

# Prepaid Vending station

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For the prepaid system the meter can make the load on only when it gets credit. The system shall be flexible enough that the consumer can get the credit anywhere and anytime. To make this happen the vending system shall be “Web based Vending System” for easy operation, token generation by any POS machines. Web server shall be at the end of the supplier. Utility shall be paying the per token generation charge to the supplier.

## Key Feature–

The Prepaid meter works on the latest currency transfer keypad technology supported by an online vending system. Since the keypad technology is future proof, cost effective and in this communication age, enables consumers to buy electricity over the multiple vending options like Utility billing centers, Utility website, through third party POS providers vending faculties

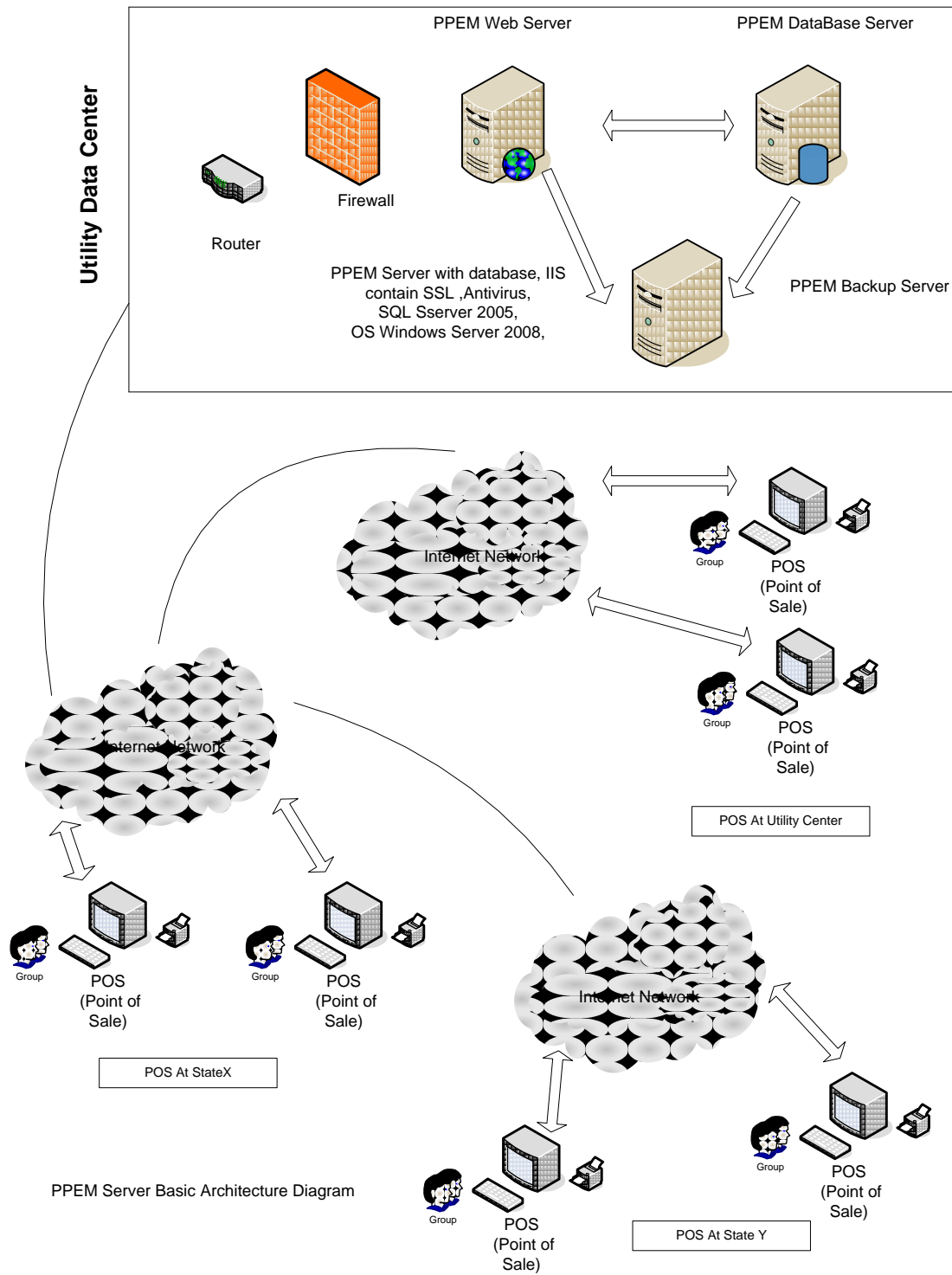
The vending system uses Triple Data Encryption Standard (Triple DES), i.e. it provides three levels of encryption for the vend code. The codes are meter specific and can't be used in any other meter. Triple DES is widely used in banking systems worldwide due to the high level of security provided by the algorithm.

