Using NetMaster To Manage IBM Networks

Guss Ginsburg, *Computer Sciences Corporation*

Abstract

After defining a network and conveying its importance to support the activities at the Johnson Space Center, the presenter demonstrates the need for network management based on the size and complexity of the IBM SNA network at JSC. Network Management consists of being aware of component status and the ability to control resources to meet the availability and service needs of users. The presenter addresses the concerns of the user as well as those of the staff responsible for managing the network. He explains how NetMaster (a network management system for managing SNA networks) is used to enhance reliability and maximize service to SNA network users through automated procedures. He discusses customization, problem and configuration management, k and system measurement applications of NetMaster. The
presenter gives several examples that demonstrate NetMaster's ability to manage and control the network, integrate various product functions, as well as provide useful management information.

NETWORKING AS A STRATEGIC TOOL

USING NETMASTER TO

MANAGE IBM SNA NETWORKS

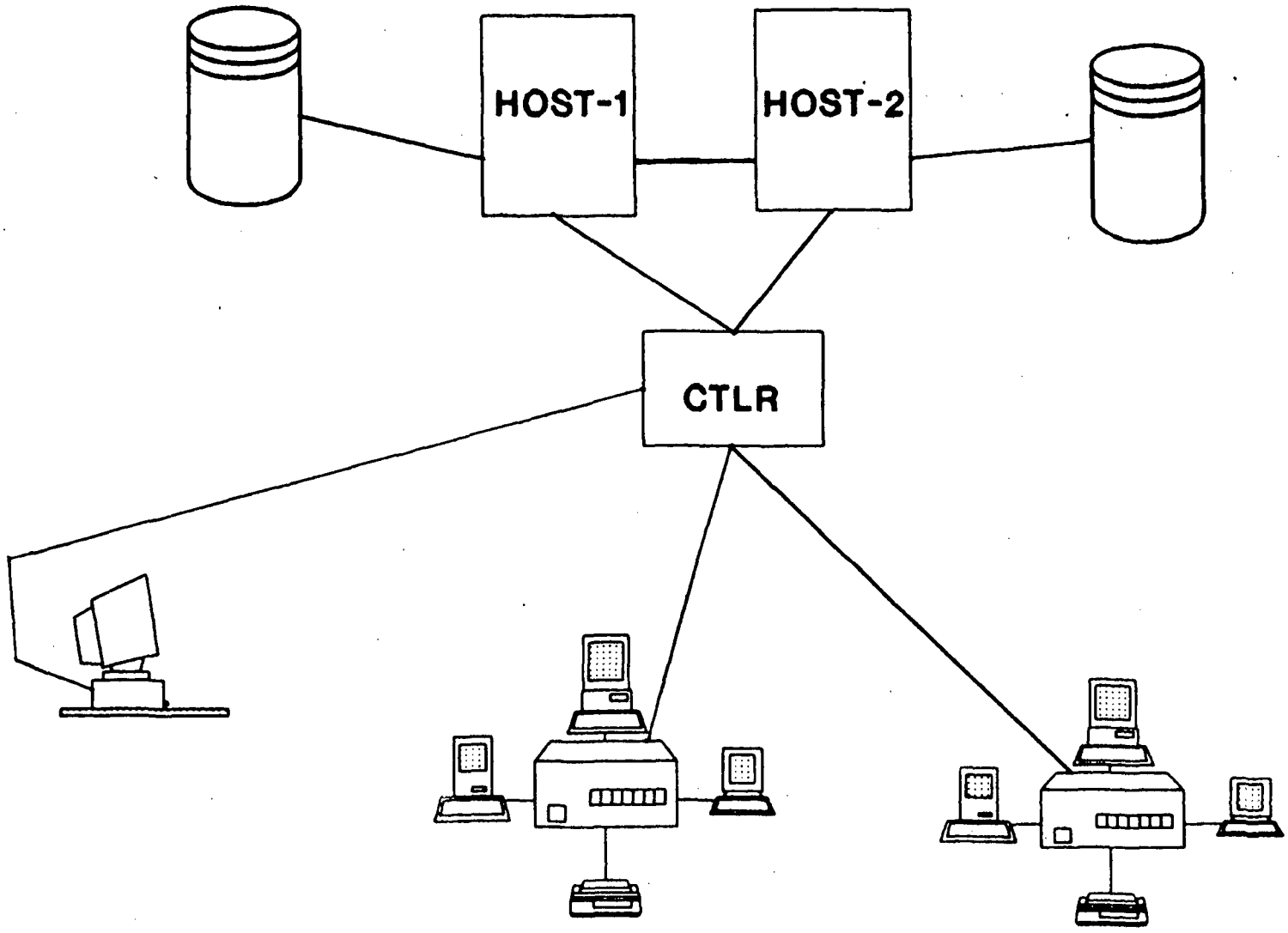
Guss Ginsburg
April 1991

OVERVIEW

- Definition of a Network
- Rationale and Objectives of Network Management
- How NetMaster Fits into the Picture
- NetMaster Features used at JSC
- Summary

DEFINITION OF A NETWORK

A System of Computers, Terminals, and Data Connected by Communication Lines


HOST-1
HOST-2
CTLR

NETWORKS ARE VITAL TO THE ENTERPRISE

- Mission Success Depends on Network Availability
- Downtime is Expensive
  - Lost Revenues and Opportunities
  - Projects can be Delayed

WHY MANAGE A NETWORK?

- **Critical Resource**
- **Maintain Reliability**
- **Maximize Service**

NETWORK MANAGEMENT CONSISTS OF ...

- Component Status Awareness
- Controlling Network Resources to meet ...
  - Availability Goals
  - Service Requirements

CONCERNS

CUSTOMERS/USERS

- **Availability**
- **Response Time**

NW & SYSTEMS MANAGEMENT

- **Customization Efforts**
- **Automated Recovery**
- **Minimize User-Reported Problems**
- **Problem Management**
- **Configuration Management**
- **Measurement Tools**

NETMASTER

- **Selected by Competitive Procurement Based on Ability to Address our Concerns**
- **Provides an Operating Environment Conducive to Monitoring and Controlling our Network**

NETMASTER

AUTOMATED RECOVERY PROCEDURES

- Message-Driven
- High-Level Language Interface (NCL)
- Panel Interface
- Can be Integrated with other NetMaster Components

NETMASTER

AUTOMATED RECOVERY PROCEDURES (cont)

- Reacts to Messages about Network Events
- Automatically Attempts to Recover from Outages
- Alerts the Network Control Center
- Avoids Screen Clutter by Filtering Messages

NETMASTER

CUSTOMIZATION

- Parameters Specified at Installation
- Minimal Exit Coding
- NCL Procedures Can be Modified by Analyst Staff
- Rules-based Systems

NETMASTER

PROBLEM MANAGEMENT

- Records Events by Resource
- Available for Review and Reporting
- Facilitates Trend Monitoring
- Indicates Deteriorating Conditions Before User is Aware of Problem
- Can be Integrated with other Components

NETMASTER

CONFIGURATION MANAGEMENT

- Derived From Network Definitions
- Database Accurately Reflects Configuration
- Can be Augmented with User-Defined Data
- Can be Integrated with Problem Management and Other Functions

NETMASTER

MEASUREMENT TOOLS

- Response-Time Monitor
- Availability

SUMMARY

NETMASTER

- **Helps Monitor and Control our SNA Network**
- **Provides Management Information**
- **Uses Automation and Rules-based Systems**