

## Enterprise Application for AMC Call Log

Marathe Aditi R  
Dept. of Computer Engg.  
Late G.N. Sapkal College Of Engineering  
Nashik, India

Datre Kajal S  
Dept. of Computer Engg.  
Late G.N. Sapkal College Of Engineering  
Nashik, India

Andhale Riya R  
Dept. of Computer Engg.  
Late G.N. Sapkal College Of Engineering  
Nashik, India

Tripathi Shivani R  
Dept. of Computer Engg.  
Late G.N. Sapkal College Of Engineering  
Nashik, India

---

**Abstract:-** Enterprise application for AMC (Annual Maintenance Contract) call log system is an online application service keeping the track of AMC renewal information for various customers and the related engineers associated with that work. Issues such as admin functionalities, engineer's work call log facility with its history and user login are the main fields taken into consideration for building this application. As it is difficult to maintain all the AMC barred and renewal information manually as well as to contact each and every engineer independently so for this concern we design such an application which helps you to assigned various engineers in the different sites and location from the same platform with user friendly environment and at a single instance of time. This application achieves an easy access of information related to the active customers and helps to solve their difficulties by assigning engineers online within limited scope of time by providing all the efforts.

**Keywords:** Redundant, Attribute, Discovery, dependency, Integrity.

---

### I. INTRODUCTION

Every service based industry provides service to their customer to retain them by taking AMC where the company charges some amount from their customer for specified product for a fixed period of time and fixed services.

AMC Management software is a part of service management software which apart from taking care of annual maintenance contract also takes care of complaint management, complaint tracking, warranty management, spare parts management and tracking which is a very important aspect of customer relationship management. It works as an agreement between the customer and the manufacturer as regards to the maintenance of product, that customer has.

In today's rapid & competitive environment, sales managers seek tools that help them manage their sales cycles and sales reps while effectively helping them close deals. In today's competitive era, quality is a prime factor. Quality output from any machine depends on machine's repeat performance. To get repeat performance; machine maintenance is a key factor. Maintenance of machines with Computerized Numerical Controls requires special skills. Every organization may not have specialized CNC maintenance team to take care of all variety of CNC machines. CNC machine manufacturers are the best people to support in maintaining these machines as total technology is available with them. In order to help our customers in getting the best throughput from the machine, we have introduced the concept of Annual Maintenance Contracts for the CNC controllers.

A manufacturer company provides the service through AMC by themselves or with the help of service providers. The contract is usually for the period of 1 year and can be extended up to three years or five years as per the mutual understanding of both the parties. Usually the service providers give only service support and would charge separately for every part under AMC. However, in some cases, few parts are replaced during the visit by service engineer when it is mentioned in AMC contract that limited parts will be replaced.

Types of maintenance contracts: AMC and CMC.

#### 1. AMC stands for Annual Maintenance Contract.

A manufacturer company provides the service through AMC by themselves or with the help of service providers. The contract is usually for the period of 1 year and can be extended up to three years or five years as per the mutual understanding of both the parties.

Usually the service providers give only service support and would charge separately for every part under AMC. However, in some cases, few parts are replaced during the visit by service engineer when it is mentioned in AMC contract that limited parts will be replaced.

#### 2. CMC stands for Comprehensive Maintenance Contract.

It includes prompt service from the company or service providers.

The contract is usually for the period of 1 year and can be extended up to three years or five years as per the mutual understanding of both the parties. It includes repairs and replacements of faulty parts. Having the contracts gives the benefits such as consumables (which are not part of contract) being available at reduced costs. CMC is costlier than AMC because it includes the costs of spares as well.

#### 1. Non – Comprehensive Annual Maintenance Contract:

- It's the most attractive economical solution.
- Non-comprehensive AMC includes all repair services related to Hardware, Software and Networking
- Only the cost of defective parts / items, critical repairing, licensed software etc
- Would borne by the Client

#### 2. Comprehensive Annual Maintenance Contract:

- This includes the repairing, services
- Replacement of all items related to Hardware
- Which covered under AMC
- Also you would get full support for Software and Networking
- But the cost of licensed software etc. would borne by the client
- The plan for Comprehensive-AMC can be quoted only after the evaluation of the items

#### 3. Residential Engineer under Annual Maintenance Contract:

- This contract contains all the features of Comprehensive AMC with residential engineer. In this plan, our skilled dedicated engineer(s) would available at your end during your working hours, for instant support.

## II. PROBLEM STATEMENT

- Secure registration and profile management facilities for users.
- Tracking engineer's activities and progress.
- Facilitating the assignment of AMC to the active engineer's online.
- Engineers can check online account calls and details of customers with ease and comfort.
- Engineers comfort for performing their work with quick submitted status to the admin via online facility.

