

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

Competitive Access Systems, Inc.,

Plaintiff,

- vs. -

**Oracle Corporation and
Oracle America, Inc.,**

Defendants.

Civil Action No. 2:22-CV-287-JRG-RSP

Jury Trial Demanded

**PLAINTIFF’S DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT
CONTENTIONS AND DOCUMENT PRODUCTION ACCOMPANYING DISCLOSURE
PURSUANT TO P.R. 3-1 & 3-2**

Pursuant to Patent Rules 3-1 and 3-2, Plaintiff Competitive Access Systems, Inc. (“CAS” or “Plaintiff”) hereby provides its Disclosure of Asserted Claims and Infringement Contentions and its Document Production Accompanying Disclosure against Defendants Oracle Corporation and Oracle America, Inc. (collectively “Oracle” or “Defendants”).

Plaintiff presents these Infringement Contentions based on Plaintiff’s analysis of the facts currently known and based on Plaintiff’s review of certain publicly available information. Plaintiff reserves the right to amend or further supplement these disclosures—including to supplement its infringement contentions pursuant to P.R. 3-6—with additional information learned in the course of discovery or further investigation concerning Oracle’s products, services, and/or source code sufficient to show the operation of Oracle’s products and/or services.

I. CAS'S P.R. 3-1 DISCLOSURES

A. P.R. 3-1(a): Infringed Claims

Subject to ongoing discovery and investigation, CAS asserts that Oracle infringes literally and/or under the doctrine of equivalents on:

- i. Claims 1–4 and 7–13 of U.S. Patent No. 8,228,801 (the “’801 Patent”) (collectively, “Asserted Claims of the ’801 Patent”) directly under 35 U.S.C. § 271(a) by making, using, offering to sell and/or selling the Accused Instrumentalities set forth in Part I.B. below. Additionally, Oracle indirectly infringes under 35 U.S.C. § 271(b) and (c) by inducing and/or contributing to the infringement of its customers, wherein the underlying infringement is the use of the Accused Instrumentalities which infringe the Asserted Claims of the ’801 Patent.
- ii. Claims 1–12 and 21–22 of U.S. Patent No. 9,350,649 (the “’649 Patent”) (collectively, “Asserted Claims of the ’649 Patent”) directly under 35 U.S.C. § 271(a) by making, using, offering to sell and/or selling the Accused Instrumentalities set forth in Part I.B. below. Additionally, Oracle indirectly infringes under 35 U.S.C. § 271(b) and (c) by inducing and/or contributing to the infringement of its customers, wherein the underlying infringement is the use of the Accused Instrumentalities which infringe the Asserted Claims of the ’649 Patent.
- iii. Claims 1 and 3–7 of U.S. Patent No. 10,868,908 (the “’908 Patent”) (collectively, “Asserted Claims of the ’908 Patent”) directly under 35 U.S.C. § 271(a) by making, using, offering to sell and/or selling the Accused Instrumentalities set forth in Part I.B. below. Additionally, Oracle indirectly infringes under 35 U.S.C. § 271(b) and (c) by inducing and/or contributing to the infringement of its customers, wherein the underlying

infringement is the use of the Accused Instrumentalities which infringe the Asserted Claims of the '908 Patent.

CAS reserves the right to supplement its position as to infringement following further discovery and/or claim construction.

B. P.R. 3-1(b): Accused Instrumentalities

Subject to ongoing discovery and investigation, and based on present information and belief, CAS contends that the Asserted Claims of the '801 Patent, the Asserted Claims of the '649 Patent, and the Asserted Claims of the '908 Patent are infringed by Oracle's products and services as identified in the charts attached hereto as Exhibits A–F, respectively, ("Accused Instrumentalities"):

- i. **The '801 Patent:** The following Accused Instrumentalities infringe the asserted claims of the '801 Patent: Oracle's MPTCP Products installed on a device, including, for example, Oracle Solaris, Oracle Linux 8.3, Oracle Linux 8.4, Oracle Linux 8.5, Oracle Linux 8.6, Oracle Linux 9, and operating systems that operate in a similar manner installed on a device, and Oracle SD-WAN Productions, including, for example, the Talari E50 Appliance, Talari E100 Appliance, Talari D2000 Appliance, Talari D6000 Appliance, Talari T5000 Appliance, and devices that operate in a similar manner, Oracle SD-WAN Virtual Appliances, Oracle SD-WAN Edge, Oracle SD-WAN Aware, Oracle SD-WAN Orchestration Cloud Service, Oracle SD-WAN, and devices and software that operate in a similar manner.
- ii. **The '649 Patent:** The following Accused Instrumentalities infringe the asserted claims of the '649 Patent: Oracle's MPTCP Products installed on a device, including, for example, Oracle Solaris, Oracle Linux 8.3, Oracle Linux 8.4, Oracle Linux 8.5, Oracle Linux 8.6,

Oracle Linux 9, and operating systems that operate in a similar manner installed on a device, and Oracle SD-WAN Productions, including, for example, the Talari E50 Appliance, Talari E100 Appliance, Talari D2000 Appliance, Talari D6000 Appliance, Talari T5000 Appliance, and devices that operate in a similar manner, Oracle SD-WAN Virtual Appliances, Oracle SD-WAN Edge, Oracle SD-WAN Aware, Oracle SD-WAN Orchestration Cloud Service, Oracle SD-WAN, and devices and software that operate in a similar manner.

- iii. **The '908 Patent:** The following Accused Instrumentalities infringe the asserted claims of the '908 Patent: Oracle's MPTCP Products installed on a device, including, for example, Oracle Solaris, Oracle Linux 8.3, Oracle Linux 8.4, Oracle Linux 8.5, Oracle Linux 8.6, Oracle Linux 9, and operating systems that operate in a similar manner installed on a device, and Oracle SD-WAN Productions, including, for example, the Talari E50 Appliance, Talari E100 Appliance, Talari D2000 Appliance, Talari D6000 Appliance, Talari T5000 Appliance, and devices that operate in a similar manner, Oracle SD-WAN Virtual Appliances, Oracle SD-WAN Edge, Oracle SD-WAN Aware, Oracle SD-WAN Orchestration Cloud Service, Oracle SD-WAN, and devices and software that operate in a similar manner.

Plaintiff reserves the right to supplement its infringement contentions to identify additional products and/or services, if necessary, when it is provided with non-public documents and/or source code from third parties and/or Oracle via the discovery process.

C. P.R. 3-1(c): Preliminary Infringement Charts

Subject to ongoing discovery and investigation, and based on present information and belief, Plaintiff contends that each element of each infringed claim is found within each Accused

Instrumentality as shown in the preliminary infringement charts attached hereto as Exhibits A–F and incorporated herein in its entirety. Plaintiff’s identification in the claim charts is exemplary and based upon public information currently available to Plaintiff.

Plaintiff reserves the right to amend its asserted claims and infringement contentions pursuant to P.R. 3-6 as discovery progresses and additional information is gathered.

D. P.R. 3-1(d): Literal Infringement and Infringement Under the Doctrine of Equivalents

Subject to ongoing discovery and investigation, and based on available information obtained to date, Plaintiff hereby contends that each element of each asserted claim is literally present in each of the Accused Instrumentalities as specifically shown in Exhibits A–F unless otherwise stated in those exhibits. As indicated above, discovery is necessary to further develop Plaintiff’s infringement positions—either literal or under the doctrine of equivalents—and the Court has yet to issue a claim construction order. Pursuant to P.R. 3-6, Plaintiff expressly reserves the right to amend and supplement its position on whether there is infringement under the doctrine of equivalents of any element of any asserted claim after further discovery from Oracle (and/or third parties) and/or pending this Court’s claim construction order.

E. P.R. 3-1(e): Priority Dates

- i. The ’801 Patent was filed on October 19, 2009 as U.S. Patent Application Serial No. 12/581,852. The ’801 Patent is entitled to priority to at least the following applications: U.S. Patent Application Serial No. 10/686,375, filed October 14, 2003, and U.S. Provisional Patent Application No. 60/418,521, filed on October 15, 2002. The ’801 Patent is entitled to a priority date of at least October 15, 2002.
- ii. The ’649 Patent was filed on October 11, 2014 as U.S. Patent Application Serial No. 14/512,414. The ’649 Patent is entitled to priority to at least the following applications:

U.S. Patent Application Serial No. 13/531,294, filed on June 22, 2012, U.S. Patent Application Serial No. 12/581,852, filed October 19, 2009, U.S. Patent Application Serial No. 10/686,375, filed October 14, 2003, and U.S. Provisional Patent Application No. 60/418,521, filed October 15, 2002. The '649 Patent is entitled to a priority date of at least October 15, 2002.

- iii. The '908 Patent was filed on May 23, 2016 as U.S. Patent Application Serial No. 15/161,787. The '908 Patent is entitled to priority to at least the following applications: U.S. Patent Application Serial No. 14/512,414, filed October 11, 2014, U.S. Patent Application Serial No. 13/531,294, filed on June 22, 2012, U.S. Patent Application Serial No. 12/581,852, filed October 19, 2009, U.S. Patent Application Serial No. 10/686,375, filed October 14, 2003, and U.S. Provisional Patent Application No. 60/418,521, filed October 15, 2002. The '908 Patent is entitled to a priority date of at least October 15, 2002.

F. P.R. 3-1(f): Right to Rely on Plaintiff's Own Instrumentality

CAS does not contend that it practices the Asserted Claims of the '801 Patent, the '649 Patent, or the '908 Patent.

II. DOCUMENT PRODUCTION ACCOMPANYING DISCLOSURE

A. Documents Responsive to P.R. 3-2(a)

Plaintiff does not presently possess any relevant, non-privileged documents responsive to P.R. 3-2(a). Plaintiff will supplement this response should any relevant, non-privileged documents be identified in the future.

B. Documents Responsive to P.R. 3-2(b)

Pursuant to P.R. 3-2(b), Plaintiff has produced a document under the following Bates Number: CAS_ORACLE000001. Plaintiff is continuing its investigation and will supplement this response should any relevant, non-privileged documents be identified in the future.

C. Documents Responsive to P.R. 3-2(c)

Pursuant to P.R. 3-2(c), copies of the file history of the '801 Patent, the '649 Patent, and the '908 Patent have been produced under the following Bates Numbers: CAS_ORACLE000002 to CAS_ORACLE001775.

III. CONCLUSION

The information contained in these disclosures is based on Plaintiff's analysis of the facts currently known to it and based on Plaintiff's review of public information reasonably available to it. Additional pertinent information about Oracle's Accused Instrumentalities is not available without engaging in further discovery. Thus, Plaintiff reserves the right to supplement, modify, and/or amend these disclosures as new information becomes available, and discovery progresses. Plaintiff anticipates that additional facts and relevant documents will be uncovered that will warrant supplementing and/or amending these disclosures.

Dated: November 3, 2022

Respectfully submitted,

/s/ James Shimota

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document was served on November 3, 2022 to counsel of record for Oracle via email at the following addresses:

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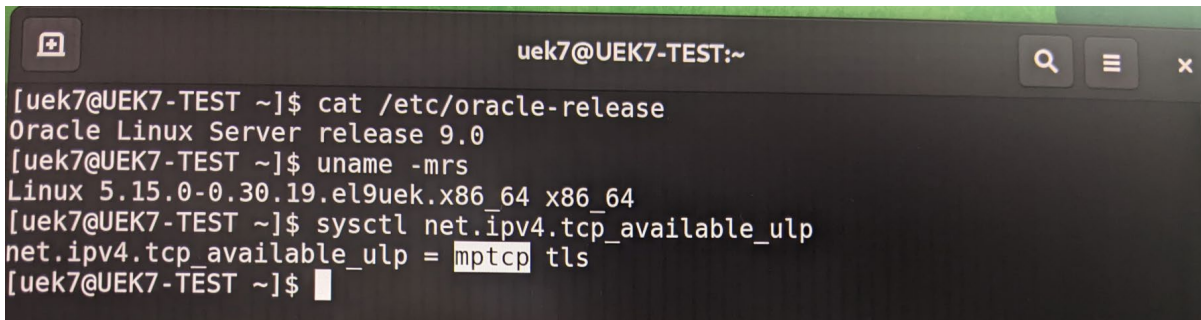
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Exhibit A

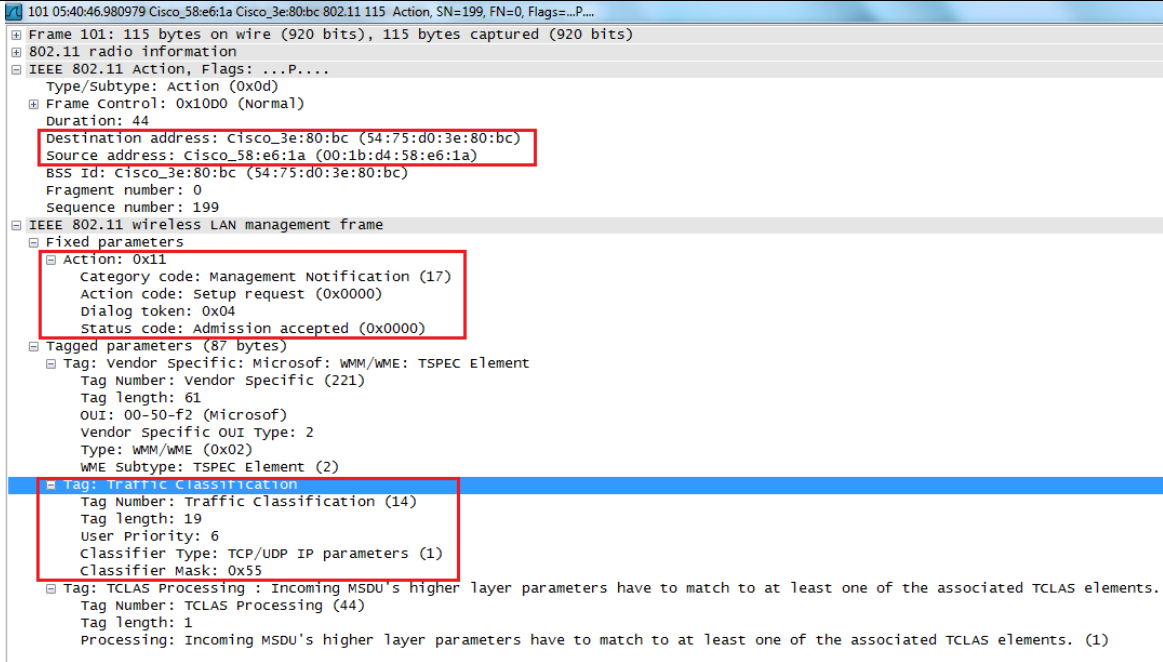
Infringement of U.S. Patent No. 8,228,801 by Oracle MPTCP Products

#	U.S. Patent No. 8,228,801	Oracle MPTCP Products
1a	1. A communications device that is capable of providing broadband communications services, comprising:	The Oracle MPTCP Products implement the claimed communication device by, for example, having Oracle Solaris, Oracle Linux 8.3, Oracle Linux 8.4, Oracle Linux 8.5, Oracle Linux 8.6, Oracle Linux 9, and operating systems that operate in a similar manner installed on a device. By way of example, Oracle Linux 9 is charted herein. The Oracle MPTCP Products constitute a communications device that is capable of providing broadband communications services as described below. For example, as shown in the below screenshot, the Oracle MPTCP Products provide broadband communication services. The Oracle MPTCP Products comply with the IETF 6824 standard.  The screenshot shows a terminal window titled 'uek7@UEK7-TEST:~'. The user has executed the following commands and received the following output: <pre>[uek7@UEK7-TEST ~]\$ cat /etc/oracle-release Oracle Linux Server release 9.0 [uek7@UEK7-TEST ~]\$ uname -mrs Linux 5.15.0-0.30.19.el9uek.x86_64 x86_64 [uek7@UEK7-TEST ~]\$ sysctl net.ipv4.tcp_available_ulp net.ipv4.tcp_available_ulp = mptcp tls [uek7@UEK7-TEST ~]\$</pre>
1b	at least one connection for connecting to a communications network;	The Oracle MPTCP Products include at least one connection for connecting to a communications network as described below: Network interfaces are identified by a name that combines a prefix and a suffix. The prefix depends on the type of network interface: Ethernet network interfaces: en; Wireless local area network (LAN) interfaces: wl; Wireless wide area network (WAN) interfaces: ww (https://docs.oracle.com/en/operating-systems/oracle-linux/9/network/network-ConfiguringtheSystemsNetwork.html#topic_syd_ypj_dtb, section 1).

