Rocky Enterprise Linux 9.2 Manual Pages on command 'nm-settings-ifcfg-rh.5'

$ man nm-settings-ifcfg-rh.5

NM-SETTINGS-IFCFG-RH(5) Configuration NM-SETTINGS-IFCFG-RH(5)

NAME

nm-settings-ifcfg-rh - Description of ifcfg-rh settings plugin

DESCRIPTION

NetworkManager is based on the concept of connection profiles that contain network configuration (see nm-settings(5) for details). The profiles can be stored in various formats. NetworkManager uses plugins for reading and writing the data. The plugins can be configured in NetworkManager.conf(5).

The ifcfg-rh plugin is used on the Fedora and Red Hat Enterprise Linux distributions to read/write configuration from/to the traditional /etc/sysconfig/network-scripts/ifcfg-* files. Each NetworkManager connection maps to one ifcfg-* file, with possible usage of keys-* for passwords, route-* for static IPv4 routes and route6-* for static IPv6 routes. The plugin currently supports reading and writing Ethernet, Wi-Fi, InfiniBand, VLAN, Bond, Bridge, and Team connections. Unsupported connection types (such as WWAN, PPPoE, VPN, or ADSL) are handled by keyfile plugin (nm-settings-keyfile(5)). The main reason for

using ifcfg-rh plugin is the compatibility with legacy configurations for ifup and ifdown (initscripts).

FILE FORMAT

The ifcfg-rh config format is a simple text file containing VARIABLE="value" lines. The format is described in sysconfig.txt of initscripts package. Note that the configuration files may be sourced by initscripts, so they must be valid shell scripts. That means, for instance, that # character can be used for comments, strings with spaces must be quoted, special characters must be escaped, etc. Users can create or modify the ifcfg-rh connection files manually, even if that is not the recommended way of managing the profiles. However, if they choose to do that, they must inform NetworkManager about their changes (for example via nmcli con (re)load).

Some ifcfg-rh configuration examples:.

Simple DHCP ethernet configuration:

NAME=ethernet

UUID=1c4ddf70-01bf-46d6-b04f-47e842bd98da

TYPE=Ethernet

BOOTPROTO=dhcp

DEFROUTE=yes

PEERDNS=yes

PEERROUTES=yes

IPV4_FAILURE_FATAL=no

ONBOOT=yes

Simple ethernet configuration with static IP:

TYPE=Ethernet

BOOTPROTO=none

IPADDR=10.1.0.25

PREFIX=24

GATEWAY=10.1.0.1

DEFROUTE=yes

IPV4_FAILURE_FATAL=no

IPV6INIT=yes

IPV6_AUTOCONF=yes

IPV6_DEFROUTE=yes

IPV6_PEERDNS=yes

IPV6_PEERROUTES=yes

IPV6_FAILURE_FATAL=no

NAME=ethernet-em2

UUID=51bb3904-c0fc-4dfe-83b2-0a71e7928c13

DEVICE=em2

ONBOOT=yes

WPA2 Enterprise WLAN (TTLS with inner MSCHAPV2 authentication):

ESSID="CompanyWLAN"

MODE=Managed

KEY_MGMT=WPA-EAP

TYPE=Wireless

IEEE_8021X_EAP_METHODS=TTLS

IEEE_8021X_IDENTITY=joe

IEEE_8021X_PASSWORD_FLAGS=ask

IEEE_8021X_INNER_AUTH_METHODS=MSCHAPV2

IEEE_8021X_CA_CERT=/home/joe/.cert/company.crt

BOOTPROTO=dhcp

DEFROUTE=yes

PEERDNS=yes

PEERROUTES=yes

IPV4_FAILURE_FATAL=no

IPV6INIT=no

NAME=MyCompany

UUID=f79848ff-11a6-4810-9e1a-99039dea84c4

ONBOOT=yes

Bridge and bridge port configuration:

ifcfg-bridge: ifcfg-bridge-port:

NAME=bridge NAME=bridge007-port-eth0

UUID=4be99ce0-c5b2-4764-8b77-ec226e440125 UUID=3ad56c4a-47e1-419b-b0d4-8ad86eb967a3

DEVICE=bridge007 DEVICE=eth0

STP=yes ONBOOT=yes

TYPE=Bridge TYPE=Ethernet

BRIDGING_OPTS=priority=32768 BRIDGE=bridge007

ONBOOT=yes

BOOTPROTO=dhcp

Bonding configuration:

ifcfg-BOND: ifcfg-BOND-slave:

NAME=BOND NAME=BOND-slave

UUID=b41888aa-924c-450c-b0f8-85a4f0a51b4a UUID=9bb048e4-286a-4cc3-b104-007dbd20decb

DEVICE=bond100 DEVICE=eth0

BONDING_OPTS="mode=balance-rr miimon=100" ONBOOT=yes

TYPE=Bond TYPE=Ethernet

BONDING_MASTER=yes MASTER=bond100

ONBOOT=yes SLAVE=yes

BOOTPROTO=dhcp

Team and team port configuration:

ifcfg-my_team0:

DEVICE=team0

TEAM_CONFIG="{ \"device\": \"team0\", \"runner\": {\"name\": \"roundrobin\"}, \"ports\": {\"eth1\": {}, \"eth2\": {}} }"

DEVICETYPE=Team

BOOTPROTO=dhcp

NAME=team0-profile

UUID=1d3460a0-7b37-457f-a300-fe8d92da4807

ONBOOT=yes

ifcfg-my_team0_slave1:

NAME=team0-slave1

UUID=d5aed298-c567-4cc1-b808-6d38ecef9e64

DEVICE=eth1

ONBOOT=yes

TEAM_MASTER=team0

DEVICETYPE=TeamPort

ifcfg-my_team0_slave2:

NAME=team0-slave2

UUID=94e75f4e-e5ad-401c-8962-31e0ae5d2215

DEVICE=eth2

ONBOOT=yes

TEAM_MASTER=team0

DEVICETYPE=TeamPort

The UUID values in the config files must be unique. You can use uuidgen command line tool to generate such values. Alternatively, you can leave out UUID entirely. In that case NetworkManager will generate a UUID based on the file name.

DIFFERENCES AGAINST INITSCRIPTS

The main differences of NetworkManager ifcfg-rh plugin and traditional initscripts are:

NM_CONTROLLED=yes|no

NM_CONTROLLED is NetworkManager-specific variable used by NetworkManager for determining whether the device of the ifcfg file should be managed. NM_CONTROLLED=yes is supposed if the variable is not present in the file. Note that if you have more ifcfg files for a single device, NM_CONTROLLED=no in one of the files will cause the device not to be managed. The profile may not even be the active one.

New variables

NetworkManager has introduced some new variable, not present in initscripts, to be able to store data for its new features. The variables are marked as extensions in the tables below.

Semantic change of variables and differences

NetworkManager changes the semantics for a few variables and there are other behavioral differences.

? PEERDNS - initscripts interpret PEERDNS=no to mean "never touch resolv.conf". NetworkManager interprets it to say "never add automatic (DHCP, PPP, VPN, etc.) nameservers to resolv.conf".

? ONBOOT - initscripts use ONBOOT=yes to mark the devices that are to be activated during boot. NetworkManager extends this to also mean that this profile can be used for auto-connecting at

any time.

? BOOTPROTO - NetworkManager supports traditional values none (static), dhcp. But it also allows additional values to enable new addressing methods. They are autoip for IPv4 link-local addressing using Avahi daemon and shared for connection sharing. When shared is used, NetworkManager assigns the interface 10.42.0.1, or it uses the first static address, if configured.

? HWADDR - initscripts compare the currently set hardware address of a device, while NetworkManager considers the permanent one.

? NOZEROCONF - initscripts add an on-link route to 169.254.0.0/16 for ethernet profiles that don't explicitly opt-out by setting NOZEROCONF variable. NetworkManager does not do that. Instead a static, manual route with scope=253 (link) should be added to get that behavior.

See the next section for detailed mapping of NetworkManager properties and ifcfg-rh variables. Variable names, format and usage differences in NetworkManager and initscripts are documented in the tables below.

DETAILS

ifcfg-rh plugin variables marked with (+) are NetworkManager specific extensions not understood by traditional initscripts.

Table 1. 6lowpan setting

Table 2. 802-11-wireless setting

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???????????????

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

??
???????????????

?ssid ? ESSID ? ? SSID of Wi-Fi ?

? ? ? ? network. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? ESSID="Quick ?

? ? ? ? Net" ?

??

???????????????

?mode ? MODE ? ? Wi-Fi network ?

? ? ? ? mode. ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? Ad-Hoc, Managed ?

? ? ? ? (Auto) [case ?

? ? ? ? insensitive] ?

??

???????????????

?band ? BAND(+) ? ? BAND alone is ?

? ? ? ? honored, but ?

? ? ? ? CHANNEL ?

? ? ? ? overrides BAND ?

? ? ? ? since it implies ?

? ? ? ? a band. ?

? ? ? ? ?

? ? ? ? Example: BAND=bg ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? a, bg ?

??

???????????????

?channel ? CHANNEL ? ? Channel used for ?

? ? ? ? the Wi-Fi ?

? ? ? ? communication. ?

? ? ? ? Channels greater ?

? ? ? ? than 14 mean "a" ?

? ? ? ? band, otherwise ?

? ? ? ? the band is ?

? ? ? ? "bg". ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? CHANNEL=6 ?

???

???????????????

?bssid ? BSSID(+) ? ? Restricts ?

? ? ? ? association only ?

? ? ? ? to a single AP. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? BSSID=00:1E:BD:64:83:21 ?

???

???????????????

?rate ? (none) ? ? This property is not ?

? ? ? ? handled by ifcfg-rh ?

? ? ? ? plugin. ?

???

???????????????

?tx-power ? (none) ? ? This property is not ?

? ? ? ? handled by ifcfg-rh ?

? ? ? ? plugin. ?

???

???????????????

?mac-address ? HWADDR ? ? Hardware address of the ?
? ? ? ? device in traditional ?
? ? ? ? hex-digits-and-colons ?
? ? ? ? notation (e.g. ?
? ? ? ? 00:22:68:14:5A:05). ?
? ? ? ? Note that for ?
? ? ? ? initscripts this is the ?
? ? ? ? current MAC address of ?
? ? ? ? the device as found ?
? ? ? ? during ifup. For ?
? ? ? ? NetworkManager this is ?
? ? ? ? the permanent MAC ?
? ? ? ? address. Or in case no ?
? ? ? ? permanent MAC address ?
? ? ? ? exists, the MAC address ?
? ? ? ? initially configured on ?
? ? ? ? the device. ?

???
???????????????

?cloned-mac-address ? MACADDR ? ? Cloned (spoofed) MAC ?
? ? ? ? address in traditional ?
? ? ? ? hex-digits-and-colons ?
? ? ? ? notation (e.g. ?
? ? ? ? 00:22:68:14:5A:99). ?

???
???????????????

?generate-mac-address-mask ? GENERATE_MAC_ADDRESS_MASK(+) ? ? the MAC address mask
?
? ? ? ? for generating ?
? ? ? ? randomized and stable ?
? ? ? ? cloned-mac-address. ?

