

Alibaba Cloud

AnalyticDB for PostgreSQL Data Warehouse Development

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Document conventions

Style	Description	Example
 Danger	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: Resetting will result in the loss of user configuration data.
 Warning	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 Warning: Restarting will cause business interruption. About 10 minutes are required to restart an instance.
 Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	 Notice: If the weight is set to 0, the server no longer receives new requests.
 Note	A note indicates supplemental instructions, best practices, tips, and other content.	 Note: You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click Settings > Network > Set network type .
Bold	Bold formatting is used for buttons, menus, page names, and other UI elements.	Click OK .
<code>Courier font</code>	Courier font is used for commands	Run the <code>cd /d C:/window</code> command to enter the Windows system folder.
<i>Italic</i>	Italic formatting is used for parameters and variables.	<code>bae log list --instanceid</code> <i>Instance_ID</i>
[] or [a b]	This format is used for an optional value, where only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	This format is used for a required value, where only one item can be selected.	<code>switch {active stand}</code>

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1. Use DataWorks to schedule ETL tasks of AnalyticDB for PostgreSQL

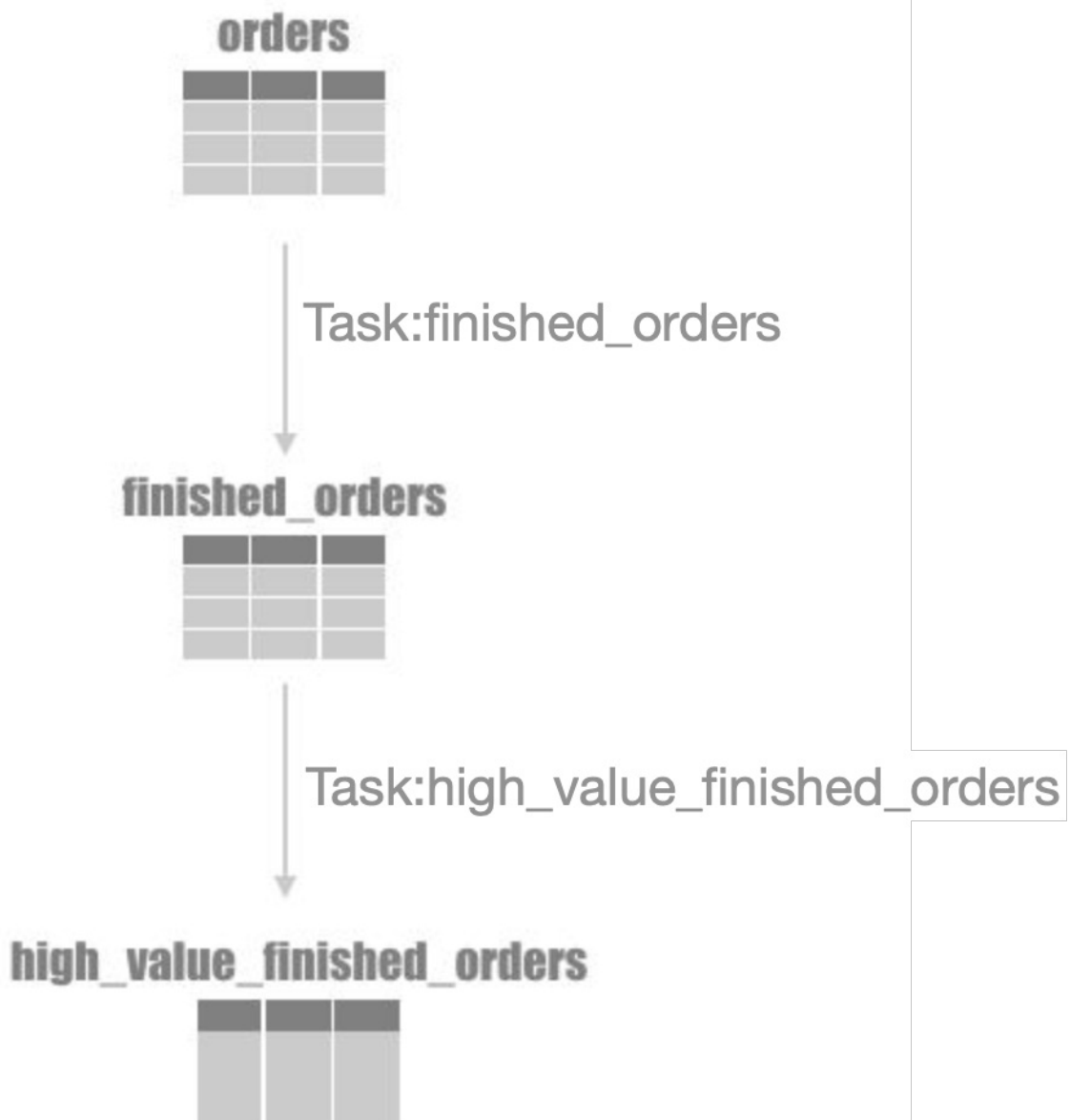
This topic describes how to use DataWorks to schedule the script tasks of AnalyticDB for PostgreSQL. DataWorks allows you to develop, schedule, and maintain the tasks of AnalyticDB for PostgreSQL and manage dependencies among tasks. It enhances the extract, transform, load (ETL) capabilities of AnalyticDB for PostgreSQL.

