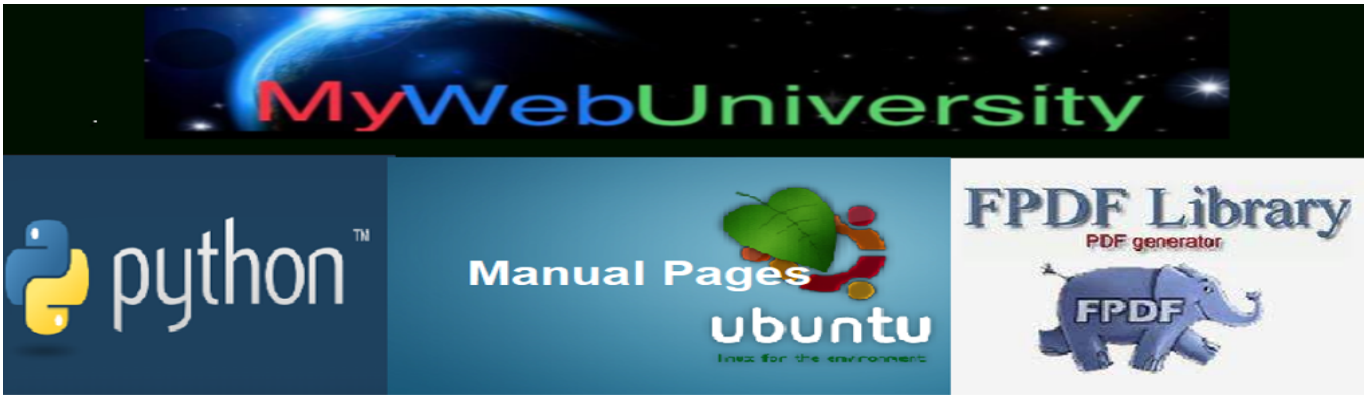

Rocky Enterprise Linux 9.2 Manual Pages on command 'nm-settings-dbus.5'

$ man nm-settings-dbus.5

NM-SETTINGS-DBUS(5) Configuration NM-SETTINGS-DBUS(5)

NAME

nm-settings-dbus - Description of settings and properties of NetworkManager connection profiles on the D-Bus API

DESCRIPTION

NetworkManager is based on a concept of connection profiles, sometimes referred to as connections only. These connection profiles contain a network configuration. When NetworkManager activates a connection profile on a network device the configuration will be applied and an active network connection will be established. Users are free to create as many connection profiles as they see fit. Thus they are flexible in having various network configurations for different networking needs. The connection profiles are handled by NetworkManager via settings service and are exported on D-Bus (/org/freedesktop/NetworkManager/Settings/<num> objects). The conceptual objects can be described as follows:

Connection (profile)

A specific, encapsulated, independent group of settings describing all the configuration required to connect to a specific network. It is referred to by a unique identifier called the UUID. A connection is tied to a one specific device type, but not necessarily a specific hardware device. It is composed of one or more Settings objects.

Setting

A group of related key/value pairs describing a specific piece of a Connection (profile). Settings keys and allowed values are described in the tables below. Keys

are also referred to as properties. Developers can find the setting objects and their properties in the libnm-core sources. Look for the *_class_init functions near the bottom of each setting source file.

The settings and properties shown in tables below list all available connection configuration options. However, note that not all settings are applicable to all connection types. NetworkManager provides a command-line tool nmcli that allows direct configuration of the settings and properties according to a connection profile type. nmcli connection editor has also a built-in describe command that can display description of particular settings and properties of this page.

connection setting

General Connection Profile Settings.

Key Name	Value Type	Default Value	Value Description
auth-retries	int32	-1	The number of retries for the authentication. Zero means to try indefinitely; -1 means to use a global default. If the global default is not set, the authentication retries for 3 times before failing the connection. Currently, this only applies to

? ? ? ? 802-1x ?
? ? ? ? authentication. ?

??
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?autoconnect ? boolean ? TRUE ? Whether or not the ?
? ? ? ? connection should ?
? ? ? ? be automatically ?
? ? ? ? connected by ?
? ? ? ? NetworkManager when ?
? ? ? ? the resources for ?
? ? ? ? the connection are ?
? ? ? ? available. TRUE to ?
? ? ? ? automatically ?
? ? ? ? activate the ?
? ? ? ? connection, FALSE ?
? ? ? ? to require manual ?
? ? ? ? intervention to ?
? ? ? ? activate the ?
? ? ? ? connection. ?
? ? ? ? Autoconnect happens ?
? ? ? ? when the ?
? ? ? ? circumstances are ?
? ? ? ? suitable. That ?
? ? ? ? means for example ?
? ? ? ? that the device is ?
? ? ? ? currently managed ?
? ? ? ? and not active. ?
? ? ? ? Autoconnect thus ?
? ? ? ? never replaces or ?
? ? ? ? competes with an ?
? ? ? ? already active ?
? ? ? ? profile. Note that ?

?   ?   ?   ? autoconnect is not   ?
?   ?   ?   ? implemented for VPN   ?
?   ?   ?   ? profiles. See   ?
?   ?   ?   ? "secondaries" as an   ?
?   ?   ?   ? alternative to   ?
?   ?   ?   ? automatically   ?
?   ?   ?   ? connect VPN   ?
?   ?   ?   ? profiles.   ?

??
?????????????????????
?autoconnect-priority ? int32   ? 0   ? The autoconnect   ?
?   ?   ?   ? priority in range   ?
?   ?   ?   ? -999 to 999. If the   ?
?   ?   ?   ? connection is set   ?
?   ?   ?   ? to autoconnect,   ?
?   ?   ?   ? connections with   ?
?   ?   ?   ? higher priority   ?
?   ?   ?   ? will be preferred.   ?
?   ?   ?   ? The higher number   ?
?   ?   ?   ? means higher   ?
?   ?   ?   ? priority. Defaults   ?
?   ?   ?   ? to 0. Note that   ?
?   ?   ?   ? this property only   ?
?   ?   ?   ? matters if there   ?
?   ?   ?   ? are more than one   ?
?   ?   ?   ? candidate profile   ?
?   ?   ?   ? to select for   ?
?   ?   ?   ? autoconnect. In   ?
?   ?   ?   ? case of equal   ?
?   ?   ?   ? priority, the   ?
?   ?   ?   ? profile used most   ?
?   ?   ?   ? recently is chosen.   ?

```
????????????????????????????????????????????????????????????????????????????????????????????????????
?????????????????????
?autoconnect-retries ? int32            ? -1      ? The number of times      ?
?                    ?                  ?         ? a connection should      ?
?                    ?                  ?         ? be tried when            ?
?                    ?                  ?         ? autoactivating           ?
?                    ?                  ?         ? before giving up.        ?
?                    ?                  ?         ? Zero means forever,      ?
?                    ?                  ?         ? -1 means the global      ?
?                    ?                  ?         ? default (4 times if      ?
?                    ?                  ?         ? not overridden).         ?
?                    ?                  ?         ? Setting this to 1        ?
?                    ?                  ?         ? means to try             ?
?                    ?                  ?         ? activation only          ?
?                    ?                  ?         ? once before              ?
?                    ?                  ?         ? blocking                 ?
?                    ?                  ?         ? autoconnect. Note        ?
?                    ?                  ?         ? that after a             ?
?                    ?                  ?         ? timeout,                 ?
?                    ?                  ?         ? NetworkManager will      ?
?                    ?                  ?         ? try to autoconnect       ?
?                    ?                  ?         ? again.                   ?

????????????????????????????????????????????????????????????????????????????????????????????????????
?????????????????????
?autoconnect-slaves  ? NMSettingConnectionAutoconnectSlaves ?     ? Whether or not       ?
?                    ? (int32)          ?         ? slaves of this           ?
?                    ?                  ?         ? connection should        ?
?                    ?                  ?         ? be automatically         ?
?                    ?                  ?         ? brought up when          ?
?                    ?                  ?         ? NetworkManager           ?
?                    ?                  ?         ? activates this           ?
```

? ? ? ? connection. This ?
? ? ? ? only has a real ?
? ? ? ? effect for master ?
? ? ? ? connections. The ?
? ? ? ? properties ?
? ? ? ? "autoconnect", ?
? ? ? ? "autoconnect-priority" ?
? ? ? ? and ?
? ? ? ? "autoconnect-retries" ?
? ? ? ? are unrelated to ?
? ? ? ? this setting. The ?
? ? ? ? permitted values ?
? ? ? ? are: 0: leave slave ?
? ? ? ? connections ?
? ? ? ? untouched, 1: ?
? ? ? ? activate all the ?
? ? ? ? slave connections ?
? ? ? ? with this ?
? ? ? ? connection, -1: ?
? ? ? ? default. If -1 ?
? ? ? ? (default) is set, ?
? ? ? ? global ?
? ? ? ? connection.autoconnect-slaves ?
? ? ? ? is read to ?
? ? ? ? determine the real ?
? ? ? ? value. If it is ?
? ? ? ? default as well, ?
? ? ? ? this fallbacks to ?
? ? ? ? 0. ?

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

?dns-over-tls ? int32 ? -1 ? Whether DNSOverTls ?

? ? ? ? (dns-over-tls) is enabled for ?

? ? ? ? the connection. DNSOverTls is ?

? ? ? ? a technology which uses TLS ?

? ? ? ? to encrypt dns traffic. The ?

? ? ? ? permitted values are: "yes" ?

? ? ? ? (2) use DNSOverTls and ?

? ? ? ? disabled fallback, ?

? ? ? ? "opportunistic" (1) use ?

? ? ? ? DNSOverTls but allow fallback ?

? ? ? ? to unencrypted resolution, ?

? ? ? ? "no" (0) don't ever use ?

? ? ? ? DNSOverTls. If unspecified ?

? ? ? ? "default" depends on the ?

? ? ? ? plugin used. Systemd-resolved ?

? ? ? ? uses global setting. This ?

? ? ? ? feature requires a plugin ?

? ? ? ? which supports DNSOverTls. ?

? ? ? ? Otherwise, the setting has no ?

? ? ? ? effect. One such plugin is ?

? ? ? ? dns-systemd-resolved. ?

??

?gateway-ping-timeout ? uint32 ? 0 ? If greater than zero, delay ?

? ? ? ? success of IP addressing ?

? ? ? ? until either the timeout is ?

? ? ? ? reached, or an IP gateway ?

? ? ? ? replies to a ping. ?

??

?id ? string ? ? A human readable unique ?

? ? ? ? identifier for the ?

? ? ? ? connection, like "Work Wi-Fi" ?

? ? ? ? or "T-Mobile 3G". ?

??

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

?interface-name ? string ? ? The name of the network ?

? ? ? ? interface this connection is ?

? ? ? ? bound to. If not set, then ?

? ? ? ? the connection can be ?

? ? ? ? attached to any interface of ?

? ? ? ? the appropriate type (subject ?

? ? ? ? to restrictions imposed by ?

? ? ? ? other settings). For software ?

? ? ? ? devices this specifies the ?

? ? ? ? name of the created device. ?

? ? ? ? For connection types where ?

? ? ? ? interface names cannot easily ?

? ? ? ? be made persistent (e.g. ?

? ? ? ? mobile broadband or USB ?

? ? ? ? Ethernet), this property ?

? ? ? ? should not be used. Setting ?

? ? ? ? this property restricts the ?

? ? ? ? interfaces a connection can ?

? ? ? ? be used with, and if ?

? ? ? ? interface names change or are ?

? ? ? ? reordered the connection may ?

? ? ? ? be applied to the wrong ?

? ? ? ? interface. ?

??

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?lldp ? int32 ? -1 ? Whether LLDP is enabled for ?

? ? ? ? the connection. ?

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

?llmnr ? int32 ? -1 ? Whether Link-Local Multicast ?
? ? ? ? Name Resolution (LLMNR) is ?
? ? ? ? enabled for the connection. ?
? ? ? ? LLMNR is a protocol based on ?
? ? ? ? the Domain Name System (DNS) ?
? ? ? ? packet format that allows ?
? ? ? ? both IPv4 and IPv6 hosts to ?
? ? ? ? perform name resolution for ?
? ? ? ? hosts on the same local link. ?
? ? ? ? The permitted values are: ?
? ? ? ? "yes" (2) register hostname ?
? ? ? ? and resolving for the ?
? ? ? ? connection, "no" (0) disable ?
? ? ? ? LLMNR for the interface, ?
? ? ? ? "resolve" (1) do not register ?
? ? ? ? hostname but allow resolving ?
? ? ? ? of LLMNR host names If ?
? ? ? ? unspecified, "default" ?
? ? ? ? ultimately depends on the DNS ?
? ? ? ? plugin (which for ?
? ? ? ? systemd-resolved currently ?
? ? ? ? means "yes"). This feature ?
? ? ? ? requires a plugin which ?
? ? ? ? supports LLMNR. Otherwise, ?
? ? ? ? the setting has no effect. ?
? ? ? ? One such plugin is ?
? ? ? ? dns-systemd-resolved. ?

??
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?master	? string	?	? Interface name of the master	?
?	?	?	? device or UUID of the master	?
?	?	?	? connection.	?

??

?mdns	? int32	? -1	? Whether mDNS is enabled for	?
?	?	?	? the connection. The permitted	?
?	?	?	? values are: "yes" (2)	?
?	?	?	? register hostname and	?
?	?	?	? resolving for the connection,	?
?	?	?	? "no" (0) disable mDNS for the	?
?	?	?	? interface, "resolve" (1) do	?
?	?	?	? not register hostname but	?
?	?	?	? allow resolving of mDNS host	?
?	?	?	? names and "default" (-1) to	?
?	?	?	? allow lookup of a global	?
?	?	?	? default in	?
?	?	?	? NetworkManager.conf. If	?
?	?	?	? unspecified, "default"	?
?	?	?	? ultimately depends on the DNS	?
?	?	?	? plugin (which for	?
?	?	?	? systemd-resolved currently	?
?	?	?	? means "no"). This feature	?
?	?	?	? requires a plugin which	?
?	?	?	? supports mDNS. Otherwise, the	?
?	?	?	? setting has no effect. One	?
?	?	?	? such plugin is	?
?	?	?	? dns-systemd-resolved.	?

??

?metered	? NMMetered (int32)	?	? Whether the connection is	?

? ? ? ? metered. When updating this ?
? ? ? ? property on a currently ?
? ? ? ? activated connection, the ?
? ? ? ? change takes effect ?
? ? ? ? immediately. ?

??
????????????????????
?mud-url ? string ? ? If configured, set to a ?
? ? ? ? Manufacturer Usage ?
? ? ? ? Description (MUD) URL that ?
? ? ? ? points to ?
? ? ? ? manufacturer-recommended ?
? ? ? ? network policies for IoT ?
? ? ? ? devices. It is transmitted as ?
? ? ? ? a DHCPv4 or DHCPv6 option. ?
? ? ? ? The value must be a valid URL ?
? ? ? ? starting with "https://". The ?
? ? ? ? special value "none" is ?
? ? ? ? allowed to indicate that no ?
? ? ? ? MUD URL is used. If the ?
? ? ? ? per-profile value is ?
? ? ? ? unspecified (the default), a ?
? ? ? ? global connection default ?
? ? ? ? gets consulted. If still ?
? ? ? ? unspecified, the ultimate ?
? ? ? ? default is "none". ?

??
????????????????????
?multi-connect ? int32 ? 0 ? Specifies whether the profile ?
? ? ? ? can be active multiple times ?
? ? ? ? at a particular moment. The ?

? ? ? ? value is of type ?
? ? ? ? NMConnectionMultiConnect. ?

??

?permissions ? array of string ? ? An array of strings defining ?
? ? ? ? what access a given user has ?
? ? ? ? to this connection. If this ?
? ? ? ? is NULL or empty, all users ?
? ? ? ? are allowed to access this ?
? ? ? ? connection; otherwise users ?
? ? ? ? are allowed if and only if ?
? ? ? ? they are in this list. When ?
? ? ? ? this is not empty, the ?
? ? ? ? connection can be active only ?
? ? ? ? when one of the specified ?
? ? ? ? users is logged into an ?
? ? ? ? active session. Each entry ?
? ? ? ? is of the form ?
? ? ? ? "[type]:[id]:[reserved]"; for ?
? ? ? ? example, "user:dcbw:blah". At ?
? ? ? ? this time only the "user" ?
? ? ? ? [type] is allowed. Any other ?
? ? ? ? values are ignored and ?
? ? ? ? reserved for future use. ?
? ? ? ? [id] is the username that ?
? ? ? ? this permission refers to, ?
? ? ? ? which may not contain the ":" ?
? ? ? ? character. Any [reserved] ?
? ? ? ? information present must be ?
? ? ? ? ignored and is reserved for ?
? ? ? ? future use. All of [type], ?
? ? ? ? [id], and [reserved] must be ?

? ? ? ? valid UTF-8. ?

??

? read-only ? boolean ? FALSE ? FALSE if the connection can ?
? ? ? ? be modified using the ?
? ? ? ? provided settings service's ?
? ? ? ? D-Bus interface with the ?
? ? ? ? right privileges, or TRUE if ?
? ? ? ? the connection is read-only ?
? ? ? ? and cannot be modified. ?

??

? secondaries ? array of string ? ? List of connection UUIDs that ?
? ? ? ? should be activated when the ?
? ? ? ? base connection itself is ?
? ? ? ? activated. Currently, only ?
? ? ? ? VPN connections are ?
? ? ? ? supported. ?

??

? slave-type ? string ? ? Setting name of the device ?
? ? ? ? type of this slave's master ?
? ? ? ? connection (eg, "bond"), or ?
? ? ? ? NULL if this connection is ?
? ? ? ? not a slave. ?

??

? stable-id ? string ? ? This represents the identity ?
? ? ? ? of the connection used for ?

? ? ? ? various purposes. It allows ?
? ? ? ? to configure multiple ?
? ? ? ? profiles to share the ?
? ? ? ? identity. Also, the stable-id ?
? ? ? ? can contain placeholders that ?
? ? ? ? are substituted dynamically ?
? ? ? ? and deterministically ?
? ? ? ? depending on the context. The ?
? ? ? ? stable-id is used for ?
? ? ? ? generating IPv6 stable ?
? ? ? ? private addresses with ?
? ? ? ? ipv6.addr-gen-mode=stable-privacy. ?
? ? ? ? It is also used to seed the ?
? ? ? ? generated cloned MAC address ?
? ? ? ? for ?
? ? ? ? ethernet.cloned-mac-address=stable ?
? ? ? ? and ?
? ? ? ? wifi.cloned-mac-address=stable. ?
? ? ? ? It is also used as DHCP ?
? ? ? ? client identifier with ?
? ? ? ? ipv4.dhcp-client-id=stable ?
? ? ? ? and to derive the DHCP DUID ?
? ? ? ? with ?
? ? ? ? ipv6.dhcp-duid=stable-[llt,ll,uuid]. ?
? ? ? ? Note that depending on the ?
? ? ? ? context where it is used, ?
? ? ? ? other parameters are also ?
? ? ? ? seeded into the generation ?
? ? ? ? algorithm. For example, a ?
? ? ? ? per-host key is commonly also ?
? ? ? ? included, so that different ?
? ? ? ? systems end up generating ?
? ? ? ? different IDs. Or with ?

? ? ? ? ipv6.addr-gen-mode=stable-privacy, ?
? ? ? ? also the device's name is ?
? ? ? ? included, so that different ?
? ? ? ? interfaces yield different ?
? ? ? ? addresses. The per-host key ?
? ? ? ? is the identity of your ?
? ? ? ? machine and stored in ?
? ? ? ? /var/lib/NetworkManager/secret-key. ?
? ? ? ? The '$' character is treated ?
? ? ? ? special to perform dynamic ?
? ? ? ? substitutions at runtime. ?
? ? ? ? Currently, supported are ?
? ? ? ? "${CONNECTION}", "${DEVICE}", ?
? ? ? ? "${MAC}", "${BOOT}", ?
? ? ? ? "${RANDOM}". These ?
? ? ? ? effectively create unique IDs ?
? ? ? ? per-connection, per-device, ?
? ? ? ? per-boot, or every time. Note ?
? ? ? ? that "${DEVICE}" corresponds ?
? ? ? ? to the interface name of the ?
? ? ? ? device and "${MAC}" is the ?
? ? ? ? permanent MAC address of the ?
? ? ? ? device. Any unrecognized ?
? ? ? ? patterns following '$' are ?
? ? ? ? treated verbatim, however are ?
? ? ? ? reserved for future use. You ?
? ? ? ? are thus advised to avoid '$' ?
? ? ? ? or escape it as "$$". For ?
? ? ? ? example, set it to ?
? ? ? ? "${CONNECTION}-${BOOT}-${DEVICE}" ?
? ? ? ? to create a unique id for ?
? ? ? ? this connection that changes ?
? ? ? ? with every reboot and differs ?

? ? ? ? depending on the interface ?
? ? ? ? where the profile activates. ?
? ? ? ? If the value is unset, a ?
? ? ? ? global connection default is ?
? ? ? ? consulted. If the value is ?
? ? ? ? still unset, the default is ?
? ? ? ? similar to "${CONNECTION}" ?
? ? ? ? and uses a unique, fixed ID ?
? ? ? ? for the connection. ?

??
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?timestamp ? uint64 ? 0 ? The time, in seconds since the Unix ?
? ? ? ? Epoch, that the connection was last ?
? ? ? ? _successfully_ fully activated. ?
? ? ? ? NetworkManager updates the ?
? ? ? ? connection timestamp periodically ?
? ? ? ? when the connection is active to ?
? ? ? ? ensure that an active connection has ?
? ? ? ? the latest timestamp. The property ?
? ? ? ? is only meant for reading (changes ?
? ? ? ? to this property will not be ?
? ? ? ? preserved). ?

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

?type ? string ? ? Base type of the connection. For ?
? ? ? ? hardware-dependent connections, ?
? ? ? ? should contain the setting name of ?
? ? ? ? the hardware-type specific setting ?
? ? ? ? (ie, "802-3-ethernet" or ?
? ? ? ? "802-11-wireless" or "bluetooth", ?
? ? ? ? etc), and for non-hardware dependent ?

? ? ? ? connections like VPN or otherwise, ?

? ? ? ? should contain the setting name of ?

? ? ? ? that setting type (ie, "vpn" or ?

? ? ? ? "bridge", etc). ?

??

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

?uuid ? string ? ? A universally unique identifier for ?

? ? ? ? the connection, for example ?

? ? ? ? generated with libuuid. It should ?

? ? ? ? be assigned when the connection is ?

? ? ? ? created, and never changed as long ?

? ? ? ? as the connection still applies to ?

? ? ? ? the same network. For example, it ?

? ? ? ? should not be changed when the "id" ?

? ? ? ? property or NMSettingIP4Config ?

? ? ? ? changes, but might need to be ?

? ? ? ? re-created when the Wi-Fi SSID, ?

? ? ? ? mobile broadband network provider, ?

? ? ? ? or "type" property changes. The UUID ?

? ? ? ? must be in the format ?

? ? ? ? "2815492f-7e56-435e-b2e9-246bd7cdc664" ?

? ? ? ? (ie, contains only hexadecimal ?

? ? ? ? characters and "-"). ?

??

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

?wait-device-timeout ? int32 ? -1 ? Timeout in milliseconds to wait for ?

? ? ? ? device at startup. During boot, ?

? ? ? ? devices may take a while to be ?

? ? ? ? detected by the driver. This property ?

? ? ? ? will cause to delay ?

? ? ? ? NetworkManager-wait-online.service and ?

? ? ? ? nm-online to give the device a chance ?

? ? ? ? to appear. This works by waiting for ?

? ? ? ? the given timeout until a compatible ?

? ? ? ? device for the profile is available ?

? ? ? ? and managed. The value 0 means no wait ?

? ? ? ? time. The default value is -1, which ?

? ? ? ? currently has the same meaning as no ?

? ? ? ? wait time. ?

??

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

?zone ? string ? ? The trust level of a the connection. ?

? ? ? ? Free form case-insensitive string (for ?

? ? ? ? example "Home", "Work", "Public"). ?

? ? ? ? NULL or unspecified zone means the ?

? ? ? ? connection will be placed in the ?

? ? ? ? default zone as defined by the ?

? ? ? ? firewall. When updating this property ?

? ? ? ? on a currently activated connection, ?

? ? ? ? the change takes effect immediately. ?

??

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

6lowpan setting

6LoWPAN Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?parent ? string ? ? If given, specifies ?

? ? ? ? the parent ?

? ? ? ? interface name or ?

? ? ? ? parent connection ?

? ? ? ? UUID from which ?

?   ?   ?   ? this 6LowPAN   ?
?   ?   ?   ? interface should be ?
?   ?   ?   ? created.   ?
??

802-1x setting

IEEE 802.1x Authentication Settings.

??
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?Key Name   ? Value Type   ? Default Value ? Value Description   ?

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

?altsubject-matches   ? array of string   ?   ? List of strings to   ?
?   ?   ?   ? be matched against   ?
?   ?   ?   ? the altSubjectName   ?
?   ?   ?   ? of the certificate   ?
?   ?   ?   ? presented by the   ?
?   ?   ?   ? authentication   ?
?   ?   ?   ? server. If the list   ?
?   ?   ?   ? is empty, no   ?
?   ?   ?   ? verification of the   ?
?   ?   ?   ? server   ?
?   ?   ?   ? certificate's   ?
?   ?   ?   ? altSubjectName is   ?
?   ?   ?   ? performed.   ?

??
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?anonymous-identity   ? string   ?   ? Anonymous identity   ?
?   ?   ?   ? string for EAP   ?
?   ?   ?   ? authentication   ?
?   ?   ?   ? methods. Used as   ?

? ? ? ? the unencrypted ?
? ? ? ? identity with EAP ?
? ? ? ? types that support ?
? ? ? ? different tunneled ?
? ? ? ? identity like ?
? ? ? ? EAP-TTLS. ?

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

?auth-timeout ? int32 ? 0 ? A timeout for the ?
? ? ? ? authentication. ?
? ? ? ? Zero means the ?
? ? ? ? global default; if ?
? ? ? ? the global default ?
? ? ? ? is not set, the ?
? ? ? ? authentication ?
? ? ? ? timeout is 25 ?
? ? ? ? seconds. ?

??
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?ca-cert ? byte array ? ? Contains the CA ?
? ? ? ? certificate if used ?
? ? ? ? by the EAP method ?
? ? ? ? specified in the ?
? ? ? ? "eap" property. ?
? ? ? ? Certificate data is ?
? ? ? ? specified using a ?
? ? ? ? "scheme"; three are ?
? ? ? ? currently ?
? ? ? ? supported: blob, ?
? ? ? ? path and pkcs#11 ?
? ? ? ? URL. When using the ?

?	?	?	? blob scheme this	?
?	?	?	? property should be	?
?	?	?	? set to the	?
?	?	?	? certificate's DER	?
?	?	?	? encoded data. When	?
?	?	?	? using the path	?
?	?	?	? scheme, this	?
?	?	?	? property should be	?
?	?	?	? set to the full	?
?	?	?	? UTF-8 encoded path	?
?	?	?	? of the certificate,	?
?	?	?	? prefixed with the	?
?	?	?	? string "file://"	?
?	?	?	? and ending with a	?
?	?	?	? terminating NUL	?
?	?	?	? byte. This property	?
?	?	?	? can be unset even	?
?	?	?	? if the EAP method	?
?	?	?	? supports CA	?
?	?	?	? certificates, but	?
?	?	?	? this allows	?
?	?	?	? man-in-the-middle	?
?	?	?	? attacks and is NOT	?
?	?	?	? recommended. Note	?
?	?	?	? that enabling	?
?	?	?	? NMSetting8021x:system-ca-certs	?
?	?	?	? will override this	?
?	?	?	? setting to use the	?
?	?	?	? built-in path, if	?
?	?	?	? the built-in path	?
?	?	?	? is not a directory.	?

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

?ca-cert-password ? string ? ? The password used to access ?

? ? ? ? the CA certificate stored in ?

? ? ? ? "ca-cert" property. Only makes ?

? ? ? ? sense if the certificate is ?

? ? ? ? stored on a PKCS#11 token that ?

? ? ? ? requires a login. ?

??

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?ca-cert-password-flags ? NMSettingSecretFlags ? ? Flags indicating how to handle ?

? ? (uint32) ? ? the "ca-cert-password" ?

? ? ? ? property. (see the section ?

? ? ? ? called ?Secret flag types:? ?

? ? ? ? for flag values) ?

??

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?ca-path ? string ? ? UTF-8 encoded path to a ?

? ? ? ? directory containing PEM or ?

? ? ? ? DER formatted certificates to ?

? ? ? ? be added to the verification ?

? ? ? ? chain in addition to the ?

? ? ? ? certificate specified in the ?

? ? ? ? "ca-cert" property. If ?

? ? ? ? NMSetting8021x:system-ca-certs ?

? ? ? ? is enabled and the built-in CA ?

? ? ? ? path is an existing directory, ?

? ? ? ? then this setting is ignored. ?

??

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?client-cert ? byte array ? ? Contains the client ?

? ? ? ? certificate if used by the EAP ?
? ? ? ? method specified in the "eap" ?
? ? ? ? property. Certificate data is ?
? ? ? ? specified using a "scheme"; ?
? ? ? ? two are currently supported: ?
? ? ? ? blob and path. When using the ?
? ? ? ? blob scheme (which is ?
? ? ? ? backwards compatible with NM ?
? ? ? ? 0.7.x) this property should be ?
? ? ? ? set to the certificate's DER ?
? ? ? ? encoded data. When using the ?
? ? ? ? path scheme, this property ?
? ? ? ? should be set to the full ?
? ? ? ? UTF-8 encoded path of the ?
? ? ? ? certificate, prefixed with the ?
? ? ? ? string "file://" and ending ?
? ? ? ? with a terminating NUL byte. ?

??
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?client-cert-password ? string ? ? The password used to access ?
? ? ? ? the client certificate stored ?
? ? ? ? in "client-cert" property. ?
? ? ? ? Only makes sense if the ?
? ? ? ? certificate is stored on a ?
? ? ? ? PKCS#11 token that requires a ?
? ? ? ? login. ?

??
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?client-cert-password-flags ? NMSettingSecretFlags ? ? Flags indicating how to handle ?
? ? (uint32) ? ? the "client-cert-password" ?
? ? ? ? property. (see the section ?

? ? ? ? called ?Secret flag types:? ?

? ? ? ? for flag values) ?

??

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?domain-match ? string ? ? Constraint for server domain ?