??
???????????????
?mac-address-blacklist ? HWADDR_BLACKLIST(+) ? ? It denies usage of the ?
? ? ? ? connection for any ?
? ? ? ? device whose address is ?
? ? ? ? listed. ?

??
???????????????
?seen-bssids ? (none) ? ? This property is not ?
? ? ? ? handled by ifcfg-rh ?
? ? ? ? plugin. ?

??
???????????????
?mtu ? MTU ? ? MTU of the wireless ?
? ? ? ? interface. ?

??
???????????????
?hidden ? SSID_HIDDEN(+) ? ? Whether the network ?
? ? ? ? hides the SSID. ?

??
???????????????
?powersave ? POWERSAVE(+) ? ? Enables or disables ?
? ? ? ? Wi-Fi power saving. ?
? ? ? ? ?
? ? ? ? Example: ?
? ? ? ? POWERSAVE=enable ?
? ? ? ? ?
? ? ? ? Allowed values: ?

? ? ? ? default, ignore, ?

? ? ? ? enable, disable ?

??
???????????????

?mac-address-randomization ? MAC_ADDRESS_RANDOMIZATION(+) ? ? Enables or disables ?

? ? ? ? Wi-Fi MAC address ?

? ? ? ? randomization. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? MAC_ADDRESS_RANDOMIZATION=always ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? default, never, always ?

??
???????????????

?security ? (none) ? ? This property is deprecated and ?

? ? ? ? not handled by ifcfg-rh-plugin. ?

??
???????????????

?ap-isolation ? AP_ISOLATION(+) ? missing variable ? Whether AP isolation is enabled ?

? ? ? means global ? ?

? ? ? default ? Allowed values: "yes", "no" ?

??
???????????????

Table 3. 802-11-wireless-security setting

??

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

??

?key-mgmt	? KEY_MGMT(+)	?	? Key management	?
?	?	?	? method.	?
?	?	?	?	?
?	?	?	? Allowed values:	?
?	?	?	? none, ieee8021x,	?
?	?	?	? owe, wpa-psk,	?
?	?	?	? sae, wpa-eap,	?
?	?	?	? wpa-eap-suite-b-192	?

??

?wep-tx-keyidx	? DEFAULTKEY	? 1	? Index of active WEP	?
?	?	?	? key. Note that in	?
?	?	?	? ifcfg format the	?
?	?	?	? index starts	?
?	?	?	? counting at 1,	?
?	?	?	? while	?
?	?	?	? NetworkManager API	?
?	?	?	? otherwise is zero	?
?	?	?	? based.	?
?	?	?	?	?
?	?	?	? Allowed values: 1,	?
?	?	?	? 2, 3, 4	?

??

?auth-alg	? SECURITYMODE(+)	?	? Authentication	?
?	?	?	? algorithm for WEP.	?
?	?	?	?	?
?	?	?	? Allowed values:	?
?	?	?	? restricted, open,	?
?	?	?	? leap	?

??

?proto ? WPA_ALLOW_WPA(+), ? no ? Allowed WPA ?

? ? WPA_ALLOW_WPA2(+) ? ? protocols, WPA and ?

? ? ? ? WPA2 (RSN). ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? yes, no ?

??

?pairwise ? CIPHER_PAIRWISE(+) ? ? Restrict pairwise ?

? ? ? ? encryption ?

? ? ? ? algorithms, ?

? ? ? ? specified as a ?

? ? ? ? space separated ?

? ? ? ? list. ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? CCMP, TKIP ?

??

?group ? CIPHER_GROUP(+) ? ? Restrict ?

? ? ? ? group/broadcast ?

? ? ? ? encryption ?

? ? ? ? algorithms, ?

? ? ? ? specified as a ?

? ? ? ? space separated ?

? ? ? ? list. ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? CCMP, TKIP, WEP40, ?

? ? ? ? WEP104 ?

?pmf ? PMF(+) ? ? Enables or disables ?

? ? ? ? PMF (802.11w) ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? PMF=required ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? default, disable, ?

? ? ? ? optional, required ?

??

?leap-username ? IEEE_8021X_IDENTITY(+) ? ? Login name for ?

? ? ? ? LEAP. ?

??

?wep-key0 ? KEY1, ? ? The first WEP key ?

? ? KEY_PASSPHRASE1(+) ? ? (used in most ?

? ? ? ? networks). See also ?

? ? ? ? DEFAULTKEY for key ?

? ? ? ? index. ?

??

?wep-key1 ? KEY2, ? ? WEP key with index ?

? ? KEY_PASSPHRASE2(+) ? ? 1. See also ?

? ? ? ? DEFAULTKEY for key ?

? ? ? ? index. ?

??

?wep-key2 ? KEY3, ? ? WEP key with index ?

? ? KEY_PASSPHRASE3(+) ? ? 2. See also ?

? ? ? ? DEFAULTKEY for key ?

? ? ? ? index. ?

??

?wep-key3 ? KEY4, ? ? WEP key with index ?

? ? KEY_PASSPHRASE4(+) ? ? 3. See also ?

? ? ? ? DEFAULTKEY for key ?

? ? ? ? index. ?

??

?wep-key-flags ? WEP_KEY_FLAGS(+) ? ? Password flags for ?

? ? ? ? KEY<i>, ?

? ? ? ? KEY_PASSPHRASE<i> ?

? ? ? ? password. (see the ?

? ? ? ? section called ?

? ? ? ? ?Secret flags? for ?

? ? ? ? _FLAGS values) ?

??

?psk ? WPA_PSK ? ? Pre-Shared-Key for ?

? ? ? ? WPA networks. ?

??

?psk-flags ? WPA_PSK_FLAGS(+) ? ? Password flags for ?

? ? ? ? WPA_PSK_FLAGS. (see ?

? ? ? ? the section called ?

? ? ? ? ?Secret flags? for ?

? ? ? ? _FLAGS values) ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? WPA_PSK_FLAGS=user ?

??

?leap-password ? IEEE_8021X_PASSWORD(+) ? ? Password for LEAP. ?

? ? ? ? It can also go to ?

? ? ? ? "key-" lookaside ?

? ? ? ? file, or it can be ?

? ? ? ? owned by a secret ?

? ? ? ? agent. ?

??

?leap-password-flags ? IEEE_8021X_PASSWORD_FLAGS(+) ? ? Password flags for ?

? ? ? ? IEEE_8021X_PASSWORD_FLAGS. ?

? ? ? ? (see the section ?

? ? ? ? called ?Secret ?

? ? ? ? flags? for _FLAGS ?

? ? ? ? values) ?

??

?wep-key-type ? KEY<i> or ? ? KEY is used for "key" type ?

? ? KEY_PASSPHRASE<i>(+); ? ? (10 or 26 hexadecimal ?

? ? KEY_TYPE(+) ? ? characters, or 5 or 13 ?

? ? ? ? character string prefixed ?

? ? ? ? with "s:"). KEY_PASSPHRASE ?

? ? ? ? is used for WEP ?

? ? ? ? passphrases. KEY_TYPE ?

? ? ? ? specifies the key type and ?

? ? ? ? can be either 'key' or ?

? ? ? ? 'passphrase'. KEY_TYPE is ?

? ? ? ? redundant and can be ?

? ? ? ? omitted. ?

? ? ? ? ?

? ? ? ? Example: KEY1=s:ahoj, ?

? ? ? ? KEY1=0a1c45bc02, ?

? ? ? ? KEY_PASSPHRASE1=mysupersecretkey ?

??

?wps-method ? WPS_METHOD ? ? Used to control the WPS methods ?

? ? ? ? to be used Valid values are ?

? ? ? ? "default", "auto", "disabled", ?

? ? ? ? "pin" and "pbc". If omitted, ?

? ? ? ? whatver the AP announces is ?

? ? ? ? used. ?

? ? ? ? ?

? ? ? ? Example: WPS_METHOD=disabled, ?

? ? ? ? WPS_METHOD="pin pbc" ?

??

?fils ? FILS(+) ? ? Enables or disables FILS ?

? ? ? ? (802.11ai) ?

? ? ? ? ?

? ? ? ? Example: FILS=required ?

? ? ? ? ?

? ? ? ? Allowed values: default, ?

? ? ? ? disable, optional, required ?

??

Table 4. 802-1x setting

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??

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

??

??

?eap ? IEEE_8021X_EAP_METHODS(+) ? ? EAP method for

?

? ? ? ? 802.1X ?

? ? ? ? authentication. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? IEEE_8021X_EAP_METHODS=PEAP ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? "LEAP", "PWD", ?

? ? ? ? "TLS", "PEAP", ?

? ? ? ? "TTLS", "FAST" ?

??

??

?identity ? IEEE_8021X_IDENTITY(+) ? ? Identity for EAP ?

? ? ? ? authentication methods. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? IEEE_8021X_IDENTITY=itsme ?

??

??

?anonymous-identity ? IEEE_8021X_ANON_IDENTITY(+) ? ? Anonymous identity for EAP

?

? ? ? ? authentication methods. ?

??

??

?pac-file ? IEEE_8021X_PAC_FILE(+) ? ? File with PAC (Protected

?

? ? ? ? Access Credential) for ?

? ? ? ? EAP-FAST. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? IEEE_8021X_PAC_FILE=/home/joe/my-fast.pac ?

??

??

?ca-cert ? IEEE_8021X_CA_CERT(+) ? ? CA certificate for EAP.
?
? ? ? ? ?
? ? ? ? Example: ?
? ? ? ? IEEE_8021X_CA_CERT=/home/joe/cacert.crt ?

??
??

?ca-path ? IEEE_8021X_CA_PATH(+) ? ? The search path for the certificate.
?

??
??

?subject-match ? IEEE_8021X_SUBJECT_MATCH(+) ? ? Substring to match subject of
server ?
? ? ? ? certificate against. ?
? ? ? ? ?
? ? ? ? Example: IEEE_8021X_SUBJECT_MATCH="Red
?
? ? ? ? Hat" ?

??
??

?altsubject-matches ? IEEE_8021X_ALTSUBJECT_MATCHES(+) ? ? List of strings to be
matched against the ?
? ? ? ? altSubjectName. ?
? ? ? ? ?
? ? ? ? Example: ?
? ? ? ?
IEEE_8021X_ALTSUBJECT_MATCHES="s1.domain.cc" ?

??
??

?domain-suffix-match ? IEEE_8021X_DOMAIN_SUFFIX_MATCH(+) ? ? Suffix to match domain of server certificate ?

? ? ? ? against. ?

??

?domain-match ? IEEE_8021X_DOMAIN_MATCH(+) ? ? Value to match domain of server certificate ?

? ? ? ? against. ?

??

?client-cert ? IEEE_8021X_CLIENT_CERT(+) ? ? Client certificate for EAP. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? IEEE_8021X_CLIENT_CERT=/home/joe/mycert.crt ?

??

?phase1-peapver ? IEEE_8021X_PEAP_VERSION(+) ? ? Use to force a specific PEAP version. ?

? ? ? ? ?

? ? ? ? Allowed values: 0, 1 ?

??

