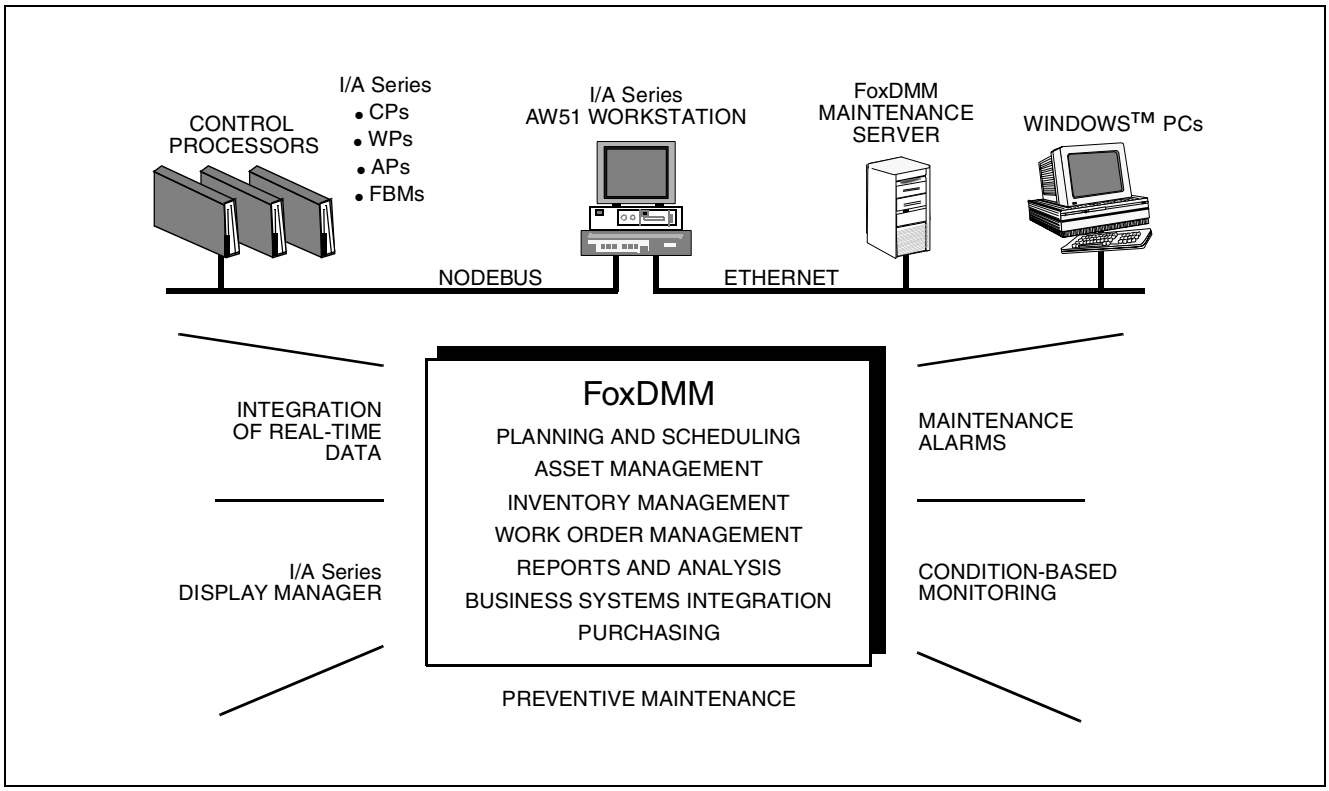
FOXBORO®

PSS 21S-7A7 B3

I/A Series® Software
FoxDMM™ – Dynamic Maintenance Management



OVERVIEW

FoxDMM is a computerized maintenance management system, a software tool for planning and scheduling equipment maintenance and asset management to meet the needs of modern plants and facilities. The FoxDMM system is the result of the integration of Foxboro's I/A Series system and PSDI's MAXIMO™ maintenance management software using jointly developed Application Programming Interfaces (APIs). The FoxDMM system exploits the power and inherent advantages of client/server technology, graphical user interfaces and relational database software. It brings the sound plant management principles of dynamic maintenance management to the Foxboro I/A Series system.

The FoxDMM system facilitates the consistent, timely collection of equipment-related data that is of central importance in maintenance management. This data is collected through a combination of real-time electronic interfaces and intuitive data entry screens.

Through automatic data feeds from the I/A Series system to condition monitoring, the FoxDMM system closes the loop between operations and maintenance. Data need only be entered once, thus eliminating the need for redundant data entry and decreasing the possibility of entry errors.

Invensys™

Product Specifications

Accurate and detailed downtime records and equipment failure analysis emerge from the collected maintenance data. Thus, the frequencies and root causes of component failures and equipment downtime can be identified and maintenance personnel can respond accordingly. The FoxDMM system places this information at the finger tips of control room operators, thereby empowering them to make more informed decisions. Access to this information also enables the operator to provide increased proactive planning. As a result, equipment performs more effectively, operations run more predictably, and overall maintenance costs are substantially reduced.

It is easy to learn how to use the FoxDMM system for routine tasks. Furthermore, you can customize the system's displays so users see only the information relevant to their needs. Programming expertise is not required to achieve FoxDMM operating expertise.

I/A Series INTEGRATION

The Foxboro Company has developed interfaces for integrating I/A Series control data into the work orders, preventive maintenance, and equipment modules of the maintenance management system.

In addition, certain information in the maintenance management system can be made accessible to the control room operator through the I/A Series Display Manager or FoxView™ graphical interfaces.

Equipment Run-Time Data

Real-time data for start/stop devices is integrated into the FoxDMM Equipment module. The FoxDMM data monitor collects equipment run-time data from the I/A Series process and performs the appropriate calculations on the data. This information, including time-stamped equipment usage data, total number of starts, and status information, is then moved into the maintenance database.

Maintenance-related information can then be reviewed in the Preventive Maintenance module (Figure 1). The Preventive Maintenance module can be configured to initiate a work order request when cumulative run-time for a device is reached, providing a proactive maintenance capability. Redundant data entry and its associated errors are eliminated with this FoxDMM configuration.

