iDRAC Service Module v2.1 or later on Ubuntu and Debian Linux Operating Systems

This White Paper provides information about the usage and troubleshooting of iDRAC Service Module v2.1 or later on Ubuntu and Debian Linux Operating systems.

Dell Engineering
September 2015

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Deepak Ravishankar

A Dell Technical White Paper
Revisions

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<th>Date</th>
<th>Description</th>
</tr>
</thead>
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<tr>
<td>April 2015</td>
<td>Initial release</td>
</tr>
<tr>
<td>September 2015</td>
<td>Added information to generalize Ubuntu and Debian Linux support for the latest version of iDRAC Service Module</td>
</tr>
</tbody>
</table>

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Executive summary

The Dell Integrated Remote Access Controller (iDRAC) Service Module is a lightweight systems management application installed on a physical Host operating system (OS) of a managed server.

iDRAC Service Module works as a system management application for Dell’s Out of Band (OOB) system management processor which is the Integrated Dell Remote Access Controller (iDRAC). Installing iDRAC Service Module v2.1 or later allows you to extend the Systems Management using iDRAC in the following areas of Ubuntu and Debian Linux OS:

- iDRAC displays the Host OS information – OS name, OS version and Hostname.
- iDRAC monitors the network interfaces created on the Host OS. This is a comprehensive Layer 3 monitoring which completes iDRAC network management stack.
- iDRAC fetches the Baseboard Management Controller (BMC) watchdog activated as a result of continuous heartbeat pings from iDRAC Service Module. This enables you to configure the watchdog parameters such as Watchdog Timeout and Watchdog Timeout expiry action in iDRAC. This also enables iDRAC to capture crash dump screens in the event of OS freeze.
- iDRAC Service Module replicates user opted Life Cycle Controller Events into the OS logs (/var/log/syslog.) This will be a one stop destination for all the hardware and firmware events for the OS administrator.

iDRAC Service Module features can be enabled or disabled during the runtime using iDRAC interfaces - Graphical User Interface (GUI), RACADM CLI and Web Service Management (WSMAN).

Prerequisites for installing iDRAC Service Module

- OpenIPMI package is to be installed. Can be downloaded from the APT (Advanced Package Tool) repository of the OS vendor For more information on the packages, see linux.dell.com/repo/community/debian/
- The USB stack in the OS should be enabled
- The Network IPV4 stack should be enabled in the OS
- Minimum iDRAC firmware version - 1.57.57 or later

Environment

- iDRAC Service Module is installed by default in the following location on Ubuntu and Debian Linux OS: /opt/dell/srvadmin/iSM
- iDRAC Service Module runs in the context of a init.d script which is located at: /etc/init.d/dcism
- iDRAC Service Module event logs are available at: /var/log/syslog.log
- iDRAC Service Module application logs will be created with dsm_ism_srvmgrd as the process name
  The syslog entries are Internet Engineering Task Force (IETF) complaint
1 Installing iDRAC Service Module

You can install iDRAC Service Module v2.1 or later on Ubuntu and Debian Linux OS using one of these two methods.

- **From Dell APT repository:**
  a. If you are installing iDRAC Service Module for the first time, type `apt-get install dcism` on the CLI.
  b. If you are updating an existing iDRAC Service Module setup, type `apt-get update dcism` on the CLI.

- **dpkg install using Debian package:**
  Type the following command on the CLI: `root@ism-ubuntu:~# dpkg -i dcism-<version>.ubuntu14.deb`.

The packages are available only on the Dell APT repository. For more information on the packages, see [linux.dell.com/repo/community/debian/](http://linux.dell.com/repo/community/debian/).

This supports a typical install where all the iDRAC Service Module features is enabled. If you want to configure the feature set supported by iDRAC Service Module, it can be done using one of the iDRAC interfaces:

- iDRAC GUI – Go to Server->ServiceModule page and configure the features.
- RACADM – Type `racadm get idrac.servicemodule` command on the CLI. The list of features and their current configuration are displayed.
- WSMAN – WSMAN commands on ServiceModule class can be invoked to change the service module configuration.

1.1 Working with iDRAC Service Module on Host OS

After installing iDRAC Service Module, type `Service start dcism` or `/etc/init.d/dcism start` on the CLI to start the iDRAC Service Module service on the Host OS.