#	U.S. Patent No. 8,228,801	Oracle MPTCP Products
1c	at least one wireless interface for connecting wirelessly to at least one remote communications device;	The Oracle MPTCP Products include at least one wireless interface for connecting wirelessly to at least one remote communications device as described below: Network interfaces are identified by a name that combines a prefix and a suffix. The prefix depends on the type of network interface: Ethernet network interfaces: en; Wireless local area network (LAN) interfaces: wl; Wireless wide area network (WAN) interfaces: ww. (https://docs.oracle.com/en/operating-systems/oracle-linux/9/network/network-ConfiguringtheSystemsNetwork.html#topic_syd_ypj_dtb, section 1).
1d	and a processor that	The Oracle MPTCP Products include a processor as described below: Oracle is pleased to announce Oracle Linux 9 general availability for Intel-64/AMD-64 (x86_64) and Arm (aarch64). This release includes the Unbreakable Enterprise Kernel Release 7 (UEK R7). (https://blogs.oracle.com/linux/post/announcing-oracle-linux-9-general-availability).
1e	requests the at least one remote communications device to assist in transferring data,	The Oracle MPTCP Products request the at least one remote communications device to assist in transferring data as described below: At a high level, an MPTCP implementation will take one input data stream from an application, and split it into one or more subflows, with sufficient control information to allow it to be reassembled and delivered reliably and in order to the recipient application. (https://datatracker.ietf.org/doc/rfc6824/, Section 3.3). Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As

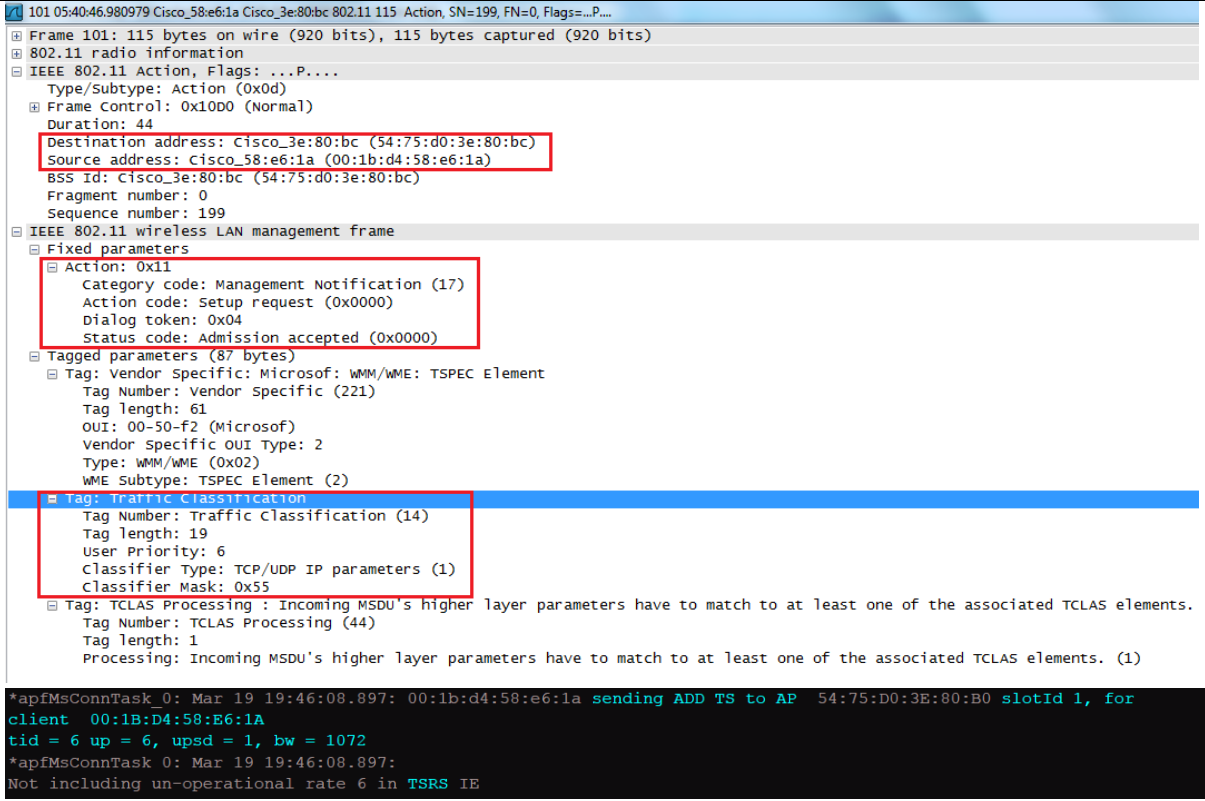
#	U.S. Patent No. 8,228,801	Oracle MPTCP Products
		additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
1f	sends a request to the at least one remote communications device for requesting use of a portion of unused bandwidth of the at least one remote communications device,	The Oracle MPTCP Products send a request to the at least one remote communications device for requesting use of a portion of unused bandwidth of the at least one remote communications device as described below: More specifically, the Oracle MPTCP Products comply with the 802.11 standards. For example, the Oracle MPTCP Products provide wpa_supPLICANT. wpa_supPLICANT can be used as a roaming daemon to automatically connect to different networks as a device travels between locations. (See https://www.debuntu.org/how-to-wifi-roaming-with-wpa-suplicant/). The 802.11k standard allows the Oracle MPTCP Products to search nearby AP for optimized Wi-Fi network roaming. The Oracle MPTCP Products associated with an AP sends a request for a list of nearby APs to acquire information on how much bandwidth those APs have. More specifically, the request to the at least one communication device is relayed by the associated AP to other APs in the same network. To facilitate roaming, an 11k capable client associated with an AP sends a request for a list of neighbor APs. The request is in the form of an 802.11 management frame known as an action packet.... The neighbor list includes information about BSSID, channel, and operation details of the neighboring radios. (802.11r, 802.11k, and 802.11w Deployment Guide, Cisco IOS-XE Release 3.3). An access point or a WLAN switch can request from a client or another access point data about channel load or how long the channel was used during a given time. A client, or some other access point, called a channel monitoring station, monitors one or more channels and collects load information for a period called channel monitoring duration. (https://www.manospanaousis.com/publication/panaousis2008optimizing/).

#	U.S. Patent No. 8,228,801	Oracle MPTCP Products
		ACCESS POINT Channel Load Request 1. Channel number 2. Channel band CHANNEL MONITORING STATION Channel Load Report 1. Channel number 2. Channel band 3. Actual start time of channel monitoring 4. Channel monitoring duration 5. Channel load (https://www.manospanaousis.com/publication/panaousis2008optimizing/). TSPEC allows 802.11 wireless client to signal its traffic requirement to the AP. The client includes the TSPEC in the add traffic stream (ADDTs). TSPEC from client include data rate, packet size, number of stream & more. 802.11e standard specifies TSPEC to provide the management link between higher QoS protocols & the channel access function. Channel Access functions are defined by EDCA (Enhanced Distributed Channel Access) mechanism. (https://mrnciew.com/2013/03/19/tspec/).

#	U.S. Patent No. 8,228,801	Oracle MPTCP Products
		 <pre> 101 05:40:46.980979 Cisco_58:e6:1a Cisco_3e:80:bc 802.11 115 Action, SN=199, FN=0, Flags=...P... Frame 101: 115 bytes on wire (920 bits), 115 bytes captured (920 bits) 802.11 radio information IEEE 802.11 Action, Flags: ...P... Type/Subtype: Action (0x0d) Frame Control: 0x10D0 (Normal) Duration: 44 Destination address: Cisco_3e:80:bc (54:75:d0:3e:80:bc) Source address: Cisco_58:e6:1a (00:1b:d4:58:e6:1a) BSS Id: Cisco_3e:80:bc (54:75:d0:3e:80:bc) Fragment number: 0 Sequence number: 199 IEEE 802.11 wireless LAN management frame Fixed parameters Action: 0x11 Category code: Management Notification (17) Action code: Setup request (0x0000) Dialog token: 0x04 Status code: Admission accepted (0x0000) Tagged parameters (87 bytes) Tag: Vendor Specific: Microsof: WMM/WME: TSPEC Element Tag Number: Vendor specific (221) Tag length: 61 OUI: 00-50-f2 (Microsof) Vendor specific OUI Type: 2 Type: WMM/WME (0x02) WME Subtype: TSPEC Element (2) Tag: Traffic Classification Tag Number: Traffic Classification (14) Tag length: 19 User Priority: 6 Classifier Type: TCP/UDP IP parameters (1) Classifier Mask: 0x55 Tag: TCLAS Processing : Incoming MSDU's higher layer parameters have to match to at least one of the associated TCLAS elements. Tag Number: TCLAS Processing (44) Tag length: 1 Processing: Incoming MSDU's higher layer parameters have to match to at least one of the associated TCLAS elements. (1) *apfMsConnTask 0: Mar 19 19:46:08.897: 00:1b:d4:58:e6:1a sending ADD TS to AP 54:75:D0:3E:80:B0 slotId 1, for client 00:1B:D4:58:E6:1A tid = 6 up = 6, upsd = 1, bw = 1072 *apfMsConnTask 0: Mar 19 19:46:08.897: Not including un-operational rate 6 in TSRS IE </pre> (https://mrnciew.com/2013/03/19/tspec/). Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.

#	U.S. Patent No. 8,228,801	Oracle MPTCP Products
1g	receives a response from the at least one remote communications device, the response containing information about the portion of unused bandwidth,	The Oracle MPTCP Products receive a response from the at least one remote communications device, the response containing information about the portion of unused bandwidth as described below: More specifically, the Oracle MPTCP Products comply with the 802.11 standards. For example, the Oracle MPTCP Products provide wpa_supplicant. wpa_supplicant can be used as a roaming daemon to automatically connect to different networks as a device travels between locations. (See https://www.debuntu.org/how-to-wifi-roaming-with-wpa-supPLICANT/). The Oracle MPTCP Products support the 802.11k standard to receive a response from APs indicating available bandwidth, which helps the Oracle MPTCP Products determine the APs for the next roam when the signal strength of the current AP weakens. To facilitate roaming, an 11k capable client associated with an AP sends a request for a list of neighbor APs. The request is in the form of an 802.11 management frame known as an action packet.... The neighbor list includes information about BSSID, channel, and operation details of the neighboring radios. (https://www.manospanaousis.com/publication/panaousis2008optimizing/). After the channel monitoring process, the results are reported to the requesting entity through a channel load report,...As a result, the station that issued the request is informed about the load of a channel. In other words this parameter gives an idea of how many free slots a new station would have at its disposal. (https://www.manospanaousis.com/publication/panaousis2008optimizing/).

#	U.S. Patent No. 8,228,801	Oracle MPTCP Products
		The diagram shows an ACCESS POINT (represented by a radio tower icon) and a CHANNEL MONITORING STATION (represented by a laptop icon). A red arrow points from the Access Point to the Channel Monitoring Station, labeled Channel Load Request with the following details: 1. Channel number 2. Channel band A blue arrow points from the Channel Monitoring Station back to the Access Point, labeled Channel Load Report with the following details: 1. Channel number 2. Channel band 3. Actual start time of channel monitoring 4. Channel monitoring duration 5. Channel load (https://www.manospanaousis.com/publication/panaousis2008optimizing/). The AP responds with a list of neighbor APs on the same WLAN with their Wi-Fi channel numbers. The AP response is also an action packet. From the response frame, the client knows which APs are candidates for the next roam. (802.11r, 802.11k, and 802.11w Deployment Guide, Cisco IOS-XE Release 3.3). In 802.11e, after receiving a request to use a portion of unused bandwidth, an AP responds to Tspec containing information about the portion of unused bandwidth. Below is an exemplary image of the response from the AP indicating available bandwidth.

#	U.S. Patent No. 8,228,801	Oracle MPTCP Products
		 The screenshot displays a Wireshark packet capture of an IEEE 802.11 wireless LAN management frame. The frame is identified as Action, SN=199, FN=0. The destination address is Cisco_3e:80:bc (54:75:d0:3e:80:bc) and the source address is Cisco_58:e6:1a (00:1b:d4:58:e6:1a). The action code is Setup request (0x0000). The frame includes a Traffic Classification tag with a User Priority of 6 and a Classifier Mask of 0x55. Below the packet details, a log entry shows the client 00:1B:D4:58:E6:1A sending ADD TS to AP 54:75:D0:3E:80:B0 slotId 1, for tid = 6 up = 6, upsd = 1, bw = 1072. https://mrncciew.com/2013/03/19/tspec/ Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.

#	U.S. Patent No. 8,228,801	Oracle MPTCP Products
1h	selects the at least one remote communications device with unused bandwidth,	The Oracle MPTCP Products select the at least one remote communications device with unused bandwidth as described below: More specifically, the Oracle MPTCP Products comply with the 802.11 standards. For example, the Oracle MPTCP Products provide wpa_supplicant. wpa_supplicant can be used as a roaming daemon to automatically connect to different networks as a device travels between locations. (See https://www.debuntu.org/how-to-wifi-roaming-with-wpa-suplicant/). On informed belief, any of the APs can be selected, including those with unused bandwidth. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
1i	sends control information to the at least one remote communications device for participating in a multilink connection,	The Oracle MPTCP Products sends control information to the at least one remote communications device for participating in a multilink connection as described below: More specifically, the Oracle MPTCP Products is configured to send the control information (e.g., token, nonce) to AP. Host A initiates a new subflow between one of its addresses and one of Host B's addresses. The token -- generated from the key -- is used to identify which MPTCP connection it is joining, and the HMAC is used for authentication. The Hash-based Message Authentication Code (HMAC) uses the keys exchanged in the MP_CAPABLE handshake, and the random numbers (nonces) exchanged in these MP_JOIN options. MP_JOIN also contains flags and an Address

#	U.S. Patent No. 8,228,801	Oracle MPTCP Products
		ID that can be used to refer to the source address without the sender needing to know if it has been changed by a NAT. <pre> Host A Host B ----- ----- MP_JOIN -> [B's token, A's nonce, A's Address ID, flags] <- MP_JOIN [B's HMAC, B's nonce, B's Address ID, flags] ACK + MP_JOIN -> [A's HMAC] <- ACK </pre> (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2). Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
1j	receives packets from the at least one remote communications device and aggregates the data from the at least one remote communications device with data transfers from the at least one connection to increase	The Oracle MPTCP Products receive packets from the at least one remote communications device and aggregate the data from the at least one remote communications device with data transfers from the at least one connection to increase data bandwidth for the communications device as described below: At a high level, an MPTCP implementation will take one input data stream from an application, and split it into one or more subflows, with sufficient control information to allow it to be reassembled and delivered reliably and in order to the recipient application.

