Cloud Garage

Microsoft Gold Partner

Remote Energy Management Solution

ENERGY MANAGEMENT SYSTEM

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- The rising energy costs and global warming had forced to keep an eye on our energy consumption. In order to do that first we need to improve the efficiency through which we can consume energy. An energy management system can help monitor, control and reduce the energy consumption significantly.

- You can schedule, control and monitor your factory equipments like motors, boilers. thermostats and other energy consuming components through wireless devices or mobile smartphone apps.

- Statistics reveal the the energy management systems can reduce energy costs from 5% to 20%. By using EMS, you can get a quick return on investment in about 24 to 36 months depending on workload and equipments.

- Hassle free installation without disruption and downtime and energy saving instantly.

- EMS system will create new jobs by entering into the domain energy analytics sector which is till now not explored.

WHY DO WE NEED EMS

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- Profiling and Bench-marking by providing online calculation of energy consumption.
- To understand where electricity is used and then minimize the usage accordingly.
- Alerts in case of deviating from the any of the electrical parameter threshold values
- Online monitoring of all the parameters from various sources can be viewed at single place.
- Develops the behavioral change in the human resource about Energy consumption.
- Develops the healthy competition for Energy Conservation between teams.
- Can track information of Balanced load, so all the faults can be avoided
- Run hour of each machine can also be viewed at single place thus helps in planning of maintenance

BENEFITS OF USING EMS

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- Running an energy-efficient operation and using renewable energy can improve relationships with customers, suppliers and other stakeholders, who may expect their suppliers to prove their environmental credentials.

- Cutting energy waste means you're increase in operational efficiency. Reducing operating cost and use capital for other areas.

- You can track energy anytime day or night and know how much is consumed at that particular time. By this, one can take required steps to reduce energy waste.

- All parameters related to energy consumption can be logged for up to 1 Year or More (based on solution implemented)