? ? ? ? name. If set, this list of ?

? ? ? ? FQDNs is used as a match ?

? ? ? ? requirement for dNSName ?

? ? ? ? element(s) of the certificate ?

? ? ? ? presented by the ?

? ? ? ? authentication server. If a ?

? ? ? ? matching dNSName is found, ?

? ? ? ? this constraint is met. If no ?

? ? ? ? dNSName values are present, ?

? ? ? ? this constraint is matched ?

? ? ? ? against SubjectName CN using ?

? ? ? ? the same comparison. Multiple ?

? ? ? ? valid FQDNs can be passed as a ?

? ? ? ? ";" delimited list. ?

??

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?domain-suffix-match ? string ? ? Constraint for server domain ?

? ? ? ? name. If set, this FQDN is ?

? ? ? ? used as a suffix match ?

? ? ? ? requirement for dNSName ?

? ? ? ? element(s) of the certificate ?

? ? ? ? presented by the ?

? ? ? ? authentication server. If a ?

? ? ? ? matching dNSName is found, ?

? ? ? ? this constraint is met. If no ?

? ? ? ? dNSName values are present, ?

?	?	?	? this constraint is matched	?
?	?	?	? against SubjectName CN using	?
?	?	?	? same suffix match comparison.	?
?	?	?	? Since version 1.24, multiple	?
?	?	?	? valid FQDNs can be passed as a	?
?	?	?	? ";" delimited list.	?

??

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?eap	? array of string	?	? The allowed EAP method to be	?
?	?	?	? used when authenticating to	?
?	?	?	? the network with 802.1x.	?
?	?	?	? Valid methods are: "leap",	?
?	?	?	? "md5", "tls", "peap", "ttls",	?
?	?	?	? "pwd", and "fast". Each	?
?	?	?	? method requires different	?
?	?	?	? configuration using the	?
?	?	?	? properties of this setting;	?
?	?	?	? refer to wpa_supplicant	?
?	?	?	? documentation for the allowed	?
?	?	?	? combinations.	?

??

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?identity	? string	?	? Identity string for EAP	?
?	?	?	? authentication methods. Often	?
?	?	?	? the user's user or login name.	?

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?optional	? boolean	? FALSE	? Whether the 802.1X	?
?	?	?	? authentication is optional. If	?
?	?	?	? TRUE, the activation will	?

? ? ? ? continue even after a timeout ?

? ? ? ? or an authentication failure. ?

? ? ? ? Setting the property to TRUE ?

? ? ? ? is currently allowed only for ?

? ? ? ? Ethernet connections. If set ?

? ? ? ? to FALSE, the activation can ?

? ? ? ? continue only after a ?

? ? ? ? successful authentication. ?

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?pac-file ? string ? ? UTF-8 encoded file path ?

? ? ? ? containing PAC for EAP-FAST. ?

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

?password ? string ? ? UTF-8 encoded password used ?

? ? ? ? for EAP authentication ?

? ? ? ? methods. If both the ?

? ? ? ? "password" property and the ?

? ? ? ? "password-raw" property are ?

? ? ? ? specified, "password" is ?

? ? ? ? preferred. ?

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

?password-flags ? NMSettingSecretFlags ? ? Flags indicating how to handle ?

? ? (uint32) ? ? the "password" property. (see ?

? ? ? ? the section called ?Secret ?

? ? ? ? flag types:? for flag values) ?

??
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?password-raw ? byte array ? ? Password used for EAP ?
? ? ? ? authentication methods, given ?
? ? ? ? as a byte array to allow ?
? ? ? ? passwords in other encodings ?
? ? ? ? than UTF-8 to be used. If both ?
? ? ? ? the "password" property and ?
? ? ? ? the "password-raw" property ?
? ? ? ? are specified, "password" is ?
? ? ? ? preferred. ?

???
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?password-raw-flags ? NMSettingSecretFlags ? ? Flags indicating how to handle ?
? ? (uint32) ? ? the "password-raw" property. ?
? ? ? ? (see the section called ?
? ? ? ? ?Secret flag types:? for flag ?
? ? ? ? values) ?

???
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?phase1-auth-flags ? uint32 ? 0 ? Specifies authentication flags ?
? ? ? ? to use in "phase 1" outer ?
? ? ? ? authentication using ?
? ? ? ? NMSetting8021xAuthFlags ?
? ? ? ? options. The individual TLS ?
? ? ? ? versions can be explicitly ?
? ? ? ? disabled. If a certain TLS ?
? ? ? ? disable flag is not set, it is ?
? ? ? ? up to the supplicant to allow ?
? ? ? ? or forbid it. The TLS options ?
? ? ? ? map to tls_disable_tlsv1_x ?
? ? ? ? settings. See the ?
? ? ? ? wpa_supplicant documentation ?

? ? ? ? for more details. ?

???

?phase1-fast-provisioning	? string	?	? Enables or disables in-line	?
?	?	?	? provisioning of EAP-FAST	?
?	?	?	? credentials when FAST is	?
?	?	?	? specified as the EAP method in	?
?	?	?	? the "eap" property. Recognized	?
?	?	?	? values are "0" (disabled), "1"	?
?	?	?	? (allow unauthenticated	?
?	?	?	? provisioning), "2" (allow	?
?	?	?	? authenticated provisioning),	?
?	?	?	? and "3" (allow both	?
?	?	?	? authenticated and	?
?	?	?	? unauthenticated provisioning).	?
?	?	?	? See the wpa_supplicant	?
?	?	?	? documentation for more	?
?	?	?	? details.	?

???

?phase1-peaplabel	? string	?	? Forces use of the new PEAP	?
?	?	?	? label during key derivation.	?
?	?	?	? Some RADIUS servers may	?
?	?	?	? require forcing the new PEAP	?
?	?	?	? label to interoperate with	?
?	?	?	? PEAPv1. Set to "1" to force	?
?	?	?	? use of the new PEAP label.	?
?	?	?	? See the wpa_supplicant	?
?	?	?	? documentation for more	?
?	?	?	? details.	?

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?phase1-peapver ? string ? ? Forces which PEAP version is ?

? ? ? ? used when PEAP is set as the ?

? ? ? ? EAP method in the "eap" ?

? ? ? ? property. When unset, the ?

? ? ? ? version reported by the server ?

? ? ? ? will be used. Sometimes when ?

? ? ? ? using older RADIUS servers, it ?

? ? ? ? is necessary to force the ?

? ? ? ? client to use a particular ?

? ? ? ? PEAP version. To do so, this ?

? ? ? ? property may be set to "0" or ?

? ? ? ? "1" to force that specific ?

? ? ? ? PEAP version. ?

???

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?phase2-altsubject-matches ? array of string ? ? List of strings to be matched ?

? ? ? ? against the altSubjectName of ?

? ? ? ? the certificate presented by ?

? ? ? ? the authentication server ?

? ? ? ? during the inner "phase 2" ?

? ? ? ? authentication. If the list is ?

? ? ? ? empty, no verification of the ?

? ? ? ? server certificate's ?

? ? ? ? altSubjectName is performed. ?

???

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?phase2-auth ? string ? ? Specifies the allowed "phase ?

? ? ? ? 2" inner authentication method ?

? ? ? ? when an EAP method that uses ?

? ? ? ? an inner TLS tunnel is ?
? ? ? ? specified in the "eap" ?
? ? ? ? property. For TTLS this ?
? ? ? ? property selects one of the ?
? ? ? ? supported non-EAP inner ?
? ? ? ? methods: "pap", "chap", ?
? ? ? ? "mschap", "mschapv2" while ?
? ? ? ? "phase2-autheap" selects an ?
? ? ? ? EAP inner method. For PEAP ?
? ? ? ? this selects an inner EAP ?
? ? ? ? method, one of: "gtc", "otp", ?
? ? ? ? "md5" and "tls". Each "phase ?
? ? ? ? 2" inner method requires ?
? ? ? ? specific parameters for ?
? ? ? ? successful authentication; see ?
? ? ? ? the wpa_supplicant ?
? ? ? ? documentation for more ?
? ? ? ? details. Both "phase2-auth" ?
? ? ? ? and "phase2-autheap" cannot be ?
? ? ? ? specified. ?

??

?phase2-autheap ? string ? ? Specifies the allowed "phase ?
? ? ? ? 2" inner EAP-based ?
? ? ? ? authentication method when ?
? ? ? ? TTLS is specified in the "eap" ?
? ? ? ? property. Recognized ?
? ? ? ? EAP-based "phase 2" methods ?
? ? ? ? are "md5", "mschapv2", "otp", ?
? ? ? ? "gtc", and "tls". Each "phase ?
? ? ? ? 2" inner method requires ?
? ? ? ? specific parameters for ?

? ? ? ? successful authentication; see ?
? ? ? ? the wpa_supplicant ?
? ? ? ? documentation for more ?
? ? ? ? details. ?

???
??????????????????????
?phase2-ca-cert ? byte array ? ? Contains the "phase 2" CA ?
? ? ? ? certificate if used by the EAP ?
? ? ? ? method specified in the ?
? ? ? ? "phase2-auth" or ?
? ? ? ? "phase2-autheap" properties. ?
? ? ? ? Certificate data is specified ?
? ? ? ? using a "scheme"; three are ?
? ? ? ? currently supported: blob, ?
? ? ? ? path and pkcs#11 URL. When ?
? ? ? ? using the blob scheme this ?
? ? ? ? property should be set to the ?
? ? ? ? certificate's DER encoded ?
? ? ? ? data. When using the path ?
? ? ? ? scheme, this property should ?
? ? ? ? be set to the full UTF-8 ?
? ? ? ? encoded path of the ?
? ? ? ? certificate, prefixed with the ?
? ? ? ? string "file://" and ending ?
? ? ? ? with a terminating NUL byte. ?
? ? ? ? This property can be unset ?
? ? ? ? even if the EAP method ?
? ? ? ? supports CA certificates, but ?
? ? ? ? this allows man-in-the-middle ?
? ? ? ? attacks and is NOT ?
? ? ? ? recommended. Note that ?
? ? ? ? enabling ?

? ? ? ? NMSetting8021x:system-ca-certs ?

? ? ? ? will override this setting to ?

? ? ? ? use the built-in path, if the ?

? ? ? ? built-in path is not a ?

? ? ? ? directory. ?

??

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?phase2-ca-cert-password ? string ? ? The password used to access ?

? ? ? ? the "phase2" CA certificate ?

? ? ? ? stored in "phase2-ca-cert" ?

? ? ? ? property. Only makes sense if ?

? ? ? ? the certificate is stored on a ?

? ? ? ? PKCS#11 token that requires a ?

? ? ? ? login. ?

??

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?phase2-ca-cert-password-flags ? NMSettingSecretFlags ? ? Flags indicating how to handle ?

? ? (uint32) ? ? the "phase2-ca-cert-password" ?

? ? ? ? property. (see the section ?

? ? ? ? called ?Secret flag types:? ?

? ? ? ? for flag values) ?

??

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?phase2-ca-path ? string ? ? UTF-8 encoded path to a ?

? ? ? ? directory containing PEM or ?

? ? ? ? DER formatted certificates to ?

? ? ? ? be added to the verification ?

? ? ? ? chain in addition to the ?

? ? ? ? certificate specified in the ?

? ? ? ? "phase2-ca-cert" property. If ?

? ? ? ? NMSetting8021x:system-ca-certs ?
? ? ? ? is enabled and the built-in CA ?
? ? ? ? path is an existing directory, ?
? ? ? ? then this setting is ignored. ?

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

?phase2-client-cert ? byte array ? ? Contains the "phase 2" client ?
? ? ? ? certificate if used by the EAP ?
? ? ? ? method specified in the ?
? ? ? ? "phase2-auth" or ?
? ? ? ? "phase2-autheap" properties. ?
? ? ? ? Certificate data is specified ?
? ? ? ? using a "scheme"; two are ?
? ? ? ? currently supported: blob and ?
? ? ? ? path. When using the blob ?
? ? ? ? scheme (which is backwards ?
? ? ? ? compatible with NM 0.7.x) this ?
? ? ? ? property should be set to the ?
? ? ? ? certificate's DER encoded ?
? ? ? ? data. When using the path ?
? ? ? ? scheme, this property should ?
? ? ? ? be set to the full UTF-8 ?
? ? ? ? encoded path of the ?
? ? ? ? certificate, prefixed with the ?
? ? ? ? string "file://" and ending ?
? ? ? ? with a terminating NUL byte. ?
? ? ? ? This property can be unset ?
? ? ? ? even if the EAP method ?
? ? ? ? supports CA certificates, but ?
? ? ? ? this allows man-in-the-middle ?
? ? ? ? attacks and is NOT ?
? ? ? ? recommended. ?

??
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?phase2-client-cert-password ? string ? ? The password used to access ?
? ? ? ? the "phase2" client ?
? ? ? ? certificate stored in ?
? ? ? ? "phase2-client-cert" property. ?
? ? ? ? Only makes sense if the ?
? ? ? ? certificate is stored on a ?
? ? ? ? PKCS#11 token that requires a ?
? ? ? ? login. ?

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?phase2-client-cert-password-flags ? NMSettingSecretFlags ? ? Flags indicating how to handle ?
? ? (uint32) ? ? the ?
? ? ? ? "phase2-client-cert-password" ?
? ? ? ? property. (see the section ?
? ? ? ? called ?Secret flag types:? ?
? ? ? ? for flag values) ?

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?phase2-domain-match ? string ? ? Constraint for server domain ?
? ? ? ? name. If set, this list of ?
? ? ? ? FQDNs is used as a match ?
? ? ? ? requirement for dNSName ?
? ? ? ? element(s) of the certificate ?
? ? ? ? presented by the ?
? ? ? ? authentication server during ?
? ? ? ? the inner "phase 2" ?
? ? ? ? authentication. If a matching ?
? ? ? ? dNSName is found, this ?

? ? ? ? constraint is met. If no ?

? ? ? ? dNSName values are present, ?

? ? ? ? this constraint is matched ?

? ? ? ? against SubjectName CN using ?

? ? ? ? the same comparison. Multiple ?

? ? ? ? valid FQDNs can be passed as a ?

? ? ? ? ";" delimited list. ?

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?phase2-domain-suffix-match ? string ? ? Constraint for server domain ?

? ? ? ? name. If set, this FQDN is ?

? ? ? ? used as a suffix match ?

? ? ? ? requirement for dNSName ?

? ? ? ? element(s) of the certificate ?

? ? ? ? presented by the ?

? ? ? ? authentication server during ?

? ? ? ? the inner "phase 2" ?

? ? ? ? authentication. If a matching ?

? ? ? ? dNSName is found, this ?

? ? ? ? constraint is met. If no ?

? ? ? ? dNSName values are present, ?

? ? ? ? this constraint is matched ?

? ? ? ? against SubjectName CN using ?

? ? ? ? same suffix match comparison. ?

? ? ? ? Since version 1.24, multiple ?

? ? ? ? valid FQDNs can be passed as a ?

? ? ? ? ";" delimited list. ?

??

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?phase2-private-key ? byte array ? ? Contains the "phase 2" inner ?

? ? ? ? private key when the ?

? ? ? ? "phase2-auth" or ?
? ? ? ? "phase2-autheap" property is ?
? ? ? ? set to "tls". Key data is ?
? ? ? ? specified using a "scheme"; ?
? ? ? ? two are currently supported: ?
? ? ? ? blob and path. When using the ?
? ? ? ? blob scheme and private keys, ?
? ? ? ? this property should be set to ?
? ? ? ? the key's encrypted PEM ?
? ? ? ? encoded data. When using ?
? ? ? ? private keys with the path ?
? ? ? ? scheme, this property should ?
? ? ? ? be set to the full UTF-8 ?
? ? ? ? encoded path of the key, ?
? ? ? ? prefixed with the string ?
? ? ? ? "file://" and ending with a ?
? ? ? ? terminating NUL byte. When ?
? ? ? ? using PKCS#12 format private ?
? ? ? ? keys and the blob scheme, this ?
? ? ? ? property should be set to the ?
? ? ? ? PKCS#12 data and the ?
? ? ? ? "phase2-private-key-password" ?
? ? ? ? property must be set to ?
? ? ? ? password used to decrypt the ?
? ? ? ? PKCS#12 certificate and key. ?
? ? ? ? When using PKCS#12 files and ?
? ? ? ? the path scheme, this property ?
? ? ? ? should be set to the full ?
? ? ? ? UTF-8 encoded path of the key, ?
? ? ? ? prefixed with the string ?
? ? ? ? "file://" and ending with a ?
? ? ? ? terminating NUL byte, and as ?
? ? ? ? with the blob scheme the ?

? ? ? ? "phase2-private-key-password" ?

? ? ? ? property must be set to the ?

? ? ? ? password used to decode the ?

? ? ? ? PKCS#12 private key and ?

? ? ? ? certificate. ?

??

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?phase2-private-key-password ? string ? ? The password used to decrypt ?

? ? ? ? the "phase 2" private key ?

? ? ? ? specified in the ?

? ? ? ? "phase2-private-key" property ?

? ? ? ? when the private key either ?

? ? ? ? uses the path scheme, or is a ?

? ? ? ? PKCS#12 format key. ?

??

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?phase2-private-key-password-flags ? NMSettingSecretFlags ? ? Flags indicating how to handle ?

? ? (uint32) ? ? the ?

? ? ? ? "phase2-private-key-password" ?

? ? ? ? property. (see the section ?

? ? ? ? called ?Secret flag types:? ?

? ? ? ? for flag values) ?

??

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?phase2-subject-match ? string ? ? Substring to be matched ?

? ? ? ? against the subject of the ?

? ? ? ? certificate presented by the ?

? ? ? ? authentication server during ?

? ? ? ? the inner "phase 2" ?

? ? ? ? authentication. When unset, no ?

? ? ? ? verification of the ?
? ? ? ? authentication server ?
? ? ? ? certificate's subject is ?
? ? ? ? performed. This property ?
? ? ? ? provides little security, if ?
? ? ? ? any, and its use is deprecated ?
? ? ? ? in favor of ?
? ? ? ? NMSetting8021x:phase2-domain-suffix-match. ?

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?pin ? string ? ? PIN used for EAP authentication methods. ?

??
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?pin-flags ? NMSettingSecretFlags ? ? Flags indicating how to handle the "pin" ?
? ? (uint32) ? ? property. (see the section called ?Secret ?
? ? ? ? flag types:? for flag values) ?

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

?private-key ? byte array ? ? Contains the private key when the "eap" ?
? ? ? ? property is set to "tls". Key data is ?
? ? ? ? specified using a "scheme"; two are ?
? ? ? ? currently supported: blob and path. When ?
? ? ? ? using the blob scheme and private keys, ?
? ? ? ? this property should be set to the key's ?
? ? ? ? encrypted PEM encoded data. When using ?
? ? ? ? private keys with the path scheme, this ?
? ? ? ? property should be set to the full UTF-8 ?
? ? ? ? encoded path of the key, prefixed with the ?
? ? ? ? string "file://" and ending with a ?
? ? ? ? terminating NUL byte. When using PKCS#12 ?

? ? ? ? format private keys and the blob scheme, ?

? ? ? ? this property should be set to the PKCS#12 ?

? ? ? ? data and the "private-key-password" ?

? ? ? ? property must be set to password used to ?

? ? ? ? decrypt the PKCS#12 certificate and key. ?

? ? ? ? When using PKCS#12 files and the path ?

? ? ? ? scheme, this property should be set to the ?

? ? ? ? full UTF-8 encoded path of the key, ?

? ? ? ? prefixed with the string "file://" and ?

? ? ? ? ending with a terminating NUL byte, and as ?

? ? ? ? with the blob scheme the ?

? ? ? ? "private-key-password" property must be ?

? ? ? ? set to the password used to decode the ?

? ? ? ? PKCS#12 private key and certificate. ?

? ? ? ? WARNING: "private-key" is not a "secret" ?

? ? ? ? property, and thus unencrypted private key ?

? ? ? ? data using the BLOB scheme may be readable ?

? ? ? ? by unprivileged users. Private keys ?

? ? ? ? should always be encrypted with a private ?

? ? ? ? key password to prevent unauthorized ?

? ? ? ? access to unencrypted private key data. ?

??

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?private-key-password ? string ? ? The password used to decrypt the private ?

? ? ? ? key specified in the "private-key" ?

? ? ? ? property when the private key either uses ?

? ? ? ? the path scheme, or if the private key is ?

? ? ? ? a PKCS#12 format key. ?

??

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?private-key-password-flags ? NMSettingSecretFlags ? ? Flags indicating how to handle the ?

? ? (uint32) ? ? "private-key-password" property. (see the ?
? ? ? ? section called ?Secret flag types:? for ?
? ? ? ? flag values) ?

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

?subject-match ? string ? ? Substring to be matched against the ?
? ? ? ? subject of the certificate presented by ?
? ? ? ? the authentication server. When unset, no ?
? ? ? ? verification of the authentication server ?
? ? ? ? certificate's subject is performed. This ?
? ? ? ? property provides little security, if any, ?
? ? ? ? and its use is deprecated in favor of ?
? ? ? ? NMSetting8021x:domain-suffix-match. ?

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

?system-ca-certs ? boolean ? FALSE ? When TRUE, overrides the "ca-path" and ?
? ? ? ? "phase2-ca-path" properties using the ?
? ? ? ? system CA directory specified at configure ?
? ? ? ? time with the --system-ca-path switch. ?
? ? ? ? The certificates in this directory are ?
? ? ? ? added to the verification chain in ?
? ? ? ? addition to any certificates specified by ?
? ? ? ? the "ca-cert" and "phase2-ca-cert" ?
? ? ? ? properties. If the path provided with ?
? ? ? ? --system-ca-path is rather a file name ?
? ? ? ? (bundle of trusted CA certificates), it ?
? ? ? ? overrides "ca-cert" and "phase2-ca-cert" ?
? ? ? ? properties instead (sets ca_cert/ca_cert2 ?
? ? ? ? options for wpa_supplicant). ?

??

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adsl setting

ADSL Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?encapsulation ? string ? ? Encapsulation of ?

? ? ? ? ADSL connection. ?

? ? ? ? Can be "vcmux" or ?

? ? ? ? "llc". ?

??

?password ? string ? ? Password used to ?

? ? ? ? authenticate with ?

? ? ? ? the ADSL service. ?

??

?password-flags ? NMSettingSecretFlags ? ? Flags indicating ?

? ? (uint32) ? ? how to handle the ?

? ? ? ? "password" ?

? ? ? ? property. (see the ?

? ? ? ? section called ?

? ? ? ? ?Secret flag ?

? ? ? ? types:? for flag ?

? ? ? ? values) ?

??

?protocol ? string ? ? ADSL connection ?

? ? ? ? protocol. Can be ?

? ? ? ? "pppoa", "pppoe" or ?

? ? ? ? "ipoatm". ?

??

?username ? string ? ? Username used to ?

? ? ? ? authenticate with ?

? ? ? ? the ADSL service. ?

??

?vci ? uint32 ? 0 ? VCI of ADSL ?

? ? ? ? connection ?

??

?vpi ? uint32 ? 0 ? VPI of ADSL ?

? ? ? ? connection ?

??

bluetooth setting

Bluetooth Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?bdaddr ? byte array ? ? The Bluetooth ?

? ? ? ? address of the ?

? ? ? ? device. ?

??

?type ? string ? ? Either "dun" for ?

? ? ? ? Dial-Up Networking ?

? ? ? ? connections or ?

? ? ? ? "panu" for Personal ?

? ? ? ? Area Networking ?

? ? ? ? connections to ?

? ? ? ? devices supporting ?

? ? ? ? the NAP profile. ?

??

bond setting

Bonding Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?interface-name ? string ? ? Deprecated in favor ?

? ? ? ? of ?

? ? ? ? connection.interface-name, ?

? ? ? ? but can be used for ?

? ? ? ? backward-compatibility ?

? ? ? ? with older daemons, ?

? ? ? ? to set the bond's ?

? ? ? ? interface name. ?

??

?options ? dict of string to ? {'mode': ? Dictionary of key/value ?

? ? string ? 'balance-rr'} ? pairs of bonding options. ?

? ? ? ? Both keys and values must ?

? ? ? ? be strings. Option names ?

? ? ? ? must contain only ?

? ? ? ? alphanumeric characters ?

? ? ? ? (ie, [a-zA-Z0-9]). ?

??

bridge setting

Bridging Settings.

??

?????

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?????

?ageing-time ? uint32 ? 300 ? The Ethernet MAC ?

? ? ? ? ? address aging time, ?

? ? ? ? ? in seconds. ?

??

?????

?forward-delay ? uint32 ? 15 ? The Spanning Tree ?

? ? ? ? ? Protocol (STP) ?

? ? ? ? ? forwarding delay, ?

? ? ? ? ? in seconds. ?

??

?????

?group-address ? byte array ? ? If specified, The ?

? ? ? ? MAC address of the ?

? ? ? ? multicast group ?

? ? ? ? this bridge uses ?

? ? ? ? for STP. The ?

? ? ? ? address must be a ?

? ? ? ? link-local address ?

? ? ? ? in standard ?

? ? ? ? Ethernet MAC ?

? ? ? ? address format, ie ?

? ? ? ? an address of the ?

? ? ? ? form ?

? ? ? ? 01:80:C2:00:00:0X, ?

? ? ? ? with X in [0, ?

? ? ? ? 4..F]. If not ?

? ? ? ? specified the ?

? ? ? ? default value is ?

? ? ? ? 01:80:C2:00:00:00. ?

??

?????

?group-forward-mask ? uint32 ? 0 ? A mask of group ?

? ? ? ? addresses to ?

? ? ? ? forward. Usually, ?

? ? ? ? group addresses in ?

? ? ? ? the range from ?

? ? ? ? 01:80:C2:00:00:00 ?

? ? ? ? to ?

? ? ? ? 01:80:C2:00:00:0F ?

? ? ? ? are not forwarded ?

? ? ? ? according to ?

? ? ? ? standards. This ?
? ? ? ? property is a mask ?
? ? ? ? of 16 bits, each ?
? ? ? ? corresponding to a ?
? ? ? ? group address in ?
? ? ? ? that range that ?
? ? ? ? must be forwarded. ?
? ? ? ? The mask can't have ?
? ? ? ? bits 0, 1 or 2 set ?
? ? ? ? because they are ?
? ? ? ? used for STP, MAC ?
? ? ? ? pause frames and ?
? ? ? ? LACP. ?

??
?????

?hello-time ? uint32 ? 2 ? The Spanning Tree ?
? ? ? ? Protocol (STP) ?
? ? ? ? hello time, in ?
? ? ? ? seconds. ?

??
?????

?interface-name ? string ? ? Deprecated in favor ?
? ? ? ? of ?
? ? ? ? connection.interface-name, ?
? ? ? ? but can be used for ?
? ? ? ? backward-compatibility ?
? ? ? ? with older daemons, ?
? ? ? ? to set the bridge's ?
? ? ? ? interface name. ?

??

?????

?mac-address ? byte array ? ? If specified, the MAC ?
? ? ? ? address of bridge. When ?
? ? ? ? creating a new bridge, ?
? ? ? ? this MAC address will be ?
? ? ? ? set. If this field is left ?
? ? ? ? unspecified, the ?
? ? ? ? "ethernet.cloned-mac-address" ?
? ? ? ? is referred instead to ?
? ? ? ? generate the initial MAC ?
? ? ? ? address. Note that setting ?
? ? ? ? "ethernet.cloned-mac-address" ?
? ? ? ? anyway overwrites the MAC ?
? ? ? ? address of the bridge ?
? ? ? ? later while activating the ?
? ? ? ? bridge. Hence, this ?
? ? ? ? property is deprecated. ?
? ? ? ? Deprecated: 1 ?

??

?????

?max-age ? uint32 ? 20 ? The Spanning Tree Protocol ?
? ? ? ? (STP) maximum message age, in ?
? ? ? ? seconds. ?

??

?????

?multicast-hash-max ? uint32 ? 4096 ? Set maximum size of multicast ?
? ? ? ? hash table (value must be a ?
? ? ? ? power of 2). ?

??

?????

?multicast-last-member-count ? uint32 ? 2 ? Set the number of queries the ?
? ? ? ? bridge will send before ?
? ? ? ? stopping forwarding a ?
? ? ? ? multicast group after a ?
? ? ? ? "leave" message has been ?
? ? ? ? received. ?

??
?????

?multicast-last-member-interval ? uint64 ? 100 ? Set interval (in deciseconds) ?
? ? ? ? between queries to find ?
? ? ? ? remaining members of a group, ?
? ? ? ? after a "leave" message is ?
? ? ? ? received. ?

??
?????

?multicast-membership-interval ? uint64 ? 26000 ? Set delay (in deciseconds) ?
? ? ? ? after which the bridge will ?
? ? ? ? leave a group, if no ?
? ? ? ? membership reports for this ?
? ? ? ? group are received. ?

??
?????

?multicast-querier ? boolean ? FALSE ? Enable or disable sending of ?
? ? ? ? multicast queries by the ?
? ? ? ? bridge. If not specified the ?
? ? ? ? option is disabled. ?

??
?????

?multicast-querier-interval ? uint64 ? 25500 ? If no queries are seen after ?

? ? ? ? this delay (in deciseconds) ?

? ? ? ? has passed, the bridge will ?

? ? ? ? start to send its own ?

? ? ? ? queries. ?

??

?????

?multicast-query-interval ? uint64 ? 12500 ? Interval (in deciseconds) ?

? ? ? ? between queries sent by the ?

? ? ? ? bridge after the end of the ?

? ? ? ? startup phase. ?

??

?????

?multicast-query-response-interval ? uint64 ? 1000 ? Set the Max Response Time/Max ?

? ? ? ? Response Delay (in ?

? ? ? ? deciseconds) for IGMP/MLD ?

? ? ? ? queries sent by the bridge. ?

??

?????

?multicast-query-use-ifaddr ? boolean ? FALSE ? If enabled the bridge's own ?

? ? ? ? IP address is used as the ?

? ? ? ? source address for IGMP ?

? ? ? ? queries otherwise the default ?

? ? ? ? of 0.0.0.0 is used. ?

??

?????

?multicast-router ? string ? ? Sets bridge's multicast ?

? ? ? ? router. Multicast-snooping ?

? ? ? ? must be enabled for this ?

? ? ? ? option to work. Supported ?

? ? ? ? values are: 'auto', ?

? ? ? ? 'disabled', 'enabled' to ?

? ? ? ? which kernel assigns the ?

? ? ? ? numbers 1, 0, and 2, ?