?phase1-peaplabel ? IEEE_8021X_PEAP_FORCE_NEW_LABEL(+) ? no ? Use to force the new PEAP label during key ?

? ? ? ? derivation. ?

? ? ? ? ?

? ? ? ? Allowed values: yes, no ?

??
???

?phase1-fast-provisioning ? IEEE_8021X_FAST_PROVISIONING(+) ? ? Enable in-line provisioning of EAP-FAST ?

? ? ? ? credentials. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? IEEE_8021X_FAST_PROVISIONING="allow-auth ?

? ? ? ? allow-unauth" ?

? ? ? ? ?

? ? ? ? Allowed values: space-separated list of ?

? ? ? ? these values [allow-auth, allow-unauth] ?

??
???

?phase1-auth-flags ? IEEE_8021X_PHASE1_AUTH_FLAGS(+) ? ? Authentication flags for the supplicant ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? IEEE_8021X_PHASE1_AUTH_FLAGS="tls-1-0-disable ?

? ? ? ? tls-1-1-disable" ?

? ? ? ? ?

? ? ? ? Allowed values: space-separated list of ?

? ? ? ? authentication flags names ?

??
???

?phase2-auth ? IEEE_8021X_INNER_AUTH_METHODS(+) ? ? Inner non-EAP authentication methods for TTLS ?

? ? ? ? or the inner EAP authentication method for ?

? ? ? ? PEAP. IEEE_8021X_INNER_AUTH_METHODS can
?
? ? ? ? contain values both for 'phase2-auth' and ?
? ? ? ? 'phase2-autheap' properties. ?
? ? ? ? ?
? ? ? ? Example:
IEEE_8021X_INNER_AUTH_METHODS=PAP ?
? ? ? ? ?
? ? ? ? Allowed values: "PAP", "CHAP", "MSCHAP", ?
? ? ? ? "MSCHAPV2", "GTC", "OTP", "MD5" and "TLS" ?

??
??

?phase2-autheap ? IEEE_8021X_INNER_AUTH_METHODS(+) ? ? Inner EAP-based authentication methods. Note ?
? ? ? ? that IEEE_8021X_INNER_AUTH_METHODS is also
?
? ? ? ? used for 'phase2-auth' values. ?
? ? ? ? ?
? ? ? ? Example: ?
? ? ? ? IEEE_8021X_INNER_AUTH_METHODS="MSCHAPV2
?
? ? ? ? EAP-TLS" ?
? ? ? ? ?
? ? ? ? Allowed values: "EAP-MD5", "EAP-MSCHAPV2", ?
? ? ? ? "EAP-GTC", "EAP-OTP" and "EAP-TLS" ?

??
??

?phase2-ca-path ? IEEE_8021X_PHASE2_CA_PATH(+) ? ? The search path for the certificate. ?

??

???

?phase2-subject-match ? IEEE_8021X_PHASE2_SUBJECT_MATCH(+) ? ? Substring to match subject of server ?

? ? ? ? certificate against. ?

? ? ? ? ?

? ? ? ? Example: IEEE_8021X_PHASE2_SUBJECT_MATCH="Red ?

? ? ? ? Hat" ?

???

???

?phase2-altsubject-matches ? IEEE_8021X_PHASE2_ALTSUBJECT_MATCHES(+) ? ?

?

???

???

?phase2-domain-suffix-match ? IEEE_8021X_PHASE2_DOMAIN_SUFFIX_MATCH(+) ? ? Suffix to match domain of server certificate ?

? ? ? ? for phase 2 against. ?

???

???

?phase2-domain-match ? IEEE_8021X_PHASE2_DOMAIN_MATCH(+) ? ? Value to match domain of server certificate ?

? ? ? ? for phase 2 against. ?

???

???

?phase2-client-cert ? IEEE_8021X_INNER_CLIENT_CERT(+) ? ? Client certificate for inner EAP method. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ?

IEEE_8021X_INNER_CLIENT_CERT=/home/joe/mycert.crt ?

??

??

?password ? IEEE_8021X_PASSWORD(+) ? ? UTF-8 encoded password used for EAP. It can also ?

? ? ? ? go to "key-" lookaside file, or it can be owned ?

? ? ? ? by a secret agent. ?

??

??

?password-flags ? IEEE_8021X_PASSWORD_FLAGS(+) ? ? Password flags for IEEE_8021X_PASSWORD password. ?

? ? ? ? (see the section called ?Secret flags? for _FLAGS ?

? ? ? ? values) ?

??

??

?password-raw ? IEEE_8021X_PASSWORD_RAW(+) ? ? password used for EAP, encoded as a hexadecimal ?

? ? ? ? string. It can also go to "key-" lookaside file. ?

? ? ? ? ?

? ? ? ? Example: IEEE_8021X_PASSWORD_RAW=041c8320083aa4bf ?

??

??

?password-raw-flags ? IEEE_8021X_PASSWORD_RAW_FLAGS(+) ? ? The secret flags for password-raw. ?

??

??

?private-key ? IEEE_8021X_PRIVATE_KEY(+) ? ? Private key for EAP-TLS.

?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? IEEE_8021X_PRIVATE_KEY=/home/joe/mykey.p12

?

??

??

?private-key-password ? IEEE_8021X_PRIVATE_KEY_PASSWORD(+) ? ? Password for IEEE_8021X_PRIVATE_KEY. It can also ?

? ? ? ? go to "key-" lookaside file, or it can be owned ?

? ? ? ? by a secret agent. ?

??

??

?private-key-password-flags ? IEEE_8021X_PRIVATE_KEY_PASSWORD_FLAGS(+) ? ? Password flags for ?

? ? ? ? IEEE_8021X_PRIVATE_KEY_PASSWORD password. (see ?

? ? ? ? the section called ?Secret flags? for _FLAGS ?

? ? ? ? values) ?

??

??

?phase2-private-key ? IEEE_8021X_INNER_PRIVATE_KEY(+) ? ? Private key for inner authentication method for ?

? ? ? ? EAP-TLS. ?

??

??

?phase2-private-key-password ? IEEE_8021X_INNER_PRIVATE_KEY_PASSWORD(+) ? ? Password for IEEE_8021X_INNER_PRIVATE_KEY. It can ?

? ? ? ? also go to "key-" lookaside file, or it can be ?

? ? ? ? owned by a secret agent. ?

??

?phase2-private-key-password-flags ? IEEE_8021X_INNER_PRIVATE_KEY_PASSWORD_FLAGS(+) ? ?

Password flags for ?

? ? ? ? IEEE_8021X_INNER_PRIVATE_KEY_PASSWORD

password. ?

? ? ? ? (see the section called ?Secret flags? for _FLAGS ?

? ? ? ? values) ?

??

?pin ? IEEE_8021X_PIN(+) ? ? The pin secret used for EAP authentication

?

? ? ? ? methods. ?

??

?pin-flags ? IEEE_8021X_PIN_FLAGS(+) ? ? The secret flags for the pin property.

?

??

?system-ca-certs ? IEEE_8021X_SYSTEM_CA_CERTS(+) ? ? a boolean value.

?

??

?auth-timeout ? IEEE_8021X_AUTH_TIMEOUT(+) ? 0 ? Timeout in seconds for the

802.1X authentication. ?

? ? ? ? Zero means the global default or 25. ?

??
???

?optional ? IEEE_8021X_OPTIONAL(+) default=no ? ? whether the 802.1X authentication is optional ?

??
???

Table 5. 802-3-ethernet setting

??
????????????

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

??
????????????

?port ? (none) ? ? The property is ?

? ? ? ? not saved by the ?

? ? ? ? plugin. ?

??
????????????

?speed ? ETHTOOL_OPTS ? ? Fixed speed for ?

? ? ? ? the ethernet ?

? ? ? ? link. It is ?

? ? ? ? added as "speed" ?

? ? ? ? parameter in the ?

? ? ? ? ETHTOOL_OPTS ?

? ? ? ? variable. ?

??
????????????

?duplex ? ETHTOOL_OPTS ? ? Fixed duplex ?

? ? ? ? mode for the ?
? ? ? ? ethernet link. ?
? ? ? ? It is added as ?
? ? ? ? "duplex" ?
? ? ? ? parameter in the ?
? ? ? ? ETHOOL_OPTS ?
? ? ? ? variable. ?

??
????????????
?auto-negotiate ? ETHTOOL_OPTS ? ? Whether link ?
? ? ? ? speed and duplex ?
? ? ? ? autonegotiation ?
? ? ? ? is enabled. It ?
? ? ? ? is not saved ?
? ? ? ? only if disabled ?
? ? ? ? and no values ?
? ? ? ? are provided for ?
? ? ? ? the "speed" and ?
? ? ? ? "duplex" ?
? ? ? ? parameters ?
? ? ? ? (skips link ?
? ? ? ? configuration). ?

??
????????????
?mac-address ? HWADDR ? ? Hardware address ?
? ? ? ? of the device in ?
? ? ? ? traditional ?
? ? ? ? hex-digits-and-colons ?
? ? ? ? notation (e.g. ?
? ? ? ? 00:22:68:14:5A:05). ?
? ? ? ? Note that for ?

? ? ? ? initscripts this ?
? ? ? ? is the current ?
? ? ? ? MAC address of ?
? ? ? ? the device as ?
? ? ? ? found during ?
? ? ? ? ifup. For ?
? ? ? ? NetworkManager ?
? ? ? ? this is the ?
? ? ? ? permanent MAC ?
? ? ? ? address. Or in ?
? ? ? ? case no ?
? ? ? ? permanent MAC ?
? ? ? ? address exists, ?
? ? ? ? the MAC address ?
? ? ? ? initially ?
? ? ? ? configured on ?
? ? ? ? the device. ?

??
????????????

?cloned-mac-address ? MACADDR ? ? Cloned (spoofed) MAC ?
? ? ? ? address in ?
? ? ? ? traditional ?
? ? ? ? hex-digits-and-colons ?
? ? ? ? notation (e.g. ?
? ? ? ? 00:22:68:14:5A:99). ?

??
????????????

?generate-mac-address-mask ? GENERATE_MAC_ADDRESS_MASK(+) ? ? the MAC address mask
?
? ? ? ? for generating ?
? ? ? ? randomized and stable ?

? ? ? ? cloned-mac-address. ?

???
????????????

?mac-address-blacklist ? HWADDR_BLACKLIST(+) ? ? It denies usage of ?

? ? ? ? the connection for ?

? ? ? ? any device whose ?

? ? ? ? address is listed. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? HWADDR_BLACKLIST="00:22:68:11:69:08 ?

? ? ? ? 00:11:22:11:44:55" ?

???
????????????

?mtu ? MTU ? ? MTU of the interface. ?

???
????????????

?s390-subchannels ? SUBCHANNELS ? ? Subchannels for IBM S390 hosts. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? SUBCHANNELS=0.0.b00a,0.0.b00b,0.0.b00c ?

???
????????????

?s390-nettype ? NETTYPE ? ? Network type of the S390 host. ?

? ? ? ? ?

? ? ? ? Example: NETTYPE=qeth ?

? ? ? ? ?

? ? ? ? Allowed values: "qeth", "lcs" or "ctc" ?

