (Driver version compatible with Hadoop version)
    - Progress DataDirect Connect64(R) for ODBC Release 7.1.5 for other supported Big Data vendors
    - Progress DataDirect Connect64(R), ODBC Release 7.1.5 version on AIX Operating System for HortonWorks Big Data based on Hive
    - Cloudera Impala ODBC Driver 2.5.41 or higher for Cloudera Big Data based on Impala
  - The listed drivers are neither bundled nor shipped with Unica Campaign and the customer has to purchase/download and configure them.
  - Unica Campaign supports only “TextFile” format with Hive/Impala based Bigdata user data source.
  - Kerberos authentication is supported for Unica Campaign data sources on Hive/Impala based Cloudera Big Data platform and requires Campaign Analytical Server (listener) to be running on RHEL Operating system. Please refer to Unica Campaign installation guide for more details.
5. Unica Campaign requires a 64-bit driver for DB2 on Windows. IBM DB2 11.1,11.5, 11.5.9 , 12.1.4 is supported for system tables and for Campaign user tables only with BLU turned off.
6. DataBricks ODBC Driver Supported Driver(s) : 2.08.00.1002 (Windows) , 2.8.2.1013-1 (RHEL).



7. HCL Unica version 26.1 supports RHEL 8.6.x and RHEL 9.3. HCL Unica does not support RHEL running on IBM PowerSystems.
8. Unica Campaign supports HP Vertica with the following caveats:
  - HP Vertica is supported only on RHEL operating system.
  - Users must install the same version of HP Vertica client as the database version.
9. IBM DB2 on z/OS is supported only as user data source with the following caveats:
  - DB2 10.1 z/OS and 11.0 z/OS with RSU1205 and PUT1205 are supported only with “New Function” mode
  - There is no out-of-the-box approach for Loaders on z/OS. Manually, the following procedure can be followed:
    - Set up USS Pipes on z/OS.
    - Write a stored procedure to invoke the DSNUTILU and a script to invoke the stored procedure.
    - Configure the loader to invoke the script.
    - When leveraging temp tables, you must set the parameter “DB2NotLoggedInitially” to “FALSE” in the datasource properties for the database.
10. IBM dashDB for Analytics is now known as IBM DB2 Warehouse on Cloud.
11. Oracle database connectivity is also supported with ODBC connection, refer to Campaign Install guide for more details. Oracle Database versions 12.2.x and 19c with native client connectivity are supported with following caveats:
  - On Oracle database server the following parameter needs to be added in “sqlnet.ora” file located under ORACLE\_HOME/network/admin/:
 

SQLNET.ALLOWED\_LOGON\_VERSION\_SERVER

    - Consult with your DBA for configuring an appropriate value for this parameter. Please refer to below link for more details:
 

<https://docs.oracle.com/database/121/NETRF/sqlnet.htm#NETRF2016>
    - Oracle 19c is also supported with ODBC connectivity, user would not be required to edit the sqlnet.ora parameters as mentioned above while connecting with ODBC.
12. Teradata Database versions 16.10, 16.20, 17.0 and 17.20 are supported for Unica Campaign user data source with the following caveat:
  - The client and the database version of Teradata needs to be the same.
13. Tomcat Application Servers v10.1.55 is supported with the following caveats:
  - Oracle JDK/JRE v17 64 bit is required on Windows is required for deployment.
14. MariaDB support has below considerations:
  - MariaDB is not supported as system tables or user tables on AIX operating system.
  - Unica Deliver supports MariaDB from v12.1.0.3 (FP3) onwards.
  - Unica Journey supports MariaDB from version 12.1.0.3 (FP3) onwards.
15. Unica Campaign supports Actian vector v5.1.0 database as user database from version 12.1.0.4 onwards for RHEL and Microsoft Windows.



16. Unica Campaign supports Google BigQuery (multiple datasets are also supported) and Trino as user database, only on RHEL OS (versions 2.1.23, 2.5.2.1004). Unica Campaign supports Singlestore as a user database, only on Microsoft Windows and RHEL OS.
17. Unica Campaign supports PostgreSQL version – 14.00.0000 as user database.
18. PostgreSQL 13.1 and 14.1 Community PostgreSQL Edition is supported as system database for all Unica products except Insight Reports.

# Chapter 2. Unica+ Products

This chapter covers system requirement details for HCL Unica+ products.

