

ia-cloud・Node-RED

実践IoTオンラインハンズオンセミナー

**GitpodによるNode-RED環境**

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ia-cloud・Node-REDを使った実践的IoT活用  
オンラインでのハンズオンセミナー



# GitpodによるNode-RED環境とは

## <特徴>

- GitpodとはWeb上で使えるIDE(統合開発環境)

クラウド上に自分専用の開発環境: Workspace (=仮想コンピュータ) が用意される  
Workspace上でNode-RED環境を構築して開発を行う

- 無料で使える 50時間/月
- Windows、Mac、iPad、chromebook 等のブラウザー(Chrome)で使える
- Workspaceで作業中のノード環境やflowの一時保存が可能

## <注意点: FREEアカウントの場合>

- ◆ Workspace active 4個まで
- ◆ 時間制限がある: 月50時間 →残り時間を見る <https://gitpod.io/plans>
- ◆ タイムアウトで接続が切れる: 非アクティブ30分→再接続必要
- ◆ 24時間アクセスが無いとInactiveとなる(解除してから再立上げできる)
- ◆ 14日非アクティブだとそのworkspaceは削除される

#対策 InactiveはworkspaceのPINを有効にすれば回避できる

<準備とログイン>

<Node-REDを開始する>

<workspaceの設定>

<終了と再立上げ>

<30分timeoutの対応>

# Node-RED の開始まで

## <準備>

- GitHubアカウントの取得  
<https://github.com/signup>

## <ログイン>

- Gidpodに以下のGitHubアカウントでログイン  
<http://gitpod.io/#https://github.com/ia-cloud/node-red-4-gitpod>
- NewWorkspaceを作成する

## <Node-REDを開始する >

- Terminal画面でNode-REDが構築、開始される(1分位)
- OpenBrowserでNode-RED環境スタート

## <workspaceの設定>

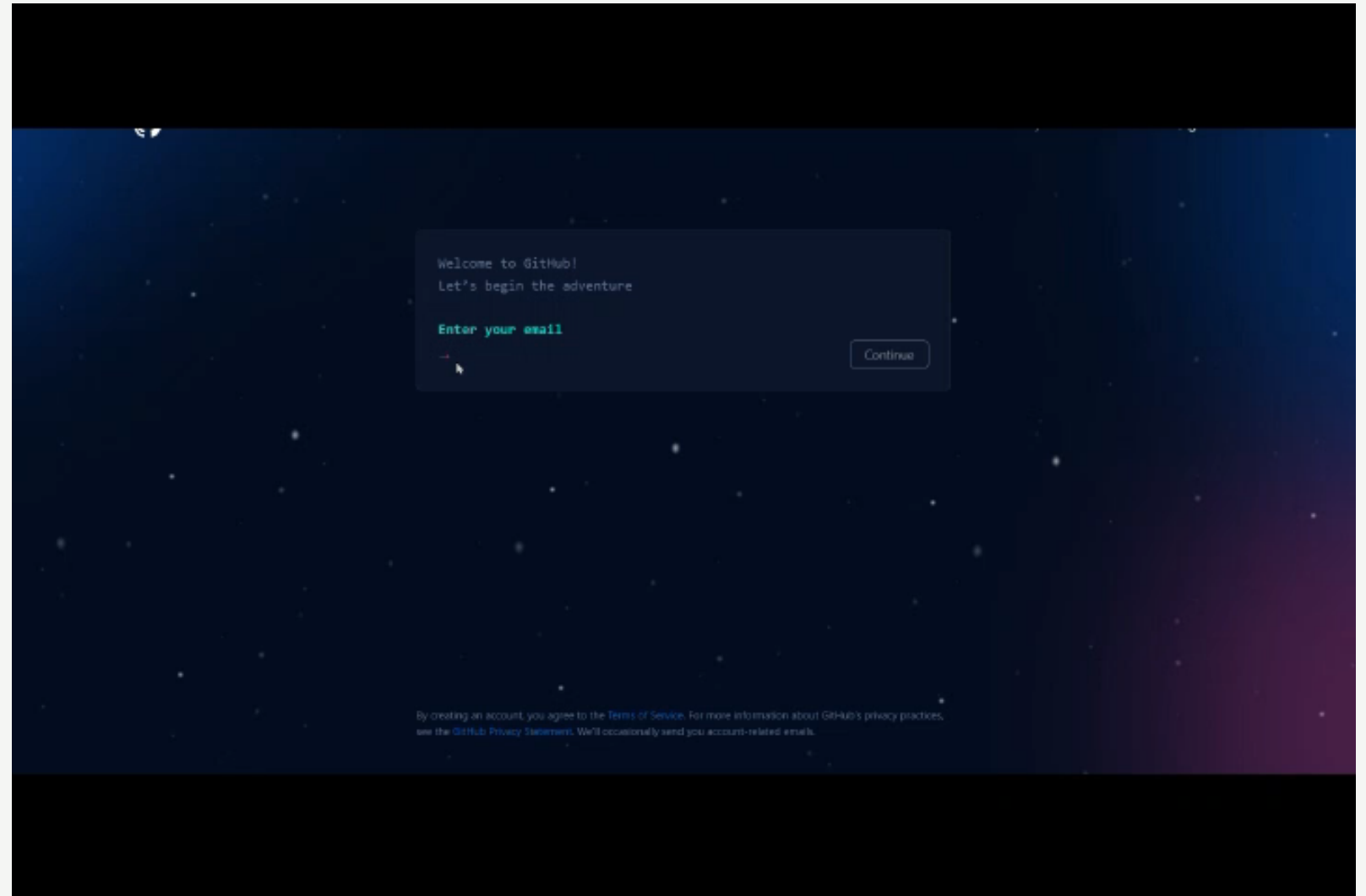
- メニューバーからDashboardでWorkspace一覧を表示し、作成したWorkspaceのPINを有効にする(削除の回避)