#	U.S. Patent No. 8,228,801	Oracle MPTCP Products
	data bandwidth for the communications device.	(https://datatracker.ietf.org/doc/rfc6824/, Section 3.3). Using recent hardware and 3 dual-port 10Gig NICs, Multipath TCP is able to transmit a single data-stream at the rate of up to 51.8 Gbit/s. (http://multipath-tcp.org/pmwiki.php?n=Main.50Gbps). More specifically, the Oracle MPTCP Products use both the at least one connection (e.g. the Ethernet interface) and the at least one wireless interface (via the at least one remote communications device) to transfer data using MPTCP. For example, a first subflow for an application can be assigned to the Ethernet interface and a second subflow can be assigned to the wireless interface. The first subflow and second subflow are reassembled (e.g. aggregated) and delivered to the application. MPTCP can be used to increase the bandwidth for data communications.
2	2. The communications device of claim 1, wherein the processor combines the data bandwidth of the at least one connection with the at least one remote communications device.	The Oracle MPTCP Products combine the data bandwidth of the at least one connection with the at least one remote communications device as described below: At a high level, an MPTCP implementation will take one input data stream from an application, and split it into one or more subflows, with sufficient control information to allow it to be reassembled and delivered reliably and in order to the recipient application. (https://datatracker.ietf.org/doc/rfc6824/, Section 3.3). Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.

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3	3. The communications device of claim 1, wherein the at least one remote communications device is at least one of a residential communications gateway, a cable modem, a digital subscriber line, a wireless device, a neighborhood access point device, a Wi-Fi device and a cellular phone.	The Oracle MPTCP Products include the at least one remote communications device is at least one of a residential communications gateway, a cable modem, a digital subscriber line, a wireless device, a neighborhood access point device, a Wi-Fi device and a cellular phone as described below: At a high level, an MPTCP implementation will take one input data stream from an application, and split it into one or more subflows, with sufficient control information to allow it to be reassembled and delivered reliably and in order to the recipient application. (https://datatracker.ietf.org/doc/rfc6824/, Section 3.3). More specifically, the Oracle MPTCP Products can use a Wi-Fi network provided by remote communications device (e.g., a cellular hotspot providing a Wi-Fi network or a computing device providing a wireless network). When the Oracle MPTCP Products leave the area covered by the first Wi-Fi network, the Oracle MPTCP Products switches automatically to a second Wi-Fi network in the new area. For example, the Oracle MPTCP Products provide wpa_supplicant. wpa_supplicant can be used as a roaming daemon to automatically connect to different networks as a device travels between locations. On informed belief, the different networks can include at least one remote communications device is at least one of a residential communications gateway, a cable modem, a digital subscriber line, a wireless device, a neighborhood access point device, a Wi-Fi device and a cellular phone. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.

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4	4. The communications device of claim 1, wherein the processor allocates the at least one remote communications device into a multilink group transfer.	The Oracle MPTCP Products allocate the at least one remote communications device into a multilink group transfer as described below: The exchange of keys in the MP_CAPABLE handshake provides material that can be used to authenticate the endpoints when new subflows will be set up. Additional subflows begin in the same way as initiating a normal TCP connection, but the SYN, SYN/ACK, and ACK packets also carry the MP_JOIN option. Host A initiates a new subflow between one of its addresses and one of Host B's addresses. The token -- generated from the key -- is used to identify which MPTCP connection it is joining, and the HMAC is used for authentication. The Hash-based Message Authentication Code (HMAC) uses the keys exchanged in the MP_CAPABLE handshake, and the random numbers (nonces) exchanged in these MP_JOIN options. MP_JOIN also contains flags and an Address ID that can be used to refer to the source address without the sender needing to know if it has been changed by a NAT. <pre> Host A Host B ----- ----- MP_JOIN MP_JOIN [B's token, A's nonce, [B's HMAC, B's nonce, A's Address ID, flags] B's Address ID, flags] <- ACK + MP_JOIN ACK [A's HMAC] <- </pre> (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2).

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		Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
7	7. The communications device of claim 1, wherein the processor determines how many remote communications devices are located in a transmission range.	The Oracle MPTCP Products determine how many remote communications devices are located in a transmission range as described below: The Oracle MPTCP Products provide wpa_supplicant. wpa_supplicant can be used as a roaming daemon to automatically connect to different networks as a device travels between locations. On informed belief, this includes determining the number of remote communication devices located within a transmission range. (https://www.debuntu.org/how-to-wifi-roaming-with-wpa-suplicant/). Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
8	8. The communications device of claim 1, wherein the communications network is at least one of a public wired network, a private wired	On informed belief, the communications network is one or more of a public wired network, a private wired network, a public wireless network, and a private wireless network.

#	U.S. Patent No. 8,228,801	Oracle MPTCP Products
	network, a public wireless network, and a private wireless network.	
9	9. The communications device of claim 1, wherein the communications network is at least one of a public switched telephone network, a cable network, a wireless network and a fiber network.	On informed belief, the communications network is one or more of a cable network, a wireless network, and a fiber network.

Exhibit B

Infringement of U.S. Patent No. 8,228,801 by Oracle SD-WAN Products

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
10a	10. A communications device that is capable of providing broadband communications services, comprising:	The Oracle SD-WAN Products, including the Talari E50 Appliance, Talari E100 Appliance, Talari D2000 Appliance, Talari D6000 Appliance, Talari T5000 Appliance, and devices that operate in a similar manner, Oracle SD-WAN Virtual Appliances, Oracle SD-WAN Edge, Oracle SD-WAN Aware, Oracle SD-WAN Orchestration Cloud Service, Oracle SD-WAN, and devices that operate in a similar manner, constitute a communications device that is capable of providing broadband communications services as described below. The Oracle SD-WAN Products include the T5000 Appliance, which “delivers up to 3.0 Gbps uplink/3.0 Gbps downlink (6 Gbps total) across up to 8 WAN connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1). “Oracle SD-WAN Release 2.5 incorporates the T5000 seamlessly into the entire family of appliances offered by Oracle. Basic Oracle SD-WAN Edge appliances platform capabilities are listed below.” (Oracle SD-WAN Edge Features Guide, p. 3-1). More specifically, the Oracle SD-WAN Products include a variety of devices, such as the Talari T5000, that provide broadband communication services as described below.
10b	at least one connection for connecting to a network;	The Oracle SD-WAN Products include at least one connection for connecting to a network as described below. The Oracle SD-WAN Products includes the T5000 Appliance, which “delivers up to 3.0 Gbps uplink/3.0 Gbps downlink (6 Gbps total) across up to 8 WAN connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1).

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
		“A WAN Link provides for the description of individual Internet or Intranet connections of a Site to the WAN or direct connections to other Sites. Individual uses of a WAN Link would be used to describe connections such as: individual Cable, DSL, fiber or other Internet Service Providers; MPLS, IPSec or other site-to-site VPN connections; backup links such as Cellular or Advanced Wireless providers.” (Oracle SD-WAN Edge Features Guide, p. 24-12). More specifically, the communications device has at least one connection for connecting to a communications network.
10c	at least one wireless interface for connecting wirelessly to remote communications devices; and	The Oracle SD-WAN Products include at least one wireless interface for connecting wirelessly to remote communications devices as described below. The “T5000 runs the same software as other Oracle appliances while taking performance and scalability to the next level, supporting gigabits of WAN bandwidth across the union of private WAN links and public Internet connections and providing support for up to 128 branch connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1). “A WAN Link provides for the description of individual Internet or Intranet connections of a Site to the WAN or direct connections to other Sites. Individual uses of a WAN Link would be used to describe connections such as: individual Cable, DSL, fiber or other Internet Service Providers; MPLS, IPSec or other site-to-site VPN connections; backup links such as Cellular or Advanced Wireless providers.” (Oracle SD-WAN Edge Features Guide, p. 24-12). “Conduit Service (Conduit): A service that is a logical combination of one or more Paths. This is the typical service for enterprise, Site-to-Site Intranet traffic using the

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
		full value of the Talari WAN. Depending on the configuration, traffic is managed across multiple WAN Links to create an end-to-end tunnel.” (Oracle SD-WAN Implementation Guide, p. 7). Adaptive Bandwidth Detection “introduced in Edge 5.2 for users with VSAT, LOS, Microwave, 3G/4G/LTE WAN Links, whose available bandwidth varies based upon weather and atmosphere conditions, location, line of site obstructions, etc. It allows the Oracle Talari Appliance to adjust the bandwidth rate on the WAN Link dynamically based on a defined bandwidth range, to use the maximum amount available without marking the paths BAD.” (Oracle SD-WAN Edge Features Guide, p. 13-8). More specifically, the Oracle appliances (e.g. the T5000) can have at least one wireless interface for connecting to wireless WAN Links.
10d	a processor that requests the remote communications devices to transfer portions of data, sends a request to the remote communications devices for requesting use of a portion of unused bandwidth of each of the remote communications devices, receives a response from each of the remote communications devices, the response containing information about the portion of unused bandwidth for each of the remote communications devices, selects a group of the remote communications devices with a larger, combined, unused	The Oracle SD-WAN Products include a processor that requests the remote communications devices to transfer portions of data, sends a request to the remote communications devices for requesting use of a portion of unused bandwidth of each of the remote communications devices, receives a response from each of the remote communications devices, the response containing information about the portion of unused bandwidth for each of the remote communications devices, selects a group of the remote communications devices with a larger, combined, unused bandwidth, sends control information to the selected remote communications devices for participating in a multilink transfer, and receiving packets from the selected remote communications devices and combines and sequences the portions of the data from the remote communications devices with second data transferred from the at least one connection to increase data bandwidth for the communications device as described below.

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
	bandwidth, sends control information to the selected remote communications devices for participating in a multilink transfer, and receiving packets from the selected remote communications devices and combines and sequences the portions of the data from the remote communications devices with second data transferred from the at least one connection to increase data bandwidth for the communications device.	On informed belief, the T5000 includes at least one processor. “The Oracle SD-WAN Edge is engineered for maximum business impact in an enterprise network. This is achieved by creating failsafe WANs that offer superior application reliability, while unlocking the benefits of network resiliency and scalable bandwidth.” (Oracle SD-WAN Edge Datasheet, p. 2). “The dynamic conduit is a conduit between two Oracle SD-WAN Edge client sites that is not predefined in the Oracle SD-WAN Edge configuration file, but is created on-demand based on network traffic. From a user perspective, the advantage of a conduit between client sites is that traffic can flow directly from one client Oracle SD-WAN Edge site to a second client site without having to traverse the NCN or two conduits. In addition, the conduit is built and removed dynamically based on user defined traffic thresholds. These thresholds are defined in either packets per second (pps) or bandwidth (kbps).” (Oracle SD-WAN Edge Features Guide, p. 4-1).

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
		(Oracle SD-WAN Implementation Guide, p. 6). “SD-WAN Edge Network Settings allows for the configuration of global parameters that impact the operation of the entire SD-WAN Edge network.” (Oracle SD-WAN Edge Features Guide, p. 24-43). “Global Path Bandwidth Testing Settings allows for the configuration of global parameters that impacts path bandwidth testing operations on individual SD-WAN Edge.” (Oracle SD-WAN Edge Features Guide, p. 24-45). “In this example the NCN with the WAN-To-WAN option enabled will forward all routes to all client appliances within a WAN-To-WAN Forwarding Group. By default, all sites reside in the default WAN To-WAN Forwarding Group. The user

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
		can also define additional WAN-To-WAN Forwarding Groups as required. The groups are defined at the Global configuration level. The intermediate site will monitor the traffic flow between Client Sites to determine if the traffic level reaches the user defined threshold. If the traffic flow reaches the defined threshold, the Intermediate node will instruct the client nodes to establish a Dynamic Conduit.” (Oracle SD-WAN Edge Features Guide, p. 4-3). “WAN Link Mode: “On-Demand Standby: An on-demand standby WAN link is a standby WAN link that may be activated to supplement conduit bandwidth when the bandwidth provided by the primary WAN links in the conduit falls below the bandwidth threshold configured in conduit QoS Policy. In addition, if all primary WAN links are dead or disabled, an on-demand standby WAN link becomes active and user traffic is transmitted on it.” (Oracle SD-WAN Edge Features Guide, p. 24-14). “Oracle SD-WAN creates a cohesive and efficient collection of all physical links and interfaces, and aggregates them into a single, logical interface to create a virtual WAN conduit. The WAN conduit takes advantage of real-time intelligence encapsulated in the header of every packet the SD-WAN processes. It also supports 128b or 256b advanced encryption standard (AES) across all aggregated WAN paths. All WAN paths are managed unidirectionally so that every packet reliably reaches its destination.” (Five Ways SD-WAN is Transforming Cloud Connectivity White Paper, pp. 3-4). “Adaptive Bandwidth Detection “introduced in Edge 5.2 for users with VSAT, LOS, Microwave, 3G/4G/LTE WAN Links, whose available bandwidth varies based upon weather and atmosphere conditions, location, line of site obstructions, etc. It allows the Oracle Talari Appliance to adjust the bandwidth rate on the WAN Link

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
		dynamically based on a defined bandwidth range, to use the maximum amount available without marking the paths BAD.” (Oracle SD-WAN Edge Features Guide, p. 13-8). “SD-WAN Edge Network Settings allows for the configuration of global parameters that impact the operation of the entire SD-WAN Edge network.” (Oracle SD-WAN Edge Features Guide, p. 24-43). “Global Path Bandwidth Testing Settings allows for the configuration of global parameters that impacts path bandwidth testing operations on individual SD-WAN Edge.” (Oracle SD-WAN Edge Features Guide, p. 24-45). “In this example the NCN with the WAN-To-WAN option enabled will forward all routes to all client appliances within a WAN-To-WAN Forwarding Group. By default, all sites reside in the default WAN To-WAN Forwarding Group. The user can also define additional WAN-To-WAN Forwarding Groups as required. The groups are defined at the Global configuration level. The intermediate site will monitor the traffic flow between Client Sites to determine if the traffic level reaches the user defined threshold. If the traffic flow reaches the defined threshold, the Intermediate node will instruct the client nodes to establish a Dynamic Conduit.” (Oracle SD-WAN Edge Features Guide, p. 4-3). “WAN Link Mode: “On-Demand Standby: An on-demand standby WAN link is a standby WAN link that may be activated to supplement conduit bandwidth when the bandwidth provided by the primary WAN links in the conduit falls below the bandwidth threshold configured in conduit QoS Policy. In addition, if all primary WAN links are dead or disabled, an on-demand standby WAN link becomes active and user traffic is transmitted on it.” (Oracle SD-WAN Edge Features Guide, p. 24-14).

