Rocky Enterprise Linux 9.2 Manual Pages on command 'address_families.7'

$ man address_families.7

ADDRESS_FAMILIES(7) Linux Programmer's Manual ADDRESS_FAMILIES(7)

NAME

address_families - socket address families (domains)

SYNOPSIS

#include <sys/types.h> /* See NOTES */

#include <sys/socket.h>

int socket(int domain, int type, int protocol);

DESCRIPTION

The domain argument of the socket(2) specifies a communication domain;

this selects the protocol family which will be used for communication.

These families are defined in <sys/socket.h>. The formats currently

understood by the Linux kernel include:

AF_UNIX, AF_LOCAL

Local communication For further information, see unix(7).

AF_INET

IPv4 Internet protocols. For further information, see ip(7).

AF_AX25

Amateur radio AX.25 protocol. For further information, see

ax25(4).

AF_IPX IPX - Novell protocols.

AF_APPLETALK

AppleTalk For further information, see ddp(7).

AF_NETROM

AX.25 packet layer protocol. For further information, see netrom(4), The Packet Radio Protocols and Linux ?https://www.tldp.org/HOWTO/AX25-HOWTO/x61.html? and the AX.25, NET/ROM, and ROSE network programming chapters of the Linux Amateur Radio AX.25 HOWTO ?https://www.tldp.org/HOWTO/AX25-HOWTO/x2107.html?.

AF_BRIDGE

Can't be used for creating sockets; mostly used for bridge links in rtnetlink(7) protocol commands.

AF_ATMPVC

Access to raw ATM Permanent Virtual Circuits (PVCs). For fur? ther information, see the ATM on Linux HOWTO ?https://www.tldp.org/HOWTO/text/ATM-Linux-HOWTO?.

AF_X25 ITU-T X.25 / ISO-8208 protocol. For further information, see x25(7).

AF_INET6

IPv6 Internet protocols. For further information, see ipv6(7).

AF_ROSE

RATS (Radio Amateur Telecommunications Society) Open Systems en? vironment (ROSE) AX.25 packet layer protocol. For further in? formation, see the resources listed for AF_NETROM.

AF_DECnet

DECet protocol sockets. See Documentation/networking/decnet.txt in the Linux kernel source tree for details.

AF_NETBEUI

Reserved for "802.2LLC project"; never used.

AF_SECURITY

This was a short-lived (between Linux 2.1.30 and 2.1.99pre2)

protocol family for firewall upcalls.

AF_KEY Key management protocol, originally developed for usage with IPsec (since Linux 2.1.38). This has no relation to keyctl(2) and the in-kernel key storage facility. See RFC 2367 PF_KEY Key Management API, Version 2 ?https://tools.ietf.org/html/rfc2367? for details.

AF_NETLINK

Kernel user interface device For further information, see netlink(7).

AF_PACKET

Low-level packet interface. For further information, see packet(7).

AF_ECONET

Acorn Econet protocol (removed in Linux 3.5). See the Econet documentation ?http://www.8bs.com/othrdnld/manuals/econet.shtml? for details.

AF_ATMSVC

Access to ATM Switched Virtual Circuits (SVCs) See the ATM on Linux HOWTO ?https://www.tldp.org/HOWTO/text/ATM-Linux-HOWTO? for details.

AF_RDS Reliable Datagram Sockets (RDS) protocol (since Linux 2.6.30). RDS over RDMA has no relation to AF_SMC or AF_XDP. For further information see rds(7), rds-rdma(7), and Documentation/network? ing/rds.txt in the Linux kernel source tree.

AF_IRDA

Socket interface over IrDA (moved to staging in Linux 4.14, re? moved in Linux 4.17). For further information see irda(7).

AF_PPPOX

Generic PPP transport layer, for setting up L2 tunnels (L2TP and PPPoE). See Documentation/networking/l2tp.txt in the Linux ker? nel source tree for details.

AF_WANPIPE

Legacy protocol for wide area network (WAN) connectivity that

was used by Sangoma WAN cards (called "WANPIPE"); removed in Linux 2.6.21.