## Overview

This document lists the software environments and minimum system requirements recommended for HCL Unica+ products.

- MaxAI
- MaxAI Workbench
- MaxAI CDM
- HCL Detect
- Real Time Personalization (RTP)
- HCL Customer Data Platform (CDP)

## Minimum Hardware Requirements

This section describes the Unica+ components minimum system requirements to install, configure, and run the applications successfully.

However, actual working configuration needs to be discussed and decided during the capacity planning and site-survey conducted jointly by HCL Software and Client teams.

Requirement	MaxAI Assistant	MaxAI Workbench	RTP	Detect	MaxAI CDM
Memory	16 GB RAM	32 GB RAM	8 GB RAM	16 GB RAM	32 GB RAM
Storage	50 GB HDD	250 GB HDD	50 GB HDD	200 GB HDD	500 GB HDD
CPU	8 CPU	16 CPU	4 CPU	8 CPU	8 CPU

## Supported Environments Matrix

This section provides an overview of the supported software components for deploying the HCL Unica+ suite of products.

Unica+ Products	Operating System	System Table Database	Application Server	Python
MaxAI - Assistant	<ul style="list-style-type: none"><li>• Windows Server 2016, 202</li><li>• RHEL 8.6.x, 9.x</li></ul>	<ul style="list-style-type: none"><li>• DB2 11.5, 12.1.4</li><li>• Oracle 21c, 23ai</li><li>• SQL Server 2019, 2020</li><li>• MariaDB 10.4, 10.6;</li><li>• PostgreSQL 14</li></ul>	Embedded Application Server	Python 3.12.x

Unica+ Products	Operating System	System Table Database	Application Server	Python
MaxAI Workbench	Supports Cloud Native Deployment	<ul style="list-style-type: none"> <li>• Training DataSources: PostgreSQL 14</li> <li>• SQL Server 2019, 2020</li> </ul>	N/A	Python 3.10 (Bundled in image)
RTP	Supports Cloud Native Deployment	MariaDB 11.8.2	Apache Tomcat 10.1.55	
Detect	<ul style="list-style-type: none"> <li>• Windows Server 2012R2, 2019, 2022</li> <li>• RHEL 8.x, 9.x</li> </ul>	MariaDB 11.8.2	Apache Tomcat 10.1.55	
CDM	<ul style="list-style-type: none"> <li>• RHEL 8.x, 9.x</li> <li>• Windows Server 2019, 2022</li> </ul>	<ul style="list-style-type: none"> <li>• System Database: SQL Server 2019, 2022</li> <li>• Oracle 19c, 21c; Snowflake</li> </ul>	NA	Python 3.10.x

 **Note:**

- For release 26.1.0, RTP supports only cloud-native deployments. Refer to HCL Real Time Personalization V26.1 Deployment Guide.
- MaxAI CDM works with all Campaign system tables to generate Campaign 360.

## MaxAI CDM Apache Airflow Requirements

This topic provides the system requirements for using HCL MaxAI CDM with Apache Airflow.

This topic provides the system requirements required for using HCL MaxAI CDM.

Component	Version	Notes
Apache Airflow	Version 3.1.2	Apache Airflow 3.1.2 or higher is required to orchestrate the DAG (Directed Acyclic Graph) pipeline.

Component	Version	Notes
		A Persistent Volume (PV) must be configured within Kubernetes to store all DAGs, DDLs (Data Definition Language), configuration files, and other pipeline artifacts.

## MaxAI Supported LLMs

HCL MaxAI supports both cloud-hosted and on-premises LLM deployments.

### Cloud / Hosted LLM

Item	Cloud Hosted LLM	On-Prem / Local Hosted LLM
Supported Model	OpenAI GPT-5.2	GPT-OSS 120B
Usage	Default model used across MaxAI features	Primary local model
Endpoint Type	Managed LLM Endpoint	Local Inference Endpoint; Inference Engine: vLLM
GPU Requirement	Not Required	Required; Recommended NVIDIA A100 / H100 Class GPUs
Infrastructure Ownership	OpenAI / Hosted Service	Customer Managed
Deployment Model	Cloud	On-Premises

### Sizing Recommendations

The following are recommended resource allocations for key components of the HCL MaxAI Canonical system, including the Airflow orchestrator and the Canonical Database. These guidelines are intended to support the listed data volumes, though actual production environments may require higher specifications based on factors such as concurrency, ETL frequency, and overall data volume.

