

EchoWare IoT Middleware Platform

With ADAN *Anomaly Detection and Notification System

The EchoWare IoT (Internet of Things) Middleware Platform is based on Echo Messaging System's Autonomous Self-Adapting Agents in an Intelligent System using Artificial Intelligence. The Platform consists of a suite of interoperable software tools whose combined capabilities are well suited for IoT systems. Echo Messaging Systems won a 'Best-Paper/Poster' award from SASO 2015 / Self-Adapting, Self-Organizing systems held at MIT in Cambridge in Sept 2015. Additional research has resulted in Echo's proprietary ADAN - Anomaly Detection and Notification System, which monitors and categorizes normal behavior. Agents that exhibit non-normal behavior will immediately react with preset responses including slow/hard power down, exception reports, device parameter setting adjustment & more.

Platform Components:

- Web Services
- Background Update Services Engine
- Web Applications
- Mobile Apps

Features:

- Plug-in architecture
- Alert-Based Agents
 - react to Events, Timers, Location, Data,...
- Common Command Interface
- Flexible Network Topology

Communications:

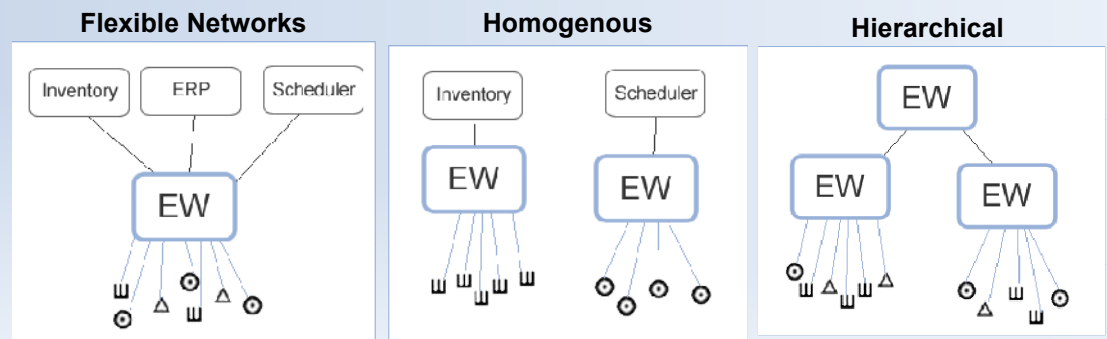
- Push Notification
- Phone/Text Message
- IP Based Notification
- API, Web Services
- Any digital communication

Push Notification:

- No SIM card required
- No Static IP required
- Push Commands directly to IoT devices
- Push Software/Firmware updates

Networking:

EchoWare IoT Middleware Platform can be configured into various network topologies, such as shown:



Capabilities:

- Register, Self-Register, Batch Register Devices
 - Provision, Security Layer
- Monitor Device & Network health
 - Dashboards, Heartbeat service
- Configure settings
- Exception Reporting
 - Notify and respond to unexpected behaviour
- Aggregate Data
 - Common Control Language
- Control Devices:
 - Automatic, Single, Filtered, Batch On-Demand
 - Via Web / Mobile apps, Web services

See Additional Documents in this Series:

[1\) Echoware Agents, AI and Intelligent Systems](#)

[2\) Echoware IoT Platform](#)

[3\) EchoWare and Push Notification](#)