After installing iDRAC Service Module, you can validate the status of iDRAC Service Module using various methods:

- **Using OS Log**
  Check the OS log for messages from iDRAC Service Module.
  For example,

  `dsm_isrvmgrd[26419]: 26419 ISM0000 [iSM@674.10892.2 EventID=“8716” EventCategory=“Audit” EventSeverity=“info” IsPastEvent=“false” language=“en-US”] The iDRAC Service Module is started on the operating system (OS) of server.`

- **Using iDRAC GUI**
  On the iDRAC home page, browse to Server->Service Module. The service module status is displayed.
• **Using RACADM CLI**
  On the CLI, type the following RACADM command
  
  ```
  ~ # racadm get idrac.servicemodule
  [Key=idrac.Embedded.1#ServiceModule.1]
  LCLReplication=Enabled
  #OMSAPresence=Not Present
  OSInfo=Enabled
  ServiceModuleEnable=Enabled
  #ServiceModuleState=Running
  #ServiceModuleVersion=<version><build no.>
  WatchdogRecoveryAction=None
  WatchdogResetTime=480
  WatchdogState=Enabled
  WMIInfo=Disabled
  ~ #
  ```

• **Using WSMAN clients**
  On the WSMAN client system type the following WSMAN command:
  
  ```
  AttributeDisplayName = ServiceModule service state on host
  AttributeName = ServiceModuleState
  DefaultValue = Running
  Dependency = null
  DisplayOrder = 2160
  FQDD = iDRAC.Embedded.1
  GroupDisplayName = ServiceModule
  GroupID = ServiceModule.1
  InstanceID = iDRAC.Embedded.1#ServiceModule.1#ServiceModuleState
  ```
1.2 iDRAC Service Module Features

iDRAC Service Module v2.1 or later supports the following features.

- **Host OS Information**
  
  OpenManage Server Administrator currently shares OS information and hostname with iDRAC. The iDRAC Service Module provides similar information such as OS name, OS version, and Fully Qualified Domain Name (FQDN) with iDRAC. By default, this monitoring feature is enabled. This feature is available even if Server Administrator is installed on the Host OS.

  You can view the OS information from the GUI or by using the RACADM command.

  a. **View OS Information with iDRAC GUI**

  Click **Server -> Server Summary** to view the OS information.

  **Server Information**

<table>
<thead>
<tr>
<th>Power State</th>
<th>ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Model</td>
<td>PowerEdge R720xd</td>
</tr>
<tr>
<td>System Revision</td>
<td>1</td>
</tr>
<tr>
<td>System Host Name</td>
<td>iom-ubuntu.itc.amerrdell.com</td>
</tr>
<tr>
<td>Operating System</td>
<td>Ubuntu</td>
</tr>
<tr>
<td>Service Tag</td>
<td>0C2U028</td>
</tr>
</tbody>
</table>

  b. **View OS Information with RACADM CLI**

  Type the following command on CLI to view the OS information

  ```bash
  racadm get system.serveros
  [SH7757~]$ racadm get system.serveros
  [Key=system.Embedded.1#ServerOS.1]
  ```
HostName=ism-ubuntu.blr.amer.dell.com
OSName=Ubuntu
#OSVersion=14.04, Trusty Tahr Kernel 3.13.0-40-generics (x86_64)
#ServerPoweredOnTime=1367

[SH7757 ~]$  

- Host OS Network interface (Layer 3) Monitoring  
iDRAC Service Module has amended the OS information feature with the OS network interface Monitoring. When iDRAC Service Module v2.1 or later is used with iDRAC 2.00.00.00 or later firmware version, it starts monitoring the operating system network interfaces. You can view this information using iDRAC GUI interface, RACADM and WSMAN.
When iDRAC Service Module v2.1 or later is used with iDRAC version lower than 2.00.00.00, the OS information feature does not provide the OS network interface monitoring.

You can monitor the Host OS Network interface from the GUI or by using the RACADM commands.

a. Monitor Host OS Network interface using iDRAC GUI  
Go to Host OS -> Network Interfaces to view and monitor the Host OS Network interface settings.