## ■ GitHubアカウントの取得

まずは、GitHubにアクセスしてアカウント登録を行います。

メールアドレスとユーザー名、パスワードを入力し、Freeプランで登録します。

<https://github.com/signup>

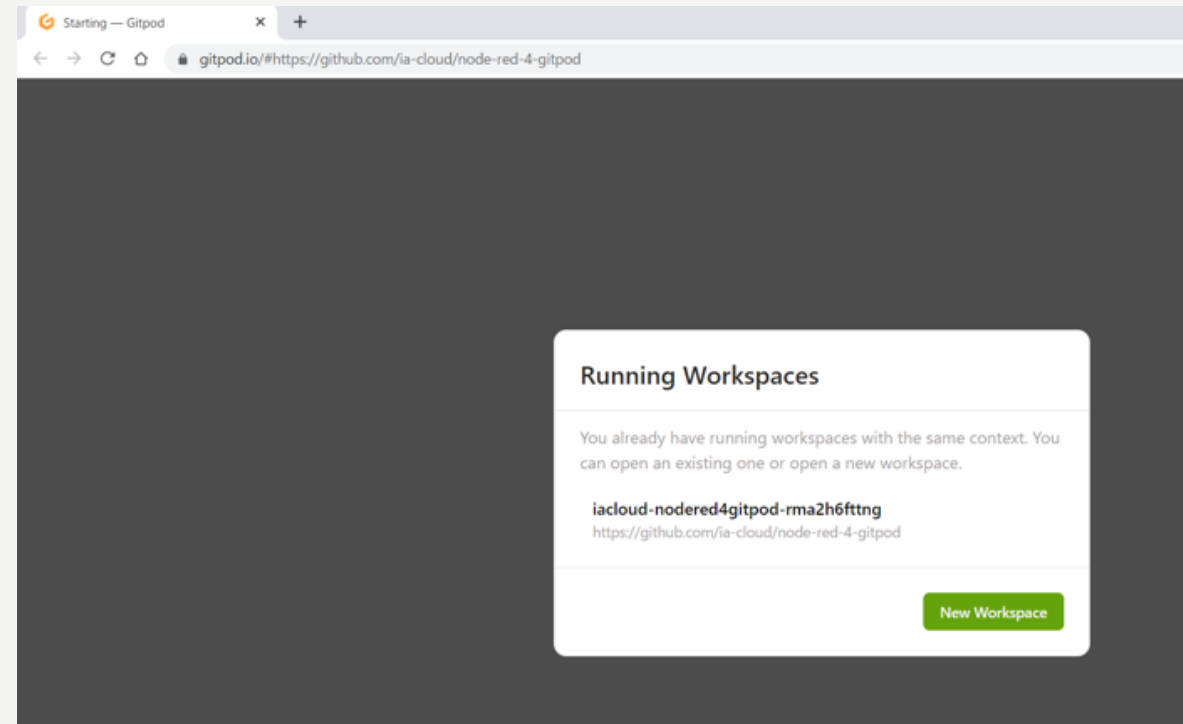




# 準備とログイン

- GidpodにGitHubアカウントでログインし、NewWorkspaceを作成する

<http://gitpod.io/#https://github.com/ia-cloud/node-red-4-gitpod>



- GitpodのTerminalでNode-REDの構築が開始される
- 構築が終わると、OpenBrowserでNode-RED環境が使える

The screenshot displays the Gitpod interface. On the left, the 'Start' menu includes 'New File...', 'Open File...', and 'Clone Git Repository...'. Below it, the 'Recent' list shows several workspace entries. The 'Terminal' tab is active, showing the following output:

```
1 Dec 01:22:03 - [info] Flows file      : /workspace/node-red-4-gitpod/ia-cloud/flows.json
1 Dec 01:22:03 - [info] Creating new flow file
1 Dec 01:22:03 - [warn]

-----
Your flow credentials file is encrypted using a system-generated key.

If the system-generated key is lost for any reason, your credentials
file will not be recoverable, you will have to delete it and re-enter
your credentials.

You should set your own key using the 'credentialSecret' option in
your settings file. Node-RED will then re-encrypt your credentials
file using your chosen key the next time you deploy a change.
-----

1 Dec 01:22:03 - [info] Server now running at http://127.0.0.1:1880/
1 Dec 01:22:03 - [warn] Encrypted credentials not found
1 Dec 01:22:03 - [info] Starting flows
1 Dec 01:22:03 - [info] Started flows
█
```