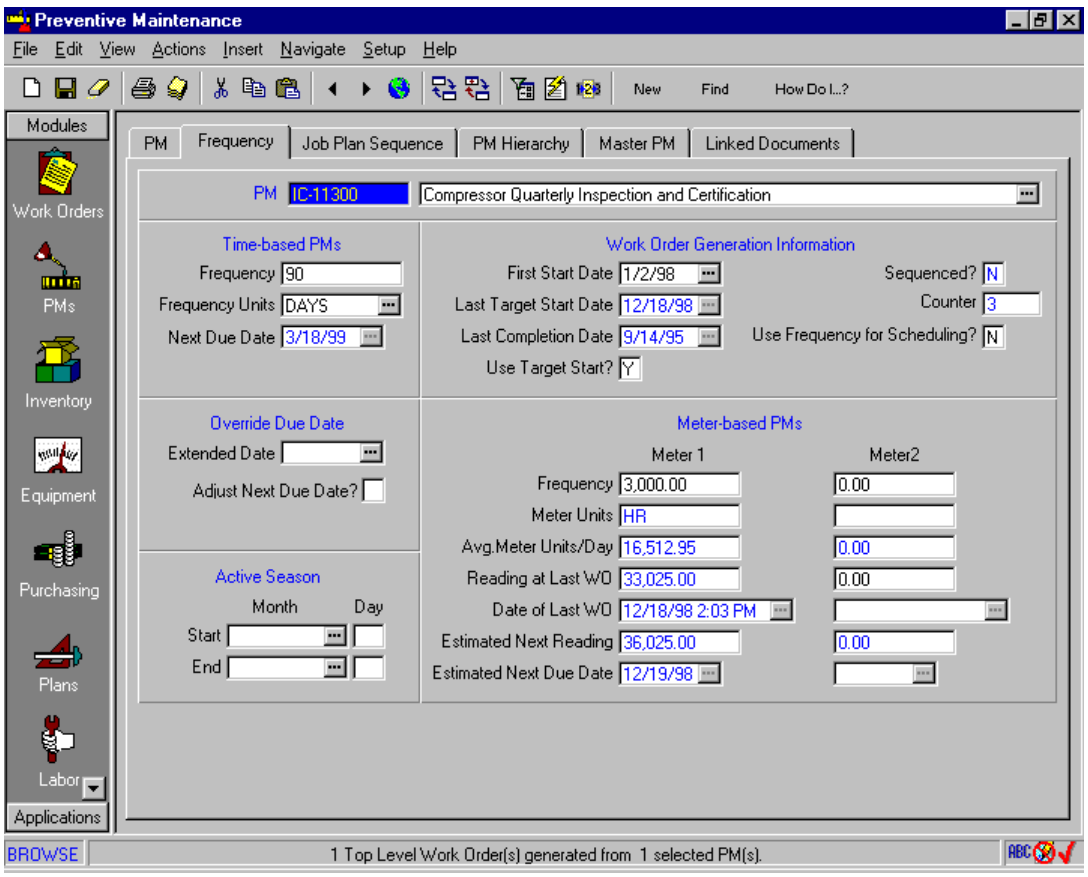


Figure 1. Preventive Maintenance Screen

Condition Monitoring

Sensor data collected from the I/A Series process is used by the Condition Monitoring application of the Equipment module (Figure 2) to predict failures and ensure timely maintenance in order to avoid catastrophic or unnecessary failure.

I/A Series process variables selected for monitoring are scanned at a specified rate, and their time-stamped values and status information are sent to the maintenance database for storage and condition monitoring analysis. As the values of these process variables cross user-defined action limits, appropriate work order requests are automatically initiated, if so configured, again eliminating the need for redundant data entry.

MAINTENANCE ALARMS

The FoxDMM alarm handler receives and decodes process alarms and system alarms for FoxDMM configured process variables and equipment devices.

The alarm information is stored in the maintenance database for review through the Condition Monitoring application interface. FoxDMM condition monitoring can be configured to initiate work order requests automatically for both types of alarms when conditions are met. For example, the failure of a device can be configured in the I/A Series process to set off a system alarm, which in turn can be configured in FoxDMM to generate a work order.

I/A Series Display Integration

Process control operators access certain FoxDMM work order related activities on I/A Series workstations through pull-down menu picks or button picks.

The functions accessible to the process control operator via the I/A Series Display Manager are:

- Equipment History
- Work Order Requests
- Work Order Status.

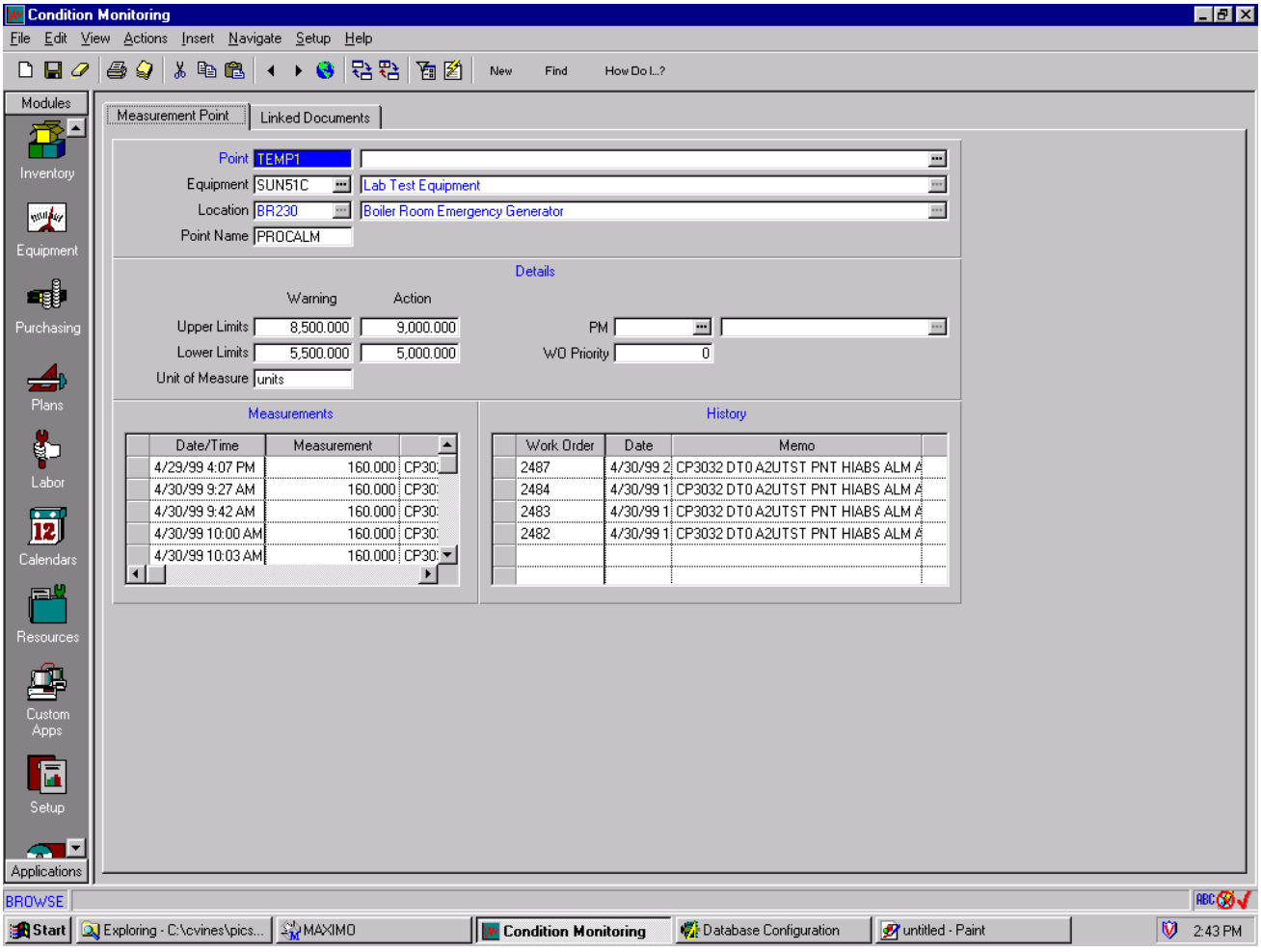


Figure 2. Condition Monitoring Screen

Equipment History

The I/A Series operator can track the history of work that has been performed on a specific piece of equipment by viewing the Equipment Work Order History screen (Figure 3). This screen displays a list of work order IDs, dates, problem descriptions, and problem codes associated with a piece of equipment.