**Table 1. Data Volume Overview**

Audiences	Source Contact and Response History
100,000	20 Million

**Table 2. Airflow (for DAG Orchestration)**

CPU	RAM	DISK
8	32 GB	500 GB

**Table 3. Canonical DB**

<b>CPU</b>	<b>RAM</b>	<b>DISK</b>	<b>Node</b>
16	64 GB	500 GB	Oracle Node: 1
16	72 GB	500 GB	SQL Server Node: 1

**Note:**

- This sizing includes resources for 5-10 concurrent users trying to retrieve canonical data via MaxAI.
- This is minimum sizing. Actual production environments require higher specifications depending on concurrency, ETL frequency, query complexity, number of DAGs, task concurrency, and data volume.

# Chapter 3. CDP System Requirements

The CDP deployment consists of microservices-based components deployed on a containerization platform and Virtual Machine (VM) based deployment.

There are two parts of the deployment:

- Microservices-based components, to be deployed on a containerization platform. Red Hat OpenShift is the choice of container orchestration platform.
- Virtual Machine (VM) based deployment.

Before proceeding with the installation of the required components, you must ensure that Red Hat OpenShift is installed and properly configured. Refer to the Red Hat OpenShift documentation for installation guidelines.

The following tools are expected to be present in the deployment to facilitate the installation:

- OpenShift CLI ("oc" command)
- Kubernetes command line tool ("kubectl" command)
- Helm CLI tool ("helm" command)

## CDP Hardware Requirements

This topic describes the minimum hardware requirements for CDP deployment, including standalone VMs, EKS cluster, and EMR cluster.

The following are the minimum hardware requirements for the CDP deployment.

### Standalone VMs

Server/Node	No. of Servers/Nodes	CPU	Memory	Storage	Network
Bastion host	1	2 vCPUs for a 7h 12m burst	8.0 GiB	EBS only	Low to Moderate
Aerospike DB	2	4 vCPUs	16.0 GiB	150 GB NVMe SSD	Up to 10 Gigabit
DMP server	1	2 vCPUs	8.0 GiB	EBS only	Up to 12.5 Gigabit
Druid server	2	16 vCPUs	128.0 GiB	EBS only	Up to 10 Gigabit
MongoDB Server	4	4 vCPUs	16.0 GiB	150 GB NVMe SSD	Up to 10 Gigabit
MongoDB Server	1	2 vCPUs for a 4h 48m burst	2.0 GiB	EBS only	Up to 5 Gigabit
NiFi DB	3	2 vCPUs	16.0 GiB	75 GB NVMe SSD	Up to 10 Gigabit

Server/Node	No. of Servers/Nodes	CPU	Memory	Storage	Network
SFTP Server	1	2 vCPUs	8.0 GiB	EBS only	Up to 12.5 Gigabit
postgres-1	2	2 vCPUs	8.0 GiB	EBS only	Up to 12.5 Gigabit
RabbitMQ	1	2 vCPUs	8.0 GiB	EBS only	Up to 10 Gigabit
TC Redis	1	2 vCPUs	16.0 GiB	EBS only	Up to 10 Gigabit
Redis and RMQ for Celery	1	2 vCPUs	16.0 GiB	EBS only	Up to 10 Gigabit
Scheduler	1	2 vCPUs	16.0 GiB	EBS only	Up to 10 Gigabit

### EKS Cluster

Server/Node	CPU	Memory	Storage	Network
3 Nodes	32 vCPUs	64.0 GiB	EBS only	12.5 Gigabit
18 Nodes	4 vCPUs	16.0 GiB	EBS only	Up to 12.5 Gigabit

### EMR Cluster

Server/Nodes	CPU	Memory	Storage	Network
Primary Node	4 vCPUs	16.0 GiB	EBS only	Up to 10 Gigabit
Core Node	4 vCPUs	16.0 GiB	EBS only	Up to 10 Gigabit

## CDP Software Requirements

This topic lists the software components to be deployed and configured before deployment for CDP Core modules.

The following is a list of components to be deployed and configured before the deployment for CDP Core modules. CDP utilizes the functionalities from these modules to perform end-to-end operations.

