## **FIONA Remote Access Billing**

The capacity of virtual machines is managed in two ways depending on the operating system:

- Windows operating system machines: Changes are submitted via Statistics Finland's
  <u>licensing service</u>. The administration makes the changes manually according to the work
  queue, usually within a few working days. <u>Recommended maximum user numbers by machine
  type are available (external link)</u>.
- **Ubuntu operating system machines:** Projects can start up and remove Ubuntu machines themselves using the interface available on the FIONA desktop. Machines are created and removed automatically within a few minutes. The first machine for a project is set up by the administration when the project begins. Changes to Ubuntu machines can also be requested via the licensing service, but this process is slower than using the interface.

Regardless of the management method, the project's machines accrue **Billing Units (BU)**, with accrual by machine type described in CSC's <u>Pouta environment documentation</u>. FIONA uses ePouta Standard and HPC-type machines. The operating system affects the BU price as follows:

Operating system	Price € per BU	
Windows, commercial	0.030	
Windows, academic	0.025	
Ubuntu	0.020	

The price of machine capacity is calculated by multiplying the number of BUs accrued during the billing period by the BU price according to the operating system. The table below presents capacity costs for different machine types over various periods.

Product	1 day, €	1 week, €	30 days, €	Billing period 3 months, €	1 year, €
Fixed annual service fee				750,00	3 000,00
User fee per user				125,00	500,00
S, commercial Windows		10,58	45,36	137,97	551,88
M, commercial Windows		21,22	91,98	275,94	1 103,76
L, commercial Windows		42,34	181,44	551,88	2 207,52
XL, commercial Windows		84,67	362,88	1 103,76	4 415,04
S, academic Windows		8,82	37,80	114,98	459,90

M, academic		17.04		222.25	242.00
Windows		17,64	75,60	229,95	919,80
L, academic					
Windows		35,28	151,20	459,90	1 839,60
XL, academic					
Windows		70,56	302,40	919,80	3 679,20
S, Ubuntu	1,01	7,06	30,24	91,98	367,92
M, Ubuntu	2,02	14,11	60,48	183,96	735,84
L, Ubuntu	4,03	28,22	120,96	367,92	1 471,68
XL, Ubuntu	8,06	56,45	241,92	735,84	2 943,36
HPC					
6.14core, Ubuntu	12,00	84,00	360,00	1 095,00	4 380,00
HPC					
6.28core, Ubuntu	24,00	168,00	720,00	2 190,00	8 760,00
HPC					
6.54core, Ubuntu	48,00	336,00	1 440,00	4 380,00	17 520,00