SYSMAN for Improved Restart Performance

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Slide 2

Speed and completeness of system startup is a major issue in maintaining availability.

The combination of SYSMAN and STARTUP.COM provide an excellent pair of tools to ensure smooth and fast restarts.

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Traditional Startup Mechanism

SYS$MANAGER:SYSTARTUP_VMS.COM

Problems:

- **Serial execution**

- **Tedious to maintain**

- **One error aborts startup**

- **Enable/Disable requires editing**

- **Serial execution leads to delays**

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Problem Summary:

- **No parallelism**

- **Editing leads to errors**

- **Cascading Errors**

- **No easy parameter changes**

- **Enable/Disable difficult**

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Solution:

VAX/VMS V5.0

SYSMAN
and
SYS$SYSTEM:STARTUP.COM

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Startup process is run by:

SYS$SYSTEM:STARTUP.COM
driven by three databases

- **Phase List**
  SYS$STARTUP:VMS$PHASES.DAT
- **OpenVMS Database**
  SYS$STARTUP:VMS$VMS.DAT
- **Layered Products Database**
  SYS$STARTUP:VMS$LAYERED.DAT

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OpenVMS Startup Phases

INITIAL
DEVICES
PRECONFIG
CONFIG
BASEENVIRON
LPBEGIN *
LPMAIN *
LPBETA *
END *

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Before Startup Phases

SYS$SYSTEM:STARTUP.COM runs:

SYS$STARTUP:NET$STARTUP.COM

Advantage:

**DECnet can be started
VERY early in the system
startup process. If DECnet
is started early, then LAT
can also be started earlier
(e.g. During phase DEVICES)**

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Startup Databases Contents

**Name of file to be executed
Phase of execution
Type of execution**
- **Direct**
- **Spawn**
- **Batch**

Affected Nodes

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SYSMAN Commands

STARTUP ADD file
STARTUP DISABLE FILE file
STARTUP ENABLE FILE file
STARTUP MODIFY FILE file
STARTUP REMOVE FILE file
STARTUP SET DATABASE database
STARTUP SET OPTIONS
STARTUP SHOW

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Before we go further:

STARTUP_P2 controls debugging flags

V = Verify
D = Startup Log to SYS$SYSTEM:STARTUP.LOG
C = Verbose Mode
P = Component Verify

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Change in Paradigm:

- ***Old Style –***
  Sequential operation

- ***New Wave –***
  Maximize parallelism

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Startup Process:

Each phase is completed before the next phase is started.

Parameters are passed as indicated by the database entries.

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Hazards:

- *Quotas*

- *Dependencies*

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Summary:

OpenVMS provides excellent tools to the management of system restarts, maximizing parallelism and minimizing the time required to perform a system startup.

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Questions?

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