? ? ? ? respectively. If not ?

? ? ? ? specified the default value ?

? ? ? ? is 'auto' (1). ?

??

?????

?multicast-snooping ? boolean ? TRUE ? Controls whether IGMP ?

? ? ? ? snooping is enabled for this ?

? ? ? ? bridge. Note that if snooping ?

? ? ? ? was automatically disabled ?

? ? ? ? due to hash collisions, the ?

? ? ? ? system may refuse to enable ?

? ? ? ? the feature until the ?

? ? ? ? collisions are resolved. ?

??

?????

?multicast-startup-query-count ? uint32 ? 2 ? Set the number of IGMP ?

? ? ? ? queries to send during ?

? ? ? ? startup phase. ?

??

?????

?multicast-startup-query-interval ? uint64 ? 3125 ? Sets the time (in ?

? ? ? ? deciseconds) between queries ?

? ? ? ? sent out at startup to ?

? ? ? ? determine membership ?

? ? ? ? information. ?

??

?????

?priority ? uint32 ? 32768 ? Sets the Spanning Tree ?

? ? ? ? Protocol (STP) priority for ?

? ? ? ? this bridge. Lower values ?

? ? ? ? are "better"; the lowest ?

? ? ? ? priority bridge will be ?

? ? ? ? elected the root bridge. ?

??

?????

?stp ? boolean ? TRUE ? Controls whether Spanning ?

? ? ? ? Tree Protocol (STP) is ?

? ? ? ? enabled for this bridge. ?

??

?????

?vlan-default-pvid ? uint32 ? 1 ? The default PVID for the ?

? ? ? ? ports of the bridge, that is ?

? ? ? ? the VLAN id assigned to ?

? ? ? ? incoming untagged frames. ?

??

?????

?vlan-filtering ? boolean ? FALSE ? Control whether VLAN ?

? ? ? ? filtering is enabled on the ?

? ? ? ? bridge. ?

??

?????

?vlan-protocol ? string ? ? If specified, the protocol ?

? ? ? ? used for VLAN filtering. ?

? ? ? ? Supported values are: ?

? ? ? ? '802.1Q', '802.1ad'. If not ?

? ? ? ? specified the default value ?

? ? ? ? is '802.1Q'. ?

??

?????

?vlan-stats-enabled ? boolean ? FALSE ? Controls whether per-VLAN ?

? ? ? ? stats accounting is enabled. ?

??

?????

?vlans ? array of vardict ? ? Array of bridge VLAN objects. ?

? ? ? ? In addition to the VLANs ?

? ? ? ? specified here, the bridge ?

? ? ? ? will also have the ?

? ? ? ? default-pvid VLAN configured ?

? ? ? ? by the ?

? ? ? ? bridge.vlan-default-pvid ?

? ? ? ? property. In nmcli the VLAN ?

? ? ? ? list can be specified with ?

? ? ? ? the following syntax: $vid ?

? ? ? ? [pvid] [untagged] [, $vid ?

? ? ? ? [pvid] [untagged]]... where ?

? ? ? ? $vid is either a single id ?

? ? ? ? between 1 and 4094 or a ?

? ? ? ? range, represented as a ?

? ? ? ? couple of ids separated by a ?

? ? ? ? dash. ?

??

?????

bridge-port setting

Bridge Port Settings.

```
????????????????????????????????????????????????????????????????????????????????
?Key Name     ? Value Type       ? Default Value ? Value Description        ?
????????????????????????????????????????????????????????????????????????????????
?hairpin-mode ? boolean          ? FALSE         ? Enables or disables      ?
?             ?                  ?               ? "hairpin mode" for       ?
?             ?                  ?               ? the port, which          ?
?             ?                  ?               ? allows frames to be      ?
?             ?                  ?               ? sent back out            ?
?             ?                  ?               ? through the port         ?
?             ?                  ?               ? the frame was            ?
?             ?                  ?               ? received on.             ?
????????????????????????????????????????????????????????????????????????????????
?path-cost    ? uint32           ? 100           ? The Spanning Tree        ?
?             ?                  ?               ? Protocol (STP) port      ?
?             ?                  ?               ? cost for                 ?
?             ?                  ?               ? destinations via         ?
?             ?                  ?               ? this port.               ?
????????????????????????????????????????????????????????????????????????????????
?priority     ? uint32           ? 32            ? The Spanning Tree        ?
?             ?                  ?               ? Protocol (STP)           ?
?             ?                  ?               ? priority of this         ?
?             ?                  ?               ? bridge port.             ?
????????????????????????????????????????????????????????????????????????????????
?vlans        ? array of vardict ?               ? Array of bridge          ?
?             ?                  ?               ? VLAN objects. In         ?
?             ?                  ?               ? addition to the          ?
?             ?                  ?               ? VLANs specified          ?
?             ?                  ?               ? here, the port will      ?
?             ?                  ?               ? also have the            ?
?             ?                  ?               ? default-pvid VLAN        ?
?             ?                  ?               ? configured on the        ?
?             ?                  ?               ? bridge by the            ?
?             ?                  ?               ? bridge.vlan-default-pvid ?
```

? ? ? ? property. In nmcli ?

? ? ? ? the VLAN list can ?

? ? ? ? be specified with ?

? ? ? ? the following ?

? ? ? ? syntax: $vid [pvid] ?

? ? ? ? [untagged] [, $vid ?

? ? ? ? [pvid] ?

? ? ? ? [untagged]]... ?

? ? ? ? where $vid is ?

? ? ? ? either a single id ?

? ? ? ? between 1 and 4094 ?

? ? ? ? or a range, ?

? ? ? ? represented as a ?

? ? ? ? couple of ids ?

? ? ? ? separated by a ?

? ? ? ? dash. ?

??

cdma setting

CDMA-based Mobile Broadband Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?mtu ? uint32 ? 0 ? If non-zero, only ?

? ? ? ? transmit packets of ?

? ? ? ? the specified size ?

? ? ? ? or smaller, ?

? ? ? ? breaking larger ?

? ? ? ? packets up into ?

? ? ? ? multiple frames. ?

??

?number ? string ? ? The number to dial ?

? ? ? ? to establish the ?

? ? ? ? connection to the ?

? ? ? ? CDMA-based mobile ?

? ? ? ? broadband network, ?

? ? ? ? if any. If not ?

? ? ? ? specified, the ?

? ? ? ? default number ?

? ? ? ? (#777) is used when ?

? ? ? ? required. ?

??

?password ? string ? ? The password used ?

? ? ? ? to authenticate ?

? ? ? ? with the network, ?

? ? ? ? if required. Many ?

? ? ? ? providers do not ?

? ? ? ? require a password, ?

? ? ? ? or accept any ?

? ? ? ? password. But if a ?

? ? ? ? password is ?

? ? ? ? required, it is ?

? ? ? ? specified here. ?

??

?password-flags ? NMSettingSecretFlags ? ? Flags indicating ?

? ? (uint32) ? ? how to handle the ?

? ? ? ? "password" ?

? ? ? ? property. (see the ?

? ? ? ? section called ?

? ? ? ? ?Secret flag ?

? ? ? ? types:? for flag ?

? ? ? ? values) ?

??

?username ? string ? ? The username used ?

? ? ? ? to authenticate ?

? ? ? ? with the network, ?

? ? ? ? if required. Many ?

? ? ? ? providers do not ?

? ? ? ? require a username, ?

? ? ? ? or accept any ?

? ? ? ? username. But if a ?

? ? ? ? username is ?

? ? ? ? required, it is ?

? ? ? ? specified here. ?

??

dcb setting

Data Center Bridging Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?app-fcoe-flags ? NMSettingDcbFlags ? ? Specifies the ?

? ? (uint32) ? ? NMSettingDcbFlags ?

? ? ? ? for the DCB FCoE ?

? ? ? ? application. Flags ?

? ? ? ? may be any ?

? ? ? ? combination of ?

? ? ? ? NM_SETTING_DCB_FLAG_ENABLE ?

? ? ? ? (0x1), ?

? ? ? ? NM_SETTING_DCB_FLAG_ADVERTISE ?

? ? ? ? (0x2), and ?

? ? ? ? NM_SETTING_DCB_FLAG_WILLING ?

? ? ? ? (0x4). ?

??

?app-fcoe-mode ? string ? ? The FCoE controller mode; ?

? ? ? ? either "fabric" or "vn2vn". ?

? ? ? ? Since 1.34, NULL is the ?

? ? ? ? default and means "fabric". ?

? ? ? ? Before 1.34, NULL was ?

? ? ? ? rejected as invalid and the ?

? ? ? ? default was "fabric". ?

??

?app-fcoe-priority ? int32 ? -1 ? The highest User Priority (0 ?

? ? ? ? - 7) which FCoE frames should ?

? ? ? ? use, or -1 for default ?

? ? ? ? priority. Only used when the ?

? ? ? ? "app-fcoe-flags" property ?

? ? ? ? includes the ?

? ? ? ? NM_SETTING_DCB_FLAG_ENABLE ?

? ? ? ? (0x1) flag. ?

??

?app-fip-flags ? NMSettingDcbFlags ? ? Specifies the ?

? ? (uint32) ? ? NMSettingDcbFlags for the DCB ?

? ? ? ? FIP application. Flags may ?

? ? ? ? be any combination of ?

? ? ? ? NM_SETTING_DCB_FLAG_ENABLE ?

? ? ? ? (0x1), ?

? ? ? ? NM_SETTING_DCB_FLAG_ADVERTISE ?

? ? ? ? (0x2), and ?

? ? ? ? NM_SETTING_DCB_FLAG_WILLING ?

? ? ? ? (0x4). ?

??

?app-fip-priority ? int32 ? -1 ? The highest User Priority (0 ?

? ? ? ? - 7) which FIP frames should ?

? ? ? ? use, or -1 for default ?

? ? ? ? priority. Only used when the ?

? ? ? ? "app-fip-flags" property ?

? ? ? ? includes the ?

? ? ? ? NM_SETTING_DCB_FLAG_ENABLE ?

? ? ? ? (0x1) flag. ?

??

?app-iscsi-flags ? NMSettingDcbFlags ? ? Specifies the ?

? ? (uint32) ? ? NMSettingDcbFlags for the DCB ?

? ? ? ? iSCSI application. Flags may ?

? ? ? ? be any combination of ?

? ? ? ? NM_SETTING_DCB_FLAG_ENABLE ?

? ? ? ? (0x1), ?

? ? ? ? NM_SETTING_DCB_FLAG_ADVERTISE ?

? ? ? ? (0x2), and ?

? ? ? ? NM_SETTING_DCB_FLAG_WILLING ?

? ? ? ? (0x4). ?

??

?app-iscsi-priority ? int32 ? -1 ? The highest User Priority (0 ?

? ? ? ? - 7) which iSCSI frames ?

? ? ? ? should use, or -1 for default ?

? ? ? ? priority. Only used when the ?

? ? ? ? "app-iscsi-flags" property ?

? ? ? ? includes the ?

? ? ? ? NM_SETTING_DCB_FLAG_ENABLE ?

? ? ? ? (0x1) flag. ?

??

?priority-bandwidth ? array of uint32 ? ? An array of 8 uint values, ?

? ? ? ? where the array index ?

? ? ? ? corresponds to the User ?

? ? ? ? Priority (0 - 7) and the ?

? ? ? ? value indicates the ?

? ? ? ? percentage of bandwidth of ?

? ? ? ? the priority's assigned group ?

? ? ? ? that the priority may use. ?

? ? ? ? The sum of all percentages ?

? ? ? ? for priorities which belong ?

? ? ? ? to the same group must total ?

? ? ? ? 100 percents. ?

??

?priority-flow-control ? array of uint32 ? ? An array of 8 boolean values, ?

? ? ? ? where the array index ?

? ? ? ? corresponds to the User ?

? ? ? ? Priority (0 - 7) and the ?

? ? ? ? value indicates whether or ?

? ? ? ? not the corresponding ?

? ? ? ? priority should transmit ?

? ? ? ? priority pause. ?

??

?priority-flow-control-flags ? NMSettingDcbFlags ? ? Specifies the ?

? ? (uint32) ? ? NMSettingDcbFlags for DCB ?

? ? ? ? Priority Flow Control (PFC). ?

? ? ? ? Flags may be any combination ?

? ? ? ? of NM_SETTING_DCB_FLAG_ENABLE ?

? ? ? ? (0x1), ?

? ? ? ? NM_SETTING_DCB_FLAG_ADVERTISE ?

? ? ? ? (0x2), and ?

? ? ? ? NM_SETTING_DCB_FLAG_WILLING ?

? ? ? ? (0x4). ?

??

?priority-group-bandwidth ? array of uint32 ? ? An array of 8 uint values, ?

? ? ? ? where the array index ?

? ? ? ? corresponds to the Priority ?

? ? ? ? Group ID (0 - 7) and the ?

? ? ? ? value indicates the ?

? ? ? ? percentage of link bandwidth ?

? ? ? ? allocated to that group. ?

? ? ? ? Allowed values are 0 - 100, ?

? ? ? ? and the sum of all values ?

? ? ? ? must total 100 percents. ?

??

?priority-group-flags ? NMSettingDcbFlags ? ? Specifies the ?

? ? (uint32) ? ? NMSettingDcbFlags for DCB ?

? ? ? ? Priority Groups. Flags may ?

? ? ? ? be any combination of ?

? ? ? ? NM_SETTING_DCB_FLAG_ENABLE ?

? ? ? ? (0x1), ?

? ? ? ? NM_SETTING_DCB_FLAG_ADVERTISE ?

? ? ? ? (0x2), and ?

? ? ? ? NM_SETTING_DCB_FLAG_WILLING ?

? ? ? ? (0x4). ?

??

?priority-group-id ? array of uint32 ? ? An array of 8 uint values, ?

? ? ? ? where the array index ?

? ? ? ? corresponds to the User ?

? ? ? ? Priority (0 - 7) and the ?

? ? ? ? value indicates the Priority ?

? ? ? ? Group ID. Allowed Priority ?

? ? ? ? Group ID values are 0 - 7 or ?

? ? ? ? 15 for the unrestricted ?

? ? ? ? group. ?

??

?priority-strict-bandwidth ? array of uint32 ? ? An array of 8 boolean values, ?

? ? ? ? where the array index ?

? ? ? ? corresponds to the User ?

? ? ? ? Priority (0 - 7) and the ?

? ? ? ? value indicates whether or ?

? ? ? ? not the priority may use all ?

? ? ? ? of the bandwidth allocated to ?

? ? ? ? its assigned group. ?

??

?priority-traffic-class ? array of uint32 ? ? An array of 8 uint values, ?

? ? ? ? where the array index ?

? ? ? ? corresponds to the User ?

? ? ? ? Priority (0 - 7) and the ?

? ? ? ? value indicates the traffic ?

? ? ? ? class (0 - 7) to which the ?

? ? ? ? priority is mapped. ?

??

dummy setting

Dummy Link Settings.

ethtool setting

Ethtool Ethernet Settings.

generic setting

Generic Link Settings.

gsm setting

GSM-based Mobile Broadband Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?apn ? string ? ? The GPRS Access ?

? ? ? ? ? Point Name ?

? ? ? ? ? specifying the APN ?

? ? ? ? ? used when ?

? ? ? ? ? establishing a data ?

? ? ? ? session with the ?

? ? ? ? GSM-based network. ?

? ? ? ? The APN often ?

? ? ? ? determines how the ?

? ? ? ? user will be billed ?

? ? ? ? for their network ?

? ? ? ? usage and whether ?

? ? ? ? the user has access ?

? ? ? ? to the Internet or ?

? ? ? ? just a ?

? ? ? ? provider-specific ?

? ? ? ? walled-garden, so ?

? ? ? ? it is important to ?

? ? ? ? use the correct APN ?

? ? ? ? for the user's ?

? ? ? ? mobile broadband ?

? ? ? ? plan. The APN may ?

? ? ? ? only be composed of ?

? ? ? ? the characters a-z, ?

? ? ? ? 0-9, ., and - per ?

? ? ? ? GSM 03.60 Section ?

? ? ? ? 14.9. ?

??

?auto-config ? boolean ? FALSE ? When TRUE, the ?

? ? ? ? settings such as ?

? ? ? ? APN, username, or ?

? ? ? ? password will ?

? ? ? ? default to values ?

? ? ? ? that match the ?

? ? ? ? network the modem ?

? ? ? ? will register to in ?

? ? ? ? the Mobile ?

? ? ? ? Broadband Provider ?

? ? ? ? database. ?

??

?device-id ? string ? ? The device unique ?

? ? ? ? identifier (as ?

? ? ? ? given by the WWAN ?

? ? ? ? management service) ?

? ? ? ? which this ?

? ? ? ? connection applies ?

? ? ? ? to. If given, the ?

? ? ? ? connection will ?

? ? ? ? only apply to the ?

? ? ? ? specified device. ?

??

?home-only ? boolean ? FALSE ? When TRUE, only ?

? ? ? ? connections to the ?

? ? ? ? home network will ?

? ? ? ? be allowed. ?

? ? ? ? Connections to ?

? ? ? ? roaming networks ?

? ? ? ? will not be made. ?

??

?mtu ? uint32 ? 0 ? If non-zero, only ?

? ? ? ? transmit packets of ?

? ? ? ? the specified size ?

? ? ? ? or smaller, ?

? ? ? ? breaking larger ?

? ? ? ? packets up into ?

? ? ? ? multiple frames. ?

??

?network-id ? string ? ? The Network ID (GSM ?

? ? ? ? LAI format, ie ?

? ? ? ? MCC-MNC) to force ?

? ? ? ? specific network ?

? ? ? ? registration. If ?

? ? ? ? the Network ID is ?

? ? ? ? specified, ?

? ? ? ? NetworkManager will ?

? ? ? ? attempt to force ?

? ? ? ? the device to ?

? ? ? ? register only on ?

? ? ? ? the specified ?

? ? ? ? network. This can ?

? ? ? ? be used to ensure ?

? ? ? ? that the device ?

? ? ? ? does not roam when ?

? ? ? ? direct roaming ?

? ? ? ? control of the ?

? ? ? ? device is not ?

? ? ? ? otherwise possible. ?

??

?number ? string ? ? Legacy setting that ?

? ? ? ? used to help ?

? ? ? ? establishing PPP ?

? ? ? ? data sessions for ?

? ? ? ? GSM-based modems. ?

? ? ? ? Deprecated: 1 ?

??

?password ? string ? ? The password used ?

? ? ? ? to authenticate ?

? ? ? ? with the network, ?

? ? ? ? if required. Many ?

? ? ? ? providers do not ?

? ? ? ? require a password, ?

? ? ? ? or accept any ?

? ? ? ? password. But if a ?

? ? ? ? password is ?

? ? ? ? required, it is ?

? ? ? ? specified here. ?

??

?password-flags ? NMSettingSecretFlags ? ? Flags indicating ?

? ? (uint32) ? ? how to handle the ?

? ? ? ? "password" ?

? ? ? ? property. (see the ?

? ? ? ? section called ?

? ? ? ? ?Secret flag ?

? ? ? ? types:? for flag ?

? ? ? ? values) ?

??

?pin ? string ? ? If the SIM is ?

? ? ? ? locked with a PIN ?

? ? ? ? it must be unlocked ?

? ? ? ? before any other ?

? ? ? ? operations are ?

? ? ? ? requested. Specify ?

? ? ? ? the PIN here to ?

? ? ? ? allow operation of ?

? ? ? ? the device. ?

??

?pin-flags ? NMSettingSecretFlags ? ? Flags indicating ?

? ? (uint32) ? ? how to handle the ?

? ? ? ? "pin" property. ?

? ? ? ? (see the section ?

? ? ? ? called ?Secret flag ?

? ? ? ? types:? for flag ?

? ? ? ? values) ?

??

?sim-id ? string ? ? The SIM card unique ?

? ? ? ? identifier (as ?

? ? ? ? given by the WWAN ?

? ? ? ? management service) ?

? ? ? ? which this ?

? ? ? ? connection applies ?

? ? ? ? to. If given, the ?

? ? ? ? connection will ?

? ? ? ? apply to any device ?

? ? ? ? also allowed by ?

? ? ? ? "device-id" which ?

? ? ? ? contains a SIM card ?

? ? ? ? matching the given ?

? ? ? ? identifier. ?

??

?sim-operator-id ? string ? ? A MCC/MNC string ?

? ? ? ? like "310260" or ?

? ? ? ? "21601" identifying ?

? ? ? ? the specific mobile ?

? ? ? ? network operator ?

? ? ? ? which this ?

? ? ? ? connection applies ?

? ? ? ? to. If given, the ?

? ? ? ? connection will ?

? ? ? ? apply to any device ?

? ? ? ? also allowed by ?

? ? ? ? "device-id" and ?

? ? ? ? "sim-id" which ?

? ? ? ? contains a SIM card ?

? ? ? ? provisioned by the ?

? ? ? ? given operator. ?

??

?username ? string ? ? The username used ?

? ? ? ? to authenticate ?

? ? ? ? with the network, ?

? ? ? ? if required. Many ?

? ? ? ? providers do not ?

? ? ? ? require a username, ?

? ? ? ? or accept any ?

? ? ? ? username. But if a ?

? ? ? ? username is ?

? ? ? ? required, it is ?

? ? ? ? specified here. ?

??

infiniband setting

Infiniband Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?mac-address ? byte array ? ? If specified, this ?

? ? ? ? ? connection will ?

? ? ? ? ? only apply to the ?

? ? ? ? ? IPoIB device whose ?

? ? ? ? ? permanent MAC ?

? ? ? ? ? address matches. ?

? ? ? ? ? This property does ?

? ? ? ? ? not change the MAC ?

? ? ? ? ? address of the ?

? ? ? ? ? device (i.e. MAC ?

? ? ? ? ? spoofing). ?

??

?mtu ? uint32 ? 0 ? If non-zero, only ?

? ? ? ? ? transmit packets of ?

? ? ? ? ? the specified size ?

? ? ? ? ? or smaller, ?

? ? ? ? ? breaking larger ?

? ? ? ? ? packets up into ?

? ? ? ? ? multiple frames. ?

??

?p-key ? int32 ? -1 ? The InfiniBand ?

? ? ? ? P_Key to use for ?

? ? ? ? this device. A ?

? ? ? ? value of -1 means ?

? ? ? ? to use the default ?

? ? ? ? P_Key (aka "the ?

? ? ? ? P_Key at index 0"). ?

? ? ? ? Otherwise, it is a ?

? ? ? ? 16-bit unsigned ?

? ? ? ? integer, whose high ?

? ? ? ? bit is set if it is ?

? ? ? ? a "full membership" ?

? ? ? ? P_Key. ?

??

?parent ? string ? ? The interface name ?

? ? ? ? of the parent ?

? ? ? ? device of this ?

? ? ? ? device. Normally ?

? ? ? ? NULL, but if the ?

? ? ? ? "p_key" property is ?

? ? ? ? set, then you must ?

? ? ? ? specify the base ?

? ? ? ? device by setting ?

? ? ? ? either this ?

? ? ? ? property or ?

? ? ? ? "mac-address". ?

??

?transport-mode ? string ? ? The ?

? ? ? ? IP-over-InfiniBand ?

? ? ? ? transport mode. ?

? ? ? ? Either "datagram" ?

? ? ? ? or "connected". ?

??

ipv4 setting

IPv4 Settings.

??

??????????

?Key Name ? Value Type ? Default Value ? Value Description ?

??

??????????

?address-data ? array of vardict ? ? Array of IPv4 ?

? ? ? ? addresses. Each ?

? ? ? ? address dictionary ?

? ? ? ? contains at least ?

? ? ? ? 'address' and ?

? ? ? ? 'prefix' entries, ?

? ? ? ? containing the IP ?

? ? ? ? address as a ?

? ? ? ? string, and the ?

? ? ? ? prefix length as a ?

? ? ? ? uint32. Additional ?

? ? ? ? attributes may also ?

? ? ? ? exist on some ?

? ? ? ? addresses. ?

??

??????????

?addresses ? array of array of ? ? Deprecated in favor ?

? ? uint32 ? ? of the ?

? ? ? ? 'address-data' and ?

? ? ? ? 'gateway' ?

? ? ? ? properties, but ?

? ? ? ? this can be used ?

? ? ? ? for ?

? ? ? ? backward-compatibility ?

? ? ? ? with older daemons. ?

? ? ? ? Note that if you ?

? ? ? ? send this property ?

? ? ? ? the daemon will ?

? ? ? ? ignore ?

? ? ? ? 'address-data' and ?

? ? ? ? 'gateway'. Array ?

? ? ? ? of IPv4 address ?

? ? ? ? structures. Each ?

? ? ? ? IPv4 address ?

? ? ? ? structure is ?

? ? ? ? composed of 3 ?

? ? ? ? 32-bit values; the ?

? ? ? ? first being the ?

? ? ? ? IPv4 address ?

? ? ? ? (network byte ?

? ? ? ? order), the second ?

? ? ? ? the prefix (1 - ?

? ? ? ? 32), and last the ?

? ? ? ? IPv4 gateway ?

? ? ? ? (network byte ?

? ? ? ? order). The gateway ?

? ? ? ? may be left as 0 if ?

? ? ? ? no gateway exists ?

? ? ? ? for that subnet. ?

??

??????????

?dad-timeout ? int32 ? -1 ? Timeout in ?

? ? ? ? milliseconds used to ?

? ? ? ? check for the presence ?

? ? ? ? of duplicate IP ?

? ? ? ? addresses on the ?

? ? ? ? network. If an ?

? ? ? ? address conflict is ?

? ? ? ? detected, the ?

? ? ? ? activation will fail. ?

? ? ? ? A zero value means ?

? ? ? ? that no duplicate ?

? ? ? ? address detection is ?

? ? ? ? performed, -1 means ?

? ? ? ? the default value ?

? ? ? ? (either configuration ?

? ? ? ? ipvx.dad-timeout ?

? ? ? ? override or zero). A ?

? ? ? ? value greater than ?

? ? ? ? zero is a timeout in ?

? ? ? ? milliseconds. The ?

? ? ? ? property is currently ?

? ? ? ? implemented only for ?

? ? ? ? IPv4. ?

??

??????????

?dhcp-client-id ? string ? ? A string sent to the ?

? ? ? ? DHCP server to ?

? ? ? ? identify the local ?

? ? ? ? machine which the DHCP ?

? ? ? ? server may use to ?

? ? ? ? customize the DHCP ?

? ? ? ? lease and options. ?

? ? ? ? When the property is a ?

? ? ? ? hex string ?

? ? ? ? ('aa:bb:cc') it is ?

? ? ? ? interpreted as a ?

? ? ? ? binary client ID, in ?
? ? ? ? which case the first ?
? ? ? ? byte is assumed to be ?
? ? ? ? the 'type' field as ?
? ? ? ? per RFC 2132 section ?
? ? ? ? 9.14 and the remaining ?
? ? ? ? bytes may be an ?
? ? ? ? hardware address (e.g. ?
? ? ? ? '01:xx:xx:xx:xx:xx:xx' ?
? ? ? ? where 1 is the ?
? ? ? ? Ethernet ARP type and ?
? ? ? ? the rest is a MAC ?
? ? ? ? address). If the ?
? ? ? ? property is not a hex ?
? ? ? ? string it is ?
? ? ? ? considered as a ?
? ? ? ? non-hardware-address ?
? ? ? ? client ID and the ?
? ? ? ? 'type' field is set to ?
? ? ? ? 0. The special values ?
? ? ? ? "mac" and "perm-mac" ?
? ? ? ? are supported, which ?
? ? ? ? use the current or ?
? ? ? ? permanent MAC address ?
? ? ? ? of the device to ?
? ? ? ? generate a client ?
? ? ? ? identifier with type ?
? ? ? ? ethernet (01). ?
? ? ? ? Currently, these ?
? ? ? ? options only work for ?
? ? ? ? ethernet type of ?
? ? ? ? links. The special ?
? ? ? ? value "ipv6-duid" uses ?

? ? ? ? the DUID from ?
? ? ? ? "ipv6.dhcp-duid" ?
? ? ? ? property as an ?
? ? ? ? RFC4361-compliant ?
? ? ? ? client identifier. As ?
? ? ? ? IAID it uses ?
? ? ? ? "ipv4.dhcp-iaid" and ?
? ? ? ? falls back to ?
? ? ? ? "ipv6.dhcp-iaid" if ?
? ? ? ? unset. The special ?
? ? ? ? value "duid" generates ?
? ? ? ? a RFC4361-compliant ?
? ? ? ? client identifier ?
? ? ? ? based on ?
? ? ? ? "ipv4.dhcp-iaid" and ?
? ? ? ? uses a DUID generated ?
? ? ? ? by hashing ?
? ? ? ? /etc/machine-id. The ?
? ? ? ? special value "stable" ?
? ? ? ? is supported to ?
? ? ? ? generate a type 0 ?
? ? ? ? client identifier ?
? ? ? ? based on the stable-id ?
? ? ? ? (see ?
? ? ? ? connection.stable-id) ?
? ? ? ? and a per-host key. If ?
? ? ? ? you set the stable-id, ?
? ? ? ? you may want to ?
? ? ? ? include the ?
? ? ? ? "${DEVICE}" or ?
? ? ? ? "${MAC}" specifier to ?
? ? ? ? get a per-device key. ?
? ? ? ? If unset, a globally ?

? ? ? ? configured default is ?

? ? ? ? used. If still unset, ?

? ? ? ? the default depends on ?

? ? ? ? the DHCP plugin. ?

??

??????????

?dhcp-fqdn ? string ? ? If the ?

? ? ? ? "dhcp-send-hostname" ?

? ? ? ? property is TRUE, then ?

? ? ? ? the specified FQDN ?

? ? ? ? will be sent to the ?

? ? ? ? DHCP server when ?

? ? ? ? acquiring a lease. ?

? ? ? ? This property and ?

? ? ? ? "dhcp-hostname" are ?

? ? ? ? mutually exclusive and ?

? ? ? ? cannot be set at the ?

? ? ? ? same time. ?

??

??????????

?dhcp-hostname ? string ? ? If the ?

? ? ? ? "dhcp-send-hostname" ?

? ? ? ? property is TRUE, then ?

? ? ? ? the specified name ?

? ? ? ? will be sent to the ?

? ? ? ? DHCP server when ?

? ? ? ? acquiring a lease. ?

? ? ? ? This property and ?

? ? ? ? "dhcp-fqdn" are ?

? ? ? ? mutually exclusive and ?

? ? ? ? cannot be set at the ?

