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# Genesys Co-browse Server

Release Notes 9.0.x

5/11/2023

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# Genesys Co-browse Server 9.0.x Release Note

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

This Release Note applies to all 9.0.x releases of Genesys Co-browse Server. Links in the **Available Releases** section enable you to access information regarding a specific release.

## Available Releases

### [+] Note about release order

Releases are listed by version number rather than in date order. For this reason, a recent release may be listed after earlier releases, if the version number is lower. Except when otherwise noted in the information for a specific release, each release includes all of the features and corrections that were introduced for the applicable operating system at earlier dates, regardless of the version numbering.

#### Release 9.0.1:

Release	Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
9.0.016.09	05/12/23	General			X		X
9.0.016.07	01/20/23	General			X		X
9.0.016.05	12/09/22	General			X		X
9.0.015.02	06/06/22	Hot Fix			X		X
9.0.014.12	01/28/22	General			X		X
9.0.014.07	12/23/21	Hot Fix			X		X
9.0.005.55	10/15/21	General			X		X
9.0.005.49	04/15/21	General			X		X
9.0.005.43	07/31/20	Hot Fix			X		X
9.0.005.39	05/20/20	Hot Fix			X		X
9.0.005.36	04/29/20	Hot Fix			X		X
9.0.005.35	04/16/20	Hot Fix			X		X
9.0.005.30	03/06/20	Hot Fix			X		X
9.0.005.25	02/03/20	Hot Fix			X		X

Release	Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
9.0.005.24	01/22/20	Hot Fix			X		X
9.0.005.20	12/19/19	Hot Fix			X		X
9.0.005.15	06/25/19	General			X		X
9.0.002.49	10/30/19	Hot Fix			X		X
9.0.002.31	01/16/19	Hot Fix			X		X
9.0.002.25	01/04/19	Hot Fix			X		X
9.0.002.23	12/14/18	Hot Fix			X		X
9.0.002.16	11/19/18	Hot Fix			X		X
9.0.002.02	06/26/18	General			X		X
9.0.000.07	03/02/18	General			X		X

The operating systems available for use with each component release are listed in the table at a high level only. For more detailed information about the supported operating environments, including requirements, supported versions, and any conditions or limitations, see the [Genesys Co-browse page](#) in the *Genesys Supported Operating Environment Reference Guide*.

For information about 8.5.x releases of Genesys Co-browse Server, see the [8.5 Release Note \(Cumulative\)](#).

## Discontinued Support

### [+] Note about discontinued items

This section documents features that are no longer supported in this software. This cumulative list is in release-number order with the most recently discontinued features at the top of the list. For more information on discontinued support for operating environments and databases, see [Discontinued Support](#) in the *Genesys Supported Operating Environment Reference Guide*.

- 
- Windows Server 2008
  - Red Hat Enterprise Linux 6

**Discontinued as of:** 9.0.005.49

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- Embedded Cassandra

**Discontinued as of:** 9.0.005.00

---

- Cassandra
-

**Deprecated as of:** 9.0.005.00

---

- Built-in chat widget for Co-browse

**Discontinued as of:** 9.0.002.02

---

- Internet Explorer 9
- Internet Explorer 10

**Discontinued as of:** 9.0.000.07

---

- History REST API

**Deprecated as of:** 9.0.000.07

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- JavaScript application genesys.min.js

**Deprecated as of:** 9.0.000.07

---

## Known Issues

You can find a cumulative list of the Known Issues and Recommendations for all 9.0.x releases of Genesys Co-browse Server, including the issues that are specific to Localized (International) releases, at the following links:

- [Known Issues and Recommendations](#)
- [Internationalization Issues](#)

## Related Resources

For additional information about Genesys Co-browse Server, see the following documentation:

- The documentation related to this software is available from the [Genesys Co-browse](#) page.
- The [Genesys Co-browse Deployment Guide](#) provides details about installing and configuring Genesys Co-browse Server.
- The [Genesys Co-browse](#) page in the [Genesys Supported Operating Environment Reference Guide](#) provides detailed information about the supported operating environments, including requirements,

supported versions, and any conditions or limitations for Co-browse components.