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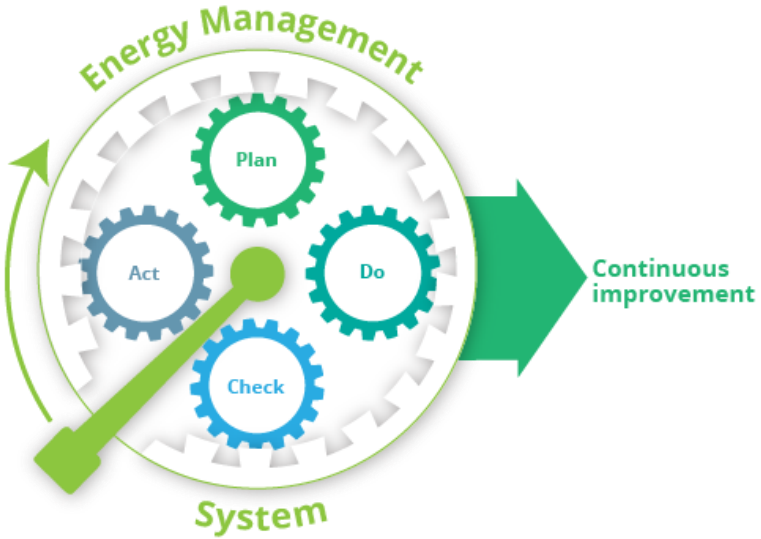
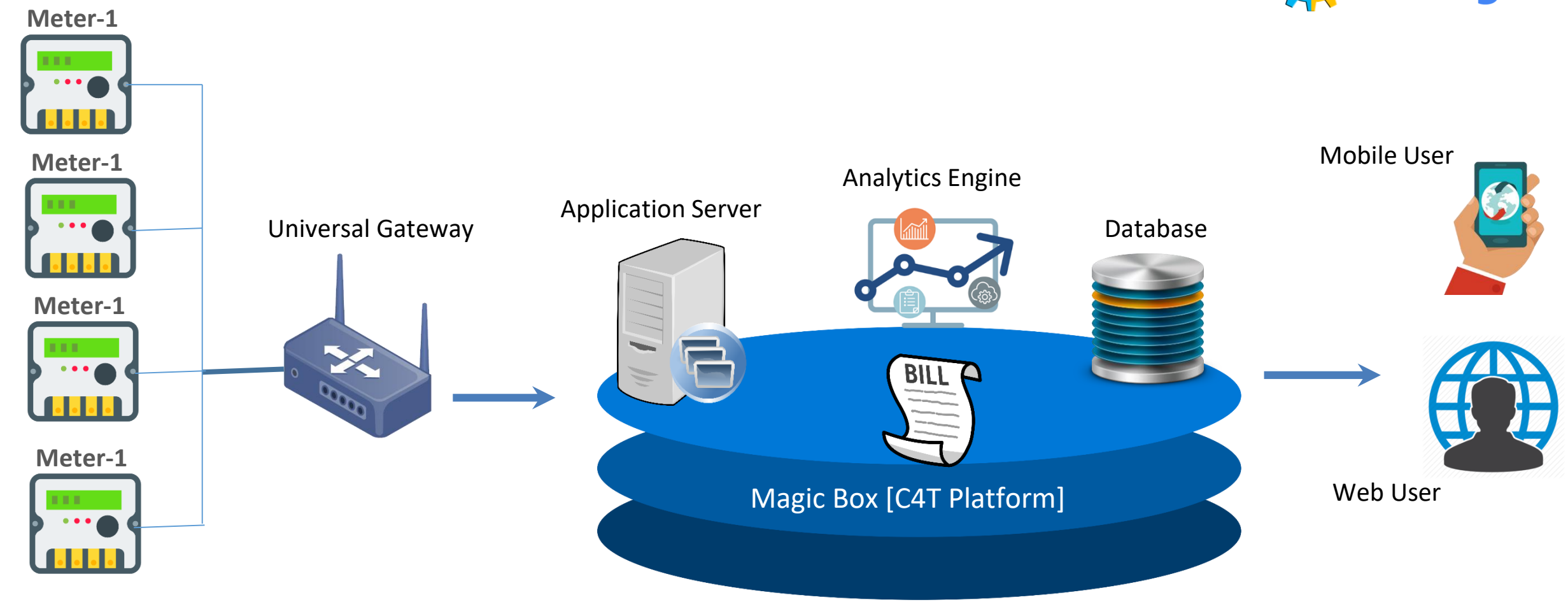
Making the Energy Visible

C4T-REMS Enable to Monitor, Manage, analysis and Control Multi-Location Energy Operation Remotely