- Basic and advance admin facilities like AMC details, Engineer's details, call log details, call history and user login details.

### III. OBJECTIVE

1. It will help the users to get benefit from intuitively ranked information and well organized views in an efficient manner.
2. To provide the facility for adding, deleting and displaying engineer's online. It should keep records of work associated with the engineer.
3. To produce the reports of call history showing pending calls, today's calls and solved calls.
4. To provide the facility to edit the existing records of the particular engineer and AMC's.
5. To provide facility for saving of time and efforts of the receptionist.
6. Easy methodology of sending AMC profiles to the engineer's.
7. Assignment of work to the engineers of different locations within limited scope of time duration.

### Software Requirements

1. Operating System	:	Windows 7
2. User Interface	:	HTML
3. Client-side Scripting	:	Angular
4. Programming Language	:	Java
5. Web Applications	:	Spring Framework
6. Database	:	MySQL server 5.6
7. Server Deployment	:	Tomcat 7

### IV. PROPOSED APPROACH

In general, enterprise application software is large-scale software that is aimed to support or solve the problems of an entire organization. This large-scale software allows for several different user roles, and the roles define the actions a specific user can perform.

#### Easy Customer Management

Our system helps you to manage your customers in the most simplified way. Every step involves automation, so there are least chances of things or any important information being left out. This gives your company a confidence about proper handling of customers.

#### Manage Product's AMC

Manage the AMC of the product provided by you which includes everything from the product issue date to warranty duration and all the other necessary data. Keep a dynamic record of the maintenances procedure through our software which is further kept upto date simultaneously in the most organized way. Avail the benefit of getting all the related information at a single click.

#### Manage your Service Call Reminders-:

Make all your employees work in a systematic way by giving them the benefit of managing their service calls most efficiently. Our software periodically sends notifications and reminders to the concerned employees about the services due through their login accounts. Tracking and maintaining is thus simplified for your employees like never before.

#### Manage Maintenance Contracts

By the help of AMC Management Software, the service managers can track down those AMC's which are near to expiration within next 30 days, since it would be highlighted on their home screen. This decreases the chance of missing the renewal of contracts by 100%. Automated creation of AMC invoices makes things more easy.

#### Manage Complaint Schedules

You can now manage all the customer complaints more efficiently by maintaining an electronic record at one place. Also, avail the opportunity of maintaining call history and schedule all the received complaints in a much more effective way and update the status side by side without any mistakes or confusion. This will further let you deliver quality service.

### Customer Wise & Reminder Reports

Record all activities related to the product under AMC by maintaining reports, keeping in my mind the customers as well as your employees. You can create customer wise and reminder process reports which include parameters and activities which can be customized according to your company and the product under service. You can also view, print and store these reports in any of the formats desired by the company.

### Email and Message Campaigns

Our most exclusive AMC Management Software lets you hold and organise email and message campaigns all together in a least complicated manner. Send auto-generated emails and messages to your customers in different cases like the coming expiration of the agreement, etc. These email and message campaigns also helps your employees by always keeping them up to date.

### Manage customer & product details

AMC management software gives this convenience to after sales support team to make a track of all required details in regards to the Product & its principal on one single platform. It also maintains a customer database containing all the information in relevance to the product for the company.

