# **Using ENS with Data Feeds**

### **Lookup**

Pair:Choose PairAAVE / ETHAAVE / USDADA / USDADX / USDANT / ETHAUD / USDBAL / ETHBAT / ETHBCH / USDBNB / USDBNT / ETH (Bancor)BNT / ETHBNT / USDBRENT / USDBTC / ARSBTC DifficultyBTC / ETHBTC / USDBUSD / ETHBZRX / ETHCHF / USDCOMP / ETHCOMP / USDCRO / ETHCRV / ETHDAI / ETHDAI / USDDASH / USDDMG / ETHDOT / USDENJ / ETHEOS / USDETC / USDETH / USDETH / XDREUR / MWhEUR / USDFast Gas / GweiFIL / USDFNX / USDFTM / ETHFTSE / GBPGBP / USDJPY / USDKNC / ETHKNC / USDLEND / ETHLEND / USDLINK / ETH (Bancor)LINK / ETHLINK / USDLRC / ETHLTC / USDMANA / ETHMKR / ETHMLN / ETHN225 / JPYNMR / ETHOrchidOXT / USDREN / ETH (Bancor)REN / ETHREN / USDREP / ETHRLC / ETHSCEX / USDsDEFI / USDSNX / ETHSNX / USDSUSD / ETHSXP / USDTotal Marketcap / USDTRX / USDTUSD / ETHTUSD ReservesTUSD SupplyUMA / ETHUNI / ETHUNI / USDUSDC / ETHUSDK / USDUSDT / ETHWNXM / ETHWOM / ETHWTI / USDXAG / USDXAU / USDXHV / USDXMR / USDXRP / USDXTZ / USDYFI / ETHYFI / USDZRX / ETHENS Name:Address:Hash ID:

### **Manual Lookup**

/LookupENS Name:Address:

### **Naming structure**

Chainlink data feeds fall under thedata.ethnaming suffix. To obtain a specific feed address, prefix this with the assets in the feed, separated by a dash (-).

PairENS Domain NameETH / USDeth-usd.data.ethBTC / USDbtc-usd.data.eth......

#### **Subdomains**

By default, the base name structure (eth-usd.data.eth) returns the proxy address for that feed. However, subdomains enable callers to retrieve other associated contract addresses, as shown in the following table.

Contract AddressesSubdomain PrefixExampleProxyproxyproxy.eth-usd.data.ethUnderlying aggregatoraggregatoraggregator.eth-usd.data.ethProposed aggregatorproposedproposed.eth-usd.data.eth

### **Architecture**

#### **Resolver**

For each network, there is a single Chainlink resolver, which does not change. Its address can be obtained using thedata.ethdomain. This resolver manages the subdomains associated withdata.eth.

NetworkResolver AddressEthereum Mainnet0x122eb74f9d0F1a5ed587F43D120C1c2BbDb9360B

#### **Listening for address changes**

When a new aggregator is deployed for a specific feed, it is first proposed, and when accepted becomes the aggregator for that feed. During this process, theproposedandaggregatorsubdomains for that feed will change. With each change, the resolver emits an Addr Changedevent, using the feed subdomain (for example:eth-usd.data.eth) as the indexed parameter.

Example: If you want to listen for when the aggregator of the ETH / USD feed changes, set up a listener to track the Addr Changed event on the resolver, using a filter like this:ethers.utils.namehash ('aggregator.eth-usd.data.eth').

## **Obtaining addresses**

Reverse Lookup

Reverse lookup is not supported.

#### **Javascript**

The example below uses Javascript Web3 library to interact with ENS. See th<u>€NS documentation</u> for the full list of languages and libraries libraries that support ENS.

This example logs the address of the data feed on the Ethereum mainnet for ETH / USD prices.

const Web3=require("web3")const web3=newWeb3("https://rpc.ankr.com/eth")web3.eth.ens.getAddress("eth-usd.data.eth").then((address)=>{console.log(address)})

#### Solidity

In Solidity, the address of the ENS registry must be known. According to the ENS documentation, this address is the same across Mainnet

#### and Goerli networks:

Also, instead of using readable string names likeeth-usd.data.eth, resolvers accept bytes32 hash IDs for names. Hash IDs can be retrieved from this subgraph or via this npm packageth-ens-namehash.

"ETH / USD" hash:0xf599f4cd075a34b92169cf57271da65a7a936c35e3f31e854447fbb3e7eb736d

// SPDX-License-Identifier: MITpragmasolidity^0.8.7;/\* \* THIS IS AN EXAMPLE CONTRACT THAT USES HARDCODED VALUES FOR CLARITY. \* THIS IS AN EXAMPLE CONTRACT THAT USES UN-AUDITED CODE. \* DO NOT USE THIS CODE IN PRODUCTION. /// ENS Registry ContractinterfaceENS{functionresolver(bytes32node)externalviewreturns(Resolver);}// Chainlink ResolverinterfaceResolver{functionaddr(bytes32node)externalviewreturns(address);}// Consumer contractcontractENSConsumer{ENS ens;// ENS registry address: 0x0000000000002E074eC69A0dFb2997BA6C7d2e1econstructor(addressensAddress) {ens=ENS(ensAddress);}// Use ID Hash instead of readable name// ETH / USD hash: 0xf599f4cd075a34b92169cf57271da65a7a936c35e3f31e854447fbb3e7eb736dfunctionresolve(bytes32node)publicviewreturns(address) {Resolver resolver=ens.resolver(node);returnresolver.addr(node);}} Open in Remix What is Remix?