<table>
<thead>
<tr>
<th>Interface Name</th>
<th>Device FQDD</th>
</tr>
</thead>
<tbody>
<tr>
<td>en0</td>
<td>NIC Integrated: 1-1-1</td>
</tr>
<tr>
<td>en1</td>
<td>NIC Integrated: 1-1-1</td>
</tr>
<tr>
<td>en2</td>
<td>NIC Integrated: 1-2-1</td>
</tr>
</tbody>
</table>

- IPv4 Settings  
- Default Gateway: 10.84.146.1  
- DNS Server: 10.816.2.260

- IPv6 Settings  
- Default Gateway: N/A  
- DNS Server: N/A

- IPv4 Addresses  
- Address: 10.84.146.233  
- Netmask: 255.255.255.0

- IPv6 Addresses  
- Address: 1080:3668:0fF9:52e9:64
- Monitor Host OS Network interfaces using RACADM CLI
  
  Type the following command on the CLI to view and monitor the Host OS Network interface settings.

  **racadm gethostnetworkinterfaces**
  
  ```
  [SH7757 ~]$ racadm gethostnetworkinterfaces
  lo
  Description : lo
  Status : Up
  Interface Type : Loopback
  DHCP : Disabled
  MAC Address : 00-00-00-00-00-00
  IPv4 Address : 127.0.0.1
  Subnet Mask : 255.0.0.0
  IPv6 Address : ::1
  Prefix Length : 128
  
  em1
  Description : em1
  Status : Up
  Interface Type : Ethernet
  DHCP : Disabled
  MAC Address : 24-B6-FD-F5-52-E8
  FQDD : NIC.Integrated.1-1-1
  
  em2
  Description : em2
  Status : Up
  Interface Type : Ethernet
  DHCP : Enabled
  DHCP ServerV4 : 10.94.146.2
  MAC Address : 24-B6-FD-F5-52-E9
  FQDD : NIC.Integrated.1-2-1
  IPv4 Address : 10.94.146.233
  Subnet Mask : 255.255.255.0
  IPv6 Address : fe80::26b6:fdff:fef5:52e9
  Prefix Length : 64
  IPv4 Gateway Address : 10.94.146.1
  IPv4 DNS Server Address 0 : 10.116.2.250
  IPv4 DNS Server Address 1 : 10.116.2.251
  ```
Monitor Host OS Network interfaces using WSMAN client

Type the following command on the WSMAN client to view and monitor the Host OS Network interface settings.

```
```

```c
DCIM_HostNetworkInterfaceView
    DCIM_HostNetworkInterfaceView
        DHCPEnabled = false
        DeviceDescription = lo
        DeviceFQDD = null
        IPv4Address = 127.0.0.1
        IPv4DHCPServer = null
        IPv4DNSServer = null
        IPv4Gateway = null
        IPv4SubnetMask = 255.0.0.0
        IPv6AddrScope = 1
        IPv6Address = ::1
        IPv6DHCPServer = null
        IPv6DNSServer = null
        IPv6Gateway = null
        IPv6PrefixLength = 128
        InstanceID = iDRAC.Embedded.1#ServiceModule.1#OSLogicalNetwork.1
        MACAddr = 00-00-00-00-00-00
        Name = lo
        Status = 0
        Type = 4

DCIM_HostNetworkInterfaceView
    DCIM_HostNetworkInterfaceView
        DHCPEnabled = false
        DeviceDescription = em1
        DeviceFQDD = NIC.Integrated.1-1-1
        IPv4Address = null
        IPv4DHCPServer = null
        IPv4DNSServer = null
        IPv4Gateway = null
        IPv4SubnetMask = null
        IPv6AddrScope = null
        IPv6Address = null
        IPv6DHCPServer = null
        IPv6DNSServer = null
        IPv6Gateway = null
        IPv6PrefixLength = null
        InstanceID = iDRAC.Embedded.1#ServiceModule.1#OSLogicalNetwork.2
        MACAddr = 24-86-FD-F5-52-E8
```
Name = em1
Status = 0
Type = 1

DCIM_HostNetworkInterfaceView
DHCPEnabled = true
DeviceDescription = em2
DeviceFQDD = NIC.Integrated.1-2-1
IPv4Address = 10.94.146.233
IPv4DHCPServer = 10.94.146.2
IPv4DNSServer = 10.116.2.250, 10.116.2.251
IPv4Gateway = 10.94.146.1
IPv4SubnetMask = 255.255.255.0
IPv6AddrScope = 2
IPv6Address = fe80::26b6:fdff:fef5:52e9
IPv6DHCPServer = null
IPv6PrefixLength = 64
InstanceID = iDRAC.Embedded.1#ServiceModule.1#OSLogicalNetwork.3
MACAddr = 24-B6-FD-F5-52-E9
Name = em2
Status = 0
Type = 1