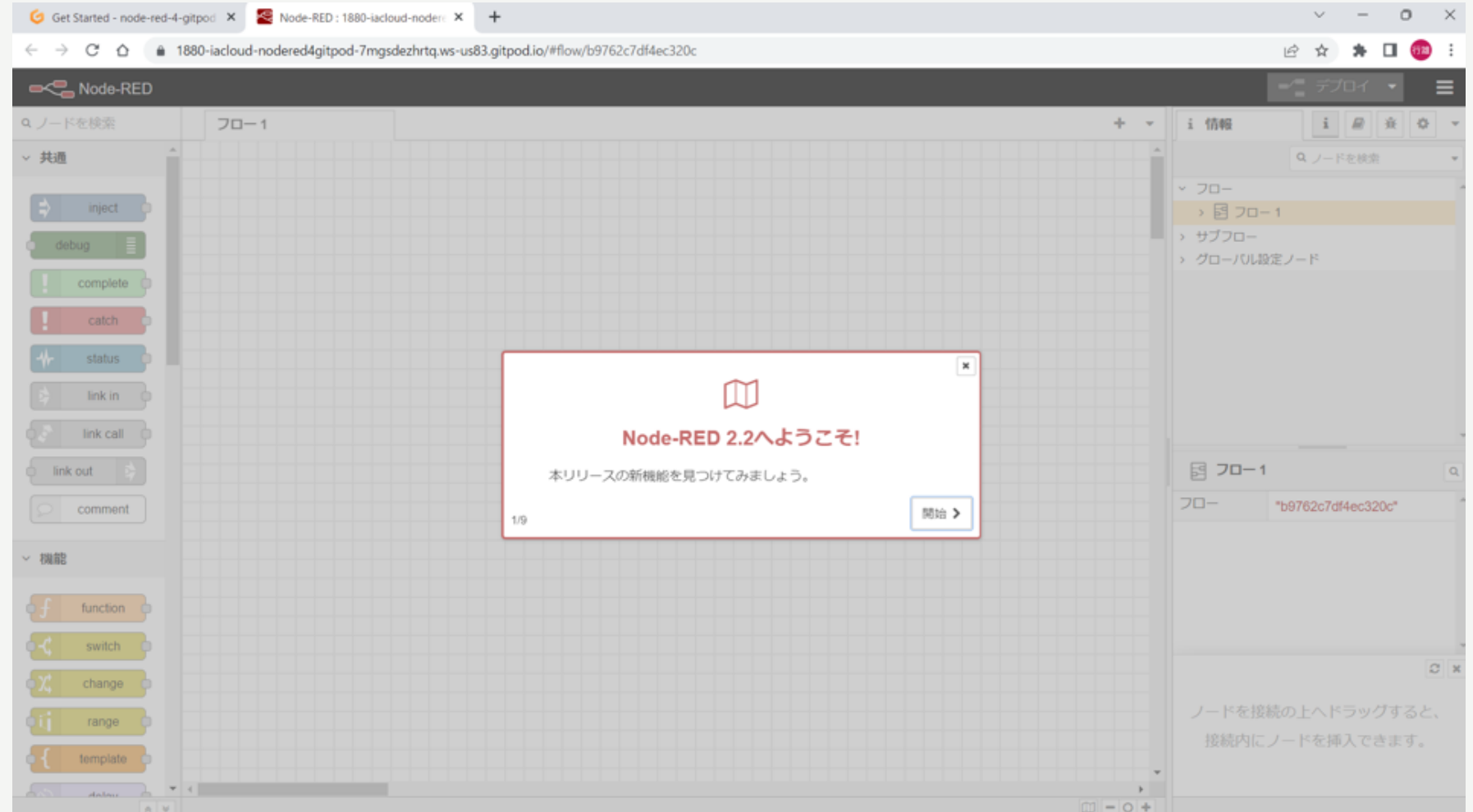
On the right, the 'Walkthroughs' section lists several guides, including 'Get Started with VS Code in the Web', 'Learn the Fundamentals', 'Boost your Productivity', and 'Get Started with Gitpod' (marked as 'Updated'). At the bottom right, a notification states 'A service is available on port 1880' with buttons for 'Make Public', 'Open Preview', and 'Open Browser'. A hand icon points to the 'Open Browser' button.