???

????????????

?s390-options ? OPTIONS and PORTNAME, ? ? S390 device options. All options go to ?

? ? CTCPROTO, ? ? OPTIONS, except for "portname" and ?

? ? ? ? "ctcprot" that have their own ?

? ? ? ? variables. ?

??

????????????

?wake-on-lan ? ETHTOOL_OPTS, ? ? Wake on Lan mode for ethernet. The ?

? ? ETHTOOL_WAKE_ON_LAN ? ? setting "ignore" is expressed with ?

? ? ? ? "ETHTOOL_WAKE_ON_LAN=ignore". ?

? ? ? ? Otherwise, the "ETHTOOL_OPTS" variable ?

? ? ? ? is set with the value "wol" and ?

? ? ? ? several of the characters ?

? ? ? ? "p|u|m|b|a|g|s|f|d" as explained in ?

? ? ? ? the ethtool manual page. ?

??

????????????

?wake-on-lan-password ? ETHTOOL_OPTS ? ? Password for secure-on based ?

? ? ? ? Wake-on-Lan. It is added as "sopass" ?

? ? ? ? parameter in the ETHTOOL_OPTS ?

? ? ? ? variable. ?

? ? ? ? ?

? ? ? ? Example: ETHTOOL_OPTS="wol gs sopass ?

? ? ? ? 00:11:22:33:44:55" ?

??

????????????

?accept-all-mac-addresses ? ACCEPT_ALL_MAC_ADDRESSES ? ? Enforce the interface to accept all ?

? ? ? ? the packets. ?

????????????

Table 6. bond setting

???

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

???

?options ? BONDING_OPTS ? ? Bonding options. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? BONDING_OPTS="miimon=100 ?

? ? ? ? mode=broadcast" ?

???

Table 7. bond-port setting

???

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

???

?queue-id ? BONDING_OPTS: ? 0 ? Queue ID. ?

? ? queue-id= ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? 0 - 65535 ?

???

Table 8. bridge setting

???

??

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

???

??

?mac-address ? BRIDGE_MACADDR(+) ? ? MAC address of ?

? ? ? ? the bridge. Note ?

? ? ? ? that this ?

? ? ? ? requires a ?

? ? ? ? recent kernel ?

? ? ? ? support, ?

? ? ? ? originally ?

? ? ? ? introduced in ?

? ? ? ? 3.15 upstream ?

? ? ? ? kernel) ?

? ? ? ? BRIDGE_MACADDR ?

? ? ? ? for bridges is ?

? ? ? ? an NM extension. ?

??

??

?stp ? STP ? no ? Span tree ?

? ? ? ? protocol ?

? ? ? ? participation. ?

??

??

?priority ? BRIDGING_OPTS: ? 32768 ? STP priority. ?

? ? priority= ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? 0 - 32768 ?

??

??

?forward-delay ? DELAY ? 15 ? STP forwarding ?

? ? ? ? delay. ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? 2 - 30 ?

???
??

?hello-time ? BRIDGING_OPTS: ? 2 ? STP hello time. ?

? ? hello_time= ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? 1 - 10 ?

???
??

?max-age ? BRIDGING_OPTS: ? 20 ? STP maximum ?

? ? max_age= ? ? message age. ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? 6 - 40 ?

???
??

?ageing-time ? BRIDGING_OPTS: ? 300 ? Ethernet MAC ?

? ? ageing_time= ? ? ageing time. ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? 0 - 1000000 ?

???
??

?multicast-snooping ? BRIDGING_OPTS: ? 1 ? IGMP snooping ?

? ? multicast_snooping= ? ? support. ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? 0 or 1 ?

???
??

?vlan-filtering ? BRIDGING_OPTS: ? 0 ? VLAN filtering ?

? ? vlan_filtering= ? ? support. ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? 0 or 1 ?

??

???

?vlan-default-pvid ? BRIDGING_OPTS: ? 1 ? default VLAN ?

? ? default_pvid= ? ? PVID. ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? 0 - 4094 ?

??

???

?vlans ? BRIDGE_VLANS ? ? List of VLANs on ?

? ? ? ? the bridge ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGE_VLANS="1 ?

? ? ? ? pvid ?

? ? ? ? untagged,20,300-400 ?

? ? ? ? untagged" ?

??

???

?group-address ? BRIDGING_OPTS: ? ? STP group address. ?

? ? group_address= ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGING_OPTS="group_address=01:80:C2:00:00:0A" ?

??

??????????????????????????????????????

?vlan-protocol ? BRIDGING_OPTS: ? ? VLAN filtering protocol. ?

? ? vlan_protocol= ? ? ?

? ? ? ? Example: BRIDGING_OPTS="vlan_protocol=802.1Q" ?

??

??????????????????????????????????????

?vlan-stats-enabled ? BRIDGING_OPTS: ? 0 ? ?

? ? vlan_stats_enabled= ? ? ?

? ? ? ? Example: BRIDGING_OPTS="vlan_stats_enabled=1" ?

??

??????????????????????????????????????

?multicast-router ? BRIDGING_OPTS: ? auto ? ?

? ? multicast_router= ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGING_OPTS="multicast_router=enabled" ?

? ? ? ? ?

? ? ? ? Allowed values: auto, enabled, disabled ?

??

??????????????????????????????????????

?multicast-query-use-ifaddr ? BRIDGING_OPTS: ? 0 ? ?

? ? multicast_query_use_ifaddr= ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGING_OPTS="multicast_query-use_ifaddr=1" ?

??

??????????????????????????????????????

?multicast-querier ? BRIDGING_OPTS: ? 0 ? ?

? ? multicast_querier= ? ? ?

? ? ? ? Example: BRIDGING_OPTS="multicast_querier=1" ?

??
???

?multicast-hash-max ? BRIDGING_OPTS: ? 4096 ? ?

? ? multicast_hash_max= ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGING_OPTS="multicast_hash_max=8192" ?

??
???

?multicast-last-member-count ? BRIDGING_OPTS: ? 2 ? ?

? ? multicast_last_member_count= ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGING_OPTS="multicast_last_member_count=4" ?

??
???

?multicast-last-member-interval ? BRIDGING_OPTS: ? 100 ? ?

? ? multicast_last_member_interval= ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGING_OPTS="multicast_last_member_interval=200" ?

??
???

?multicast-membership-interval ? BRIDGING_OPTS: ? 26000 ? ?

? ? multicast_membership_interval= ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGING_OPTS="multicast_membership_interval=16000" ?

??
???

?multicast-querier-interval ? BRIDGING_OPTS: ? 25500 ? ?

? ? multicast_querier_interval= ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGING_OPTS="multicast_querier_interval=20000" ?

??
???

?multicast-query-interval ? BRIDGING_OPTS: ? 12500 ? ?

? ? multicast_query_interval= ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGING_OPTS="multicast_query_interval=22500" ?

??
???

?multicast-query-response-interval ? BRIDGING_OPTS: ? 1000 ? ?

? ? multicast_query_response_interval= ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGING_OPTS="multicast_query_response_interval=2000"
?

??
???

?multicast-startup-query-count ? BRIDGING_OPTS: ? 2 ? ?

? ? multicast_startup_query_count= ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGING_OPTS="multicast_startup_query_count=4" ?

??
???

?multicast-startup-query-interval ? BRIDGING_OPTS: ? 3125 ? ?

? ? multicast_startup_query_interval= ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGING_OPTS="multicast_startup_query_interval=4000" ?

??
???

Table 9. bridge-port setting

??

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

??

?priority ? BRIDGING_OPTS: ? 32 ? STP priority. ?

? ? priority= ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? 0 - 63 ?

??

?path-cost ? BRIDGING_OPTS: ? 100 ? STP cost. ?

? ? path_cost= ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? 1 - 65535 ?

??

?hairpin-mode ? BRIDGING_OPTS: ? yes ? Hairpin mode of ?

? ? hairpin_mode= ? ? the bridge port. ?

??

?vlans ? BRIDGE_PORT_VLANS ? ? List of VLANs on ?

? ? ? ? the bridge port ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? BRIDGE_PORT_VLANS="1 ?

? ? ? ? pvid ?

? ? ? ? untagged,20,300-400 ?

? ? ? ? untagged" ?

??

Table 10. connection setting

??

??????????????????

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

??
????????????????

?id ? NAME(+) ? ? User friendly ?

? ? ? ? name for the ?

? ? ? ? connection ?

? ? ? ? profile. ?

??
????????????????

?uuid ? UUID(+) ? ? UUID for the ?

? ? ? ? connection ?

? ? ? ? profile. When ?

? ? ? ? missing, ?

? ? ? ? NetworkManager ?

? ? ? ? creates the UUID ?

? ? ? ? itself (by ?

? ? ? ? hashing the ?

? ? ? ? filename). ?

??
????????????????

?stable-id ? STABLE_ID(+) ? ? Token to ?

? ? ? ? generate stable ?

? ? ? ? IDs. ?

??
????????????????

?interface-name ? DEVICE ? ? Interface name ?

? ? ? ? of the device ?

? ? ? ? this profile is ?

? ? ? ? bound to. The ?

? ? ? ? variable can be ?

? ? ? ? left out when ?
? ? ? ? the profile ?
? ? ? ? should apply for ?
? ? ? ? more devices. ?
? ? ? ? Note that DEVICE ?
? ? ? ? can be required ?
? ? ? ? for some ?
? ? ? ? connection ?
? ? ? ? types. ?

???
????????????????
?type ? TYPE ? ? Base type of the ?
? ? (DEVICETYPE, ? ? connection. ?
? ? DEVICE) ? ? DEVICETYPE is ?
? ? ? ? used for teaming ?
? ? ? ? connections. ?
? ? ? ? ?
? ? ? ? Example: ?
? ? ? ? TYPE=Ethernet; ?
? ? ? ? TYPE=Bond; ?
? ? ? ? TYPE=Bridge; ?
? ? ? ? DEVICETYPE=TeamPort ?
? ? ? ? ?
? ? ? ? Allowed values: ?
? ? ? ? Ethernet, ?
? ? ? ? Wireless, ?
? ? ? ? InfiniBand, ?
? ? ? ? Bridge, Bond, ?
? ? ? ? Vlan, Team, ?
? ? ? ? TeamPort ?

??

??????????????????

?permissions	? USERS(+)	?	? Restrict to certain users the access to this connection, and allow the connection to be active only when at least one of the specified users is logged into an active session.	?
			? Example: USERS="joe bob"	?

??

??????????????????

?autoconnect	? ONBOOT	? yes	? Whether the connection should be autoconnected (not only while booting).	?

??

??????????????????

?autoconnect-priority	? AUTOCONNECT_PRIORITY(+)	? 0	? Connection priority for automatic activation. Connections with higher numbers are preferred when selecting profiles for automatic	?

?   ?   ?   ? activation.   ?
?   ?   ?   ?   ?
?   ?   ?   ? Example: ?
?   ?   ?   ? AUTOCONNECT_PRIORITY=20   ?
?   ?   ?   ?   ?
?   ?   ?   ? Allowed values: ?
?   ?   ?   ? -999 to 999   ?

??

????????????????