? ? ? ? same time. ?

??

??????????

?dhcp-hostname-flags ? uint32 ? 0 ? Flags for the DHCP ?

? ? ? ? hostname and FQDN. ?

? ? ? ? Currently, this ?

? ? ? ? property only includes ?

? ? ? ? flags to control the ?

? ? ? ? FQDN flags set in the ?

? ? ? ? DHCP FQDN option. ?

? ? ? ? Supported FQDN flags ?

? ? ? ? are ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_SERV_UPDATE ?

? ? ? ? (0x1), ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_ENCODED ?

? ? ? ? (0x2) and ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_NO_UPDATE ?

? ? ? ? (0x4). When no FQDN ?

? ? ? ? flag is set and ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_CLEAR_FLAGS ?

? ? ? ? (0x8) is set, the DHCP ?

? ? ? ? FQDN option will ?

? ? ? ? contain no flag. ?

? ? ? ? Otherwise, if no FQDN ?

? ? ? ? flag is set and ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_CLEAR_FLAGS ?

? ? ? ? (0x8) is not set, the ?

? ? ? ? standard FQDN flags ?

? ? ? ? are set in the ?

? ? ? ? request: ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_SERV_UPDATE ?

? ? ? ? (0x1), ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_ENCODED ?

? ? ? ? (0x2) for IPv4 and ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_SERV_UPDATE ?

? ? ? ? (0x1) for IPv6. When ?

? ? ? ? this property is set ?

? ? ? ? to the default value ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_NONE ?

? ? ? ? (0x0), a global ?

? ? ? ? default is looked up ?

? ? ? ? in NetworkManager ?

? ? ? ? configuration. If that ?

? ? ? ? value is unset or also ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_NONE ?

? ? ? ? (0x0), then the ?

? ? ? ? standard FQDN flags ?

? ? ? ? described above are ?

? ? ? ? sent in the DHCP ?

? ? ? ? requests. ?

??

??????????

?dhcp-iaid ? string ? ? A string containing the "Identity ?

? ? ? ? Association Identifier" (IAID) used by ?

? ? ? ? the DHCP client. The property is a ?

? ? ? ? 32-bit decimal value or a special ?

? ? ? ? value among "mac", "perm-mac", ?

? ? ? ? "ifname" and "stable". When set to ?

? ? ? ? "mac" (or "perm-mac"), the last 4 ?

? ? ? ? bytes of the current (or permanent) ?

? ? ? ? MAC address are used as IAID. When set ?

? ? ? ? to "ifname", the IAID is computed by ?

? ? ? ? hashing the interface name. The ?

? ? ? ? special value "stable" can be used to ?

? ? ? ? generate an IAID based on the ?
? ? ? ? stable-id (see connection.stable-id), ?
? ? ? ? a per-host key and the interface name. ?
? ? ? ? When the property is unset, the value ?
? ? ? ? from global configuration is used; if ?
? ? ? ? no global default is set then the IAID ?
? ? ? ? is assumed to be "ifname". Note that ?
? ? ? ? at the moment this property is ignored ?
? ? ? ? for IPv6 by dhclient, which always ?
? ? ? ? derives the IAID from the MAC address. ?

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

?dhcp-reject-servers ? array of string ? ? Array of servers from which DHCP ?
? ? ? ? offers must be rejected. This property ?
? ? ? ? is useful to avoid getting a lease ?
? ? ? ? from misconfigured or rogue servers. ?
? ? ? ? For DHCPv4, each element must be an ?
? ? ? ? IPv4 address, optionally followed by a ?
? ? ? ? slash and a prefix length (e.g. ?
? ? ? ? "192.168.122.0/24"). This property is ?
? ? ? ? currently not implemented for DHCPv6. ?

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

?dhcp-send-hostname ? boolean ? TRUE ? If TRUE, a hostname is sent to the ?
? ? ? ? DHCP server when acquiring a lease. ?
? ? ? ? Some DHCP servers use this hostname to ?
? ? ? ? update DNS databases, essentially ?
? ? ? ? providing a static hostname for the ?
? ? ? ? computer. If the "dhcp-hostname" ?
? ? ? ? property is NULL and this property is ?
? ? ? ? TRUE, the current persistent hostname ?

? ? ? ? of the computer is sent. ?

??

?dhcp-timeout ? int32 ? 0 ? A timeout for a DHCP transaction in ?

? ? ? ? seconds. If zero (the default), a ?

? ? ? ? globally configured default is used. ?

? ? ? ? If still unspecified, a device ?

? ? ? ? specific timeout is used (usually 45 ?

? ? ? ? seconds). Set to 2147483647 (MAXINT32) ?

? ? ? ? for infinity. ?

??

?dhcp-vendor-class-identifier ? string ? ? The Vendor Class Identifier DHCP ?

? ? ? ? option (60). Special characters in the ?

? ? ? ? data string may be escaped using ?

? ? ? ? C-style escapes, nevertheless this ?

? ? ? ? property cannot contain nul bytes. If ?

? ? ? ? the per-profile value is unspecified ?

? ? ? ? (the default), a global connection ?

? ? ? ? default gets consulted. If still ?

? ? ? ? unspecified, the DHCP option is not ?

? ? ? ? sent to the server. Since 1.28 ?

??

?dns ? array of uint32 ? ? Array of IP addresses of DNS servers ?

? ? ? ? (as network-byte-order integers) ?

??

?dns-options ? array of string ? ? Array of DNS options as described in ?

? ? ? ? man 5 resolv.conf. NULL means that the ?

? ? ? ? options are unset and left at the ?

? ? ? ? default. In this case NetworkManager ?

? ? ? ? will use default options. This is ?

? ? ? ? distinct from an empty list of ?

? ? ? ? properties. The currently supported ?

? ? ? ? options are "attempts", "debug", ?

? ? ? ? "edns0", "inet6", "ip6-bytestring", ?

? ? ? ? "ip6-dotint", "ndots", ?

? ? ? ? "no-check-names", "no-ip6-dotint", ?

? ? ? ? "no-reload", "no-tld-query", "rotate", ?

? ? ? ? "single-request", ?

? ? ? ? "single-request-reopen", "timeout", ?

? ? ? ? "trust-ad", "use-vc". The "trust-ad" ?

? ? ? ? setting is only honored if the profile ?

? ? ? ? contributes name servers to ?

? ? ? ? resolv.conf, and if all contributing ?

? ? ? ? profiles have "trust-ad" enabled. When ?

? ? ? ? using a caching DNS plugin (dnsmasq or ?

? ? ? ? systemd-resolved in ?

? ? ? ? NetworkManager.conf) then "edns0" and ?

? ? ? ? "trust-ad" are automatically added. ?

??

??????????

?dns-priority ? int32 ? 0 ? DNS servers priority. The relative ?

? ? ? ? priority for DNS servers specified by ?

? ? ? ? this setting. A lower numerical value ?

? ? ? ? is better (higher priority). Negative ?

? ? ? ? values have the special effect of ?

? ? ? ? excluding other configurations with a ?

? ? ? ? greater numerical priority value; so ?

? ? ? ? in presence of at least one negative ?

? ? ? ? priority, only DNS servers from ?
? ? ? ? connections with the lowest priority ?
? ? ? ? value will be used. To avoid all DNS ?
? ? ? ? leaks, set the priority of the profile ?
? ? ? ? that should be used to the most ?
? ? ? ? negative value of all active ?
? ? ? ? connections profiles. Zero selects a ?
? ? ? ? globally configured default value. If ?
? ? ? ? the latter is missing or zero too, it ?
? ? ? ? defaults to 50 for VPNs (including ?
? ? ? ? WireGuard) and 100 for other ?
? ? ? ? connections. Note that the priority is ?
? ? ? ? to order DNS settings for multiple ?
? ? ? ? active connections. It does not ?
? ? ? ? disambiguate multiple DNS servers ?
? ? ? ? within the same connection profile. ?
? ? ? ? When multiple devices have ?
? ? ? ? configurations with the same priority, ?
? ? ? ? VPNs will be considered first, then ?
? ? ? ? devices with the best (lowest metric) ?
? ? ? ? default route and then all other ?
? ? ? ? devices. When using dns=default, ?
? ? ? ? servers with higher priority will be ?
? ? ? ? on top of resolv.conf. To prioritize a ?
? ? ? ? given server over another one within ?
? ? ? ? the same connection, just specify them ?
? ? ? ? in the desired order. Note that ?
? ? ? ? commonly the resolver tries name ?
? ? ? ? servers in /etc/resolv.conf in the ?
? ? ? ? order listed, proceeding with the next ?
? ? ? ? server in the list on failure. See for ?
? ? ? ? example the "rotate" option of the ?
? ? ? ? dns-options setting. If there are any ?

? ? ? ? negative DNS priorities, then only ?
? ? ? ? name servers from the devices with ?
? ? ? ? that lowest priority will be ?
? ? ? ? considered. When using a DNS resolver ?
? ? ? ? that supports Conditional Forwarding ?
? ? ? ? or Split DNS (with dns=dnsmasq or ?
? ? ? ? dns=systemd-resolved settings), each ?
? ? ? ? connection is used to query domains in ?
? ? ? ? its search list. The search domains ?
? ? ? ? determine which name servers to ask, ?
? ? ? ? and the DNS priority is used to ?
? ? ? ? prioritize name servers based on the ?
? ? ? ? domain. Queries for domains not ?
? ? ? ? present in any search list are routed ?
? ? ? ? through connections having the '~.' ?
? ? ? ? special wildcard domain, which is ?
? ? ? ? added automatically to connections ?
? ? ? ? with the default route (or can be ?
? ? ? ? added manually). When multiple ?
? ? ? ? connections specify the same domain, ?
? ? ? ? the one with the best priority (lowest ?
? ? ? ? numerical value) wins. If a sub ?
? ? ? ? domain is configured on another ?
? ? ? ? interface it will be accepted ?
? ? ? ? regardless the priority, unless parent ?
? ? ? ? domain on the other interface has a ?
? ? ? ? negative priority, which causes the ?
? ? ? ? sub domain to be shadowed. With Split ?
? ? ? ? DNS one can avoid undesired DNS leaks ?
? ? ? ? by properly configuring DNS priorities ?
? ? ? ? and the search domains, so that only ?
? ? ? ? name servers of the desired interface ?
? ? ? ? are configured. ?

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

?dns-search ? array of string ? ? Array of DNS search domains. Domains ?
? ? ? ? starting with a tilde ('~') are ?
? ? ? ? considered 'routing' domains and are ?
? ? ? ? used only to decide the interface over ?
? ? ? ? which a query must be forwarded; they ?
? ? ? ? are not used to complete unqualified ?
? ? ? ? host names. When using a DNS plugin ?
? ? ? ? that supports Conditional Forwarding ?
? ? ? ? or Split DNS, then the search domains ?
? ? ? ? specify which name servers to query. ?
? ? ? ? This makes the behavior different from ?
? ? ? ? running with plain /etc/resolv.conf. ?
? ? ? ? For more information see also the ?
? ? ? ? dns-priority setting. ?

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

?gateway ? string ? ? The gateway associated with this ?
? ? ? ? configuration. This is only meaningful ?
? ? ? ? if "addresses" is also set. The ?
? ? ? ? gateway's main purpose is to control ?
? ? ? ? the next hop of the standard default ?
? ? ? ? route on the device. Hence, the ?
? ? ? ? gateway property conflicts with ?
? ? ? ? "never-default" and will be ?
? ? ? ? automatically dropped if the IP ?
? ? ? ? configuration is set to never-default. ?
? ? ? ? As an alternative to set the gateway, ?
? ? ? ? configure a static default route with ?
? ? ? ? /0 as prefix length. ?

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

?ignore-auto-dns ? boolean ? FALSE ? When "method" is set to "auto" and ?

? ? ? ? this property to TRUE, automatically ?

? ? ? ? configured name servers and search ?

? ? ? ? domains are ignored and only name ?

? ? ? ? servers and search domains specified ?

? ? ? ? in the "dns" and "dns-search" ?

? ? ? ? properties, if any, are used. ?

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

?ignore-auto-routes ? boolean ? FALSE ? When "method" is set to "auto" and ?

? ? ? ? this property to TRUE, automatically ?

? ? ? ? configured routes are ignored and only ?

? ? ? ? routes specified in the "routes" ?

? ? ? ? property, if any, are used. ?

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

?may-fail ? boolean ? TRUE ? If TRUE, allow overall network ?

? ? ? ? configuration to proceed even if the ?

? ? ? ? configuration specified by this ?

? ? ? ? property times out. Note that at ?

? ? ? ? least one IP configuration must ?

? ? ? ? succeed or overall network ?

? ? ? ? configuration will still fail. For ?

? ? ? ? example, in IPv6-only networks, ?

? ? ? ? setting this property to TRUE on the ?

? ? ? ? NMSettingIP4Config allows the overall ?

? ? ? ? network configuration to succeed if ?

? ? ? ? IPv4 configuration fails but IPv6 ?

? ? ? ? configuration completes successfully. ?

??

?method ? string ? ? IP configuration method. ?
? ? ? ? NMSettingIP4Config and ?
? ? ? ? NMSettingIP6Config both support ?
? ? ? ? "disabled", "auto", "manual", and ?
? ? ? ? "link-local". See the ?
? ? ? ? subclass-specific documentation for ?
? ? ? ? other values. In general, for the ?
? ? ? ? "auto" method, properties such as ?
? ? ? ? "dns" and "routes" specify information ?
? ? ? ? that is added on to the information ?
? ? ? ? returned from automatic configuration. ?
? ? ? ? The "ignore-auto-routes" and ?
? ? ? ? "ignore-auto-dns" properties modify ?
? ? ? ? this behavior. For methods that imply ?
? ? ? ? no upstream network, such as "shared" ?
? ? ? ? or "link-local", these properties must ?
? ? ? ? be empty. For IPv4 method "shared", ?
? ? ? ? the IP subnet can be configured by ?
? ? ? ? adding one manual IPv4 address or ?
? ? ? ? otherwise 10.42.x.0/24 is chosen. Note ?
? ? ? ? that the shared method must be ?
? ? ? ? configured on the interface which ?
? ? ? ? shares the internet to a subnet, not ?
? ? ? ? on the uplink which is shared. ?

??

?never-default ? boolean ? FALSE ? If TRUE, this connection will never be ?
? ? ? ? the default connection for this IP ?

? ? ? ? type, meaning it will never be ?

? ? ? ? assigned the default route by ?

? ? ? ? NetworkManager. ?

??

??????????

?required-timeout ? int32 ? -1 ? The minimum time interval in ?

? ? ? ? milliseconds for which dynamic IP ?

? ? ? ? configuration should be tried before ?

? ? ? ? the connection succeeds. This property ?

? ? ? ? is useful for example if both IPv4 and ?

? ? ? ? IPv6 are enabled and are allowed to ?

? ? ? ? fail. Normally the connection succeeds ?

? ? ? ? as soon as one of the two address ?

? ? ? ? families completes; by setting a ?

? ? ? ? required timeout for e.g. IPv4, one ?

? ? ? ? can ensure that even if IP6 succeeds ?

? ? ? ? earlier than IPv4, NetworkManager ?

? ? ? ? waits some time for IPv4 before the ?

? ? ? ? connection becomes active. Note that ?

? ? ? ? if "may-fail" is FALSE for the same ?

? ? ? ? address family, this property has no ?

? ? ? ? effect as NetworkManager needs to wait ?

? ? ? ? for the full DHCP timeout. A zero ?

? ? ? ? value means that no required timeout ?

? ? ? ? is present, -1 means the default value ?

? ? ? ? (either configuration ?

? ? ? ? ipvx.required-timeout override or ?

? ? ? ? zero). ?

??

??????????

?route-data ? array of vardict ? ? Array of IPv4 routes. Each route ?

? ? ? ? dictionary contains at least 'dest' ?

? ? ? ? and 'prefix' entries, containing the ?

? ? ? ? destination IP address as a string, ?

? ? ? ? and the prefix length as a uint32. ?

? ? ? ? Most routes will also have a ?

? ? ? ? 'next-hop' entry, containing the next ?

? ? ? ? hop IP address as a string. If the ?

? ? ? ? route has a 'metric' entry (containing ?

? ? ? ? a uint32), that will be used as the ?

? ? ? ? metric for the route (otherwise NM ?

? ? ? ? will pick a default value appropriate ?

? ? ? ? to the device). Additional attributes ?

? ? ? ? may also exist on some routes. ?

??

??????????

?route-metric ? int64 ? -1 ? The default metric for routes that ?

? ? ? ? don't explicitly specify a metric. The ?

? ? ? ? default value -1 means that the metric ?

? ? ? ? is chosen automatically based on the ?

? ? ? ? device type. The metric applies to ?

? ? ? ? dynamic routes, manual (static) routes ?

? ? ? ? that don't have an explicit metric ?

? ? ? ? setting, address prefix routes, and ?

? ? ? ? the default route. Note that for IPv6, ?

? ? ? ? the kernel accepts zero (0) but ?

? ? ? ? coerces it to 1024 (user default). ?

? ? ? ? Hence, setting this property to zero ?

? ? ? ? effectively mean setting it to 1024. ?

? ? ? ? For IPv4, zero is a regular value for ?

? ? ? ? the metric. ?

??????????

?route-table ? uint32 ? 0 ? Enable policy routing (source routing) ?

? ? ? ? and set the routing table used when ?

? ? ? ? adding routes. This affects all ?

? ? ? ? routes, including device-routes, ?

? ? ? ? IPv4LL, DHCP, SLAAC, default-routes ?

? ? ? ? and static routes. But note that ?

? ? ? ? static routes can individually ?

? ? ? ? overwrite the setting by explicitly ?

? ? ? ? specifying a non-zero routing table. ?

? ? ? ? If the table setting is left at zero, ?

? ? ? ? it is eligible to be overwritten via ?

? ? ? ? global configuration. If the property ?

? ? ? ? is zero even after applying the global ?

? ? ? ? configuration value, policy routing is ?

? ? ? ? disabled for the address family of ?

? ? ? ? this connection. Policy routing ?

? ? ? ? disabled means that NetworkManager ?

? ? ? ? will add all routes to the main table ?

? ? ? ? (except static routes that explicitly ?

? ? ? ? configure a different table). ?

? ? ? ? Additionally, NetworkManager will not ?

? ? ? ? delete any extraneous routes from ?

? ? ? ? tables except the main table. This is ?

? ? ? ? to preserve backward compatibility for ?

? ? ? ? users who manage routing tables ?

? ? ? ? outside of NetworkManager. ?

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?routes ? array of array of ? ? Deprecated in favor of the ?

? ? uint32 ? ? 'route-data' property, but this can be ?

? ? ? ? used for backward-compatibility with ?

? ? ? ? older daemons. Note that if you send ?
? ? ? ? this property the daemon will ignore ?
? ? ? ? 'route-data'. Array of IPv4 route ?
? ? ? ? structures. Each IPv4 route structure ?
? ? ? ? is composed of 4 32-bit values; the ?
? ? ? ? first being the destination IPv4 ?
? ? ? ? network or address (network byte ?
? ? ? ? order), the second the destination ?
? ? ? ? network or address prefix (1 - 32), ?
? ? ? ? the third being the next-hop (network ?
? ? ? ? byte order) if any, and the fourth ?
? ? ? ? being the route metric. If the metric ?
? ? ? ? is 0, NM will choose an appropriate ?
? ? ? ? default metric for the device. (There ?
? ? ? ? is no way to explicitly specify an ?
? ? ? ? actual metric of 0 with this ?
? ? ? ? property.) ?

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ipv6 setting

IPv6 Settings.

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?Key Name ? Value Type ? Default Value ? Value Description ?

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?addr-gen-mode ? int32 ? 1 ? Configure method ?
? ? ? ? for creating the ?
? ? ? ? address for use ?
? ? ? ? with RFC4862 IPv6 ?

? ? ? ? Stateless Address ?
? ? ? ? Autoconfiguration. ?
? ? ? ? The permitted ?
? ? ? ? values are: ?
? ? ? ? NM_SETTING_IP6_CONFIG_ADDR_GEN_MODE_EUI64 ?
? ? ? ? (0) or ?
? ? ? ? NM_SETTING_IP6_CONFIG_ADDR_GEN_MODE_STABLE_PRIVACY ?
? ? ? ? (1). If the ?
? ? ? ? property is set to ?
? ? ? ? EUI64, the ?
? ? ? ? addresses will be ?
? ? ? ? generated using the ?
? ? ? ? interface tokens ?
? ? ? ? derived from ?
? ? ? ? hardware address. ?
? ? ? ? This makes the host ?
? ? ? ? part of the address ?
? ? ? ? to stay constant, ?
? ? ? ? making it possible ?
? ? ? ? to track host's ?
? ? ? ? presence when it ?
? ? ? ? changes networks. ?
? ? ? ? The address changes ?
? ? ? ? when the interface ?
? ? ? ? hardware is ?
? ? ? ? replaced. The value ?
? ? ? ? of stable-privacy ?
? ? ? ? enables use of ?
? ? ? ? cryptographically ?
? ? ? ? secure hash of a ?
? ? ? ? secret ?
? ? ? ? host-specific key ?
? ? ? ? along with the ?

? ? ? ? connection's ?
? ? ? ? stable-id and the ?
? ? ? ? network address as ?
? ? ? ? specified by ?
? ? ? ? RFC7217. This makes ?
? ? ? ? it impossible to ?
? ? ? ? use the address ?
? ? ? ? track host's ?
? ? ? ? presence, and makes ?
? ? ? ? the address stable ?
? ? ? ? when the network ?
? ? ? ? interface hardware ?
? ? ? ? is replaced. On ?
? ? ? ? D-Bus, the absence ?
? ? ? ? of an addr-gen-mode ?
? ? ? ? setting equals ?
? ? ? ? enabling ?
? ? ? ? stable-privacy. For ?
? ? ? ? keyfile plugin, the ?
? ? ? ? absence of the ?
? ? ? ? setting on disk ?
? ? ? ? means EUI64 so that ?
? ? ? ? the property ?
? ? ? ? doesn't change on ?
? ? ? ? upgrade from older ?
? ? ? ? versions. Note that ?
? ? ? ? this setting is ?
? ? ? ? distinct from the ?
? ? ? ? Privacy Extensions ?
? ? ? ? as configured by ?
? ? ? ? "ip6-privacy" ?
? ? ? ? property and it ?
? ? ? ? does not affect the ?

? ? ? ? temporary addresses ?
? ? ? ? configured with ?
? ? ? ? this option. ?

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?address-data ? array of vardict ? ? Array of IPv6 addresses. Each address dictionary ?
? ? ? ? contains at least 'address' and 'prefix' entries, ?
? ? ? ? containing the IP address as a string, and the ?
? ? ? ? prefix length as a uint32. Additional attributes ?
? ? ? ? may also exist on some addresses. ?

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?addresses ? array of legacy ? ? Deprecated in favor of the 'address-data' and ?
? ? IPv6 address struct ? ? 'gateway' properties, but this can be used for ?
? ? (a(ayuay)) ? ? backward-compatibility with older daemons. Note ?
? ? ? ? that if you send this property the daemon will ?
? ? ? ? ignore 'address-data' and 'gateway'. Array of ?
? ? ? ? IPv6 address structures. Each IPv6 address ?
? ? ? ? structure is composed of an IPv6 address, a prefix ?
? ? ? ? length (1 - 128), and an IPv6 gateway address. The ?
? ? ? ? gateway may be zeroed out if no gateway exists for ?
? ? ? ? that subnet. ?

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?dad-timeout ? int32 ? -1 ? Timeout in milliseconds used to check for the ?
? ? ? ? presence of duplicate IP addresses on the network. ?
? ? ? ? If an address conflict is detected, the activation ?
? ? ? ? will fail. A zero value means that no duplicate ?
? ? ? ? address detection is performed, -1 means the ?
? ? ? ? default value (either configuration ?

? ? ? ? ipvx.dad-timeout override or zero). A value ?

? ? ? ? greater than zero is a timeout in milliseconds. ?

? ? ? ? The property is currently implemented only for ?

? ? ? ? IPv4. ?

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?dhcp-duid ? string ? ? A string containing the DHCPv6 Unique Identifier ?

? ? ? ? (DUID) used by the dhcp client to identify itself ?

? ? ? ? to DHCPv6 servers (RFC 3315). The DUID is carried ?

? ? ? ? in the Client Identifier option. If the property ?

? ? ? ? is a hex string ('aa:bb:cc') it is interpreted as ?

? ? ? ? a binary DUID and filled as an opaque value in the ?

? ? ? ? Client Identifier option. The special value ?

? ? ? ? "lease" will retrieve the DUID previously used ?

? ? ? ? from the lease file belonging to the connection. ?

? ? ? ? If no DUID is found and "dhclient" is the ?

? ? ? ? configured dhcp client, the DUID is searched in ?

? ? ? ? the system-wide dhclient lease file. If still no ?

? ? ? ? DUID is found, or another dhcp client is used, a ?

? ? ? ? global and permanent DUID-UUID (RFC 6355) will be ?

? ? ? ? generated based on the machine-id. The special ?

? ? ? ? values "llt" and "ll" will generate a DUID of type ?

? ? ? ? LLT or LL (see RFC 3315) based on the current MAC ?

? ? ? ? address of the device. In order to try providing a ?

? ? ? ? stable DUID-LLT, the time field will contain a ?

? ? ? ? constant timestamp that is used globally (for all ?

? ? ? ? profiles) and persisted to disk. The special ?

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

? ? ? ? will generate a DUID of the corresponding type, ?

? ? ? ? derived from the connection's stable-id and a ?

? ? ? ? per-host unique key. You may want to include the ?

? ? ? ? "${DEVICE}" or "${MAC}" specifier in the ?

? ? ? ? stable-id, in case this profile gets activated on ?

? ? ? ? multiple devices. So, the link-layer address of ?

? ? ? ? "stable-ll" and "stable-llt" will be a generated ?

? ? ? ? address derived from the stable id. The DUID-LLT ?

? ? ? ? time value in the "stable-llt" option will be ?

? ? ? ? picked among a static timespan of three years (the ?

? ? ? ? upper bound of the interval is the same constant ?

? ? ? ? timestamp used in "llt"). When the property is ?

? ? ? ? unset, the global value provided for ?

? ? ? ? "ipv6.dhcp-duid" is used. If no global value is ?

? ? ? ? provided, the default "lease" value is assumed. ?

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?dhcp-hostname ? string ? ? If the "dhcp-send-hostname" property is TRUE, then ?

? ? ? ? the specified name will be sent to the DHCP server ?

? ? ? ? when acquiring a lease. This property and ?

? ? ? ? "dhcp-fqdn" are mutually exclusive and cannot be ?

? ? ? ? set at the same time. ?

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?dhcp-hostname-flags ? uint32 ? 0 ? Flags for the DHCP hostname and FQDN. Currently, ?

? ? ? ? this property only includes flags to control the ?

? ? ? ? FQDN flags set in the DHCP FQDN option. Supported ?

? ? ? ? FQDN flags are ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_SERV_UPDATE (0x1), ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_ENCODED (0x2) and ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_NO_UPDATE (0x4). When ?

? ? ? ? no FQDN flag is set and ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_CLEAR_FLAGS (0x8) is ?

? ? ? ? set, the DHCP FQDN option will contain no flag. ?

? ? ? ? Otherwise, if no FQDN flag is set and ?

? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_CLEAR_FLAGS (0x8) is ?
? ? ? ? not set, the standard FQDN flags are set in the ?
? ? ? ? request: NM_DHCP_HOSTNAME_FLAG_FQDN_SERV_UPDATE ?
? ? ? ? (0x1), NM_DHCP_HOSTNAME_FLAG_FQDN_ENCODED (0x2) ?
? ? ? ? for IPv4 and ?
? ? ? ? NM_DHCP_HOSTNAME_FLAG_FQDN_SERV_UPDATE (0x1) for ?
? ? ? ? IPv6. When this property is set to the default ?
? ? ? ? value NM_DHCP_HOSTNAME_FLAG_NONE (0x0), a global ?
? ? ? ? default is looked up in NetworkManager ?
? ? ? ? configuration. If that value is unset or also ?
? ? ? ? NM_DHCP_HOSTNAME_FLAG_NONE (0x0), then the ?
? ? ? ? standard FQDN flags described above are sent in ?
? ? ? ? the DHCP requests. ?

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?dhcp-iaid ? string ? ? A string containing the "Identity Association ?
? ? ? ? Identifier" (IAID) used by the DHCP client. The ?
? ? ? ? property is a 32-bit decimal value or a special ?
? ? ? ? value among "mac", "perm-mac", "ifname" and ?
? ? ? ? "stable". When set to "mac" (or "perm-mac"), the ?
? ? ? ? last 4 bytes of the current (or permanent) MAC ?
? ? ? ? address are used as IAID. When set to "ifname", ?
? ? ? ? the IAID is computed by hashing the interface ?
? ? ? ? name. The special value "stable" can be used to ?
? ? ? ? generate an IAID based on the stable-id (see ?
? ? ? ? connection.stable-id), a per-host key and the ?
? ? ? ? interface name. When the property is unset, the ?
? ? ? ? value from global configuration is used; if no ?
? ? ? ? global default is set then the IAID is assumed to ?
? ? ? ? be "ifname". Note that at the moment this property ?
? ? ? ? is ignored for IPv6 by dhclient, which always ?
? ? ? ? derives the IAID from the MAC address. ?

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?dhcp-reject-servers ? array of string ? ? Array of servers from which DHCP offers must be ?
? ? ? ? rejected. This property is useful to avoid getting ?
? ? ? ? a lease from misconfigured or rogue servers. For ?
? ? ? ? DHCPv4, each element must be an IPv4 address, ?
? ? ? ? optionally followed by a slash and a prefix length ?
? ? ? ? (e.g. "192.168.122.0/24"). This property is ?
? ? ? ? currently not implemented for DHCPv6. ?

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?dhcp-send-hostname ? boolean ? TRUE ? If TRUE, a hostname is sent to the DHCP server ?
? ? ? ? when acquiring a lease. Some DHCP servers use this ?
? ? ? ? hostname to update DNS databases, essentially ?
? ? ? ? providing a static hostname for the computer. If ?
? ? ? ? the "dhcp-hostname" property is NULL and this ?
? ? ? ? property is TRUE, the current persistent hostname ?
? ? ? ? of the computer is sent. ?

