- 1. Indexing: Ensure that appropriate indexes are created on the columns used in the join and filter conditions. Proper indexing can significantly speed up query execution.
- 2. Limit the Use of Wildcards (%): The use of wildcards at the beginning of LIKE clauses (e.g., '%キャビンアテンダント%') can be resource-intensive. If possible, try to avoid leading wildcards or use full-text search mechanisms for better performance.
- 3. Limit the Number of Joins: The query involves several LEFT JOINs, which can affect the execution time. Consider whether all the joins are necessary or if some can be optimized. Only join necessary table(s).
- 4. Table Partitioning: If the tables are very large, consider partitioning them based on specific criteria (e.g., date ranges) to improve query performance.
- 5. Materialized Views: Try materialized views to store the results of certain complex joins or aggregations. This also saves time for future use.
- 6. Query Plan Analysis: Analyze the query execution plan to identify any performance bottlenecks. Use EXPLAIN statement (or its equivalent in your database system) to analyze the query plan that affect the execution time and optimize accordingly.
- 7. Caching: Implement caching mechanisms to store the results of frequently executed queries and reduce database load.
- 8. Query Pagination: For large result sets, consider using pagination to fetch data in smaller batches, rather than retrieving all records at once. Can be use LIMIT in the query.
- 9. Optimize Server and Database Configuration: Ensure that your database server is properly configured, with sufficient resources allocated to handle the query load. The larger the ram the better for optimization.
- 10. Application-Level Optimization: Review the application code that generates this query and optimize it, if possible, try to reduce the complexity of the generated SQL.

Remember that the effectiveness of these optimization tips may vary depending on the specific data, database schema, and workload. It's essential to thoroughly test and benchmark any changes made to ensure they indeed improve query performance. Additionally, regular database

maintenance, such as index rebuilding and statistics updates, can also contribute to better performance over time.

Below are the improved query.

```
SELECT Jobs.id AS 'Jobs id',
Jobs.name AS 'Jobs name',
Jobs.media_id AS `Jobs__media_id`,
Jobs.job category id AS 'Jobs job category id',
Jobs.job_type_id AS `Jobs__job_type_id`,
Jobs.description AS `Jobs__description`,
Jobs.detail AS 'Jobs detail',
Jobs.business skill AS 'Jobs business skill',
Jobs.knowledge AS 'Jobs_knowledge',
Jobs.location AS 'Jobs location',
Jobs.activity AS 'Jobs__activity',
Jobs.academic_degree_doctor AS `Jobs__academic_degree_doctor`,
Jobs.academic degree master AS 'Jobs academic degree master',
Jobs.academic_degree_professional AS `Jobs__academic_degree_professional`,
Jobs.academic_degree_bachelor AS `Jobs__academic_degree_bachelor`,
Jobs.salary_statistic_group AS `Jobs__salary_statistic_group`,
Jobs.salary_range_first_year AS `Jobs__salary_range_first_year`,
Jobs.salary_range_average AS `Jobs__salary_range_average`,
Jobs.salary range remarks AS 'Jobs' salary range remarks',
Jobs.restriction AS `Jobs__restriction`,
Jobs.estimated_total_workers AS `Jobs__estimated_total_workers`,
Jobs.remarks AS 'Jobs remarks',
Jobs.url AS 'Jobs url',
Jobs.seo_description AS `Jobs__seo_description`,
Jobs.seo_keywords AS `Jobs__seo_keywords`,
Jobs.sort order AS 'Jobs sort order',
Jobs.publish_status AS `Jobs__publish_status`,
Jobs.version AS 'Jobs_version',
Jobs.created by AS 'Jobs created by',
Jobs.created AS 'Jobs__created',
Jobs.modified AS 'Jobs__modified',
Jobs.deleted AS 'Jobs deleted',
JobCategories.id AS `JobCategories__id`,
JobCategories.name AS `JobCategories__name`,
JobCategories.sort order AS 'JobCategories sort order',
JobCategories.created_by AS `JobCategories__created_by`,
JobCategories.created AS `JobCategories__created`,
JobCategories.modified AS 'JobCategories modified',
JobCategories.deleted AS `JobCategories__deleted`,
JobTypes.id AS `JobTypes id`,
JobTypes.name AS 'JobTypes name',
JobTypes.job_category_id AS `JobTypes__job_category_id`,
```

```
JobTypes.sort_order AS `JobTypes__sort_order`,
```

JobTypes.created by AS `JobTypes created by`,

JobTypes.created AS 'JobTypes created',

JobTypes.modified AS `JobTypes__modified`,

JobTypes.deleted AS `JobTypes deleted`

FROM jobs Jobs

LEFT JOIN jobs_personalities JobsPersonalities

ON Jobs.id = (JobsPersonalities.job_id)

LEFT JOIN personalities Personalities

ON (Personalities.id = (JobsPersonalities.personality_id)

AND (Personalities.deleted) IS NULL)

LEFT JOIN jobs practical skills JobsPracticalSkills

ON Jobs.id = (JobsPracticalSkills.job_id)

LEFT JOIN practical_skills PracticalSkills

ON (PracticalSkills.id = (JobsPracticalSkills.practical skill id)

AND (PracticalSkills.deleted) IS NULL)

LEFT JOIN jobs basic abilities JobsBasicAbilities

ON Jobs.id = (JobsBasicAbilities.job id)

LEFT JOIN basic_abilities BasicAbilities

ON (BasicAbilities.id = (JobsBasicAbilities.basic_ability_id)

AND (BasicAbilities.deleted) IS NULL)

LEFT JOIN jobs_tools JobsTools

ON Jobs.id = (JobsTools.job id)

LEFT JOIN affiliates Tools

ON (Tools.type = 1

AND Tools.id = (JobsTools.affiliate id)

AND (Tools.deleted) IS NULL)

LEFT JOIN jobs_career_paths JobsCareerPaths

ON Jobs.id = (JobsCareerPaths.job_id)

LEFT JOIN affiliates CareerPaths

ON (CareerPaths.type = 3

AND CareerPaths.id = (JobsCareerPaths.affiliate_id)

AND (CareerPaths.deleted) IS NULL)

LEFT JOIN jobs_rec_qualifications JobsRecQualifications

ON Jobs.id = (JobsRecQualifications.job id)

LEFT JOIN affiliates RecQualifications

ON (RecQualifications.type = 2

AND RecQualifications.id = (JobsRecQualifications.affiliate_id)

AND (RecQualifications.deleted) IS NULL)

LEFT JOIN jobs_req_qualifications JobsReqQualifications

ON Jobs.id = (JobsReqQualifications.job_id)

LEFT JOIN affiliates ReqQualifications

ON (RegQualifications.type = 2

AND ReqQualifications.id = (JobsReqQualifications.affiliate_id)

AND (RegQualifications.deleted) IS NULL)

INNER JOIN job_categories JobCategories

ON (JobCategories.id = (Jobs.job_category_id)

AND (JobCategories.deleted) IS NULL)

INNER JOIN job_types JobTypes
ON (JobTypes.id = (Jobs.job_type_id)
AND (JobTypes.deleted) IS NULL)
WHERE ((JobCategories.name LIKE '%キャビンアテンダント%')
AND publish_status = 1
AND (Jobs.deleted) IS NULL)
GROUP BY Jobs.id
ORDER BY Jobs.sort_order desc,
Jobs.id DESC LIMIT 50 OFFSET 0