AF_LLC Logical link control (IEEE 802.2 LLC) protocol, upper part of data link layer of ISO/OSI networking protocol stack (since Linux 2.4); has no relation to AF_PACKET. See chapter 13.5.3. Logical Link Control in Understanding Linux Kernel Internals (O'Reilly Media, 2006) and IEEE Standards for Local Area Net? works: Logical Link Control (The Institute of Electronics and Electronics Engineers, Inc., New York, New York, 1985) for de? tails. See also some historical notes ?https://wiki.linuxfoundation.org/networking/llc? regarding its development.

AF_IB InfiniBand native addressing (since Linux 3.11).

AF_MPLS

Multiprotocol Label Switching (since Linux 4.1); mostly used for configuring MPLS routing via netlink(7), as it doesn't expose ability to create sockets to user space.

AF_CAN Controller Area Network automotive bus protocol (since Linux 2.6.25). See Documentation/networking/can.rst in the Linux ker? nel source tree for details.

AF_TIPC

TIPC, "cluster domain sockets" protocol (since Linux 2.6.16). See TIPC Programmer's Guide ?http://tipc.io/programming.html? and the protocol description ?http://tipc.io/protocol.html? for details.

AF_BLUETOOTH

Bluetooth low-level socket protocol (since Linux 3.11). See Bluetooth Management API overview ?https://git.kernel.org /pub/scm/bluetooth/bluez.git/tree/doc/mgmt-api.txt? and An Introduction to Bluetooth Programming by Albert Huang ?https://people.csail.mit.edu/albert/bluez-intro/? for details.

AF_IUCV

IUCV (inter-user communication vehicle) z/VM protocol for hyper?

visor-guest interaction (since Linux 2.6.21); has no relation to AF_VSOCK and/or AF_SMC See IUCV protocol overview ?https://www.ibm.com/support/knowledgecenter/en/SSB27U_6.4.0 /com.ibm.zvm.v640.hcpb4/iucv.htm? for details.

AF_RXRPC

Rx, Andrew File System remote procedure call protocol (since Linux 2.6.22). See Documentation/networking/rxrpc.txt in the Linux kernel source tree for details.

AF_ISDN

New "modular ISDN" driver interface protocol (since Linux 2.6.27). See the mISDN wiki ?http://www.misdn.eu/wiki/Main_Page/? for details.

AF_PHONET

Nokia cellular modem IPC/RPC interface (since Linux 2.6.31). See Documentation/networking/phonet.txt in the Linux kernel source tree for details.

AF_IEEE802154

IEEE 802.15.4 WPAN (wireless personal area network) raw packet protocol (since Linux 2.6.31). See Documentation/network? ing/ieee802154.txt in the Linux kernel source tree for details.

AF_CAIF

Ericsson's Communication CPU to Application CPU interface (CAIF) protocol (since Linux 2.6.36). See Documentation/network? ing/caif/Linux-CAIF.txt in the Linux kernel source tree for de? tails.

AF_ALG Interface to kernel crypto API (since Linux 2.6.38). See Docu? mentation/crypto/userspace-if.rst in the Linux kernel source tree for details.

AF_VSOCK

VMWare VSockets protocol for hypervisor-guest interaction (since Linux 3.9); has no relation to AF_IUCV and AF_SMC. For further information, see vsock(7).

AF_KCM KCM (kernel connection multiplexer) interface (since Linux 4.6).

See Documentation/networking/kcm.txt in the Linux kernel source tree for details.

AF_QIPCRTR

Qualcomm IPC router interface protocol (since Linux 4.7).

AF_SMC SMC-R (shared memory communications over RDMA) protocol (since Linux 4.11), and SMC-D (shared memory communications, direct memory access) protocol for intra-node z/VM quest interaction (since Linux 4.19); has no relation to AF_RDS, AF_IUCV or AF_VSOCK. See RFC 7609 IBM's Shared Memory Communications over RDMA (SMC-R) Protocol ?https://tools.ietf.org/html/rfc7609? for details regarding SMC-R. See SMC-D Reference Information ?https://www-01.ibm.com/software/network/commserver/SMC-D/index.html? for details regarding SMC-D.

AF_XDP XDP (express data path) interface (since Linux 4.18). See Docu? mentation/networking/af_xdp.rst in the Linux kernel source tree for details.

SEE ALSO

socket(2), socket(7)

COLOPHON

This page is part of release 5.10 of the Linux man-pages project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at https://www.kernel.org/doc/man-pages/.