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?dhcp-timeout ? int32 ? 0 ? A timeout for a DHCP transaction in seconds. If ?
? ? ? ? zero (the default), a globally configured default ?
? ? ? ? is used. If still unspecified, a device specific ?
? ? ? ? timeout is used (usually 45 seconds). Set to ?
? ? ? ? 2147483647 (MAXINT32) for infinity. ?

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?dns ? array of byte array ? ? Array of IP addresses of DNS servers (in network ?
? ? ? ? byte order) ?

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?dns-options ? array of string ? ? Array of DNS options as described in man 5 ?

? ? ? ? resolv.conf. NULL means that the options are unset ?

? ? ? ? and left at the default. In this case ?

? ? ? ? NetworkManager will use default options. This is ?

? ? ? ? distinct from an empty list of properties. The ?

? ? ? ? currently supported options are "attempts", ?

? ? ? ? "debug", "edns0", "inet6", "ip6-bytestring", ?

? ? ? ? "ip6-dotint", "ndots", "no-check-names", ?

? ? ? ? "no-ip6-dotint", "no-reload", "no-tld-query", ?

? ? ? ? "rotate", "single-request", ?

? ? ? ? "single-request-reopen", "timeout", "trust-ad", ?

? ? ? ? "use-vc". The "trust-ad" setting is only honored ?

? ? ? ? if the profile contributes name servers to ?

? ? ? ? resolv.conf, and if all contributing profiles have ?

? ? ? ? "trust-ad" enabled. When using a caching DNS ?

? ? ? ? plugin (dnsmasq or systemd-resolved in ?

? ? ? ? NetworkManager.conf) then "edns0" and "trust-ad" ?

? ? ? ? are automatically added. ?

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?dns-priority ? int32 ? 0 ? DNS servers priority. The relative priority for ?

? ? ? ? DNS servers specified by this setting. A lower ?

? ? ? ? numerical value is better (higher priority). ?

? ? ? ? Negative values have the special effect of ?

? ? ? ? excluding other configurations with a greater ?

? ? ? ? numerical priority value; so in presence of at ?

? ? ? ? least one negative priority, only DNS servers from ?

? ? ? ? connections with the lowest priority value will be ?

? ? ? ? used. To avoid all DNS leaks, set the priority of ?

? ? ? ? the profile that should be used to the most ?
? ? ? ? negative value of all active connections profiles. ?
? ? ? ? Zero selects a globally configured default value. ?
? ? ? ? If the latter is missing or zero too, it defaults ?
? ? ? ? to 50 for VPNs (including WireGuard) and 100 for ?
? ? ? ? other connections. Note that the priority is to ?
? ? ? ? order DNS settings for multiple active ?
? ? ? ? connections. It does not disambiguate multiple ?
? ? ? ? DNS servers within the same connection profile. ?
? ? ? ? When multiple devices have configurations with the ?
? ? ? ? same priority, VPNs will be considered first, then ?
? ? ? ? devices with the best (lowest metric) default ?
? ? ? ? route and then all other devices. When using ?
? ? ? ? dns=default, servers with higher priority will be ?
? ? ? ? on top of resolv.conf. To prioritize a given ?
? ? ? ? server over another one within the same ?
? ? ? ? connection, just specify them in the desired ?
? ? ? ? order. Note that commonly the resolver tries name ?
? ? ? ? servers in /etc/resolv.conf in the order listed, ?
? ? ? ? proceeding with the next server in the list on ?
? ? ? ? failure. See for example the "rotate" option of ?
? ? ? ? the dns-options setting. If there are any negative ?
? ? ? ? DNS priorities, then only name servers from the ?
? ? ? ? devices with that lowest priority will be ?
? ? ? ? considered. When using a DNS resolver that ?
? ? ? ? supports Conditional Forwarding or Split DNS (with ?
? ? ? ? dns=dnsmasq or dns=systemd-resolved settings), ?
? ? ? ? each connection is used to query domains in its ?
? ? ? ? search list. The search domains determine which ?
? ? ? ? name servers to ask, and the DNS priority is used ?
? ? ? ? to prioritize name servers based on the domain. ?
? ? ? ? Queries for domains not present in any search list ?
? ? ? ? are routed through connections having the '~.' ?

? ? ? ? special wildcard domain, which is added ?
? ? ? ? automatically to connections with the default ?
? ? ? ? route (or can be added manually). When multiple ?
? ? ? ? connections specify the same domain, the one with ?
? ? ? ? the best priority (lowest numerical value) wins. ?
? ? ? ? If a sub domain is configured on another interface ?
? ? ? ? it will be accepted regardless the priority, ?
? ? ? ? unless parent domain on the other interface has a ?
? ? ? ? negative priority, which causes the sub domain to ?
? ? ? ? be shadowed. With Split DNS one can avoid ?
? ? ? ? undesired DNS leaks by properly configuring DNS ?
? ? ? ? priorities and the search domains, so that only ?
? ? ? ? name servers of the desired interface are ?
? ? ? ? configured. ?

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?dns-search ? array of string ? ? Array of DNS search domains. Domains starting with ?
? ? ? ? a tilde ('~') are considered 'routing' domains and ?
? ? ? ? are used only to decide the interface over which a ?
? ? ? ? query must be forwarded; they are not used to ?
? ? ? ? complete unqualified host names. When using a DNS ?
? ? ? ? plugin that supports Conditional Forwarding or ?
? ? ? ? Split DNS, then the search domains specify which ?
? ? ? ? name servers to query. This makes the behavior ?
? ? ? ? different from running with plain ?
? ? ? ? /etc/resolv.conf. For more information see also ?
? ? ? ? the dns-priority setting. ?

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?gateway ? string ? ? The gateway associated with this configuration. ?
? ? ? ? This is only meaningful if "addresses" is also ?

? ? ? ? set. The gateway's main purpose is to control the ?
? ? ? ? next hop of the standard default route on the ?
? ? ? ? device. Hence, the gateway property conflicts with ?
? ? ? ? "never-default" and will be automatically dropped ?
? ? ? ? if the IP configuration is set to never-default. ?
? ? ? ? As an alternative to set the gateway, configure a ?
? ? ? ? static default route with /0 as prefix length. ?

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?ignore-auto-dns ? boolean ? FALSE ? When "method" is set to "auto" and this property ?
? ? ? ? to TRUE, automatically configured name servers and ?
? ? ? ? search domains are ignored and only name servers ?
? ? ? ? and search domains specified in the "dns" and ?
? ? ? ? "dns-search" properties, if any, are used. ?

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?ignore-auto-routes ? boolean ? FALSE ? When "method" is set to "auto" and this property ?
? ? ? ? to TRUE, automatically configured routes are ?
? ? ? ? ignored and only routes specified in the "routes" ?
? ? ? ? property, if any, are used. ?

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?ip6-privacy ? NMSettingIP6ConfigPrivacy ? ? Configure IPv6 Privacy Extensions for SLAAC, ?
? ? (int32) ? ? described in RFC4941. If enabled, it makes the ?
? ? ? ? kernel generate a temporary IPv6 address in ?
? ? ? ? addition to the public one generated from MAC ?
? ? ? ? address via modified EUI-64. This enhances ?
? ? ? ? privacy, but could cause problems in some ?
? ? ? ? applications, on the other hand. The permitted ?
? ? ? ? values are: -1: unknown, 0: disabled, 1: enabled ?

? ? ? ? (prefer public address), 2: enabled (prefer ?
? ? ? ? temporary addresses). Having a per-connection ?
? ? ? ? setting set to "-1" (unknown) means fallback to ?
? ? ? ? global configuration "ipv6.ip6-privacy". If also ?
? ? ? ? global configuration is unspecified or set to ?
? ? ? ? "-1", fallback to read ?
? ? ? ? "/proc/sys/net/ipv6/conf/default/use_tempaddr". ?
? ? ? ? Note that this setting is distinct from the Stable ?
? ? ? ? Privacy addresses that can be enabled with the ?
? ? ? ? "addr-gen-mode" property's "stable-privacy" ?
? ? ? ? setting as another way of avoiding host tracking ?
? ? ? ? with IPv6 addresses. ?

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?may-fail ? boolean ? TRUE ? If TRUE, allow overall network configuration to ?
? ? ? ? proceed even if the configuration specified by ?
? ? ? ? this property times out. Note that at least one ?
? ? ? ? IP configuration must succeed or overall network ?
? ? ? ? configuration will still fail. For example, in ?
? ? ? ? IPv6-only networks, setting this property to TRUE ?
? ? ? ? on the NMSettingIP4Config allows the overall ?
? ? ? ? network configuration to succeed if IPv4 ?
? ? ? ? configuration fails but IPv6 configuration ?
? ? ? ? completes successfully. ?

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?method ? string ? ? IP configuration method. NMSettingIP4Config and ?
? ? ? ? NMSettingIP6Config both support "disabled", ?
? ? ? ? "auto", "manual", and "link-local". See the ?
? ? ? ? subclass-specific documentation for other values. ?
? ? ? ? In general, for the "auto" method, properties such ?

? ? ? ? as "dns" and "routes" specify information that is ?
? ? ? ? added on to the information returned from ?
? ? ? ? automatic configuration. The "ignore-auto-routes" ?
? ? ? ? and "ignore-auto-dns" properties modify this ?
? ? ? ? behavior. For methods that imply no upstream ?
? ? ? ? network, such as "shared" or "link-local", these ?
? ? ? ? properties must be empty. For IPv4 method ?
? ? ? ? "shared", the IP subnet can be configured by ?
? ? ? ? adding one manual IPv4 address or otherwise ?
? ? ? ? 10.42.x.0/24 is chosen. Note that the shared ?
? ? ? ? method must be configured on the interface which ?
? ? ? ? shares the internet to a subnet, not on the uplink ?
? ? ? ? which is shared. ?

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?never-default ? boolean ? FALSE ? If TRUE, this connection will never be the default ?
? ? ? ? connection for this IP type, meaning it will never ?
? ? ? ? be assigned the default route by NetworkManager. ?

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?ra-timeout ? int32 ? 0 ? A timeout for waiting Router Advertisements in ?
? ? ? ? seconds. If zero (the default), a globally ?
? ? ? ? configured default is used. If still unspecified, ?
? ? ? ? the timeout depends on the sysctl settings of the ?
? ? ? ? device. Set to 2147483647 (MAXINT32) for infinity. ?

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?required-timeout ? int32 ? -1 ? The minimum time interval in milliseconds for ?
? ? ? ? which dynamic IP configuration should be tried ?
? ? ? ? before the connection succeeds. This property is ?

? ? ? ? useful for example if both IPv4 and IPv6 are ?
? ? ? ? enabled and are allowed to fail. Normally the ?
? ? ? ? connection succeeds as soon as one of the two ?
? ? ? ? address families completes; by setting a required ?
? ? ? ? timeout for e.g. IPv4, one can ensure that even if ?
? ? ? ? IP6 succeeds earlier than IPv4, NetworkManager ?
? ? ? ? waits some time for IPv4 before the connection ?
? ? ? ? becomes active. Note that if "may-fail" is FALSE ?
? ? ? ? for the same address family, this property has no ?
? ? ? ? effect as NetworkManager needs to wait for the ?
? ? ? ? full DHCP timeout. A zero value means that no ?
? ? ? ? required timeout is present, -1 means the default ?
? ? ? ? value (either configuration ipvx.required-timeout ?
? ? ? ? override or zero). ?

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?route-data ? array of vardict ? ? Array of IPv6 routes. Each route dictionary ?
? ? ? ? contains at least 'dest' and 'prefix' entries, ?
? ? ? ? containing the destination IP address as a string, ?
? ? ? ? and the prefix length as a uint32. Most routes ?
? ? ? ? will also have a 'next-hop' entry, containing the ?
? ? ? ? next hop IP address as a string. If the route has ?
? ? ? ? a 'metric' entry (containing a uint32), that will ?
? ? ? ? be used as the metric for the route (otherwise NM ?
? ? ? ? will pick a default value appropriate to the ?
? ? ? ? device). Additional attributes may also exist on ?
? ? ? ? some routes. ?

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?route-metric ? int64 ? -1 ? The default metric for routes that don't ?
? ? ? ? explicitly specify a metric. The default value -1 ?

? ? ? ? means that the metric is chosen automatically ?
? ? ? ? based on the device type. The metric applies to ?
? ? ? ? dynamic routes, manual (static) routes that don't ?
? ? ? ? have an explicit metric setting, address prefix ?
? ? ? ? routes, and the default route. Note that for IPv6, ?
? ? ? ? the kernel accepts zero (0) but coerces it to 1024 ?
? ? ? ? (user default). Hence, setting this property to ?
? ? ? ? zero effectively mean setting it to 1024. For ?
? ? ? ? IPv4, zero is a regular value for the metric. ?

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?route-table ? uint32 ? 0 ? Enable policy routing (source routing) and set the ?
? ? ? ? routing table used when adding routes. This ?
? ? ? ? affects all routes, including device-routes, ?
? ? ? ? IPv4LL, DHCP, SLAAC, default-routes and static ?
? ? ? ? routes. But note that static routes can ?
? ? ? ? individually overwrite the setting by explicitly ?
? ? ? ? specifying a non-zero routing table. If the table ?
? ? ? ? setting is left at zero, it is eligible to be ?
? ? ? ? overwritten via global configuration. If the ?
? ? ? ? property is zero even after applying the global ?
? ? ? ? configuration value, policy routing is disabled ?
? ? ? ? for the address family of this connection. Policy ?
? ? ? ? routing disabled means that NetworkManager will ?
? ? ? ? add all routes to the main table (except static ?
? ? ? ? routes that explicitly configure a different ?
? ? ? ? table). Additionally, NetworkManager will not ?
? ? ? ? delete any extraneous routes from tables except ?
? ? ? ? the main table. This is to preserve backward ?
? ? ? ? compatibility for users who manage routing tables ?
? ? ? ? outside of NetworkManager. ?

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?routes ? array of legacy IPv6 ? ? Deprecated in favor of the 'route-data' property, ?

? ? route struct (a(ayuayu)) ? ? but this can be used for backward-compatibility ?

? ? ? ? with older daemons. Note that if you send this ?

? ? ? ? property the daemon will ignore 'route-data'. ?

? ? ? ? Array of IPv6 route structures. Each IPv6 route ?

? ? ? ? structure is composed of an IPv6 address, a prefix ?

? ? ? ? length (1 - 128), an IPv6 next hop address (which ?

? ? ? ? may be zeroed out if there is no next hop), and a ?

? ? ? ? metric. If the metric is 0, NM will choose an ?

? ? ? ? appropriate default metric for the device. ?

???

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

?token ? string ? ? Configure the token for ?

? ? ? ? draft-chown-6man-tokenised-ipv6-identifiers-02 ?

? ? ? ? IPv6 tokenized interface identifiers. Useful with ?

? ? ? ? eui64 addr-gen-mode. ?

???

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

ip-tunnel setting

IP Tunneling Settings.

???

?Key Name ? Value Type ? Default Value ? Value Description ?

???

?encapsulation-limit ? uint32 ? 0 ? How many additional ?

? ? ? ? levels of ?

? ? ? ? encapsulation are ?

? ? ? ? permitted to be ?

? ? ? ? prepended to ?

? ? ? ? packets. This ?

? ? ? ? property applies ?

? ? ? ? only to IPv6 ?

? ? ? ? tunnels. ?

??

?flags ? uint32 ? 0 ? Tunnel flags. ?

? ? ? ? Currently, the ?

? ? ? ? following values ?

? ? ? ? are supported: ?

? ? ? ? NM_IP_TUNNEL_FLAG_IP6_IGN_ENCAP_LIMIT ?

? ? ? ? (0x1), ?

? ? ? ? NM_IP_TUNNEL_FLAG_IP6_USE_ORIG_TCLASS ?

? ? ? ? (0x2), ?

? ? ? ? NM_IP_TUNNEL_FLAG_IP6_USE_ORIG_FLOWLABEL ?

? ? ? ? (0x4), ?

? ? ? ? NM_IP_TUNNEL_FLAG_IP6_MIP6_DEV ?

? ? ? ? (0x8), ?

? ? ? ? NM_IP_TUNNEL_FLAG_IP6_RCV_DSCP_COPY ?

? ? ? ? (0x10), ?

? ? ? ? NM_IP_TUNNEL_FLAG_IP6_USE_ORIG_FWMARK ?

? ? ? ? (0x20). They are ?

? ? ? ? valid only for IPv6 ?

? ? ? ? tunnels. ?

??

?flow-label ? uint32 ? 0 ? The flow label to assign to tunnel ?

? ? ? ? packets. This property applies only to ?

? ? ? ? IPv6 tunnels. ?

??

?input-key ? string ? ? The key used for tunnel input packets; ?

? ? ? ? the property is valid only for certain ?

? ? ? ? tunnel modes (GRE, IP6GRE). If empty, no ?

? ? ? ? key is used. ?

??

?local ? string ? ? The local endpoint of the tunnel; the ?

? ? ? ? value can be empty, otherwise it must ?

? ? ? ? contain an IPv4 or IPv6 address. ?

??

?mode ? uint32 ? 0 ? The tunneling mode, for example ?

? ? ? ? NM_IP_TUNNEL_MODE_IPIP (1) or ?

? ? ? ? NM_IP_TUNNEL_MODE_GRE (2). ?

??

?mtu ? uint32 ? 0 ? If non-zero, only transmit packets of ?

? ? ? ? the specified size or smaller, breaking ?

? ? ? ? larger packets up into multiple ?

? ? ? ? fragments. ?

??

?output-key ? string ? ? The key used for tunnel output packets; ?

? ? ? ? the property is valid only for certain ?

? ? ? ? tunnel modes (GRE, IP6GRE). If empty, no ?

? ? ? ? key is used. ?

??

?parent ? string ? ? If given, specifies the parent interface ?

? ? ? ? name or parent connection UUID the new ?

? ? ? ? device will be bound to so that tunneled ?

? ? ? ? packets will only be routed via that ?

? ? ? ? interface. ?

??

?path-mtu-discovery ? boolean ? TRUE ? Whether to enable Path MTU Discovery on ?

? ? ? ? this tunnel. ?

??

?remote ? string ? ? The remote endpoint of the tunnel; the ?

? ? ? ? value must contain an IPv4 or IPv6 ?

? ? ? ? address. ?

??

?tos ? uint32 ? 0 ? The type of service (IPv4) or traffic ?

? ? ? ? class (IPv6) field to be set on tunneled ?

? ? ? ? packets. ?

??

?ttl ? uint32 ? 0 ? The TTL to assign to tunneled packets. 0 ?

? ? ? ? is a special value meaning that packets ?

? ? ? ? inherit the TTL value. ?

??

macsec setting

MACSec Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?encrypt ? boolean ? TRUE ? Whether the ?

? ? ? ? transmitted traffic ?

? ? ? ? must be encrypted. ?

??

?mka-cak ? string ? ? The pre-shared CAK ?

? ? ? ? (Connectivity ?

? ? ? ? Association Key) ?

? ? ? ? for MACsec Key ?

? ? ? ? Agreement. ?

??

?mka-cak-flags ? NMSettingSecretFlags ? ? Flags indicating ?

? ? (uint32) ? ? how to handle the ?

? ? ? ? "mka-cak" property. ?

? ? ? ? (see the section ?

? ? ? ? called ?Secret flag ?

? ? ? ? types:? for flag ?

? ? ? ? values) ?

??

?mka-ckn ? string ? ? The pre-shared CKN ?

? ? ? ? (Connectivity-association ?

? ? ? ? Key Name) for ?

? ? ? ? MACsec Key ?

? ? ? ? Agreement. ?

??

?mode ? int32 ? 0 ? Specifies how the CAK ?

? ? ? ? (Connectivity Association ?

? ? ? ? Key) for MKA (MACsec Key ?

? ? ? ? Agreement) is obtained. ?

??

?parent ? string ? ? If given, specifies the ?

? ? ? ? parent interface name or ?

? ? ? ? parent connection UUID ?

? ? ? ? from which this MACSEC ?

? ? ? ? interface should be ?

? ? ? ? created. If this ?

? ? ? ? property is not ?

? ? ? ? specified, the connection ?

? ? ? ? must contain an ?

? ? ? ? "802-3-ethernet" setting ?

? ? ? ? with a "mac-address" ?

? ? ? ? property. ?

??

?port ? int32 ? 1 ? The port component of the ?

? ? ? ? SCI (Secure Channel ?

? ? ? ? Identifier), between 1 ?

? ? ? ? and 65534. ?

??

?send-sci ? boolean ? TRUE ? Specifies whether the SCI ?

? ? ? ? (Secure Channel ?

? ? ? ? Identifier) is included ?

? ? ? ? in every packet. ?

??

?validation ? int32 ? 2 ? Specifies the validation ?

? ? ? ? mode for incoming frames. ?

??

MAC VLAN Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?mode ? uint32 ? 0 ? The macvlan mode, ?

? ? ? ? which specifies the ?

? ? ? ? communication ?

? ? ? ? mechanism between ?

? ? ? ? multiple macvlans ?

? ? ? ? on the same lower ?

? ? ? ? device. ?

??

?parent ? string ? ? If given, specifies ?

? ? ? ? the parent ?

? ? ? ? interface name or ?

? ? ? ? parent connection ?

? ? ? ? UUID from which ?

? ? ? ? this MAC-VLAN ?

? ? ? ? interface should be ?

? ? ? ? created. If this ?

? ? ? ? property is not ?

? ? ? ? specified, the ?

? ? ? ? connection must ?

? ? ? ? contain an ?

? ? ? ? "802-3-ethernet" ?

? ? ? ? setting with a ?

? ? ? ? "mac-address" ?

? ? ? ? property. ?

??

?promiscuous ? boolean ? TRUE ? Whether the ?

? ? ? ? interface should be ?

? ? ? ? put in promiscuous ?

? ? ? ? mode. ?

??

?tap ? boolean ? FALSE ? Whether the ?

? ? ? ? interface should be ?

? ? ? ? a MACVTAP. ?

??

match setting

Match settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?driver ? array of string ? ? A list of driver ?

? ? ? ? names to match. ?

? ? ? ? Each element is a ?

? ? ? ? shell wildcard ?

? ? ? ? pattern. See ?

? ? ? ? NMSettingMatch:interface-name ?

? ? ? ? for how special ?

? ? ? ? characters '|', ?

? ? ? ? '&', '!' and '\\' ?

? ? ? ? are used for ?

? ? ? ? optional and ?

? ? ? ? mandatory matches ?

? ? ? ? and inverting the ?

? ? ? ? pattern. ?

??

?interface-name ? array of string ? ? A list of interface names to ?

? ? ? ? match. Each element is a ?

? ? ? ? shell wildcard pattern. An ?

? ? ? ? element can be prefixed with ?

? ? ? ? a pipe symbol (|) or an ?

? ? ? ? ampersand (&). The former ?
? ? ? ? means that the element is ?
? ? ? ? optional and the latter means ?
? ? ? ? that it is mandatory. If ?
? ? ? ? there are any optional ?
? ? ? ? elements, than the match ?
? ? ? ? evaluates to true if at least ?
? ? ? ? one of the optional element ?
? ? ? ? matches (logical OR). If ?
? ? ? ? there are any mandatory ?
? ? ? ? elements, then they all must ?
? ? ? ? match (logical AND). By ?
? ? ? ? default, an element is ?
? ? ? ? optional. This means that an ?
? ? ? ? element "foo" behaves the ?
? ? ? ? same as "|foo". An element ?
? ? ? ? can also be inverted with ?
? ? ? ? exclamation mark (!) between ?
? ? ? ? the pipe symbol (or the ?
? ? ? ? ampersand) and before the ?
? ? ? ? pattern. Note that "!foo" is ?
? ? ? ? a shortcut for the mandatory ?
? ? ? ? match "&!foo". Finally, a ?
? ? ? ? backslash can be used at the ?
? ? ? ? beginning of the element ?
? ? ? ? (after the optional special ?
? ? ? ? characters) to escape the ?
? ? ? ? start of the pattern. For ?
? ? ? ? example, "&\\!a" is an ?
? ? ? ? mandatory match for literally ?
? ? ? ? "!a". ?

?kernel-command-line ? array of string ? ? A list of kernel command line ?

? ? ? ? arguments to match. This may ?

? ? ? ? be used to check whether a ?

? ? ? ? specific kernel command line ?

? ? ? ? option is set (or unset, if ?

? ? ? ? prefixed with the exclamation ?

? ? ? ? mark). The argument must ?

? ? ? ? either be a single word, or ?

? ? ? ? an assignment (i.e. two ?

? ? ? ? words, joined by "="). In the ?

? ? ? ? former case the kernel ?

? ? ? ? command line is searched for ?

? ? ? ? the word appearing as is, or ?

? ? ? ? as left hand side of an ?

? ? ? ? assignment. In the latter ?

? ? ? ? case, the exact assignment is ?

? ? ? ? looked for with right and ?

? ? ? ? left hand side matching. ?

? ? ? ? Wildcard patterns are not ?

? ? ? ? supported. See ?

? ? ? ? NMSettingMatch:interface-name ?

? ? ? ? for how special characters ?

? ? ? ? '|', '&', '!' and '\\' are ?

? ? ? ? used for optional and ?

? ? ? ? mandatory matches and ?

? ? ? ? inverting the match. ?

??

?path ? array of string ? ? A list of paths to match ?

? ? ? ? against the ID_PATH udev ?

? ? ? ? property of devices. ID_PATH ?

? ? ? ? represents the topological ?

? ? ? ? persistent path of a device. ?

? ? ? ? It typically contains a ?

? ? ? ? subsystem string (pci, usb, ?

? ? ? ? platform, etc.) and a ?

? ? ? ? subsystem-specific ?

? ? ? ? identifier. For PCI devices ?

? ? ? ? the path has the form ?

? ? ? ? "pci-$domain:$bus:$device.$function", ?

? ? ? ? where each variable is an ?

? ? ? ? hexadecimal value; for ?

? ? ? ? example "pci-0000:0a:00.0". ?

? ? ? ? The path of a device can be ?

? ? ? ? obtained with "udevadm info ?

? ? ? ? /sys/class/net/$dev | grep ?

? ? ? ? ID_PATH=" or by looking at ?

? ? ? ? the "path" property exported ?

? ? ? ? by NetworkManager ("nmcli -f ?

? ? ? ? general.path device show ?

? ? ? ? $dev"). Each element of the ?

? ? ? ? list is a shell wildcard ?

? ? ? ? pattern. See ?

? ? ? ? NMSettingMatch:interface-name ?

? ? ? ? for how special characters ?

? ? ? ? '|', '&', '!' and '\\' are ?

? ? ? ? used for optional and ?

? ? ? ? mandatory matches and ?

? ? ? ? inverting the pattern. ?

??

802-11-olpc-mesh setting

OLPC Wireless Mesh Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?channel ? uint32 ? 0 ? Channel on which ?

? ? ? ? the mesh network to ?

? ? ? ? join is located. ?

??

?dhcp-anycast-address ? byte array ? ? Anycast DHCP MAC ?

? ? ? ? address used when ?

? ? ? ? requesting an IP ?

? ? ? ? address via DHCP. ?

? ? ? ? The specific ?

? ? ? ? anycast address ?

? ? ? ? used determines ?

? ? ? ? which DHCP server ?

? ? ? ? class answers the ?

? ? ? ? request. This is ?

? ? ? ? currently only ?

? ? ? ? implemented by ?

? ? ? ? dhclient DHCP ?

? ? ? ? plugin. ?

??

?ssid ? byte array ? ? SSID of the mesh ?

? ? ? ? network to join. ?

??

ovs-bridge setting

OvsBridge Link Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?datapath-type ? string ? ? The data path type. ?

? ? ? ? One of "system", ?

? ? ? ? "netdev" or empty. ?

??

?fail-mode ? string ? ? The bridge failure ?

? ? ? ? mode. One of ?

```
    ?                ?         ?            ? "secure",          ?
    ?                ?         ?            ? "standalone" or     ?
    ?                ?         ?            ? empty.             ?
    ??????????????????????????????????????????????????????????????????????????????
    ?mcast-snooping-enable ? boolean    ? FALSE        ? Enable or disable   ?
    ?                ?         ?            ? multicast snooping. ?
    ??????????????????????????????????????????????????????????????????????????????
    ?rstp-enable          ? boolean    ? FALSE        ? Enable or disable   ?
    ?                ?         ?            ? RSTP.              ?
    ??????????????????????????????????????????????????????????????????????????????
    ?stp-enable           ? boolean    ? FALSE        ? Enable or disable   ?
    ?                ?         ?            ? STP.               ?
    ??????????????????????????????????????????????????????????????????????????????
ovs-dpdk setting
    OvsDpdk Link Settings.
    ????????????????????????????????????????????????????????
    ?Key Name ? Value Type ? Default Value ? Value Description   ?
    ????????????????????????????????????????????????????????
    ?devargs  ? string     ?             ? Open vSwitch DPDK   ?
    ?        ?          ?             ? device arguments.   ?
    ????????????????????????????????????????????????????????
    ?n-rxq    ? uint32     ? 0           ? Open vSwitch DPDK   ?
    ?        ?          ?             ? number of rx        ?
    ?        ?          ?             ? queues. Defaults to ?
    ?        ?          ?             ? zero which means to ?
    ?        ?          ?             ? leave the parameter ?
    ?        ?          ?             ? in OVS unspecified  ?
    ?        ?          ?             ? and effectively     ?
    ?        ?          ?             ? configures one      ?
    ?        ?          ?             ? queue.             ?
    ????????????????????????????????????????????????????????
ovs-interface setting
    Open vSwitch Interface Settings.
```

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?type ? string ? ? The interface type. ?

? ? ? ? Either "internal", ?

? ? ? ? "system", "patch", ?

? ? ? ? "dpdk", or empty. ?

??

ovs-patch setting

OvsPatch Link Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?peer ? string ? ? Specifies the name ?

? ? ? ? of the interface ?

? ? ? ? for the other side ?

? ? ? ? of the patch. The ?

? ? ? ? patch on the other ?

? ? ? ? side must also set ?

? ? ? ? this interface as ?

? ? ? ? peer. ?

??

ovs-port setting

OvsPort Link Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?bond-downdelay ? uint32 ? 0 ? The time port must ?

? ? ? ? be inactive in ?

? ? ? ? order to be ?

? ? ? ? considered down. ?

??

?bond-mode ? string ? ? Bonding mode. One ?

? ? ? ? of "active-backup", ?

? ? ? ? "balance-slb", or ?

? ? ? ? "balance-tcp". ?

??

?bond-updelay ? uint32 ? 0 ? The time port must ?

? ? ? ? be active before it ?

? ? ? ? starts forwarding ?