This screen also provides on-line problem tracking capabilities which allow the operator to select a work order from this list in order to view the work order status in more detail. Access to this information via the I/A Series Display Manager provides the operator with important information with which to make informed decisions about the maintenance of a piece of equipment.

Work Order Requests

When a problem arises with a piece of equipment, the I/A Series operator is able to initiate a new work order request by selecting Work Order Requests from a pull-down menu or button pick.

A work order can be created for the equipment in question from the Work Order Requests screen (Figure 4). Then the work order is processed in the maintenance database for approval and scheduling.

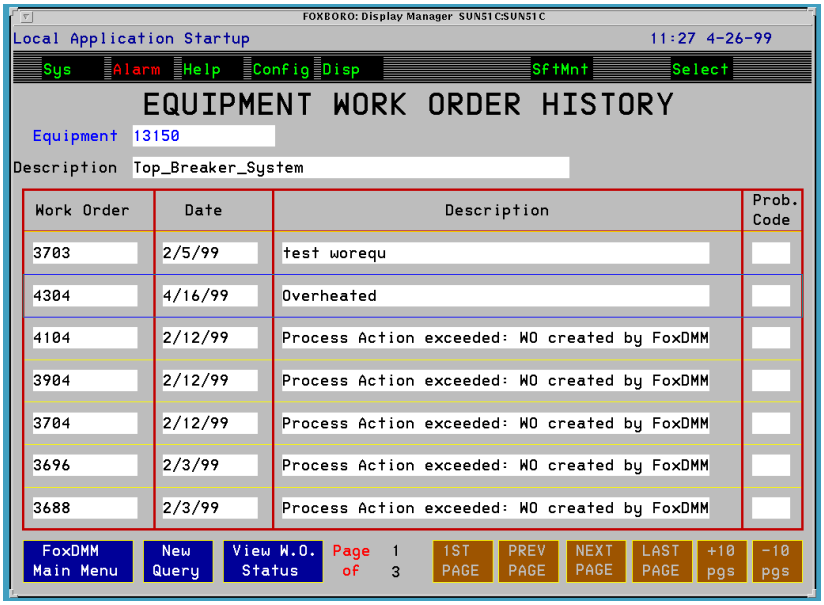


Figure 3. Equipment History Screen

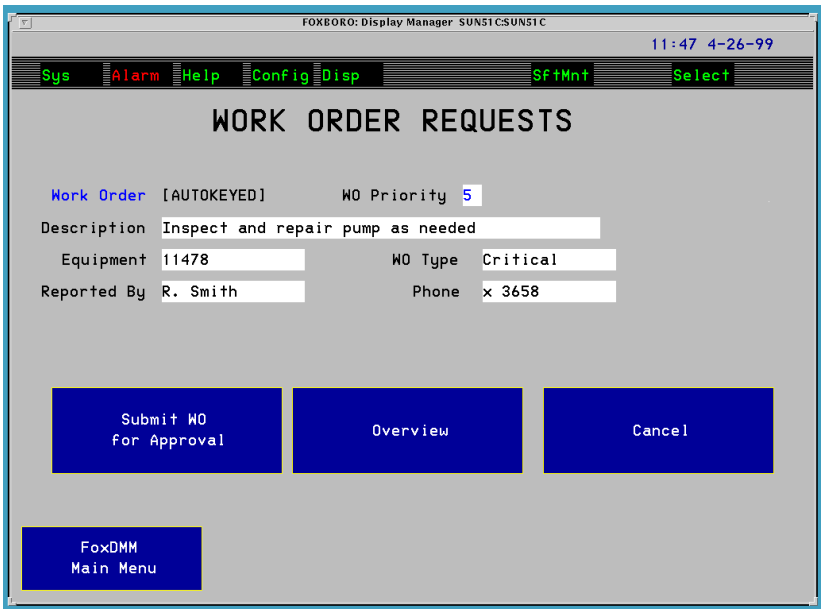


Figure 4. Work Order Requests Screen

Work Order Status

The I/A Series operator can check the status of the work order request by viewing the Work Order Status screen (Figure 5). Pertinent information about the work order such as if and when the work has been scheduled, estimated time to completion, and the crew assigned to do the work, is displayed on this screen.

Work order records can be filtered by several fields, including Work Order ID, Status, and Problem Code. The operator may also access an overview of all work orders from this screen.

If the work has been completed, the I/A Series operator will know who performed the task as well as the nature of the equipment problem.

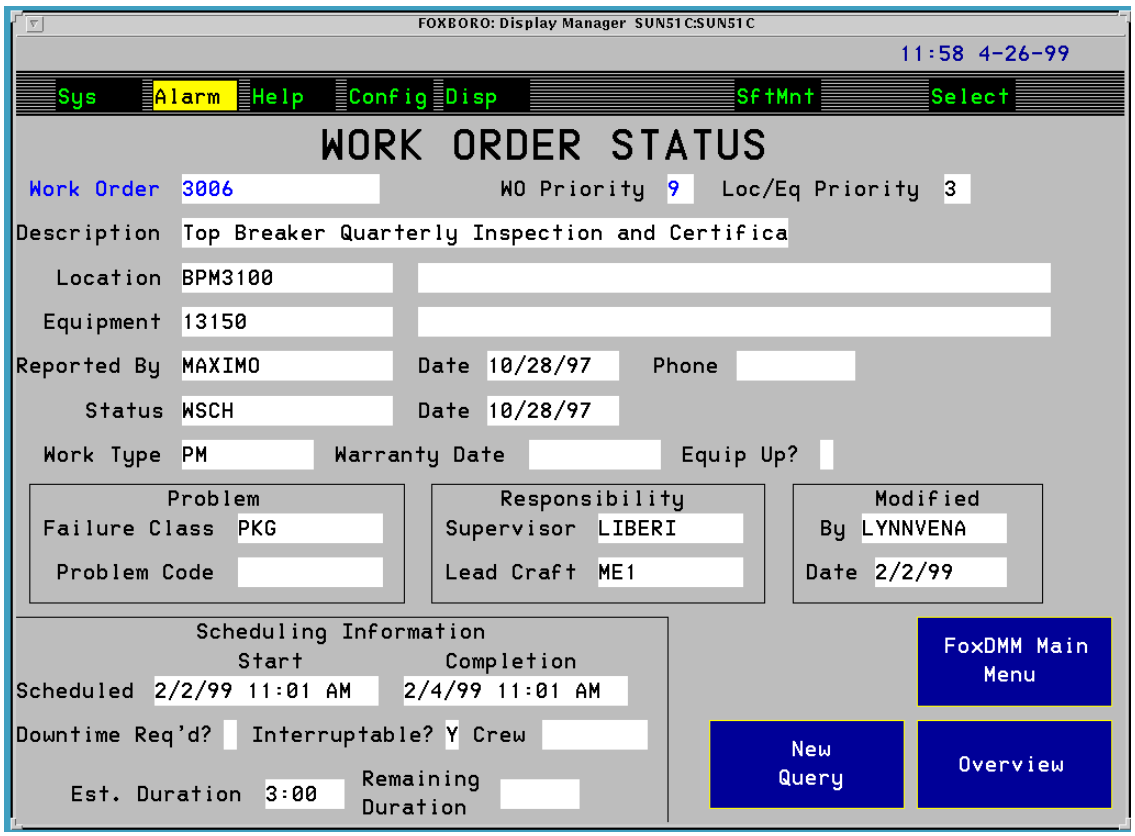


Figure 5. Work Status Report Screen

CONFIGURATION

The FoxDMM Configurator provides the linking mechanism between the maintenance database and the I/A Series control system. It allows the user to link and configure monitoring parameters for equipment and measurement points already established in the maintenance database to I/A Series process variables. This equipment linking feature is evident in the two-column configurator main dialog box that is shown in Figure 6.

