ipaddresstools v1.2.12

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CHAPTER 1

ipaddresstools

1.1 ipaddresstools package

1.1.1 Submodules

1.1.2 ipaddresstools.ipaddresstools module

Script Name: ipaddresstools.py Script Type: Python Updated By: Benjamin P. Trachtenberg Date Written 1/11/2015

Description: Collection of tools for IP Address's

`ipaddresstools.ipaddresstools.`**`all_ip_address_in_subnet`**(*ip_net*, *cidr*)

Function to return every ip in a subnet

Parameters

- **`ip_net`** (*`String`*) – String format 192.168.1.1
- **`cidr`** (*`String`*) – CIDR value of 0 to 32

Return type List

Returns A List of IPv4 Address's

`ipaddresstools.ipaddresstools.`**`all_subnets_longer_prefix`**(*ip_net*, *cidr*)

Function to return every subnet a ip can belong to with a longer prefix

Parameters

- **`ip_net`** (*`String`*) – String format 192.168.1.1
- **`cidr`** (*`String`*) – CIDR value of 0 to 32

Return type List

Returns A List of subnets

`ipaddresstools.ipaddresstools.`**`all_subnets_possible`**(*ip_net*, *cidr*)

Function to return every subnet a ip can belong to with a longer prefix

Parameters

- **ip_net** (*String*) – String format 192.168.1.1
- **cidr** (*String*) – CIDR value of 0 to 32

Return type List

Returns A List of subnets

`ipaddresstools.ipaddresstools.`**`all_subnets_shorter_prefix`**(*ip_net*, *cidr*, *include_default=False*)

Function to return every subnet a ip can belong to with a shorter prefix

Parameters

- **ip_net** (*String*) – String format 192.168.1.1
- **cidr** (*String*) – CIDR value of 0 to 32
- **include_default** (*Boolean*) – True or False

Return type List

Returns A List of subnets

`ipaddresstools.ipaddresstools.`**`cidr_check`**(*cidr*, *return_cidr=True*)

Function to verify a good CIDR value

Parameters

- **cidr** (*Integer*) – 30
- **return_cidr** (*Boolean*) – True or False

Return type String

Returns String

`ipaddresstools.ipaddresstools.`**`get_neighbor_ip`**(*ip_addr*, *cidr='30'*)

Function to figure out the IP's between neighbors address

Parameters

- **ip_addr** (*String*) – String format 192.168.1.1
- **cidr** (*String*) – CIDR value of 30, or 31

Return type Tuple

Returns returns Our IP and the Neighbor IP in a tuple

`ipaddresstools.ipaddresstools.`**`ip`**(*ip_addr*, *return_tuple=True*)

Function to check if a address is good

Parameters

- **ip_addr** (*String*) – String format 192.168.1.1
- **return_tuple** (*Boolean*) – True or False

Return type Tuple, or Boolean

Returns Tuple, or Boolean

`ipaddresstools.ipaddresstools.`**`ip_mask`**(*ip_addr_and_mask*, *return_tuple=True*)

Function to check if a address and CIDR mask is good

Parameters

- **ip_addr_and_mask** (*String*) – String format 192.168.1.1/24
- **return_tuple** (*Boolean*) – True or False

Return type Tuple, or Boolean

Returns Tuple, or Boolean

ipaddresstools.ipaddresstools.**mcast_ip**(*ip_addr*, *return_tuple=True*)

Function to check if a address is multicast

Parameters

- **ip_addr** (*String*) – String format 239.1.1.1
- **return_tuple** (*Boolean*) – True or False

Return type Tuple, or Boolean

Returns Tuple, or Boolean

ipaddresstools.ipaddresstools.**mcast_ip_mask**(*ip_addr_and_mask*, *return_tuple=True*)

Function to check if a address is multicast and that the CIDR mask is good

Parameters

- **ip_addr_and_mask** (*String*) – String format 239.0.0.0/24
- **return_tuple** (*Boolean*) – True or False

Return type Tuple, or Boolean

Returns Tuple, or Boolean

ipaddresstools.ipaddresstools.**number_check**(*check*, *return_number=True*)

Function to verify item entered is a number

Parameters

- **check** (*Anything*) – What to check
- **return_number** (*Boolean*) – True or False

Return type Boolean

Returns Check return_number for return options

ipaddresstools.ipaddresstools.**random_cidr_mask**(*lowest_mask=16*)

Function to generate a random CIDR value

Parameters **lowest_mask** (*Integer*) – An integer value for the lowest mask you want it to generate

Return type String

Returns A string of a random CIDR mask

ipaddresstools.ipaddresstools.**random_mcast_ip**()

Function to generate a random multicast ip address

Return type String

Returns A multicast IP Address

ipaddresstools.ipaddresstools.**random_mcast_ip_mask**(*lowest_mask=16*)

Function to generate a random multicast ip address and cidr mask pair in the following format X.X.X.X/X

Parameters **lowest_mask** (*Integer*) – An integer value for the lowest mask you want it to generate

Return type String

Returns A multicast IP Address and CIDR pair in the following format X.X.X.X/X

`ipaddresstools.ipaddresstools.`**`random_ucast_ip`**`()`

Function to generate a random unicast ip address

Return type String

Returns A unicast IP Address

`ipaddresstools.ipaddresstools.`**`random_ucast_ip_mask`**`(`*lowest_mask=16*`)`

Function to generate a random unicast ip address and cidr mask pair in the following format X.X.X.X/X

Parameters **`lowest_mask`** (*`Integer`*) – An integer value for the lowest mask you want it to generate

Return type String

Returns A unicast IP Address and CIDR pair in the following format X.X.X.X/X

`ipaddresstools.ipaddresstools.`**`subnet_range`**`(`*ip_net*, *cidr*`)`

Function to return a subnet range value from a IP address and CIDR pair

Parameters

- **`ip_net`** (*`String`*) – String format 192.168.1.1
- **`cidr`** (*`String`*) – CIDR value of 1 to 32

Return type Dict

Returns returns a dictionary of info

`ipaddresstools.ipaddresstools.`**`ucast_ip`**`(`*ip_addr*, *return_tuple=True*`)`

Function to check if a address is unicast

Parameters

- **`ip_addr`** (*`String`*) – String format 192.168.1.1
- **`return_tuple`** (*`Boolean`*) – True or False

Return type Tuple, or Boolean

Returns Tuple, or Boolean

`ipaddresstools.ipaddresstools.`**`ucast_ip_mask`**`(`*ip_addr_and_mask*, *return_tuple=True*`)`

Function to check if a address is unicast and that the CIDR mask is good

Parameters

- **`ip_addr_and_mask`** (*`String`*) – String format 192.168.1.1/24
- **`return_tuple`** (*`Boolean`*) – True or False

Return type Tuple, or Boolean

Returns Tuple, or Boolean

`ipaddresstools.ipaddresstools.`**`whole_subnet_maker`**`(`*ip_addr*, *cidr*`)`

Function to return a whole subnet value from a IP address and CIDR pair

Parameters

- **`ip_addr`** (*`String`*) – String format 192.168.1.1
- **`cidr`** (*`String`*) – CIDR value of 0 to 32

Return type String

Returns returns the corrected whole subnet

1.1.3 Module contents

Init for ipaddresstools

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