

## EIP 1820: Pseudo-introspection Registry Contract

### [Return to Ethereum ERCs](#)

**Note:** The following is an excerpt from the official Ethereum site. It is provided here as a convenience and is not authoritative. Refer to the original document as the authoritative reference.

Table 1: Data sheet for Pseudo-introspection Registry Contract

|               |                                                                                                                         |
|---------------|-------------------------------------------------------------------------------------------------------------------------|
| Title         | Pseudo-introspection Registry Contract                                                                                  |
| Author        | Jordi Baylina, Jacques Dafflon                                                                                          |
| Status        | Final                                                                                                                   |
| Created       | 2019-03-04                                                                                                              |
| Description   | <a href="http://eips.ethereum.org/EIPS/eip-1820">http://eips.ethereum.org/EIPS/eip-1820</a>                             |
| Specification | <a href="http://eips.ethereum.org/EIPS/eip-1820#Specification">http://eips.ethereum.org/EIPS/eip-1820#Specification</a> |
| Category      | ERC                                                                                                                     |
| Requires      | <a href="#">165</a> , <a href="#">214</a>                                                                               |
| Replaces      | <a href="#">ERC 820</a>                                                                                                 |

### Simple Summary

*This standard defines a universal registry smart contract where any address (contract or regular account) can register which interface it supports and which smart contract is responsible for its implementation.*

*This standard keeps backward compatibility with [ERC165](#).*

### Abstract

*This standard defines a registry where smart contracts and regular accounts can publish which functionality they implement—either directly or through a proxy contract.*

*Anyone can query this registry to ask if a specific address implements a given interface and which smart contract handles its implementation.*

*This registry MAY be deployed on any chain and shares the same address on all chains.*

*Interfaces with zeroes (0) as the last 28 bytes are considered [ERC165](#) interfaces, and this registry SHALL forward the call to the contract to see if it implements the interface.*

*This contract also acts as an [ERC165](#) cache to reduce gas consumption.*

## Motivation

*There have been different approaches to define pseudo-introspection in [Ethereum](#). The first is [ERC165](#) which has the limitation that it cannot be used by regular accounts. The second attempt is [ERC672](#) which uses reverse Ethereum Name Service (ENS)<sup>1)</sup>. Using reverse ENS has two issues. First, it is unnecessarily complicated, and second, ENS is still a centralized contract controlled by a *multisig*. This *multisig* theoretically would be able to modify the system.*

*This standard is much simpler than ERC672, and it is fully decentralized.*

*This standard also provides a unique address for all chains. Thus solving the problem of resolving the correct registry address for different chains.*

<sup>1)</sup>

Ethereum Name Service, <https://ens.domains/>

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