?autoconnect-retries   ? AUTOCONNECT_RETRIES(+)   ?   ? The number of times a   ?
?   ?   ?   ? connection should be   ?
?   ?   ?   ? autoactivated before   ?
?   ?   ?   ? giving up and switching   ?
?   ?   ?   ? to the next one.   ?
?   ?   ?   ?   ?
?   ?   ?   ? Example: ?
?   ?   ?   ? AUTOCONNECT_RETRIES=1   ?
?   ?   ?   ?   ?
?   ?   ?   ? Allowed values: -1 (use   ?
?   ?   ?   ? global default), 0   ?
?   ?   ?   ? (forever) or a positive   ?
?   ?   ?   ? value   ?

??

????????????????

?multi-connect   ? MULTI_CONNECT(+)   ?   ? whether the profile can   ?
?   ?   ?   ? be active on multiple   ?
?   ?   ?   ? devices at a given   ?
?   ?   ?   ? moment. The values are   ?
?   ?   ?   ? numbers corresponding   ?
?   ?   ?   ? to   ?
?   ?   ?   ? #NMConnectionMultiConnect   ?

? ? ? ? enum. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? MULTI_CONNECT=3 ?

??

?????????????????

?zone ? ZONE(+) ? ? Trust level of this ?

? ? ? ? connection. The string is ?

? ? ? ? usually used for a ?

? ? ? ? firewall. ?

? ? ? ? ?

? ? ? ? Example: ZONE=Work ?

??

?????????????????

?master ? MASTER, MASTER_UUID, ? ? Reference to master ?

? ? TEAM_MASTER, ? ? connection. The variable ?

? ? TEAM_MASTER_UUID, ? ? used depends on the ?

? ? BRIDGE, BRIDGE_UUID ? ? connection type and the ?

? ? ? ? value. In general, if the ?

? ? ? ? *_UUID variant is ?

? ? ? ? present, the variant ?

? ? ? ? without *_UUID is ?

? ? ? ? ignored. NetworkManager ?

? ? ? ? attempts to write both ?

? ? ? ? for compatibility with ?

? ? ? ? legacy tooling. ?

??

?????????????????

?slave-type ? MASTER, MASTER_UUID, ? ? Slave type doesn't map ?

? ? TEAM_MASTER, ? ? directly to a variable, ?

? ? TEAM_MASTER_UUID, ? ? but it is recognized ?
? ? DEVICETYPE, BRIDGE, ? ? using different ?
? ? BRIDGE_UUID ? ? variables. MASTER and ?
? ? ? ? MASTER_UUID for bonding, ?
? ? ? ? TEAM_MASTER, ?
? ? ? ? TEAM_MASTER_UUID and ?
? ? ? ? DEVICETYPE for teaming, ?
? ? ? ? BRIDGE and BRIDGE_UUID ?
? ? ? ? for bridging. ?

??
????????????????
?autoconnect-slaves ? AUTOCONNECT_SLAVES(+) ? missing variable ? Whether slaves of this ?
? ? ? means global ? connection should be ?
? ? ? default ? auto-connected when this ?
? ? ? ? connection is activated. ?

??
????????????????
?secondaries ? SECONDARY_UUIDS(+) ? ? UUID of VPN connections ?
? ? ? ? that should be activated ?
? ? ? ? together with this ?
? ? ? ? connection. ?

??
????????????????
?gateway-ping-timeout ? GATEWAY_PING_TIMEOUT(+) ? 0 ? If greater than zero, the ?
? ? ? ? IP connectivity will be ?
? ? ? ? checked by pinging the ?
? ? ? ? gateway and waiting for ?
? ? ? ? the specified timeout (in ?
? ? ? ? seconds). ?
? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? GATEWAY_PING_TIMEOUT=5 ?

??

??????????????????

?metered ? CONNECTION_METERED(+) ? ? Whether the device is ?

? ? ? ? metered ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? CONNECTION_METERED=yes ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? yes,no,unknown ?

??

??????????????????

?lldp ? LLDP(+) ? missing variable ? whether LLDP is enabled ?

? ? ? means global ? for the connection ?

? ? ? default ? ?

? ? ? ? Example: LLDP=no ?

? ? ? ? ?

? ? ? ? Allowed values: boolean ?

? ? ? ? value or 'rx' ?

??

??????????????????

?auth-retries ? AUTH_RETRIES(+) ? 0 ? Number of retries for ?

? ? ? ? authentication. ?

??

??????????????????

?mdns ? MDNS(+) ? missing variable ? Whether or not mDNS is ?

? ? ? means global ? enabled for the ?

? ? ? default ? connection ?

? ? ? ? ?

? ? ? ? Example: MDNS=yes ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? yes,no,resolve ?

??

????????????????

?llmnr ? LLMNR(+) ? missing variable ? Whether or not LLMNR is ?

? ? ? means global ? enabled for the ?

? ? ? default ? connection ?

? ? ? ? ?

? ? ? ? Example: LLMNR=yes ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? yes,no,resolve ?

??

????????????????

?dns-over-tls ? DNS_OVER_TLS(+) ? missing variable ? Whether or not DNSOverTls ?

? ? ? means global ? is enabled for the ?

? ? ? default ? connection ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? yes,no,opportunistic ?

??

????????????????

?mptcp-flags ? MPTCP_FLAGS(+) ? missing variable ? The MPTCP flags that ?

? ? ? means global ? indicate whether MPTCP is ?

? ? ? default ? enabled and which flags ?

? ? ? ? to use for the address ?

? ? ? ? endpoints. ?
? ? ? ? ?
? ? ? ? Example: ?
? ? ? ? MPTCP_FLAGS="signal,subflow" ?

??
?wait-device-timeout ? DEVTIMEOUT(+) ? ? for initscripts ?
? ? ? ? compatibility, this variable ?
? ? ? ? must be a whole integer. If ?
? ? ? ? necessary, NetworkManager ?
? ? ? ? stores also a fractional ?
? ? ? ? component for the ?
? ? ? ? milliseconds. ?
? ? ? ? ?
? ? ? ? Example: DEVTIMEOUT=5 ?
? ? ? ? ?
? ? ? ? Allowed values: timeout in ?
? ? ? ? seconds. ?

??
?mud-url ? MUD_URL ? ? MUD_URL to be sent by device ?
? ? ? ? (See RFC 8520). ?
? ? ? ? ?
? ? ? ? Example: ?
? ? ? ? https://yourdevice.example.com/model.json ?
? ? ? ? ?
? ? ? ? Allowed values: a valid URL ?
? ? ? ? that points to recommended ?
? ? ? ? policy for this device ?

??

????????????????

?wait-activation-delay ? WAIT_ACTIVATION_DELAY(+) ? ? Time in milliseconds to wait for ?

? ? ? ? connection to be considered activated. ?

? ? ? ? The wait will start after the pre-up ?

? ? ? ? dispatcher event. ?

? ? ? ? ?

? ? ? ? Example: WAIT_ACTIVATION_DELAY=5000 ?

? ? ? ? ?

? ? ? ? Allowed values: delay in milliseconds. ?

??

????????????????

Table 11. dcb setting

??

???????

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

??

???????

?app-fcoe-flags ? DCB_APP_FCOE_ENABLE, ? no ? FCOE flags. ?

? ? DCB_APP_FCOE_ADVERTISE, ? ? ?

? ? DCB_APP_FCOE_WILLING ? ? Example: ?

? ? ? ? DCB_APP_FCOE_ENABLE=yes ?

? ? ? ? DCB_APP_FCOE_ADVERTISE=yes ?

??

???????

?app-fcoe-priority ? DCB_APP_FCOE_PRIORITY ? ? Priority of FCoE frames. ?

? ? ? ? ?

? ? ? ? Allowed values: 0 - 7 ?

??
???????

?app-fcoe-mode ? DCB_APP_FCOE_MODE ? fabric ? FCoE controller mode. ?

? ? ? ? ?

? ? ? ? Allowed values: fabric, ?

? ? ? ? vn2vn ?

??
???????

?app-iscsi-flags ? DCB_APP_ISCSI_ENABLE, ? no ? iSCSI flags. ?

? ? DCB_APP_ISCSI_ADVERTISE, ? ? ?

? ? DCB_APP_ISCSI_WILLING ? ? ?

??
???????

?app-iscsi-priority ? DCB_APP_ISCSI_PRIORITY ? ? Priority of iSCSI frames. ?

? ? ? ? ?

? ? ? ? Allowed values: 0 - 7 ?

??
???????

?app-fip-flags ? DCB_APP_FIP_ENABLE, ? no ? FIP flags. ?

? ? DCB_APP_FIP_ADVERTISE, ? ? ?

? ? DCB_APP_FIP_WILLING ? ? ?

??
???????

?app-fip-priority ? DCB_APP_FIP_PRIORITY ? ? Priority of FIP frames. ?

? ? ? ? ?

? ? ? ? Allowed values: 0 - 7 ?

??
???????

?priority-flow-control-flags ? DCB_PFC_ENABLE, ? no ? Priority flow control ?
? ? DCB_PFC_ADVERTISE, ? ? flags. ?
? ? DCB_PFC_WILLING ? ? ?

??
???????
?priority-flow-control ? DCB_PFC_UP ? ? Priority flow control ?
? ? ? ? values. String of 8 "0" ?
? ? ? ? and "1", where "0". means ?
? ? ? ? "do not transmit priority ?
? ? ? ? pause", "1" means ?
? ? ? ? "transmit pause". ?
? ? ? ? ?
? ? ? ? Example: ?
? ? ? ? DCB_PFC_UP=01101110 ?

??
???????
?priority-group-flags ? DCB_PG_ENABLE, ? no ? Priority groups flags. ?
? ? DCB_PG_ADVERTISE, ? ? ?
? ? DCB_PG_WILLING ? ? ?

??
???????
?priority-group-id ? DCB_PG_ID ? ? Priority groups values. ?
? ? ? ? String of eight priorities ?
? ? ? ? (0 - 7) or "f" ?
? ? ? ? (unrestricted). ?
? ? ? ? ?
? ? ? ? Example: ?
? ? ? ? DCB_PG_ID=1205f173 ?

??

???????

?priority-group-bandwidth ? DCB_PG_PCT ? ? Priority groups values. ?

? ? ? ? Eight bandwidths (in ?

? ? ? ? percent), separated with ?

? ? ? ? commas. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? DCB_PG_PCT=10,5,10,15,10,10,10,30 ?

??

???????

?priority-bandwidth ? DCB_PG_UPPCT ? ? Priority values. Eight bandwidths ?

? ? ? ? (in percent), separated with ?

? ? ? ? commas. The sum of the numbers ?

? ? ? ? must be 100. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? DCB_PG_UPPCT=7,13,10,10,15,15,10,20 ?

??

???????

?priority-strict-bandwidth ? DCB_PG_STRICT ? ? Priority values. String of eight ?

? ? ? ? "0" or "1", where "0" means "may ?

? ? ? ? not utilize all bandwidth", "1" ?

? ? ? ? means "may utilize all bandwidth". ?

? ? ? ? ?

? ? ? ? Example: DCB_PG_STRICT=01101110 ?

