

Promoting a Node

Clusters can be designed for high availability or role-based workloads, where certain nodes may take on leadership or coordination responsibilities. In these scenarios, promoting a node is a key administrative task. It allows you to change the role of a node. While not always needed in basic setups, node promotion becomes essential in distributed systems, replicated databases, or services requiring failover control.

When to Promote a Node?

Promoting a node is typically performed in clusters where role-based architecture is used. In high-availability setups, some nodes may act as leaders while others serve as followers or replicas. If a leader node becomes unavailable or needs to be replaced, you can promote another node to take over its responsibilities and maintain continuity of service.

Node promotion is also useful when scaling out and rebalancing responsibilities across a larger cluster. For example, promoting a node to handle scheduling, state tracking, or replication leadership can reduce bottlenecks and improve responsiveness. In cases involving database clusters or consensus-driven systems, promotion ensures a clear and controlled transition of leadership without relying solely on automatic failover mechanisms.

Promote a Node in Elestio

To promote a node, start by accessing the **Clusters** section in the [Elestio dashboard](#). Choose the cluster containing the node you want to promote. Inside the cluster view, navigate to the **Nodes** tab to see the full list of nodes, including their current roles, health status, and resource usage. Locate the node that you want to promote and open its action menu. From here, select the **“Promote Node”** option.

The screenshot shows the Elestio dashboard for a PostgreSQL cluster named 'postgresql-k0hdl'. The cluster is in a 'Running' state. The 'Nodes' tab is selected, displaying two nodes: 'postgresql-k0hdl1' (Primary) and 'postgresql-k0hdl2' (Replica). The 'postgresql-k0hdl2' node has a 'Promote' button highlighted with a red box. Other buttons include 'Open terminal', 'Delete cluster', and 'Add node'.

You may be prompted to confirm the action, depending on the configuration and current role of the node. This confirmation helps prevent unintended role changes that could affect cluster behavior.

The screenshot shows a confirmation dialog titled 'Promote current node'. The dialog asks 'Do you really want to promote this node?' and provides a warning: 'Promoting this Node will Make it the New Primary: Up to 2 Minutes of Downtime Expected.' It also asks the user to type 'postgresql-k0hdl2' to confirm. There are 'Cancel' and 'Promote' buttons at the bottom.

Once confirmed, Elestio will initiate the promotion process. This involves reconfiguring the cluster's internal coordination state to acknowledge the new role of the promoted node. Depending on the service architecture and the software running on the cluster, this may involve reassigning leadership, updating replication targets, or shifting service orchestration responsibilities.

After promotion is complete, the node's updated role will be reflected in the dashboard. At this point, it will begin operating with the responsibilities assigned to its new status. You can monitor its activity, inspect logs, and validate that workloads are being handled as expected.

Considerations for Promotion

Before promoting a node, ensure that it meets the necessary resource requirements and is in a stable, healthy state. Promoting a node that is under high load or experiencing performance issues

can lead to service degradation. It's also important to consider replication and data synchronization, especially in clusters where stateful components like databases are in use.

Promotion is a safe and reversible operation, but it should be done with awareness of your workload architecture. If your system relies on specific leader election mechanisms, promoting a node should follow the design patterns supported by those systems.

Revision #1

Created 2025-04-10 15:39:42 UTC

Updated 2025-04-10 16:23:11 UTC