The FoxDMM Configurator is used to establish the following parameters:

- Selection of I/A Series monitoring station
- Association of equipment tag names in the maintenance database with I/A Series process-related variables
- Monitoring type per device
- Warning and action filter limits
- Selection of system alarm and process alarm devices
- Conditions for generating work order requests
- Database update frequency for preventive maintenance run-times
- Database update frequency for condition-based monitoring.

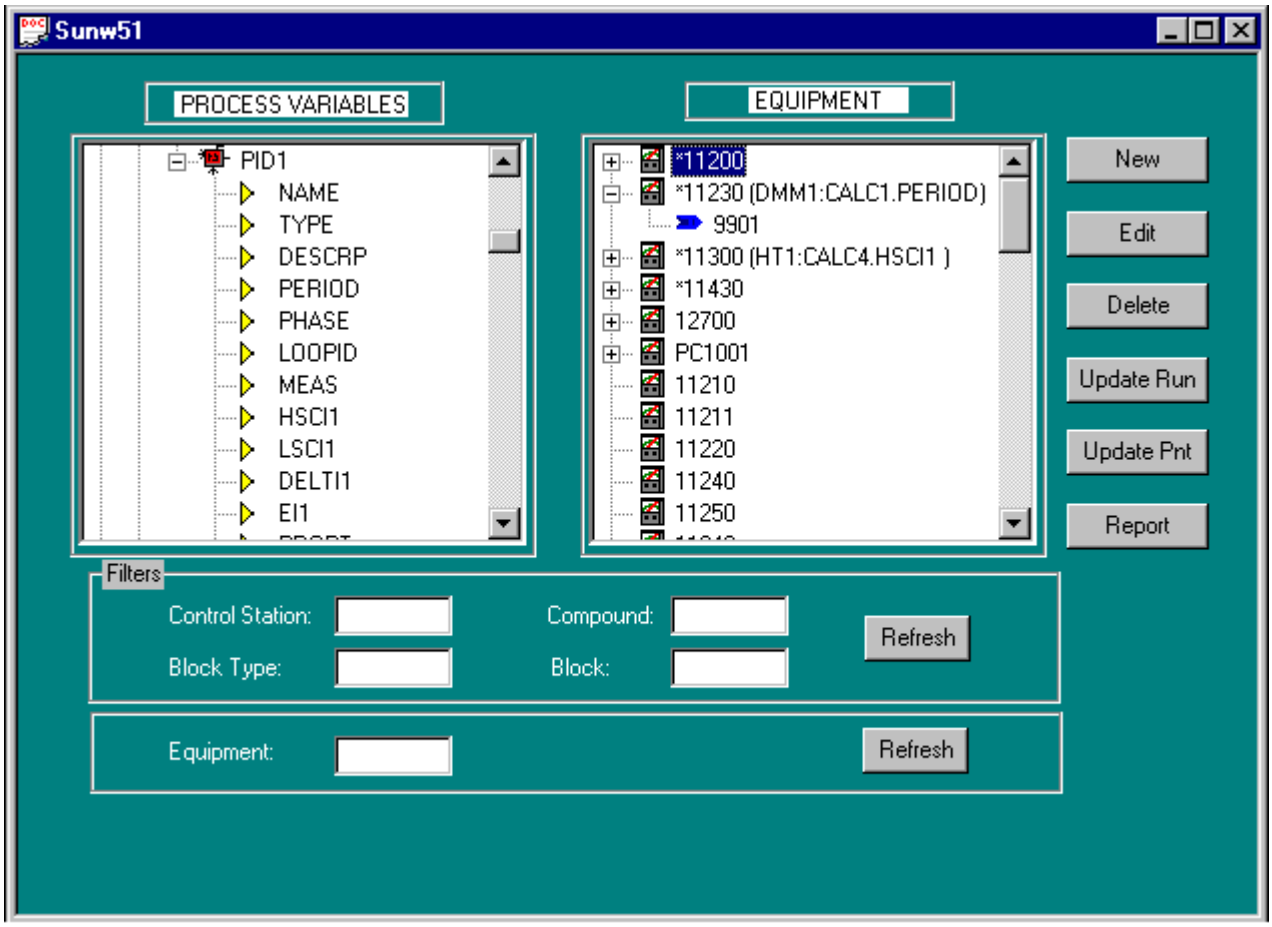


Figure 6. FoxDMM Configurator Main Dialog Box

There are four types of monitoring supported by the FoxDMM system; each is independently configurable:

- Run-time – tracks equipment run-times for preventive maintenance
- Condition – tracks process variable values for condition monitoring
- Process Alarm – tracks process variable alarm conditions for condition monitoring
- System Alarm – tracks equipment alarm conditions for condition monitoring.

However, process and system alarms are not currently available on 70 Series Application Workstations.

It takes just three steps to establish your configuration with the FoxDMM Configurator:

1. Link the I/A Series process variable with an equipment tag name by clicking on a process variable from the left-hand column of Figure 6. Then drag and drop the variable onto the equipment tag name in the right-hand column.
2. Click the New button and select the monitoring or alarm type: Run-time, Condition, Process Alarm, or System Alarm. A dialog box is displayed for the monitoring or alarm type chosen.
3. From this dialog box, choose the desired parameter values from the list in Table 1.

Table 1. Parameter Values

For this monitoring or alarm type...	... Choose this parameter
Run-time	Maintenance Record Update - Standby mode
Condition	High and low warning levels, and high and low action levels (refer to Figure 7, FoxDMM Configurator Condition Monitoring Dialog Box)
Process Alarm	Alarm type
System Alarm	Alarm subsystem and associated alarm codes (refer to Figure 8, FoxDMM Configurator System Alarm Monitoring Dialog Box)

