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Discover Avalanche Workshop

Novembre 2025



Come creare una nuova L1

Introduzione alla costruzione di blockchain personalizzate su Avalanche



Creare un account sul builder hub:

<https://build.avax.network/console/primary-network/faucet>



Come creare una nuova L1

Creazione della Subnet

- un gruppo di validatori che supporta una o più blockchain

The screenshot shows the Avalanche Builder Hub interface at build.avax.network/console/layer-1/create/create-chain. The main area is titled "Create Chain" and contains three steps: 1. Create Chain, 2. Manage L1 Nodes, and 3. Convert to L1. There are two options: "Create or Select a Subnet" (with "Create New Subnet" sub-options) and "Use Existing Subnet". A prominent blue "Create Subnet" button is at the bottom. The sidebar on the left includes sections like Home, Back to Builder Hub, Primary Network, Data API Keys, Node Setup, Stake, Testnet Faucet, C/P-Chain Bridge, Ethereum Bridge, AVAX Unit Converter, and a "Create New L1" button.

The screenshot shows a "Create Subnet" dialog box. It includes "Subnet Details" (Owner: P-fuji19g30cs...8as6j0k) and "Network Fee" (Fee Amount: 0.000005 AVAX). At the bottom are "Reject" and "Approve" buttons, with "Approve" being highlighted by a red circle.



Come creare una nuova L1



The screenshot shows the 'Create Chain' page of the Avalanche Builder Hub. The URL in the browser is `build.avax.network/console/layer-1/create/create-chain`. The top navigation bar shows 'Avalanche' and 'Console > Create Chain'. It also displays 'Testnet' status, 'C-Chain 1.4944 AVAX', and 'P-Chain 0.50 AVAX'. The main flow is divided into three steps: 1. Create Chain (highlighted in blue), 2. Managed Testnet L1 Nodes, OR, 2. L1 Node Setup with Docker, and 3. Convert to L1.

Create Chain

Create a subnet and add a new blockchain with custom parameters and genesis data

Create or Select a Subnet

Create a new Subnet or enter an existing Subnet ID.

