

CLAIMS

WHAT IS CLAIMED IS:

1. A computer-implemented method under control of a computer including a processor and memory, wherein the processor is configured by specific computer-executable instructions stored in the memory to perform the computer-implemented method comprising:
 - transmitting, via a network connection, a request to a Program Execution Service (PES) to access a virtual desktop instance, wherein the virtual desktop instance is configured to execute an operating system;
 - receiving, via the network connection, access to the virtual desktop instance;
 - receiving, via the network connection, at least a portion of user content in a data store;
 - storing the at least a portion of the user content in a local data store;
 - launching a local version of the virtual desktop instance based on a local image of the operating system, wherein the local image of the operating system is configured according to a desktop profile of the user; and
 - attaching the local data store to the local version of the virtual desktop instance, wherein input/output operations relating to user content are redirected to the local data store attached to the local version of the virtual desktop instance.
2. The computer-implemented method of Claim 1 further comprising sending a request to the PES to enter a disconnected mode.
3. The computer-implemented method of Claim 1 further comprising determining that the network connection is likely to be interrupted based at least in part on a degradation in the network bandwidth.
4. The computer-implemented method of Claim 3 wherein receiving the portion of the user content and launching the local version of the virtual desktop instance are subsequent to determining that the network connection is likely to be interrupted.
5. The computer-implemented method of Claim 4 further comprising capturing information related to execution of the operating system onto the copy of the data store.

6. The computer-implemented method of Claim 5 further comprising determining that the network connection is restored and transmitting a request to the PES to synchronize the copy of the data store with the data store.

7. The computer-implemented method of Claim 6 further comprising terminating the local version of the virtual desktop instance.

8. The computer-implemented method of Claim 1, wherein the local image of the operating system is a different operating system version than the operating system executing within the virtual desktop instance.

9. The computer-implemented method of Claim 1 further comprising receiving at least a portion of the desktop profile for the user and storing it in a local data store.

10. The computer-implemented method of Claim 9 further comprising synchronizing changes to the desktop profile for the user in the local data store with a desktop profile for the user stored in a data store maintained by the PES.

11. A system, comprising:

one or more computers of a Program Execution Service (PES) including processors and memory, the memory including instructions that, upon execution, cause the one or more computers to:

receive a first request from a computing device to access a first virtual desktop instance, the request identifying a user of the computing device;

identify a first virtual desktop instance corresponding to the first request, wherein the first virtual desktop instance includes at least an operating system;

cause one or more volumes to be attached to the first virtual desktop instance, the one or more volumes including desktop personalization information for the user and a data store for the user, wherein the operating system is personalized according to the desktop personalization information for the user, and wherein one or more operating system folders are mapped to storage in the data store for the user;

provide, to a computing device, a copy of the data store for the user and an image of the operating system personalized according to the desktop personalization information for the user;

provide, to the computing device, a virtual desktop monitoring module, wherein the virtual desktop monitoring module is configured to execute a local version of the first virtual desktop instance from the image of the operating system and wherein the virtual desktop monitoring module is configured to attach the copy of the data store to the local version of the virtual desktop instance on the computing device; and

receive a request from the client computing device to synchronize the local data store with the data store on the one or more volumes.

12. The system of Claim 11, wherein the instructions, upon execution, further cause the PES to synchronize the copy of the data store with the data store on the one or more volumes based on policy rules associated with the user.

13. The system of Claim 12, wherein the instructions, upon execution, further cause the PES to:

receive a second request from the computing device to access a second virtual desktop instance, the request identifying the user of the computing device;

identify a second virtual desktop instance corresponding to the second request; and

cause the data store to be attached to the second virtual desktop instance.

14. The system of Claim 11, wherein the instructions, upon execution, further cause the PES to provide, to the computing device, at least a portion of the copy of the data store upon determining that the computing device will be disconnected from the PES.

15. The system of Claim 11, wherein the instructions, upon execution, cause the PES to terminate the local version of the virtual desktop instance upon a connection of the computing device to the PES.

16. Non-transitory physical computer storage comprising computer-executable instructions that, when executed, by a computing system having a processor and memory, direct the computing system to at least:

configure a virtual desktop instance for a user by creating one or more volumes, the one or more volumes including desktop personalization information for the user and a data store for the user, wherein an operating system within the virtual desktop instance is personalized

according to the desktop personalization information for the user and at least a portion of operating system input/output operations are redirected to the data store for the user;

provide, to a computing device associated with the user, at least a portion of the desktop personalization information and at least a portion of the data store for the user;

enable the computing device to run a local version of the virtual desktop instance and attach a local data store that includes at least the provided portion of the desktop personalization information and the provided portion of the data store for the user, wherein upon attachment of the local data store to the local version of the virtual desktop instance a local image of the operating system is personalized according to at least the provided portion of the desktop personalization information and at least a portion of local operating system input/output operations are redirected to the local data store; and

receive a request from the client computing device to synchronize the local data store with the data store on the one or more volumes.

17. **The non-transitory physical computer storage of Claim 16, wherein the local version of the virtual desktop instance comprises a version of the operating system with a different set of resources, the resources including one or more of processing power requirements or memory requirements.**

18. The non-transitory physical computer storage of Claim 16, wherein the computer-executable instructions, when executed, further direct the computing system to enable the computing device to capture changes to the provided portion of the data store on the local data store.

19. The non-transitory physical computer storage of Claim 16, wherein the computer-executable instructions, when executed, further direct the computing system to:

receive a request from the computing device to access a second virtual desktop instance;
configure a second virtual desktop instance comprising to the request; and
cause the data store to be attached to the second virtual desktop instance.

20. The non-transitory physical computer storage of Claim 19, wherein the computer-executable instructions, when executed, direct the computing system to synchronize the second virtual desktop instance with the local data store.

21. The computer-implemented method of claim 1, wherein at least one aspect of the local version of the virtual desktop instance is modified.

22. The system of claim 11, wherein at least one aspect of the local version of the first virtual desktop instance is modified on the computing device.

23. The non-transitory physical computer storage of claim 16, wherein at least one aspect of the local version of the virtual desktop instance is modified on the computing device.