The vending station can be placed at the billing stations of Utility. The token can be printed using the printer attached to the personal computer. The internet connectivity for access between the vending station placed at Utility premises & the server shall be there. Adequate back up power in the form of suitable UPS with standard back up shall be provided at each Vending Station. Prepaid system (Vending system) can be integrated with the utility's website & payment gateway through web services.

## VENDING PROCESS:

- On receipt of the vend request the system have a provision to ascertain the identity of the consumer. The keys to identify the consumer can be the meter serial number or account number.
- The vend terminal send the request to a central database that authenticates the transaction and generate an encrypted code.
- In order to provide maximum security to the system the encryption is not done on the vend terminal.
- On receipt of each request the vend terminal connects to the central database and get the code generated.
- The code hence generated can be printed on paper using the attached printer.
- The vending system is used to transfer current values (Rupees) to the meter.
- The consumer pay the money at the vend terminal, this information when fed to the vend terminal is to be send to the central database that encrypts the token using Triple DES encryption algorithm.

# System Architecture



**Figure 1: Genus Prepayment Solution Architecture Diagram**

## Interfaces and Interface Description

Following is the list of interfaces between modules of Genus-Agrim:

Sr. No.	Functional Modules	Description
1.	User Management Master Management	Only users authorized by <b>User Management</b> module can add or update or delete information in <b>Masters</b> module.
2.	User Management Store Management	Only users authorized by <b>User Management</b> module can have access to features of <b>Store</b> module.
3.	User Management Token Generation	Only users authorized by <b>User Management</b> module can have access to features of <b>Token Generation</b> module
4.	User Management Pos Management	Only users authorized by <b>User Management</b> module can have access to features of Pos Management Module
5.	User Management Revenue Admin	Only users authorized by <b>User Management</b> module can have access to features of Revenue Admin Module
6.	User Management Data View Management	Only users authorized by <b>User Management</b> module can have access to features of Data View Management Module
7.	Store Management Master Management	<b>Store Management</b> can issue meter or provide servicing for only meters whose records available in <b>Master Management</b> . These facilities can be availed only by Consumers registered with <b>Master Management</b> .
8.	Store Management Master Management Token Generate Management	<b>Store Management</b> can issue meter or provide servicing for only meters whose records available in <b>Master Management</b> . These facilities can be availed only by Consumers registered with <b>Master Management</b> . Now with the help of <b>token generate management</b> user can generate token according to their requirement which is depend on user's feasibility

9.	User Management Store Management Token Generate Management Pos Management	<b>Store Management</b> can issue meter or provide servicing for only meters whose records available in <b>Master Management</b> . These facilities can be availed only by Consumers registered with <b>Master Management</b> . Now with the help of <b>token generate management</b> user can generate token according to their requirement which is depend on user's feasibility.
10.	User Management Store Management Token Generate Management Pos Management Revenue Admin	<b>Store Management</b> can issue meter or provide servicing for only meters whose records available in <b>Master Management</b> . These facilities can be availed only by Consumers registered with <b>Master Management</b> . Now with the help of <b>token generate management</b> user can generate token according to their requirement which is depend on user's feasibility and <b>POS Management</b> can deposit Recharge Amount . <b>Revenue Admin</b> can Change Category, Settlement Transaction of the meter
11.	User Management Store Management Token Generate Management Pos Management Revenue Admin Data View Management	Show all report which is related to All module of application and cover all Transaction data