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
		Adaptive Bandwidth Detection “introduced in Edge 5.2 for users with VSAT, LOS, Microwave, 3G/4G/LTE WAN Links, whose available bandwidth varies based upon weather and atmosphere conditions, location, line of site obstructions, etc. It allows the Oracle Talari Appliance to adjust the bandwidth rate on the WAN Link dynamically based on a defined bandwidth range, to use the maximum amount available without marking the paths BAD.” (Oracle SD-WAN Edge Features Guide, p. 13-8). “The dynamic conduit is a conduit between two Oracle SD-WAN Edge client sites that is not predefined in the Oracle SD-WAN Edge configuration file, but is created on-demand based on network traffic. From a user perspective, the advantage of a conduit between client sites is that traffic can flow directly from one client Oracle SD-WAN Edge site to a second client site without having to traverse the NCN or two conduits. In addition, the conduit is built and removed dynamically based on user defined traffic thresholds. These thresholds are defined in either packets per second (pps) or bandwidth (kbps).” (Oracle SD-WAN Edge Features Guide, p. 4-1). “Oracle SD-WAN creates a cohesive and efficient collection of all physical links and interfaces, and aggregates them into a single, logical interface to create a virtual WAN conduit. The WAN conduit takes advantage of real-time intelligence encapsulated in the header of every packet the SD-WAN processes. It also supports 128b or 256b advanced encryption standard (AES) across all aggregated WAN paths. All WAN paths are managed unidirectionally so that every packet reliably reaches its destination.” (Five Ways SD-WAN is Transforming Cloud Connectivity White Paper, pp. 3-4). More specifically, the processors of the Oracle SD-WAN appliances provide requests to remote communications device to assist in transferring data. Each site in the Oracle

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
		SD-WAN has at least one appliance, such as a T5000. An appliance at a first site (e.g. the communications device) conducts a bandwidth test with appliances at other sites (e.g. remote communication devices) to determine the bandwidth available at at least one of the remote communication devices. The remote communication devices return a response containing information regarding the unused bandwidth as part of the global path bandwidth testing. Dynamic conduits can be created on-demand between a communications device and a remote communications device based on traffic thresholds (e.g. unused bandwidth). The communications device sends control information to the remote communication device to establish the dynamic conduit (e.g. a multilink connection) over one or more WAN links. Data (e.g. packets) transmitted over a conduit, including dynamic conduits, is communicated across one or more WAN links and aggregated in order to increase data bandwidth for the communications device. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.
11	11. The communications device of claim 10, wherein the processor creates and updates routing tables for each of the remote communications devices.	The processor creates and updates routing tables for each of the remote communications devices as described below. “In Oracle SD-WAN Edge release 2.3, the APNA allows a user to define routers so that they can be polled for routes using SNMPv2. Once the routes have been learned by the APNA, the user can define rules which will include or exclude the routes from

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
		the APNA route table. These routes will then be advertised or propagated to other APNAs within the Oracle SD-WAN Edge. Additional capabilities include the ability to continue polling the router for routes and, if a route is removed from the routing table of the router, propagate the topology change across the Oracle SD-WAN Edge. The polling intervals supported are “poll now,” “every 30 seconds,” “every minute,” or “every 5 minutes.” If the router that is probed is not reachable, the APNA can also be configured to purge the learned routes or maintain them.” (Oracle SD-WAN Edge Features Guide, p. 1-5). “The WAN To WAN (W-T-W) Forwarding Group is used to allow client sites to communicate through an intermediary site with each other. In previous releases only a single W-T-W forwarding groups was allowed. In current releases this number is unrestricted. When enabled the routing tables are shared between the site with W-T-W forwarding enabled and all client site in the specific W-T-W group. Additionally when using Dynamic Conduits W-T-W forwarding must be enabled. By default all sites are in a default W-T-W forwarding group.” (Oracle SD-WAN Edge Features Guide, p. 24-60). More specifically, dynamic conduits create and update routing tables. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
12	12. The communications device of claim 10, wherein the processor uses the routing tables to determine routing efficiencies based on quality of service and selects a group of the remote communications devices for optimizing the routing efficiencies.	The processor uses the routing tables to determine routing efficiencies based on quality of service and selects a group of the remote communications devices for optimizing the routing efficiencies as described below. “In Oracle SD-WAN Edge release 2.3, the APNA allows a user to define routers so that they can be polled for routes using SNMPv2. Once the routes have been learned by the APNA, the user can define rules which will include or exclude the routes from the APNA route table. These routes will then be advertised or propagated to other APNAs within the Oracle SD-WAN Edge. Additional capabilities include the ability to continue polling the router for routes and, if a route is removed from the routing table of the router, propagate the topology change across the Oracle SD-WAN Edge. The polling intervals supported are “poll now,” “every 30 seconds,” “every minute,” or “every 5 minutes.” If the router that is probed is not reachable, the APNA can also be configured to purge the learned routes or maintain them.” (Oracle SD-WAN Edge Features Guide, p. 1-5). “The dynamic conduit is a conduit between two Oracle SD-WAN Edge client sites that is not predefined in the Oracle SD-WAN Edge configuration file, but is created on-demand based on network traffic. From a user perspective, the advantage of a conduit between client sites is that traffic can flow directly from one client Oracle SD-WAN Edge site to a second client site without having to traverse the NCN or two conduits. In addition, the conduit is built and removed dynamically based on user defined traffic thresholds. These thresholds are defined in either packets per second (pps) or bandwidth (kbps).” (Oracle SD-WAN Edge Features Guide, p. 4-1). “The WAN To WAN (W-T-W) Forwarding Group is used to allow client sites to communicate through an intermediary site with each other. In previous releases only a single W-T-W forwarding groups was allowed. In current releases this number is

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
		unrestricted. When enabled the routing tables are shared between the site with W-T-W forwarding enabled and all client site in the specific W-T-W group. Additionally when using Dynamic Conduits W-T-W forwarding must be enabled. By default all sites are in a default W-T-W forwarding group.” (Oracle SD-WAN Edge Features Guide, p. 24-60). Adaptive Bandwidth Detection “introduced in Edge 5.2 for users with VSAT, LOS, Microwave, 3G/4G/LTE WAN Links, whose available bandwidth varies based upon weather and atmosphere conditions, location, line of site obstructions, etc. It allows the Oracle Talari Appliance to adjust the bandwidth rate on the WAN Link dynamically based on a defined bandwidth range, to use the maximum amount available without marking the paths BAD.” (Oracle SD-WAN Edge Features Guide, p. 13-8). More specifically, dynamic conduits can be created on-demand between a communications device and a remote communications device based on traffic thresholds (e.g. unused bandwidth). Accordingly, the routing tables include at least a total connection speed and/or available unused bandwidth. For wireless links, the routing table can include wireless transfer speeds and/or signal strength. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.

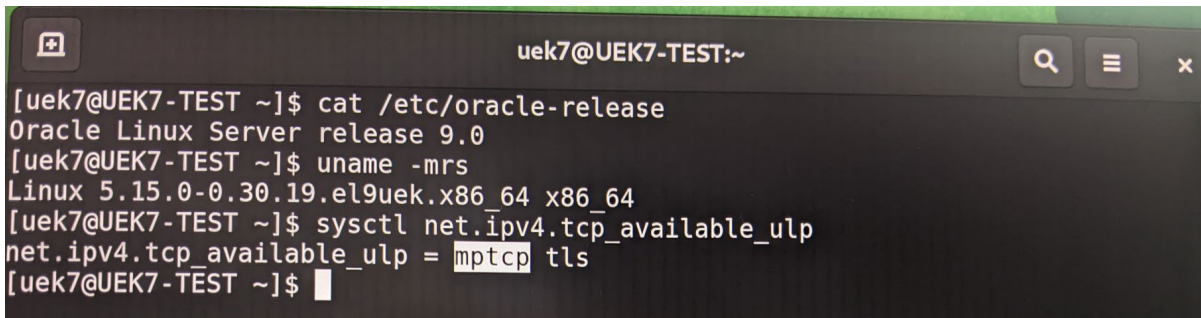
#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
13	13. The communications device of claim 10, wherein the processor uses the routing tables to determine routing efficiencies based on at least one of quality of service, total connection speed of the remote communication devices, a number of data hops, available unused bandwidth of the remote communication devices, wireless transfer speeds and signal strength between the remote communication devices and the communication device.	The processor uses the routing tables to determine routing efficiencies based on at least one of quality of service, total connection speed of the remote communication devices, a number of data hops, available unused bandwidth of the remote communication devices, wireless transfer speeds and signal strength between the remote communication devices and the communication device as described below. “In Oracle SD-WAN Edge release 2.3, the APNA allows a user to define routers so that they can be polled for routes using SNMPv2. Once the routes have been learned by the APNA, the user can define rules which will include or exclude the routes from the APNA route table. These routes will then be advertised or propagated to other APNAs within the Oracle SD-WAN Edge. Additional capabilities include the ability to continue polling the router for routes and, if a route is removed from the routing table of the router, propagate the topology change across the Oracle SD-WAN Edge. The polling intervals supported are “poll now,” “every 30 seconds,” “every minute,” or “every 5 minutes.” If the router that is probed is not reachable, the APNA can also be configured to purge the learned routes or maintain them.” (Oracle SD-WAN Edge Features Guide, p. 1-5). “The dynamic conduit is a conduit between two Oracle SD-WAN Edge client sites that is not predefined in the Oracle SD-WAN Edge configuration file, but is created on-demand based on network traffic. From a user perspective, the advantage of a conduit between client sites is that traffic can flow directly from one client Oracle SD-WAN Edge site to a second client site without having to traverse the NCN or two conduits. In addition, the conduit is built and removed dynamically based on user defined traffic thresholds. These thresholds are defined in either packets per second (pps) or bandwidth (kbps).” (Oracle SD-WAN Edge Features Guide, p. 4-1).

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
		“The WAN To WAN (W-T-W) Forwarding Group is used to allow client sites to communicate through an intermediary site with each other. In previous releases only a single W-T-W forwarding groups was allowed. In current releases this number is unrestricted. When enabled the routing tables are shared between the site with W-T-W forwarding enabled and all client site in the specific W-T-W group. Additionally when using Dynamic Conduits W-T-W forwarding must be enabled. By default all sites are in a default W-T-W forwarding group.” (Oracle SD-WAN Edge Features Guide, p. 24-60). Adaptive Bandwidth Detection “introduced in Edge 5.2 for users with VSAT, LOS, Microwave, 3G/4G/LTE WAN Links, whose available bandwidth varies based upon weather and atmosphere conditions, location, line of site obstructions, etc. It allows the Oracle Talari Appliance to adjust the bandwidth rate on the WAN Link dynamically based on a defined bandwidth range, to use the maximum amount available without marking the paths BAD.” (Oracle SD-WAN Edge Features Guide, p. 13-8). More specifically, dynamic conduits can be created on-demand between a communications device and a remote communications device based on traffic thresholds (e.g. unused bandwidth). Accordingly, the routing tables include at least a total connection speed and/or available unused bandwidth. For wireless links, the routing table can include wireless transfer speeds and/or signal strength. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional

#	U.S. Patent No. 8,228,801	Oracle SD-WAN Products
		information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.

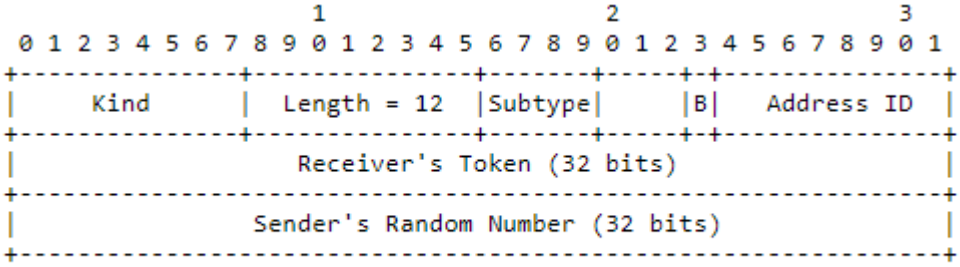
Exhibit C

Infringement of U.S. Patent No. 9,350,649 by Oracle MPTCP Products

#	U.S. Patent No. 9,350,649	Oracle MPTCP Products
7a	7. A method for establishing and sending data during a multipath connection, comprising:	The Oracle MPTCP Products perform the claimed method utilizing, for example, devices having Oracle Solaris, Oracle Linux 8.3, Oracle Linux 8.4, Oracle Linux 8.5, Oracle Linux 8.6, Oracle Linux 9, and devices that operate in a similar manner. By way of example, Oracle Linux 9 is charted herein. The Oracle MPTCP Products perform a method for establishing and sending data during a multipath connection as described below:  More specifically, the Oracle MPTCP Products comply with the IETF 6824 standard. Accordingly, the Oracle MPTCP Products send and request data during a multipath connection.
7b	the data-source device receiving multipath connection requests from a plurality of data-requesting devices, each of the multipath connection requests involving a particular multipath	The Oracle MPTCP Products include the data-source device receiving multipath connection requests from a plurality of data-requesting devices, each of the multipath connection requests involving a particular multipath connection to a data-requesting device as described below: Network interfaces are identified by a name that combines a prefix and a suffix. The prefix depends on the type of network interface: Ethernet network interfaces: en; Wireless local area network (LAN) interfaces: wl; Wireless wide area network (WAN) interfaces: ww

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	connection to a data-requesting device;	(https://docs.oracle.com/en/operating-systems/oracle-linux/9/network/network-ConfiguringtheSystemsNetwork.html#topic_syd_ypj_dtb, section 1) Associating a New Subflow with an Existing MPTCP Connection: The exchange of keys in the MP_CAPABLE handshake provides material that can be used to authenticate the endpoints when new subflows will be set up. Additional subflows begin in the same way as initiating a normal TCP connection, but the SYN, SYN/ACK, and ACK packets also carry the MP_JOIN option. (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2) Host A initiates a new subflow between one of its addresses and one of Host B's addresses. The token -- generated from the key -- is used to identify which MPTCP connection it is joining, and the HMAC is used for authentication. The Hash-based Message Authentication Code (HMAC) uses the keys exchanged in the MP_CAPABLE handshake, and the random numbers (nonces) exchanged in these MP_JOIN options. MP_JOIN also contains flags and an Address ID that can be used to refer to the source address without the sender needing to know if it has been changed by a NAT. (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2) <pre> Host A Host B ----- ----- MP_JOIN MP_JOIN [B's token, A's nonce, [B's HMAC, B's nonce, A's Address ID, flags] B's Address ID, flags] <- ACK + MP_JOIN ACK [A's HMAC] <- </pre>

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		(https://datatracker.ietf.org/doc/rfc6824/, Section 2.2) Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
7c	the data-source device associating a connection ID to each multipath connection request;	The Oracle MPTCP Products include the data-source device associating a connection ID to each multipath connection request as described below: Token: A locally unique identifier given to a multipath connection by a host. May also be referred to as a "Connection ID". (https://datatracker.ietf.org/doc/rfc6824/) Host A initiates a new subflow between one of its addresses and one of Host B's addresses. The token -- generated from the key -- is used to identify which MPTCP connection it is joining, and the HMAC is used for authentication. The Hash-based Message Authentication Code (HMAC) uses the keys exchanged in the MP_CAPABLE handshake, and the random numbers (nonces) exchanged in these MP_JOIN options. MP_JOIN also contains flags and an Address ID that can be used to refer to the source address without the sender needing to know if it has been changed by a NAT. (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2) Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As

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		additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
7d	the data-source device using multipath information about each of a plurality of network-edge devices that is capable of joining in a particular multipath connection to a particular data-requesting device, the particular multipath connection having a particular connection ID;	The Oracle MPTCP Products include the data-source device using multipath information about each of a plurality of network-edge devices that is capable of joining in a particular multipath connection to a particular data-requesting device, the particular multipath connection having a particular connection ID as described below: The exchange of keys in the MP_CAPABLE handshake provides material that can be used to authenticate the endpoints when new subflows will be set up. Additional subflows begin in the same way as initiating a normal TCP connection, but the SYN, SYN/ACK, and ACK packets also carry the MP_JOIN option. (https://datatracker.ietf.org/doc/rfc6824/) In the first MP_JOIN on the SYN packet, illustrated in Figure 5, the initiator sends a token, random number, and address ID. (https://datatracker.ietf.org/doc/rfc6824/)  Figure 5: Join Connection (MP_JOIN) Option (for Initial SYN) (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2)

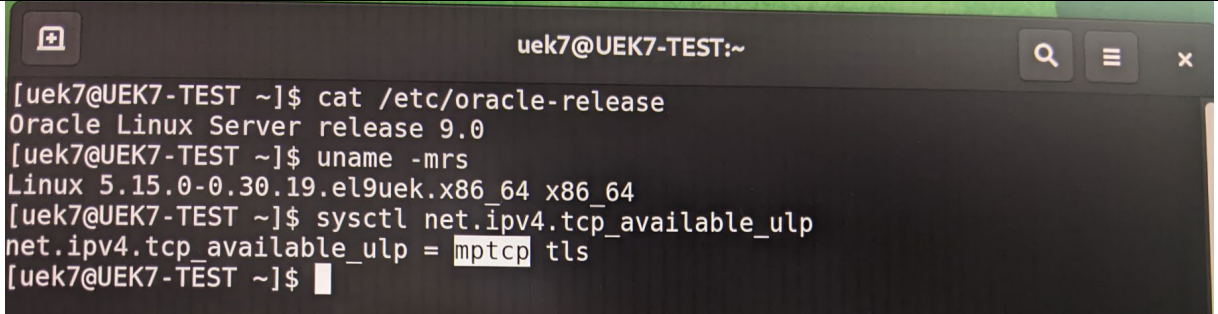
#	U.S. Patent No. 9,350,649	Oracle MPTCP Products
		Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
7e	the data-source device notifying each of the network-edge devices that is participating in the particular multipath connection associated with the particular connection ID; and	The Oracle MPTCP Products include the data-source device notifying each of the network-edge devices that is participating in the particular multipath connection associated with the particular connection ID as described below: HOST B sends an ACK in response to MP_Join for each additional subflow. <pre> Host A Host B ----- ----- MP_JOIN -> [B's token, A's nonce, A's Address ID, flags] <- MP_JOIN [B's HMAC, B's nonce, B's Address ID, flags] ACK + MP_JOIN -> [A's HMAC] <- ACK </pre> (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2) Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As