Release Notes for other Genesys components are available [here](#).

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# Known Issues and Recommendations

## Genesys Co-browse Server

The Known Issues and Recommendations section is a cumulative list for all 9.0.x releases of Genesys Co-browse Server. This section provides the latest information on known issues and recommendations associated with this product. It includes information on when individual items were found and, if applicable, corrected. The Resolved Issues section for each release describes the corrections and may list additional issues that were corrected without first being documented as Known Issues.

See also [Internationalization Issues](#).

---

The following are known issues related to Redis database connections:

- If password authentication is used to connect with Redis Sentinel, the same password is required for all instances of Sentinel, Main, or Replica.
- Redis and Redis Sentinel secured with TLS connection is confirmed only for server TLS certificate. Client TLS certificate validation isn't supported.

ID: <b>CB-7943</b>	Found In: <b>9.0.016.09</b>	Fixed In:
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---

The following are known issues for the scrolling synchronization mechanism (cobrowse.useByElementScrolling = true):

- Only vertical scrolling is supported (horizontal scrolling is not supported).
- The scrolling synchronization might not behave properly on multi-column layouts or layouts that have sticky (fixed position) menus.

ID: <b>CB-7230</b>	Found In: <b>9.0.005.24</b>	Fixed In:
--------------------	-----------------------------	-----------

---

The following are known issues for static resources behind authentication:

- Resources from the style attributes are currently not supported. For example, for `<div style="background-image:url(image.png)">`, if the `image.png` is behind authentication, the agent won't see it.
- Images are only supported through the `<img>` tag or if they're referenced in CSS (`<source>` tags are not supported).
- If a resource for caching is received from a third-party domain, the CORS headers must be correctly set, since the Genesys Co-browse script on the master-side needs to access its content.
- `pseudoHover` for cached files is not supported. Hover effects can work improperly for elements whose

styles are described in cached CSS files or style tags.

- Resources added or updated after a co-browse session has started are not cached and are taken by the slave-side via direct link to the resource or proxied through the Co-browse Server.

ID: <b>CB-5759</b>	Found In: <b>9.0.005.00</b>	Fixed In:
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---

Static resources behind authentication do not work in release 9.0.002.49.

ID: <b>CB-7056</b>	Found In: <b>9.0.002.49</b>	Fixed In:
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## Internationalization Issues

Information in this section is included for international customers. Release numbers in the **Found In** and **Fixed In** fields refer to the English (US) release of Genesys Co-browse Server unless otherwise noted in the issue description.

---

There are no internationalization issues for this product.

---



# Release 9.0.0

## Genesys Co-browse Server Release Notes

You can find links to Release Notes for particular 9.0.0 releases of Genesys Co-browse Server, if available, in the tree menu on the left or in the list of [Available Releases](#).

# 9.0.016.07

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
01/20/23	Update			X			X

### What's New

This release includes only resolved issues.

### Resolved Issues

This release contains the following resolved issues:

---

The deprecated header, `application/x-javascript`, is replaced with `text/javascript`, which is now the recommended header for JSONP server responses. (CB-7905)

---

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

### Upgrade Notes

No special procedure is required to upgrade to release 9.0.016.07.

# 9.0.016.05

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
12/09/22	General			X			X

### What's New

This release contains the following new features and enhancements:

- Slots and templates synchronization support is now available for the Web Components feature. (CB-7864)
- Starting with this release, Co-browse supports constructed CSS objects on web pages. (CB-7863)
- All vulnerable or outdated third-party libraries part of the Co-browse bundle are replaced with their updated stable versions. (CB-7839)

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

### Resolved Issues

This release contains the following resolved issues:

---

The Jetty application server is now updated to version 9.4.49, which is a stabler version without known vulnerabilities. (CB-7883)

---

---

As part of an effort to revise session tab names that might be considered offensive, an agent-side page is now named **agent.html** with the title **Agent Co-browsing party**. The changes are backward compatible. (CB-7868)

---

The Spring libraries set was updated to its most recent stable version, 5.3.20. (CB-7808)

---

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.016.05.

