# Framework Deployment Guide

## IPv6 vs. IPv4 Overview

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## Contents

> ### Important
>
> This section provides a high-level view of IPv6, and how to enable it in a Genesys component. For detailed information about IPv6, the operating systems that support it, and things to consider when deploying it, see Internet Protocol version 6 (IPv6). For a list of Framework connections that support IPv6, see IPv6 Support.

Internet Protocol version 6, commonly known as IPv6, is a network layer protocol for packet-switched inter-networks. It is designated as the successor of IPv4, the current version of the Internet Protocol, for general use on the Internet.

## Configuring IPv6

IPv6 must be configured on each component that is going to support it. You can do this using an environment variable or a configuration option, depending on the situation:

You must use an environment variable if:

- An IPv6 connection is to be established before an application is able to, or must, read information from Configuration Server.
- You want all Genesys applications on the same host to support IPv6. You only have to configure this on the host once, rather than configure each application on that host individually. The host-level setting will override any application-level setting.

Otherwise, you can use either an environment variable or a configuration option.

## Set Environment Variable

Set the environment variable **GCTI_CONN_IPV6_ON** to `true` (represented by any non-zero integer value) to enable IPv6; or to `false` (represented by zero (0)) to disable IPv6. The default value of this environment variable is `false (0)`, indicating that IPv6 support is disabled. This default value ensures backward compatibility.

## Set Configuration Option

Using Genesys Administrator, set the **enable-ipv6** option in the **[common]** section of the options of the component's Application object. Refer to the *Framework Configuration Options Reference Manual* for more information about this option.

Refer to component-specific documentation and Internet Protocol version 6 (IPv6) for more information about IPv6 and any specific considerations for deploying IPv6 in your situation.

## Mixed IPv4 and IPv6 Environments

You can configure IPv6 and IPv4 in the same environment, as described in Internet Protocol version 6 (IPv6). In this mixed environment, you can configure connections with servers that support IPv4, IPv6, and both. For connections with servers that support both IPv4 and IPv6, you can specify which version you prefer to use. For example, if you are setting up a connection to a DB Server that supports both IP4 and IPv6, you can choose to use IPv4 or IPv6 for that connection. There is no universal rule that determines what version should be used, so the choice is up to you.

To configure this choice, you can use either an environment variable or a transport option.

## Set Environment Variable

Set the environment variable **GCTI_CONN_IP_VERSION** to either 4,6 to indicate a preference for IPv4; or to 6,4 to indicate a preference for IPv6. The default value of this environment variable is 4,6, indicating that IPv4 is preferred. This default value ensures backward compatibility. The value of this environment variable is overridden if the transport parameter **ip-version** is configured at the Application level.

## Set Transport Option

Using Genesys Administrator, set the Transport parameter **ip-version** on the **Advanced** tab of the **Connection Info** dialog box for the connection. Refer to the *Framework Configuration Options Reference Manual* for more information about this parameter.

> ### Important
> This option has no affect on connections to Configuration Server that are established before the option value can be read from the Configuration Database.

The same option can also be set in the transport section of the Host's annex to set the IP version used on the connection between Solution Control Server and LCA. Otherwise, Management Framework components do not support this option. When the same transport option is set on the application level, it overrides the value of the environment variable **GCTI_CONN_IP_VERSION**.

Refer to the *Framework Configuration Options Reference Manual* for more information about setting this option in an application or in a host.

The following table summarizes how this environment variable or option affects the connection for which it is configured.

| Connecting Server | 4,6 | 6,4 |
| --- | --- | --- |
| Supports only IPv4 | ipv4 is used | ipv4 is used |

| Connecting Server | 4,6 | 6,4 |
|---|---|---|
| Supports both IPv4 and IPv6 | ipv4 is used | ipv6 is used |
| Supports only IPv6 | ipv6 is used | ipv6 is used |