Create New Subnet

Subnet Owner

P-fuji19g30csky7s2jrr6q67ylud07lw5n358as6j0k

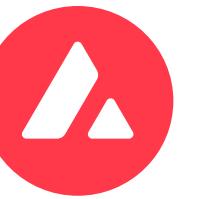
Create Subnet

or

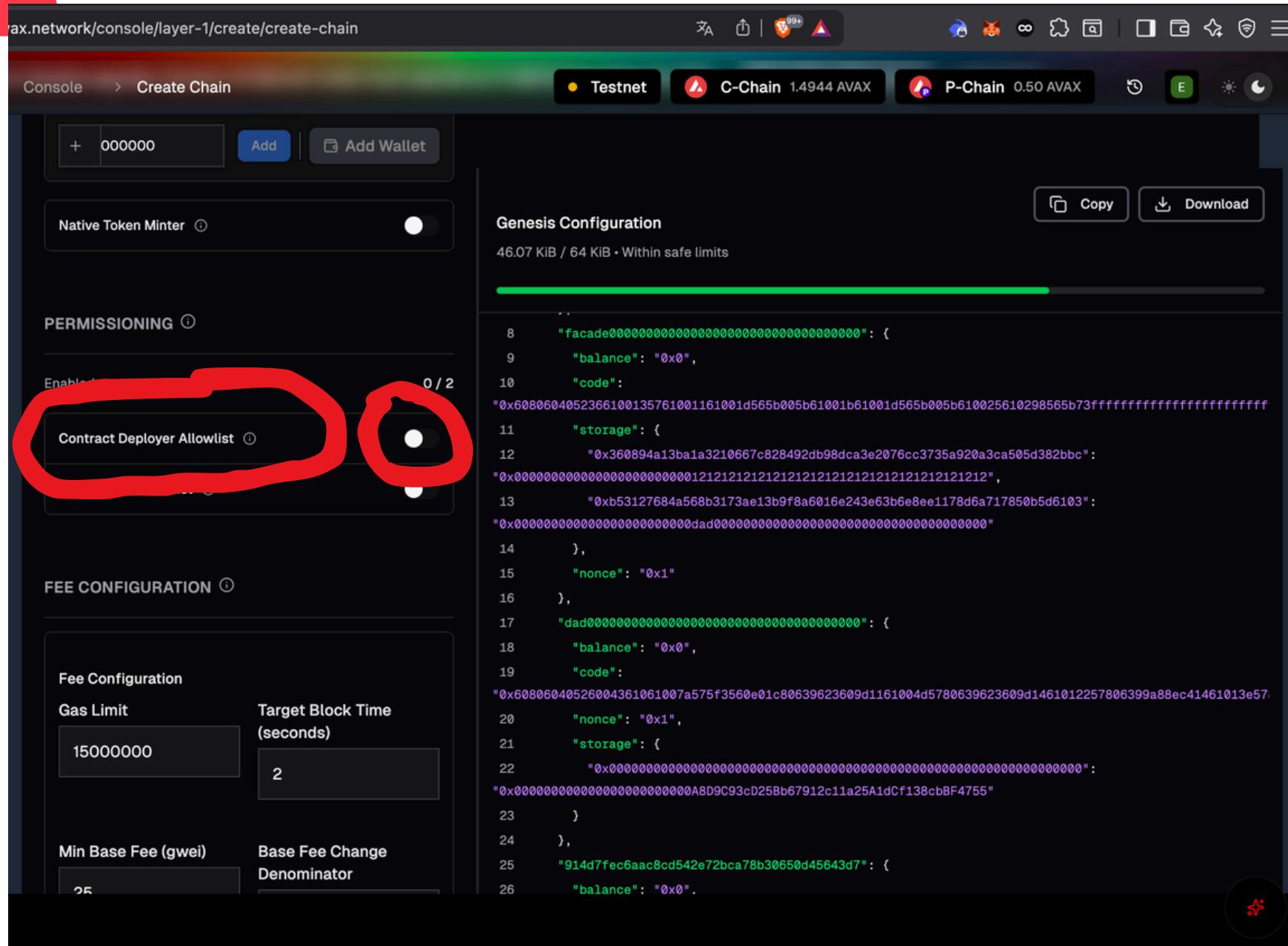
