

Cloudera Runtime 7.3.2

## Troubleshooting Apache Ranger

Date published: 2020-07-28

Date modified: 2026-03-31

# CLOUDERA

<https://docs.cloudera.com/>

# Legal Notice

© Cloudera Inc. 2026. All rights reserved.

The documentation is and contains Cloudera proprietary information protected by copyright and other intellectual property rights. No license under copyright or any other intellectual property right is granted herein.

Unless otherwise noted, scripts and sample code are licensed under the Apache License, Version 2.0.

Copyright information for Cloudera software may be found within the documentation accompanying each component in a particular release.

Cloudera software includes software from various open source or other third party projects, and may be released under the Apache Software License 2.0 (“ASLv2”), the Affero General Public License version 3 (AGPLv3), or other license terms. Other software included may be released under the terms of alternative open source licenses. Please review the license and notice files accompanying the software for additional licensing information.

Please visit the Cloudera software product page for more information on Cloudera software. For more information on Cloudera support services, please visit either the Support or Sales page. Feel free to contact us directly to discuss your specific needs.

Cloudera reserves the right to change any products at any time, and without notice. Cloudera assumes no responsibility nor liability arising from the use of products, except as expressly agreed to in writing by Cloudera.

Cloudera, Cloudera Altus, HUE, Impala, Cloudera Impala, and other Cloudera marks are registered or unregistered trademarks in the United States and other countries. All other trademarks are the property of their respective owners.

Disclaimer: EXCEPT AS EXPRESSLY PROVIDED IN A WRITTEN AGREEMENT WITH CLOUDERA, CLOUDERA DOES NOT MAKE NOR GIVE ANY REPRESENTATION, WARRANTY, NOR COVENANT OF ANY KIND, WHETHER EXPRESS OR IMPLIED, IN CONNECTION WITH CLOUDERA TECHNOLOGY OR RELATED SUPPORT PROVIDED IN CONNECTION THEREWITH. CLOUDERA DOES NOT WARRANT THAT CLOUDERA PRODUCTS NOR SOFTWARE WILL OPERATE UNINTERRUPTED NOR THAT IT WILL BE FREE FROM DEFECTS NOR ERRORS, THAT IT WILL PROTECT YOUR DATA FROM LOSS, CORRUPTION NOR UNAVAILABILITY, NOR THAT IT WILL MEET ALL OF CUSTOMER’S BUSINESS REQUIREMENTS. WITHOUT LIMITING THE FOREGOING, AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, CLOUDERA EXPRESSLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, QUALITY, NON-INFRINGEMENT, TITLE, AND FITNESS FOR A PARTICULAR PURPOSE AND ANY REPRESENTATION, WARRANTY, OR COVENANT BASED ON COURSE OF DEALING OR USAGE IN TRADE.

# Contents

<b>Ranger database upgrade failure.....</b>	<b>4</b>
---	----------

## Ranger database upgrade failure

You can determine susceptibility of Ranger database upgrade failure.

### About this task

Upgrading Apache Ranger on environments using an external MySQL 8.x database can fail if the server-level default character set is utf8mb4. The failure occurs because Ranger's upgrade scripts attempt to create an index on the `x_trx_log.trx_id` column that exceeds MySQL's 3072-byte key length limit under utf8mb4 encoding.

### Procedure

1. Verify `x_trx_log` table existence.

Execute the following SQL query in your Ranger database:

```
SHOW CREATE TABLE x_trx_log;
```

Condition	Action
Table <code>x_trx_log</code> does not exist	The upgrade will not fail due to this issue. No further action is required.
Table <code>x_trx_log</code> exists	Proceed to step 2 to check the table's default character set (look for <code>DEFAULT CHARSET</code> in the output).

2. Check table's default character set.

Inspect the previous command output for `x_trx_log`'s `DEFAULT CHARSET` or the `trx_id` column's collation.

Condition	Action
<code>DEFAULT CHARSET</code> is not utf8mb4	The upgrade is unlikely to fail due to this specific issue. No further action is required.
<code>DEFAULT CHARSET</code> is utf8mb4	If the default charset is set to utf8mb4 then, your environment is susceptible. Proceed to Step 3.

3. Verify index existence (`x_trx_log_IDX_trx_id`).

If the `x_trx_log` table exists and the default charset is set to utf8mb4, check if the problematic index already exists:

```
SELECT * FROM INFORMATION_SCHEMA.STATISTICS WHERE table_schema=DATABASE()
AND table_name='x_trx_log' AND index_name='x_trx_log_IDX_trx_id';
```

Condition	Action
Index <code>x_trx_log_IDX_trx_id</code> exists	The upgrade will not fail due to this issue. No further action is required.
Index <code>x_trx_log_IDX_trx_id</code> does not exist	Proceed to the remediation step.

### What to do next

#### Remediation step

Create the required index manually by executing the following SQL statement in the Ranger DB:

```
CREATE INDEX x_trx_log_IDX_trx_id ON x_trx_log (trx_id(190));
```

This prefix index ensures the key length stays within the 3072-byte limit for utf8mb4 environments.