# Node-REDを開始する

Node-REDをブラウザで開く

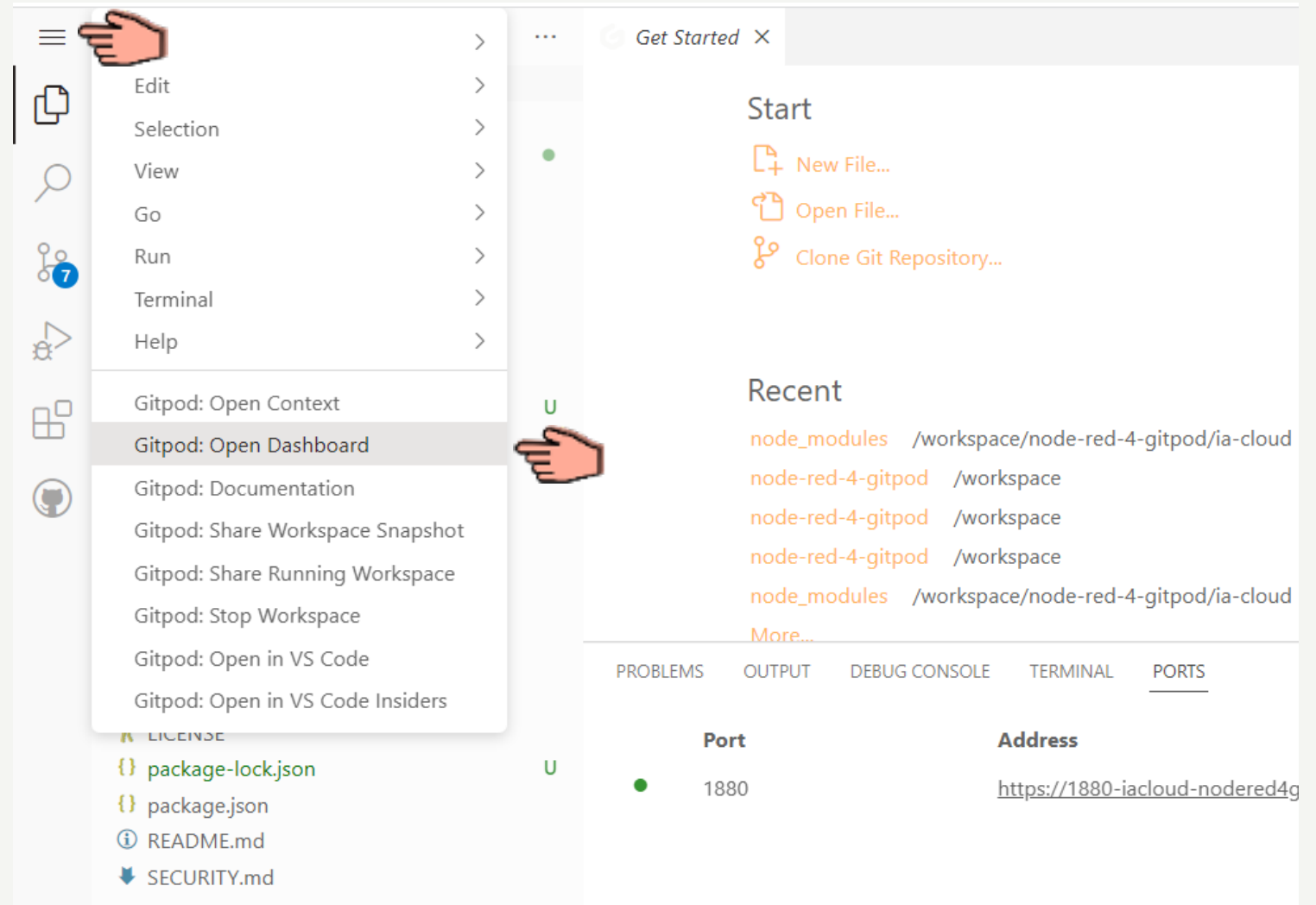
## ■ Node-REDを開始する





14日非アクティブだとworkspaceが削除されることを回避するためにworkspaceのPINを有効にします

- メニューバーからDashboardを開く



The screenshot shows the Gitpod interface with the menu open. The menu items are:

- Edit
- Selection
- View
- Go
- Run
- Terminal
- Help
- Gitpod: Open Context
- Gitpod: Open Dashboard** (highlighted)
- Gitpod: Documentation
- Gitpod: Share Workspace Snapshot
- Gitpod: Share Running Workspace
- Gitpod: Stop Workspace
- Gitpod: Open in VS Code
- Gitpod: Open in VS Code Insiders

The main content area shows the 'Start' section with options: New File..., Open File..., and Clone Git Repository... The 'Recent' section lists several workspace entries. At the bottom, there is a table for 'PORTS' with columns for 'Port' and 'Address'.

Port	Address
1880	<a href="https://1880-iacloud-nodered4g">https://1880-iacloud-nodered4g</a>



# workspaceの設定

## DashboardからPINを設定する

- Dashboardのworkspace一覧から使用するworkspaceのケバブでPinを有効にする

The screenshot shows the workspace dashboard interface. At the top, there is a search bar labeled 'Search Workspaces', a 'Limit: 50' dropdown, and a 'New Workspace Ctrl-O' button. Below this is a table of active workspaces:

Workspace ID	Repository	Version	Last Update	Actions
iacloud-nodered4gitpod-8dqyn3s8kt1	ia-cloud/node-red-4-gitpod - v2.x https://github.com/ia-cloud/node-red-4-gitpod	v2.x No Changes	2 minutes ago	⋮
iacloud-nodered4gitpod-4kx6zd5fb9n	ia-cloud/node-red-4-gitpod - v2.x https://github.com/ia-cloud/node-red-4-gitpod	v2.x No Changes	16 minutes	⋮
iacloud-nodered4gitpod-eouyveyapg9	ia-cloud/node-red-4-gitpod - v2.x https://github.com/ia-cloud/node-red-4-gitpod	v2.x 7 Changes	2 hours	⋮

At the bottom, there is a section for 'Inactive Workspaces (2)' with a sub-header: 'Workspaces that have been stopped for more than 24 hours. Inactive workspaces are automatically deleted after 14 days. Learn more'.

A context menu is open for the first workspace, listing the following actions: Open, Connect via SSH, Rename, Stop, Download, Share, Pin (highlighted with a red dashed circle and a checkmark), and Delete. Hand icons point to the 'New Workspace Ctrl-O' button and the context menu trigger.