# 9.0.015.02

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
06/06/22	General			X			X

### What's New

This release contains the following new features and enhancements:

- Co-browse now supports Microsoft Edge Chromium browser. (CB-7806)
- Co-browse session synchronization now includes HTML Web Components browser feature support. It is now possible to synchronize various types of Web Components with few limitations. For more information on limitations, see [Limitations](#). (CB-7680)

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

### Resolved Issues

This release contains no resolved issues.

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.015.02.

# 9.0.014.12

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
01/28/22	General			X			X

### What's New

This release contains the following new features and enhancements:

- A new option **enable** is now added to the **reporting** section, which enables or disables pushing data for Genesys historical reporting. See [reporting Section](#) for more details.
- This release includes important security fixes related to the Apache Log4j 2 vulnerability (CVE-2021-44832). In particular, the Log4j version included with Genesys Co-browse has been upgraded to 2.17.1. (CB-7755)
- Support for OpenJDK 8 and OpenJDK 11 is included in all supported operating systems. This requires Windows installation to set JAVA\_HOME environment variable that points to the OpenJDK root folder. (CB-7555)

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

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### Resolved Issues

This release contains the following resolved issues:

---

Static resources behind the authentication feature now handle more CSS internal resources to synchronize agents properly. It is recommended to perform CSS validation for better user experience. (CB-7648)

---

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.014.12.



# 9.0.014.07

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
12/23/21	Hot Fix			X			X

### What's New

This release contains the following new features and enhancements:

- This release includes important security fixes related to the log4j vulnerability (CVE-2021-44228). In particular, the log4j version included with Genesys Co-browse has been upgraded to 2.16.0. (CB-7745)

### Resolved Issues

This release contains the following resolved issues:

---

Static resources behind the authentication feature are now improved for working with CSS. (CB-7642)

---

Potentially vulnerable eval() core JavaScript functions are now removed from the frontend code to improve Co-browse security. (CB-7713)

---

Default values of Redis TTL for session and resource cache records are adjusted to 1 hour in the configuration template. (CB-7605)

---

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

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---

Starting from 9.0.014.07, Cassandra support is fully discontinued for both Co-browse sessions and cache storage. Redis database is the only supported storage for Co-browse. (CB-7706)

---

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.014.07.

# 9.0.005.55

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
10/15/21	General			X			X

### What's New

This release includes only resolved issues.

### Resolved Issues

This release contains the following resolved issues:

---

Jetty libraries are now upgraded to the latest stable version to cover potential denial of service attacks. (CB-7693)

---

To avoid the risk of Man-in-the-Middle (MITM) attacks, the agent side parameter, **gcbSessionServer** now has a secure flag that prevents cookies from reading plain text in the intercepted traffic. (CB-7667)

---

The default value for the outputPattern logging option is now set to the same value as the predefined value. This prevents incorrect logging formats in the Co-browse Server log when using Genesys Administrator to configure Co-browse. (CB-7610)

---

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

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Website storage is implemented to restore an active session between page reloads and page location changes between subdomains of the same root domain without cookies. This reduces the cookie footprint in the customer's website. To enable this feature on a website, set the instrumentation option, **cookieFootprintReduce**, to true. For example:

```
var _genesys = {  
  cobrowse: {  
    cookieFootprintReduce: true  
  }  
};
```

(CB-7593)

---

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.005.55.