??

???????

?priority-traffic-class ? DCB_PG_UP2TC ? ? Priority values. String of eight ?

? ? ? ? traffic class values (0 - 7). ?

? ? ? ? ?

? ? ? ? Example: DCB_PG_UP2TC=01623701 ?

???
???????

All DCB related configuration is a NetworkManager extension. DCB=yes

must be used explicitly to enable DCB so that the rest of the DCB_*

variables can apply.

Table 12. ethtool setting

Table 13. hostname setting

???
?????

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

???
?????

?priority ? HOSTNAME_PRIORITY(+) ? missing variable ? hostname ?

? ? ? means global ? priority ?

? ? ? value or 100 ? ?

? ? ? ? Example: ?

? ? ? ? HOSTNAME_PRIORITY=50 ?

???
?????

?from-dhcp ? HOSTNAME_FROM_DHCP(+) ? missing variable ? whether the system ?

? ? ? means global ? hostname can be ?

? ? ? default or 1 ? determined from DHCP ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? HOSTNAME_FROM_DHCP=0,1 ?

???

?????

?from-dns-lookup ? HOSTNAME_FROM_DNS_LOOKUP(+) ? missing variable ? whether the system ?

? ? ? means global ? hostname can be ?

? ? ? default or 1 ? determined from ?

? ? ? ? reverse DNS lookup ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? HOSTNAME_FROM_DNS_LOOKUP=0,1 ?

??

?????

?only-best-device ? HOSTNAME_ONLY_FROM_DEFAULT(+) ? missing variable ? whether the hostname can be ?

? ? ? means global ? determined only from devices ?

? ? ? default or 1 ? with the default route ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? HOSTNAME_ONLY_FROM_DEFAULT=0,1 ?

??

?????

Table 14. infiniband setting

??

????????????????????????

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ? ?

??

????????????????????????

?mac-address ? HWADDR ? ? IBoIP 20-byte ?

? ? ? ? hardware address ?

? ? ? ? of the device ?

? ? ? ? (in traditional ?

? ? ? ? hex-digits-and-colons ?

? ? ? ? notation). Note ?

? ? ? ? that for ?

? ? ? ? initscripts this ?

? ? ? ? is the current ?

? ? ? ? MAC address of ?

? ? ? ? the device as ?

? ? ? ? found during ?

? ? ? ? ifup. For ?

? ? ? ? NetworkManager ?

? ? ? ? this is the ?

? ? ? ? permanent MAC ?

? ? ? ? address. Or in ?

? ? ? ? case no ?

? ? ? ? permanent MAC ?

? ? ? ? address exists, ?

? ? ? ? the MAC address ?

? ? ? ? initially ?

? ? ? ? configured on ?

? ? ? ? the device. ?

? ? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? HWADDR=01:02:03:04:05:06:07:08:09:0A:01:02:03:04:05:06:07:08:09:11 ?

??

?mtu ? MTU ? ? MTU of the interface. ?

??

?transport-mode ? CONNECTED_MODE ? CONNECTED_MODE=no ? CONNECTED_MODE=yes for "connected" mode, CONNECTED_MODE=no for ?

? ? ? ? "datagram" mode ?

??
?????????????????????????

?p-key ? PKEY_ID (and ? PKEY=no ? InfiniBand P_Key. The value can be a hex number prefixed with "0x" ?

? ? PKEY=yes) ? ? or a decimal number. When PKEY_ID is specified, PHYSDEV and DEVICE ?

? ? ? ? also must be specified. Note that ifcfg-rh format will always ?

? ? ? ? automatically set the full membership bit 0x8000. Other p-key ?

? ? ? ? cannot be stored. ?

? ? ? ? ?

? ? ? ? Example: PKEY=yes PKEY_ID=2 PHYSDEV=mlx4_ib0 DEVICE=mlx4_ib0.8002 ?

??
?????????????????????????

?parent ? PHYSDEV ? PKEY=no ? InfiniBand parent device. ?

? ? (PKEY=yes) ? ? ?

? ? ? ? Example: PHYSDEV=ib0 ?

??
?????????????????????????

Table 15. ipv4 setting

??
????????????????????????

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

??
????????????????????????

?method ? BOOTPROTO ? none ? Method used for ?

? ? ? ? IPv4 protocol ?

? ? ? ? configuration. ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? none, dhcp ?

? ? ? ? (bootp), static, ?

? ? ? ? ibft, autoip, ?

? ? ? ? shared ?

??

????????????????????????

?dns ? DNS1, DNS2, ... ? ? List of DNS ?

? ? ? ? servers. Even if ?

? ? ? ? NetworkManager ?

? ? ? ? supports many ?

? ? ? ? DNS servers, ?

? ? ? ? initscripts and ?

? ? ? ? resolver only ?

? ? ? ? care about the ?

? ? ? ? first three, ?

? ? ? ? usually. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? DNS1=1.2.3.4 ?

? ? ? ? DNS2=10.0.0.254 ?

? ? ? ? DNS3=8.8.8.8 ?

??

????????????????????????

?dns-search ? DOMAIN ? ? List of DNS ?

? ? ? ? search domains. ?

??

????????????????????????

?addresses ? IPADDR, PREFIX ? ? List of static ?

? ? (NETMASK), ? ? IP addresses. ?

? ? IPADDR1, PREFIX1 ? ? ?

? ? (NETMASK1), ... ? ? Example: ?

? ? ? ? IPADDR=10.5.5.23 ?

? ? ? ? PREFIX=24 ?

? ? ? ? IPADDR1=1.1.1.2 ?

? ? ? ? PREFIX1=16 ?

??

?????????????????????????

?gateway ? GATEWAY ? ? Gateway IP ?

? ? ? ? address. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? GATEWAY=10.5.5.1 ?

??

?????????????????????????

?routes ? ADDRESS1, ? ? List of static ?

? ? NETMASK1, ? ? routes. They are ?

? ? GATEWAY1, ? ? not stored in ?

? ? METRIC1, ? ? ifcfg-* file, ?

? ? OPTIONS1, ... ? ? but in route-* ?

? ? ? ? file instead. ?

??

?????????????????????????

?ignore-auto-routes ? PEERROUTES(+) ? yes ? PEERROUTES has ?

? ? ? ? the opposite ?

? ? ? ? meaning as ?

? ? ? ? 'ignore-auto-routes' ?

? ? ? ? property. ?

???
????????????????????????

?ignore-auto-dns ? PEERDNS ? yes ? PEERDNS has the ?

? ? ? ? opposite meaning as ?

? ? ? ? 'ignore-auto-dns' ?

? ? ? ? property. ?

???
????????????????????????

?dhcp-send-hostname ? DHCP_SEND_HOSTNAME(+) ? yes ? Whether ?

? ? ? ? DHCP_HOSTNAME should ?

? ? ? ? be sent to the DHCP ?

? ? ? ? server. ?

???
????????????????????????

?dhcp-hostname ? DHCP_HOSTNAME ? ? Hostname to send to ?

? ? ? ? the DHCP server. ?

? ? ? ? When both ?

? ? ? ? DHCP_HOSTNAME and ?

? ? ? ? DHCP_FQDN are ?

? ? ? ? specified only the ?

? ? ? ? latter is used. ?

???
????????????????????????

?never-default ? DEFROUTE (GATEWAYDEV ? yes ? DEFROUTE=no tells ?

? ? in ? ? NetworkManager that ?

? ? /etc/sysconfig/network) ? ? this connection ?

? ? ? ? should not be ?

? ? ? ? assigned the default ?

? ? ? ? route. DEFROUTE has ?

? ? ? ? the opposite meaning ?

? ? ? ? as 'never-default' ?

? ? ? ? property. ?

??

?may-fail ? IPV4_FAILURE_FATAL(+) ? no ? IPV4_FAILURE_FATAL ?

? ? ? ? has the opposite ?

? ? ? ? meaning as ?

? ? ? ? 'may-fail' property. ?

??

?route-metric ? IPV4_ROUTE_METRIC(+) ? -1 ? IPV4_ROUTE_METRIC is ?

? ? ? ? the default IPv4 ?

? ? ? ? metric for routes on ?

? ? ? ? this connection. If ?

? ? ? ? set to -1, a default ?

? ? ? ? metric based on the ?

? ? ? ? device type is used. ?

??

?route-table ? IPV4_ROUTE_TABLE(+) ? 0 ? IPV4_ROUTE_TABLE ?

? ? ? ? enables ?

? ? ? ? policy-routing and ?

? ? ? ? sets the default ?

? ? ? ? routing table. ?

??

?dns-options ? RES_OPTIONS(+) ? ? List of DNS options ?

? ? ? ? to be added to ?

? ? ? ? /etc/resolv.conf ?
? ? ? ? ?
? ? ? ? Example: ?
? ? ? ? RES_OPTIONS=ndots:2 ?
? ? ? ? timeout:3 ?

??

?dns-priority ? IPV4_DNS_PRIORITY(+) ? 0 ? The priority for DNS ?
? ? ? ? servers of this ?
? ? ? ? connection. Lower ?
? ? ? ? values have higher ?
? ? ? ? priority. If zero, ?
? ? ? ? the default value ?
? ? ? ? will be used (50 for ?
? ? ? ? VPNs, 100 for other ?
? ? ? ? connections). A ?
? ? ? ? negative value ?
? ? ? ? prevents DNS from ?
? ? ? ? other connections ?
? ? ? ? with greater values ?
? ? ? ? to be used. ?
? ? ? ? ?
? ? ? ? Example: ?
? ? ? ? IPV4_DNS_PRIORITY=20 ?

??

?auto-route-ext-gw ? IPV4_AUTO_ROUTE_EXT_GW(+) ? yes ? VPN connections will ?
? ? ? ? default to add the ?
? ? ? ? route automatically ?
? ? ? ? unless this setting ?
? ? ? ? is set to %FALSE. ?

? ? ? ? For other connection ?
? ? ? ? types, adding such ?
? ? ? ? an automatic route ?
? ? ? ? is currently not ?
? ? ? ? supported and ?
? ? ? ? setting this to ?
? ? ? ? %TRUE has no effect. ?

??
???????????????????????
?replace-local-rule ? IPV4_REPLACE_LOCAL_RULE(+) ? no ? Connections will ?
? ? ? ? default to keep the ?
? ? ? ? autogenerated ?
? ? ? ? priority 0 local ?
? ? ? ? rule unless this ?
? ? ? ? setting is set to ?
? ? ? ? %TRUE. ?

??
???????????????????????
?dhcp-client-id ? DHCP_CLIENT_ID(+) ? ? A string sent to the ?
? ? ? ? DHCP server to ?
? ? ? ? identify the local ?
? ? ? ? machine. A binary ?
? ? ? ? value can be ?
? ? ? ? specified using hex ?
? ? ? ? notation ?
? ? ? ? ('aa:bb:cc'). ?
? ? ? ? ?
? ? ? ? Example: ?
? ? ? ? DHCP_CLIENT_ID=ax-srv-1; ?
? ? ? ? DHCP_CLIENT_ID=01:44:44:44:44:44:44 ?

??
????????????????????????