? ? ? ? traffic. ?

??

?lacp ? string ? ? LACP mode. One of ?

? ? ? ? "active", "off", or ?

? ? ? ? "passive". ?

??

?tag ? uint32 ? 0 ? The VLAN tag in the ?

? ? ? ? range 0-4095. ?

??

?vlan-mode ? string ? ? The VLAN mode. One ?

? ? ? ? of "access", ?

? ? ? ? "native-tagged", ?

? ? ? ? "native-untagged", ?

? ? ? ? "trunk" or unset. ?

??

ppp setting

Point-to-Point Protocol Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?baud ? uint32 ? 0 ? If non-zero, ?

? ? ? ? instruct pppd to ?

? ? ? ? set the serial port ?

? ? ? ? to the specified ?

? ? ? ? baudrate. This ?

? ? ? ? value should ?

? ? ? ? normally be left as ?

? ? ? ? 0 to automatically ?

? ? ? ? choose the speed. ?

??

?crtscts ? boolean ? FALSE ? If TRUE, specify ?

? ? ? ? that pppd should ?

? ? ? ? set the serial port ?

? ? ? ? to use hardware ?

? ? ? ? flow control with ?

? ? ? ? RTS and CTS ?

? ? ? ? signals. This ?

? ? ? ? value should ?

? ? ? ? normally be set to ?

? ? ? ? FALSE. ?

??

?lcp-echo-failure ? uint32 ? 0 ? If non-zero, ?

? ? ? ? instruct pppd to ?

? ? ? ? presume the ?

? ? ? ? connection to the ?

? ? ? ? peer has failed if ?

? ? ? ? the specified ?

? ? ? ? number of LCP ?

? ? ? ? echo-requests go ?

? ? ? ? unanswered by the ?

? ? ? ? peer. The ?

? ? ? ? "lcp-echo-interval" ?

? ? ? ? property must also ?

? ? ? ? be set to a ?

? ? ? ? non-zero value if ?

? ? ? ? this property is ?

? ? ? ? used. ?

??

?lcp-echo-interval ? uint32 ? 0 ? If non-zero, ?

? ? ? ? instruct pppd to ?

? ? ? ? send an LCP ?

? ? ? ? echo-request frame ?

? ? ? ? to the peer every n ?

? ? ? ? seconds (where n is ?

? ? ? ? the specified ?

? ? ? ? value). Note that ?

? ? ? ? some PPP peers will ?

? ? ? ? respond to echo ?

? ? ? ? requests and some ?

? ? ? ? will not, and it is ?

? ? ? ? not possible to ?

? ? ? ? autodetect this. ?

??

?mppe-stateful ? boolean ? FALSE ? If TRUE, stateful ?

? ? ? ? MPPE is used. See ?

? ? ? ? pppd documentation ?

? ? ? ? for more ?

? ? ? ? information on ?

? ? ? ? stateful MPPE. ?

??

?mru ? uint32 ? 0 ? If non-zero, ?

? ? ? ? instruct pppd to ?

? ? ? ? request that the ?

? ? ? ? peer send packets ?

? ? ? ? no larger than the ?

? ? ? ? specified size. If ?

? ? ? ? non-zero, the MRU ?

? ? ? ? should be between ?

? ? ? ? 128 and 16384. ?

??

?mtu ? uint32 ? 0 ? If non-zero, ?

? ? ? ? instruct pppd to ?

? ? ? ? send packets no ?

? ? ? ? larger than the ?

? ? ? ? specified size. ?

??

?no-vj-comp ? boolean ? FALSE ? If TRUE, Van ?

? ? ? ? Jacobsen TCP header ?

? ? ? ? compression will ?

? ? ? ? not be requested. ?

??

?noauth ? boolean ? TRUE ? If TRUE, do not ?

? ? ? ? require the other ?

? ? ? ? side (usually the ?

? ? ? ? PPP server) to ?

? ? ? ? authenticate itself ?

? ? ? ? to the client. If ?

? ? ? ? FALSE, require ?

? ? ? ? authentication from ?

? ? ? ? the remote side. ?

? ? ? ? In almost all ?

? ? ? ? cases, this should ?

? ? ? ? be TRUE. ?

??

?nobsdcomp ? boolean ? FALSE ? If TRUE, BSD ?

? ? ? ? compression will ?

? ? ? ? not be requested. ?

??

?nodeflate ? boolean ? FALSE ? If TRUE, "deflate" ?

? ? ? ? compression will ?

? ? ? ? not be requested. ?

??

?refuse-chap ? boolean ? FALSE ? If TRUE, the CHAP ?

? ? ? ? authentication ?

? ? ? ? method will not be ?

? ? ? ? used. ?

??

?refuse-eap ? boolean ? FALSE ? If TRUE, the EAP ?

? ? ? ? authentication ?

? ? ? ? method will not be ?

? ? ? ? used. ?

??

?refuse-mschap ? boolean ? FALSE ? If TRUE, the MSCHAP ?

? ? ? ? authentication ?

? ? ? ? method will not be ?

? ? ? ? used. ?

??

?refuse-mschapv2 ? boolean ? FALSE ? If TRUE, the ?

? ? ? ? MSCHAPv2 ?

? ? ? ? authentication ?

? ? ? ? method will not be ?

? ? ? ? used. ?

??

?refuse-pap ? boolean ? FALSE ? If TRUE, the PAP ?

? ? ? ? authentication ?

? ? ? ? method will not be ?

? ? ? ? used. ?

??

?require-mppe ? boolean ? FALSE ? If TRUE, MPPE ?

? ? ? ? (Microsoft ?

? ? ? ? Point-to-Point ?

? ? ? ? Encryption) will be ?

? ? ? ? required for the ?

? ? ? ? PPP session. If ?

? ? ? ? either 64-bit or ?

? ? ? ? 128-bit MPPE is not ?

? ? ? ? available the ?

? ? ? ? session will fail. ?

? ? ? ? Note that MPPE is ?

? ? ? ? not used on mobile ?

? ? ? ? broadband ?

? ? ? ? connections. ?

??

?require-mppe-128 ? boolean ? FALSE ? If TRUE, 128-bit ?

? ? ? ? MPPE (Microsoft ?

? ? ? ? Point-to-Point ?

? ? ? ? Encryption) will be ?

? ? ? ? required for the ?

? ? ? ? PPP session, and ?

? ? ? ? the "require-mppe" ?

? ? ? ? property must also ?

? ? ? ? be set to TRUE. If ?

? ? ? ? 128-bit MPPE is not ?

? ? ? ? available the ?

? ? ? ? session will fail. ?

??

pppoe setting

PPP-over-Ethernet Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?parent ? string ? ? If given, specifies ?

? ? ? ? the parent ?

? ? ? ? interface name on ?

? ? ? ? which this PPPoE ?

? ? ? ? connection should ?

? ? ? ? be created. If ?

? ? ? ? this property is ?

? ? ? ? not specified, the ?

? ? ? ? connection is ?

? ? ? ? activated on the ?

? ? ? ? interface specified ?

? ? ? ? in "interface-name" ?

? ? ? ? of ?

? ? ? ? NMSettingConnection. ?

??

?password ? string ? ? Password used to ?

? ? ? ? authenticate with ?

? ? ? ? the PPPoE service. ?

??

?password-flags ? NMSettingSecretFlags ? ? Flags indicating how ?

? ? (uint32) ? ? to handle the ?

? ? ? ? "password" property. ?

? ? ? ? (see the section ?

? ? ? ? called ?Secret flag ?

? ? ? ? types:? for flag ?

? ? ? ? values) ?

??

?service ? string ? ? If specified, ?

? ? ? ? instruct PPPoE to ?

? ? ? ? only initiate ?

? ? ? ? sessions with access ?

? ? ? ? concentrators that ?

? ? ? ? provide the ?

? ? ? ? specified service. ?

? ? ? ? For most providers, ?

? ? ? ? this should be left ?

? ? ? ? blank. It is only ?

? ? ? ? required if there ?

? ? ? ? are multiple access ?

? ? ? ? concentrators or a ?

? ? ? ? specific service is ?

? ? ? ? known to be ?

? ? ? ? required. ?

??

?username ? string ? ? Username used to ?

? ? ? ? authenticate with ?

? ? ? ? the PPPoE service. ?

??

proxy setting

WWW Proxy Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?browser-only ? boolean ? FALSE ? Whether the proxy ?

? ? ? ? configuration is ?

? ? ? ? for browser only. ?

??

?method ? int32 ? 0 ? Method for proxy ?

? ? ? ? configuration, ?

? ? ? ? Default is ?

? ? ? ? NM_SETTING_PROXY_METHOD_NONE ?

? ? ? ? (0) ?

??

?pac-script ? string ? ? PAC script for the ?

? ? ? ? connection. ?

??

?pac-url ? string ? ? PAC URL for obtaining PAC ?

? ? ? ? file. ?

??

serial setting

Serial Link Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?baud ? uint32 ? 57600 ? Speed to use for ?

? ? ? ? communication over ?

? ? ? ? the serial port. ?

? ? ? ? Note that this ?

? ? ? ? value usually has ?

? ? ? ? no effect for ?

? ? ? ? mobile broadband ?

? ? ? ? modems as they ?

? ? ? ? generally ignore ?

? ? ? ? speed settings and ?

? ? ? ? use the highest ?

? ? ? ? available speed. ?

??

?bits ? uint32 ? 8 ? Byte-width of the ?

? ? ? ? serial ?

? ? ? ? communication. The ?

? ? ? ? 8 in "8n1" for ?

? ? ? ? example. ?

??

?parity ? byte ? ? The connection ?

? ? ? ? parity: 69 (ASCII ?

? ? ? ? 'E') for even ?

? ? ? ? parity, 111 (ASCII ?

? ? ? ? 'o') for odd, 110 ?

? ? ? ? (ASCII 'n') for ?

? ? ? ? none. ?

??

?send-delay ? uint64 ? 0 ? Time to delay ?

? ? ? ? between each byte ?

? ? ? ? sent to the modem, ?

? ? ? ? in microseconds. ?

??

?stopbits ? uint32 ? 1 ? Number of stop bits ?

? ? ? ? for communication ?

? ? ? ? on the serial port. ?

? ? ? ? Either 1 or 2. The ?

? ? ? ? 1 in "8n1" for ?

? ? ? ? example. ?

??

sriov setting

SR-IOV settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?autoprobe-drivers ? NMTernary (int32) ? ? Whether to ?

? ? ? ? autoprobe virtual ?

? ? ? ? functions by a ?

? ? ? ? compatible driver. ?

? ? ? ? If set to ?

? ? ? ? NM_TERNARY_TRUE ?

? ? ? ? (1), the kernel ?

? ? ? ? will try to bind ?

? ? ? ? VFs to a compatible ?

? ? ? ? driver and if this ?

? ? ? ? succeeds a new ?

? ? ? ? network interface ?

? ? ? ? will be ?

? ? ? ? instantiated for ?

? ? ? ? each VF. If set to ?

? ? ? ? NM_TERNARY_FALSE ?

? ? ? ? (0), VFs will not ?

? ? ? ? be claimed and no ?

? ? ? ? network interfaces ?

? ? ? ? will be created for ?

? ? ? ? them. When set to ?

? ? ? ? NM_TERNARY_DEFAULT ?

? ? ? ? (-1), the global ?

? ? ? ? default is used; in ?

? ? ? ? case the global ?

? ? ? ? default is ?

? ? ? ? unspecified it is ?

? ? ? ? assumed to be ?

? ? ? ? NM_TERNARY_TRUE ?

? ? ? ? (1). ?

??

?total-vfs ? uint32 ? 0 ? The total number of ?

? ? ? ? virtual functions ?

? ? ? ? to create. Note ?

? ? ? ? that when the sriov ?

? ? ? ? setting is present ?

? ? ? ? NetworkManager ?

? ? ? ? enforces the number ?

? ? ? ? of virtual ?

? ? ? ? functions on the ?

? ? ? ? interface (also ?

? ? ? ? when it is zero) ?

? ? ? ? during activation ?

? ? ? ? and resets it upon ?

? ? ? ? deactivation. To ?

? ? ? ? prevent any changes ?

? ? ? ? to SR-IOV ?

? ? ? ? parameters don't ?

? ? ? ? add a sriov setting ?

? ? ? ? to the connection. ?

??

?vfs ? array of vardict ? ? Array of virtual ?

? ? ? ? function ?

? ? ? ? descriptors. Each ?

? ? ? ? VF descriptor is a ?

? ? ? ? dictionary mapping ?

? ? ? ? attribute names to ?

? ? ? ? GVariant values. ?

? ? ? ? The 'index' entry ?

? ? ? ? is mandatory for ?

? ? ? ? each VF. When ?

? ? ? ? represented as ?

? ? ? ? string a VF is in ?

? ? ? ? the form: "INDEX ?

? ? ? ? [ATTR=VALUE[?

? ? ? ? ATTR=VALUE]...]". ?

? ? ? ? for example: "2 ?

? ? ? ? mac=00:11:22:33:44:55 ?

? ? ? ? spoof-check=true". ?

? ? ? ? Multiple VFs can be ?

? ? ? ? specified using a ?

? ? ? ? comma as separator. ?

? ? ? ? Currently, the ?

? ? ? ? following ?

? ? ? ? attributes are ?

? ? ? ? supported: mac, ?

? ? ? ? spoof-check, trust, ?

? ? ? ? min-tx-rate, ?

? ? ? ? max-tx-rate, vlans. ?

? ? ? ? The "vlans" ?

? ? ? ? attribute is ?

? ? ? ? represented as a ?

? ? ? ? semicolon-separated ?

? ? ? ? list of VLAN ?

? ? ? ? descriptors, where ?

? ? ? ? each descriptor has ?

? ? ? ? the form ?

? ? ? ? "ID[.PRIORITY[.PROTO]]". ?

? ? ? ? PROTO can be either ?

? ? ? ? 'q' for 802.1Q (the ?

? ? ? ? default) or 'ad' ?

? ? ? ? for 802.1ad. ?

??

tc setting

Linux Traffic Control Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?qdiscs ? array of vardict ? ? Array of TC ?

? ? ? ? queueing ?

? ? ? ? disciplines. When ?

? ? ? ? the "tc" setting is ?

? ? ? ? present, qdiscs ?

? ? ? ? from this property ?

? ? ? ? are applied upon ?

? ? ? ? activation. If the ?

? ? ? ? property is empty, ?

? ? ? ? all qdiscs are ?

? ? ? ? removed and the ?

? ? ? ? device will only ?

? ? ? ? have the default ?

? ? ? ? qdisc assigned by ?

? ? ? ? kernel according to ?

? ? ? ? the ?

? ? ? ? "net.core.default_qdisc" ?

? ? ? ? sysctl. If the "tc" ?

? ? ? ? setting is not ?

? ? ? ? present, ?

? ? ? ? NetworkManager ?

? ? ? ? doesn't touch the ?

? ? ? ? qdiscs present on ?

? ? ? ? the interface. ?

??

?tfilters ? array of vardict ? ? Array of TC traffic ?

? ? ? ? filters. When the "tc" ?

? ? ? ? setting is present, ?

? ? ? ? filters from this ?

? ? ? ? property are applied ?

? ? ? ? upon activation. If the ?

? ? ? ? property is empty, ?

? ? ? ? NetworkManager removes ?

? ? ? ? all the filters. If the ?

? ? ? ? "tc" setting is not ?

? ? ? ? present, NetworkManager ?

? ? ? ? doesn't touch the ?

? ? ? ? filters present on the ?

? ? ? ? interface. ?

??

team setting

Teaming Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?config ? string ? ? The JSON ?

? ? ? ? configuration for ?

? ? ? ? the team network ?

? ? ? ? interface. The ?

? ? ? ? property should ?

? ? ? ? contain raw JSON ?

? ? ? ? configuration data ?

? ? ? ? suitable for teamd, ?

? ? ? ? because the value ?

? ? ? ? is passed directly ?

? ? ? ? to teamd. If not ?

? ? ? ? specified, the ?

? ? ? ? default ?

? ? ? ? configuration is ?

? ? ? ? used. See man ?

? ? ? ? teamd.conf for the ?

? ? ? ? format details. ?

??

?interface-name ? string ? ? Deprecated in favor ?

? ? ? ? of ?

? ? ? ? connection.interface-name, ?

? ? ? ? but can be used for ?

? ? ? ? backward-compatibility ?

? ? ? ? with older daemons, ?

? ? ? ? to set the team's ?

? ? ? ? interface name. ?

??

?link-watchers ? array of vardict ? ? Link watchers ?

? ? ? ? configuration for the ?

? ? ? ? connection: each link ?

? ? ? ? watcher is defined by a ?

? ? ? ? dictionary, whose keys ?

? ? ? ? depend upon the selected ?

? ? ? ? link watcher. Available ?

? ? ? ? link watchers are ?

? ? ? ? 'ethtool', 'nsna_ping' and ?

? ? ? ? 'arp_ping' and it is ?

? ? ? ? specified in the ?

? ? ? ? dictionary with the key ?

? ? ? ? 'name'. Available keys ?

? ? ? ? are: ethtool: ?

? ? ? ? 'delay-up', 'delay-down', ?

```
?                    ?              ?              ? 'init-wait'; nsna_ping:      ?
?                    ?              ?              ? 'init-wait', 'interval',     ?
?                    ?              ?              ? 'missed-max',                ?
?                    ?              ?              ? 'target-host'; arp_ping:     ?
?                    ?              ?              ? all the ones in nsna_ping    ?
?                    ?              ?              ? and 'source-host',           ?
?                    ?              ?              ? 'validate-active',           ?
?                    ?              ?              ? 'validate-inactive',         ?
?                    ?              ?              ? 'send-always'. See           ?
?                    ?              ?              ? teamd.conf man for more      ?
?                    ?              ?              ? details.                     ?

????????????????????????????????????????????????????????????????????????????????????????????????????
    ?mcast-rejoin-count        ? int32          ? -1          ? Corresponds to the teamd     ?
    ?                    ?              ?              ? mcast_rejoin.count.          ?

????????????????????????????????????????????????????????????????????????????????????????????????????
    ?mcast-rejoin-interval     ? int32          ? -1          ? Corresponds to the teamd     ?
    ?                    ?              ?              ? mcast_rejoin.interval.       ?

????????????????????????????????????????????????????????????????????????????????????????????????????
    ?notify-peers-count        ? int32          ? -1          ? Corresponds to the teamd     ?
    ?                    ?              ?              ? notify_peers.count.          ?

????????????????????????????????????????????????????????????????????????????????????????????????????
    ?notify-peers-interval     ? int32          ? -1          ? Corresponds to the teamd     ?
    ?                    ?              ?              ? notify_peers.interval.       ?

????????????????????????????????????????????????????????????????????????????????????????????????????
    ?runner                    ? string         ?             ? Corresponds to the teamd     ?
    ?                    ?              ?              ? runner.name. Permitted       ?
    ?                    ?              ?              ? values are: "roundrobin",    ?
    ?                    ?              ?              ? "broadcast",                 ?
```

? ? ? ? "activebackup", ?

? ? ? ? "loadbalance", "lacp", ?

? ? ? ? "random". ?

??

?runner-active ? boolean ? TRUE ? Corresponds to the teamd ?

? ? ? ? runner.active. ?

??

?runner-agg-select-policy ? string ? ? Corresponds to the teamd ?

? ? ? ? runner.agg_select_policy. ?

??

?runner-fast-rate ? boolean ? FALSE ? Corresponds to the teamd ?

? ? ? ? runner.fast_rate. ?

??

?runner-hwaddr-policy ? string ? ? Corresponds to the teamd ?

? ? ? ? runner.hwaddr_policy. ?

??

?runner-min-ports ? int32 ? -1 ? Corresponds to the teamd ?

? ? ? ? runner.min_ports. ?

??

?runner-sys-prio ? int32 ? -1 ? Corresponds to the teamd ?

? ? ? ? runner.sys_prio. ?

??

?runner-tx-balancer ? string ? ? Corresponds to the teamd ?

? ? ? ? runner.tx_balancer.name. ?

?runner-tx-balancer-interval ? int32 ? -1 ? Corresponds to the teamd ?

? ? ? ? runner.tx_balancer.interval. ?

??

?runner-tx-hash ? array of string ? ? Corresponds to the teamd ?

? ? ? ? runner.tx_hash. ?

??

team-port setting

Team Port Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?config ? string ? ? The JSON ?

? ? ? ? configuration for ?

? ? ? ? the team port. The ?

? ? ? ? property should ?

? ? ? ? contain raw JSON ?

? ? ? ? configuration data ?

? ? ? ? suitable for teamd, ?

? ? ? ? because the value ?

? ? ? ? is passed directly ?

? ? ? ? to teamd. If not ?

? ? ? ? specified, the ?

? ? ? ? default ?

? ? ? ? configuration is ?

? ? ? ? used. See man ?

? ? ? ? teamd.conf for the ?

? ? ? ? format details. ?

??

?lacp-key ? int32 ? -1 ? Corresponds to the ?

? ? ? ? teamd ?

? ? ? ? ports.PORTIFNAME.lacp_key. ?

??

?lacp-prio ? int32 ? -1 ? Corresponds to the teamd ?

? ? ? ? ports.PORTIFNAME.lacp_prio. ?

??

?link-watchers ? array of vardict ? ? Link watchers configuration ?

? ? ? ? for the connection: each ?

? ? ? ? link watcher is defined by ?

? ? ? ? a dictionary, whose keys ?

? ? ? ? depend upon the selected ?

? ? ? ? link watcher. Available ?

? ? ? ? link watchers are ?

? ? ? ? 'ethtool', 'nsna_ping' and ?

? ? ? ? 'arp_ping' and it is ?

? ? ? ? specified in the dictionary ?

? ? ? ? with the key 'name'. ?

? ? ? ? Available keys are: ?

? ? ? ? ethtool: 'delay-up', ?

? ? ? ? 'delay-down', 'init-wait'; ?

? ? ? ? nsna_ping: 'init-wait', ?

? ? ? ? 'interval', 'missed-max', ?

? ? ? ? 'target-host'; arp_ping: ?

? ? ? ? all the ones in nsna_ping ?

? ? ? ? and 'source-host', ?

? ? ? ? 'validate-active', ?

? ? ? ? 'validate-inactive', ?

? ? ? ? 'send-always'. See ?

? ? ? ? teamd.conf man for more ?

? ? ? ? details. ?

??

?prio ? int32 ? 0 ? Corresponds to the teamd ?

? ? ? ? ports.PORTIFNAME.prio. ?

??

?queue-id ? int32 ? -1 ? Corresponds to the teamd ?

? ? ? ? ports.PORTIFNAME.queue_id. ?

? ? ? ? When set to -1 means the ?

? ? ? ? parameter is skipped from ?

? ? ? ? the json config. ?

??

?sticky ? boolean ? FALSE ? Corresponds to the teamd ?

? ? ? ? ports.PORTIFNAME.sticky. ?

??

tun setting

Tunnel Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?group ? string ? ? The group ID which ?

? ? ? ? will own the ?

? ? ? ? device. If set to ?

? ? ? ? NULL everyone will ?

? ? ? ? be able to use the ?

? ? ? ? device. ?

??

?mode ? uint32 ? 1 ? The operating mode ?

? ? ? ? of the virtual ?

? ? ? ? device. Allowed ?

? ? ? ? values are ?

? ? ? ? NM_SETTING_TUN_MODE_TUN ?

? ? ? ? (1) to create a ?

? ? ? ? layer 3 device and ?

? ? ? ? NM_SETTING_TUN_MODE_TAP ?

? ? ? ? (2) to create an ?

? ? ? ? Ethernet-like layer ?

? ? ? ? 2 one. ?

??

?multi-queue ? boolean ? FALSE ? If the property is set ?

? ? ? ? to TRUE, the interface ?

? ? ? ? will support multiple ?

? ? ? ? file descriptors ?

? ? ? ? (queues) to parallelize ?

? ? ? ? packet sending or ?

? ? ? ? receiving. Otherwise, ?

? ? ? ? the interface will only ?

? ? ? ? support a single queue. ?

??

?owner ? string ? ? The user ID which will ?

? ? ? ? own the device. If set ?

? ? ? ? to NULL everyone will ?

? ? ? ? be able to use the ?

? ? ? ? device. ?

??

?pi ? boolean ? FALSE ? If TRUE the interface ?

? ? ? ? will prepend a 4 byte ?

? ? ? ? header describing the ?

? ? ? ? physical interface to ?

? ? ? ? the packets. ?

??

?vnet-hdr ? boolean ? FALSE ? If TRUE the ?

? ? ? ? IFF_VNET_HDR the tunnel ?

? ? ? ? packets will include a ?

? ? ? ? virtio network header. ?

??

user setting

General User Profile Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?data ? dict of string to ? {} ? A dictionary of ?

? ? string ? ? key/value pairs ?

? ? ? ? with user data. ?

? ? ? ? This data is ?

? ? ? ? ignored by ?

? ? ? ? NetworkManager and ?

? ? ? ? can be used at the ?

? ? ? ? users discretion. ?

? ? ? ? The keys only ?

? ? ? ? support a strict ?

? ? ? ? ascii format, but ?

? ? ? ? the values can be ?

? ? ? ? arbitrary UTF8 ?

? ? ? ? strings up to a ?

? ? ? ? certain length. ?

??

vlan setting

VLAN Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?egress-priority-map ? array of string ? ? For outgoing ?

? ? ? ? packets, a list of ?

? ? ? ? mappings from Linux ?

? ? ? ? SKB priorities to ?

? ? ? ? 802.1p priorities. ?

? ? ? ? The mapping is ?

? ? ? ? given in the format ?

? ? ? ? "from:to" where ?

? ? ? ? both "from" and ?

? ? ? ? "to" are unsigned ?

? ? ? ? integers, ie "7:3". ?

??

?flags ? NMVlanFlags ? ? One or more flags ?

? ? (uint32) ? ? which control the ?

? ? ? ? behavior and ?

? ? ? ? features of the ?

? ? ? ? VLAN interface. ?

? ? ? ? Flags include ?

? ? ? ? NM_VLAN_FLAG_REORDER_HEADERS ?

? ? ? ? (0x1) (reordering ?

? ? ? ? of output packet ?

? ? ? ? headers), ?

? ? ? ? NM_VLAN_FLAG_GVRP ?

? ? ? ? (0x2) (use of the ?

? ? ? ? GVRP protocol), and ?

? ? ? ? NM_VLAN_FLAG_LOOSE_BINDING ?

? ? ? ? (0x4) (loose ?

? ? ? ? binding of the ?

? ? ? ? interface to its ?

? ? ? ? master device's ?

? ? ? ? operating state). ?

? ? ? ? NM_VLAN_FLAG_MVRP ?

? ? ? ? (0x8) (use of the ?

? ? ? ? MVRP protocol). The ?

? ? ? ? default value of ?

? ? ? ? this property is ?

? ? ? ? NM_VLAN_FLAG_REORDER_HEADERS, ?

? ? ? ? but it used to be ?

? ? ? ? 0. To preserve ?

? ? ? ? backward ?

? ? ? ? compatibility, the ?

? ? ? ? default-value in ?

? ? ? ? the D-Bus API ?

? ? ? ? continues to be 0 ?

? ? ? ? and a missing ?

? ? ? ? property on D-Bus ?

? ? ? ? is still considered ?

? ? ? ? as 0. ?

??

?id ? uint32 ? 0 ? The VLAN identifier that the ?

? ? ? ? interface created by this ?

? ? ? ? connection should be ?

? ? ? ? assigned. The valid range is ?

? ? ? ? from 0 to 4094, without the ?

? ? ? ? reserved id 4095. ?

??

?ingress-priority-map ? array of string ? ? For incoming packets, a list ?

? ? ? ? of mappings from 802.1p ?

? ? ? ? priorities to Linux SKB ?

? ? ? ? priorities. The mapping is ?

? ? ? ? given in the format "from:to" ?

? ? ? ? where both "from" and "to" ?

? ? ? ? are unsigned integers, ie ?

? ? ? ? "7:3". ?

??

?interface-name ? string ? ? Deprecated in favor of ?

? ? ? ? connection.interface-name, ?

? ? ? ? but can be used for ?

? ? ? ? backward-compatibility with ?

? ? ? ? older daemons, to set the ?

? ? ? ? vlan's interface name. ?

??

?parent ? string ? ? If given, specifies the ?

? ? ? ? parent interface name or ?

? ? ? ? parent connection UUID from ?

? ? ? ? which this VLAN interface ?

? ? ? ? should be created. If this ?

? ? ? ? property is not specified, ?

? ? ? ? the connection must contain ?

? ? ? ? an "802-3-ethernet" setting ?

? ? ? ? with a "mac-address" ?

? ? ? ? property. ?

??

vpn setting

VPN Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?data ? dict of string to ? {} ? Dictionary of ?

? ? string ? ? key/value pairs of ?

? ? ? ? VPN plugin specific ?

? ? ? ? data. Both keys ?

? ? ? ? and values must be ?

? ? ? ? strings. ?

??

?persistent ? boolean ? FALSE ? If the VPN service ?

? ? ? ? supports ?

? ? ? ? persistence, and ?

? ? ? ? this property is ?

? ? ? ? TRUE, the VPN will ?

? ? ? ? attempt to stay ?

? ? ? ? connected across ?

? ? ? ? link changes and ?

? ? ? ? outages, until ?

? ? ? ? explicitly ?

? ? ? ? disconnected. ?

??

?secrets ? dict of string to ? {} ? Dictionary of ?

? ? string ? ? key/value pairs of ?

? ? ? ? VPN plugin specific ?

? ? ? ? secrets like ?

? ? ? ? passwords or ?

? ? ? ? private keys. Both ?

? ? ? ? keys and values ?

? ? ? ? must be strings. ?

??

?service-type ? string ? ? D-Bus service name ?

? ? ? ? of the VPN plugin ?

? ? ? ? that this setting ?

? ? ? ? uses to connect to ?

? ? ? ? its network. i.e. ?

? ? ? ? org.freedesktop.NetworkManager.vpnc ?

? ? ? ? for the vpnc ?

? ? ? ? plugin. ?

??

?timeout ? uint32 ? 0 ? Timeout for the VPN service to ?

? ? ? ? establish the connection. Some ?

? ? ? ? services may take quite a long time ?

? ? ? ? to connect. Value of 0 means a ?

? ? ? ? default timeout, which is 60 ?

? ? ? ? seconds (unless overridden by ?

? ? ? ? vpn.timeout in configuration file). ?

? ? ? ? Values greater than zero mean ?