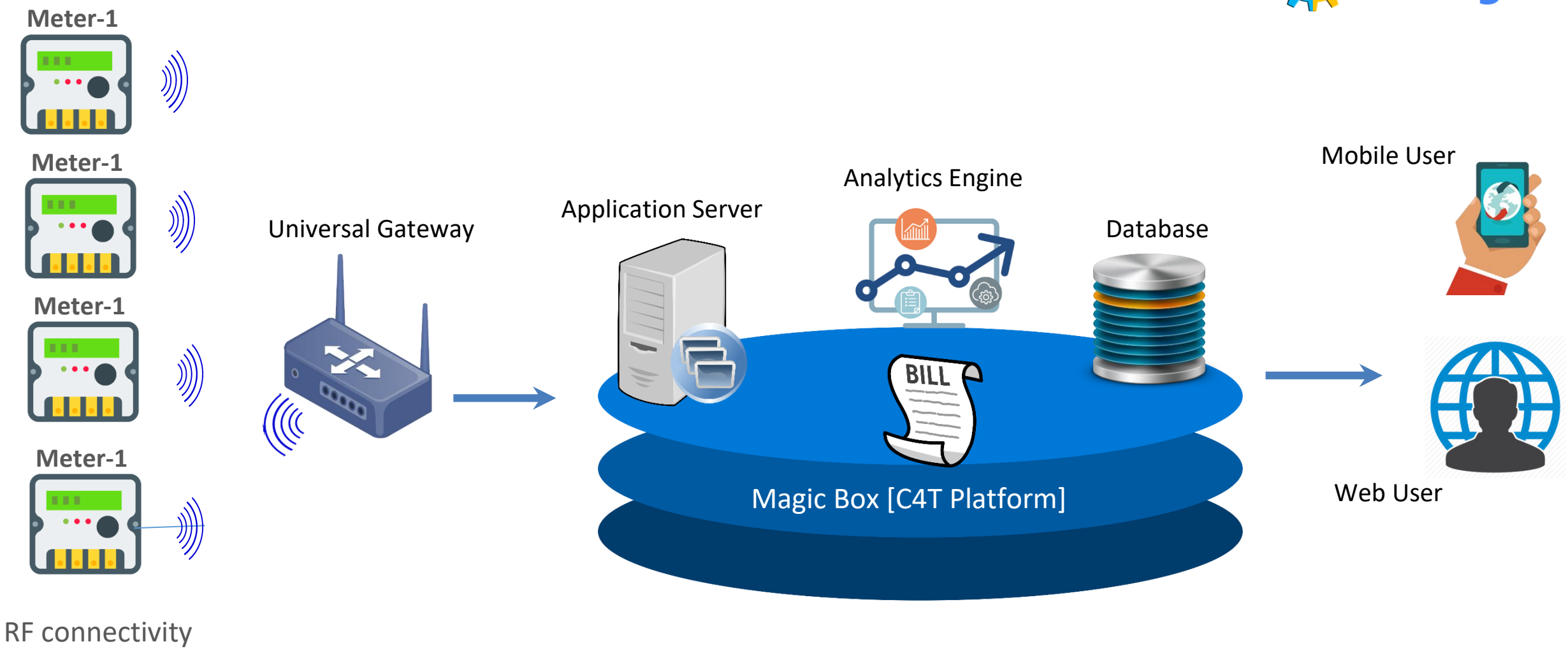


REMS Solution Architecture

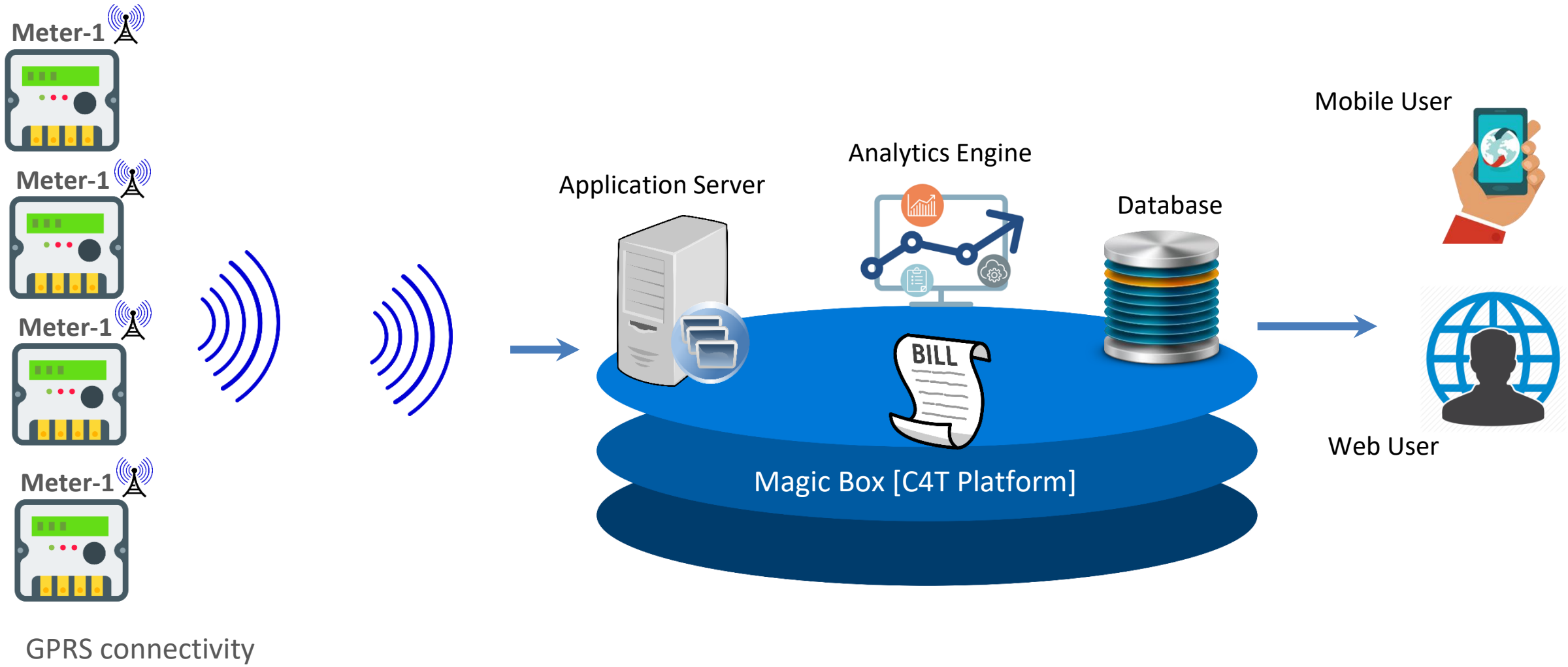


RS485 connectivity

REMS Solution Architecture



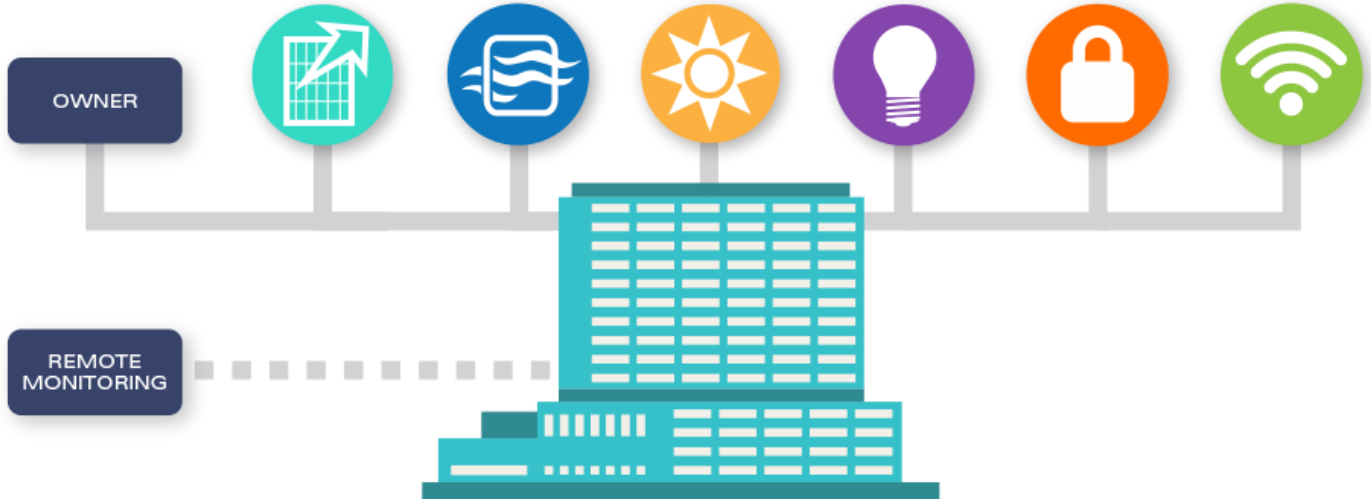
REMS Solution Architecture



GPRS connectivity

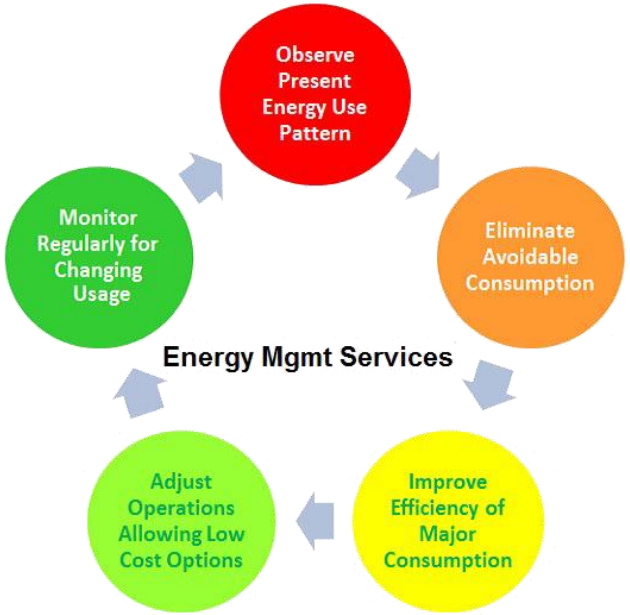
Features

- Centralise Remote Energy Management
- Report Performance and Health of Devices
- Real Time Data for Better Monitoring
- Historical Data for Analysis
- Capture All Energy Parameters



Features

- Configurable Data Capturing Frequency
- Alarms/Notifications on Mobile App/E-Mail
- Analyze Peak/Lean Demand
- Configurable Alerts and its Threshold.
- Information Access Any time Any Where
- Device Access Any time Any Where



Reports

- Hourly/Daily/Monthly Consumption Pattern
- Load Pattern report
- DG Running Report
- Device Profile Report
- Device Health Report.
- Advanced billing Capabilities.

Alerts/Notifications

- Out of Schedule Device Running
- Load variation
- PF variation
- Voltage Variation
- Device ON/OFF
- DG ON/OFF
- Deviation from the Standard Specification of Device

MONITORING OF LARGE SCALE DEPLOYMENT MADE EASY

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- Creating Group of Site.
- Creating Group of Meters.
- Assigning Group of Meters to a Parent Meter helps in generating audit report.
- Defining parameter Monitoring Limit with range for each energy parameters to Generate alerts.
- Energy Meter Monitoring Profiling helps creating consumption patter based on appliances behavior with respect to time.
- Customized Billing engine.