Use Existing Subnet

UbwLb3MxsverNmGirXQAqqp9XvFdNXD41UnhGnXj52kGsyogx

Come creare una nuova L1

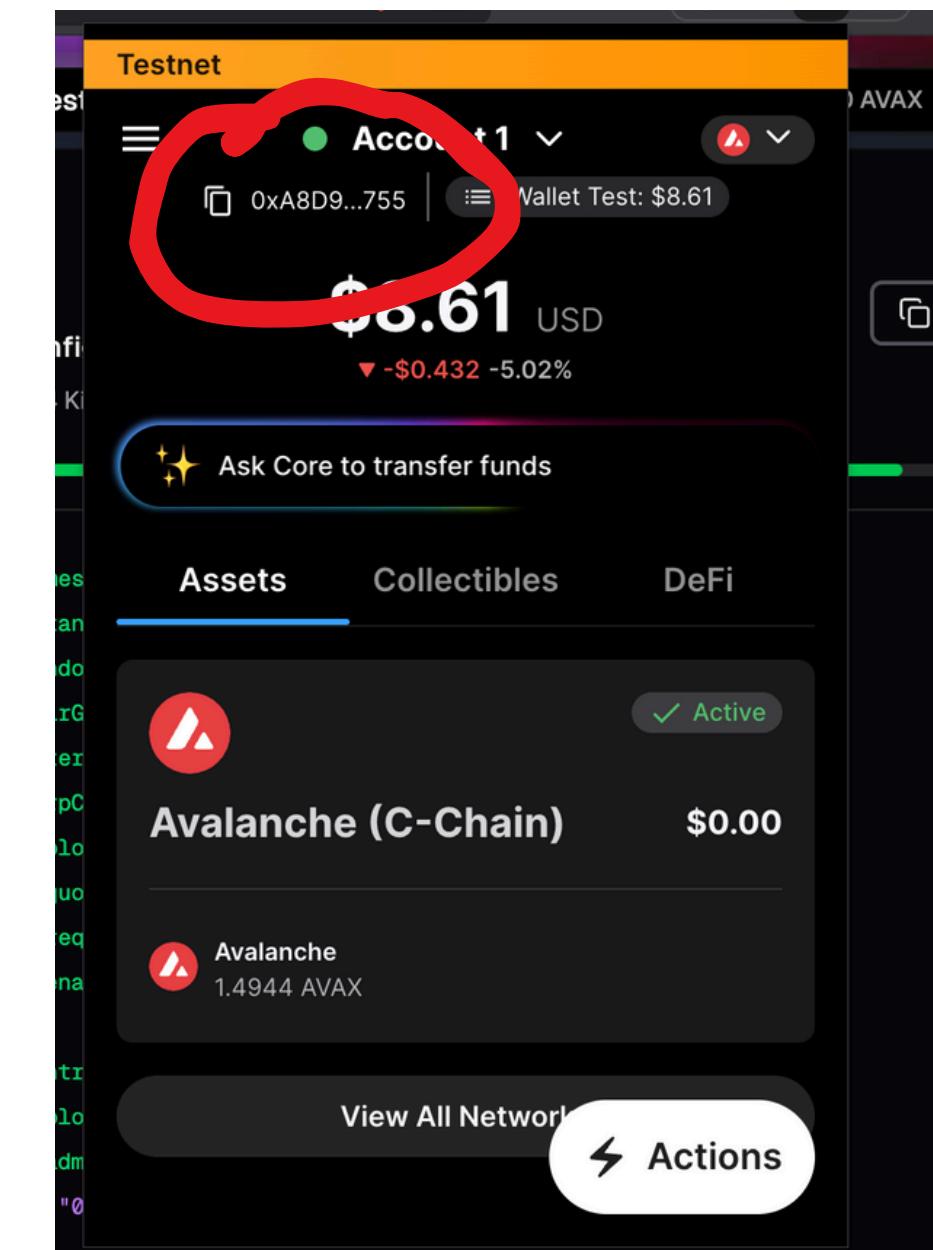
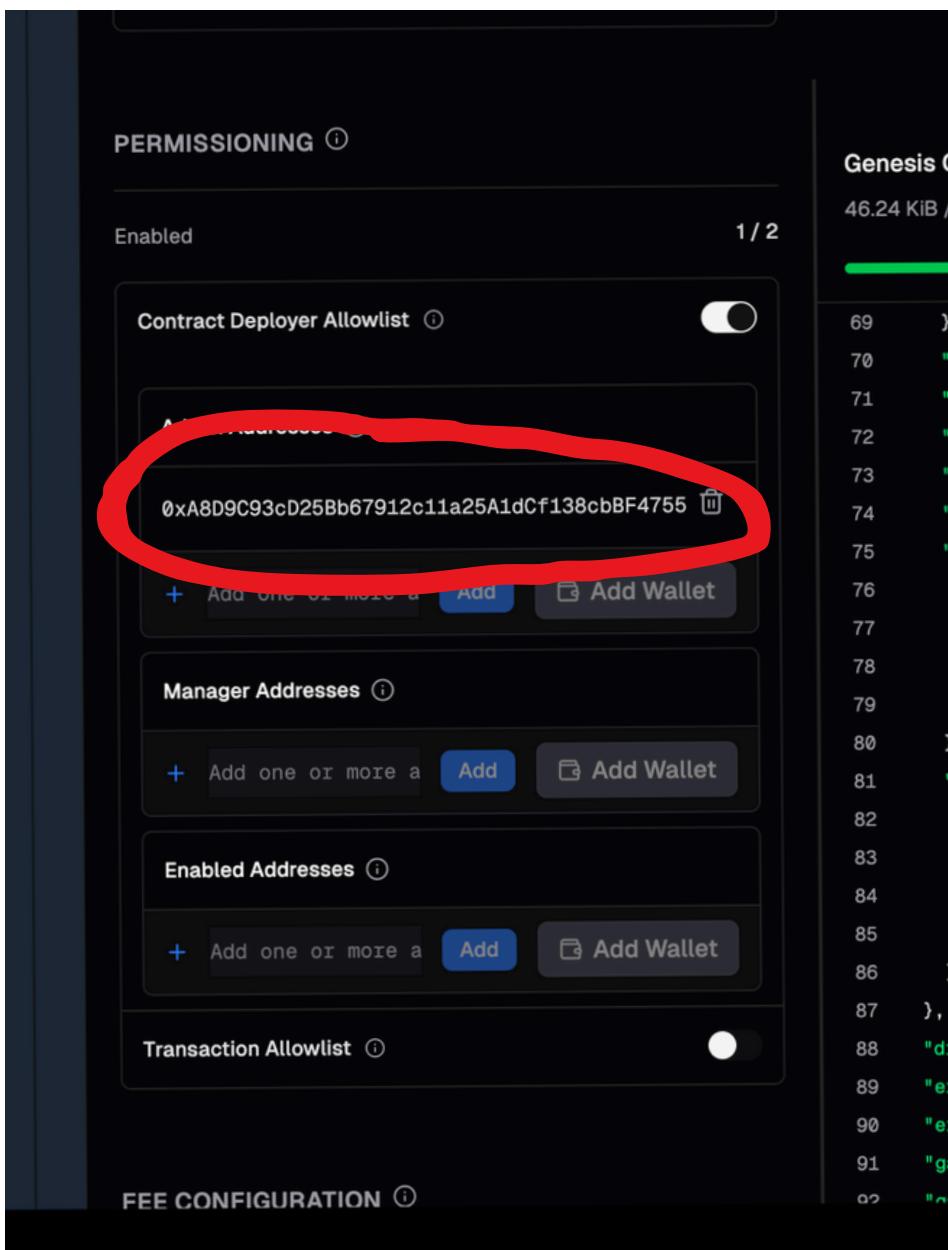