Prerequisites

- Test data is obtained from the [TPCH test data set](#).
- Data is imported to AnalyticDB for PostgreSQL. For more information, see [Introduction to data migration and synchronization solutions](#).

Overview

Dependencies among tasks are important for task scheduling. For example, the relationships between two AnalyticDB for PostgreSQL tasks created in DataWorks and AnalyticDB for PostgreSQL tables are shown in the following figure.



- Task: finished_orders

AnalyticDB for PostgreSQL uses `o_orderstatus = 'F'` to filter finished orders in the orders table and then writes the orders into the finished_orders table.

- Task: high_value_finished_orders

AnalyticDB for PostgreSQL uses `o_totalprice > 10000` to filter orders whose total price is greater than 10,000 from the finished_orders table and writes the orders into the high_value_finished_orders table.

Create tasks

For more information, visit [AnalyticDB for PostgreSQL node](#).

Configure dependencies among tasks

The core of task scheduling is that multiple tasks run at a specific time based on specified dependencies.

For example, the `finished_orders` task runs at 02:00 every day, and the `high_value_finished_orders` task runs after the `finished_orders` task succeeds. To configure a dependency between the two tasks, follow these steps:

1. Set the runtime of the `finished_orders` task.

Schedule

Start Instantiation: ☒ Next Day ☐ Immediately After Deployment

Execution Mode: ☒ Normal ☐ Dry Run

Rerun: Please Select

Auto Rerun upon Error: ☐

Start and End Dates: 1970-01-01 - 9999-01-01

Note: The schedule only runs from the start date to the end date.

Skip Execution: ☐

Instance Recurrence: Day

Customize Runtime: ☒

Run At: 02:00

Note: By default, instances are run at a random time from 0:00 to 0:30.

CRON Expression: 00 00 02 * * ?

Task start time

Cross-Cycle Dependencies: ☐

Resource Group

Resource Group: Common scheduler resource group

Dependencies

Auto Parse: ☒ Yes ☐ No [Parse I/O](#)

Parent Nodes: Search by output name or output table name. [+](#) [Use Root Node](#)

Parent Node Output Name	Parent Node Output Table Name	Node Name	Parent Node ID	Owner	Add Method	Actions
null.finished_orders	-	-	-	-	Added Manually	Delete

Outputs: Search by output name. [+](#)

Output Name	Output Table Name	Child Node Name	Child Node ID	Owner	Add Method	Actions
Output table	-	-	-	-	Added Manually	Delete

2. Configure a dependency for the `high_value_finished_orders` task.

Properties

Schedule

Start Instantiation: ☒ Next Day ☐ Immediately After Deployment

Execution Mode: ☒ Normal ☐ Dry Run

Rerun: Please Select

Auto Rerun upon Error: ☐

Start and End Dates: 1970-01-01 - 9999-01-01

Note: The schedule only runs from the start date to the end date.

Skip Execution: ☐

Instance Recurrence: Day

Customize Runtime: ☒

Run At: 02:00

Note: By default, instances are run at a random time from 0:00 to 0:30.

CRON Expression: 00 00 02 * * ?

Cross-Cycle Dependencies: ☐

Resource Group

Resource Group: Common scheduler resource group

Dependencies

Auto Parse: ☒ Yes ☐ No [Parse I/O](#)