Application/Service	Deployment Type	Version
HashiCorp Vault	Helm chart	Vault v1.17.2
Red Hat Quay Operator		
RHBK Operator, OpenShift RBAC	NA	
NFS	Storage Class on OpenShift	
AMQ streams	OpenShift Operator	
SMTP server		

<b>Application/Service</b>	<b>Deployment Type</b>	<b>Version</b>
Trino	Helm chart	v0.7.0
Apache Spark (Spark ETL jobs)	Helm chart	3.5.1
HAProxy (route/ingress)	Route on OpenShift	
MinIO	Helm chart	v5.0.15
Apache Airflow	Helm chart	2.9.2
Stackable Operator for Apache Spark (certified) / Spark Helm Operator (Community)	Helm chart	24.3.0
PostgreSQL	PgSQL on VM	
AMQ broker	OpenShift Operator	
3Scale	Api-Gateway	

# Chapter 4. Other Software Support and Configurations

This chapter covers client browser support, directory server support, authentication provider support, Kafka support, caching, reporting, and virtualization support for HCL Unica products.

Additionally, it also covers other software support details and configuration guidelines for HCL Unica products.

## Client Web Browser Support

This topic lists the supported web browsers and their operating systems for HCL Unica products.

Browser <sup>(1,3)</sup>	Operating System
Safari <sup>(2)</sup> Version 26.5 (21624.2.5.11.4)	MacOS: Tahoe V 26.5
Google Chrome for Business edition Version 148.0.7778.179 (Official Build) (64-bit)	Windows 7 SP1, Windows 8 SP1, Windows 10
Microsoft Edge Version 148.0.3967.83 (Official build) (64-bit)	Windows 10

## Adobe Acrobat Support

Annotations using the Adobe Acrobat markup feature in Unica Plan are supported only on specific browsers.

Browser <sup>(1)</sup>	Operating System	Adobe Acrobat
Internet Explorer 11 (32-bit and 64-bit)	Windows 7 SP1, Windows 8 SP1, Windows 10	Adobe Acrobat Pro 2022

## Supported Screen Resolution

For an improved user experience, set your screen resolution to 1600 x 900 and set "Size of the text, apps, and other items" under "Display Setting" > "Scale and layout" to 100%.

Lower resolutions can result in some information not being properly displayed. If you use a lower resolution, maximize the browser window to see more content.

## Directory Server Support

This topic lists the supported directory servers and their host operating systems for HCL Unica products.

Directory Server <sup>(1)</sup>	Host Operating System
Microsoft Active Directory 2012, 2012R2, <b>2016</b> <sup>(2)</sup>	Windows
Oracle (Sun) ONE Directory Server Enterprise Edition 11gR2	All OS
IBM Security Directory Server (formerly known as Tivoli Directory Server) 10.0.3	All OS

**Note:**

- HCL CDP standalone does not support integration with any directory servers. HCL CDP integrated with Unica Platform uses authentication via Marketing Platform.
- Windows Integrated Login is available only for HCL Unica products installed on Windows systems through IIS deployment. For details, contact HCL Support.

## Authentication Provider Support

This topic lists the supported authentication providers and their host operating systems for HCL Unica products.

Authentication Provider	Host Operating System
Windows Active Directory Server 2012, 2012R2, 2016	Windows
CA Single Sign On (formerly known as Siteminder) 12.5	All OS
IBM Security Access Manager (Formerly known as Tivoli Access Manager for eBusiness) <sup>(A)</sup> 9.0.4, 8.0.1.3	All OS
Federated Single Sign-On based on SAML 2.0 standards	All OS



**Note:** (A) Unica Centralized Offer Management, Unica Interact, and Unica Plan work with HTTP methods such as GET, PUT, POST, PATCH, and DELETE. By default, these HTTP methods are not enabled on ISAM and Siteminder. For these Unica products to work with ISAM and Siteminder, these methods must be enabled.

## Kafka Support

This topic lists the supported Kafka and Zookeeper versions for HCL Unica products.