Come creare una nuova L1 Generazione del Genesis



Il Genesis è il file che definisce lo stato iniziale della blockchain. Builder Hub lo genera automaticamente in JSON. Qui decidiamo se aggiungere account prefinanziati, smart contract predeployati ecc

Come creare una nuova L1



Come creare una nuova L1

Deploy della Subnet



x.network/console/layer-1/create/create-chain

Console > Create Chain

Testnet C-Chain 1.4944 AVAX P-Chain 0.50 AVAX

Enabled

Transparent Upgradeable Proxy

Proxy Admin Contract

ICM Messenger

Wrapped COIN

Safe Singleton Factory

Multicall3

Create2Deployer

```
77 "quorumNumerator": 67,
78 "requirePrimaryNetworkSigners": true,
79 "enabled": true
80 },
81 "contractDeployerAllowListConfig": {
82 "blockTimestamp": 1763031406,
83 "adminAddresses": [
84 "0xA8D9C93cD25Bb67912c11a25A1dCf138cbBF4755"
85 ]
86 }
87 },
88 "difficulty": "0x0",
89 "excessBlobGas": null,
90 "extraData": "0x",
91 "gasLimit": "0xe4e1c0",
92 "gasUsed": "0x0",
93 "mixHash": "0x0000000000000000000000000000000000000000000000000000000000000000",
```

Create Chain

Create your chain by issuing a CreateChainTx transaction.

Create Chain

Next

A red circle highlights the "Create Chain" button at the bottom of the screen.

Testnet

Create Blockchain

Blockchain Details

Subnet ID: UbwLb3Mxsw...syogx

Blockchain Name: Demo Blockchain

Virtual Machine ID: srEXiWaHuh...6X7Dy

Genesis File: View

Network Fee

Fee Amount: 0.000056 AVAX
\$0.001

Reject Approve

A red circle highlights the "Approve" button at the bottom of the screen.

Come creare una nuova L1

La Subnet è l'infrastruttura. Ora creiamo la chain vera e propria all'interno della Subnet:



The screenshot shows a web browser window for the Avalanche Network Builder Hub at build.avax.network/console/layer-1/create/managed-testnet-l1-nodes. The page title is "Managed Testnet L1 Nodes". The interface includes a sidebar with links like Home, Back to Builder Hub, Primary Network, Data API Keys, Node Setup, Stake, Testnet Faucet, C/P-Chain Bridge, Ethereum Bridge, AVAX Unit Converter, Create New L1, L1 Node Setup, L1 Validator Balance, Explorer Setup, Nodes, and ICM Relayer. The main content area is titled "Step 1: Select Subnet". It instructs users to enter the Subnet ID of the blockchain they want to create a node for. A search input field contains "FORTA". Below it, a "Suggestions:" section lists several Subnet IDs, with the first one, "UbwLb3MxwerNmGirXQAqqp9XvFdNXD41UnhGnXj52kGsyogx", highlighted with a large red oval. Step 2, "Create Node", is shown below with a "Create Node" button.

