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Business process reengineering and automation in virtual environment

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Abstract

Introduction of the Slovenian State Cloud (SSC) automated the procurement of new virtualized servers. When a user orders the desired server, it is generated and it appears on the VMware infrastructure. The problem occurs when user wants to move this server to a different network. This process is complicated, time-consuming and not automated. In the study, we focused on optimizing the process of changing an IP address and we were questioning whether the development of a script or workflow for changing an IP address on a virtualized server with the help of vRealize Orchestrator and IPAM is reasonable. We designed three models and analyzed their effectiveness. We found out that the changing of an IP address and network on the created virtualized server with partial automation is faster than the creation of a new virtualized server in the appropriate network. By calculating the profitability threshold, we have also calculated the profitability threshold above which the investment becomes financially acceptable.

Key words: Process reengineering, process automation, virtual environment

Prenova in avtomatizacija procesa v virtualnem okolju

Z uvedbo Državnega računalniškega oblaka (DRO) se je avtomatiziralo naročanje novih virtualiziranih strežnikov. Ko uporabnik naroči želeni strežnik, se le-ta ustvari in pojavi na VMware infrastrukturi, problem pa se pojavi, ko želi uporabnik ta strežnik prestaviti med različnimi omrežji, saj je proces zapleten dolgotrajen in ni avtomatiziran. V raziskavi smo se osredotočili na optimizacijo procesa zamenjave IP naslova, kjer nas je zanimalo, ali je razvoj skripte oziroma delovnega toka za zamenjavo IP naslova na virtualiziranem strežniku s pomočjo vRealize Orchestratorja in IPAM-a smiselna. Na raziskovalno vprašanje smo skušali odgovoriti tako, da smo izdelali tri modele in analizirali njihovo učinkovitost. Ugotovili smo, da je zamenjava mreže in IP naslova na izdelanih virtualiziranih strežnikih z delno avtomatizacijo hitrejša kot izdelava novega virtualiziranega strežnika v ustrezni mreži. S pomočjo izračuna praga rentabilnosti smo izračunali tudi mejo rentabilnosti, nad katero postane investicija finančno sprejemljiva.

Ključne besede: Prenova procesov, avtomatizacija procesov, virtualno okolje