New Features for Cisco IOS-XE 17.2.1

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New Features for Cisco IOS-XE 17.2.1

The following features are introduced for the ESR6300.

Serial Port Support

Additional protocol capabilities have been added to the ESR6300 to bring it into feature compatibility with the IR1101. These include:

- SCADA Gateway functionality (IEC10x and DNP3)
- Raw Socket (TCP and UDP)
- Line Relay
- Reverse Telnet

All of the configuration and show commands will be the same as are available on the IR1101 platform.

https://www.cisco.com/c/en/us/td/docs/routers/access/1101/software/configuration/guide/b_IR1101config.html

Boot from the USB

Support has been added in order to boot the device from configuration files located on the pluggable USB. Customized startup configuration files can be booted from IOS or from ROMMON.

Booting from IOS

The following configuration steps need to be taken in order to boot from the USB.

To display the boot options:

```
Router(config)#boot config ?
  bootflash:  URL of the config file
  flash:      URL of the config file
```

```
  nvram:      URL of the config file
  usbflash0:  URL of the config file
  webui:      URL of the config file
```

The syntax for the boot command is:

boot config usbflash0:<*file name*>

For example:

```
Router(config)#boot config usbflash0:startup-config
Router(config)#
Router#write memory
Building configuration...
[OK]
*Feb 10 10:20:11.990: %SYS-2-PRIVCFG_ENCRYPT: Successfully encrypted private config file
```

The environment variable CONFIG_FILE in the following example confirms that the startup-config is set to boot from usbflash0.

```
Router#show boot
BOOT variable =
CONFIG_FILE variable = usbflash0:startup-config
BOOTLDR variable does not exist
Configuration register is 0x1820
Standby not ready to show bootvar
```

Booting from ROMMON

The following configuration steps need to be taken in order to boot from the USB.

From the ROMMON prompt, execute **set CONFIG_FILE=usbflash0:** <*filename*>

For example:

```
rommon 2 > set CONFIG_FILE=usbflash0:my_startupcfg
rommon 3 > sync
rommon 4 > set
PS1=rommon ! >
MCU_UPGRADE=SKIP
THRPUT=
LICENSE_BOOT_LEVEL=
RET_2_RTS=
MCP_STARTUP_TRACEFLAGS=00000000:00000000
BSI=0
RANDOM_NUM=1275114933
BOOT=flash:Jun5_1.SSA,12
RET_2_RCALTS=951454376
CONFIG_FILE=usbflash0:my_startupcfg
```

Continue booting the IOS image as usual from the ROMMON prompt.

Booting from the USB Feature Summary

- Once the CONFIG_FILE is set to a non-default value, the **nvram:startup-config** command is aliased to this new location.
- Any change made to the config file in usbflash will be reflected in nvram:startup-config as well.
- The EXEC command **erase nvram:startup-config** erases the contents of NVRAM, and deletes the file referenced by CONFIG_FILE variable.

- If the USB is unplugged after setting the **boot config usbflash0:** <*filename*> variable, then the day 0 default configuration will take effect.
- When the configuration is saved using the **copy system:running-config nvram:startup-config** command, the device saves a complete version of the configuration file to the location specified by the CONFIG_FILE environment variable, and a distilled version to NVRAM. A distilled version is one that does not contain access list information.