#	U.S. Patent No. 9,350,649	Oracle MPTCP Products
		additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
7f	the data-source device sending data associated with the particular connection ID to the network-edge devices participating in the particular multipath connection associated with the particular connection ID.	The Oracle MPTCP Products include the data-source device sending data associated with the particular connection ID to the network-edge devices participating in the particular multipath connection associated with the particular connection ID as described below: At a high level, an MPTCP implementation will take one input data stream from an application, and split it into one or more subflows, with sufficient control information to allow it to be reassembled and delivered reliably and in order to the recipient application. (https://datatracker.ietf.org/doc/rfc6824/, Section 3.3) Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
8	8. The method of claim 7, further comprising: the data-source device sending different groups of data packets to different network-edge devices that are participating in the particular multipath connection associated with the particular connection ID.	The Oracle MPTCP Products include the data-source device sending different groups of data packets to different network-edge devices that are participating in the particular multipath connection associated with the particular connection ID as described below: At a high level, an MPTCP implementation will take one input data stream from an application, and split it into one or more subflows, with sufficient control information to allow it to be reassembled and delivered reliably and in order to the recipient application. (https://datatracker.ietf.org/doc/rfc6824/, Section 3.3)

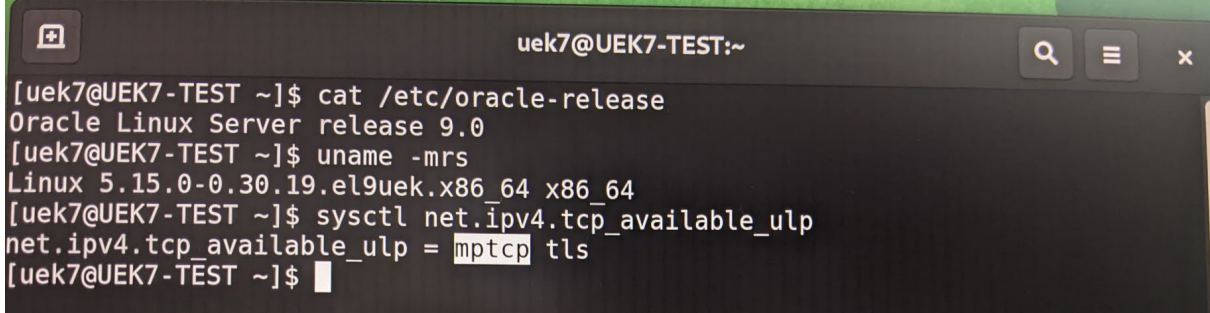
#	U.S. Patent No. 9,350,649	Oracle MPTCP Products
		Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
9a	9. The method of claim 7, further comprising:	See 7a.
9b	the data-source device receiving identification of the network-edge devices to be removed from the particular multipath connection; and	The Oracle MPTCP Products include the data-source device receiving identification of the network-edge devices to be removed from the particular multipath connection as described below: In regular TCP, a FIN announces the receiver that the sender has no more data to send. In order to allow subflows to operate independently and to keep the appearance of TCP over the wire, a FIN in MPTCP only affects the subflow on which it is sent. This allows nodes to exercise considerable freedom over which paths are in use at any one time. The semantics of a FIN remain as for regular TCP; i.e., it is not until both sides have ACKed each other's FINs that the subflow is fully closed. (https://datatracker.ietf.org/doc/rfc6824/, Section 3.3.3) Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.

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9c	the data-source device removing the identified network-edge devices from the particular multipath connection.	The Oracle MPTCP Products include the data-source device removing the identified network-edge devices from the particular multipath connection as described below: In regular TCP, a FIN announces the receiver that the sender has no more data to send. In order to allow subflows to operate independently and to keep the appearance of TCP over the wire, a FIN in MPTCP only affects the subflow on which it is sent. This allows nodes to exercise considerable freedom over which paths are in use at any one time. The semantics of a FIN remain as for regular TCP; i.e., it is not until both sides have ACKed each other's FINs that the subflow is fully closed. (https://datatracker.ietf.org/doc/rfc6824/, Section 3.3.3) Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
10	10. The method of claim 7, further comprising the data-source device notifying the data-requesting device when all data has been sent over the particular multilink connection.	The Oracle MPTCP Products include the data-source device notifying the data-requesting device when all data has been sent over the particular multilink connection as described below: To provide full end-to-end resilience, MPTCP provides a connection-level acknowledgment, to act as a cumulative ACK for the connection as a whole. (https://datatracker.ietf.org/doc/rfc6824/, Section 3.3.2) When Host A wants to inform Host B that it has no more data to send, it signals this "Data FIN" as part of the Data Sequence Signal. It has the same semantics and behavior as a regular TCP FIN, but at the connection level. Once all the data on the MPTCP connection has been

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		successfully received, then this message is acknowledged at the connection level with a DATA_ACK. (https://datatracker.ietf.org/doc/rfc6824/, Section 2.6) <pre> Host A Host B ----- ----- DATA_SEQUENCE_SIGNAL -> [Data FIN] <- (MPTCP DATA_ACK) </pre> (https://datatracker.ietf.org/doc/rfc6824/, Section 2.6) Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
11	11. The method of claim 7, wherein the data-source device is one of a multipath link aggregator, a network relay, a multipath link server, a server, a network switch, a network router and a device capable of providing multipath services.	The Oracle MPTCP Products include the data-source device is one of a multipath link aggregator, a network relay, a multipath link server, a server, a network switch, a network router and a device capable of providing multipath services as described below: For example, the Oracle MPTCP Products can be used as a server.

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		 <pre> uek7@UEK7-TEST:~ [uek7@UEK7-TEST ~]\$ cat /etc/oracle-release Oracle Linux Server release 9.0 [uek7@UEK7-TEST ~]\$ uname -mrs Linux 5.15.0-0.30.19.el9uek.x86_64 x86_64 [uek7@UEK7-TEST ~]\$ sysctl net.ipv4.tcp_available_ulp net.ipv4.tcp_available_ulp = mptcp tls [uek7@UEK7-TEST ~]\$ </pre>
12	12. The method of claim 7, wherein the connection ID is generated by one of the data-source device, one of the plurality of network-edge devices, the data-requesting device, and a network device.	The Oracle MPTCP Products include the connection ID is generated by one of the data-source device, one of the plurality of network-edge devices, the data-requesting device, and a network device as described below: Token: A locally unique identifier given to a multipath connection by a host. May also be referred to as a "Connection ID". (https://datatracker.ietf.org/doc/rfc6824/) Host A initiates a new subflow between one of its addresses and one of Host B's addresses. The token -- generated from the key -- is used to identify which MPTCP connection it is joining, and the HMAC is used for authentication. (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2) Local.Token (32 bits): This is the token chosen by the local host on this MPTCP connection. The token MUST be unique among all established MPTCP connections, generated from the local key. (https://datatracker.ietf.org/doc/rfc6824/, Section B.1.1) Local.Key (64 bits): This is the key sent by the local host on this MPTCP connection.

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		(https://datatracker.ietf.org/doc/rfc6824/, Section B.1.1) Remote.Token (32 bits): This is the token chosen by the remote host on this MPTCP connection, generated from the remote key. (https://datatracker.ietf.org/doc/rfc6824/, Section B.1.1) Remote.Key (64 bits): This is the key chosen by the remote host on this MPTCP connection. (https://datatracker.ietf.org/doc/rfc6824/, Section B.1.1) Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
21a	21. A method for creating and using a multipath connection, comprising the steps of:	The Oracle MPTCP Products perform the claimed method utilizing, for example, devices having Oracle Solaris, Oracle Linux 8.3, Oracle Linux 8.4, Oracle Linux 8.5, Oracle Linux 8.6, Oracle Linux 9, and devices that operate in a similar manner. By way of example, Oracle Linux 9 is charted herein. The Oracle MPTCP Products perform a method for creating and using a multipath connection as described below:

#	U.S. Patent No. 9,350,649	Oracle MPTCP Products
		 <pre> uek7@UEK7-TEST:~ [uek7@UEK7-TEST ~]\$ cat /etc/oracle-release Oracle Linux Server release 9.0 [uek7@UEK7-TEST ~]\$ uname -mrs Linux 5.15.0-0.30.19.el9uek.x86_64 x86_64 [uek7@UEK7-TEST ~]\$ sysctl net.ipv4.tcp_available_ulp net.ipv4.tcp_available_ulp = mptcp tls [uek7@UEK7-TEST ~]\$ </pre>
21b	a data-requesting device sending first multipath control information to or through a first network-edge device, the first multipath control information indicates that the first network-edge device will join the multipath connection, the data-requesting device being connected over a first connection to the first network-edge device;	The Oracle MPTCP Products include a data-requesting device sending first multipath control information to or through a first network-edge device, the first multipath control information indicates that the first network-edge device will join the multipath connection, the data-requesting device being connected over a first connection to the first network-edge device as described below: Network interfaces are identified by a name that combines a prefix and a suffix. The prefix depends on the type of network interface: Ethernet network interfaces: en; Wireless local area network (LAN) interfaces: wl; Wireless wide area network (WAN) interfaces: ww (https://docs.oracle.com/en/operating-systems/oracle-linux/9/network/network-ConfiguringtheSystemsNetwork.html#topic_syd_ypj_dtb, section 1) Initiating an MPTCP Connection: This is the same signaling as for initiating a normal TCP connection, but the SYN, SYN/ACK, and ACK packets also carry the MP_CAPABLE option. This is variable length and serves multiple purposes. Firstly, it verifies whether the remote host supports Multipath TCP; secondly, this option allows the hosts to exchange some information to authenticate the establishment of additional subflows.

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		Host A Host B ----- MP_CAPABLE -> [A's key, flags] <- MP_CAPABLE [B's key, flags] ACK + MP_CAPABLE -> [A's key, B's key, flags] (https://datatracker.ietf.org/doc/rfc6824/, Section 2.1) Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
21c	the data-requesting device sending a second multipath control information to or through a second network-edge device, the second multipath control information indicates that the second network-edge device will join the multipath connection, the data-requesting device being connected over a second connection to the second network-edge device, the data-requesting device capable of receiving different data over the first connection and the second connection at the same time as described below:	The Oracle MPTCP Products include the data-requesting device sending a second multipath control information to or through a second network-edge device, the second multipath control information indicates that the second network-edge device will join the multipath connection, the data-requesting device being connected over a second connection to the second network-edge device, the data-requesting device capable of receiving different data over the first connection and the second connection at the same time as described below: Network interfaces are identified by a name that combines a prefix and a suffix. The prefix depends on the type of network interface: Ethernet network interfaces: en; Wireless local area network (LAN) interfaces: wl; Wireless wide area network (WAN) interfaces: ww (https://docs.oracle.com/en/operating-systems/oracle-linux/9/network/network-ConfiguringtheSystemsNetwork.html#topic_syd_ypj_dtb, section 1)

#	U.S. Patent No. 9,350,649	Oracle MPTCP Products
	capable of receiving different data over the first connection and the second connection at the same time; and	Associating a New Subflow with an Existing MPTCP Connection: The exchange of keys in the MP_CAPABLE handshake provides material that can be used to authenticate the endpoints when new subflows will be set up. Additional subflows begin in the same way as initiating a normal TCP connection, but the SYN, SYN/ACK, and ACK packets also carry the MP_JOIN option. Host A initiates a new subflow between one of its addresses and one of Host B's addresses. The token -- generated from the key -- is used to identify which MPTCP connection it is joining, and the HMAC is used for authentication. The Hash-based Message Authentication Code (HMAC) uses the keys exchanged in the MP_CAPABLE handshake, and the random numbers (nonces) exchanged in these MP_JOIN options. MP_JOIN also contains flags and an Address ID that can be used to refer to the source address without the sender needing to know if it has been changed by a NAT. (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2) <pre> Host A Host B ----- ----- MP_JOIN MP_JOIN [B's token, A's nonce, [B's HMAC, B's nonce, A's Address ID, flags] B's Address ID, flags] <- <- ACK + MP_JOIN ACK [A's HMAC] <- <- <- </pre> (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2) Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the

#	U.S. Patent No. 9,350,649	Oracle MPTCP Products
		claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
21d	after the first network-edge device joins the multipath connection, the data-requesting device receiving first data over the first connection from the first network-edge device; and	The Oracle MPTCP Products include after the first network-edge device joins the multipath connection, the data-requesting device receiving first data over the first connection from the first network-edge device as described below: More specifically, the Oracle MPTCP Products supports MPTCP that enables the hosts to use different paths with different IP addresses to exchange packets belonging to the MPTCP connection in accordance with IETF RFC 6824. External Constraints: The protocol must function through the vast majority of existing middleboxes such as NATs, firewalls, and proxies, and as such must resemble existing TCP as far as possible on the wire. Furthermore, the protocol must not assume the segments it sends on the wire arrive unmodified at the destination: they may be split or coalesced; TCP options may be removed or duplicated. (https://datatracker.ietf.org/doc/rfc6824/, Section 1.1) A Multipath TCP connection provides a bidirectional bytestream between two hosts communicating like normal TCP and, thus, does not require any change to the applications. However, Multipath TCP enables the hosts to use different paths with different IP addresses to exchange packets belonging to the MPTCP connection. A Multipath TCP connection appears like a normal TCP connection to an application. However, to the network layer, each MPTCP subflow looks like a regular TCP flow whose segments carry a new TCP option type. Multipath TCP manages the creation, removal, and utilization of these subflows to send data. The number of subflows that are managed within a Multipath TCP connection is not fixed and it can fluctuate during the lifetime of the Multipath TCP connection.