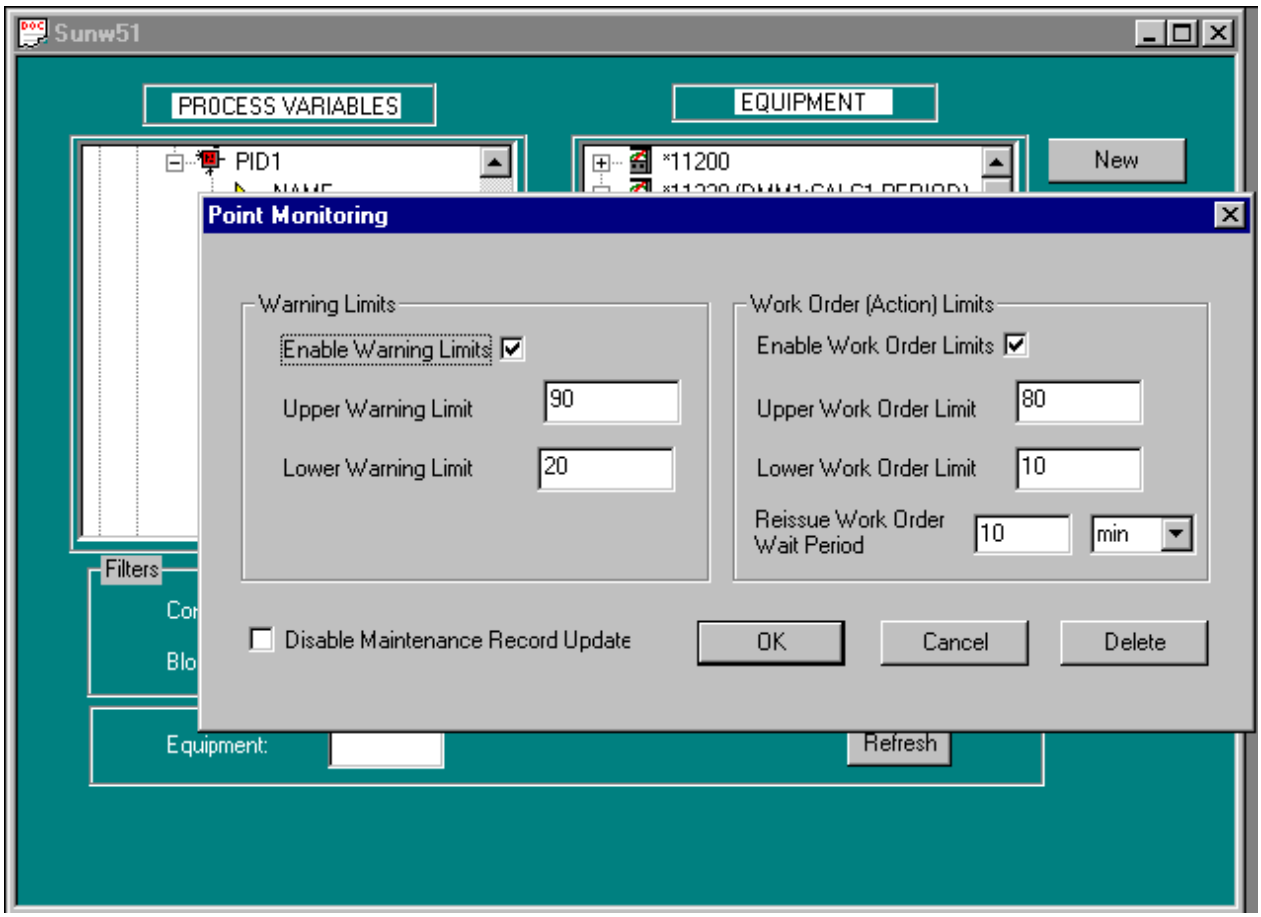


Figure 7. FoxDMM Configurator Condition Monitoring Dialog Box

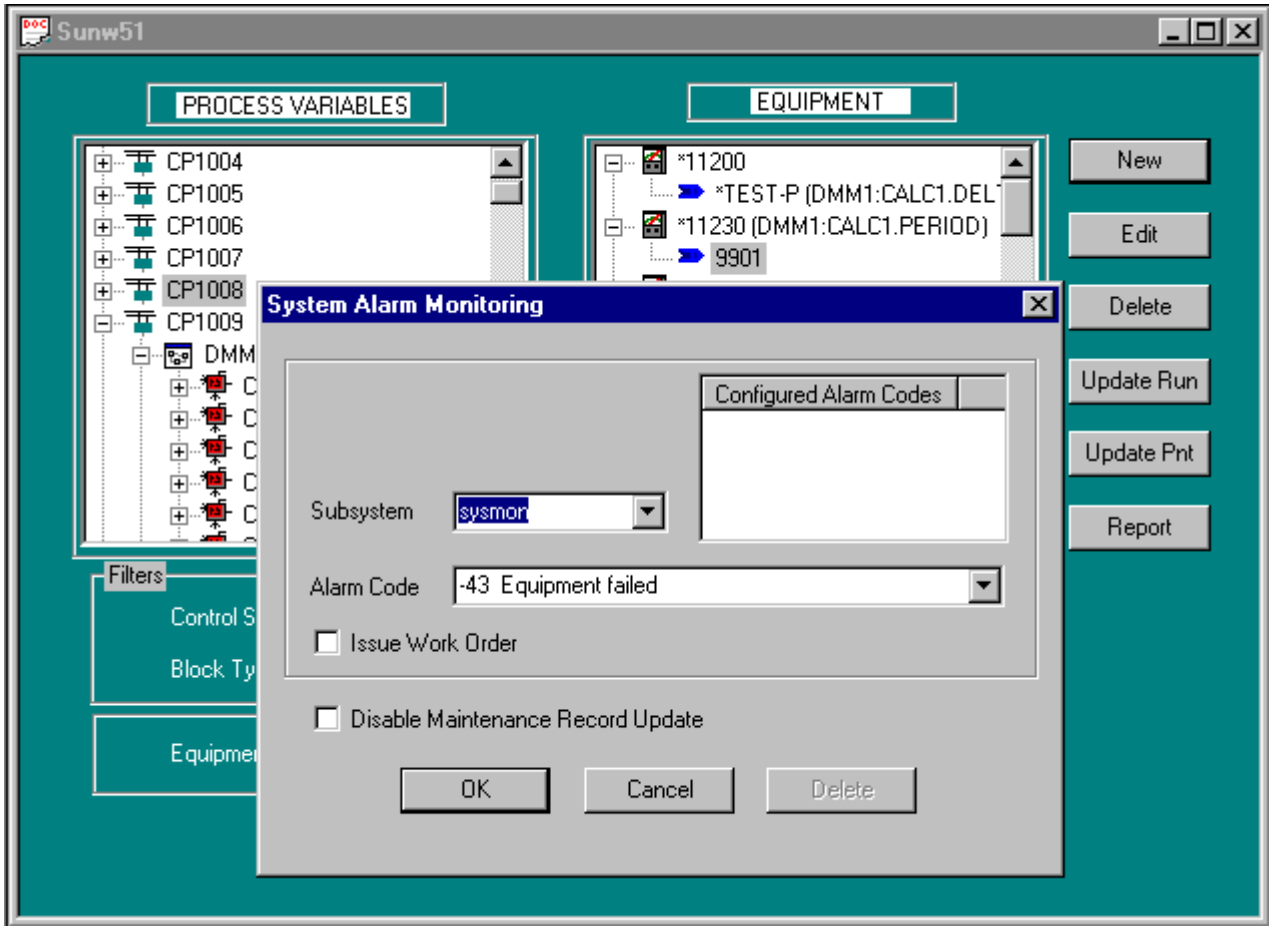


Figure 8. FoxDMM Configurator System Alarm Monitoring Dialog Box

MAINTENANCE MANAGEMENT FUNCTIONALITY

Modeling the Enterprise

A FoxDMM Equipment module enables you to maintain and update records of your equipment assets. You can add new pieces of equipment to the database, track maintenance costs, and enter and review metered-use readings. With the Equipment module, you can:

- Track equipment, including the associated costs, history and failures of a serialized piece of equipment as it moves throughout a plant or facility
- Use Asset Modeling to determine relationships between a piece of equipment, its physical location and the systems with which it may be associated
- Create hierarchies identifying operating locations as part of multiple systems
- Build an equipment hierarchy to roll up maintenance costs
- Build failure code hierarchies to record equipment problems for analysis
- Set measurement points, perform trending and defect analysis through Condition Monitoring
- Assign stores, repair shops, and vendors as location records to facilitate continual tracking of equipment as it is moved
- Analyze the potential for failure based on a piece of equipment's location and the possible effects on systems with which it is associated.

