CLAIMS

1. A computer-implemented method for dynamically selecting a storage tier for storing an object from a plurality of storage tiers, the method comprising performing computer-implemented operations for:

receiving, at an operating system executing on a computing device, an unqualified request to store an object, the unqualified request being received from an application executing on the computing device and comprising the object to be stored and an optimizing factor;

in response to the receiving the request, selecting by way of the operating system a storage tier from a plurality of storage tiers for storing the object based at least in part upon one or more object location factors and the optimization factor, the plurality of storage tiers comprising a local storage tier that comprises one or more of a system memory or a system cache of the computing device, a local network storage tier, and a remote network storage tier, wherein the one or more object location factors comprise a historical usage pattern of the object generated by monitoring the historical usage pattern of the object; and

causing the object to be stored at the selected storage tier.

2. The computer-implemented method of claim 1, wherein the plurality of storage tiers comprises a local storage tier, a local network storage tier, and a remote network storage tier and wherein the optimization factor comprises data indicating that a cost of storing the object is to be minimized when selecting the storage tier.

3. The computer-implemented method of claim 2, wherein the selection of the storage tier for storing the object is based upon the object location factors and the optimization factor.

4. The computer-implemented method of claim 3, wherein the request to store the object further comprises one or more of the object location factors.

5. The computer-implemented method of claim 3, further comprising:

storing data identifying the object and the storage tier used to store the object;

receiving a request to retrieve the object; and

in response to receiving the request to retrieve the object, utilizing the stored data to identify the storage tier used to store the object, retrieving the object from the identified storage tier, and providing the retrieved object in response to the request to retrieve the object.

6. The computer-implemented method of claim 3, wherein the operating system is executing in a virtual machine instance.

7. The computer-implemented method of claim 6, wherein the virtual machine instance is executing in a distributed execution environment.

8. The computer-implemented method of claim 1, wherein the one or more object location factors further comprise one or more of an object type, an object size, object file attributes, object security requirements, object sharing requirements, the compressibility of the object, a cost of storing the object at a storage tier, a latency when storing the object or retrieving the object from a storage tier, or available bandwidth to a storage tier.

9. A computer-implemented method for dynamically selecting a storage tier for storing an object, the method comprising performing computer-implemented operations for:

receiving, by an operating system executing on a computing device, an unqualified request to store an object, the unqualified request being received from an application executing on the computing device and comprising the object to be stored and an optimization factor;

in response to receiving the request, selecting, by the operating system a local

storage location or a network storage location suitable for storing the object based at least in part on one or more object location factors and at least in part upon the optimization factor, the local storage location comprising one or more of a system memory or a system cache of the computing device; and

causing the object to be stored at the selected storage location.

10. The computer-implemented method of claim 9, wherein the unqualified request comprises a request that does not specify a location for storing the object.

11. The computer-implemented method of claim 9, wherein the local storage location comprises one or more memories and mass storage devices of the computing device executing the operating system that receives the unqualified request to store the object.

12. The computer-implemented method of claim 9, wherein the network storage location comprises a storage service accessible to the computer by way of a web service.

13. The computer-implemented method of claim 9, wherein one or more of the object location factors are generated by monitoring communication with the network storage location.

14. The computer-implemented method of claim 12, wherein one or more of the object location factors are retrieved from the storage service.

15. The computer-implemented method of claim 9, wherein the one or more object location factors further comprise one or more of an object type, an object size, object file attributes, object security requirements, object sharing requirements, the compressibility of the object, a cost of storing the object at a storage location, a latency when storing the object or retrieving the object from a storage location, and available

bandwidth to a storage location.

16. The computer-implemented method of claim 9, further comprising monitoring a historical usage pattern of the object and utilizing the historical usage pattern of the object as one of the one or more object location factors.