Come creare una nuova L1

La Subnet è l'infrastruttura. Ora creiamo la chain vera e propria all'interno della Subnet:



The screenshot shows a web browser window for the Avalanche Network Builder Hub at the URL `build.avax.network/console/layer-1/create/managed-testnet-l1-nodes`. A green banner at the top reads: "Avalanche Network Granite upgrade released. All Mainnet nodes must upgrade by 11 AM ET, November 19, 2025". The main content area is titled "Managed Testnet L1 Nodes". It displays "Technical Details" including EVM Chain ID (92766), Blockchain ID, Subnet ID, and VM ID. Below this, a four-step process is shown:

- Step 2: Create Node**
Review the details and create your managed testnet node.
Create Node (button highlighted with a red oval)
- Step 3: Add to Wallet**
Add the new node's RPC to your wallet.
Add to Wallet (button)
- Step 4: Open Testnet Node Manager**
To view this node and other that you have created, open the Testnet Node Manager.
Open Testnet Node Manager (button)

The left sidebar contains navigation links for Home, Back to Builder Hub, Primary Network, Data API Keys, Node Setup, Stake, Testnet Faucet, C/P-Chain Bridge, Ethereum Bridge, AVAX Unit Converter, Layer 1 (with Create New L1 selected), L1 Node Setup, L1 Validator Balance, Explorer Setup, Free Testnet Infrastructure, Nodes, and ICM Relayer.

Come creare una nuova L1

Una volta creata, eseguiamo un test: aggiungiamo il wallet



The screenshot shows a web browser window for the Avalanche Network Builder Hub at build.avax.network/console/layer-1/create/managed-testnet-l1-nodes. A red arrow points from the sidebar to the 'Step 3: Add to Wallet' section. A red circle highlights the 'Add to Wallet' button.

Avalanche Network Granite upgrade released. All Mainnet nodes must upgrade by 11 AM ET, November 19, 2025 • 06 d : 04 h : 48 m : 47 s • Learn more

Managed Testnet L1 Nodes

Step 2: Create Node
Review the details and create your managed testnet node.
Create Node

Step 3: Add to Wallet
Add the new node's RPC to your wallet.
RPC URL: <https://nodes-prod.18.182.4.86.sslip.io/ext/bc/2eZsdG9PfcYdmFHZW1WGsoyPavZnhSHrvGb3Rv1zh5QiNSyF45/rpc>

Add to Wallet

Step 4: Open Testnet Node Manager

Layer 1

- Create New L1 (highlighted)
- L1 Node Setup
- L1 Validator Balance
- Explorer Setup
- Free Testnet Infrastructure
- Nodes
- ICM Relayer

Come creare una nuova L1



Managed Testnet | 1 Nodes

Testnet C-Chain

Details X

Add an existing Avalanche L1

RPC URL
`https://nodes-prod.18.182.4.86.sslip.io/ext/bc/2eZ`

Coin Name (Symbol)
COIN

Chain Name
Demo Blockchain

EVM Chain ID
92766

Avalanche Chain ID (base58)
`2eZsdG9PfcYdmFHZW1WGsoyPavZnhSHrvGb3Rv1:`

Validator Manager Address
`0x12345678901234567890123456789012345678`

Testnet Node Manager

The image shows a mobile application interface. On the left, there's a dark-themed screen with a header showing "by 11 AM ET, November 19, 2025" and a timer "06 d : 04 h : 47 m". Below this are several input fields containing placeholder text like "GsoyPavZnhSHrvGb3Rv1:" and "90123456789012345678". At the bottom, there's a "Loading..." message with a circular icon.

On the right, a modal dialog titled "Add New Network?" is displayed. The title bar is orange with the text "Testnet". The main content area has a dark background with white text. It features a circular icon with a globe symbol, followed by the text "Demo Blockchain" and the URL "build.avax.network".