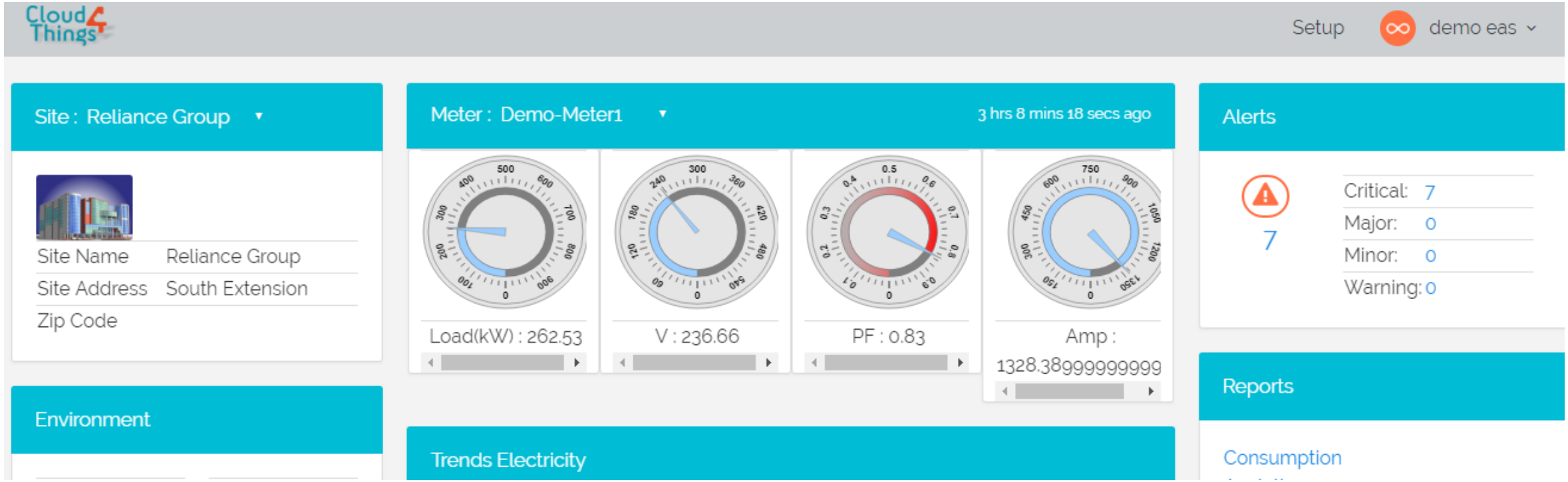
Value Preposition

- Improve Operational Efficiency and Service Reliability.
- Enabler to reduce Energy Consumption.
- Avoid Potentially Costly Unexpected Downtime.
- Significantly Improve the Capital value of Building.

The Solution is useful for following :

- SME’s
- Various Industries
- Chain of Schools
- Commercial Buildings
- Hotels
- Residential Buildings
- Private and Government Institutions
- Big Chain of Stores.

Main View @ Client



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List of Meters View@ Client Site

Meter List

Total Records : 8

	State	Name	kWh	kVah	kW	kVa	Voltage	Current	PF	Freq.	MD	THD	THD	Last Update
1.		AEWPL_666662	102.67	102.68	0.48	0.48	218.8	2.2	1.0	49.9	0.61	0.0	0.0	1 mins 41 secs ago
2.		AEWPL_666664	24.29	24.89	0.1	0.11	233.8	0.4	0.98	49.9	0.11	0.0	0.0	1 mins 41 secs ago
3.		AEWPL_666665	24.22	24.72	0.1	0.1	234.0	0.4	0.98	49.9	0.11	0.0	0.0	1 mins 41 secs ago
4.		AEWPL_666610	44.09	71.14	0.32	0.56	225.5	2.4	0.57	49.9	0.46	0.0	0.0	1 mins 41 secs ago
5.		AEWPL_666611	19.38	19.43	0.12	0.12	221.6	0.5	1.0	49.9	0.14	0.0	0.0	1 mins 41 secs ago
6.		AEWPL_666612	17.88	17.92	0.1	0.1	222.0	0.4	1.0	49.9	0.12	0.0	0.0	1 mins 41 secs ago
7.		AEWPL_666613	18.36	18.36	0.12	0.12	221.5	0.5	1.0	49.9	0.14	0.0	0.0	1 mins 41 secs ago
8.		AEWPL_666666	24.09	24.49	0.1	0.1	234.3	0.4	1.0	49.9	0.11	0.0	0.0	1 mins 41 secs ago