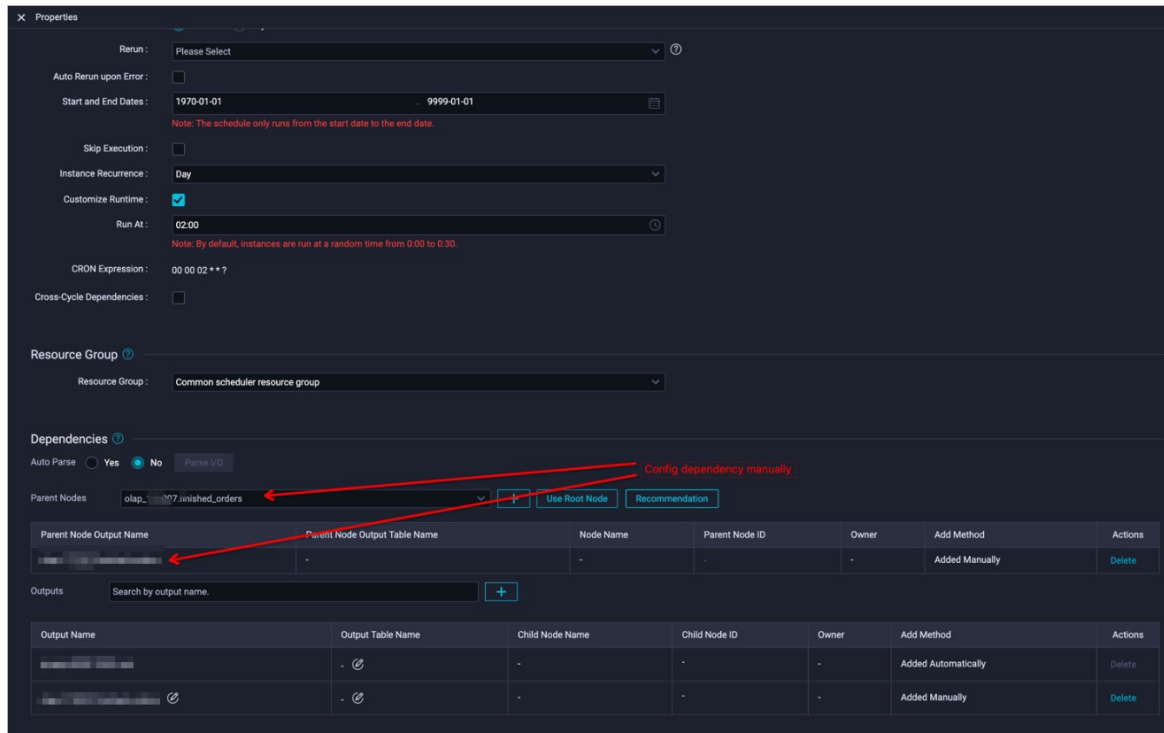
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Parent Node Output Name	Parent Node Output Table Name	Node Name	Parent Node ID	Owner	Add Method	Actions
null.finished_orders	-	-	-	-	Added Manually	Delete

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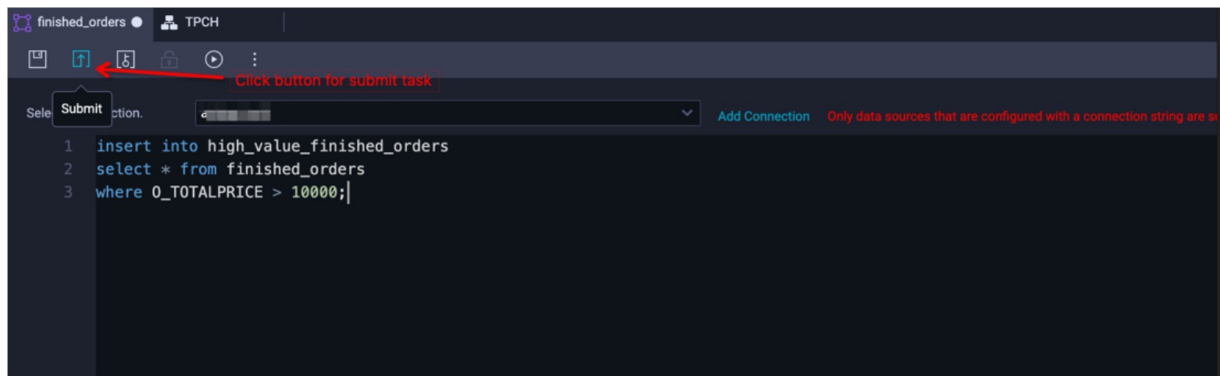
Auto parse dependencies

If a task dependency is not parsed automatically, you must manually specify an upper-level dependent node first.

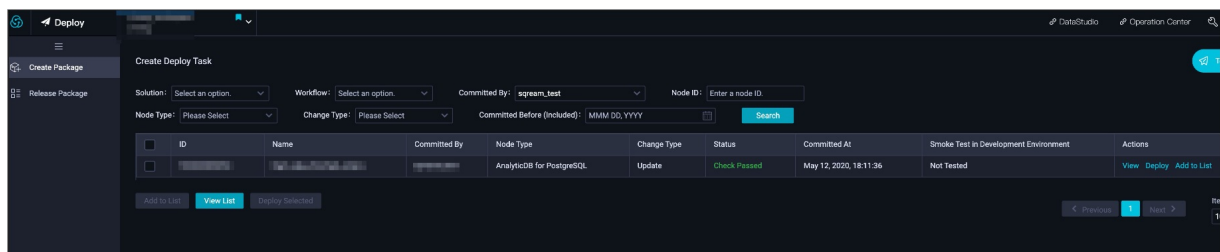


Publish tasks

Select the submitted tasks and click the publish icon.



You can view published tasks on the published task list page.



After the tasks are published, you can maintain them on the task O&M page.