9.0.005.49

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
04/15/21	General			X			X

### What's New

This release contains the following new features and enhancements:

- The Static Resources Behind Authentication feature is now enabled by default. (CB-7558)
- JQuery is now updated to version 3.5.1 for security reasons. (CB-7563)
- Support for the following Operating Systems. See the [Genesys Co-browse](#) page in the [Genesys Supported Operating Environment Reference Guide](#) for more detailed information and a list of all supported operating systems.
  - Windows Server 2019
  - Microsoft Hyper-V Server 2019
  - Red Hat Enterprise Linux 8(CB-7557), (CB-7522)
- The following Operating Systems are no longer supported:
  - Windows Server 2012
  - Windows Server 2008
  - Red Hat Enterprise Linux 6(CB-7521), (CB-7609)

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

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## Resolved Issues

This release contains the following resolved issues:

---

The Jetty cross-origin filter behavior is now adjusted to support wildcard domains. Previously, due to library updates for security reasons, Co-browse Server lost the ability to handle **allowedOrigins** that contained a wildcard. (CB-7582)

---

The default time-to-live (TTL) for cached static resources is now set to 1 hour (1h). Previously, the default was 1 day (1d), which might have caused resource renewal issues in the cache. You can still configure your desired TTL through the **[redis] cache.ttl** configuration option. (CB-7560)

---

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.005.49.

9.0.005.43

## Genesys Co-browse Server Release Notes

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
07/31/20	Hot Fix			X		X

### What's New

This release contains the following new features and enhancements:

- Support for Redis 6. See the [Genesys Co-browse](#) page in the [Genesys Supported Operating Environment Reference Guide](#) for more detailed information and a list of all supported databases. (CB-7436)
- Support for Redis Sentinel Cluster, in order to increase high availability and server stability. To configure, use the following new configuration options in the [\[redis\]](#) section:
  - [\[redis\] sentinels](#)
  - [\[redis\] type](#)
  - [\[redis\] master](#)
  - [\[redis\] password](#)

(CB-7404)

- Support for TLS for a single Redis connection, in order to securely store data. (CB-7392)
- Updated the 3rd-party library for CSS parsing to a version that handles fraction (fr) units. (CB-7435)

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
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#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

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---

## Resolved Issues

This release contains the following resolved issues:

---

You can now specify how to handle incoming and outgoing cookies that come through url-proxy and css-proxy requests. Co-browse Server now either passes or blocks cookies in both directions with the new configuration option **[http-proxy] allowCookies**. Previously, Co-browse Server passed cookies that were forwarded from the web server, but blocked cookies from the browser to the web server. (CB-7418)

---

Co-browse Server now includes improvements on how certain elements work on a web page when their value changes during a Co-browse session. (CB-7395)

---

A warning message now appears in the agent-side debug log if a web page in the Co-browse session does not contain a correct `<!DOCTYPE html>` tag. (CB-7420)

---

Co-browse Server no longer generates numerous `CancelledKeyException` debug log messages when the connection with the client is lost. **Note:** This correction applies only when REST endpoints are requested. If a server certificate is not trusted, numerous exceptions might still be generated. (CB-7309)

---

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.005.43.



9.0.005.39

## Genesys Co-browse Server Release Notes

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
05/20/20	Hot Fix			X		X

### What's New

This release includes only resolved issues.

### Resolved Issues

This release contains the following resolved issues:

---

Co-browse Server now handles the scenario of a cluster URL already having the final "/", with or without parameters, so that an invalid URL with a double slash does not result in Co-browse proxy URLs. (CB-7390)

---

Co-browse Server now works properly with <iframe>-s which are added to the page during a co-browse session. (CB-7388)

---

Co-browse Server now handles errors for CometD disconnections more accurately with a verbose exception stack trace only for debug log level. (CB-7386)

---

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

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---

Co-browse Server now includes snapshot ordering to prevent race conditions from occurring when making changes from Slave to Master. (CB-7378)

---

Co-browse Server now correctly handles Internet Explorer 11 errors. The issue was resolved by replacing the Internet Explorer 11 JavaScript method with a polyfill. (CB-7376)

---

Co-browse Server now permits the customization of Co-browse functional elements through the custom style in the <head> tag. This was accomplished by changing the priority of how Co-browse CSS styles are placed into HTML page. (CB-7363)

---

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.005.39.