Planning and Scheduling

Work Orders Module

Work orders are the central elements of maintenance management. The FoxDMM Work Orders module provides all the functionality needed to process your daily maintenance work load. The Work Order module allows you to:

- View detailed planning information - work plan, schedule, costs, labor, materials, equipment, failure analysis and related documents via the Work Order Tracking screen
- Enter simple or detailed day-to-day maintenance requests via the Work Request screen
- Record maintenance work and close work orders from the shop floor via the Quick Reporting screen
- Schedule work orders based on real-time update of criticality
- Define and sequence work for multiple assets based on location and/or equipment
- Work Breakdown Structure (WBS) for related work orders or projects
- Compare real-time budgets or estimates against actual and historical work orders
- Track inside/outside machinery required to be off-line prior to work being performed

Inspections

- Define inspection plans and schedules for inspection
- Record inspection information thereby enabling auditability of statutory requirements
- Analyze inspection data to support predictive maintenance.

Preventive Maintenance Module

Preventive Maintenance (PM) modules are used to generate work orders for regularly performed tasks on either an elapsed-time or a performance basis (metered use). FoxDMM's PM features allow you to:

- Generate PM work orders individually, batched or automatically
- Accommodate multiple criteria for work order generation
- Generate seasonal preventive maintenance work orders for planned shutdowns
- Sequence multiple job plans and consolidate multiple procedures on one PM master
- Cluster PM work orders to take advantage of unplanned downtime.

Resources Module

- Maintain detailed company, service contract, and tool records for use in other modules to plan and analyze maintenance work.

Labor Module

- Store information by employee, craft, or contractor
- Maintain personnel files for each employee's attendance, vacation, sick, and non-productive work time; track overtime history and individual pay rates
- Create craft records including regular and overtime pay rates
- Associate labor records with craft records for organizing labor by craft
- Report actual labor on work orders in timecard format.

Calendars Module

- Create schedules for equipment, craft, and labor records
- View calendars via start/end date illustrating shifts, holidays, and vacations
- View calendars by month or day displaying total work hours available
- Associate calendars with labor and craft records to plan work based on equipment and labor availability.

Job Plans Module

A Job Plan is a detailed description of work to be performed on a maintenance task. It typically includes procedural descriptions and lists of estimated parts, labor and tools to be used on the job. Work orders and preventive maintenance masters reference job plans for their resource estimates. The FoxDMM Job Plans module lets you:

- Track multiple quantities and costs by operation or job plan
- Divide job plans sequentially, each with its own parts, labor and tool estimates
- Automatically retrieve the most current rate and cost information for material, labor and tool cost estimates
- Duplicate job plans for modification.

Work Manager Option

The FoxDMM Work Manager helps you develop daily plans, manage backlogs, decrease mean time to respond, and minimize equipment downtime. The Work Manager provides two distinct dispatching and planning modes for addressing these issues, with which you can:

- Develop daily plans and manage backlogs to lower response time and equipment downtime
- In dispatch mode, enter work, assign employees and track ongoing jobs in real time. Centralized dispatching and shop floor dispatching are supported
- In planning mode, assign employees to scheduled work orders and track employee availability
- Plan upcoming work based on priority of work and crafts person availability.

Scheduler Option

The FoxDMM Scheduler is available for interactive resource planning. Using resource leveling techniques, the Scheduler helps you produce realistic plans while optimizing personnel, craft, and other resource allocations. You can:

- Generate work order schedules based on resource leveling techniques
- Graphically analyze and manipulate availability of resources via an interactive Planning window
- Set downtime requirements for machinery required to be off-line prior to work being performed
- Optimize schedules through what-if analysis
- Store new schedule dates for comparison with original target dates
- Forecast preventive maintenance work orders.

Purchasing and Materials Management

A Purchasing module provides tools for preparing and printing purchase requisitions (PR), request for quotation (RFQ), and purchase orders (PO). When parts are received, quantities and costs are automatically updated in inventory records. The FoxDMM Purchasing module allows you to:

Purchasing Module

- Create RFQ for multiple vendor bids on materials and services
- Create purchase requisitions or purchase orders for materials and services
- Create purchase requisitions from scratch or from the Inventory or Work Orders module
- Automatically create purchase orders from purchase requisitions; create purchase orders in a batch from line items of multiple purchase requisitions
- Store standard descriptions for use on PR, PO, or invoice items
- Create agreement purchase orders to purchase parts over time
- Release agreement POs automatically
- Create special orders by entering item descriptions as line items for parts not in the inventory database
- Use direct purchasing to order and issue parts and services directly to work orders or GL account codes
- Analyze vendor performance when ordering parts
- Use Invoice Matching to complete purchasing cycle within FoxDMM for seamless interface with other financial applications; automatically perform two-way (PO/Invoice) and three-way (PO/Receipt/Invoice) matches
- Define an unlimited number of currencies to track purchases from different countries
- Define multiple tax rates for interstate and international purchasing
- Optimize purchasing efficiency with electronic commerce.

Inventory Module

Managing inventory is an important part of maintaining any facility or plant. The FoxDMM Inventory module keeps track of stocked and non-stocked parts and indicates when stock falls below user-defined minimum levels. It also creates purchase requisitions to restock needed parts and updates part balances as they are received. FoxDMM allows you to:

- Specify attributes and search by attribute for items, equipment and locations
- Create over 2,000 material classification templates
- Track stocked and non-stocked items through multiple stores
- Track items, costs and balances by bin, lot and storeroom
- Replenish stock from vendor, central store, or other storeroom, when quantities fall below minimum levels
- Reorder items automatically by shelf life

- Track item costs by last cost, average cost or user-defined standard cost
- Automatically reorder materials through user-defined EOQ, ROP, and safety stock algorithms
- Use ABC analysis to assign inventory item priorities governing frequency of physical item counts
- Access material forecasting and item availability information
- Create temporary stores for carriers responsible for items in transit
- Employ just-in-time methodologies by utilizing WO reservation dates as well as lead time to generate POs
- Identify out-of-stock items or make substitutions with alternate parts, vendor, and location tracking capabilities
- Establish EOQs, ROPs, and safety stock by individual storeroom
- Issue parts directly or in a batch to work orders and GL account codes
- View work order reservations for inventory items
- Display all assets on which a given part is used
- Mandate a date/time-stamped and system-verified authorization before changes in inventory can be made
- Access latest cost information and item levels instantly

Safety

- Identify hazardous material
- Identify hazards which can be eliminated by lockout/tagout
- Identify hazards which cannot be eliminated and issue precautions
- Identify affected equipment and locations
- Associate and track permits.