?dad-timeout ? ACD_TIMEOUT(+), ? missing variable ? Timeout (in milliseconds for ?

? ? ARPING_WAIT ? means global ? ACD_TIMEOUT or in seconds for ?

? ? ? default (config ? ARPING_WAIT) for address conflict ?

? ? ? override or ? detection before configuring IPv4 ?

? ? ? zero) ? addresses. 0 turns off the ACD ?

? ? ? ? completely, -1 means default value. ?

? ? ? ? ?

? ? ? ? Example: ACD_TIMEOUT=2000 or ?

? ? ? ? ARPING_WAIT=2 ?

??
????????????????????????

?dhcp-timeout ? IPV4_DHCP_TIMEOUT(+) ? ? A timeout after which the DHCP ?

? ? ? ? transaction fails in case of no ?

? ? ? ? response. ?

? ? ? ? ?

? ? ? ? Example: IPV4_DHCP_TIMEOUT=10 ?

??
????????????????????????

?dhcp-hostname-flags ? DHCP_HOSTNAME_FLAGS ? ? flags for the DHCP hostname and
?

? ? ? ? FQDN properties ?

? ? ? ? ?

? ? ? ? Example: DHCP_HOSTNAME_FLAGS=5 ?

??
????????????????????????

?dhcp-fqdn ? DHCP_FQDN ? ? FQDN to send to the DHCP server. ?

? ? ? ? When both DHCP_HOSTNAME and ?

? ? ? ? DHCP_FQDN are specified only the ?

? ? ? ? latter is used. ?

? ? ? ? ?

? ? ? ? Example: DHCP_FQDN=foo.bar.com ?

??

?dhcp-vendor-class-identifier ? DHCP_VENDOR_CLASS_IDENTIFIER(+) ? ? The Vendor Class Identifier DHCP ?

? ? ? ? option (60). ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? DHCP_VENDOR_CLASS_IDENTIFIER=foo ?

??

?link-local ? IPV4_LINK_LOCAL(+) ? ? Configure link-local IP address in ?

? ? ? ? interaction with method ?

? ? ? ? ?

? ? ? ? Example: IPV4_LINK_LOCAL=auto ?

??

Table 16. ipv6 setting

??

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

??

?method ? IPV6INIT, ? IPV6INIT=yes; ? Method used for ?

? ? IPV6FORWARDING, ? IPV6FORWARDING=no; ? IPv6 protocol ?

? ? IPV6_AUTOCONF, ? IPV6_AUTOCONF=!IPV6FORWARDING, ? configuration.

?

? ? DHCPV6C, ? DHCPV6=no ? ignore ~ ?

? ? IPV6_DISABLED ? ? IPV6INIT=no; ?

? ? ? ? auto ~ ?

? ? ? ? IPV6_AUTOCONF=yes; ?

? ? ? ? dhcp ~ ?

? ? ? ? IPV6_AUTOCONF=no ?

? ? ? ? and DHCPV6C=yes; ?

? ? ? ? disabled ~ ?

? ? ? ? IPV6_DISABLED=yes ?

??

??????????????????????????????

?dns ? DNS1, DNS2, ... ? ? List of DNS ?

? ? ? ? servers. ?

? ? ? ? NetworkManager ?

? ? ? ? uses the variables ?

? ? ? ? both for IPv4 and ?

? ? ? ? IPv6. ?

??

??????????????????????????????

?dns-search ? IPV6_DOMAIN(+) ? ? List of DNS search ?

? ? ? ? domains. ?

??

??????????????????????????????

?addresses ? IPV6ADDR, ? ? List of static IP ?

? ? IPV6ADDR_SECONDARIES ? ? addresses. ?

? ? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? IPV6ADDR=ab12:9876::1 ?

? ? ? ? IPV6ADDR_SECONDARIES="ab12:9876::2 ?
? ? ? ? ab12:9876::3" ?

??
??????????????????????????????

?gateway ? IPV6_DEFAULTGW ? ? Gateway IP address. ?
? ? ? ? ?
? ? ? ? Example: IPV6_DEFAULTGW=abbe::1 ?

??
??????????????????????????????

?routes ? (none) ? ? List of static routes. They are ?
? ? ? ? not stored in ifcfg-* file, but in ?
? ? ? ? route6-* file instead in the form ?
? ? ? ? of command line for 'ip route ?
? ? ? ? add'. ?

??
??????????????????????????????

?ignore-auto-routes ? IPV6_PEERROUTES(+) ? yes ? IPV6_PEERROUTES has the opposite ?
? ? ? ? meaning as 'ignore-auto-routes' ?
? ? ? ? property. ?

??
??????????????????????????????

?ignore-auto-dns ? IPV6_PEERDNS(+) ? yes ? IPV6_PEERDNS has the opposite ?
? ? ? ? meaning as 'ignore-auto-dns' ?
? ? ? ? property. ?

??
??????????????????????????????

?dhcp-hostname ? DHCPV6_HOSTNAME ? ? Hostname to send the DHCP server.

?

??
?????????????????????????????

?dhcp-timeout ? IPV6_DHCP_TIMEOUT(+) ? ? A timeout after which the DHCP ?

? ? ? ? transaction fails in case of no ?

? ? ? ? response. ?

? ? ? ? ?

? ? ? ? Example: IPV6_DHCP_TIMEOUT=10 ?

??
?????????????????????????????

?dhcp-hostname-flags ? DHCPV6_HOSTNAME_FLAGS ? ? flags for the DHCP hostname

?

? ? ? ? property ?

? ? ? ? ?

? ? ? ? Example: DHCPV6_HOSTNAME_FLAGS=5 ?

??
?????????????????????????????

?never-default ? IPV6_DEFROUTE(+), ? IPV6_DEFROUTE=yes (when no ? IPV6_DEFROUTE=no

tells ?

? ? (and IPV6_DEFAULTGW, ? variable specified) ? NetworkManager that this ?

? ? IPV6_DEFAULTDEV in ? ? connection should not be assigned ?

? ? /etc/sysconfig/network) ? ? the default IPv6 route. ?

? ? ? ? IPV6_DEFROUTE has the opposite ?

? ? ? ? meaning as 'never-default' ?

? ? ? ? property. ?

??
?????????????????????????????

?may-fail ? IPV6_FAILURE_FATAL(+) ? no ? IPV6_FAILURE_FATAL has the ?

? ? ? ? opposite meaning as 'may-fail' ?

? ? ? ? property. ?

??

?route-metric ? IPV6_ROUTE_METRIC(+) ? -1 ? IPV6_ROUTE_METRIC is the default

?

? ? ? ? IPv6 metric for routes on this ?

? ? ? ? connection. If set to -1, a ?

? ? ? ? default metric based on the device ?

? ? ? ? type is used. ?

??

?route-table ? IPV6_ROUTE_TABLE(+) ? 0 ? IPV6_ROUTE_TABLE enables ?

? ? ? ? policy-routing and sets the ?

? ? ? ? default routing table. ?

??

?dns-priority ? IPV6_DNS_PRIORITY(+) ? 0 ? The priority for DNS servers of ?

? ? ? ? this connection. Lower values have ?

? ? ? ? higher priority. If zero, the ?

? ? ? ? default value will be used (50 for ?

? ? ? ? VPNs, 100 for other connections). ?

? ? ? ? A negative value prevents DNS from ?

? ? ? ? other connections with greater ?

? ? ? ? values to be used. ?

? ? ? ? ?

? ? ? ? Example: IPV6_DNS_PRIORITY=20 ?

??

?dns-options ? IPV6_RES_OPTIONS(+) ? ? List of DNS options to be added to ?

?   ?   ?   ? /etc/resolv.conf   ?
?   ?   ?   ?   ?
?   ?   ?   ? Example: IPV6_RES_OPTIONS=ndots:2   ?
?   ?   ?   ? timeout:3   ?

??
??????????????????????????????

?auto-route-ext-gw   ? IPV6_AUTO_ROUTE_EXT_GW(+)   ? yes   ? VPN connections will default to
?
?   ?   ?   ? add the route automatically unless ?
?   ?   ?   ? this setting is set to %FALSE. For ?
?   ?   ?   ? other connection types, adding   ?
?   ?   ?   ? such an automatic route is   ?
?   ?   ?   ? currently not supported and   ?
?   ?   ?   ? setting this to %TRUE has no   ?
?   ?   ?   ? effect.   ?

??
??????????????????????????????

?replace-local-rule ? IPV6_REPLACE_LOCAL_RULE(+)   ? no   ? Connections will default to keep
?
?   ?   ?   ? the autogenerated priority 0 local ?
?   ?   ?   ? rule unless this setting is set to ?
?   ?   ?   ? %TRUE.   ?

??
??????????????????????????????

?ip6-privacy   ? IPV6_PRIVACY,   ? no   ? Configure IPv6 Privacy Extensions   ?
?   ? IPV6_PRIVACY_PREFER_PUBLIC_IP(+) ?   ? for SLAAC (RFC4941).   ?
?   ?   ?   ?   ?
?   ?   ?   ? Example: IPV6_PRIVACY=rfc3041   ?
?   ?   ?   ? IPV6_PRIVACY_PREFER_PUBLIC_IP=yes   ?
?   ?   ?   ?   ?

? ? ? ? Allowed values: IPV6_PRIVACY: no, ?

? ? ? ? yes (rfc3041 or rfc4941); ?

? ? ? ? IPV6_PRIVACY_PREFER_PUBLIC_IP: ?

? ? ? ? yes, no ?

??

??????????????????????????????

?addr-gen-mode ? IPV6_ADDR_GEN_MODE ? "default-or-eui64" ? Configure IPv6 Stable Privacy

?

? ? ? ? addressing for SLAAC (RFC7217). ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? IPV6_ADDR_GEN_MODE=stable-privacy ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? IPV6_ADDR_GEN_MODE: default, ?

? ? ? ? default-or-eui64, eui64, ?

? ? ? ? stable-privacy ?

??

??????????????????????????????

?token ? IPV6_TOKEN ? ? The IPv6 tokenized interface ?

? ? ? ? identifier token ?

? ? ? ? ?

? ? ? ? Example: IPV6_TOKEN=::53 ?

??

??????????????????????????????

?ra-timeout ? IPV6_RA_TIMEOUT(+) ? ? A timeout for waiting Router ?

? ? ? ? Advertisements in seconds. ?

? ? ? ? ?

? ? ? ? Example: IPV6_RA_TIMEOUT=10 ?

???

?dhcp-duid ? DHCPV6_DUID(+) ? ? A string sent to the DHCPv6 server ?

? ? ? ? to identify the local machine. ?

? ? ? ? Apart from the special values ?

? ? ? ? "lease", "stable-llt", ?

? ? ? ? "stable-ll", "stable-uuid", "llt" ?

? ? ? ? and "ll" a binary value in hex ?

? ? ? ? format is expected. An hex string ?

? ? ? ? where each octet is separated by a ?

? ? ? ? colon is also accepted. ?

? ? ? ? ?

? ? ? ? Example: DHCPV6_DUID=LL; ?

? ? ? ? DHCPV6_DUID=0301deadbeef0001; ?