# 9.0.005.36

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
04/29/20	Hot Fix			X		X

### What's New

This release includes only resolved issues.

### Resolved Issues

This release contains the following resolved issues:

---

Co-browse Server no longer encounters an issue with the **cbUrl** parameter in the customer website instrumentation and with the **[cluster] url** configuration option. Previously, extra URL parameters were being added after the question sign (?), causing a malformed URL. (CB-7354)

---

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.005.36.

# 9.0.005.35

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
04/16/20	Hot Fix			X		X

### What's New

This release includes only resolved issues.

### Resolved Issues

This release contains the following resolved issues:

---

Co-browser Server now correctly synchronizes a mouse click from the customer side to the agent side. Previously, a mouse click from the customer side was reflected in the bottom left corner on the agent side. (CB-7359)

---

Co-browse Server now works properly with <iframe> tags that are added to the page during a co-browse session. (CB-7353)

---

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

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## Upgrade Notes

No special procedure is required to upgrade to release 9.0.005.35.

# 9.0.005.30

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
03/06/20	Hot Fix			X		X

### What's New

This release includes only resolved issues.

### Resolved Issues

This release contains the following resolved issues:

Visibility issues with the cursor no longer occur on the customer side if the co-browsed page contains overlay elements. (CB-7336)

The RegExp validation is now removed from the web configuration UI because correct values were being unexpectedly blocked. A server validation occurs for the entered value, with a warning in the server logs if the value is incorrect. (CB-7237)

Co-browse Server now correctly passes a co-browse session through pages with multiple redirects. Previously, the co-browse session could have been lost if the page redirected to another page within a very short period of time. (CB-7237)

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.005.30.



9.0.005.25

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
02/03/20	Hot Fix			X		X

### What's New

This release contains the following new features and enhancements:

- Co-browse Server now sets the SameSite=None attribute for the BAYEUX\_BROWSER cookie if long-polling CometD transport is used. This enhancement addresses the new, stricter browser policies being implemented (starting 2/4/20 for Chrome, and starting at later dates for other browsers). Without this flag, the Co-browse session will not work due to Co-browse being on a different domain than the Co-browsed web page. In this case, when long-polling transport is used, you must configure the Load Balancer to work through HTTPS only. (CB-7310)

### Important

Genesys highly recommends using web sockets instead of long-polling to improve Co-browse session performance.

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

## Resolved Issues

This release contains no resolved issues.

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.005.25.

# 9.0.005.24

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
01/22/20	Hot Fix			X		X

### What's New

This release contains the following new features and enhancements:

Co-browse now has a new mechanism for scrolling synchronization. To enable, set `cobrowse.useByElementScrolling` to `true` in the instrumentation. For example:

```
let _genesys = {  
  cobrowse: {  
    useByElementScrolling: true  
  }  
}
```

This feature is considered experimental. See [Known Issues](#) for additional information. (CB-7230)

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

### Resolved Issues

This release contains no resolved issues

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.005.24.

# 9.0.005.20

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
12/19/19	Hot Fix			X		X

### What's New

This release contains the following new features and enhancements:

- Co-browse now sets the SameSite=None attribute for cookie-based **stickiness**. This enhancement addresses the new, stricter browser policies being implemented (starting in February 2020 for Chrome, and starting at a later date for other browsers). Without this flag, Co-browse stickiness will not work due to Co-browse being on a different domain than the co-browsed web page. Because Co-browse is an API that can be called from applications running on different domains, the proper level of control is the CORS access-control-allow-origin header, which is implemented in the **allowedOrigins** option. (CB-7074)
- Co-browse can now proxy files that have a space symbol in their names. (CB-7215)

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

### Resolved Issues

This release contains the following resolved issues:

---

Co-browse Server now serves JavaScript (gcb.min.js) with UTF-8 encoding (with HTTP Header Content-Type: application/javascript; charset=UTF-8). This modification improves Co-browse

---

---

behavior that might occur, in rare cases, when Internet Explorer is used to co-browse web pages in non-UTF-8 locales, such as Shift JIS. (CB-6998)

---

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.005.20.

