

CLAIMS

1. A computer-implemented method for performing a live update, the method comprising:
determining a migration type for a live migration to be performed from a source server to a target server;
performing the live migration from the source server to the target server;
based on the migration type, maintaining pages to be migrated;
tracking modifications in a hypervisor page table; and
performing a back-migration based on the migration type.
2. The computer-implemented method of claim 1, further comprising tracking modifications during the live migration in a hypervisor table of the target server.
3. The computer-implemented method of claim 2, further comprising tracking modifications occurring after the live migration is completed in a second hypervisor table of the target server.
4. The computer-implemented method of any of the preceding claims, further comprising determining whether the migration type is a permanent migration or a temporary migration.
5. The computer-implemented method of claim 4, responsive to determining the migration type is a permanent migration, freeing page memory of the source server associated with the permanent migration.
6. The computer-implemented method of any of the preceding claims, wherein tracking the modifications comprises using the modification-after-migration (MAM) bit to indicate pages that have been modified.
7. The computer-implemented method of claim 6, wherein the back-migration only transmits changes in the hypervisor table indicated by the MAM bit, wherein the changes are combined with the pages that are maintained in the source server.
8. A system for performing live updates, the system comprising:
one or more processors; and
at least one memory coupled to the one or more processors, wherein the one or more processors are configured to:
determine a migration type for a live migration to be performed from a source server to a target server;
perform the live migration from the source server to the target server;
based on the migration type, maintain pages to be migrated;
track modifications in a hypervisor page table; and

perform a back-migration based on the migration type.

9. The system of claim 8, wherein the one or more processors are configured to track modifications during the live migration in a hypervisor table of the target server.
10. The system of claim 9, wherein the one or more processors are configured to track modifications occurring after the live migration is completed in a second hypervisor table of the target server.
11. The system of any of claims 8 to 10, wherein the one or more processors are configured to determine whether the migration type is a permanent migration or a temporary migration.
12. The system of claim 11, responsive to determining the migration type is a permanent migration, the one or more processors are configured to free page memory of the source server associated with the permanent migration.
13. The system of any of claims 8 to 12, wherein tracking the modifications uses the modification-after-migration (MAM) bit to indicate pages that have been modified.
14. The system of claim 13, wherein the back-migration only transmits changes in the hypervisor table indicated by the MAM bit, wherein the changes are combined with the pages that are maintained in the source server.
15. A computer program product for performing a live update, the computer program product comprising:
a computer readable storage medium readable by a processing circuit and storing instructions for execution by the processing circuit for performing a method according to any of claims 1 to 7.
16. A computer program stored on a computer readable medium and loadable into the internal memory of a digital computer, comprising software code portions, when said program is run on a computer, for performing the method of any of claims 1 to 7.