? ? ? ? DHCPV6_DUID=03:01:de:ad:be:ef:00:01 ?

???

Table 17. loopback setting

???

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

???

?mtu ? MTU ? ? MTU of the ?

? ? ? ? interface. ?

???

Table 18. match setting

???

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

???

?path ? MATCH_PATH ? ? space-separated ?

? ? ? ? list of paths to ?

? ? ? ? match against ?

? ? ? ? the udev ?

? ? ? ? property ?

? ? ? ? ID_PATHS of ?

? ? ? ? devices ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? MATCH_PATH="pci-0000:01:00.0 ?

? ? ? ? pci-0000:0c:00.0" ?

??

Table 19. ovs-bridge setting

Table 20. ovs-dpdk setting

Table 21. ovs-external-ids setting

Table 22. ovs-interface setting

Table 23. ovs-other-config setting

Table 24. ovs-patch setting

Table 25. ovs-port setting

Table 26. proxy setting

??

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

??

?method ? PROXY_METHOD(+) ? none ? Method for proxy ?

? ? ? ? configuration. ?

? ? ? ? For "auto", WPAD ?

? ? ? ? is used for ?

? ? ? ? proxy ?

? ? ? ? configuration, ?

? ? ? ? or set the PAC ?

? ? ? ? file via PAC_URL ?

? ? ? ? or PAC_SCRIPT. ?

? ? ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? none, auto ?

??

?browser-only ? BROWSER_ONLY(+) ? no ? Whether the ?

? ? ? ? proxy ?

? ? ? ? configuration is ?

? ? ? ? for browser ?

? ? ? ? only. ?

??

?pac-url ? PAC_URL(+) ? ? URL for PAC ?

? ? ? ? file. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? PAC_URL=http://wpad.mycompany.com/wpad.dat ?

??

?pac-script ? PAC_SCRIPT(+) ? ? The PAC script. This is an UTF-8 encoded ?

? ? ? ? javascript code that defines a ?

? ? ? ? FindProxyForURL() function. ?

? ? ? ? ?

? ? ? ? Example: PAC_SCRIPT="function ?

? ? ? ? FindProxyForURL (url, host) { return ?

? ? ? ? 'PROXY proxy.example.com:8080; DIRECT'; }" ?

??

Table 27. sriov setting

??

????????

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

??

????????

?total-vfs ? SRIOV_TOTAL_VFS(+) ? ? The total number ?

? ? ? ? of virtual ?

?   ?   ?   ? functions to   ?

?   ?   ?   ? create   ?

?   ?   ?   ?   ?

?   ?   ?   ? Example: ?

?   ?   ?   ? SRIOV_TOTAL_VFS=16   ?

??

????????

?vfs   ? SRIOV_VF1(+),   ?   ? SR-IOV virtual   ?

?   ? SRIOV_VF2(+), ...   ?   ? function   ?

?   ?   ?   ? descriptors   ?

?   ?   ?   ?   ?

?   ?   ?   ? Example: ?

?   ?   ?   ? SRIOV_VF10="mac=00:11:22:33:44:55", ?

?   ?   ?   ? ...   ?

??

????????

?autoprobe-drivers ? SRIOV_AUTOPROBE_DRIVERS(+) ? missing variable ? Whether to autoprobe virtual   ?

?   ?   ? means global   ? functions by a compatible driver   ?

?   ?   ? default   ?   ?

?   ?   ?   ? Example: ?

?   ?   ?   ? SRIOV_AUTOPROBE_DRIVERS=0,1   ?

??

????????

Table 28. tc setting

???

?Property ? Ifcfg-rh   ? Default ? Description   ?

?   ? Variable   ?   ?   ?

???

?qdiscs   ? QDISC1(+),   ?   ? Queueing   ?

?   ? QDISC2(+), ..., ?   ? disciplines to   ?

? ? TC_COMMIT(+) ? ? set on the ?

? ? ? ? interface. When ?

? ? ? ? no QDISC1, ?

? ? ? ? QDISC2, ..., ?

? ? ? ? FILTER1, ?

? ? ? ? FILTER2, ... ?

? ? ? ? keys are ?

? ? ? ? present, ?

? ? ? ? NetworkManager ?

? ? ? ? doesn't touch ?

? ? ? ? qdiscs and ?

? ? ? ? filters present ?

? ? ? ? on the ?

? ? ? ? interface, ?

? ? ? ? unless TC_COMMIT ?

? ? ? ? is set to 'yes'. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? QDISC1=ingress, ?

? ? ? ? QDISC2="root ?

? ? ? ? handle 1234: ?

? ? ? ? fq_codel" ?

??

?tfilters ? FILTER1(+), ? ? Traffic filters ?

? ? FILTER2(+), ..., ? ? to set on the ?

? ? TC_COMMIT(+) ? ? interface. When ?

? ? ? ? no QDISC1, ?

? ? ? ? QDISC2, ..., ?

? ? ? ? FILTER1, ?

? ? ? ? FILTER2, ... ?

? ? ? ? keys are ?

? ? ? ? present, ?

? ? ? ? NetworkManager ?

? ? ? ? doesn't touch ?

? ? ? ? qdiscs and ?

? ? ? ? filters present ?

? ? ? ? on the ?

? ? ? ? interface, ?

? ? ? ? unless TC_COMMIT ?

? ? ? ? is set to 'yes'. ?

? ? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? FILTER1="parent ?

? ? ? ? ffff: matchall ?

? ? ? ? action simple ?

? ? ? ? sdata Input", ?

? ? ? ? ... ?

??

Table 29. team setting

??

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ? ?

??

?config ? TEAM_CONFIG ? ? Team ?

? ? ? ? ? configuration in ?

? ? ? ? ? JSON. See man ?

? ? ? ? ? teamd.conf for ?

? ? ? ? ? details. ?

??

Table 30. team-port setting

??

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ? ?

??

?config ? TEAM_PORT_CONFIG ? ? Team port ?

? ? ? ? ? configuration in ?

? ? ? ? JSON. See man ?

? ? ? ? teamd.conf for ?

? ? ? ? details. ?

??

Table 31. user setting

??

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

??

?data ? NM_USER_* ? ? each key/value ?

? ? ? ? pair is stored ?

? ? ? ? as a separate ?

? ? ? ? variable with ?

? ? ? ? name composed by ?

? ? ? ? concatenating ?

? ? ? ? NM_USER_ with ?

? ? ? ? the encoded key. ?

? ? ? ? The key is ?

? ? ? ? encoded by ?

? ? ? ? substituting ?

? ? ? ? lowercase ?

? ? ? ? letters with ?

? ? ? ? uppercase and ?

? ? ? ? prepending ?

? ? ? ? uppercase ?

? ? ? ? letters with an ?

? ? ? ? underscore. A ?

? ? ? ? dot is encoded ?

? ? ? ? as a double ?

? ? ? ? underscore. ?

? ? ? ? Remaining ?

? ? ? ? characters are ?

? ? ? ? encoded as ?

? ? ? ? underscore ?

? ? ? ? followed by a 3 ?

? ? ? ? digit octal ?

? ? ? ? representation ?

? ? ? ? of the ?

? ? ? ? character. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? NM_USER_FOO__BAR=something ?

??

Table 32. veth setting

Table 33. vlan setting

??

??

?Property ? Ifcfg-rh ? Default ? Description ?

? ? Variable ? ? ?

??

??

?parent ? DEVICE or ? ? Parent interface ?

? ? PHYSDEV ? ? of the VLAN. ?

??

??

?id ? VLAN_ID, DEVICE. ? ? VLAN identifier. ?

? ? ? ? If VLAN_ID is ?

? ? ? ? not set, it is ?

? ? ? ? attempted to be ?

? ? ? ? detected from ?

? ? ? ? the suffix of ?

? ? ? ? DEVICE=. Note ?

? ? ? ? that older ?

? ? ? ? versions of ?

? ? ? ? NetworkManager ?

? ? ? ? had a bug where ?

? ? ? ? they would ?

? ? ? ? prefer the ?

? ? ? ? detected ID from ?

? ? ? ? the DEVICE over ?

? ? ? ? VLAN_ID. ?

??

??

?flags ? GVRP, MVRP, ? ? VLAN flags. ?

? ? VLAN_FLAGS ? ? ?

? ? ? ? Allowed values: ?

? ? ? ? "yes or "no" for ?

? ? ? ? GVRP and MVRP; ?

? ? ? ? "LOOSE_BINDING" ?

? ? ? ? and ?

? ? ? ? "NO_REORDER_HDR" ?

? ? ? ? for VLAN_FLAGS ?

??

??

?protocol ? VLAN_PROTOCOL ? ? VLAN protocol. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? VLAN_PROTOCOL="802.1ad" ?

??

??

?ingress-priority-map ? VLAN_INGRESS_PRIORITY_MAP ? ? Ingress priority ?

? ? ? ? mapping. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? VLAN_INGRESS_PRIORITY_MAP=4:2,3:5 ?

??

??

?egress-priority-map ? VLAN_EGRESS_PRIORITY_MAP ? ? Egress priority mapping. ?

? ? ? ? ?

? ? ? ? Example: ?

? ? ? ? VLAN_EGRESS_PRIORITY_MAP=5:4,4:1,3:7 ?

??

??

?interface-name ? PHYSDEV and VLAN_ID, or ? ? VLAN interface name. If all ?

? ? DEVICE ? ? variables are set, parent device ?

? ? ? ? from PHYSDEV takes precedence over ?

? ? ? ? DEVICE, but VLAN id from DEVICE ?

? ? ? ? takes precedence over VLAN_ID. ?

? ? ? ? ?

? ? ? ? Example: PHYSDEV=eth0, VLAN_ID=12; ?

? ? ? ? or DEVICE=eth0.12 ?

??

??

Table 34. vrf setting

Table 35. wifi-p2p setting

Table 36. wireguard setting

Table 37. wpan setting

The following settings are not supported by ifcfg-rh plugin:

802-11-olpc-mesh, adsl, bluetooth, cdma, dummy, generic, gsm,

ip-tunnel, macsec, macvlan, ppp, pppoe, serial, tun, vpn, vxlan, wimax

Secret flags

Each secret property in a NetworkManager setting has an associated

flags property that describes how to handle that secret. In the

ifcfg-rh plugin variables for secret flags have a _FLAGS suffix. The variables contain one or more of the following values (space separated). Missing (or empty) *_FLAGS variable means that the password is owned by NetworkManager.

- user - a user-session secret agent is responsible for providing and storing this secret; when it is required, agents will be asked to provide it.
- ask - the associated password is not saved but it will be requested from the user each time it is required.
- unused - in some situations it cannot be automatically determined that a secret is required or not. This flag hints that the secret is not required and should not be requested from the user.

FILES

/etc/sysconfig/network-scripts/ifcfg-*

/etc/sysconfig/network-scripts/keys-*

/etc/sysconfig/network-scripts/route-*

/etc/sysconfig/network-scripts/route6-*

/usr/share/doc/initscripts/sysconfig.txt

SEE ALSO

nm-settings(5), nm-settings-keyfile(5), NetworkManager(8), NetworkManager.conf(5), nmcli(1), nmcli-examples(7)