9.0.005.15

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
06/25/19	General			X		X

### What's New

This release contains the following new features and enhancements:

- Co-browse now supports websites that are fully **behind authentication**, including images and CSS. See **Known Issues** for additional information. (CB-5759)
- Co-browse now uses **Redis** for data storage. Cassandra has been deprecated and support will be removed in a future release. (CB-5763)
- Co-browse now provides **Historical Reporting** via Genesys Customer Experience Insights (**GCXI**). (CB-6054)
- Agents now have a **zoom-to-fit/actual size control**, allowing them to avoid unnecessary scrolling and to get a better overall picture of the co-browsed content. Previously, the Co-browse area of the agent's desktop had a fixed zoom level that was tied to the size of the customer's browser. In some situations, this forced the agent to use the scroll bars (including horizontal) to see different areas of the shared web page. (CB-6213)
- Co-browse now provides an improved UI representation of **masked/restricted data** for agents. (CB-6221)
- Co-browse now **masks images** when data masking is used. Previously, only textual data was masked, leaving images intact. (CB-6189)
- Support for OpenJDK 8. See the Prerequisites section on the **Genesys Co-browse** page in the **Genesys Supported Operating Environment Reference Guide** for more detailed information and a list of all prerequisites. (CB-6191)
- Embedded Cassandra is no longer supported. (CB-6153)

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

---

## Resolved Issues

This release contains the following resolved issues:

---

Co-browse no longer occasionally hides all of the page content from the agent if the `style` attribute of `<body>` was dynamically changed during a co-browse session. (CB-6017)

---

You can now localize the **Yes/No** buttons in the UI popups that Co-browse displays to end users (for example, when an agent requests **Write Mode**). Use the keys `modalYes` and `modalNo` for [localization](#). (CB-5982)

---

Co-browse now better synchronizes pages with the flex layout. Previously, if the `<body>` tag had a `display: flex` style, it might have rendered improperly on the agent side. (CB-5824)

---

A mousedown or mouseup event no longer replays on restricted elements. (CB-5816)

---

Co-browse is now able to start a session if there are invalid selectors in the DOM restrictions configuration. Information about invalid selectors are logged in the end user browser console (to see them, set `debug: true` in the instrumentation). (CB-5682)

---

Co-browse now follows redirects when proxying static resources (for images and/or CSS synchronization, see this [article](#)). (CB-5617)

---

Setting `_genesys.cobrowse.debug` to `true` is now enough to turn on Co-browse debug logs. Previously, it was necessary to set `_genesys.debug` to get the full log. This is particularly convenient if using Genesys Widgets, as it is aligned with how other Widgets are configured. (CB-4993)

---

Configuration options that take effect only after restarting the server are now logged with the following warning: "Option `<option name>` change will take effect after server restart." (CB-4980)

---

Third-party libraries have been updated to avoid discovered vulnerabilities. (CB-6348)

---



## Upgrade Notes

- Co-browse now uses Redis for data storage. See the Co-browse [Redis migration documentation](#) for both new and existing customers.

9.0.002.49

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
10/30/19	Hot Fix			X		X

### What's New

This release includes the following new features and enhancements:

- Co-browse now correctly processes files, such as fonts, css, or images, that contain spaces in filenames. (CB-6907)

### Resolved Issues

This release contains no resolved issues.

### Upgrade Notes

No special procedure is required to upgrade to release 9.0.002.49.

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

# 9.0.002.31

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
01/16/19	Hot Fix			X		X

### What's New

This release includes only resolved issues.

### Resolved Issues

This release contains the following resolved issues:

---

Co-browse no longer occasionally hides all of the page content from the agent if the **style** attribute of `<body>` was dynamically changed during a co-browse session. (CB-6005)

---

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

### Upgrade Notes

No special procedure is required to upgrade to release 9.0.002.31.

