



## LANCOM Sizing Guide R&S® Unified Firewalls

Two steps to the right decision

This sizing guide will help you to select the LANCOM R&S® Unified Firewall appliance that best suits your requirements. The following two steps will result in the best possible assessment:

- Determine the number of effective UTM users
- Select the most suitable appliance from the range of LANCOM R&S® Unified Firewalls

## Step 1: Determine the number of effective UTM users

Table 1 (at the end of Step 1) provides the basis for determining the number of effective UTM users. The following summarizes the key background information you need to complete Table 1.

### Total number of all real users

The starting point is the total number of real users. Users are all of the devices with an IP address, including servers and workstations.

### Notes

- > If several users communicate through a device with a single IP address, you need to consider the number of individual users.
- > Not to be forgotten are users who connect to the firewall-protected network through access points, or from other branch offices and production environments.

Enter the value determined for the total number of real users into the left-hand column of Table 1.

### Number of power users

Users who are more active consume more of the resources provided by the firewall for UTM protection. For this reason we classify users in terms of normal and power usage based on the features listed below. Note that at least one characteristic on the right-hand side of the overview must be fulfilled in order to classify power users.

	"Normal" user	"Power" user
Qualitative behavior	Mainly moderate surfing with a web browser to use search engines, news pages or e-mail portals; evenly spread over the working day	Business (e.g. ERP, teleconferencing, web office suite, webinars, cloud services), intensive browsing using search engines, lots of media transmissions and file downloads with intense peak activity
Number of e-mails per working day	Less than 70 e-mails per working day	More than 70 e-mails per working day
Data volumes	Less than 500 MBytes per working day	More than 500 MBytes per working day

### Note

- > Helpful in determining the number of power users are historical data such as the average number of e-mails per user during a working day.

### Calculating the total number of "effective users"

In order to obtain a common basis for the calculation despite different user types, we determine the total number of "effective users" below.

For later consideration, please note down the numbers of "normal" and "power" users. Enter the number of user types into the top two rows of the second column of Table 1. For both user types, multiply the number of real users by the corresponding weighting factor per user type. "Normal" user behavior remains unchanged (factor 1) and "power" users are weighted at 1.3. Enter the results into the top two rows of the right-hand column of Table 1.

You should also determine whether there is a need for more VPN connections, for example using figures based on your experience. Multiply the average number of concurrent VPN connections during a working day by a factor of 1.3 and enter the value into the last column in Table 1.

To calculate the number of effective users, take the sum of the values in the top three rows of the right-hand column of Table 1.

#### Allow for system load and determine the number of “effective UTM users”

The system load must also be taken into account. The number of “effective UTM users” allows for an increase in complexity as the number of users increases and network infrastructure grows, for example through Active Directory and increasing numbers of network components and servers. We allow for this with a 30% overhead. Multiply the number of effective users calculated in step 1 by a factor of 1.3 and enter this into the next row of Table 1.

#### Note

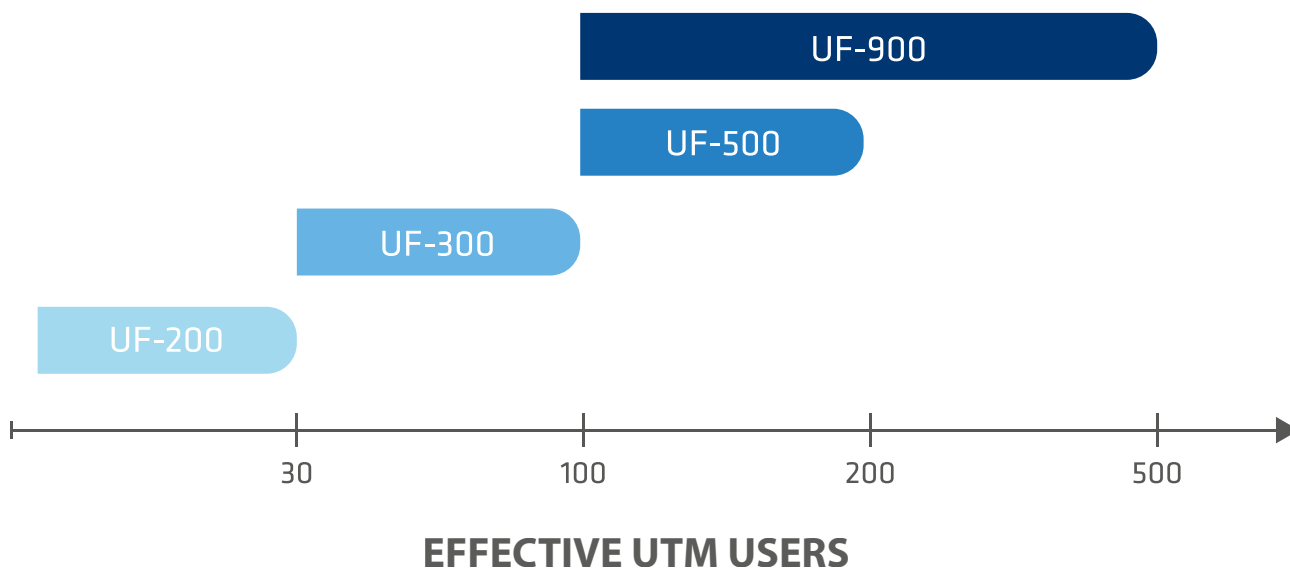
- > You should also allow for special local requirements: Is there high volume of data traffic on the network, for example from or between several servers, that needs to be processed by the firewall? Are there web or e-mail servers? For these cases you should use a higher multiplier than 1.3, e.g. 1.6, to determine the “number of effective UTM users”.

