**Potential Algorithm for Anomaly Detection:**

For anomaly detection in the duration of a span, we can use the Isolation Forest algorithm, which is efficient and effective for this purpose. Another suitable algorithm is the Local Outlier Factor (LOF).

**Isolation Forest:**

This algorithm isolates observations by randomly selecting a feature and then randomly selecting a split value between the maximum and minimum values of the selected feature. Anomalies are expected to have shorter paths in the tree structure, making them easier to isolate. It is efficient in high-dimensional spaces and works well for detecting outliers in large datasets.

**Local Outlier Factor (LOF):**

LOF is an algorithm that computes the local density deviation of a given data point with respect to its neighbours. It identifies anomalies by comparing the local density of an observation to that of its neighbours. Points with a substantially lower density than their neighbours are considered outliers. LOF is particularly useful for detecting local anomalies that might not be apparent when looking at the global structure of the data.

**Why Isolation Forest and LOF:**

**Isolation Forest:** It has a linear time complexity, making it scalable to large datasets. It is also robust to high-dimensional data, which is common in microservice tracing data.

**Local Outlier Factor (LOF):** LOF is capable of identifying local anomalies, which is important in distributed systems where anomalies may only be apparent in localized contexts. It provides a score that reflects the degree of abnormality of the data point, allowing for nuanced anomaly detection.

By combining these two algorithms, we can leverage their strengths to robustly identify anomalies in span durations.