? ? ? ? timeout in seconds. ?

??

?user-name ? string ? ? If the VPN connection requires a ?

? ? ? ? user name for authentication, that ?

? ? ? ? name should be provided here. If ?

? ? ? ? the connection is available to more ?

? ? ? ? than one user, and the VPN requires ?

? ? ? ? each user to supply a different ?

? ? ? ? name, then leave this property ?

? ? ? ? empty. If this property is empty, ?

? ? ? ? NetworkManager will automatically ?

? ? ? ? supply the username of the user ?

? ? ? ? which requested the VPN connection. ?

??

vrf setting

VRF settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?table ? uint32 ? 0 ? The routing table ?

? ? ? ? for this VRF. ?

??

vxlan setting

VXLAN Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?ageing ? uint32 ? 300 ? Specifies the ?

? ? ? ? lifetime in seconds ?

? ? ? ? of FDB entries ?

? ? ? ? learnt by the ?

? ? ? ? kernel. ?

??

?destination-port ? uint32 ? 8472 ? Specifies the UDP ?

? ? ? ? destination port to ?

? ? ? ? communicate to the ?

? ? ? ? remote VXLAN tunnel ?

? ? ? ? endpoint. ?

??

?id ? uint32 ? 0 ? Specifies the VXLAN ?

? ? ? ? Network Identifier ?

? ? ? ? (or VXLAN Segment ?

? ? ? ? Identifier) to use. ?

??

?l2-miss ? boolean ? FALSE ? Specifies whether ?

? ? ? ? netlink LL ADDR ?

? ? ? ? miss notifications ?

? ? ? ? are generated. ?

??

?l3-miss ? boolean ? FALSE ? Specifies whether ?

? ? ? ? netlink IP ADDR ?

? ? ? ? miss notifications ?

? ? ? ? are generated. ?

??

?learning ? boolean ? TRUE ? Specifies whether ?

? ? ? ? unknown source link ?

? ? ? ? layer addresses and ?

? ? ? ? IP addresses are ?

? ? ? ? entered into the ?

? ? ? ? VXLAN device ?

? ? ? ? forwarding ?

? ? ? ? database. ?

??

?limit ? uint32 ? 0 ? Specifies the ?

? ? ? ? maximum number of ?

? ? ? ? FDB entries. A ?

? ? ? ? value of zero means ?

? ? ? ? that the kernel ?

? ? ? ? will store ?

? ? ? ? unlimited entries. ?

??

?local ? string ? ? If given, specifies ?

? ? ? ? the source IP ?

? ? ? ? address to use in ?

? ? ? ? outgoing packets. ?

??

?parent ? string ? ? If given, specifies ?

? ? ? ? the parent ?

? ? ? ? interface name or ?

? ? ? ? parent connection ?

? ? ? ? UUID. ?

??

?proxy ? boolean ? FALSE ? Specifies whether ?

? ? ? ? ARP proxy is turned ?

? ? ? ? on. ?

??

?remote ? string ? ? Specifies the ?

? ? ? ? unicast destination ?

? ? ? ? IP address to use ?

? ? ? ? in outgoing packets ?

? ? ? ? when the ?

? ? ? ? destination link ?

? ? ? ? layer address is ?

? ? ? ? not known in the ?

? ? ? ? VXLAN device ?

? ? ? ? forwarding ?

? ? ? ? database, or the ?

? ? ? ? multicast IP ?

? ? ? ? address to join. ?

??

?rsc ? boolean ? FALSE ? Specifies whether ?

? ? ? ? route short circuit ?

? ? ? ? is turned on. ?

??

?source-port-max ? uint32 ? 0 ? Specifies the ?

? ? ? ? maximum UDP source ?

? ? ? ? port to communicate ?

? ? ? ? to the remote VXLAN ?

? ? ? ? tunnel endpoint. ?

??

?source-port-min ? uint32 ? 0 ? Specifies the ?

? ? ? ? minimum UDP source ?

? ? ? ? port to communicate ?

? ? ? ? to the remote VXLAN ?

? ? ? ? tunnel endpoint. ?

??

?tos ? uint32 ? 0 ? Specifies the TOS ?

? ? ? ? value to use in ?

? ? ? ? outgoing packets. ?

??

?ttl ? uint32 ? 0 ? Specifies the ?

? ? ? ? time-to-live value ?

? ? ? ? to use in outgoing ?

? ? ? ? packets. ?

??

wifi-p2p setting

Wi-Fi P2P Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?peer ? string ? ? The P2P device that ?

? ? ? ? should be connected ?

? ? ? ? to. Currently, this ?

? ? ? ? is the only way to ?

? ? ? ? create or join a ?

? ? ? ? group. ?

??

?wfd-ies ? byte array ? ? The Wi-Fi Display ?

? ? ? ? (WFD) Information ?

? ? ? ? Elements (IEs) to ?

? ? ? ? set. Wi-Fi Display ?

? ? ? ? requires a protocol ?

? ? ? ? specific ?

? ? ? ? information element ?

? ? ? ? to be set in ?

? ? ? ? certain Wi-Fi ?

? ? ? ? frames. These can ?

? ? ? ? be specified here ?

? ? ? ? for the purpose of ?

? ? ? ? establishing a ?

? ? ? ? connection. This ?

? ? ? ? setting is only ?

? ? ? ? useful when ?

? ? ? ? implementing a ?

? ? ? ? Wi-Fi Display ?

? ? ? ? client. ?

??

?wps-method ? uint32 ? 0 ? Flags indicating ?

? ? ? ? which mode of WPS ?

? ? ? ? is to be used. ?

? ? ? ? There's little ?

? ? ? ? point in changing ?

? ? ? ? the default setting ?

? ? ? ? as NetworkManager ?

? ? ? ? will automatically ?

? ? ? ? determine the best ?

? ? ? ? method to use. ?

??

wimax setting

WiMax Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?mac-address ? byte array ? ? If specified, this ?

? ? ? ? connection will ?

? ? ? ? only apply to the ?

? ? ? ? WiMAX device whose ?

? ? ? ? MAC address ?

? ? ? ? matches. This ?
? ? ? ? property does not ?
? ? ? ? change the MAC ?
? ? ? ? address of the ?
? ? ? ? device (known as ?
? ? ? ? MAC spoofing). ?
? ? ? ? Deprecated: 1 ?
???
?network-name ? string ? ? Network Service ?
? ? ? ? Provider (NSP) name ?
? ? ? ? of the WiMAX ?
? ? ? ? network this ?
? ? ? ? connection should ?
? ? ? ? use. Deprecated: 1 ?
???

802-3-ethernet setting

Wired Ethernet Settings.

??
???????
?Key Name ? Value Type ? Default Value ? Value Description ?

??
???????
?accept-all-mac-addresses ? NMTernary (int32) ? ? When TRUE, setup ?
? ? ? ? the interface to ?
? ? ? ? accept packets for ?
? ? ? ? all MAC addresses. ?
? ? ? ? This is enabling ?
? ? ? ? the kernel ?
? ? ? ? interface flag ?
? ? ? ? IFF_PROMISC. When ?
? ? ? ? FALSE, the ?

? ? ? ? interface will only ?
? ? ? ? accept the packets ?
? ? ? ? with the interface ?
? ? ? ? destination mac ?
? ? ? ? address or ?
? ? ? ? broadcast. ?

??
???????

?assigned-mac-address ? string ? ? The new field for ?
? ? ? ? the cloned MAC ?
? ? ? ? address. It can be ?
? ? ? ? either a hardware ?
? ? ? ? address in ASCII ?
? ? ? ? representation, or ?
? ? ? ? one of the special ?
? ? ? ? values "preserve", ?
? ? ? ? "permanent", ?
? ? ? ? "random" or ?
? ? ? ? "stable". This ?
? ? ? ? field replaces the ?
? ? ? ? deprecated ?
? ? ? ? "cloned-mac-address" ?
? ? ? ? on D-Bus, which can ?
? ? ? ? only contain ?
? ? ? ? explicit hardware ?
? ? ? ? addresses. Note ?
? ? ? ? that this property ?
? ? ? ? only exists in ?
? ? ? ? D-Bus API. libnm ?
? ? ? ? and nmcli continue ?
? ? ? ? to call this ?
? ? ? ? property ?

? ? ? ? "cloned-mac-address". ?

??
???????

?auto-negotiate ? boolean ? FALSE ? When TRUE, enforce ?
? ? ? ? auto-negotiation of ?
? ? ? ? speed and duplex ?
? ? ? ? mode. If "speed" and ?
? ? ? ? "duplex" properties ?
? ? ? ? are both specified, ?
? ? ? ? only that single mode ?
? ? ? ? will be advertised ?
? ? ? ? and accepted during ?
? ? ? ? the link ?
? ? ? ? auto-negotiation ?
? ? ? ? process: this works ?
? ? ? ? only for BASE-T 802.3 ?
? ? ? ? specifications and is ?
? ? ? ? useful for enforcing ?
? ? ? ? gigabits modes, as in ?
? ? ? ? these cases link ?
? ? ? ? negotiation is ?
? ? ? ? mandatory. When ?
? ? ? ? FALSE, "speed" and ?
? ? ? ? "duplex" properties ?
? ? ? ? should be both set or ?
? ? ? ? link configuration ?
? ? ? ? will be skipped. ?

??
???????

?cloned-mac-address ? byte array ? ? This D-Bus field is ?
? ? ? ? deprecated in favor ?

? ? ? ? of ?
? ? ? ? "assigned-mac-address" ?
? ? ? ? which is more ?
? ? ? ? flexible and allows ?
? ? ? ? specifying special ?
? ? ? ? variants like ?
? ? ? ? "random". For libnm ?
? ? ? ? and nmcli, this field ?
? ? ? ? is called ?
? ? ? ? "cloned-mac-address". ?

??
???????

?duplex ? string ? ? When a value is set, ?
? ? ? ? either "half" or ?
? ? ? ? "full", configures the ?
? ? ? ? device to use the ?
? ? ? ? specified duplex mode. ?
? ? ? ? If "auto-negotiate" is ?
? ? ? ? "yes" the specified ?
? ? ? ? duplex mode will be ?
? ? ? ? the only one ?
? ? ? ? advertised during link ?
? ? ? ? negotiation: this ?
? ? ? ? works only for BASE-T ?
? ? ? ? 802.3 specifications ?
? ? ? ? and is useful for ?
? ? ? ? enforcing gigabits ?
? ? ? ? modes, as in these ?
? ? ? ? cases link negotiation ?
? ? ? ? is mandatory. If the ?
? ? ? ? value is unset (the ?
? ? ? ? default), the link ?

? ? ? ? configuration will be ?

? ? ? ? either skipped (if ?

? ? ? ? "auto-negotiate" is ?

? ? ? ? "no", the default) or ?

? ? ? ? will be ?

? ? ? ? auto-negotiated (if ?

? ? ? ? "auto-negotiate" is ?

? ? ? ? "yes") and the local ?

? ? ? ? device will advertise ?

? ? ? ? all the supported ?

? ? ? ? duplex modes. Must be ?

? ? ? ? set together with the ?

? ? ? ? "speed" property if ?

? ? ? ? specified. Before ?

? ? ? ? specifying a duplex ?

? ? ? ? mode be sure your ?

? ? ? ? device supports it. ?

??

???????

?generate-mac-address-mask ? string ? ? With ?

? ? ? ? "cloned-mac-address" ?

? ? ? ? setting "random" or ?

? ? ? ? "stable", by default ?

? ? ? ? all bits of the MAC ?

? ? ? ? address are scrambled ?

? ? ? ? and a ?

? ? ? ? locally-administered, ?

? ? ? ? unicast MAC address is ?

? ? ? ? created. This property ?

? ? ? ? allows to specify that ?

? ? ? ? certain bits are ?

? ? ? ? fixed. Note that the ?

? ? ? ? least significant bit ?
? ? ? ? of the first MAC ?
? ? ? ? address will always be ?
? ? ? ? unset to create a ?
? ? ? ? unicast MAC address. ?
? ? ? ? If the property is ?
? ? ? ? NULL, it is eligible ?
? ? ? ? to be overwritten by a ?
? ? ? ? default connection ?
? ? ? ? setting. If the value ?
? ? ? ? is still NULL or an ?
? ? ? ? empty string, the ?
? ? ? ? default is to create a ?
? ? ? ? locally-administered, ?
? ? ? ? unicast MAC address. ?
? ? ? ? If the value contains ?
? ? ? ? one MAC address, this ?
? ? ? ? address is used as ?
? ? ? ? mask. The set bits of ?
? ? ? ? the mask are to be ?
? ? ? ? filled with the ?
? ? ? ? current MAC address of ?
? ? ? ? the device, while the ?
? ? ? ? unset bits are subject ?
? ? ? ? to randomization. ?
? ? ? ? Setting ?
? ? ? ? "FE:FF:FF:00:00:00" ?
? ? ? ? means to preserve the ?
? ? ? ? OUI of the current MAC ?
? ? ? ? address and only ?
? ? ? ? randomize the lower 3 ?
? ? ? ? bytes using the ?
? ? ? ? "random" or "stable" ?

? ? ? ? algorithm. If the ?

? ? ? ? value contains one ?

? ? ? ? additional MAC address ?

? ? ? ? after the mask, this ?

? ? ? ? address is used ?

? ? ? ? instead of the current ?

? ? ? ? MAC address to fill ?

? ? ? ? the bits that shall ?

? ? ? ? not be randomized. For ?

? ? ? ? example, a value of ?

? ? ? ? "FE:FF:FF:00:00:00 ?

? ? ? ? 68:F7:28:00:00:00" ?

? ? ? ? will set the OUI of ?

? ? ? ? the MAC address to ?

? ? ? ? 68:F7:28, while the ?

? ? ? ? lower bits are ?

? ? ? ? randomized. A value of ?

? ? ? ? "02:00:00:00:00:00 ?

? ? ? ? 00:00:00:00:00:00" ?

? ? ? ? will create a fully ?

? ? ? ? scrambled ?

? ? ? ? globally-administered, ?

? ? ? ? burned-in MAC address. ?

? ? ? ? If the value contains ?

? ? ? ? more than one ?

? ? ? ? additional MAC ?

? ? ? ? addresses, one of them ?

? ? ? ? is chosen randomly. ?

? ? ? ? For example, ?

? ? ? ? "02:00:00:00:00:00 ?

? ? ? ? 00:00:00:00:00:00 ?

? ? ? ? 02:00:00:00:00:00" ?

? ? ? ? will create a fully ?

? ? ? ? scrambled MAC address, ?

? ? ? ? randomly locally or ?

? ? ? ? globally administered. ?

???

???????

?mac-address ? byte array ? ? If specified, this ?

? ? ? ? connection will only ?

? ? ? ? apply to the Ethernet ?

? ? ? ? device whose permanent ?

? ? ? ? MAC address matches. ?

? ? ? ? This property does not ?

? ? ? ? change the MAC address ?

? ? ? ? of the device (i.e. ?

? ? ? ? MAC spoofing). ?

???

???????

?mac-address-blacklist ? array of string ? ? If specified, this ?

? ? ? ? connection will never ?

? ? ? ? apply to the Ethernet ?

? ? ? ? device whose permanent ?

? ? ? ? MAC address matches an ?

? ? ? ? address in the list. ?

? ? ? ? Each MAC address is in ?

? ? ? ? the standard ?

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

? ? ? ? notation ?

? ? ? ? (00:11:22:33:44:55). ?

???

???????

?mtu ? uint32 ? 0 ? If non-zero, only ?

? ? ? ? transmit packets of ?
? ? ? ? the specified size or ?
? ? ? ? smaller, breaking ?
? ? ? ? larger packets up into ?
? ? ? ? multiple Ethernet ?
? ? ? ? frames. ?

??
???????

?port ? string ? ? Specific port type to ?
? ? ? ? use if the device ?
? ? ? ? supports multiple ?
? ? ? ? attachment methods. ?
? ? ? ? One of "tp" (Twisted ?
? ? ? ? Pair), "aui" ?
? ? ? ? (Attachment Unit ?
? ? ? ? Interface), "bnc" ?
? ? ? ? (Thin Ethernet) or ?
? ? ? ? "mii" (Media ?
? ? ? ? Independent ?
? ? ? ? Interface). If the ?
? ? ? ? device supports only ?
? ? ? ? one port type, this ?
? ? ? ? setting is ignored. ?

??
???????

?s390-nettype ? string ? ? s390 network device ?
? ? ? ? type; one of "qeth", ?
? ? ? ? "lcs", or "ctc", ?
? ? ? ? representing the ?
? ? ? ? different types of ?
? ? ? ? virtual network ?

? ? ? ? devices available on ?

? ? ? ? s390 systems. ?

???

???????

?s390-options ? dict of string to ? {} ? Dictionary of ?

? ? string ? ? key/value pairs of ?

? ? ? ? s390-specific device ?

? ? ? ? options. Both keys ?

? ? ? ? and values must be ?

? ? ? ? strings. Allowed keys ?

? ? ? ? include "portno", ?

? ? ? ? "layer2", "portname", ?

? ? ? ? "protocol", among ?

? ? ? ? others. Key names ?

? ? ? ? must contain only ?

? ? ? ? alphanumeric ?

? ? ? ? characters (ie, ?

? ? ? ? [a-zA-Z0-9]). ?

? ? ? ? Currently, ?

? ? ? ? NetworkManager itself ?

? ? ? ? does nothing with this ?

? ? ? ? information. However, ?

? ? ? ? s390utils ships a udev ?

? ? ? ? rule which parses this ?

? ? ? ? information and ?

? ? ? ? applies it to the ?

? ? ? ? interface. ?

???

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?s390-subchannels ? array of string ? ? Identifies specific ?

? ? ? ? subchannels that this ?

? ? ? ? network device uses ?
? ? ? ? for communication with ?
? ? ? ? z/VM or s390 host. ?
? ? ? ? Like the "mac-address" ?
? ? ? ? property for non-z/VM ?
? ? ? ? devices, this property ?
? ? ? ? can be used to ensure ?
? ? ? ? this connection only ?
? ? ? ? applies to the network ?
? ? ? ? device that uses these ?
? ? ? ? subchannels. The list ?
? ? ? ? should contain exactly ?
? ? ? ? 3 strings, and each ?
? ? ? ? string may only be ?
? ? ? ? composed of ?
? ? ? ? hexadecimal characters ?
? ? ? ? and the period (.) ?
? ? ? ? character. ?

??
???????

?speed ? uint32 ? 0 ? When a value greater ?
? ? ? ? than 0 is set, ?
? ? ? ? configures the device ?
? ? ? ? to use the specified ?
? ? ? ? speed. If ?
? ? ? ? "auto-negotiate" is ?
? ? ? ? "yes" the specified ?
? ? ? ? speed will be the only ?
? ? ? ? one advertised during ?
? ? ? ? link negotiation: this ?
? ? ? ? works only for BASE-T ?
? ? ? ? 802.3 specifications ?

? ? ? ? and is useful for ?
? ? ? ? enforcing gigabit ?
? ? ? ? speeds, as in this ?
? ? ? ? case link negotiation ?
? ? ? ? is mandatory. If the ?
? ? ? ? value is unset (0, the ?
? ? ? ? default), the link ?
? ? ? ? configuration will be ?
? ? ? ? either skipped (if ?
? ? ? ? "auto-negotiate" is ?
? ? ? ? "no", the default) or ?
? ? ? ? will be ?
? ? ? ? auto-negotiated (if ?
? ? ? ? "auto-negotiate" is ?
? ? ? ? "yes") and the local ?
? ? ? ? device will advertise ?
? ? ? ? all the supported ?
? ? ? ? speeds. In Mbit/s, ie ?
? ? ? ? 100 == 100Mbit/s. Must ?
? ? ? ? be set together with ?
? ? ? ? the "duplex" property ?
? ? ? ? when non-zero. Before ?
? ? ? ? specifying a speed ?
? ? ? ? value be sure your ?
? ? ? ? device supports it. ?

??
???????

?wake-on-lan ? uint32 ? 1 ? The ?
? ? ? ? NMSettingWiredWakeOnLan ?
? ? ? ? options to enable. Not ?
? ? ? ? all devices support ?
? ? ? ? all options. May be ?

? ? ? ? any combination of ?
? ? ? ? NM_SETTING_WIRED_WAKE_ON_LAN_PHY ?
? ? ? ? (0x2), ?
? ? ? ? NM_SETTING_WIRED_WAKE_ON_LAN_UNICAST ?
? ? ? ? (0x4), ?
? ? ? ? NM_SETTING_WIRED_WAKE_ON_LAN_MULTICAST ?
? ? ? ? (0x8), ?
? ? ? ? NM_SETTING_WIRED_WAKE_ON_LAN_BROADCAST ?
? ? ? ? (0x10), ?
? ? ? ? NM_SETTING_WIRED_WAKE_ON_LAN_ARP ?
? ? ? ? (0x20), ?
? ? ? ? NM_SETTING_WIRED_WAKE_ON_LAN_MAGIC ?
? ? ? ? (0x40) or the special ?
? ? ? ? values ?
? ? ? ? NM_SETTING_WIRED_WAKE_ON_LAN_DEFAULT ?
? ? ? ? (0x1) (to use global ?
? ? ? ? settings) and ?
? ? ? ? NM_SETTING_WIRED_WAKE_ON_LAN_IGNORE ?
? ? ? ? (0x8000) (to disable ?
? ? ? ? management of ?
? ? ? ? Wake-on-LAN in ?
? ? ? ? NetworkManager). ?

??
???????

?wake-on-lan-password ? string ? ? If specified, the password used with ?
? ? ? ? magic-packet-based Wake-on-LAN, ?
? ? ? ? represented as an Ethernet MAC ?
? ? ? ? address. If NULL, no password will be ?
? ? ? ? required. ?

??
???????

wireguard setting

WireGuard Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?fwmark ? uint32 ? 0 ? The use of fwmark ?

? ? ? ? is optional and is ?

? ? ? ? by default off. ?

? ? ? ? Setting it to 0 ?

? ? ? ? disables it. ?

? ? ? ? Otherwise, it is a ?

? ? ? ? 32-bit fwmark for ?

? ? ? ? outgoing packets. ?

? ? ? ? Note that ?

? ? ? ? "ip4-auto-default-route" ?

? ? ? ? or ?

? ? ? ? "ip6-auto-default-route" ?

? ? ? ? enabled, implies to ?

? ? ? ? automatically ?

? ? ? ? choose a fwmark. ?

??

?ip4-auto-default-route ? NMTernary (int32) ? ? Whether to enable ?

? ? ? ? special handling of the ?

? ? ? ? IPv4 default route. If ?

? ? ? ? enabled, the IPv4 ?

? ? ? ? default route from ?

? ? ? ? wireguard.peer-routes ?

? ? ? ? will be placed to a ?

? ? ? ? dedicated routing-table ?

? ? ? ? and two policy routing ?

? ? ? ? rules will be added. The ?

? ? ? ? fwmark number is also ?

? ? ? ? used as routing-table ?

? ? ? ? for the default-route, ?

? ? ? ? and if fwmark is zero, ?

? ? ? ? an unused fwmark/table ?

? ? ? ? is chosen automatically. ?

? ? ? ? This corresponds to what ?

? ? ? ? wg-quick does with ?

? ? ? ? Table=auto and what ?

? ? ? ? WireGuard calls ?

? ? ? ? "Improved Rule-based ?

? ? ? ? Routing". Note that for ?

? ? ? ? this automatism to work, ?

? ? ? ? you usually don't want ?

? ? ? ? to set ipv4.gateway, ?

? ? ? ? because that will result ?

? ? ? ? in a conflicting default ?

? ? ? ? route. Leaving this at ?

? ? ? ? the default will enable ?

? ? ? ? this option ?

? ? ? ? automatically if ?

? ? ? ? ipv4.never-default is ?

? ? ? ? not set and there are ?

? ? ? ? any peers that use a ?

? ? ? ? default-route as ?

? ? ? ? allowed-ips. ?

??

?ip6-auto-default-route ? NMTernary (int32) ? ? Like ?

? ? ? ? ip4-auto-default-route, ?

? ? ? ? but for the IPv6 default ?

? ? ? ? route. ?

??

?listen-port ? uint32 ? 0 ? The listen-port. If ?

? ? ? ? listen-port is not ?

? ? ? ? specified, the port will ?

? ? ? ? be chosen randomly when ?

? ? ? ? the interface comes up. ?

??

?mtu ? uint32 ? 0 ? If non-zero, only ?

? ? ? ? transmit packets of the ?

? ? ? ? specified size or ?

? ? ? ? smaller, breaking larger ?

? ? ? ? packets up into multiple ?

? ? ? ? fragments. If zero a ?

? ? ? ? default MTU is used. ?

? ? ? ? Note that contrary to ?

? ? ? ? wg-quick's MTU setting, ?

? ? ? ? this does not take into ?

? ? ? ? account the current ?

? ? ? ? routes at the time of ?

? ? ? ? activation. ?

??

?peer-routes ? boolean ? TRUE ? Whether to automatically ?

? ? ? ? add routes for the ?

? ? ? ? AllowedIPs ranges of the ?

? ? ? ? peers. If TRUE (the ?

? ? ? ? default), NetworkManager ?

? ? ? ? will automatically add ?

? ? ? ? routes in the routing ?

? ? ? ? tables according to ?

? ? ? ? ipv4.route-table and ?

? ? ? ? ipv6.route-table. ?

? ? ? ? Usually you want this ?

? ? ? ? automatism enabled. If ?

? ? ? ? FALSE, no such routes ?

? ? ? ? are added automatically. ?

? ? ? ? In this case, the user ?

? ? ? ? may want to configure ?

? ? ? ? static routes in ?

? ? ? ? ipv4.routes and ?

? ? ? ? ipv6.routes, ?

? ? ? ? respectively. Note that ?

? ? ? ? if the peer's AllowedIPs ?

? ? ? ? is "0.0.0.0/0" or "::/0" ?

? ? ? ? and the profile's ?

? ? ? ? ipv4.never-default or ?

? ? ? ? ipv6.never-default ?

? ? ? ? setting is enabled, the ?

? ? ? ? peer route for this peer ?

? ? ? ? won't be added ?

? ? ? ? automatically. ?

??

?peers ? array of 'a{sv}' ? ? Array of dictionaries ?

? ? ? ? for the WireGuard peers. ?

??

?private-key ? string ? ? The 256 bit private-key ?

? ? ? ? in base64 encoding. ?

??

?private-key-flags ? NMSettingSecretFlags ? ? Flags indicating how to ?

? ? (uint32) ? ? handle the "private-key" ?

? ? ? ? property. (see the ?

? ? ? ? section called ?Secret ?

? ? ? ? flag types:? for flag ?

? ? ? ? values) ?

??

802-11-wireless setting

Wi-Fi Settings.

??

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

?Key Name ? Value Type ? Default Value ? Value Description ?

??

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

?ap-isolation	? NMTernary (int32) ?		? Configures AP ?
?	?	?	? isolation, which ?
?	?	?	? prevents ?
?	?	?	? communication ?
?	?	?	? between wireless ?
?	?	?	? devices connected ?
?	?	?	? to this AP. This ?
?	?	?	? property can be set ?
?	?	?	? to a value ?
?	?	?	? different from ?
?	?	?	? NM_TERNARY_DEFAULT ?
?	?	?	? (-1) only when the ?
?	?	?	? interface is ?
?	?	?	? configured in AP ?
?	?	?	? mode. If set to ?
?	?	?	? NM_TERNARY_TRUE ?
?	?	?	? (1), devices are ?
?	?	?	? not able to ?
?	?	?	? communicate with ?
?	?	?	? each other. This ?
?	?	?	? increases security ?
?	?	?	? because it protects ?
?	?	?	? devices against ?
?	?	?	? attacks from other ?
?	?	?	? clients in the ?
?	?	?	? network. At the ?
?	?	?	? same time, it ?
?	?	?	? prevents devices to ?
?	?	?	? access resources on ?
?	?	?	? the same wireless ?

? ? ? ? networks as file ?
? ? ? ? shares, printers, ?
? ? ? ? etc. If set to ?
? ? ? ? NM_TERNARY_FALSE ?
? ? ? ? (0), devices can ?
? ? ? ? talk to each other. ?
? ? ? ? When set to ?
? ? ? ? NM_TERNARY_DEFAULT ?
? ? ? ? (-1), the global ?
? ? ? ? default is used; in ?
? ? ? ? case the global ?
? ? ? ? default is ?
? ? ? ? unspecified it is ?
? ? ? ? assumed to be ?
? ? ? ? NM_TERNARY_FALSE ?
? ? ? ? (0). ?

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

?assigned-mac-address ? string ? ? The new field for ?
? ? ? ? the cloned MAC ?
? ? ? ? address. It can be ?
? ? ? ? either a hardware ?
? ? ? ? address in ASCII ?
? ? ? ? representation, or ?
? ? ? ? one of the special ?
? ? ? ? values "preserve", ?
? ? ? ? "permanent", ?
? ? ? ? "random" or ?
? ? ? ? "stable". This ?
? ? ? ? field replaces the ?
? ? ? ? deprecated ?
? ? ? ? "cloned-mac-address" ?

? ? ? ? on D-Bus, which can ?
? ? ? ? only contain ?
? ? ? ? explicit hardware ?
? ? ? ? addresses. Note ?
? ? ? ? that this property ?
? ? ? ? only exists in ?
? ? ? ? D-Bus API. libnm ?
? ? ? ? and nmcli continue ?
? ? ? ? to call this ?
? ? ? ? property ?
? ? ? ? "cloned-mac-address". ?

???
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?band ? string ? ? 802.11 frequency band ?
? ? ? ? of the network. One ?
? ? ? ? of "a" for 5GHz ?
? ? ? ? 802.11a or "bg" for ?
? ? ? ? 2.4GHz 802.11. This ?
? ? ? ? will lock ?
? ? ? ? associations to the ?
? ? ? ? Wi-Fi network to the ?
? ? ? ? specific band, i.e. ?
? ? ? ? if "a" is specified, ?
? ? ? ? the device will not ?
? ? ? ? associate with the ?
? ? ? ? same network in the ?
? ? ? ? 2.4GHz band even if ?
? ? ? ? the network's ?
? ? ? ? settings are ?
? ? ? ? compatible. This ?
? ? ? ? setting depends on ?
? ? ? ? specific driver ?

? ? ? ? capability and may ?
? ? ? ? not work with all ?
? ? ? ? drivers. ?

