

CLAIMS

1. A system, comprising:
 - a memory that stores computer executable components; and
 - a processor, operably coupled to the memory, and that executes the computer executable components stored in the memory, wherein the computer executable components comprise:
 - a data pool component that performs a semantic analysis of data access patterns across a distributed computing network to partition file system objects independently of a directory structure and into groups with defined temporary access restrictions.
2. The system of claim 1, further comprising:
 - a directory component that organizes data into the directory structure by defining sectors on a node of the distributed computing network into an address space.
3. The system of claim 2, further comprising:
 - a partition component that separates metadata from the data of the directory structure and partitions the metadata into the groups within a continuous section of virtual address space based on the data access patterns.
4. The system of claim 3, further comprising:
 - an adaption component that dynamically adjusts the continuous section of virtual address space to enable localization of a decision regarding consistency of the data to minimize operating requests across the distributed computing network.
5. The system of claim 4, wherein the adaption component dynamically adjusts the continuous section of virtual address space via a tree-operation selected from the group consisting of a vertical split, a horizontal split, a vertical merger, and a horizontal merger.
6. The system of claim 5, further comprising:
 - a prediction component employs machine learning to predict a future data access pattern of a file system object, wherein the partition component further partitions the metadata based on the future data access pattern.
7. A computer-implemented method, comprising:
 - performing, by a system operatively coupled to a processor, a semantic analysis of data access patterns across a distributed computing network to partition file system objects independently of a directory structure and into groups with defined temporary access restrictions.

8. The computer-implemented method of claim 7, further comprising:
organizing, by the system, data into the directory structure by defining sectors on a node of the distributed computing network into an address space.
9. The computer-implemented method of claim 8, further comprising:
separating, by the system, metadata from the data of the directory structure; and
partitioning, by the system, the metadata into the groups within a continuous section of virtual address space based on the data access patterns.
10. The computer-implemented method of claim 9, further comprising:
adjusting, by the system, the continuous section of virtual address space to enable localization of a decision regarding consistency of the data to minimize operating requests across the distributed computing network.
11. The computer-implemented method of claim 10, wherein the adjusting comprises a tree-operation selected from the group consisting of a vertical split, a horizontal split, a vertical merger, and a horizontal merger.
12. A computer program product for managing data comprised within a distributed computing network, the computer program product comprising a computer readable storage medium having program instructions embodied therewith, the program instructions executable by a processor to cause the processor to:
perform, by the processor, a semantic analysis of data access patterns across a distributed computing network to partition file system objects independently of a directory structure and into groups with defined temporary access restrictions.
13. The computer program product of claim 12, wherein the program instructions further cause the processor to:
organize, by the processor, the data into the directory structure by defining sectors on a node of the distributed computing network into an address space.
14. The computer program product of claim 13, wherein the program instructions further cause the processor to:
separate, by the processor, metadata from the data of the directory structure; and
partition, by the processor, partitions the metadata into the groups within a continuous section of virtual address space based on the data access patterns.

15. The computer program product of claim 12, wherein the distributed computing network is comprised within a cloud computing environment.
16. The computer program product of claim 14, wherein the program instructions further cause the processor to:
- adjust, by the processor, the continuous section of virtual address space to enable localization of a decision regarding consistency of the data to minimize operating requests across the distributed computing network.
17. The computer program product of claim 16, wherein the processor adjusts the continuous section of virtual address space via a tree-operation selected from the group consisting of a vertical split, a horizontal split, a vertical merger, and a horizontal merger.