

Nucleus NET® API for Linux®

OS Changer® tools, hide the RTOS difference and allows developers to focus on the product development. *OS Changer* simplifies porting and also saves you from future porting efforts.

The *OS Changer* family of products gives users the freedom to switch RTOSes and greatly re-use existing code base to enable your product to get to the market faster with low development costs. These products come in the form of individual API libraries that are fully scalable and readily usable in your application. OS Changer does not require ANY modifications to Linux products.

- **Get your Nucleus NET software instantly ported to Linux RTOS**
- **Highly optimized and requires very small memory footprint**
- **Supports various Linux distributions**
- **Royalty-free software**

How to use OS Changer?

- ✓ Use `oschanger.h` instead of the Nucleus NET header files in all your source code
- ✓ Define pre-processor flag to indicate target RTOS, Tools and other options
- ✓ Configure Linux kernel to match with your board configuration
- ✓ Compile and link your application using appropriate development tools and include OS Changer libraries that you need for your application
- ✓ Resolve all compiler and linker errors
- ✓ Port low-level drivers to target RTOS if one is not provided along with Linux
- ✓ Download the application image to the target system and test

Nucleus NET APIs supported for Linux can be found in the table on the next page ...

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Table - Supported Nucleus NET API's for Linux

Nucleus NET APIs	Support	Remarks
NU_Abort	Yes	
NU_Accept	Yes	
NU_Add_DNS_Server	Yes	
NU_Add_Route	Yes	
NU_Attach_IP_To_Device	Yes	
NU_Bind	Yes	
NU_Close_Socket	Yes	
NU_Connect	Yes	
NU_Delete_DNS_Server	Yes	
NU_Delete_Route	Yes	
NU_Detach_IP_From_Device	Yes	
NU_Dhcp	Yes	
NU_Fcntl	Yes	
NU_FD_Check	Yes	
NU_FD_Init	Yes	
NU_FD_Reset	Yes	
NU_FD_Set	Yes	
NU_Get_Host_By_Addr	Yes	
NU_Get_Host_By_Name	Yes	
NU_Get_Peer_Name	Yes	
NU_Getsockopt	Yes	
NU_Get_Default_TTL	Yes	
NU_Get_IP_Forwarding	Yes	
NU_Get_Sock_Name	Yes	
NU_Init_Devices	Yes	
NU_ioctl	Yes	
NU_Is_Connected	Yes	
NU_Listen	Yes	
NU_Recv	Yes	
NU_Recv_From	Yes	
NU_Select	Yes	
NU_Send	Yes	
NU_Send_To	Yes	
NU_Setsockopt	Yes	
NU_Set_Default_TTL	Yes	
NU_Set_IP_Forwarding	Yes	
NU_Socket	Yes	
NU_ioctl_FIONREAD	Yes	
NU_ioctl_SIOCDARP	Yes	
NU_ioctl_SIOCGARP	Yes	

The logo for OS Changer, featuring the word "changer" in a stylized, lowercase font with a yellow-to-orange gradient and a drop shadow effect. The letters are set against a white, rounded rectangular background that also has a slight gradient and shadow.

Nucleus NET APIs	Support	Remarks
NU_loctl_SIOCGIFADDR	Yes	
NU_loctl_SIOCGIFDSTADDR	Yes	
NU_loctl_SIOCGETVLAN	Yes	
NU_loctl_SIOCGHWCAP	Yes	
NU_loctl_SIOCIFREQ	Yes	
NU_loctl_SIOCSARP	Yes	
NU_loctl_SIOCSHWOPTS	Yes	
NU_loctl_SIOCSIFADDR	Yes	
NU_loctl_SIOCSPHYSADDR	Yes	
NU_loctl_SIOCSETVLAN	Yes	
NU_Getsockopt_IP_BROADCAST_IF	Yes	
NU_Getsockopt_IP_HDRINCL	Yes	
NU_Getsockopt_IP_MULTICAST_IF	Yes	
NU_Getsockopt_IP_MULTICAST_TTL	Yes	
NU_Getsockopt_IP_RECVIFADDR	Yes	
NU_Getsockopt_IP_TOS	Yes	
NU_Getsockopt_IP_TTL	Yes	
NU_Getsockopt_SO_BROADCAST	Yes	
NU_Getsockopt_SO_KEEPALIVE	Yes	
NU_Getsockopt_SO_LINGER	Yes	
NU_Getsockopt_SO_REUSEADDR	Yes	
NU_Getsockopt_TCP_NODELAY	Yes	
NU_Setsockopt_IP_ADD_MEMBERSHIP	Yes	
NU_Setsockopt_IP_DROP_MEMBERSHIP	Yes	
NU_Setsockopt_IP_BROADCAST_IF	Yes	
NU_Setsockopt_IP_HDRINCL	Yes	
NU_Setsockopt_IP_MULTICAST_IF	Yes	
NU_Setsockopt_IP_MULTICAST_TTL	Yes	
NU_Setsockopt_IP_RECVIFADDR	Yes	
NU_Setsockopt_IP_TTL	Yes	
NU_Setsockopt_SO_KEEPALIVE	Yes	
NU_Setsockopt_TCP_NODELAY	Yes	
NU_Setsockopt_SO_BROADCAST	Yes	
NU_Setsockopt_SO_LINGER	Yes	
NU_Setsockopt_SO_REUSEADDR	Yes	

More APIs will be supported in future releases of OS Changer



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