??
??????????????????????
?bssid ? byte array ? ? If specified, directs ?
? ? ? ? the device to only ?
? ? ? ? associate with the ?
? ? ? ? given access point. ?
? ? ? ? This capability is ?
? ? ? ? highly driver ?
? ? ? ? dependent and not ?
? ? ? ? supported by all ?
? ? ? ? devices. Note: this ?
? ? ? ? property does not ?
? ? ? ? control the BSSID ?
? ? ? ? used when creating an ?
? ? ? ? Ad-Hoc network and is ?
? ? ? ? unlikely to in the ?
? ? ? ? future. ?

??
??????????????????????
?channel ? uint32 ? 0 ? Wireless channel to ?
? ? ? ? use for the Wi-Fi ?
? ? ? ? connection. The ?
? ? ? ? device will only join ?
? ? ? ? (or create for Ad-Hoc ?
? ? ? ? networks) a Wi-Fi ?
? ? ? ? network on the ?
? ? ? ? specified channel. ?
? ? ? ? Because channel ?

? ? ? ? numbers overlap ?

? ? ? ? between bands, this ?

? ? ? ? property also ?

? ? ? ? requires the "band" ?

? ? ? ? property to be set. ?

??

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

?cloned-mac-address ? byte array ? ? This D-Bus field is ?

? ? ? ? deprecated in favor ?

? ? ? ? of ?

? ? ? ? "assigned-mac-address" ?

? ? ? ? which is more ?

? ? ? ? flexible and allows ?

? ? ? ? specifying special ?

? ? ? ? variants like ?

? ? ? ? "random". For libnm ?

? ? ? ? and nmcli, this field ?

? ? ? ? is called ?

? ? ? ? "cloned-mac-address". ?

??

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

?generate-mac-address-mask ? string ? ? With ?

? ? ? ? "cloned-mac-address" ?

? ? ? ? setting "random" or ?

? ? ? ? "stable", by default ?

? ? ? ? all bits of the MAC ?

? ? ? ? address are scrambled ?

? ? ? ? and a ?

? ? ? ? locally-administered, ?

? ? ? ? unicast MAC address is ?

? ? ? ? created. This property ?

? ? ? ? allows to specify that ?
? ? ? ? certain bits are ?
? ? ? ? fixed. Note that the ?
? ? ? ? least significant bit ?
? ? ? ? of the first MAC ?
? ? ? ? address will always be ?
? ? ? ? unset to create a ?
? ? ? ? unicast MAC address. ?
? ? ? ? If the property is ?
? ? ? ? NULL, it is eligible ?
? ? ? ? to be overwritten by a ?
? ? ? ? default connection ?
? ? ? ? setting. If the value ?
? ? ? ? is still NULL or an ?
? ? ? ? empty string, the ?
? ? ? ? default is to create a ?
? ? ? ? locally-administered, ?
? ? ? ? unicast MAC address. ?
? ? ? ? If the value contains ?
? ? ? ? one MAC address, this ?
? ? ? ? address is used as ?
? ? ? ? mask. The set bits of ?
? ? ? ? the mask are to be ?
? ? ? ? filled with the ?
? ? ? ? current MAC address of ?
? ? ? ? the device, while the ?
? ? ? ? unset bits are subject ?
? ? ? ? to randomization. ?
? ? ? ? Setting ?
? ? ? ? "FE:FF:FF:00:00:00" ?
? ? ? ? means to preserve the ?
? ? ? ? OUI of the current MAC ?
? ? ? ? address and only ?

? ? ? ? randomize the lower 3 ?
? ? ? ? bytes using the ?
? ? ? ? "random" or "stable" ?
? ? ? ? algorithm. If the ?
? ? ? ? value contains one ?
? ? ? ? additional MAC address ?
? ? ? ? after the mask, this ?
? ? ? ? address is used ?
? ? ? ? instead of the current ?
? ? ? ? MAC address to fill ?
? ? ? ? the bits that shall ?
? ? ? ? not be randomized. For ?
? ? ? ? example, a value of ?
? ? ? ? "FE:FF:FF:00:00:00 ?
? ? ? ? 68:F7:28:00:00:00" ?
? ? ? ? will set the OUI of ?
? ? ? ? the MAC address to ?
? ? ? ? 68:F7:28, while the ?
? ? ? ? lower bits are ?
? ? ? ? randomized. A value of ?
? ? ? ? "02:00:00:00:00:00 ?
? ? ? ? 00:00:00:00:00:00" ?
? ? ? ? will create a fully ?
? ? ? ? scrambled ?
? ? ? ? globally-administered, ?
? ? ? ? burned-in MAC address. ?
? ? ? ? If the value contains ?
? ? ? ? more than one ?
? ? ? ? additional MAC ?
? ? ? ? addresses, one of them ?
? ? ? ? is chosen randomly. ?
? ? ? ? For example, ?
? ? ? ? "02:00:00:00:00:00 ?

? ? ? ? 00:00:00:00:00:00 ?
? ? ? ? 02:00:00:00:00:00" ?
? ? ? ? will create a fully ?
? ? ? ? scrambled MAC address, ?
? ? ? ? randomly locally or ?
? ? ? ? globally administered. ?

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

?hidden ? boolean ? FALSE ? If TRUE, indicates ?
? ? ? ? that the network is a ?
? ? ? ? non-broadcasting ?
? ? ? ? network that hides its ?
? ? ? ? SSID. This works both ?
? ? ? ? in infrastructure and ?
? ? ? ? AP mode. In ?
? ? ? ? infrastructure mode, ?
? ? ? ? various workarounds ?
? ? ? ? are used for a more ?
? ? ? ? reliable discovery of ?
? ? ? ? hidden networks, such ?
? ? ? ? as probe-scanning the ?
? ? ? ? SSID. However, these ?
? ? ? ? workarounds expose ?
? ? ? ? inherent insecurities ?
? ? ? ? with hidden SSID ?
? ? ? ? networks, and thus ?
? ? ? ? hidden SSID networks ?
? ? ? ? should be used with ?
? ? ? ? caution. In AP mode, ?
? ? ? ? the created network ?
? ? ? ? does not broadcast its ?
? ? ? ? SSID. Note that ?

? ? ? ? marking the network as ?

? ? ? ? hidden may be a ?

? ? ? ? privacy issue for you ?

? ? ? ? (in infrastructure ?

? ? ? ? mode) or client ?

? ? ? ? stations (in AP mode), ?

? ? ? ? as the explicit ?

? ? ? ? probe-scans are ?

? ? ? ? distinctly ?

? ? ? ? recognizable on the ?

? ? ? ? air. ?

??

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

?mac-address ? byte array ? ? If specified, this ?

? ? ? ? connection will only ?

? ? ? ? apply to the Wi-Fi ?

? ? ? ? device whose permanent ?

? ? ? ? MAC address matches. ?

? ? ? ? This property does not ?

? ? ? ? change the MAC address ?

? ? ? ? of the device (i.e. ?

? ? ? ? MAC spoofing). ?

??

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

?mac-address-blacklist ? array of string ? ? A list of permanent ?

? ? ? ? MAC addresses of Wi-Fi ?

? ? ? ? devices to which this ?

? ? ? ? connection should ?

? ? ? ? never apply. Each MAC ?

? ? ? ? address should be ?

? ? ? ? given in the standard ?

? ? ? ? hex-digits-and-colons ?
? ? ? ? notation (eg ?
? ? ? ? "00:11:22:33:44:55"). ?

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

?mac-address-randomization ? uint32 ? 0 ? One of ?
? ? ? ? NM_SETTING_MAC_RANDOMIZATION_DEFAULT ?
? ? ? ? (0) (never randomize ?
? ? ? ? unless the user has ?
? ? ? ? set a global default ?
? ? ? ? to randomize and the ?
? ? ? ? supplicant supports ?
? ? ? ? randomization), ?
? ? ? ? NM_SETTING_MAC_RANDOMIZATION_NEVER ?
? ? ? ? (1) (never randomize ?
? ? ? ? the MAC address), or ?
? ? ? ? NM_SETTING_MAC_RANDOMIZATION_ALWAYS ?
? ? ? ? (2) (always randomize ?
? ? ? ? the MAC address). This ?
? ? ? ? property is deprecated ?
? ? ? ? for ?
? ? ? ? 'cloned-mac-address'. ?
? ? ? ? Deprecated: 1 ?

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

?mode ? string ? ? Wi-Fi network mode; one of ?
? ? ? ? "infrastructure", "mesh", "adhoc" or ?
? ? ? ? "ap". If blank, infrastructure is ?
? ? ? ? assumed. ?

??

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

?mtu ? uint32 ? 0 ? If non-zero, only transmit packets ?

? ? ? ? of the specified size or smaller, ?

? ? ? ? breaking larger packets up into ?

? ? ? ? multiple Ethernet frames. ?

??

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

?powersave ? uint32 ? 0 ? One of ?

? ? ? ? NM_SETTING_WIRELESS_POWERSAVE_DISABLE ?

? ? ? ? (2) (disable Wi-Fi power saving), ?

? ? ? ? NM_SETTING_WIRELESS_POWERSAVE_ENABLE ?

? ? ? ? (3) (enable Wi-Fi power saving), ?

? ? ? ? NM_SETTING_WIRELESS_POWERSAVE_IGNORE ?

? ? ? ? (1) (don't touch currently configure ?

? ? ? ? setting) or ?

? ? ? ? NM_SETTING_WIRELESS_POWERSAVE_DEFAULT ?

? ? ? ? (0) (use the globally configured ?

? ? ? ? value). All other values are ?

? ? ? ? reserved. ?

??

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

?rate ? uint32 ? 0 ? If non-zero, directs the device to ?

? ? ? ? only use the specified bitrate for ?

? ? ? ? communication with the access point. ?

? ? ? ? Units are in Kb/s, ie 5500 = 5.5 ?

? ? ? ? Mbit/s. This property is highly ?

? ? ? ? driver dependent and not all devices ?

? ? ? ? support setting a static bitrate. ?

??

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

?security ? ? ? This property is deprecated, but can ?
? ? ? ? be set to the value ?
? ? ? ? '802-11-wireless-security' when a ?
? ? ? ? wireless security setting is also ?
? ? ? ? present in the connection dictionary, ?
? ? ? ? for compatibility with very old ?
? ? ? ? NetworkManager daemons. ?

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

?seen-bssids ? array of string ? ? A list of BSSIDs (each BSSID ?
? ? ? ? formatted as a MAC address like ?
? ? ? ? "00:11:22:33:44:55") that have been ?
? ? ? ? detected as part of the Wi-Fi ?
? ? ? ? network. NetworkManager internally ?
? ? ? ? tracks previously seen BSSIDs. The ?
? ? ? ? property is only meant for reading ?
? ? ? ? and reflects the BSSID list of ?
? ? ? ? NetworkManager. The changes you make ?
? ? ? ? to this property will not be ?
? ? ? ? preserved. ?

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

?ssid ? byte array ? ? SSID of the Wi-Fi network. Must be ?
? ? ? ? specified. ?

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

?tx-power ? uint32 ? 0 ? If non-zero, directs the device to ?
? ? ? ? use the specified transmit power. ?
? ? ? ? Units are dBm. This property is ?
? ? ? ? highly driver dependent and not all ?

? ? ? ? devices support setting a static ?

? ? ? ? transmit power. ?

??

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

?wake-on-wlan ? uint32 ? 1 ? The NMSettingWirelessWakeOnWLan ?

? ? ? ? options to enable. Not all devices ?

? ? ? ? support all options. May be any ?

? ? ? ? combination of ?

? ? ? ? NM_SETTING_WIRELESS_WAKE_ON_WLAN_ANY ?

? ? ? ? (0x2), ?

? ? ? ? NM_SETTING_WIRELESS_WAKE_ON_WLAN_DISCONNECT ?

? ? ? ? (0x4), ?

? ? ? ? NM_SETTING_WIRELESS_WAKE_ON_WLAN_MAGIC ?

? ? ? ? (0x8), ?

? ? ? ? NM_SETTING_WIRELESS_WAKE_ON_WLAN_GTK_REKEY_FAILURE

?

? ? ? ? (0x10), ?

? ? ? ?

NM_SETTING_WIRELESS_WAKE_ON_WLAN_EAP_IDENTITY_REQUEST ?

? ? ? ? (0x20), ?

? ? ? ? NM_SETTING_WIRELESS_WAKE_ON_WLAN_4WAY_HANDSHAKE

?

? ? ? ? (0x40), ?

? ? ? ? NM_SETTING_WIRELESS_WAKE_ON_WLAN_RFKILL_RELEASE ?

? ? ? ? (0x80), ?

? ? ? ? NM_SETTING_WIRELESS_WAKE_ON_WLAN_TCP ?

? ? ? ? (0x100) or the special values ?

? ? ? ? NM_SETTING_WIRELESS_WAKE_ON_WLAN_DEFAULT ?

? ? ? ? (0x1) (to use global settings) and ?

? ? ? ? NM_SETTING_WIRELESS_WAKE_ON_WLAN_IGNORE ?

? ? ? ? (0x8000) (to disable management of ?

? ? ? ? Wake-on-LAN in NetworkManager). ?

??

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

802-11-wireless-security setting

Wi-Fi Security Settings.

??

????????

?Key Name ? Value Type ? Default Value ? Value Description ?

??

????????

?auth-alg ? string ? ? When WEP is used ?

? ? ? ? (ie, key-mgmt = ?

? ? ? ? "none" or ?

? ? ? ? "ieee8021x") ?

? ? ? ? indicate the 802.11 ?

? ? ? ? authentication ?

? ? ? ? algorithm required ?

? ? ? ? by the AP here. ?

? ? ? ? One of "open" for ?

? ? ? ? Open System, ?

? ? ? ? "shared" for Shared ?

? ? ? ? Key, or "leap" for ?

? ? ? ? Cisco LEAP. When ?

? ? ? ? using Cisco LEAP ?

? ? ? ? (ie, key-mgmt = ?

? ? ? ? "ieee8021x" and ?

? ? ? ? auth-alg = "leap") ?

? ? ? ? the "leap-username" ?

? ? ? ? and "leap-password" ?

? ? ? ? properties must be ?

? ? ? ? specified. ?

??
????????

?fils ? int32 ? 0 ? Indicates whether ?
? ? ? ? Fast Initial Link ?
? ? ? ? Setup (802.11ai) ?
? ? ? ? must be enabled for ?
? ? ? ? the connection. ?
? ? ? ? One of ?
? ? ? ? NM_SETTING_WIRELESS_SECURITY_FILS_DEFAULT ?
? ? ? ? (0) (use global ?
? ? ? ? default value), ?
? ? ? ? NM_SETTING_WIRELESS_SECURITY_FILS_DISABLE ?
? ? ? ? (1) (disable FILS), ?
? ? ? ? NM_SETTING_WIRELESS_SECURITY_FILS_OPTIONAL ?
? ? ? ? (2) (enable FILS if ?
? ? ? ? the supplicant and ?
? ? ? ? the access point ?
? ? ? ? support it) or ?
? ? ? ? NM_SETTING_WIRELESS_SECURITY_FILS_REQUIRED ?
? ? ? ? (3) (enable FILS ?
? ? ? ? and fail if not ?
? ? ? ? supported). When ?
? ? ? ? set to ?
? ? ? ? NM_SETTING_WIRELESS_SECURITY_FILS_DEFAULT ?
? ? ? ? (0) and no global ?
? ? ? ? default is set, ?
? ? ? ? FILS will be ?
? ? ? ? optionally enabled. ?

??
????????

?group ? array of string ? ? A list of group/broadcast encryption ?

? ? ? ? algorithms which prevents connections to ?

? ? ? ? Wi-Fi networks that do not utilize one of ?

? ? ? ? the algorithms in the list. For maximum ?

? ? ? ? compatibility leave this property empty. ?

? ? ? ? Each list element may be one of "wep40", ?

? ? ? ? "wep104", "tkip", or "ccmp". ?

??

????????

?key-mgmt ? string ? ? Key management used for the connection. ?

? ? ? ? One of "none" (WEP or no password ?

? ? ? ? protection), "ieee8021x" (Dynamic WEP), ?

? ? ? ? "owe" (Opportunistic Wireless Encryption), ?

? ? ? ? "wpa-psk" (WPA2 + WPA3 personal), "sae" ?

? ? ? ? (WPA3 personal only), "wpa-eap" (WPA2 + ?

? ? ? ? WPA3 enterprise) or "wpa-eap-suite-b-192" ?

? ? ? ? (WPA3 enterprise only). This property must ?

? ? ? ? be set for any Wi-Fi connection that uses ?

? ? ? ? security. ?

??

????????

?leap-password ? string ? ? The login password for legacy LEAP ?

? ? ? ? connections (ie, key-mgmt = "ieee8021x" ?

? ? ? ? and auth-alg = "leap"). ?

??

????????

?leap-password-flags ? NMSettingSecretFlags ? ? Flags indicating how to handle the ?

? ? (uint32) ? ? "leap-password" property. (see the section ?

? ? ? ? called ?Secret flag types:? for flag ?

? ? ? ? values) ?

??
????????

?leap-username ? string ? ? The login username for legacy LEAP ?
? ? ? ? connections (ie, key-mgmt = "ieee8021x" ?
? ? ? ? and auth-alg = "leap"). ?

??
????????

?pairwise ? array of string ? ? A list of pairwise encryption algorithms ?
? ? ? ? which prevents connections to Wi-Fi ?
? ? ? ? networks that do not utilize one of the ?
? ? ? ? algorithms in the list. For maximum ?
? ? ? ? compatibility leave this property empty. ?
? ? ? ? Each list element may be one of "tkip" or ?
? ? ? ? "ccmp". ?

??
????????

?pmf ? int32 ? 0 ? Indicates whether Protected Management ?
? ? ? ? Frames (802.11w) must be enabled for the ?
? ? ? ? connection. One of ?
? ? ? ? NM_SETTING_WIRELESS_SECURITY_PMF_DEFAULT ?
? ? ? ? (0) (use global default value), ?
? ? ? ? NM_SETTING_WIRELESS_SECURITY_PMF_DISABLE ?
? ? ? ? (1) (disable PMF), ?
? ? ? ? NM_SETTING_WIRELESS_SECURITY_PMF_OPTIONAL ?
? ? ? ? (2) (enable PMF if the supplicant and the ?
? ? ? ? access point support it) or ?
? ? ? ? NM_SETTING_WIRELESS_SECURITY_PMF_REQUIRED ?
? ? ? ? (3) (enable PMF and fail if not ?
? ? ? ? supported). When set to ?
? ? ? ? NM_SETTING_WIRELESS_SECURITY_PMF_DEFAULT ?
? ? ? ? (0) and no global default is set, PMF will ?

? ? ? ? be optionally enabled. ?

??
????????

?proto ? array of string ? ? List of strings specifying the allowed WPA ?
? ? ? ? protocol versions to use. Each element may ?
? ? ? ? be one "wpa" (allow WPA) or "rsn" (allow ?
? ? ? ? WPA2/RSN). If not specified, both WPA and ?
? ? ? ? RSN connections are allowed. ?

??
????????

?psk ? string ? ? Pre-Shared-Key for WPA networks. For ?
? ? ? ? WPA-PSK, it's either an ASCII passphrase ?
? ? ? ? of 8 to 63 characters that is (as ?
? ? ? ? specified in the 802.11i standard) hashed ?
? ? ? ? to derive the actual key, or the key in ?
? ? ? ? form of 64 hexadecimal character. The ?
? ? ? ? WPA3-Personal networks use a passphrase of ?
? ? ? ? any length for SAE authentication. ?

??
????????

?psk-flags ? NMSettingSecretFlags ? ? Flags indicating how to handle the "psk" ?
? ? (uint32) ? ? property. (see the section called ?Secret ?
? ? ? ? flag types:? for flag values) ?

??
????????

?wep-key-flags ? NMSettingSecretFlags ? ? Flags indicating how to handle the ?
? ? (uint32) ? ? "wep-key0", "wep-key1", "wep-key2", and ?
? ? ? ? "wep-key3" properties. (see the section ?
? ? ? ? called ?Secret flag types:? for flag ?

? ? ? ? values) ?

??

????????

?wep-key-type ? NMWepKeyType ? ? Controls the interpretation of WEP keys. ?

? ? (uint32) ? ? Allowed values are NM_WEP_KEY_TYPE_KEY ?

? ? ? ? (1), in which case the key is either a 10- ?

? ? ? ? or 26-character hexadecimal string, or a ?

? ? ? ? 5- or 13-character ASCII password; or ?

? ? ? ? NM_WEP_KEY_TYPE_PASSPHRASE (2), in which ?

? ? ? ? case the passphrase is provided as a ?

? ? ? ? string and will be hashed using the ?

? ? ? ? de-facto MD5 method to derive the actual ?

? ? ? ? WEP key. ?

??

????????

?wep-key0 ? string ? ? Index 0 WEP key. This is the WEP key used ?

? ? ? ? in most networks. See the "wep-key-type" ?

? ? ? ? property for a description of how this key ?

? ? ? ? is interpreted. ?

??

????????

?wep-key1 ? string ? ? Index 1 WEP key. This WEP index is not ?

? ? ? ? used by most networks. See the ?

? ? ? ? "wep-key-type" property for a description ?

? ? ? ? of how this key is interpreted. ?

??

????????

?wep-key2 ? string ? ? Index 2 WEP key. This WEP index is not ?

? ? ? ? used by most networks. See the ?

? ? ? ? "wep-key-type" property for a description ?

? ? ? ? of how this key is interpreted. ?

??

????????

?wep-key3 ? string ? ? Index 3 WEP key. This WEP index is not ?

? ? ? ? used by most networks. See the ?

? ? ? ? "wep-key-type" property for a description ?

? ? ? ? of how this key is interpreted. ?

??

????????

?wep-tx-keyidx ? uint32 ? 0 ? When static WEP is used (ie, key-mgmt = ?

? ? ? ? "none") and a non-default WEP key index is ?

? ? ? ? used by the AP, put that WEP key index ?

? ? ? ? here. Valid values are 0 (default key) ?

? ? ? ? through 3. Note that some consumer access ?

? ? ? ? points (like the Linksys WRT54G) number ?

? ? ? ? the keys 1 - 4. ?

??

????????

?wps-method ? uint32 ? 0 ? Flags indicating which mode of WPS is to ?

? ? ? ? be used if any. There's little point in ?

? ? ? ? changing the default setting as ?

? ? ? ? NetworkManager will automatically ?

? ? ? ? determine whether it's feasible to start ?

? ? ? ? WPS enrollment from the Access Point ?

? ? ? ? capabilities. WPS can be disabled by ?

? ? ? ? setting this property to a value of 1. ?

??

????????

wpan setting

IEEE 802.15.4 (WPAN) MAC Settings.

```
????????????????????????????????????????????????????????????????????????
?Key Name      ? Value Type ? Default Value ? Value Description   ?
????????????????????????????????????????????????????????????????????????
?channel       ? int32      ? -1            ? IEEE 802.15.4       ?
?              ?            ?               ? channel. A positive ?
?              ?            ?               ? integer or -1,      ?
?              ?            ?               ? meaning "do not     ?
?              ?            ?               ? set, use whatever   ?
?              ?            ?               ? the device is       ?
?              ?            ?               ? already set to".    ?
????????????????????????????????????????????????????????????????????????
?mac-address   ? string     ?               ? If specified, this  ?
?              ?            ?               ? connection will     ?
?              ?            ?               ? only apply to the   ?
?              ?            ?               ? IEEE 802.15.4       ?
?              ?            ?               ? (WPAN) MAC layer    ?
?              ?            ?               ? device whose        ?
?              ?            ?               ? permanent MAC       ?
?              ?            ?               ? address matches.    ?
????????????????????????????????????????????????????????????????????????
?page          ? int32      ? -1            ? IEEE 802.15.4       ?
?              ?            ?               ? channel page. A     ?
?              ?            ?               ? positive integer or ?
?              ?            ?               ? -1, meaning "do not ?
?              ?            ?               ? set, use whatever   ?
?              ?            ?               ? the device is       ?
?              ?            ?               ? already set to".    ?
????????????????????????????????????????????????????????????????????????
?pan-id        ? uint32     ? 65535         ? IEEE 802.15.4       ?
?              ?            ?               ? Personal Area       ?
?              ?            ?               ? Network (PAN)       ?
```

? ? ? ? identifier. ?

??

?short-address ? uint32 ? 65535 ? Short IEEE 802.15.4 ?

? ? ? ? address to be used ?

? ? ? ? within a restricted ?

? ? ? ? environment. ?

??

bond-port setting

Bond Port Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?queue-id ? uint32 ? 0 ? The queue ID of ?

? ? ? ? this bond port. The ?

? ? ? ? maximum value of ?

? ? ? ? queue ID is the ?

? ? ? ? number of TX queues ?

? ? ? ? currently active in ?

? ? ? ? device. ?

??

hostname setting

Hostname settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?from-dhcp ? NMTernary (int32) ? ? Whether the system ?

? ? ? ? hostname can be ?

? ? ? ? determined from ?

? ? ? ? DHCP on this ?

? ? ? ? connection. When ?

? ? ? ? set to ?

? ? ? ? NM_TERNARY_DEFAULT ?

? ? ? ? (-1), the value ?

? ? ? ? from global ?

? ? ? ? configuration is ?

? ? ? ? used. If the ?

? ? ? ? property doesn't ?

? ? ? ? have a value in the ?

? ? ? ? global ?

? ? ? ? configuration, ?

? ? ? ? NetworkManager ?

? ? ? ? assumes the value ?

? ? ? ? to be ?

? ? ? ? NM_TERNARY_TRUE ?

? ? ? ? (1). ?

??

?from-dns-lookup ? NMTernary (int32) ? ? Whether the system ?

? ? ? ? hostname can be ?

? ? ? ? determined from ?

? ? ? ? reverse DNS lookup ?

? ? ? ? of addresses on ?

? ? ? ? this device. When ?

? ? ? ? set to ?

? ? ? ? NM_TERNARY_DEFAULT ?

? ? ? ? (-1), the value ?

? ? ? ? from global ?

? ? ? ? configuration is ?

? ? ? ? used. If the ?

? ? ? ? property doesn't ?

? ? ? ? have a value in the ?

? ? ? ? global ?

? ? ? ? configuration, ?

? ? ? ? NetworkManager ?

? ? ? ? assumes the value ?

? ? ? ? to be ?

? ? ? ? NM_TERNARY_TRUE ?

? ? ? ? (1). ?

??

?only-from-default ? NMTernary (int32) ? ? If set to ?

? ? ? ? NM_TERNARY_TRUE ?

? ? ? ? (1), NetworkManager ?

? ? ? ? attempts to get the ?

? ? ? ? hostname via ?

? ? ? ? DHCPv4/DHCPv6 or ?

? ? ? ? reverse DNS lookup ?

? ? ? ? on this device only ?

? ? ? ? when the device has ?

? ? ? ? the default route ?

? ? ? ? for the given ?

? ? ? ? address family ?

? ? ? ? (IPv4/IPv6). If set ?

? ? ? ? to NM_TERNARY_FALSE ?

? ? ? ? (0), the hostname ?

? ? ? ? can be set from ?

? ? ? ? this device even if ?

? ? ? ? it doesn't have the ?

? ? ? ? default route. When ?

? ? ? ? set to ?

? ? ? ? NM_TERNARY_DEFAULT ?

? ? ? ? (-1), the value ?

? ? ? ? from global ?

? ? ? ? configuration is ?

? ? ? ? used. If the ?

? ? ? ? property doesn't ?

? ? ? ? have a value in the ?

? ? ? ? global ?

? ? ? ? configuration, ?

? ? ? ? NetworkManager ?

? ? ? ? assumes the value ?

? ? ? ? to be ?

? ? ? ? NM_TERNARY_FALSE ?

? ? ? ? (0). ?

??

?priority ? int32 ? 0 ? The relative ?

? ? ? ? priority of this ?

? ? ? ? connection to ?

? ? ? ? determine the ?

? ? ? ? system hostname. A ?

? ? ? ? lower numerical ?

? ? ? ? value is better ?

? ? ? ? (higher priority). ?

? ? ? ? A connection with ?

? ? ? ? higher priority is ?

? ? ? ? considered before ?

? ? ? ? connections with ?

? ? ? ? lower priority. If ?

? ? ? ? the value is zero, ?

? ? ? ? it can be ?

? ? ? ? overridden by a ?

? ? ? ? global value from ?

? ? ? ? NetworkManager ?

? ? ? ? configuration. If ?

? ? ? ? the property ?

? ? ? ? doesn't have a ?

? ? ? ? value in the global ?

? ? ? ? configuration, the ?

? ? ? ? value is assumed to ?

? ? ? ? be 100. Negative ?

? ? ? ? values have the ?

? ? ? ? special effect of ?

? ? ? ? excluding other ?

? ? ? ? connections with a ?

? ? ? ? greater numerical ?

? ? ? ? priority value; so ?

? ? ? ? in presence of at ?

? ? ? ? least one negative ?

? ? ? ? priority, only ?

? ? ? ? connections with ?

? ? ? ? the lowest priority ?

? ? ? ? value will be used ?

? ? ? ? to determine the ?

? ? ? ? hostname. ?

??

ovs-external-ids setting

OVS External IDs Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?data ? dict of string to ? {} ? A dictionary of ?

? ? string ? ? key/value pairs ?

? ? ? ? with exernal-ids ?

? ? ? ? for OVS. ?

??

veth setting

Veth Settings.

??

?Key Name ? Value Type ? Default Value ? Value Description ?

??

?peer ? string ? ? This property ?

? ? ? ? specifies the peer ?

? ? ? ? interface name of ?

? ? ? ? the veth. This ?

? ? ? ? property is ?

? ? ? ? mandatory. ?

??

Secret flag types:

Each password or secret property in a setting has an associated flags property that describes how to handle that secret. The flags property is a bitfield that contains zero or more of the following values logically OR-ed together.

? 0x0 (none) - the system is responsible for providing and storing this secret. This may be required so that secrets are already available before the user logs in. It also commonly means that the secret will be stored in plain text on disk, accessible to root only. For example via the keyfile settings plugin as described in the "PLUGINS" section in NetworkManager.conf(5).

? 0x1 (agent-owned) - a user-session secret agent is responsible for providing and storing this secret; when it is required, agents will be asked to provide it.

? 0x2 (not-saved) - this secret should not be saved but should be requested from the user each time it is required. This flag should be used for One-Time-Pad secrets, PIN codes from hardware tokens, or if the user simply does not want to save the secret.

? 0x4 (not-required) - 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/NetworkManager/system-connections or distro plugin-specific location

SEE ALSO

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