howto, suse, tumbleweed, dns, name, resolution, nameresolution, netconfig

SUSE Tumbleweed - Fix Name Resolution Not Working After Update

- https://bugs.launchpad.net/cloud-init/+bug/1849296
- https://wiki.archlinux.org/title/systemd-resolved

The symptoms:

- host command not working, e.g.:

```
host www.heise.de
```

```
;; communications error to 127.0.0.1#53: connection refused
```

- /etc/resolv.conf and /var/run/netconfig/resolv.conf have been empty

First I have populated /etc/hosts to make an update, just in case...

```
vim /etc/hosts
```

```
#
# hosts         This file describes a number of hostname-to-address
#               mappings for the TCP/IP subsystem.  It is mostly
#               used at boot time, when no name servers are running.
#               On small systems, this file can be used instead of a
#               "named" name server.
# Syntax:
#
# IP-Address  Full-Qualified-Hostname  Short-Hostname
#

127.0.0.1       localhost
# fallback hostname used by NetworkManager
127.0.0.1       localhost.localdomain

# special IPv6 addresses
::1             localhost ipv6-localhost ipv6-loopback

fe00::0         ipv6-localnet

ff00::0         ipv6-mcastprefix
ff02::1         ipv6-allnodes
ff02::2         ipv6-allrouters
ff02::3         ipv6-allhosts

# zypper ref && zypper dup without working name resolution
192.168.1.1             lxxx lxxx.wiretrip.de
195.135.221.134         download.opensuse.org
195.135.221.140         mirrorcache-eu.opensuse.org
195.135.221.157         downloadcontent.opensuse.org
192.229.220.191         download.nvidia.com
142.250.185.238         dl.google.com
159.69.47.205           rpm.anydesk.com
188.40.104.135          keys.anydesk.com
134.76.12.6             ftp.gwdg.de
143.204.89.100          linux.teamviewer.com
35.185.44.232           paulcarroty.gitlab.io
172.65.251.78           gitlab.com
```

```
zypper ref && zypper dup
```