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		(https://datatracker.ietf.org/doc/rfc6824/, Section 2) Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
21e	after the second network-edge device joins the multipath connection, receiving second data at the data-requesting device over the second path from the second network-edge device.	The Oracle MPTCP Products include after the second network-edge device joins the multipath connection, receiving second data at the data-requesting device over the second path from the second network-edge device as described below: More specifically, the Oracle MPTCP Products supports MPTCP that enables the hosts to use different paths with different IP addresses to exchange packets belonging to the MPTCP connection in accordance with IETF RFC 6824. External Constraints: The protocol must function through the vast majority of existing middleboxes such as NATs, firewalls, and proxies, and as such must resemble existing TCP as far as possible on the wire. Furthermore, the protocol must not assume the segments it sends on the wire arrive unmodified at the destination: they may be split or coalesced; TCP options may be removed or duplicated. (https://datatracker.ietf.org/doc/rfc6824/, Section 1.1) A Multipath TCP connection provides a bidirectional bytestream between two hosts communicating like normal TCP and, thus, does not require any change to the applications. However, Multipath TCP enables the hosts to use different paths with different IP addresses to exchange packets belonging to the MPTCP connection. A Multipath TCP connection appears like a normal TCP connection to an application. However, to the network layer, each MPTCP

#	U.S. Patent No. 9,350,649	Oracle MPTCP Products
		subflow looks like a regular TCP flow whose segments carry a new TCP option type. Multipath TCP manages the creation, removal, and utilization of these subflows to send data. The number of subflows that are managed within a Multipath TCP connection is not fixed and it can fluctuate during the lifetime of the Multipath TCP connection. (https://datatracker.ietf.org/doc/rfc6824/, Section 2) Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
22	22. The method as in claim 21, wherein the first network-edge device is connected to a network, and wherein the second network-edge device is connected to the network or a different network.	The Oracle MPTCP Products include the first network-edge device is connected to a network, and wherein the second network-edge device is connected to the network or a different network as described below: Network interfaces are identified by a name that combines a prefix and a suffix. The prefix depends on the type of network interface: Ethernet network interfaces: en; Wireless local area network (LAN) interfaces: wl; Wireless wide area network (WAN) interfaces: ww (https://docs.oracle.com/en/operating-systems/oracle-linux/9/network/network-ConfiguringtheSystemsNetwork.html#topic_syd_y pj_dtb, section 1) Multipath TCP (MPTCP) is a set of extensions to regular TCP to provide a Multipath TCP service, which enables a transport connection to operate across multiple paths simultaneously. (https://datatracker.ietf.org/doc/rfc6824/, Section 1)

Exhibit D

Infringement of U.S. Patent No. 9,350,649 by Oracle SD-WAN Products

#	U.S. Patent No. 9,350,649	Oracle SD-WAN Products
1a	1. A method for establishing and sending data during a multipath connection comprising:	The Oracle SD-WAN Products, including the Talari E50 Appliance, Talari E100 Appliance, Talari D2000 Appliance, Talari D6000 Appliance, Talari T5000 Appliance, and devices that operate in a similar manner, Oracle SD-WAN Virtual Appliances, Oracle SD-WAN Edge, Oracle SD-WAN Aware, Oracle SD-WAN Orchestration Cloud Service, Oracle SD-WAN, and devices that operate in a similar manner, perform a method for establishing and sending data during a multipath connection as described below. The Oracle SD-WAN Products include the T5000 Appliance, which “delivers up to 3.0 Gbps uplink/3.0 Gbps downlink (6 Gbps total) across up to 8 WAN connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1). “Oracle SD-WAN Release 2.5 incorporates the T5000 seamlessly into the entire family of appliances offered by Oracle. Basic Oracle SD-WAN Edge appliances platform capabilities are listed below.” (Oracle SD-WAN Edge Features Guide, p. 3-1). More specifically, the Oracle SD-WAN Products include a variety of devices, such as the Talari T5000, that establish and send data during a multipath connection as described below.
1b	a data-source device receiving multipath information about each of a plurality of network-edge devices that is capable of joining a multipath connection with a data-requesting device,	A data-source device receives multipath information about each of a plurality of network-edge devices that is capable of joining a multipath connection with a data-requesting device as described below. The Oracle SD-WAN includes the T5000 Appliance, which “delivers up to 3.0 Gbps uplink/3.0 Gbps downlink (6 Gbps total) across up to 8 WAN connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1).

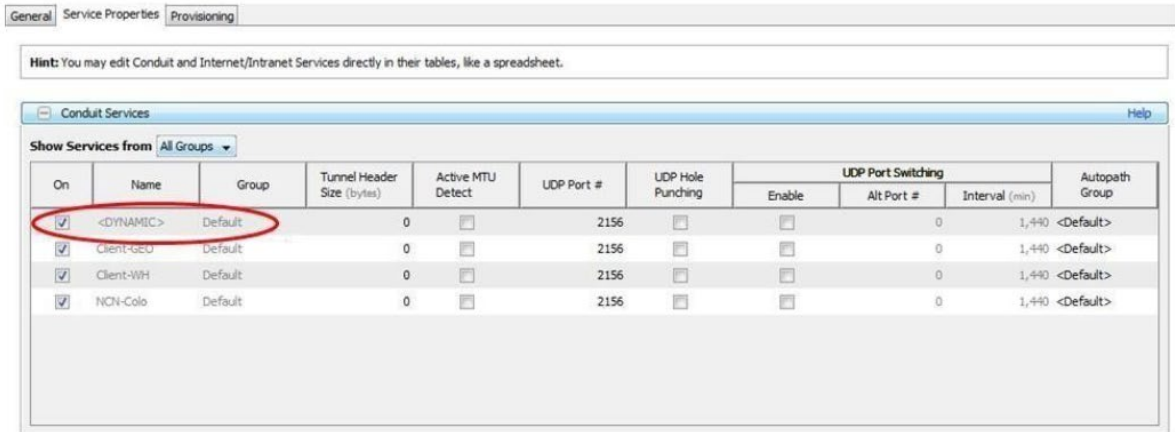
#	U.S. Patent No. 9,350,649	Oracle SD-WAN Products
		The “T5000 runs the same software as other Oracle appliances while taking performance and scalability to the next level, supporting gigabits of WAN bandwidth across the union of private WAN links and public Internet connections and providing support for up to 128 branch connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1). (Oracle SD-WAN Implementation Guide, p. 6). “SD-WAN Edge Network Settings allows for the configuration of global parameters that impact the operation of the entire SD-WAN Edge network.” (Oracle SD-WAN Edge Features Guide, p. 24-43). “Global Path Bandwidth Testing Settings allows for the configuration of

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		global parameters that impacts path bandwidth testing operations on individual SD-WAN Edge.” (Oracle SD-WAN Edge Features Guide, p. 24-45). “In this example the NCN with the WAN-To-WAN option enabled will forward all routes to all client appliances within a WAN-To-WAN Forwarding Group. By default, all sites reside in the default WAN To-WAN Forwarding Group. The user can also define additional WAN-To-WAN Forwarding Groups as required. The groups are defined at the Global configuration level. The intermediate site will monitor the traffic flow between Client Sites to determine if the traffic level reaches the user defined threshold. If the traffic flow reaches the defined threshold, the Intermediate node will instruct the client nodes to establish a Dynamic Conduit.” (Oracle SD-WAN Edge Features Guide, p. 4-3). WAN Link Mode: “On-Demand Standby: An on-demand standby WAN link is a standby WAN link that may be activated to supplement conduit bandwidth when the bandwidth provided by the primary WAN links in the conduit falls below the bandwidth threshold configured in conduit QoS Policy. In addition, if all primary WAN links are dead or disabled, an on-demand standby WAN link becomes active and user traffic is transmitted on it.” (Oracle SD-WAN Edge Features Guide, p. 24-14). Adaptive Bandwidth Detection “introduced in Edge 5.2 for users with VSAT, LOS, Microwave, 3G/4G/LTE WAN Links, whose available bandwidth varies based upon weather and atmosphere conditions, location, line of site obstructions, etc. It allows the Oracle Talari Appliance to adjust the bandwidth rate on the WAN Link dynamically based on a defined bandwidth range, to use the maximum amount available without marking the paths BAD.” (Oracle SD-WAN Edge Features Guide, p. 13-8).

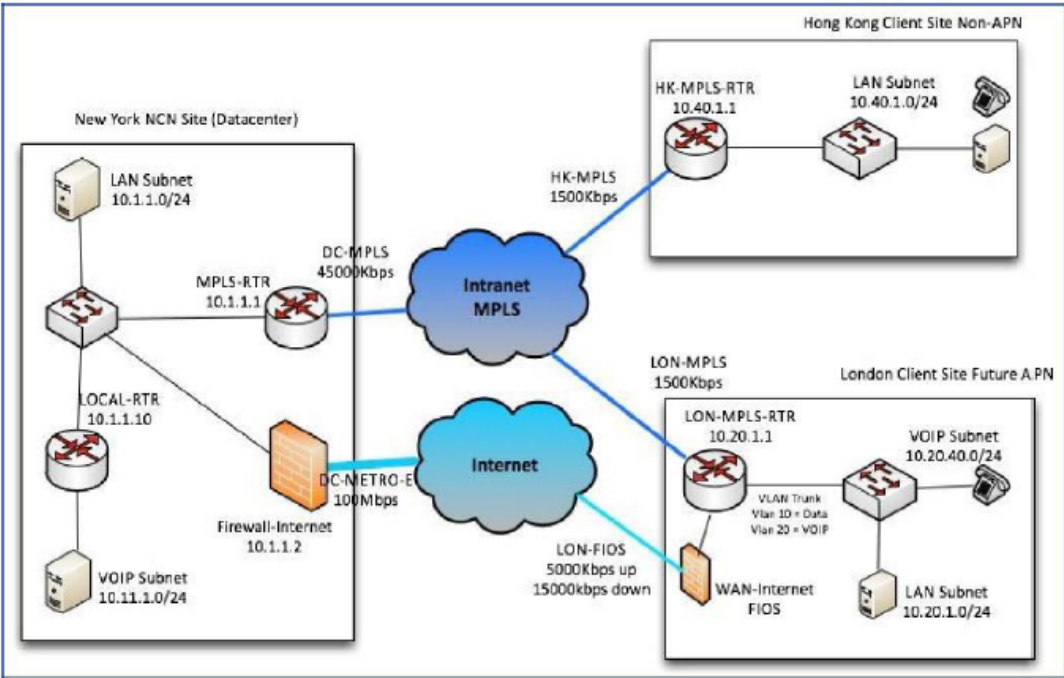
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		More specifically, each site in the Oracle SD-WAN has at least one appliance, such as a T5000. A particular appliance communicates with one or more appliances in remote locations (e.g. network-edge devices) that are capable of joining a multipath connection. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.
1c	each of the network-edge devices being connected to one or more networks, and	Each of the network-edge devices are connected to one or more networks as described below. The Oracle SD-WAN Products include the T5000 Appliance, which “delivers up to 3.0 Gbps uplink/3.0 Gbps downlink (6 Gbps total) across up to 8 WAN connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1). The “T5000 runs the same software as other Oracle appliances while taking performance and scalability to the next level, supporting gigabits of WAN bandwidth across the union of private WAN links and public Internet connections and providing support for up to 128 branch connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1).

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		The diagram illustrates the Oracle SD-WAN architecture across three sites: New York NCN Site (Datacenter): Contains a LAN Subnet (10.1.1.0/24), a LOCAL-RTR (10.1.1.10), a VOIP Subnet (10.1.1.0/24), an MPLS-RTR (10.1.1.1), a Firewall-Internet (10.1.1.2), and a DC-METRO-E (100Mbps) link. Hong Kong Client Site Non-APN: Contains an HK-MPLS-RTR (10.40.1.1), a LAN Subnet (10.40.1.0/24), and an HK-MPLS link (1500Kbps). London Client Site Future APN: Contains a LON-MPLS-RTR (10.20.1.1), a VOIP Subnet (10.20.40.0/24), a LAN Subnet (10.20.1.0/24), a LON-MPLS link (1500Kbps), and a LON-FIOS link (5000Kbps up, 15000Kbps down). The architecture also includes an Intranet MPLS cloud and an Internet cloud, which facilitate connectivity between the sites. (Oracle SD-WAN Implementation Guide, p. 6). More specifically, each appliance in the Oracle SD-WAN is capable of being connected to one or more networks. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.

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1d	the data-source device performing at least one of (i) sending different groups of data packets to different network-edge devices that are participating in the multipath connection, (ii) sending different streams of data to one or more of the network-edge devices that are participating in the multipath connection, and (iii) sending combinations of different streams and different groups of data packets to one or more of the network-edge devices that are participating in the multipath connection.	The data-source device perform at least one of (i) sending different groups of data packets to different network-edge devices that are participating in the multipath connection, (ii) sending different streams of data to one or more of the network-edge devices that are participating in the multipath connection, and (iii) sending combinations of different streams and different groups of data packets to one or more of the network-edge devices that are participating in the multipath connection as described below. “Oracle SD-WAN creates a cohesive and efficient collection of all physical links and interfaces, and aggregates them into a single, logical interface to create a virtual WAN conduit. The WAN conduit takes advantage of real-time intelligence encapsulated in the header of every packet the SD-WAN processes. It also supports 128b or 256b advanced encryption standard (AES) across all aggregated WAN paths. All WAN paths are managed unidirectionally so that every packet reliably reaches its destination.” (Five Ways SD-WAN is Transforming Cloud Connectivity White Paper, pp. 3-4). More specifically, data (e.g. packets) transmitted over a conduit, including dynamic conduits, is communicated across one or more WAN links. Accordingly, the appliances perform at least one of (i) sending different groups of data packets to different network-edge devices that are participating in the multipath connection, (ii) sending different streams of data to one or more of the network-edge devices that are participating in the multipath connection, and (iii) sending combinations of different streams and different groups of data packets to one or more of the network-edge devices that are participating in the multipath connection. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted

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		claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.
2	2. The method of claim 1, wherein the multipath information includes a connection ID that is generated by one of the data-source device, one of the plurality of network-edge devices, the data-requesting device and a network device.	The multipath information includes a connection ID that is generated by one of the data-source device, one of the plurality of network-edge devices, the data-requesting device and a network device as described below. “The dynamic conduit is a conduit between two Oracle SD-WAN Edge client sites that is not predefined in the Oracle SD-WAN Edge configuration file, but is created on-demand based on network traffic. From a user perspective, the advantage of a conduit between client sites is that traffic can flow directly from one client Oracle SD-WAN Edge site to a second client site without having to traverse the NCN or two conduits. In addition, the conduit is built and removed dynamically based on user defined traffic thresholds. These thresholds are defined in either packets per second (pps) or bandwidth (kbps).” (Oracle SD-WAN Edge Features Guide, p. 4-1).  (Oracle SD-WAN Edge Features Guide, p. 4-6).

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		More specifically, conduits, including dynamic conduits, created by the appliances (e.g. a one of the data-source device, one of the plurality of network-edge devices, the data-requesting device and a network device), have a name (e.g. a connection ID). Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.
3a	3. The method of claim 1, further comprising:	See 1a.
3b	the data-source device receiving second multipath information about a second network-edge device that is capable of joining the multipath connection; and	The data-source device receiving second multipath information about a second network-edge device that is capable of joining the multipath connection as described below. The Oracle SD-WAN Products include the T5000 Appliance, which “delivers up to 3.0 Gbps uplink/3.0 Gbps downlink (6 Gbps total) across up to 8 WAN connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1). The “T5000 runs the same software as other Oracle appliances while taking performance and scalability to the next level, supporting gigabits of WAN bandwidth across the union of private WAN links and public Internet connections and providing support for up to 128 branch connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1).

#	U.S. Patent No. 9,350,649	Oracle SD-WAN Products
		 The diagram illustrates a multi-site Oracle SD-WAN architecture. It features three main locations: New York NCN Site (Datacenter), Hong Kong Client Site Non-APN, and London Client Site Future APN. The New York site includes a LAN Subnet (10.1.1.0/24), a LOCAL-RTR (10.1.1.10), a VOIP Subnet (10.1.1.0/24), an MPLS-RTR (10.1.1.1), a Firewall-Internet (10.1.1.2), and a DC-METRO-ET (100Mbps). The Hong Kong site includes an HK-MPLS-RTR (10.40.1.1), a LAN Subnet (10.40.1.0/24), and an HK-MPLS link (1500Kbps). The London site includes a LON-MPLS-RTR (10.20.1.1), a VOIP Subnet (10.20.40.0/24), a LAN Subnet (10.20.1.0/24), a LON-MPLS link (1500Kbps), a WAN-Internet FIOS link (5000Kbps up, 15000Kbps down), and a Vlan Trunk (Vlan 10 = Data, Vlan 20 = VOIP). The sites are interconnected via an Intranet MPLS cloud and an Internet cloud. (Oracle SD-WAN Implementation Guide, p. 6). More specifically, each appliance in the Oracle SD-WAN is capable of being connected to one or more networks and one or more appliances in remote locations. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.

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3c	the data-source device joining the second network-edge device to the multipath connection.	The data-source device joining the second network-edge device to the multipath connection as described below. “The dynamic conduit is a conduit between two Oracle SD-WAN Edge client sites that is not predefined in the Oracle SD-WAN Edge configuration file, but is created on-demand based on network traffic. From a user perspective, the advantage of a conduit between client sites is that traffic can flow directly from one client Oracle SD-WAN Edge site to a second client site without having to traverse the NCN or two conduits. In addition, the conduit is built and removed dynamically based on user defined traffic thresholds. These thresholds are defined in either packets per second (pps) or bandwidth (kbps).” (Oracle SD-WAN Edge Features Guide, p. 4-1). More specifically, conduits, including dynamic conduits, can include multiple appliances in a single conduit (e.g. multilink connection). Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.
4a	4. The method of claim 1, further comprising:	See 1a.
4b	the data-source device receiving multipath information about which network-edge devices are	The data-source device receiving multipath information about which network-edge devices are to be removed from the multipath connection as described below.