The dialog lists the following details:

- Chain ID: 92766
- Chain Name: Demo Blockchain
- RPC URL: [https://nodes-
prod.18.182.4.86.sslip.io/ext/bc/2eZsdG9PfcYdmI](https://nodes-prod.18.182.4.86.sslip.io/ext/bc/2eZsdG9PfcYdmI)
- Explorer URL: (This field is partially visible)

At the bottom of the dialog are two buttons: "Reject" and "Approve". The "Approve" button is highlighted with a large red oval.

Come creare una nuova L1



The screenshot shows a web browser window for the Avalanche Network builder console at build.avax.network/console/layer-1/create/managed-testnet-l1-nodes. The page displays a message about the Granite upgrade and a timer. On the left, a sidebar lists various network-related tools like Data API Keys, Node Setup, Stake, and Testnet Faucet. The main content area shows a step-by-step guide for creating a managed testnet node:

- Step 3: Add to Wallet**

Add the new node's RPC to your wallet.

RPC URL:
`https://nodes-prod.18.182.4.86.sslip.io/ext/bc/2eZsdG9PfcYdmFHZW1WGsoyPavZnhSHrvGb3Rv1zh5QiNSyF45/rpc`

[Add to Wallet](#)
- Step 4: Open Testnet Node Manager**

To view this node and other that you have created, open the Testnet Node Manager.

[Open Testnet Node Manager](#)

A large red oval highlights the "Open Testnet Node Manager" button.

Come creare una nuova L1



build.avax.network/console/testnet-infra/nodes

Network Granite upgrade released. All Mainnet nodes must upgrade by 11 AM ET, November 19, 2025 • 06 d : 04 h : 46 m : 14 s • Learn more

inglese italiano 46 m : 33 s

Console > Nodes Testnet Demo Blockchain 1000000.0000 COIN P-Chain 0.50 AVAX

Managed Testnet Nodes

Manage your hosted testnet nodes.

1 / 3 active nodes

Refresh

Demo Blockchain

Active 3d 0h remaining

Created: Nov 13, 2025 Expires: Nov 16, 2025

SUBNET ID: UbwLb3MxsweiNmGirXQAqqp9XvFdNXD41UnhGnXj52kGs

BLOCKCHAIN ID: 2eZsdG9PfcYdmFHZW1WGsoyPavZnhSHrvGb3Rv1zh5QiNS

RPC URL: https://nodes-prod.18.182.4.86.sslip.io/ext/bc/2eZsdG9PfcYdmFHZW1WGsoyPavZnhSHrvGb3Rv1zh5QiNSyF45

info.getNodeID API Response

```
{ "jsonrpc": "2.0", "result": { "nodeID": "NodeID-L3bgqwEAEPD5aLvUhN3xnDDWR4hFyE7d", "nodePOP": { "publicKey": "0x9746b9e10a474c34f77d605d1bb24f5ef940f2ec8913ceae2ab23c3df3f038f4e6c9784988283c762538dfc2785fcff5", "proofOfPossession": "0x834148075f78718479cf1dc7e66a9946623d7555d54350ec313f09471f935de22880b29b003980f5f01de1280f2346c812f35723c992fac5f } }, "id": 1 }
```

Add a node for a new L1

Edit on GitHub Report Issue

build.avax.network/console/testnet-infra/nodes

Network Granite upgrade released. All Mainnet nodes must upgrade by 11 AM ET, November 19, 2025 • 06 d : 04 h : 46 m : 14 s • Learn more