# 9.0.002.25

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
01/04/19	Hot Fix			X		X

### What's New

This release contains the following new features and enhancements:

- Co-browse now better synchronizes web pages that contain dynamic iframes. Previously, if the agent side was using Internet Explorer, dynamic iframe deletion could cause problems with synchronizing the next web page that was opened on the master side.

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

### Resolved Issues

This release contains no resolved issues.

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.002.25.

# 9.0.002.23

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
12/14/18	Hot Fix			X		X

### What's New

This release contains the following new features and enhancements:

Support for CentOS Linux 7+ operating system. See the [Genesys Co-browse](#) page in the Genesys Supported Operating Environment Reference Guide for more detailed information and a list of all supported operating systems.

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

### Resolved Issues

This release contains the following resolved issues:

---

The Co-browse metrics no longer erroneously report a negative number of deactivated sessions. (CB-5962)

---

Co-browse now better synchronizes certain types of image carousel. Previously, in some implementations, agents would only see the initial image in the carousel. (CB-5959)

---

Co-browse now correctly synchronizes the display of body elements. Previously, Co-browse always set a value of **display: block** in **document.body** in the agent's browser, even if the co-browsed

---

---

page contained a different value—such as **flex**, for example. This sometimes led to problems with the synchronization of layout and scrolling. (CB-5958)

---

Erroneous "Request's target user is not SLAVE" messages no longer appear in the logs during normal operation of Co-browse. (CB-5955)

---

Co-browse now successfully connects to Config Server when **log/verbose=debug**. The previous release (9.0.002.16) did not support **debug** and only worked with the **trace** log level. (CB-5952)

---

Co-browse now correctly synchronizes element attribute deletions. Previously, because of a defect in Internet Explorer, Co-browse did not always synchronize element attribute deletions when the consumer was using IE. This issue showed up in several different ways. In particular, some websites that use Polymer.js could get stuck in an **unresolved** (loading) state on the agent side. (CB-5942)

---

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.002.23.

# 9.0.002.16

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
11/19/18	Hot Fix			X		X

### What's New

This release contains the following new features and enhancements:

- Co-browse now synchronizes dynamically deleted CSS nodes (<style> and <link rel="stylesheet">). Previously, if such a node was deleted during a Co-browse session, this was not synchronized, and in some cases it led to differences in how the page was displayed to the end user and to the agent.

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

### Resolved Issues

This release contains the following resolved issues:

---

Co-browse now works correctly if the Co-browse server URL includes query parameters. For example, if your instrumentation points to `https://example.com/cobrowse?access_token=7NNXLq3SH9KtRiMMuB9akLGzSG50J4Un`, this now works correctly. Previously Co-browse did not support any query parameters in the URL. (CB-5881)

---

Co-browse now correctly synchronizes pages that use <link rel="import"> tags. (CB-5877)

---



---

Co-browse no longer synchronizes most of the <meta> tags. Previously, their synchronization could negatively affect the experience in certain scenarios. (CB-5870)

---

Co-browse now sends the correct notification when signaling about the session end. Previously, Co-browse was not sending the proper reason, which affected the JavaScript APIs, and the agent UI where a wrong notification was shown when the session ended. (CB-5851)

---

Invalid selectors in the DOM restrictions configuration are now ignored, and the co-browse session can start. Also, information about invalid selectors are logged in the end-user browser console (you must set **debug: true** in the instrumentation). Previously, Co-browse was unable to start a session if there was an invalid selector in the DOM restrictions configuration. (CB-5850)

---

The customer-facing tooltip indicating masked content from the agent is now removed when the co-browse session ends. (CB-5415)

---

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.002.16.

9.0.002.02

**9.x Genesys Co-browse Server** is part of 9.x starting in **9.0.000.07**.

## Genesys Co-browse Server Release Notes

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
06/26/18	General			X		X

### What's New

- Co-browse now partially supports static resources behind authentication. Previously, if a resource (such as an image or a CSS file) was available only to authenticated end users, Co-browse was unable to synchronize the resource, so it was not visible for agents.