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	to be removed from the multipath connection; and	“The dynamic conduit is a conduit between two Oracle SD-WAN Edge client sites that is not predefined in the Oracle SD-WAN Edge configuration file, but is created on-demand based on network traffic. From a user perspective, the advantage of a conduit between client sites is that traffic can flow directly from one client Oracle SD-WAN Edge site to a second client site without having to traverse the NCN or two conduits. In addition, the conduit is built and removed dynamically based on user defined traffic thresholds. These thresholds are defined in either packets per second (pps) or bandwidth (kbps).” (Oracle SD-WAN Edge Features Guide, p. 4-1). “Based on the above traffic flows as well as the nature of dynamic conduits the user should be aware of certain Design considerations. These considerations are as follows: [...]How often a WAN link transitions from good to bad.” (Oracle SD-WAN Edge Features Guide, p. 4-1). “Oracle SD-WAN Edge 4.4 allows users to control when a Path is marked bad and how long a bad Path is kept on probation. It also gives users greater visibility into why a bad or dead Path is in its current state.” (Oracle SD-WAN Edge Features Guide, p. 10-4). “A new feature has been added in Oracle SD-WAN Edge Release 2.4 to determine Intranet route eligibility by path state as opposed to WAN link state. In the past, a route was ineligible if the WAN link was down, but there were cases where the WAN link was only down at one site. This caused the Intranet data to not flow between sites. To resolve this issue the Oracle appliance now can make a path eligible/ineligible decision based on path state and not just WAN link state. The “Route Eligible Path” is a path whose status is used to determine whether a route is eligible to be used when making routing decisions.” (Oracle SD-WAN Edge Features Guide, p. 2-1). More specifically, the status of each WAN Link and/or path within a conduit can be measured to determine if the WAN Link or path is good, bad, or dead.

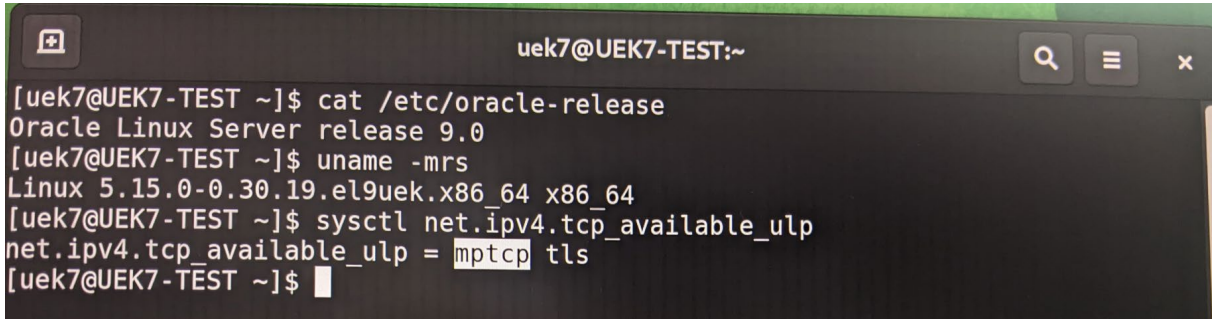
#	U.S. Patent No. 9,350,649	Oracle SD-WAN Products
		Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.
4c	the data-source device removing the network-edge devices from being associated with the multipath connection.	The data-source device removing the network-edge devices from being associated with the multipath connection as described below. More specifically, WAN Links and paths marked as bad are put on probation and not used. WAN Links and paths marked as dead are removed from the conduit. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.
5	5. The method of claim 1, further comprising at least one of the data-source device, the network-edge devices and the data-requesting device determining which of the network-edge devices are to be	At least one of the data-source device, the network-edge devices and the data-requesting device determining which of the network-edge devices are to be removed from the multipath connection as described below. “The dynamic conduit is a conduit between two Oracle SD-WAN Edge client sites that is not predefined in the Oracle SD-WAN Edge configuration file, but is created on-demand based on network traffic. From a user perspective, the advantage of a conduit between client sites is that traffic can flow directly from one client Oracle SD-WAN Edge site to a second client site

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	removed from the multipath connection.	without having to traverse the NCN or two conduits. In addition, the conduit is built and removed dynamically based on user defined traffic thresholds. These thresholds are defined in either packets per second (pps) or bandwidth (kbps).” (Oracle SD-WAN Edge Features Guide, p. 4-1). “Based on the above traffic flows as well as the nature of dynamic conduits the user should be aware of certain Design considerations. These considerations are as follows: [...]How often a WAN link transitions from good to bad.” (Oracle SD-WAN Edge Features Guide, p. 4-1). “Oracle SD-WAN Edge 4.4 allows users to control when a Path is marked bad and how long a bad Path is kept on probation. It also gives users greater visibility into why a bad or dead Path is in its current state.” (Oracle SD-WAN Edge Features Guide, p. 10-4). “A new feature has been added in Oracle SD-WAN Edge Release 2.4 to determine Intranet route eligibility by path state as opposed to WAN link state. In the past, a route was ineligible if the WAN link was down, but there were cases where the WAN link was only down at one site. This caused the Intranet data to not flow between sites. To resolve this issue the Oracle appliance now can make a path eligible/ineligible decision based on path state and not just WAN link state. The “Route Eligible Path” is a path whose status is used to determine whether a route is eligible to be used when making routing decisions.” (Oracle SD-WAN Edge Features Guide, p. 2-1). More specifically, the appliances measure the status of each WAN Link and/or path within a conduit to determine if the WAN Link or path is good, bad, or dead. WAN Links and paths marked as bad are put on probation and not used. WAN Links and paths marked as dead are removed from the conduit.

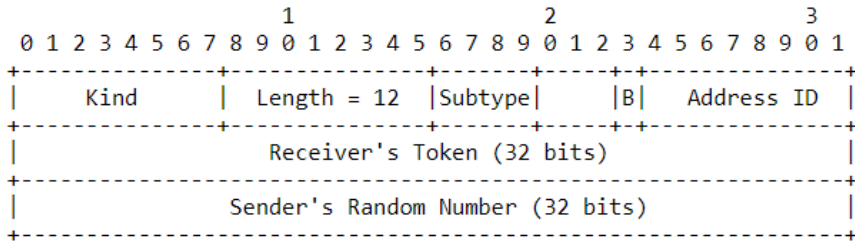
#	U.S. Patent No. 9,350,649	Oracle SD-WAN Products
		Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.
6	6. The method of claim 1, wherein the data-source device is one of a multipath link aggregator, a network relay, a multipath link server, a server, a network switch, a network router and a device capable of providing multipath services.	The data-source device is one of a multipath link aggregator, a network relay, a multipath link server, a server, a network switch, a network router and a device capable of providing multipath services as described below. The Oracle SD-WAN Products includes the T5000 Appliance, which “delivers up to 3.0 Gbps uplink/3.0 Gbps downlink (6 Gbps total) across up to 8 WAN connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1). “Oracle SD-WAN Release 2.5 incorporates the T5000 seamlessly into the entire family of appliances offered by Oracle. Basic Oracle SD-WAN Edge appliances platform capabilities are listed below.” (Oracle SD-WAN Edge Features Guide, p. 3-1). More specifically, the Talari T5000 is one of a multipath link aggregator, a network relay, a multipath link server, a server, a network switch, a network router and a device capable of providing multipath services.

Exhibit E

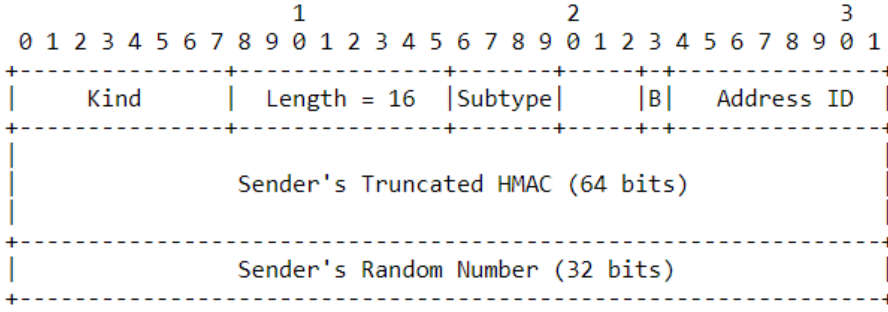
Infringement of U.S. Patent No. 10,868,908 by Oracle MPTCP Products

#	U.S. Patent No. 10,868,908	Oracle MPTCP Products
1a	1. A client device for multilink data packet communication with a server, the client device comprising:	The Oracle MPTCP Products implemented the claimed client device utilizing, for example, devices having Oracle Solaris, Oracle Linux 8.3, Oracle Linux 8.4, Oracle Linux 8.5, Oracle Linux 8.6, Oracle Linux 9, and devices that operate in a similar manner. By way of example, Oracle Linux 9 is charted herein. The Oracle MPTCP Products constitute a communications device that is capable of providing broadband communications services. For example, as shown in the below screenshot, the Oracle MPTCP Products comply with the IETF 6824 standard. Accordingly, the Oracle MPTCP Products provide multilink data packet communications with a server as described below.  <pre>uek7@UEK7-TEST:~ [uek7@UEK7-TEST ~]\$ cat /etc/oracle-release Oracle Linux Server release 9.0 [uek7@UEK7-TEST ~]\$ uname -mrs Linux 5.15.0-0.30.19.el9uek.x86_64 x86_64 [uek7@UEK7-TEST ~]\$ sysctl net.ipv4.tcp_available_ulp net.ipv4.tcp_available_ulp = mptcp tls [uek7@UEK7-TEST ~]\$</pre>
1b	a first network interface having a first data transfer rate associated with a first path from the server to the first network interface of the client device;	The Oracle MPTCP Products include a first network interface having a first data transfer rate associated with a first path from the server to the first network interface of the client device as described below: Network interfaces are identified by a name that combines a prefix and a suffix. The prefix depends on the type of network interface: Ethernet network interfaces: en; Wireless local area network (LAN) interfaces: wl; Wireless wide area network (WAN) interfaces: ww.

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		(https://docs.oracle.com/en/operating-systems/oracle-linux/9/network/network-ConfiguringtheSystemsNetwork.html#topic_syd_ypj_dtb, section 1). Each network interface has its own data transfer rate and path from the server to the first network interface.
1c	a second network interface having a second data transfer rate associated with a second path from the server to the second network interface of the client device; and	The Oracle MPTCP Products include a second network interface having a second data transfer rate associated with a second path from the server to the second network interface of the client device as described below: Network interfaces are identified by a name that combines a prefix and a suffix. The prefix depends on the type of network interface: Ethernet network interfaces: en; Wireless local area network (LAN) interfaces: wl; Wireless wide area network (WAN) interfaces: ww. (https://docs.oracle.com/en/operating-systems/oracle-linux/9/network/network-ConfiguringtheSystemsNetwork.html#topic_syd_ypj_dtb, section 1). Each network interface has its own data transfer rate and path from the server to the second network interface.
1d	at least one processor configured to:	The Oracle MPTCP Products include at least one processor as described below: Oracle is pleased to announce Oracle Linux 9 general availability for Intel-64/AMD-64 (x86_64) and Arm (aarch64). This release includes the Unbreakable Enterprise Kernel Release 7 (UEK R7). (https://blogs.oracle.com/linux/post/announcing-oracle-linux-9-general-availability).
1e	transmit a first message through the first network interface to the server, wherein the first message	The Oracle MPTCP Products transmit a first message through the first network interface to the server, wherein the first message includes a multilink request a destination URL as described below:

#	U.S. Patent No. 10,868,908	Oracle MPTCP Products
	includes a multilink request a destination URL;	More specifically, in IETF RFC 6824, the first message being transmitted in multilink data packet communication is MP_JOIN that includes a token (identification of MPTCP connection), a random numbers (nonce), and references to the source address (flags and Address ID). In the first MP_JOIN on the SYN packet, illustrated in Figure 5, the initiator sends a token, random number, and address ID. https://datatracker.ietf.org/doc/rfc6824/, Section 3.2).  Figure 5: Join Connection (MP_JOIN) Option (for Initial SYN) https://datatracker.ietf.org/doc/rfc6824/, Section 3.2). The MP_JOIN SYN sends not only the token (which is static for a connection) but also random numbers (nonces) that are used to prevent replay attacks on the authentication method. https://datatracker.ietf.org/doc/rfc6824/, Section 3.2). The MP_JOIN option includes an "Address ID". This is an identifier that only has significance within a single connection, where it identifies the source address of this packet, even if the IP header has been changed in transit by a middlebox. The Address ID allows address removal (Section 3.4.2) without needing to know what the source address at the receiver is, thus allowing address removal through NATs. The Address ID also allows correlation between new subflow

#	U.S. Patent No. 10,868,908	Oracle MPTCP Products
		setup attempts and address signaling (Section 3.4.1), to prevent setting up duplicate subflows on the same path, if an MP_JOIN and ADD_ADDR are sent at the same time. https://datatracker.ietf.org/doc/rfc6824/, Section 3.2). The exchange of keys in the MP_CAPABLE handshake provides material that can be used to authenticate the endpoints when new subflows will be set up. Additional subflows begin in the same way as initiating a normal TCP connection, but the SYN, SYN/ACK, and ACK packets also carry the MP_JOIN option. https://datatracker.ietf.org/doc/rfc6824/, Section 2.2). Host A initiates a new subflow between one of its addresses and one of Host B's addresses. The token -- generated from the key -- is used to identify which MPTCP connection it is joining, and the HMAC is used for authentication. The Hash-based Message Authentication Code (HMAC) uses the keys exchanged in the MP_CAPABLE handshake, and the random numbers (nonces) exchanged in these MP_JOIN options. MP_JOIN also contains flags and an Address ID that can be used to refer to the source address without the sender needing to know if it has been changed by a NAT. https://datatracker.ietf.org/doc/rfc6824/, Section 2.2). <pre> Host A Host B ----- MP_JOIN -> [B's token, A's nonce, A's Address ID, flags] <- MP_JOIN [B's HMAC, B's nonce, B's Address ID, flags] ACK + MP_JOIN -> [A's HMAC] <- ACK </pre>

#	U.S. Patent No. 10,868,908	Oracle MPTCP Products
		(https://datatracker.ietf.org/doc/rfc6824/, Section 2.2). Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
1f	transmit a second message through the second network interface to the server, wherein the second message includes a multilink session identification the destination URL; and	The Oracle MPTCP Products transmit a second message through the second network interface to the server, wherein the second message includes a multilink session identification the destination URL as described below: More specifically, in IETF RFC 6824, the second message transmitted in multilink data packet communication is MP_JOIN that includes an MP_JOIN option containing a random number and a truncated (leftmost 64 bits) Hash-based Message Authentication Code (HMAC) as well as references to the source address. (https://datatracker.ietf.org/doc/rfc6824/, Section 3.2).  <pre> 1 2 3 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 +-----+-----+-----+-----+-----+-----+-----+ Kind Length = 16 Subtype B Address ID +-----+-----+-----+-----+-----+-----+ Sender's Truncated HMAC (64 bits) Sender's Random Number (32 bits) +-----+-----+-----+-----+-----+-----+ </pre> Figure 6: Join Connection (MP_JOIN) Option (for Responding SYN/ACK) (https://datatracker.ietf.org/doc/rfc6824/, Section 3.2).