# 終了と再立上げ

## <終了>

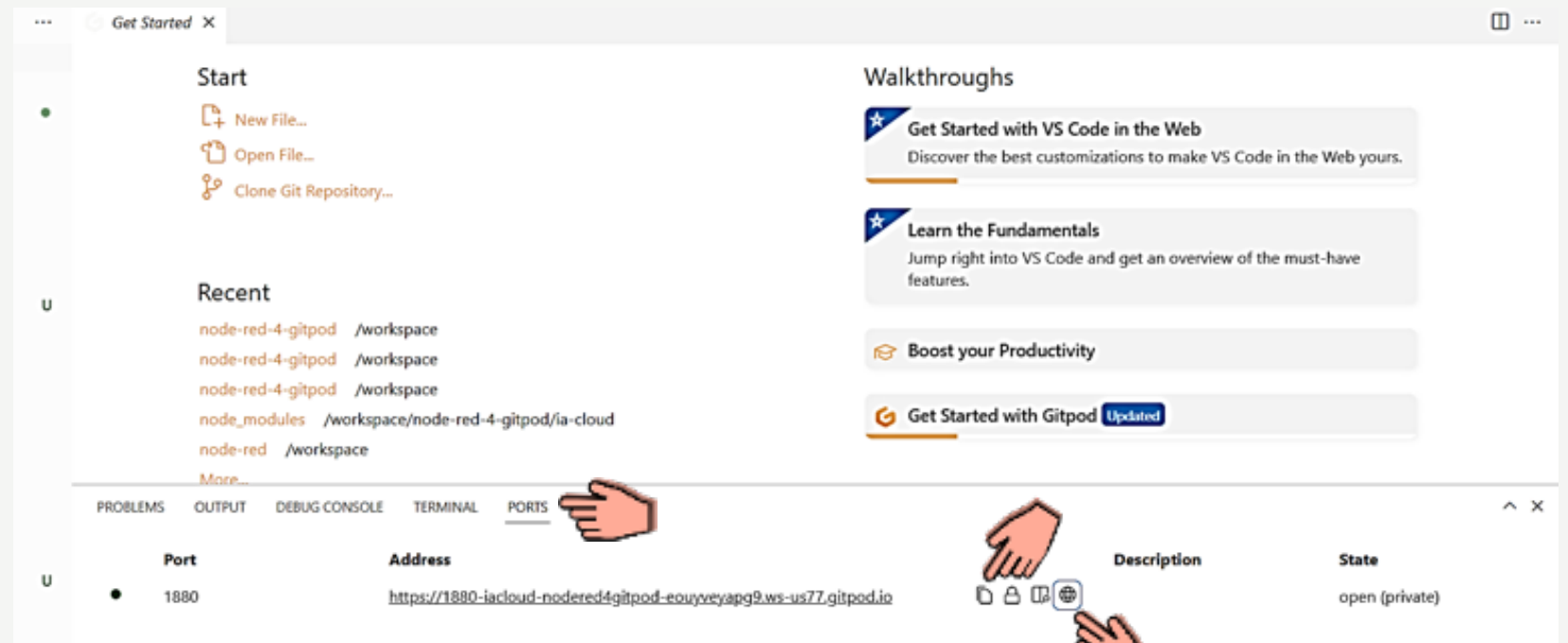
- PortsからWorkspaceのAddressをコピー、記録する
- Workspaceを停止する(タイムカウントを停止)

## <再立上げ>

- Gidpod環境にGitHubアカウントでログイン
- DashboardのWorkspaceの一覧から再接続するAddressを選択  
<https://gitpod.io/workspaces>
- TerminalでNode-REDが構築、開始される
- OpenBrowserでNode-RED環境
- flow及びパレットに組込んだノードの復元を確認

# 終了及び再立上げ

- PortsからworkspaceのAddressをコピー、記録する
- Ports表示からBrowserを開くこともできる



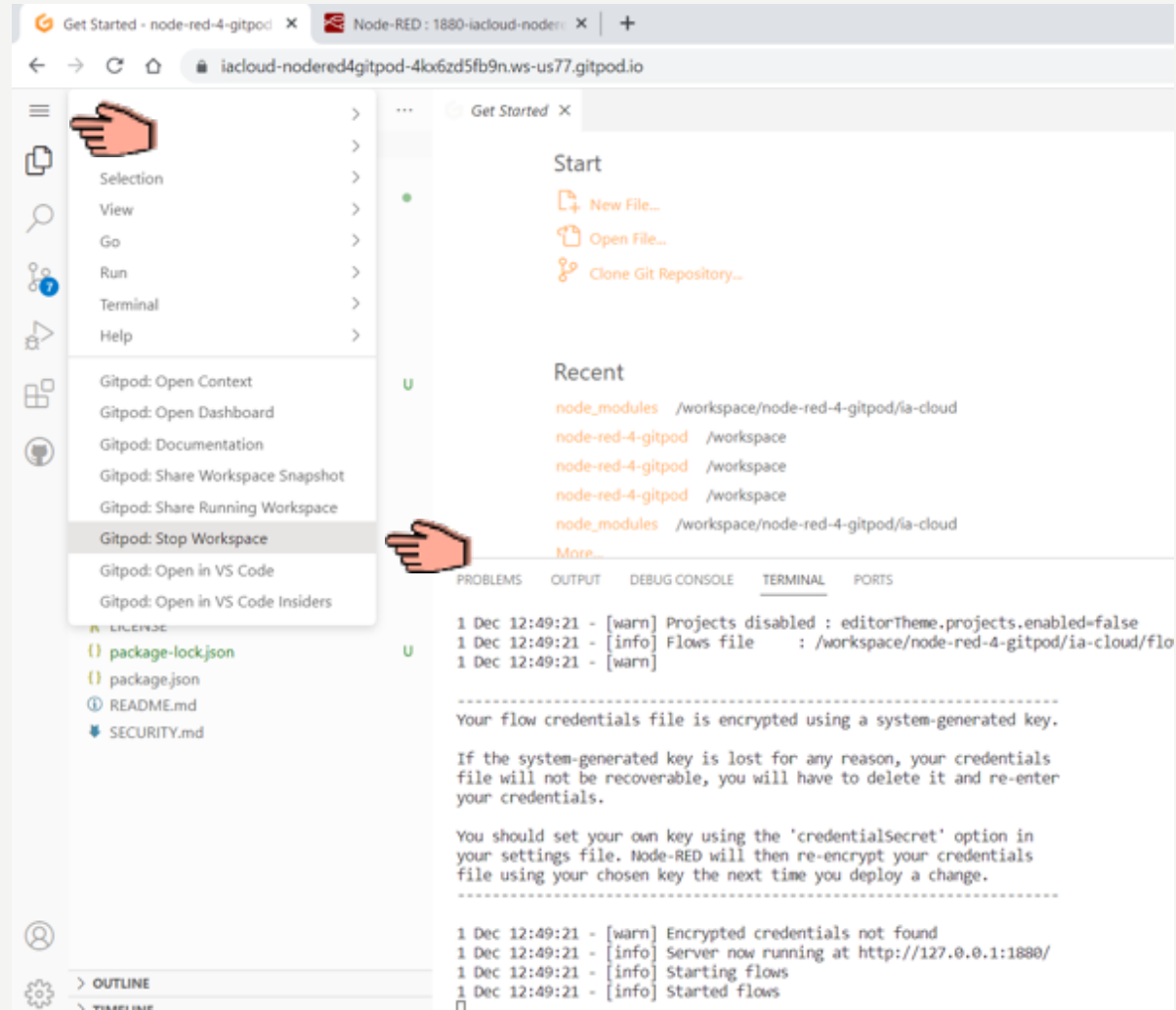
The screenshot shows the VS Code interface with the 'PORTS' view active. The 'PORTS' tab is highlighted with a hand icon. Below it, a table displays port information:

Port	Address	Description	State
1880	<a href="https://1880-iacloud-noderec4gitpod-eouyveyapg9.ws-us77.gitpod.io">https://1880-iacloud-noderec4gitpod-eouyveyapg9.ws-us77.gitpod.io</a>		open (private)

Another hand icon points to the 'Description' column header, and a third hand icon points to the globe icon in the row, indicating that clicking the globe icon opens the port in a browser.

# 終了及び再立上げ

- メニューバーから  
Workspaceを停止する



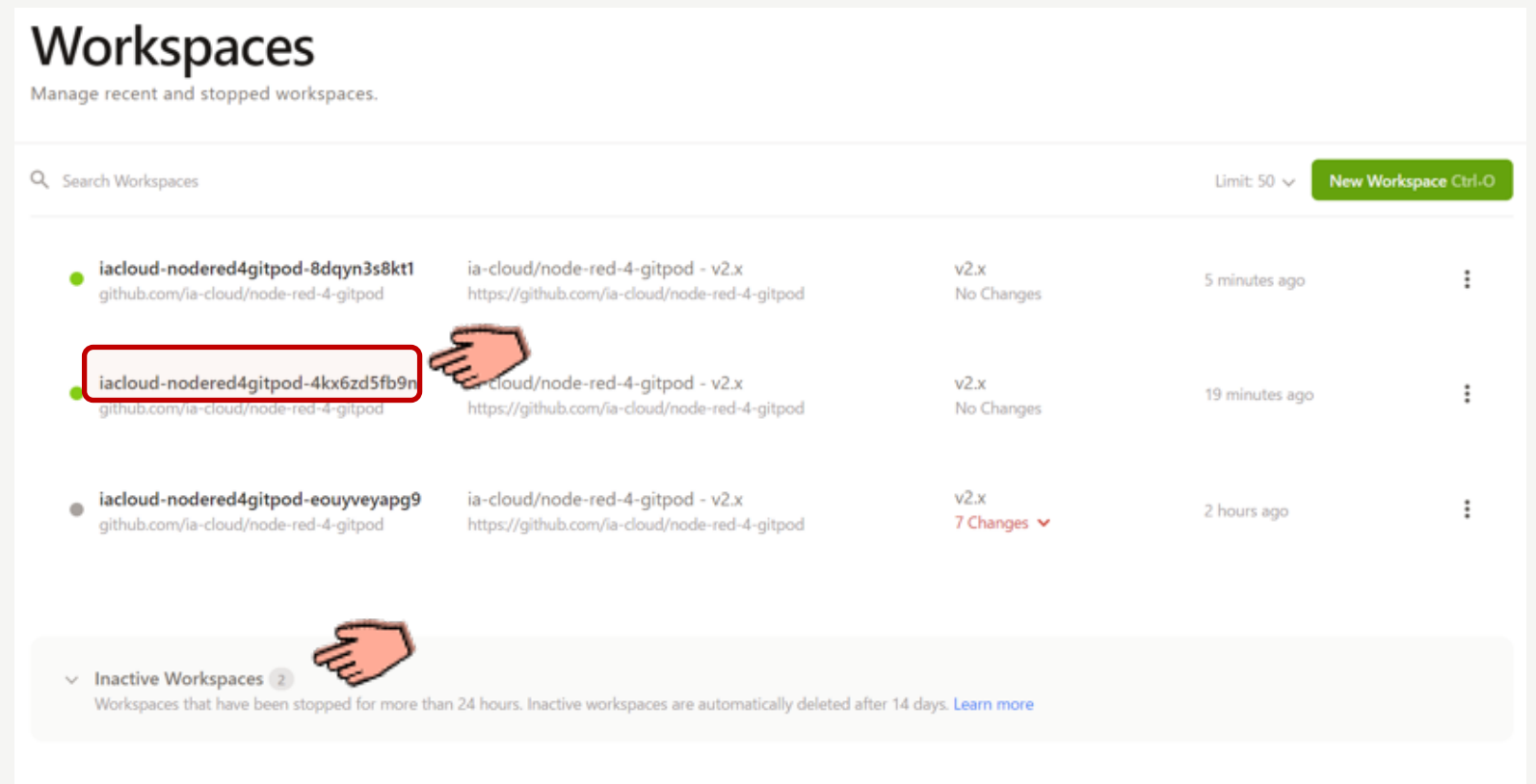
# 終了及び再立上げ

- Dashboardのworkspace一覧から再接続する

<http://gitpod.io/#https://github.com/ia-cloud/node-red-4-gitpod>

workspaceのAddressを選択してNode-REDを再構築する  
(Noed環境やflowは復元される)


- ・Inactiveにあるpin無しworkspaceはpinセットでactiveに復活できる  
(24時間activeでなかったworkspace)



