



Media and devices > Node Troubleshooting

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# Node Troubleshooting

Use this page when a node is visible in status but node tools fail.

## Command ladder

```
openclaw status
openclaw gateway status
openclaw logs --follow
openclaw doctor
openclaw channels status --probe
```

Then run node specific checks:

```
openclaw nodes status
openclaw nodes describe --node <idOrNameOrIp>
openclaw approvals get --node <idOrNameOrIp>
```

Healthy signals:

Node is connected and paired for role `node` .

`nodes describe` includes the capability you are calling.

Exec approvals show expected mode/allowlist.

## Foreground requirements

`canvas.*` , `camera.*` , and `screen.*` are foreground only on iOS/Android nodes.

Quick check and fix:

```
openclaw nodes describe --node <idOrNameOrIp>
openclaw nodes canvas snapshot --node <idOrNameOrIp>
openclaw logs --follow
```

If you see `NODE_BACKGROUND_UNAVAILABLE` , bring the node app to the foreground and retry.

## Permissions matrix

Capability	iOS	Android	macOS node app	Typical code
<code>camera.snap</code> , <code>camera.clip</code>	Camera (+ mic for clip audio)	Camera (+ mic for clip audio)	Camera (+ mic for clip audio)	<code>*_PERMIS RED</code>
<code>screen.record</code>	Screen Recording (+ mic optional)	Screen capture prompt (+ mic optional)	Screen Recording	<code>*_PERMIS RED</code>
<code>location.get</code>	While Using or Always (depends on mode)	Foreground/Background location based on mode	Location permission	<code>LOCATION N_REQUIR</code>
<code>system.run</code>	n/a (node host path)	n/a (node host path)	Exec approvals required	<code>SYSTEM_R</code>

## Pairing versus approvals

These are different gates:

1. **Device pairing:** can this node connect to the gateway?

## 2. Exec approvals: can this node run a specific shell command?

Quick checks:

```
openclaw devices list
openclaw nodes status
openclaw approvals get --node <idOrNameOrIp>
openclaw approvals allowlist add --node <idOrNameOrIp> "/usr/bin/uname"
```

If pairing is missing, approve the node device first. If pairing is fine but `system.run` fails, fix exec approvals/allowlist.

## Common node error codes

`NODE_BACKGROUND_UNAVAILABLE` → app is backgrounded; bring it foreground.

`CAMERA_DISABLED` → camera toggle disabled in node settings.

`*_PERMISSION_REQUIRED` → OS permission missing/denied.

`LOCATION_DISABLED` → location mode is off.


`LOCATION_PERMISSION_REQUIRED` → requested location mode not granted.

`LOCATION_BACKGROUND_UNAVAILABLE` → app is backgrounded but only While Using permission exists.

`SYSTEM_RUN_DENIED: approval required` → exec request needs explicit approval.

`SYSTEM_RUN_DENIED: allowlist miss` → command blocked by allowlist mode.

## Fast recovery loop



```
openclaw nodes status
openclaw nodes describe --node <idOrNameOrIp>
openclaw approvals get --node <idOrNameOrIp>
openclaw logs --follow
```

If still stuck:

Re-approve device pairing.

Re-open node app (foreground).

Re-grant OS permissions.

Recreate/adjust exec approval policy.

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