- **Automatic System Recovery**
  You can perform automatic system recovery operations such as reboot, power cycle, or power off the server after a specified time interval, known as the watchdog timeout feature. This feature is enabled only if the OS watchdog timer is disabled. If OpenManage Server Administrator is installed, the watchdog feature in iDRAC Service Module will be disabled to avoid duplicate watchdog timers. When the iDRAC Service Module Watchdog is active; you can configure the Watchdog Timeout value and the Recovery Action using the iDRAC interfaces. The default timeout value is 480 seconds and the default recovery action is None.
This feature configures and activates the BMC watchdog. When the OS is not responsive, by default BMC considers that the configured recovery option is selected.

You can view the BMC Watchdog information from the GUI or by using the RACADM commands.

a. **View BMC Watchdog counter using iDRAC GUI**

Auto Recovery

<table>
<thead>
<tr>
<th>Recovery Action</th>
<th>Initial Countdown</th>
<th>Current Countdown</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>493</td>
<td>435</td>
</tr>
</tbody>
</table>

b. **Configuring the watchdog parameters using RACADM**

To configure the watchdog parameters from RACADM, use the following commands:

```
racadm set idrac.servicemodule.WatchdogRecoveryAction=[None, Poweroff, powercycle, reboot]
```

```
racadm set idrac.servicemodule.WatchdogResetTime=480 [Any]
```

```
racadm set idrac.servicemodule.WatchdogState=[Enabled/Disabled]
```

- **Replicate Lifecycle Logs to OS Log**

When the Lifecycle Controller log replication feature is enabled in iDRAC, you can replicate the Lifecycle Controller Logs to the OS logs. This is similar to the System Event Log (SEL) replication performed by OpenManage Server Administrator. All events that have the OS Log option selected as the target (on the Alerts page from the iDRAC home page, or in the equivalent RACADM or WSMAN interfaces) are replicated in the OS log using iDRAC Service Module. The default set of logs to be included in the OS logs are similar to those configured for SNMP alerts or traps.
iDRAC Service Module also logs the events that have occurred when the OS is not functioning. The OS logging performed by iDRAC Service Module follows the IETF syslog standards for Linux based OS.

If OpenManage Server Administrator is installed, this monitoring feature is disabled to avoid duplicate SEL entries in the OS log.

You can validate the LCL log replication using any of the following methods:

1. **Enable Global Alerts in Alerts page.** Go to Server -> Alerts.

   ![Alerts Filter](image)

   Alerts Filter

<table>
<thead>
<tr>
<th>Category</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Health</td>
<td>Audit</td>
</tr>
<tr>
<td>System Health</td>
<td>Updates</td>
</tr>
<tr>
<td>System Health</td>
<td>Critical</td>
</tr>
</tbody>
</table>

2. **Select the category of alerts to be replicated.**

3. **Check Alert configuration for the alerts to be replicated under OS Log.**

4. **Send sample or test alerts from Test Event section.**
5. **iDRAC Service Module replicates the sample or test alert to OS logs in /var/log/syslog**

Dec 10 08:10:40 ism-ubuntu dsm_ism_srvmgrd: 4014 FAN0001 [iSM@674.10892.2 EventID="2153" EventCategory="System Health" EventSeverity="error" IsPastEvent="false" EventTimeStamp="2014-12-10T13:40:40-05:30" language="en-US"] Fan 1 RPM is less than the lower critical threshold.

- **Co-existence of OpenManage Server Administrator and iDRAC Service Module**
  In a system, both OpenManage Server Administrator and the iDRAC Service Module can co-exist and continue to function correctly and independently.

  If you have enabled the monitoring features such as Lifecycle Log replication and Watchdog during the installation of iDRAC Service Module, then after the installation is complete if the iDRAC Service Module detects the presence of OpenManage Server Administrator, it disables the set of monitoring features that overlap. This action will be logged into the OS and iDRAC as well.

  An attempt to re-enable these monitoring features through the iDRAC interfaces at any time, will perform similar checks and the features are enabled only if OpenManage Server Administrator is not running.

