

# Avertle® for Data Center

## Intelligent Diagnostics and Prognostics for Data Center Reliability & Availability

As global demand for remote working continues to grow, the load on datacenters are increasing non-linearly in size and complexity, and their uptime is becoming extremely critical for ensuring business and social continuity. Providing reliable uptime for datacenters requires they function at an optimum level of prescribed SLAs with enough redundancy of critical infrastructure. Equipment failures that go unnoticed until the last moment especially in datacenters can cause severe downtime

### According to a recent study by Uptime:

Power failures accounted for **36%** of the biggest, global public service outages tracked by Uptime Institute since January 2016.

About **33%** of outages costed over **\$250K**, **5%** respondents reported outages that costed them **\$1 Million** or above with **1** outage costing as much as **~\$50 Million**.

**80%** of respondents say that their most recent service outage could have been prevented.

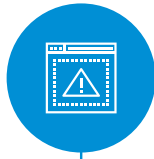
### WHAT WE OFFER

LTTS Avertle® is a scalable end-to-end predictive maintenance solution that can accurately diagnose and predict the remaining useful life, operating zones, asset health and degradation for critical equipment in Datacenters such as power and HVAC assets.

#### Key features:

- Assessment of available data sources (online + offline) for critical equipment
- Multi-dimensional multivariable ML models using hybrid approach (Physics + Simulated Data driven)
- Anomaly identification and Fault classification by domain SMEs and ML model updates using Deep Learning techniques
- Optimal selection as well as installation of sensors
- Rich Fault Signature library for 35 + equipment types
- Early fault detection at the Edge gateway and updated models with supervised learning cycle between edge and LTTS Global Model database
- Real time monitoring and pre-processing at our AI enabled Edge gateway
- Visualization support on multiple platforms like HMI, Mobile, Desktops and Laptops

## WHAT MAKES US DIFFERENT



### Early Failure Detection on Edge

Pre-build Machine Learning Models for various equipment types.

On the Edge processing and failure prediction



### ML Model Re-tuning on Field Conditions

ML based Multi-dimensional Models for failure and performance prediction

Fault signature library for different equipment type



### Actionable Insights

Prognostics to act ahead of any fault occurrence

Cloud agnostic visualization

Holistic View of Asset Performance at various Level of Organization Hierarchy



### 24 X 7 Monitoring

Round the clock, real time monitoring of critical assets

Notifications for critical events/ alarms

## THE POSSIBILITIES WE CREATE

- **Planned Interventions:** Implementing LTTS Avertle® at a data center can provide clear insights and indications when a critical Power and HVAC asset is likely to fail, and the management team can make planned interventions before the actual incident occurs.
- **20 % Reduced Maintenance Costs:** Reduction in overheads and OPEX capital that is tied up in reactive approach towards critical Power and HVAC assets.
- **15 % Reduced Outage:** Measurable benefits in the form of improved uptime. Data center maintenance team can address unplanned outage effectively with provided fault codes at subcomponent level.
- **80 % Improved Asset Reliability:** Insight in Remaining useful life and estimated time to failure of asset with physics-based modelling approach.

## SUCCESS STORIES

Over 150+ installations for 35+ equipment types in varied industry segments across 15 global customers in 18 months.



15% Improved Machine Uptime, 10% Improved Service Levels and 20% Reduced Maintenance Cost for a major data center provider



20% Reduced Maintenance Cost and 90% Fault prediction accuracy for a Global Auto OEM



93% Improved uptime and 15% Reduced Maintenance Cost for a Global Beverage Manufacturer