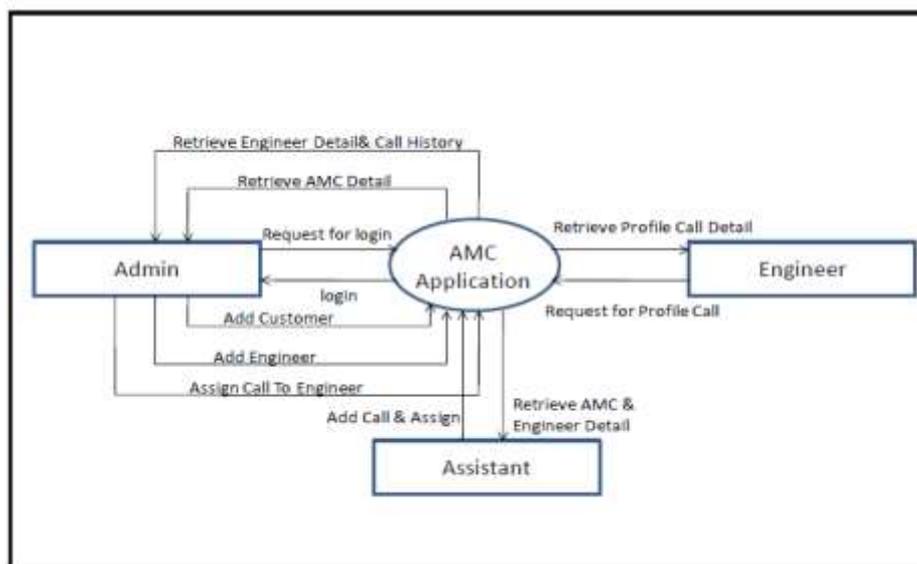


Fig-1: System Architecture

## CONCLUSION

Enterprise application for AMC (Annual Maintenance Contract) call log system is an online application service would benefit not only the small scales system but also large companies. In existing system, it only supports small system as well as some finality not available. In Proposed system, it useful to all kinds of system. This helps you to manage your customers in the most simplified way. It keep a dynamic record of the maintenances procedure through our software which is further kept up to date simultaneously in the most organized way. This System creates a new level for Enterprise has not been implemented yet.

## REFERENCE

1. D. Yugen and L. Yonggang. Virtual web services and its application in e-commerce. In Proceeding of the 2nd IEEE International Conference on Information Science and Engineering (ICISE), pages 1–5, December 2010.

2. D. Yugen and L. Yonggang. Virtual web services and its application in e-commerce. In Proceeding of the 2nd IEEE International Conference on Information Science and Engineering (ICISE), pages 1–5, December 2010..
3. Ezeofor C. J., Ulasi A. G “Analysis of Network Data Encryption & Decryption Techniques in Communication Systems” International Journal of Innovative Research in Science, Engineering and Technology (An ISO 3297: 2007 Certified Organization) Vol. 3, Issue 12, December 2014.
4. Satyajeet R. Shinge & Rahul Patil “An Encryption Algorithm Based on ASCII Value of Data”. (IJCSIT) International Journal of Computer Science and Information Technologies, Vol. 5 (6) , 2014, 7232-7234.
5. Mitali, Vijay Kumar & Arvind Sharma “A Survey on Various Cryptography Techniques”. International Journal of Emerging Trends & Technology in Computer Science (IJETTCS) Web Site: [www.ijettcs.org](http://www.ijettcs.org) Email: [editor@ijettcs.org](mailto:editor@ijettcs.org) Volume 3, Issue 4, July-August 2014
6. Surabhi Shah & Megha Singh A New Encryption Algorithm to Increase Performance & Security through Block Cipher Technique Volume 4, Issue 9, September 2014 ISSN: 2277 128X International Journal of Advanced Research in Computer Science and Software Engineering Research Paper Available online at: [www.ijarcsse.com](http://www.ijarcsse.com).
7. Ashwini R. Tonde & , Akshay P. Dhande “Review Paper On FPGA Based Implementation Of Advanced Encryption Standard (AES) Algorithm “International Journal of Advanced Research in Computer and Communication Engineering Vol. 3, Issue 1, January 2014.
8. Prakash G L1 ,Dr. Manish Prateek2 and Dr. Inder Singh Data Encryption and Decryption Algorithms using Key Rotations for Data Security in Cloud System International Journal Of Engineering And Computer Science ISSN:2319-7242 Volume 3 Issue 4 April, 2014.
9. Suchita Tayde & Seema Siledar “File Encryption, Decryption Using AES Algorithm in Android Phone”. Volume 5, Issue 5, May 2015 ISSN: 2277 128X International Journal of Advanced Research in Computer Science and Software Engineering Research Paper.
10. Kurapati Sundar Teja, Shanmukha Mallikarjuna Bandaru & Kurapati Pavan “Data Encryption and Decryption Algorithm Using Hamming Code and Arithmetic Operations”. Int. Journal of Engineering Research and Applications [www.ijera.com](http://www.ijera.com) ISSN: 2248-9622, Vol. 5, Issue 8 August 2015.
11. Zaeniah & Bambang Eka Purnama An Analysis of Encryption and Decryption Application by using One Time Pad Algorithm International Journal of Advanced Computer Science and Applications, Vol. 6, No. 9, 2015.
12. A. Joseph Amalraj and Dr. J. John Raybin Jose “ A Survey Paper On Cryptography Techniques” A. Joseph Amalraj et al, International Journal of Computer Science and Mobile Computing, Vol.5 Issue.8, August- 2016, pg. 55-59 © 2016, IJCSMC All Rights Reserved 55 Available Online at [www.ijcsmc.com](http://www.ijcsmc.com).
13. F. Paci, M. Mecella, M. Ouzzani, and E. Bertino. Acconv- an access control model for conversational web services. ACM Transaction on the Web (TWB), 5(3):1–33, 2011.