

У статті представлена розроблена методика вибору програмного забезпечення для реалізації термінального доступу до програмних продуктів на основі розрахунку прямих витрат на володіння програмним забезпеченням, зроблені висновки про сферу застосування розглянутих програмних продуктів.

**Ключові слова:** термінальний доступ, протоколи термінального доступу, X-windows, Nomachine NX, RDP, ICA, мережевий трафік, прямі витрати, ліцензування, CAL, TS CAL, вартість підключення термінального рішення.

S.S. PETROVSKY  
Khmelnyskyi National University

**DEVELOPMENT OF SOFTWARE SELECTION METHOD FOR IMPLEMENTATION OF TERMINAL ACCESS TO SOFTWARE PRODUCTS**

This article represents a method of software selection for the purpose of terminal access connections to software products implementation based upon the evaluation of the direct expenditures for the software ownership, and contains the conclusions on the sphere of implementation of the software products under consideration. Due to the large number of software products and technologies presented in the market, it is necessary to have an idea of the possibilities of these software products, as well as the areas of their application. The purpose of the research was to analyze the existing technologies of terminal access in the market, ways of licensing such connections, as well as pricing methods for such solutions. In the course of the work, three basic licensing schemes are analyzed: the licensing scheme of the server and client connections, the licensing scheme of the server only (or the licensing of physical processors of hardware components), as well as the scheme for granting licenses only for client connections.

**Keywords:** terminal access, terminal access protocols, X-windows, Nomachine NX, PRD, ICA, network traffic, direct expenditures, licensing, CAL, TS CAL, terminal solution connection cost.

[1].

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- CAL (Client Access

- TSCAL (Terminal Server Client

License)  
Access License));

$$S = \sum_{i=1}^y (V \times T_{yi} \times r_i) + C_{CAL} + C_{TSCAL} + \frac{C_S + C_{TS}}{n}$$

V -

T<sub>yi</sub> -

i ;

$r_i - 1$ ,  
 $i -$ ,  
 $y -$  ( ),  
 $C_{CAL} -$  (CAL),  
 $C_{TSCAL} -$  (TSCAL),  
 $C_{S-}$ ,  
 $C_{TS} -$  ( );  
 $n -$ ,  
 1. Linux- – X-window.  
 Linux, X-windows  
 [2].  
 2. FreeNX, Nomachine NX.  
 Nomachine NX [3],  
 X-windows, ( SSH) [4].  
 Microsoft Windows Server 2008.  
 RDP  
 6.1. . [5]  
 Xen-Desktop Citrix. Citrix ICA,  
 XP / VS Server ThinStuff. [6].  
 RDP 6.1.  
 Microsoft Windows Server 2008, (CAL-  
 ThinStuff XP / VS Server [7].  
 LX Server ThinStuff.  
 RDP 6.1.  
 ThinStuff LX Server [7].  
 7.7, TrafficInspector [7],  
 2, 7-  
 1 : 7.7 : 210;  
 (15 7 );  
 (3,5 );  
 ( 1,7 ).

/		
X-window	X-windows	21
Free NX	NX	10
Microsoft 2008 Windows Server	RDP 6.1	3
Citrix XenDesktop 5.0	ICA	2,5
ThinStuff XP/VS Server	RDP 5.2	3,5
ThinStuff LX Server	RDP 5.2	3,5

	$C_{S,}$	$C_{TS,}$	$C_{CAL,}$	$C_{SCAL,}$	$V,$	
X-window	0	0	0	0	21	31 500
FreeNX	0	0	0	0	10	15 000
MS Windows Server 2008	2650 0	0	1044	2526	3	9 395
Citrix XenDesktop	2363 5	0	1026	1969	2,5	7 927
ThinStuff XP/VS Server	2363 5	4100 0	1026	0	3,5	9 508
ThinStuff LX Server	0	1800 0	0	0	3,5	6 150

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6. Citrix ukra na. URL: <http://www.citrix.ua/>
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