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Alerts View @ Client

Total Records : 161

	Time	Device Name	Alert Type	Severity	Data	
1.	08-Feb-2018 10:00:21	MJ-OFFICE-METER-666665	GRID_HIGH_VOLTAGE	Critical	{ "THRESHOLD" : 240 , "VALUE" : 242.8}	Clear
2.	08-Feb-2018 10:00:21	AEWPL_666666	GRID_HIGH_VOLTAGE	Critical	{ "THRESHOLD" : 240 , "VALUE" : 240.8}	Clear
3.	08-Feb-2018 10:00:21	sanjay	GRID_HIGH_VOLTAGE	Critical	{ "THRESHOLD" : 240 , "VALUE" : 2273.0}	Clear
4.	08-Feb-2018 10:00:21	MJ-OFFICE-METER-666614	GRID_HIGH_VOLTAGE	Critical	{ "THRESHOLD" : 240 , "VALUE" : 241.6}	Clear
5.	07-Feb-2018 13:40:50	MJ-OFFICE-METER-666610	GRID_HIGH_VOLTAGE	Critical	{ "THRESHOLD" : 240 , "VALUE" : 244.5}	Clear
6.	07-Feb-2018 13:35:07	MJ-OFFICE-METER-666612	GRID_HIGH_VOLTAGE	Critical	{ "THRESHOLD" : 240 , "VALUE" : 244.2}	Clear
7.	07-Feb-2018 13:32:58	MJ-OFFICE-METER-666611	GRID_HIGH_VOLTAGE	Critical	{ "THRESHOLD" : 240 , "VALUE" : 243.0}	Clear
8.	07-Feb-2018 13:30:09	MJ-OFFICE-METER-666662	GRID_HIGH_VOLTAGE	Critical	{ "THRESHOLD" : 240 , "VALUE" : 242.3}	Clear
9.	06-Feb-2018 13:32:54	MJ-OFFICE-METER-666613	GRID_HIGH_VOLTAGE	Critical	{ "THRESHOLD" : 240 , "VALUE" : 242.2}	Clear
10.	03-Feb-2018 15:47:36	MJ-OFFICE-METER-666661	GRID_HIGH_LOAD_KW	Warning	{ "THRESHOLD" : 5.0 , "VALUE" : 54.0}	Clear
11.	03-Feb-2018 15:47:36	MJ-OFFICE-METER-666661	GRID_HIGH_CURRENT	Critical	{ "THRESHOLD" : 2 , "VALUE" : 2.3}	Clear

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Meters Healthy/Unhealthy View @ Client

Total Records : 10

	State	Name	kWh	kVah	kW	kVa	Voltage	Current	PF	Freq.	MD	THD	THD	Last Update
1.		AEWPL_666661	178.19	180.3	0.56	0.57	235.8	2.4	0.98	49.8	0.65	0.0	0.0	1 mins 33 secs ago
2.		AEWPL_666662	105.33	105.34	0.49	0.49	222.3	2.2	1.0	49.8	0.61	0.0	0.0	1 mins 34 secs ago
3.		AEWPL_666664	24.86	25.47	0.1	0.1	236.3	0.4	1.0	49.8	0.11	0.0	0.0	1 mins 34 secs ago
4.		AEWPL_666665	24.47	24.97	0.0	0.0	230.1	0.0	0.0	49.8	0.11	0.0	0.0	1 mins 34 secs ago
5.		AEWPL_666610	45.52	73.37	0.21	0.33	231.3	1.4	0.61	49.8	0.46	0.0	0.0	1 mins 34 secs ago
6.		AEWPL_666611	20.03	20.08	0.12	0.12	226.2	0.5	1.0	49.8	0.14	0.0	0.0	1 mins 34 secs ago
7.		AEWPL_666612	18.46	18.5	0.1	0.11	224.8	0.4	1.0	49.8	0.12	0.0	0.0	1 mins 34 secs ago
8.		AEWPL_666613	19.01	19.01	0.12	0.12	228.9	0.5	1.0	49.8	0.14	0.0	0.0	1 mins 34 secs ago
9.		AEWPL_666614	42.24	44.56	0.27	0.27	240.2	1.1	1.0	50.1	0.3	0.0	0.0	6 hrs 44 mins 42 secs ago
10.		AEWPL_666666	24.33	24.74	0.11	0.11	242.5	0.4	1.0	49.9	0.11	0.0	0.0	2 hrs 59 mins 40 secs ago

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Iot Gateway View @ Client

IoT Gateway Dashboad

Total Records : 2

	State	Name	Last Update	#Meters
1.		MJ_demo_2	48 secs ago	13
2.		MJ_demo_3	63 days 1 hrs 8 mins ago	4