- **Using iDRAC Service Module From iDRAC GUI Interface**
  To use the iDRAC Service Module from the iDRAC GUI interface:

  1. Go to **Overview → Server → Service Module**.

     The iDRAC Service Module Setup page is displayed.
2. You can view the following:
   a. Installed iDRAC Service Module version on the host OS
   b. Connection status of the iDRAC Service Module with iDRAC
3. To perform out-of-band monitoring functions, select one or more of the following options:
   a. OS Information — View the OS information.
   b. Replicate Lifecycle Log in OS Log — Include Lifecycle Controller logs to OS logs. This option is disabled if OpenManage Server Administrator is installed on the system.
   c. Auto System Recovery Action — Perform auto recovery operations on the system after a specified time (in seconds):— Reboot— Power Off System— Power Cycle System This option is disabled if OpenManage Server Administrator is installed on the system.
2 Troubleshooting

This section lists some of the troubleshooting information about the iDRAC Service Module.

- **Could not install iDRAC Service Module, fails on dependency check “openipmi”**
  
  Openipmi is a prerequisite for iDRAC Service Module to work. Type `apt-get install openipmi` on the CLI to install openipmi.

  ```
  root@ism-ubuntu:~# dpkg -l | grep openipmi
  ii  openipmi 2.0.18-0ubuntu7.1 amd64
  Intelligent Platform Management Interface (for servers)
  root@ism-ubuntu:~#
  ```

- **Could not start the iDRAC Service Module service or even after starting iDRAC Service Module Service it shows not running status**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Signs</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>The iDRAC Service Module debian package is force installed by ignoring dependency failures.</td>
<td></td>
<td>Please install all the dependencies during install.</td>
</tr>
<tr>
<td>The IPv4 network stack is disabled in the OS</td>
<td>iDRAC Service Module uses IPv4 inet sockets. Please enable IPv4 networking.</td>
<td></td>
</tr>
<tr>
<td>Missing “cdc_ether” and “usbnet” drivers</td>
<td>These drivers are required for a functional Ethernet over USB emulation which is used by iDRAC Service Module. Default configuration should always have this installed.</td>
<td></td>
</tr>
<tr>
<td>The iDRAC Service Module service is disabled in iDRAC.</td>
<td>OS Log: Dec 10 08:41:38 ism-ubuntu dsm_ism_srvmgrd: 4588 ISM0011 [iSM@674.10892.2 EventID=&quot;8194&quot; EventCategory=&quot;Audit&quot; EventSeverity=&quot;warn&quot; IsPastEvent=&quot;false&quot; language=&quot;en-US&quot;] The server operating system (OS) is unable to start the iDRAC Service Module, because it is set to &quot;disabled&quot; in iDRAC</td>
<td>Enable the iDRAC Service Module – Using GUI - Go to Server-&gt;ServiceModule page to view the status. <strong>Using RACADM Command</strong> - &quot;racadm set idrac.servicemodule.ServiceModuleEnable 0&quot; and then start iDRAC Service Module service on the Host OS.</td>
</tr>
<tr>
<td>OS-to-iDRAC Passthru is disabled</td>
<td>OS Log:</td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>Dec 10 08:44:49 ism-ubuntu dsm_ism_srvmgrd: 4693 ISM0001 [ISM@674.10892.2 EventID=&quot;8257&quot; EventCategory=&quot;Audit&quot; EventSeverity=&quot;error&quot; IsPastEvent=&quot;false&quot; language=&quot;en-US&quot;] The iDRAC Service Module detected a OS to iDRAC Pass-through in the disabled mode. Switch the OS to iDRAC Pass-through to a USB NIC mode.</td>
<td>Please enable OS-to-iDRAC Passthru in USBNIC mode. The following RACADM command can be used:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;racadm set idrac.os-bmc.adminstate 1&quot;.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The iDRAC Service Module Service will automatically start on the Host OS.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OS-to-iDRAC Passthru is enabled in LOM mode.</th>
<th>OS Log:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 10 08:48:34 ism-ubuntu dsm_ism_srvmgrd: 4719 ISM0001 [ISM@674.10892.2 EventID=&quot;8257&quot; EventCategory=&quot;Audit&quot; EventSeverity=&quot;error&quot; IsPastEvent=&quot;false&quot; language=&quot;en-US&quot;] The iDRAC Service Module detected a OS to iDRAC Pass-through in the LOM mode. Switch the OS to iDRAC Pass-through to a USB NIC mode.</td>
<td>If you choose to start iDRAC Service Module, the please enable OS-to-iDRAC Passthru in USBNIC mode. The following command can be used:</td>
</tr>
<tr>
<td></td>
<td>&quot;racadm set idrac.os-bmc.PTModeusb-p2p&quot;.</td>
</tr>
<tr>
<td></td>
<td>The iDRAC Service Module Service will automatically start on the Host OS.</td>
</tr>
</tbody>
</table>