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		The exchange of keys in the MP_CAPABLE handshake provides material that can be used to authenticate the endpoints when new subflows will be set up. Additional subflows begin in the same way as initiating a normal TCP connection, but the SYN, SYN/ACK, and ACK packets also carry the MP_JOIN option. (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2). Host A initiates a new subflow between one of its addresses and one of Host B's addresses. The token -- generated from the key -- is used to identify which MPTCP connection it is joining, and the HMAC is used for authentication. The Hash-based Message Authentication Code (HMAC) uses the keys exchanged in the MP_CAPABLE handshake, and the random numbers (nonces) exchanged in these MP_JOIN options. MP_JOIN also contains flags and an Address ID that can be used to refer to the source address without the sender needing to know if it has been changed by a NAT. (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2). Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
1g	receive data packets from the server through the first and second network interfaces of the client device during the multilink session wherein the first data transfer rate and the	The Oracle MPTCP Products receive data packets from the server through the first and second network interfaces of the client device during the multilink session wherein the first data transfer rate and the second data transfer rate provide an increased data transfer rate of the first path and the second path from the server to the client device as described below:

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	second data transfer rate provide an increased data transfer rate of the first path and the second path from the server to the client device.	Once an MPTCP connection has begun with the MP_CAPABLE exchange, further subflows can be added to the connection. Hosts have knowledge of their own address(es), and can become aware of the other host's addresses through signaling exchanges as described in Section 3.4. Using this knowledge, a host can initiate a new subflow over a currently unused pair of addresses. It is permitted for either host in a connection to initiate the creation of a new subflow (https://datatracker.ietf.org/doc/rfc6824/, Section 3.2). MPTCP can be used to increase the data transfer rate for data communications. For example, using recent hardware and 3 dual-port 10Gig NICs, Multipath TCP is able to transmit a single data-stream at the rate of up to 51.8 Gbit/s. (http://multipath-tcp.org/pmwiki.php?n=Main.50Gbps). Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
3	3. The client device of claim 1, wherein a server provides the multilink session identification that is unique to the multilink session.	The Oracle MPTCP Products provide the multilink session identification that is unique to the multilink session as described below: Token: A locally unique identifier given to a multipath connection by a host. May also be referred to as a "Connection ID". (https://datatracker.ietf.org/doc/rfc6824/). Host A initiates a new subflow between one of its addresses and one of Host B's addresses. The token -- generated from the key -- is used to identify which MPTCP connection it is joining,

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		and the HMAC is used for authentication. The Hash-based Message Authentication Code (HMAC) uses the keys exchanged in the MP_CAPABLE handshake, and the random numbers (nonces) exchanged in these MP_JOIN options. MP_JOIN also contains flags and an Address ID that can be used to refer to the source address without the sender needing to know if it has been changed by a NAT. (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2). Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
4	4. The client device of claim 1, wherein the first information is comprised of at least one of an Internet address associated with the first network interface, and the second information is comprised of at least one of an Internet address associated with the second network interface.	The first information is comprised of at least one of an Internet address associated with the first network interface, and the second information is comprised of at least one of an Internet address associated with the second network interface as described below: The exchange of keys in the MP_CAPABLE handshake provides material that can be used to authenticate the endpoints when new subflows will be set up. Additional subflows begin in the same way as initiating a normal TCP connection, but the SYN, SYN/ACK, and ACK packets also carry the MP_JOIN option. (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2). Host A initiates a new subflow between one of its addresses and one of Host B's addresses. The token -- generated from the key -- is used to identify which MPTCP connection it is joining, and the HMAC is used for authentication. The Hash-based Message Authentication Code (HMAC) uses the keys exchanged in the MP_CAPABLE handshake, and the random numbers

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		(nonces) exchanged in these MP_JOIN options. MP_JOIN also contains flags and an Address ID that can be used to refer to the source address without the sender needing to know if it has been changed by a NAT. (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2). <pre> Host A Host B ----- ----- MP_JOIN -> [B's token, A's nonce, A's Address ID, flags] <- MP_JOIN [B's HMAC, B's nonce, B's Address ID, flags] ACK + MP_JOIN -> [A's HMAC] <- ACK </pre> (https://datatracker.ietf.org/doc/rfc6824/, Section 2.2). Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
5	5. The client device of claim 1, wherein each of the first network interface and the second network interface is one or more of cellular	Each of the first network interface and the second network interface is one or more of cellular interface, Wi-Fi interface, a wireless interface, a cable interface, a wired interface, an Ethernet interface, a Bluetooth interface, a near-field communication interface, and an optical interface as described below:

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	interface, Wi-Fi interface, a wireless interface, a cable interface, a wired interface, an Ethernet interface, a Bluetooth interface, a near-field communication interface, and an optical interface.	Network interfaces are identified by a name that combines a prefix and a suffix, such as wl0 for a first wireless interface, en0 for a first Ethernet network interface, and ww0 for a first wireless wide area network (WAN) interface. (https://docs.oracle.com/en/operating-systems/oracle-linux/9/network/network-ConfiguringtheSystemsNetwork.html#topic_syd_ypj_dtb, section 1). More specifically, the Oracle MPTCP Products include cellular interfaces, Wi-Fi interface, a wireless interface, a cable interface, a wired interface, an Ethernet interface, a Bluetooth interface, a near-field communication interface, and/or an optical interface.
6	6. The client device of claim 1, wherein the processor is configured to reorder the one or more data packets that are received over the at least two or more network interfaces of the client device during the multilink session.	The Oracle MPTCP Products reorder the one or more data packets that are received over the at least two or more network interfaces of the client device during the multilink session as described below: If the SYN packets are unacknowledged, it is up to local policy to decide how to respond. It is expected that a sender will eventually fall back to single-path TCP (i.e., without the MP_CAPABLE option) in order to work around middleboxes that may drop packets with unknown options; however, the number of multipath-capable attempts that are made first will be up to local policy. It is possible that MPTCP and non-MPTCP SYNs could get reordered in the network. Therefore, the final state is inferred from the presence or absence of the MP_CAPABLE option in the third packet of the TCP handshake. (https://datatracker.ietf.org/doc/rfc6824/, Section 3.1). Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As

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		additional information is obtained through discovery related to the Oracle MPTCP Products and related instrumentalities, CAS will supplement these contentions.
7	7. The client device of claim 1, wherein the client device is one of a cell phone, a tablet, a switch, a server, a network device, a router, a computer, a Wi-Fi device, a Wi-Max device, a wireless device, a mobile communication device, a near-field communications device, and a Bluetooth device.	The Oracle MPTCP Products are one of a cell phone, a tablet, a switch, a server, a network device, a router, a computer, a Wi-Fi device, a Wi-Max device, a wireless device, a mobile communication device, a near-field communications device, and a Bluetooth device.

Exhibit F

Infringement of U.S. Patent No. 10,868,908 by Oracle SD-WAN Products

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13a	13. A first device comprising:	The Oracle SD-WAN Products, including the Talari E50 Appliance, Talari E100 Appliance, Talari D2000 Appliance, Talari D6000 Appliance, Talari T5000 Appliance, and devices that operate in a similar manner, Oracle SD-WAN Virtual Appliances, Oracle SD-WAN Edge, Oracle SD-WAN Aware, Oracle SD-WAN Orchestration Cloud Service, Oracle SD-WAN, and devices that operate in a similar manner, implement the claimed device as described below. The Oracle SD-WAN Products include the T5000 Appliance, which “delivers up to 3.0 Gbps uplink/3.0 Gbps downlink (6 Gbps total) across up to 8 WAN connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1). “Oracle SD-WAN Release 2.5 incorporates the T5000 seamlessly into the entire family of appliances offered by Oracle. Basic Oracle SD-WAN Edge appliances platform capabilities are listed below.” (Oracle SD-WAN Edge Features Guide, p. 3-1). More specifically, the Oracle SD-WAN Products include a variety of devices, such as the Talari T5000, that are devices having a network interface.
13b	a network interface; and	The Oracle SD-WAN Products include a network interface as described below: The Oracle SD-WAN includes the T5000 Appliance, which delivers up to 3.0 Gbps uplink/3.0 Gbps downlink (6 Gbps total) across up to 8 WAN connections. (Oracle SD-WAN Edge Features Guide, p. 3-1). A WAN Link provides for the description of individual Internet or Intranet connections of a Site to the WAN or direct connections to other Sites. Individual uses of a WAN Link would be used to describe connections such as: individual Cable, DSL, fiber or other

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		Internet Service Providers; MPLS, IPSec or other site-to-site VPN connections; backup links such as Cellular or Advanced Wireless providers. (Oracle SD-WAN Edge Features Guide, p. 24-12).
13c	at least one processor configured to:	The Oracle SD-WAN Products include at least one processor as described below: The Oracle SD-WAN includes the T5000 Appliance, which delivers up to 3.0 Gbps uplink/3.0 Gbps downlink (6 Gbps total) across up to 8 WAN connections. (Oracle SD-WAN Edge Features Guide, p. 3-1). The T5000 runs the same software as other Oracle appliances while taking performance and scalability to the next level, supporting gigabits of WAN bandwidth across the union of private WAN links and public Internet connections and providing support for up to 128 branch connections. (Oracle SD-WAN Edge Features Guide, p. 3-1).
13d	transmit a first message through the network interface to a second device, wherein the first message includes a multilink request and a destination URL, the network interface to the second device having a data transfer rate associated therewith;	The Oracle SD-WAN Products transmit a first message through the network interface to a second device, wherein the first message includes a multilink request and a destination URL, the network interface to the second device having a data transfer rate associated therewith as described below: The Oracle SD-WAN Products include the T5000 Appliance, which “delivers up to 3.0 Gbps uplink/3.0 Gbps downlink (6 Gbps total) across up to 8 WAN connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1). The “T5000 runs the same software as other Oracle appliances while taking performance and scalability to the next level, supporting gigabits of WAN bandwidth across the union of private WAN links and public Internet connections and providing support for up to 128 branch connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1).

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		(Oracle SD-WAN Implementation Guide, p. 6). “SD-WAN Edge Network Settings allows for the configuration of global parameters that impact the operation of the entire SD-WAN Edge network.” (Oracle SD-WAN Edge Features Guide, p. 24-43). “Global Path Bandwidth Testing Settings allows for the configuration of global parameters that impacts path bandwidth testing operations on individual SD-WAN Edge.” (Oracle SD-WAN Edge Features Guide, p. 24-45). Adaptive Bandwidth Detection “introduced in Edge 5.2 for users with VSAT, LOS, Microwave, 3G/4G/LTE WAN Links, whose available bandwidth varies based upon weather and atmosphere conditions, location, line of site obstructions, etc. It allows the

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		Oracle Talari Appliance to adjust the bandwidth rate on the WAN Link dynamically based on a defined bandwidth range, to use the maximum amount available without marking the paths BAD.” (Oracle SD-WAN Edge Features Guide, p. 13-8). “The Internet Service is for traffic between an enterprise user and sites on the public Internet. Traffic of this type is not encapsulated. During times of congestion, Oracle SD-WAN Edge does actively manage bandwidth by rate-limiting Internet traffic relative to the conduit and intranet traffic as per the configuration established by the administrator.” (Oracle SD-WAN Edge Features Guide, p. 2-17). More specifically, each site in the Oracle SD-WAN has at least one appliance, such as a T5000. The appliances can transmit messages through the network interface to a second device. This message can be for the Internet Service, which includes a URL. Each appliance is associated with one or more WAN Links, each of which has an associated transfer rate. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.
13e	transmit a second message through the network interface to a third device, wherein the second message includes a multilink session identification that is unique to the	The Oracle SD-WAN Products transmit a second message through the network interface to a third device, wherein the second message includes a multilink session identification that is unique to the multilink session and the destination URL, the network interface to the third device having a data transfer rate associated therewith as described below.

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	multilink session and the destination URL, the network interface to the third device having a data transfer rate associated therewith; and	The Oracle SD-WAN Products include the T5000 Appliance, which “delivers up to 3.0 Gbps uplink/3.0 Gbps downlink (6 Gbps total) across up to 8 WAN connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1). The “T5000 runs the same software as other Oracle appliances while taking performance and scalability to the next level, supporting gigabits of WAN bandwidth across the union of private WAN links and public Internet connections and providing support for up to 128 branch connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1). (Oracle SD-WAN Implementation Guide, p. 6).

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		“SD-WAN Edge Network Settings allows for the configuration of global parameters that impact the operation of the entire SD-WAN Edge network.” (Oracle SD-WAN Edge Features Guide, p. 24-43). “Global Path Bandwidth Testing Settings allows for the configuration of global parameters that impacts path bandwidth testing operations on individual SD-WAN Edge.” (Oracle SD-WAN Edge Features Guide, p. 24-45). Adaptive Bandwidth Detection “introduced in Edge 5.2 for users with VSAT, LOS, Microwave, 3G/4G/LTE WAN Links, whose available bandwidth varies based upon weather and atmosphere conditions, location, line of site obstructions, etc. It allows the Oracle Talari Appliance to adjust the bandwidth rate on the WAN Link dynamically based on a defined bandwidth range, to use the maximum amount available without marking the paths BAD.” (Oracle SD-WAN Edge Features Guide, p. 13-8). “The Internet Service is for traffic between an enterprise user and sites on the public Internet. Traffic of this type is not encapsulated. During times of congestion, Oracle SD-WAN Edge does actively manage bandwidth by rate-limiting Internet traffic relative to the conduit and intranet traffic as per the configuration established by the administrator.” (Oracle SD-WAN Edge Features Guide, p. 2-17). More specifically, each site in the Oracle SD-WAN has at least one appliance, such as a T5000. The appliances can transmit messages through the network interface to a third device at the location. This message can be for the Internet Service, which includes a URL. Each appliance is associated with one or more WAN Links, each of which has an associated transfer rate. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the

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		Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.
13f	receive the different data packets through the at least one network interface from the second device and from the third device during the multilink session, wherein the data transfer rate associated with the network interface to the second device and the network interface to the third device provide an increased data transfer rate for the first device.	The Oracle SD-WAN Products receive the different data packets through the at least one network interface from the second device and from the third device during the multilink session, wherein the data transfer rate associated with the network interface to the second device and the network interface to the third device provide an increased data transfer rate for the first device as described below. “Oracle SD-WAN creates a cohesive and efficient collection of all physical links and interfaces, and aggregates them into a single, logical interface to create a virtual WAN conduit. The WAN conduit takes advantage of real-time intelligence encapsulated in the header of every packet the SD-WAN processes. It also supports 128b or 256b advanced encryption standard (AES) across all aggregated WAN paths. All WAN paths are managed unidirectionally so that every packet reliably reaches its destination.” (Five Ways SD-WAN is Transforming Cloud Connectivity White Paper, pp. 3-4). More specifically, data (e.g. packets) transmitted over a conduit, including dynamic conduits, is communicated across one or more WAN links and aggregated in order to increase data bandwidth for the device. Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to carry out the claimed method. Publicly available documentation makes it evident that the Defendants and/or their customers are performing the method in the manner set forth in the asserted claims. As additional information is obtained through discovery related to

#	U.S. Patent No. 10,868,908	Oracle SD-WAN Products
		the Oracle SD-WAN Products and related instrumentalities, CAS will supplement these contentions.
15	15. The first device of claim 13, wherein the first device is one of a cell phone, a tablet, a switch, a server, a network device, a router, a computer, a Wi-Fi device, a Wi-Max device, a mobile communication device, a wireless communications device, a near-field communications device, and a Bluetooth device.	The first device is one of a cell phone, a tablet, a switch, a server, a network device, a router, a computer, a Wi-Fi device, a Wi-Max device, a mobile communication device, a wireless communications device, a near-field communications device, and a Bluetooth device as described below. The Oracle SD-WAN Products include the T5000 Appliance, which “delivers up to 3.0 Gbps uplink/3.0 Gbps downlink (6 Gbps total) across up to 8 WAN connections.” (Oracle SD-WAN Edge Features Guide, p. 3-1). “Oracle SD-WAN Release 2.5 incorporates the T5000 seamlessly into the entire family of appliances offered by Oracle. Basic Oracle SD-WAN Edge appliances platform capabilities are listed below.” (Oracle SD-WAN Edge Features Guide, p. 3-1). More specifically, the Talari T5000 is at least one of a server, a network device, and a router.