inglese italiano 46 m : 33 s

Console > Nodes Testnet Demo Blockchain 1000000.0000 COIN P-Chain 1.00 AVAX

Active 3d 0h remaining

SUBNET ID: UbwLb3MxsweiNmGirXQAqqp9XvFdNXD41UnhGnXj52kGs

BLOCKCHAIN ID: 2eZsdG9PfcYdmFHZW1WGsoyPavZnhSHrvGb3Rv1zh5QiNS

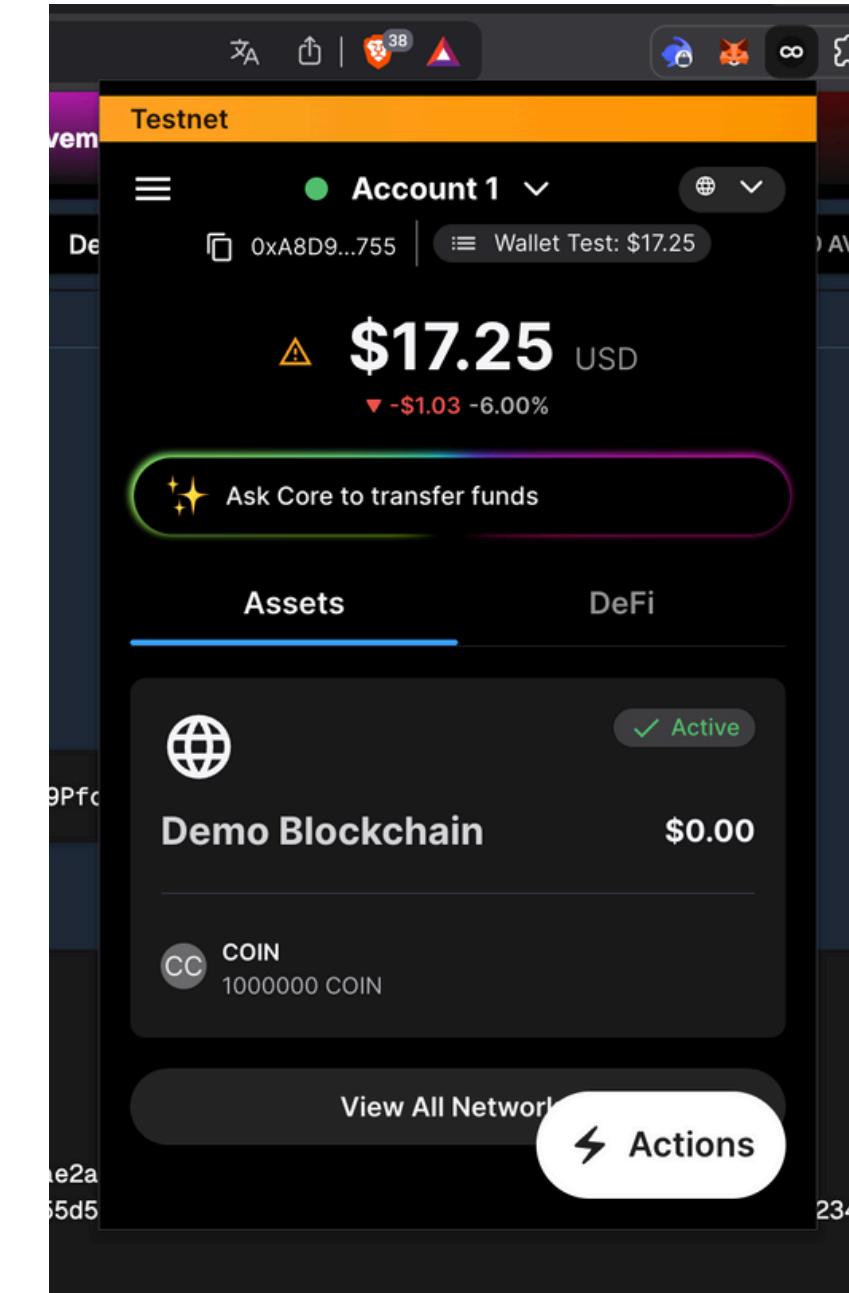
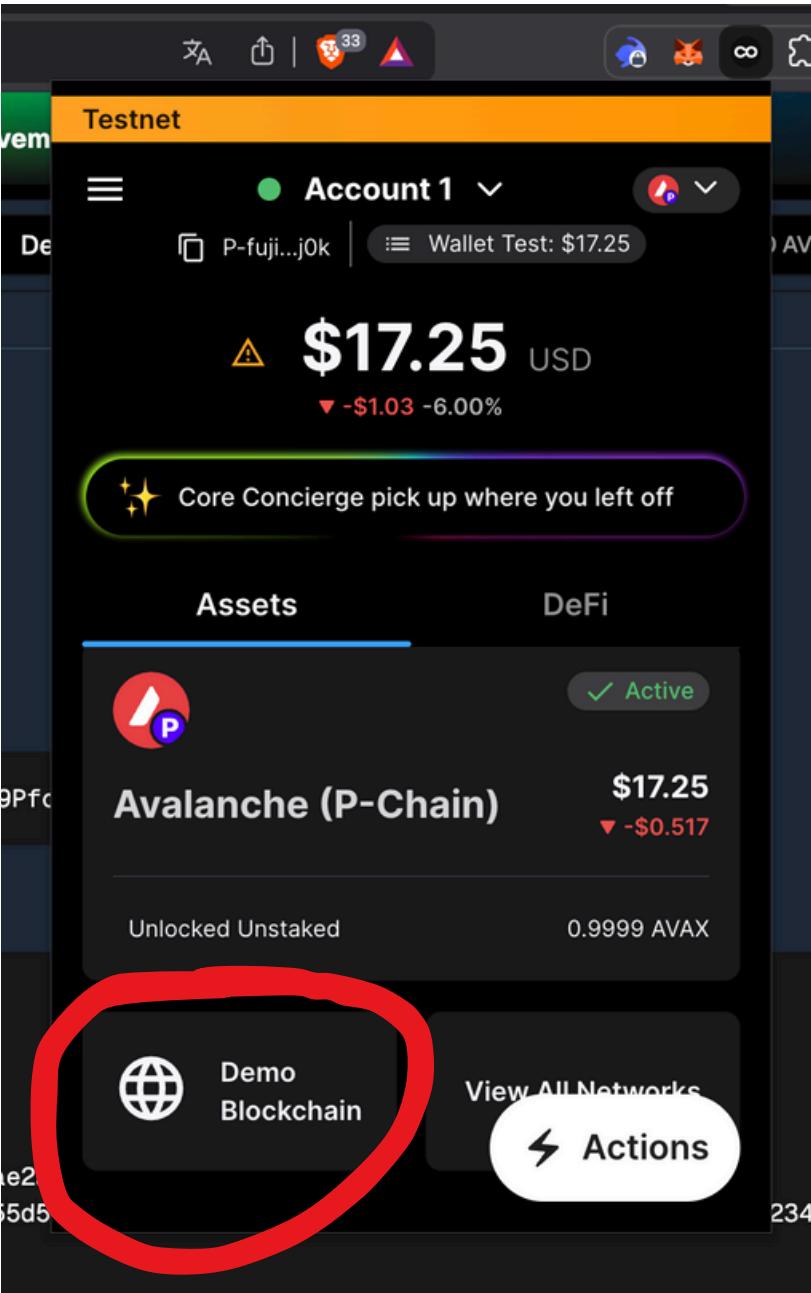
RPC URL: https://nodes-prod.18.182.4.86.sslip.io/ext/bc/2eZsdG9PfcYdmFHZW1WGsoyPavZnhSHrvGb3Rv1zh5QiNSyF45

info.getNodeID API Response

```
{ "jsonrpc": "2.0", "result": { "nodeID": "NodeID-L3bgqwEAEPD5aLvUhN3xnDDWR4hFyE7d", "nodePOP": { "publicKey": "0x9746b9e10a474c34f77d605d1bb24f5ef940f2ec8913ceae2ab23c3df3f038f4e6c9784988283c762538dfc2785fcff5", "proofOfPossession": "0x834148075f78718479cf1dc7e66a9946623d7555d54350ec313f09471f935de22880b29b003980f5f01de1280f2346c812f35723c992fac5f } }, "id": 1 }
```

Add to Wallet Delete Node

Come creare una nuova L1



Come interagire con una nuova L1

Comandi



```
export L1_RPC_URL="L1_RPC_URL"
export PRIVATE_KEY="PRIVATE_KEY"
export L1_CHAIN_ID="L1_CHAIN_ID"

forge script script/DeployGov.s.sol:DeployGov \
  --rpc-url $L1_RPC_URL \
  --private-key $PRIVATE_KEY \
  --chain-id $L1_CHAIN_ID \
  --broadcast \
  -vvvv
```



Domande?

Grazie per la Vostra
attenzione