**Workspaces**  
Manage recent and stopped workspaces.

Search Workspaces Limit: 50

Workspace ID	Repository	Version	Status	Time	Actions
iacloud-nodered4gitpod-8dqyn3s8kt1	ia-cloud/node-red-4-gitpod	v2.x	No Changes	5 minutes ago	⋮
<b>iacloud-nodered4gitpod-4kx6zd5fb9n</b>	ia-cloud/node-red-4-gitpod	v2.x	No Changes	19 minutes ago	⋮
iacloud-nodered4gitpod-eouyveyapg9	ia-cloud/node-red-4-gitpod	v2.x	7 Changes	2 hours ago	⋮

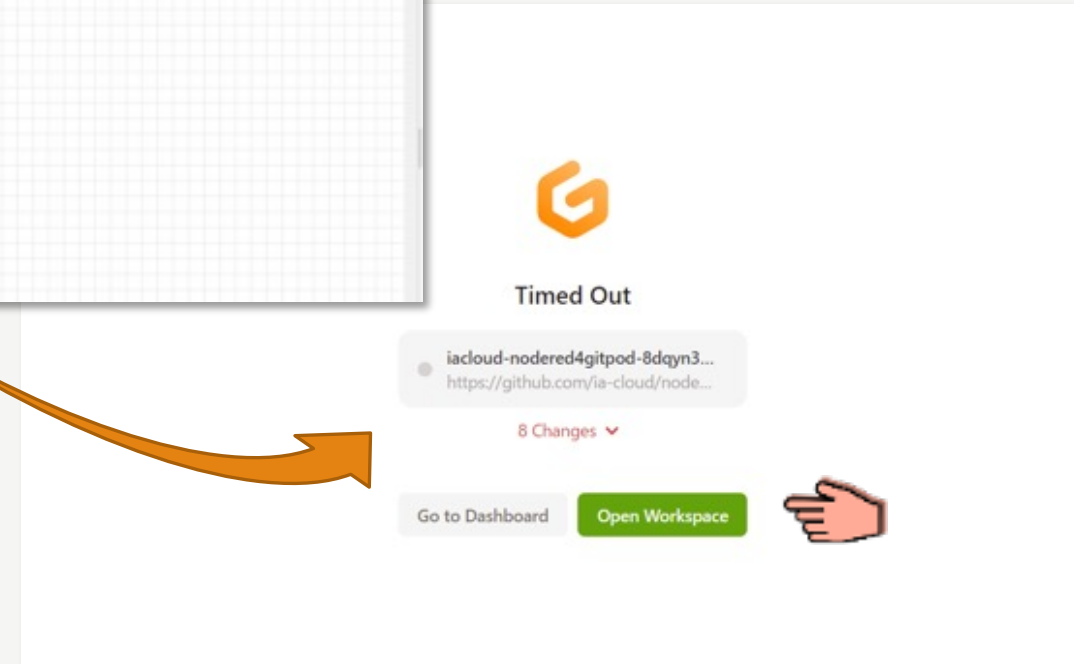
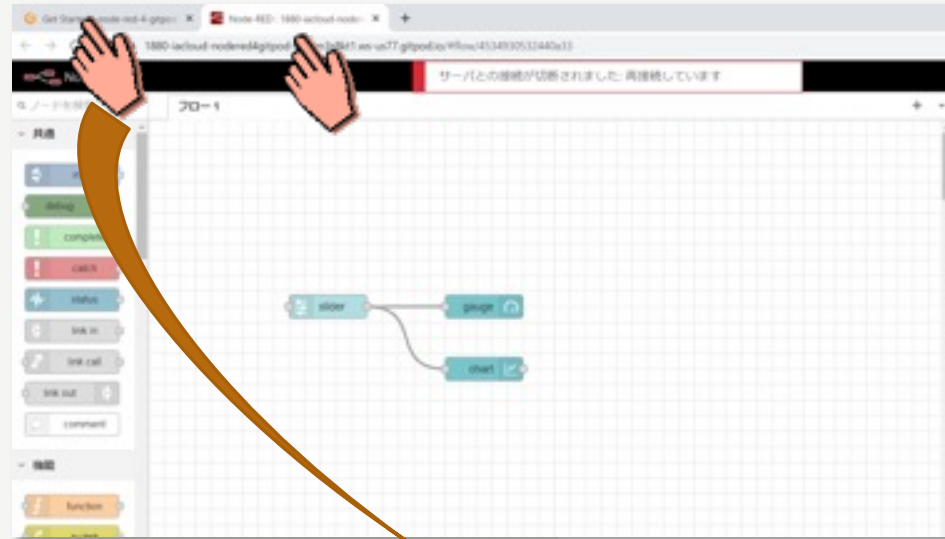
**Inactive Workspaces** 2 

Workspaces that have been stopped for more than 24 hours. Inactive workspaces are automatically deleted after 14 days. [Learn more](#)