	Number	Weighting	Number of effective users
Total number of “normal” users		x 1.0	=
Total number of “power” users		x 1.3	=
Average number of concurrent VPN connections		x 1.3	=
		<b>Total number of effective users:</b>	
		x 1.3 (system load)	=
			<b>Total number of effective UTM users</b>

Table 1: Calculation of the total number of effective UTM users

## Step 2: Identifying the right appliance from the range of LANCOM R&S®Unified Firewalls

The number of effective UTM users is now assigned to the appropriate LANCOM R&S®Unified Firewall.



### Notes

- > You may have identified a number of effective UTM users for which two different LANCOM R&S®Unified Firewalls come into question. Consider whether the number of effective UTM users could increase over the next few years, for example by hiring new employees, expanding production facilities, or commissioning a server.
- > If you need high availability with redundant power supplies, then the UF-900 is the right choice for you.
- > The UF-50 and UF-100 only support specific UTM functions (see table 2) and thus are not taken into consideration in the above calculation.
- > Table 2 contains relevant data for the LANCOM R&S®Unified Firewalls. Refer to these to fine-tune your selection.

### Local test installations

So you have determined that you have a high number of effective UTM users and have selected a suitable appliance. How about trying out its performance with a test installation? Please contact our sales and pre-sales team and arrange an appointment at your location.

	UF-50	UF-100	UF-200	UF-300	UF-500	UF-900
Max. number of GE interfaces/ network cards	4	4	4	8	14	8 (up to 24 with expansion modules)
SFP	-	-	-	-	-	Up to 8 with expansion modules
SFP+	-	-	-	-	-	Up to 8 with expansion modules
UDP throughput (Mbps)*	2,600	3,800	3,800	7,700	13,400	60,000
TCP throughput (Mbps)*	1,300	3,660	3,660	7,410	12,990	59,020
IMIX throughput (Mbps)	250	375	375	600	1,100	6,000
App-filter throughput (Mbps)	-	-	3,640	6,560	9,490	58,100
HTTP-proxy throughput (Mbps)	200	745	745	1,010	1,770	8,090
HTTPS-proxy throughput (Mbps)	130	325	325	550	1,025	5,680
VPN (IPSec) throughput (Mbps)	200	430	430	620	1,260	4,280
IDS- / IPS throughput (Mbps)	-	-	550	635	1,295	3,780
UTM throughput (Mbps) incl. IDS / IPS	-	-	80	100	170	820
Concurrent sessions	520,000	1,000,000	1,000,000	1,000,000	2,000,000	16,700,000
New sessions per second	8,000	11,000	11,000	13,000	33,000	130,000
UTM protection (malware-, URL- and spam filter, application control, IDS/IPS, HA)	URL filter	Malware, URL- and spam filters	√	√	√	√
19" (1HE)	Rack Mount Kit UF-50	Rack Mount Kit UF-100/200	Rack Mount Kit UF-100/200	√	√	√
High availability (HA)	-	-	√	√	√	√
Redundant power supply	-	-	-	-	-	√

\* Packet size 1500 bytes

Table 2: Overview of throughput values for the LANCOM R&S®Unified Firewalls