To enable static resources behind authentication, you must add the new **enableStaticResourceService** option with a value of **true** to the web page instrumentation. For example:

```
cobrowse: {  
  // ...  
  enableStaticResourceService: true  
}
```

Note that only first-level images (``) and CSS tags (`<link href="..." rel="stylesheet">`) are supported. If a resource is referenced from a CSS file (such as a background image), or a CSS file is referenced in another CSS file using the `@import` directive, the resource will not be synchronized. This functionality will be improved in future releases.

- The built-in Chat widget is now discontinued and no longer ships with Genesys Co-browse. You can use [Genesys Widgets](#) to integrate Co-browse and Chat.

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

- [List of Release Notes](#)

## Resolved Issues

This release contains no resolved issues.

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.002.02.

9.0.000.07

## Genesys Co-browse Server Release Notes

**9.x** This is the first 9.x release of **Genesys Co-browse Server**.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
03/02/18	General			X		X

### What's New

This release contains the following new features and enhancements:

- Co-browse now supports Windows Server 2016.
- Co-browse now supports Citrix XenDesktop v7.6 and Citrix XenApp v7.8.
- Co-browse now has improved logging in case of Cassandra connection issues.
- Co-browse Server now adds a Date header to its REST API responses in accordance with RFC 2616.
- The Session ID is now displayed in a format that is easier to read, minimizing errors when the end-user must read it to an agent over a voice connection.
- The CORS policy is now stricter. By default, the allowed origins are left empty and are no longer set to "all origins allowed (\*)". You must configure the allowed origins during deployment:
  - **[cross-origin] allowedOrigins**
  - **[http-proxy] allowedExternalDomains**
- The configuration property **setDocumentDomain** in the JavaScript Configuration API is now set to **false** by default. This means that Co-browse no longer sets the **document.domain** property of the page, which resolves some potential compatibility issues with your scripts. However, this also means that co-browsing for subdomain iframes is not supported by default. To enable co-browsing of subdomain iframes, set **setDocumentDomain** to **true** in your instrumentation.
- Co-browse Server no longer starts if you haven't specified a value for the mandatory

### Helpful Links

#### Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

#### Product Documentation

- [Genesys Co-browse](#)

#### Genesys Products

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**[cluster] url** configuration option.

- **genesys.min.js** (pre-integrated Co-browse, Chat, and Web Engagement JavaScript clients) is now deprecated. You must now use Genesys Widgets and **gcb.min.js** for your website instrumentation. **genesys.min.js** and all other embeddable JavaScript files other than **gcb.min.js** will be removed in future releases.

## Resolved Issues

This release contains the following resolved issues:

---

This release includes important security updates. (CB-4834)

---

The **maxOfflineDuration** and **disableWebSockets** configuration options must now be set from the **cobrowse** section in the instrumentation (for example, **\_genesys.cobrowse.maxOfflineDuration**). Setting these options from outside of this section is now deprecated (for example, do not set **\_genesys.maxOfflineDuration**). (CB-4990)

---

Callback-polling (JSONP-based) transport was discontinued. Co-browse JavaScript clients now connect to Co-browse Server using either WebSockets or Ajax long-polling. There are still some JSONP-based requests to Co-browse Server, but it is no longer supported for general communication during a Co-browse session.

We highly recommend that you configure your infrastructure to enable WebSockets support, as it provides smoother user experience and reduces the load on the clients, the infrastructure, and the Co-browse Server. (CB-4900)

---

The History REST API is now deprecated and will be discontinued in a future release. (CB-4833)

---

Co-browse now has a more reliable synchronization of <select> and other input elements in case they're recreated in DOM with a new value (as opposed to just being assigned a new value). This improves support for some JavaScript frameworks, such as ReactJS. (CB-4826)

---

Co-browse dependencies have been updated to improve performance and address potential issues. (CB-4821)

---

Co-browse now has improved stability on the pages that contain iframes when an agent is using Workspace Desktop Edition or Workspace Web Edition via Internet Explorer. (CB-4721)

---

## Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.07.