Business View @Client

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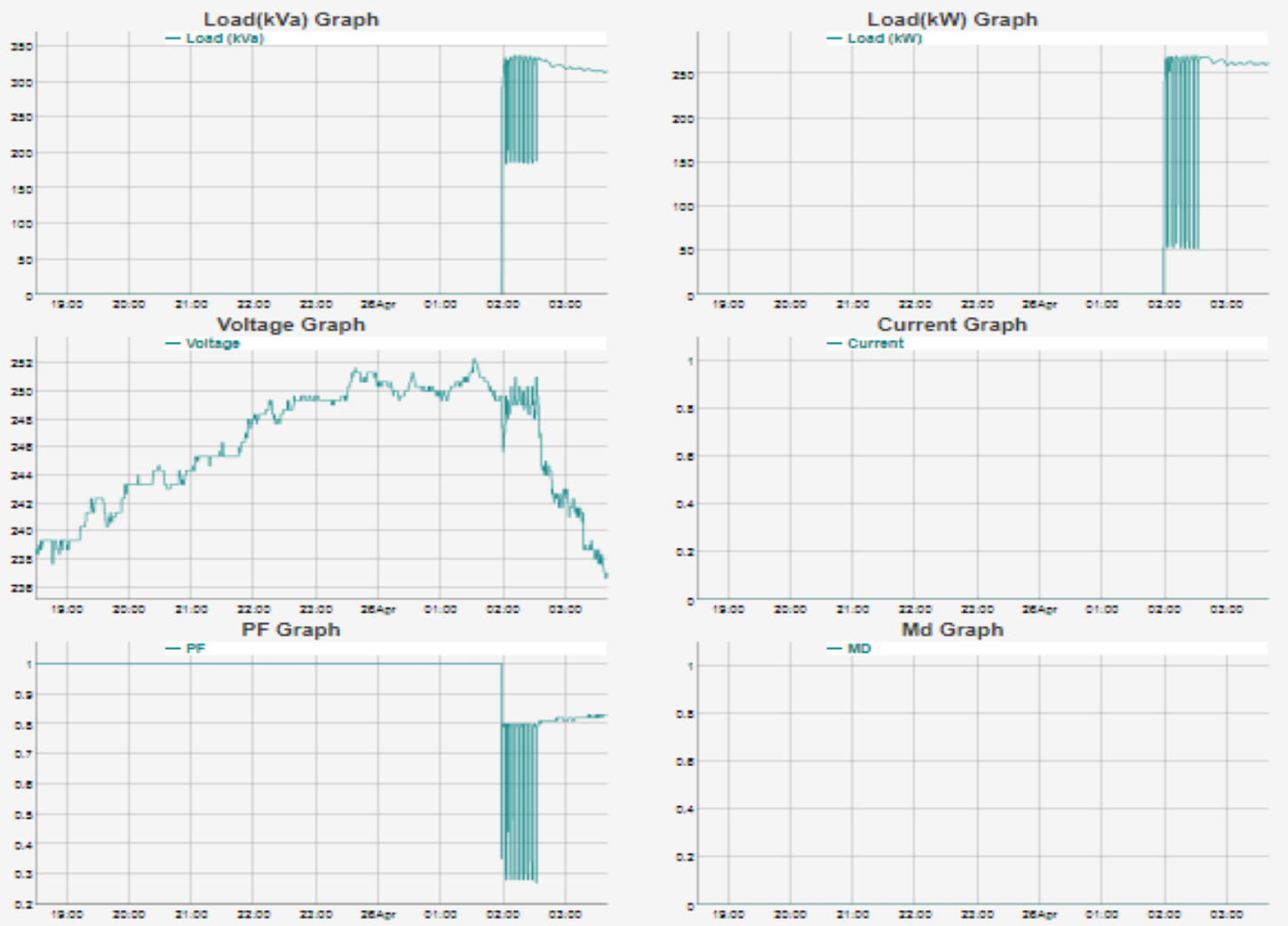
Graphical View @ Client



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Visit: **www.cloudgarage.in/**

Thank You