

# ***SYSMAN for Improved Restart Performance***

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Room 3***

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***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***

***SY\$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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## **NOTES**

## *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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## **NOTES**

***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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## **NOTES**

## *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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## **NOTES**

## *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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## **NOTES**

## *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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## **NOTES**

## *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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## **NOTES**



## *Questions?*

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