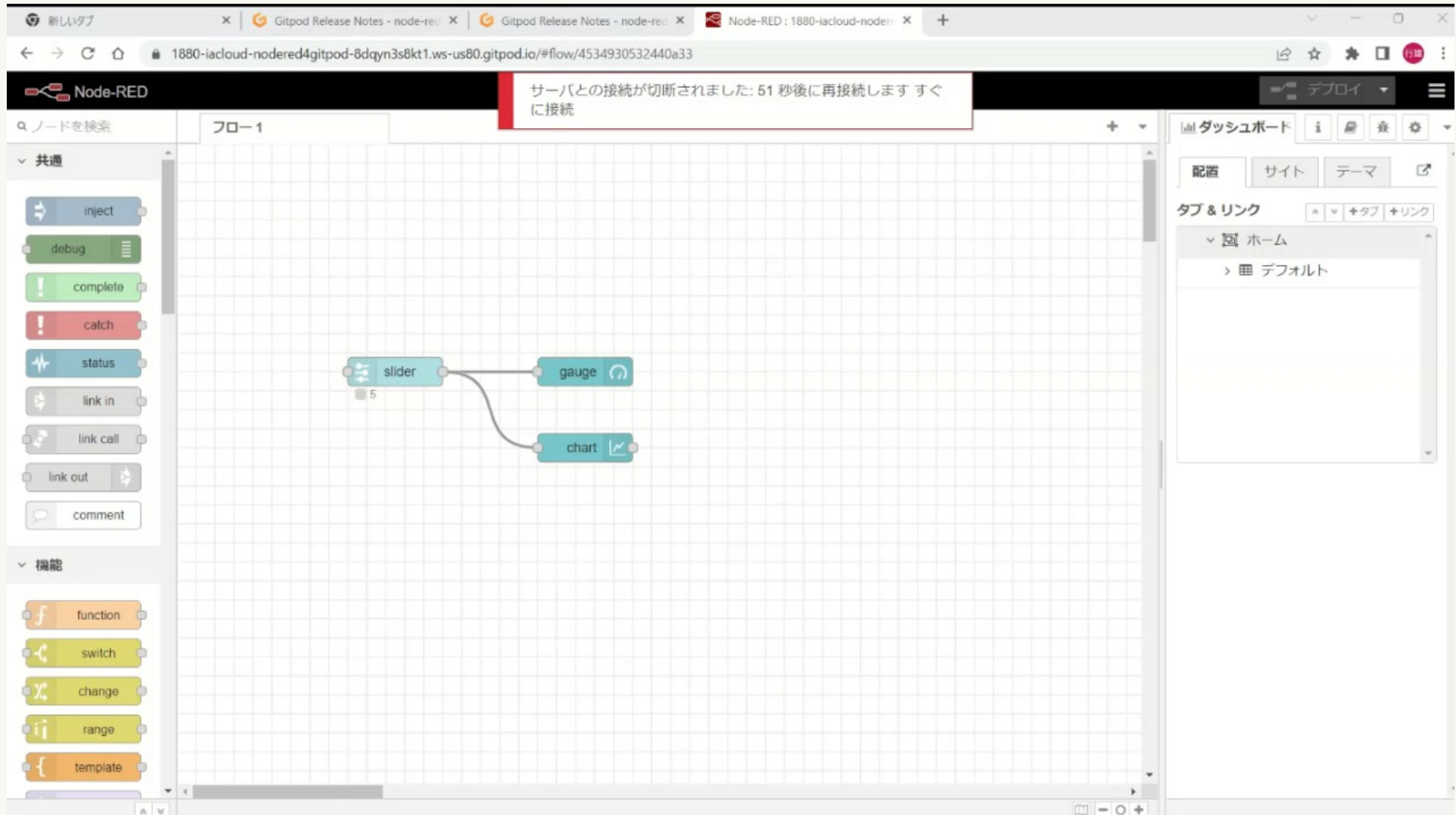
# 30分Timeoutの対応

## <30分Timeoutの対応>

- 30分TimeOutで再接続ができない状況になったときは、一旦Node-REDのBrowserを閉じてGitpodのTimeout画面からworkspaceを開くをクリックするとterminalが起動し、Browserを開くでNode-REDを前の状態から再開できる。



# 30分Timeoutの対応(30分経過後の状況)



The screenshot shows the Node-RED web interface. At the top, a red warning box displays the message: "サーバとの接続が切断されました: 51 秒後に再接続します すぐに接続" (Connection to the server has been disconnected: 51 seconds until reconnection, connect immediately). The main workspace shows a flow named "フロー-1" with three nodes: a "slider" node on the left, a "gauge" node on the top right, and a "chart" node on the bottom right. The "slider" node is connected to both the "gauge" and "chart" nodes. The left sidebar contains a palette of nodes under "共通" (Common) and "機能" (Function) categories. The right sidebar shows the "ダッシュボード" (Dashboard) settings, including "配置" (Layout), "サイト" (Site), and "テーマ" (Theme) options.





# Gitpod プランと残り時間の確認

<https://gitpod.io/plans>

## 【Freeアカウント】

- \* 50時間/月 : 残り時間
- \* 30分Timeout
- \* 4workspaceまで

## 【残り時間の確認】

The screenshot shows the Gitpod 'Plans' page. On the left is a navigation menu with 'Plans' selected. The main content area displays the current plan status: 'You are currently using the Free plan. Upgrade your plan to get more hours and more parallel workspaces.' Below this, a progress bar shows 'Remaining hours: 49.8' out of a total of '61.5'. A hand icon points to this bar with the label '当月の残り時間'. Below the progress bar are four plan cards: 'FREE' (50 hours, current plan), 'PERSONAL' (100 hours, \$9/month), 'PROFESSIONAL' (unlimited hours, \$25/month), and 'UNLEASHED' (unlimited hours, \$39/month). The 'FREE' card is highlighted with a red box and labeled 'アカウントの状況'.

Plan	Hours	Price	Features
FREE	50 hours	FREE	Public & Private Repositories, 4 Parallel Workspaces, 30 min Inactivity Timeout
PERSONAL	100 hours	\$9 per month	Everything in Free
PROFESSIONAL	unlimited hours	\$25 per month	Everything in Personal, 8 Parallel Workspaces
UNLEASHED	unlimited hours	\$39 per month	Everything in Professional, 16 Parallel Workspaces, 1h Inactivity Timeout, 3h Timeout Boost

ご清聴ありがとうございました

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GitpodによるNode-RED環境

Node-RED

佐井行雄