| iDRAC minimum firmware version required not met | install the latest iDRAC firmware. Minimum version required is 1.57.57 or later. |
3 Frequently Asked Questions

This section lists some frequently asked questions about the iDRAC Service Module.

- **Do I need to uninstall Open Manage Server Administrator before installing or running the iDRAC Service Module?**
  No. Before you install or run the iDRAC Service Module, ensure that you have stopped the features of Server Administrator that the iDRAC Service Module provide. Uninstalling the Server Administrator is not required.

- **How do I know that the iDRAC Service Module is installed on my system?**
  To know if the iDRAC Service Module is installed on your system, type the command `"/etc/init.d/dcismeng status"`. If the iDRAC Service Module is installed and running, the status displayed will be running.

- **How do I know which version of the iDRAC Service Module I have in my system?**
  The `dpkg` command can be used to know about the installed iDRAC Service Module version. Type `dpkg -s dcismon` the CLI.

- **What is the minimum permission level required to install the iDRAC Service Module?**
  To install the iDRAC Service Module, you must have root level privileges.

- **Whenever I try to install the iDRAC Service Module, I get an error message** *This is not a supported server. Consult the User Guide for additional information about the supported servers. What should I do now?*
  Before installing the iDRAC Service Module, ensure that the server or the system on which the iDRAC Service Module is to be installed is a Dell’s 12th generation PowerEdge server or later. Also make sure that you have a 64-bit system.

- **I see the message** *The iDRAC Service Module is unable to communicate with iDRAC using the OS to iDRAC Pass-through channel in the OS log, even when the OS to iDRAC Pass-through over USBNIC is configured properly. Why do I get this message?*
  iDRAC Service Module uses the OS to iDRAC Pass-through over USBNIC to establish communication with iDRAC. Sometimes, the communication is not established though the USBNIC interface is configured with correct IP endpoints. This may happen when the Host OS routing table has multiple entries for the same destination mask and the USBNIC destination is not listed as the first one in routing order.

<table>
<thead>
<tr>
<th>Destination</th>
<th>Gateway</th>
<th>Genmask</th>
<th>Flags</th>
<th>Iface</th>
</tr>
</thead>
<tbody>
<tr>
<td>default</td>
<td>10.94.148.1</td>
<td>0.0.0.0</td>
<td>U</td>
<td>em1</td>
</tr>
<tr>
<td>10.94.148</td>
<td>0.0.0.0</td>
<td>255.255.255.0</td>
<td>U</td>
<td>em1</td>
</tr>
<tr>
<td>link-local</td>
<td>0.0.0.0</td>
<td>255.255.255.0</td>
<td>U</td>
<td>iDRAC</td>
</tr>
<tr>
<td>link-local</td>
<td>0.0.0.0</td>
<td>255.255.255.0</td>
<td>U</td>
<td>iDRAC</td>
</tr>
</tbody>
</table>

In the example idrac is the USBNIC interface. The link-local destination mask is repeated and the USBNIC is not the first one in order. This results in the connectivity issue between iDRAC Service Module and iDRAC over the OS to iDRAC Pass-through. To troubleshoot the connectivity issue, you can perform one of the following steps:
Ensure that the iDRAC USBNIC IPv4 address (by default it’s 169.254.0.1) is reachable from the Host OS. If not:

- Change the iDRAC USBNIC address on a unique destination mask.
- Delete the unwanted entries from the routing table to ensure USBNIC is chosen by route when the host wants to reach the iDRAC USBNIC IPv4 address.

- **Where do I find the Replicated “LifeCycle Controller Log” on my OS?**
  The default syslog location is “/var/log/syslog”. If syslog is configured for remote logging, then the remote logging location will have the logs.