Business System Integration Option

Integration with other business systems is a critical advantage of Foxboro's integrated asset management system. FoxDMM:

- Allows risk free integration with multiple financial systems including commercial integration to SAP, Oracle, and Peoplesoft
- Eliminates duplicate handling of data and ensures upgradeability to future versions of FoxDMM with commercial APIs
- Supports double entry accounting for complete integration with any financial system
- Manages the purchasing process via FoxDMM or integrates with your own financial system
- Takes advantage of user-defined financial calendars to correlate directly with your accounting periods
- Summarizes transactions for integration while providing detailed audit trail information
- Preserves your corporate general ledger codes through customizable, multi-segment general ledger account field
- Uses Application Launching to register and launch applications from within any FoxDMM module
- Uses the Documents function to establish relationships between drawings and equipment; launches drawings and images in their native application
- Uses the Chart of Accounts to validate and control financial GL accounts.

Foxboro also provides consulting services to help define requirements, design information networks, formulate desktop strategies, build screens, and successfully implement FoxDMM.

Likewise, Foxboro provides the consulting and system integration services necessary to integrate FoxDMM with the appropriate elements of your business system.

Adaptation to Business Processes

Integrated Workflow Option

Define and manage the maintenance process from start to finish with FoxDMM workflow, the solution that brings streamlined collaboration to the maintenance team.

- Automatically initiate a workflow process on work requests, preventive maintenance tasks, and inventory reorders.
- Notify team members of assignments by e-mail
- Create flowcharts to visually represent the entire maintenance process being automated.

Reports Option

- Use the extensive standard reports to generate information work orders, safety plans, inventory values, and other critical points about maintenance operations and related materials.
- Generate and customize ad hoc reports with FoxDMM Report Writer, an add-on graphical report writing tool for the database.
- Access maintenance data using FoxDMM Analyzer, an add-on tool with the ability to drill into the details and view information from different perspectives.
- Create customized reports from any of the standard reports or create new reports.
- Register reports for use with any application to provide access to output related to specific portions of maintenance operations.

Custom Applications Module

- Create stand-alone executable tables and screens for access from any module.
- Create additional tables and screens to be associated with specific applications.

Setup Module

- Use signature security to provide application and process-specific protection.
- Reconfigure the database, or customize application fields to individual or company specifics.

Utilities Module

- Customize the FoxDMM PC client interface with Centura Object Nationalizer.
- Select and archive data for future reference.
- Access the database data directly, query or update the database, and run reports with Interactive SQL.

Linked Documents

- Documents can be linked to all major modules of FoxDMM.
- Documents can be on local disk, file server or the Internet.
- Once documents are linked to a record they are inherited by related modules.

Internet Options

FoxDMM Everywhere Option

- Creation of new work requests and review of existing requests through any Java-enabled Internet browser
- Wizard style interface that guides the user through the process
- Zero workstation administration and end user training required

Electronic Commerce Option

- Electronic transfer of purchase orders to vendors
- Electronic order acknowledgment in FoxDMM
- Ability to check vendor inventory levels and order status
- Ability to check customer-specific pricing.

SYSTEM ARCHITECTURE

FoxDMM is an I/A Series software application implemented with the client/server architecture shown in Figure 9. The system consists of the FoxDMM database server, the FoxDMM Application server, the I/A Series workstation clients, and Windows-based personal computer (PC) clients. Servers and clients communicate over the information systems TCP/IP network. FoxDMM monitoring applications communicate with the control process through the I/A Series Nodebus.

SYSTEM REQUIREMENTS

FoxDMM Database Server

The FoxDMM product supports two platform types as the database server. These platforms are listed below:

Sun™ Servers

- Sun SPARC 5™, SPARC 20, Sun Ultra™ 30, or Sun Enterprise Server 250 running Solaris™ 2.51 or higher operating system. If a SPARC 5 is used, it must be a dedicated server. If a SPARC 20 is used, other applications may run on the same server.
- 256 MB of RAM, minimum, depending upon the number of users and equipment or inventory records
- 4 GB of hard disk space, minimum, to accommodate Solaris, FoxDMM server process, Oracle™ relational database, and the maintenance data

Intel Servers

- One Pentium™ III 450 MHz processor minimum; expandable to 2 or 4 processors
- 256 MB of RAM, minimum, depending upon the number of users and equipment or inventory records
- 4 GB of hard disk space minimum to accommodate Windows NT™ 4.0 server, FoxDMM server process, Oracle relational database or SQL 6.5 server, and the maintenance data
- Windows NT 4.0 server

The database server platforms require the TCP/IP networking protocol software.

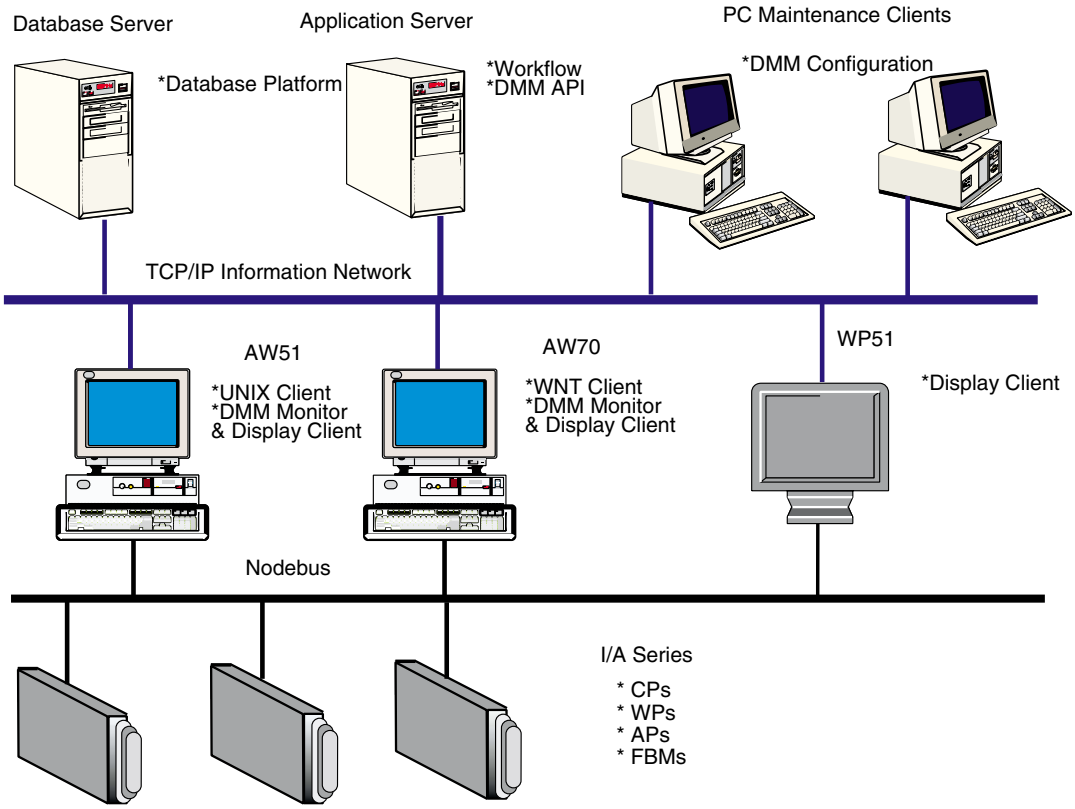


Figure 9. FoxDMM Maintenance System Architecture

FoxDMM Application Server

The FoxDMM product beginning with Version 2.03 requires an application server when optional product functionality is included. This application server is necessary when the Everywhere product or the Workflow product is utilized. The FoxDMM application server must meet these minimal requirements:

- Intel™ based Pentium III 450 MHz or greater dual processor with 1 GB of RAM memory minimum.
- Windows NT server 4.0, service pack 4 or higher
- Internet Information Server (IIS) supplied with Windows NT server
- TCP/IP networking software included with Windows NT
- Oracle SQL*Net Version 2 or Net 8 software if the Oracle database is utilized
- Microsoft™ server SQL client software if Microsoft SQL server database is utilized
- Client workstations must be running TCP/IP networking software to communicate with the application server.