then I had to edit /etc/sysconfig/network/config to set a static DNS-server

```
vim /etc/sysconfig/network/config
```

```
# Path:        Network/General
## Description: Global network configuration
#
# Note:
# Most of the options can and should be overridden by per-interface
# settings in the ifcfg-* files.
#
# Note: The ISC dhclient started by the NetworkManager is not using any
# of these options -- NetworkManager is not using any sysconfig settings.
#

## Type:        yesno
## Default:     yes
# If ifup should check if an IPv4 address is already in use, set this to yes.
#
# Make sure that packet sockets (CONFIG_PACKET) are supported in the kernel,
# since this feature uses arp, which depends on that.
# Also be aware that this takes one second per interface; consider that when
# setting up a lot of interfaces.
CHECK_DUPLICATE_IP="yes"

## Type:        list(auto,yes,no)
## Default:     auto
# If ifup should send a gratuitous ARP to inform the receivers about its
# IPv4 addresses. Default is to send gratuitous ARP, when duplicate IPv4
# address check is enabled and the check were sucessful.
#
# Make sure that packet sockets (CONFIG_PACKET) are supported in the kernel,
# since this feature uses arp, which depends on that.
SEND_GRATUITOUS_ARP="auto"

## Type:        yesno
## Default:     no
# Switch on/off debug messages for all network configuration stuff. If set to no
# most scripts can enable it locally with "-o debug".
DEBUG="no"

## Type:        integer
## Default:     30
#
# Some interfaces need some time to come up or come asynchronously via hotplug.
# WAIT_FOR_INTERFACES is a global wait for all mandatory interfaces in
# seconds. If empty no wait occurs.
#
WAIT_FOR_INTERFACES="30"

## Type:        yesno
## Default:     yes
#
# With this variable you can determine if the SuSEfirewall when enabled
# should get started when network interfaces are started.
FIREWALL="yes"

## Type:        int
## Default:     30
#
# When using NetworkManager you may define a timeout to wait for NetworkManager
# to connect in NetworkManager-wait-online.service.  Other network services
# may require the system to have a valid network setup in order to succeed.
#
# This variable has no effect if NetworkManager is disabled.
#
NM_ONLINE_TIMEOUT="30"
```

```
## Type:        string
## Default:     "dns-resolver dns-bind ntp-runtime nis"
#
# This variable defines the start order of netconfig modules installed
# in the /etc/netconfig.d/ directory.
#
# To disable the execution of a module, don't remove it from the list
# but prepend it with a minus sign, "-ntp-runtime".
#
NETCONFIG_MODULES_ORDER="dns-resolver dns-bind dns-dnsmasq nis ntp-runtime"

## Type:        yesno
## Default:     no
#
# Enable netconfig verbose reporting.
#
NETCONFIG_VERBOSE="no"

## Type:        yesno
## Default:     no
#
# This variable enables netconfig to always force a replace of modified
# files and automatically enables the -f | --force-replace parameter.
#
# The purpose is to use it as workaround, when some other tool trashes
# the files, e.g. /etc/resolv.conf and you observe messages like this
# in your logs on in "netconfig update" output:
# ATTENTION: You have modified /etc/resolv.conf. Leaving it untouched.
#
# Please do not forget to also report a bug as we have a system policy
# to use netconfig.
#
NETCONFIG_FORCE_REPLACE="no"

## Type:        string
## Default:     "auto"
#
# Defines the DNS merge policy as documented in netconfig(8) manual page.
# Set to "" to disable DNS configuration.
#
NETCONFIG_DNS_POLICY="auto"

## Type:        string(resolver,bind,dnsmasq,)
## Default:     "resolver"
#
# Defines the name of the DNS forwarder that has to be configured.
# Currently implemented are "bind", "dnsmasq" and "resolver", that
# causes to write the name server IP addresses to /etc/resolv.conf
# only (no forwarder). Empty string defaults to "resolver".
#
NETCONFIG_DNS_FORWARDER="resolver"

## Type:        yesno
## Default:     yes
#
# When enabled (default) in forwarder mode ("bind", "dnsmasq"),
# netconfig writes an explicit localhost nameserver address to the
# /etc/resolv.conf, followed by the policy resolved name server list
# as fallback for the moments, when the local forwarder is stopped.
#
NETCONFIG_DNS_FORWARDER_FALLBACK="yes"

## Type:        string
## Default:     ""
#
# List of DNS domain names used for host-name lookup.
# It is written as search list into the /etc/resolv.conf file.
#
NETCONFIG_DNS_STATIC_SEARCHLIST=""
```

```
## Type:        string
## Default:     ""
#
# List of DNS nameserver IP addresses to use for host-name lookup.
# When the NETCONFIG_DNS_FORWARDER variable is set to "resolver",
# the name servers are written directly to /etc/resolv.conf.
# Otherwise, the nameserver are written into a forwarder specific
# configuration file and the /etc/resolv.conf does not contain any
# nameservers causing the glibc to use the name server on the local
# machine (the forwarder). See also netconfig(8) manual page.
#
NETCONFIG_DNS_STATIC_SERVERS="192.168.1.1"

## Type:        string
## Default:     "auto"
#
# Allows to specify a custom DNS service ranking list, that is which
# services provide preferred (e.g. vpn services), and which services
# fallback settings (e.g. avahi).
# Preferred service names have to be prepended with a "+", fallback
# service names with a "-" character. The special default value
# "auto" enables the current build-in service ranking list -- see the
# netconfig(8) manual page -- "none" or "" disables the ranking.
#
NETCONFIG_DNS_RANKING="auto"

## Type:        string
## Default:     ""
#
# Allows to specify options to use when writting the /etc/resolv.conf,
# for example:
#       "debug attempts:1 timeout:10"
# See resolv.conf(5) manual page for details.
#
NETCONFIG_DNS_RESOLVER_OPTIONS=""

## Type:        string
## Default:     ""
#
# Allows to specify a sortlist to use when writting the /etc/resolv.conf,
# for example:
#       130.155.160.0/255.255.240.0 130.155.0.0"
# See resolv.conf(5) manual page for details.
#
NETCONFIG_DNS_RESOLVER_SORTLIST=""

## Type:        string
## Default:     "auto"
#
# Defines the NTP merge policy as documented in netconfig(8) manual page.
# Set to "" to disable NTP configuration.
#
NETCONFIG_NTP_POLICY="auto"

## Type:        string
## Default:     ""
#
# List of NTP servers.
#
NETCONFIG_NTP_STATIC_SERVERS=""

## Type:        string
## Default:     "auto"
#
# Defines the NIS merge policy as documented in netconfig(8) manual page.
# Set to "" to disable NIS configuration.
#
NETCONFIG_NIS_POLICY="auto"
```

```
## Type:        string(yes,no,)
## Default:     "yes"
#
# Defines whether to set the default NIS domain. When enabled and no domain
# is provided dynamically or in static settings, /etc/defaultdomain is used.
# Valid values are:
#  - "no" or ""         netconfig does not set the domainname
#  - "yes"              netconfig sets the domainname according to the
#                       NIS policy using settings provided by the first
#                       iterface and service that provided it.
#  - "<interface name>" as yes, but only using settings from interface.
#
NETCONFIG_NIS_SETDOMAINNAME="yes"

## Type:        string
## Default:     ""
#
# Defines a default NIS domain.
#
# Further domain can be specified by adding a "_<number>" suffix to
# the NETCONFIG_NIS_STATIC_DOMAIN and NETCONFIG_NIS_STATIC_SERVERS
# variables, e.g.: NETCONFIG_NIS_STATIC_DOMAIN_1="second".
#
NETCONFIG_NIS_STATIC_DOMAIN=""

## Type:        string
## Default:     ""
#
# Defines a list of NIS servers for the default NIS domain or the
# domain specified with same "_<number>" suffix.
#
NETCONFIG_NIS_STATIC_SERVERS=""

## Type:        string
## Default:     ''
#
# Set this variable global variable to the ISO / IEC 3166 alpha2
# country code specifying the wireless regulatory domain to set.
# When not empty, ifup-wireless will be set in the wpa_supplicant
# config or via 'iw reg set' command.
#
# Note: This option requires a wpa driver supporting it, like
# the 'nl80211' driver used by default since openSUSE 11.3.
# When you notice problems with your hardware, please file a
# bug report and set e.g. WIRELESS_WPA_DRIVER='wext' (the old
# default driver) in the ifcfg file.
# See also "/usr/sbin/wpa_supplicant --help" for the list of
# available wpa drivers.
#
WIRELESS_REGULATORY_DOMAIN=''
```

then I have forced netconfig to adjusting /etc/resolv.conf with

```
netconfig update -f
```

~~DISCUSSION~~