Kafka / Zookeeper	Version
Apache Kafka	Apache Kafka 3.4.0, <b>3.9.0</b>
Confluent Kafka	7.4.1

**Note:**



- For Interact Trigger messages, if Apache Kafka is deployed in a cluster, then Apache ZooKeeper 3.5.5, 3.6.3, or higher is supported.
- For Deliver you can optionally use Kafka for processing RCT responses. Refer to the Unica Deliver Startup and Admin Guide on how to configure Kafka for Response and Contact tracker utility. Confluent Kafka is not supported with Deliver.
- Unica Journey is supported on Amazon-managed Kafka: MSK on AWS3. Unica Journey is also supported on AMQ Kafka managed by RedShift on OpenShift.

## Open SSL Configurations

Unica Campaign requires the following environment variables to be added based on the operating system.

Operating System	Configuration
Microsoft Windows	Add these variables in cmpServer.bat: <pre>set OPENSLL_CONF=&lt;CAMPAIGN_HOME&gt;/bin/openssl.cnf set OPENSLL_MODULES=&lt;CAMPAIGN_HOME&gt;/bin</pre>
Unix-based Operating Systems	Add these variables in setenv.sh on RHEL, SuSE, and AIX: <pre>export OPENSLL_CONF=&lt;CAMPAIGN_HOME&gt;/bin/openssl.cnf export OPENSLL_MODULES=&lt;CAMPAIGN_HOME&gt;/bin</pre>

## Caching Solutions Supported

This topic lists the supported caching solutions for HCL Unica products.

Product	Caching Solution
Interact	Ignite Redis 6.0
Detect	Redis 8.2.5
MaxAI Assistant	Redis 8.2.5

## Reporting Server Support

This topic lists the supported reporting tools for HCL Unica products.

Product	Supported Reporting Tool
Unica Campaign, Unica Plan	Apache Superset v6.0

Product	Supported Reporting Tool
Unica Deliver	
Unica Journey	
Unica Interact	
HCL RTP	

**Note:**

- Unica Deliver does not support analytical reports with system tables with Postgres database.
- RTP supports Superset on MariaDB only.

## Virtualization Software Support

HCL Unica supports customers running its products on listed operating systems, including in virtual machine environments.

With every HCL Unica release, HCL Unica products are certified for a specific set of operating systems as listed in this guide. HCL Unica also recognizes the growing presence of hardware virtual machine software and OS-level virtualization software (for example, VMware, Microsoft Virtual Server, Solaris Containers) in customer environments.

### Support of Virtualization Environments

HCL supports customers who run its products on any of the listed operating systems, irrespective of whether they are running a virtual machine in their environment. HCL supports any product-specific issues that occur while running within a virtual machine; however, HCL does not rigorously test its products inside of any virtual machine. As a result, virtual machines are supported as a compatible environment.

Virtualization software vendors support a set of certified operating systems and hardware. The customer and the virtual machine vendors are responsible for any interactions and/or issues that arise at the hardware or operating system layer as a result of their use of the virtualization software.

### Performance

The use of a virtual machine adds software overhead that may affect performance and/or scalability. Any statements on expected product performance on a hardware platform cannot be interpreted to apply to a virtual machine running on the same hardware platform.

### Troubleshooting Issues

HCL Technical Support is unable to accept virtual images from customers as troubleshooting tools due to licensing concerns with respect to third-party software products which might be included in those images.

Should HCL customers who use its products inside a virtual machine experience issues, HCL customers will not be required to recreate and troubleshoot every issue in a non-virtualization environment. However, HCL does reserve the right to request customers to diagnose certain issues in a supported operating system environment without the virtual image. HCL will make this request only when there is reason to believe that the virtual environment is a contributing factor to the issue.

# Chapter 5. Supported Environments Revisions

This section provides an overview of changes in supported software for version 26.1 of HCL Unica products.

## Newly Supported Software Versions

HCL Unica version 26.1.0 has added support for the following new versions of third-party software.

Supporting Software Entity	Supporting Software Version
Application Server	Apache Tomcat 10.1.55 JBoss EAP v8.1.0
Java / JDK	Oracle JDK 17 64-bit Open JDK 17 64-bit
Database	DB2 12.1.4

## Discontinued Support Software Versions

HCL Unica version 26.1 has discontinued support for the following versions of third-party software.

Supporting Software Entity	Supporting Software Version
Application Server	Apache Tomcat v9.0.x IBM WebSphere Application Server 8.5.5.x Weblogic Application server
Reporting Server Support	Apache BIRT (Insights for reporting)



**Note:** IBM WebSphere Application Server 8.5.5.x does not support Java 17.