When the dynamic maintenance management (DMM) application programming interfaces (APIs) are installed with a HP UNIX or Sun Solaris database, the FoxDMM Application server is also required. Contact Foxboro to properly size this FoxDMM application server in these situations.

When the DMM APIs are installed on the Windows NT database without the Workflow and Everywhere products, the FoxDMM Application server possibly may be eliminated. Contact Foxboro to properly size this FoxDMM Application server in this situation.

I/A Series Clients

AW51 Models

- I/A Series V4.3 or greater software running on AW51 or WP51 Models B, C, D, or E with a direct information network connection (TCP/IP)
- 128 MB of RAM minimum
- 200 MB of hard disk space, minimum, dedicated to the FoxDMM Display Handler and graphical displays.

Earlier versions of I/A Series workstations are not supported but can be upgraded through the Foxboro Company Advantage Program.

AW70 Models

- Pentium II 350 MHz processor or higher with a direct information network connection (TCP/IP)
- 128 MB of RAM, minimum
- 200 MB of hard disk space, minimum, dedicated to the FoxDMM Display Handler and graphical displays.

Earlier versions of I/A Series workstations are not supported but can be upgraded through the Foxboro Company Advantage Program.

PC Clients

- Pentium III based PC - 450 MHz or faster
- Windows 95, Windows 98, or Windows NT 4.0 Workstation
- 64 MB of RAM, minimum; for Windows NT 4.0, 128 MB of RAM, minimum
- 400 MB of hard disk space minimum dedicated to the maintenance workspace
- Network interface card for Windows clients and certified WinSocket compliant TCP/IP software
- FoxDMM Windows PCs require TCP/IP networking protocol software. These are suggested:
  - TCP/IP for Windows 9X
  - TCP/IP for Windows NT workstation.

PRODUCT CONFIGURATIONS

Basic FoxDMM Solution

The FoxDMM Enterprise Solution is available in various concurrent licensing configurations beginning with ten users. Larger configurations are available upon request. The basic FoxDMM Enterprise Solution contains all the necessary software modules to provide a comprehensive world class maintenance management system which includes:

- Enterprise modeling (track, model, and analyze equipment and assets)
- Planning and scheduling (work orders, preventive maintenance, job plans, resources, labor, and calendars)
- Purchasing and materials management (requisitions, orders, and inventory)

- Customization (custom applications, setup, reports, and utilities)
- I/A Series client/server integration
  - I/A Series Display Integration Module
  - FoxDMM Configuration Module
- I/A Series Run-time and Condition Monitoring including:
  - Equipment Run-time Module
  - Condition Monitoring Module
  - Maintenance Alarms Module (not included on the AW70 models).

The FoxDMM Workgroup software is available in concurrent licensing configurations for Windows NT servers beginning with a single user. The Workgroup software has reduced functionality so please contact Foxboro for details.

Purchase Options

FoxDMM Implementation Services

FoxDMM Implementation Services are available as optional engineering services to supplement customer expertise with computerized maintenance management systems. The following comprehensive services help guarantee proper planning, implementation, training, and support to ensure maximum benefits of Dynamic Maintenance Management for the customer:

- Requirements definition and planning
- System startup services including:
  - Pre-installation preparation, operating system, database, and maintenance software installation, getting started documentation
- Project management services
- Monitoring of installation plus configuration
- Interface with existing systems
- Database design and construction
- Application engineering services
- Administrative and advanced user training.

FoxDMM I/A Series Solutions

FoxDMM I/A Series Solutions are available as optional modules for customers who are already users of compliant CMMS software or need additional FoxDMM modules to support larger multi-node I/A Series configurations. Each of the following modules provide value-added integration between Foxboro's I/A Series Process Automation Systems and third-party compliant computerized maintenance management system software:

- I/A Series client/server display integration (1, 5, 10, or 20 I/A Series clients)
- I/A Series Run-time and Condition Monitoring.

FoxDMM Database Software

Database software is required for FoxDMM operation. The following database software is available from Foxboro or may be supplied by the customer:

- Oracle V7.3 or higher Workgroup server run-time licenses (five minimum)
- Oracle V7.3 or higher Enterprise server run-time licenses (eight minimum)
- Microsoft SQL server, version 6.5 or higher, operating on Windows NT 4.0 server.

FoxDMM Hardware Solutions

FoxDMM hardware solutions are available as optional infrastructure, client, and server platforms to support FoxDMM operational requirements.

Customers can choose from both I/A Series and third-party hardware platforms which also include supporting operating system and application software as follows:

- FoxDMM database server hardware and software
  - Sun SPARC server with Solaris 2.51 or higher
  - Pentium III server with Microsoft SQL 6.5 server running on Windows NT 4.0 server
  - Pentium III server with Oracle V7.3 or higher running on Windows NT 4.0 server
- FoxDMM Application server hardware and software
  - One Pentium III 450 MHz processor minimum; expandable to 2 processors
  - Windows NT server V4.0
  - TCP/IP network software
  - Internet Information Server

- FoxDMM PC client hardware and software
  - Pentium III PC with Microsoft Windows 9X or Windows NT 4.0 and TCP/IP network
- I/A Series client
  - I/A Series V4.3 or greater software on I/A Series Application Workstation 51 (AW51) Models B, C, D, or E
  - I/A Series V6.1 or greater software on I/A Series Application Workstation 70 (AW70) Models A or B
- Network design, cable, hardware, and installation services, as required
- TCP/IP networking software is required.

Advanced FoxDMM Solutions

Optional modules are available for customers needing additional functionality from third-party compliant computerized maintenance management system software or alternate database capabilities.

- Work Manager (Dispatching and HR Planning)
- Scheduler (Resources, Leveling, Graphics, and What if)
- Integrated Workflow and Business Process Modeling
- Analyzer (powerful way to access, analyze, and present data)
- Reports Packages - SQR4 Workbench and Crystal Reports
- Financial APIs to Selected Enterprise Resource Providers (ERP)
- Mobile Applications
- FoxDMM Everywhere (creation of work requests using Java enabled Internet browsers)
- MRO - On-Line (downloadable job plans and PM schedules)
- Electronic Commerce (electronic transfer of purchase orders).

FoxDMM Configuration Requirements

Customers can contact their local Foxboro sales representative and request a quotation for FoxDMM implementation at any location worldwide. The customer will be asked several simple questions which will help determine the FoxDMM configuration requirements.

- How many users will need on-line maintenance access?
- How many users have TCP/IP network access?
- How many users access I/A Series process information?
- How many users currently use an Oracle database?
- Do you own a Sun SPARC server or an I/A Series AW51 processor?
- What is your estimated total number of devices and on-line monitored maintenance points?
- How many I/A Series Nodebuses exist in your process environment?

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