**Invention Disclosure**

**Title**

Detecting Flow Anomalies in Distributed Systems

**Inventors**

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**Description**

We outline a method of detecting anomalies and their physical locations that lay hidden in the deep layers of networks within distributed systems.

In typical cases, the existence of anomalies within distributed systems will cause severe disruptions, which draws the attention of its stakeholders such as users, owners and administrators of the distributed systems. Such anomalies are then easily detected and located for corrections.

However, our method focus on a specific type of *non-critical anomalies* that allows the distributed systems to continue their normal operations without significantly obstructing the distributed systems from meeting their objectives. Due to the fact that non-critical anomalies do not pose immediate threats, they are often ignored by administrators and owners of the distributed systems. If such non-critical anomalies are not corrected appropriately, either a long term physical deterioration or combination of several rare events may trigger a catastrophic failure in the distributed systems. It would be useful to utilize our method of anomalies detection in order to detect such non-critical anomalies early and prevent undesirable outcomes.