



IBM System z9 and zSeries

VSE Health Checker



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		zSeries

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VSE Health Checker

§ Why such a tool?

- VSE has a lot of parameters
- Some parameters are dependent on other parameters
- Only experienced VSE experts know all these parameters and their meanings
- Troubleshooting is often very time consuming
- Asking for all the parameter values via phone (L2 service) is very lengthy and painful
- VSE experts are often not on site

The Idea

- § **Diagnosis tool for displaying and analyzing VSE system parameters**
- § **Graphical display, diagrams, charts**
- § **Automatic system diagnosis**
- § **Captured data can be**
 - saved to disk (XML format)
 - read from disk
 - sent via e-mail to an VSE expert (e.g. to IBM)
- § **Java based tool running on a PC**
- § **Only base VSE system functions required**
 - Java based Connector to access VSE
 - No additional vendor (priced) products

Benefits

- § **Find out about upcoming problems**
 - Before they occur
- § **Increased stability and performance**
 - when system parameters are tuned correctly
- § **Data from different parameters can be combined**
- § **Education about VSE parameters by using the tool**

- § **Note:**
 - It can take up to 5 minutes to collect all the data
 - Manual collection would take much more time

Procedure

§ 1. Step:

- Collection and user friendly display of the data

§ 2. Step:

- Analysis of the data
- Find and show dependencies

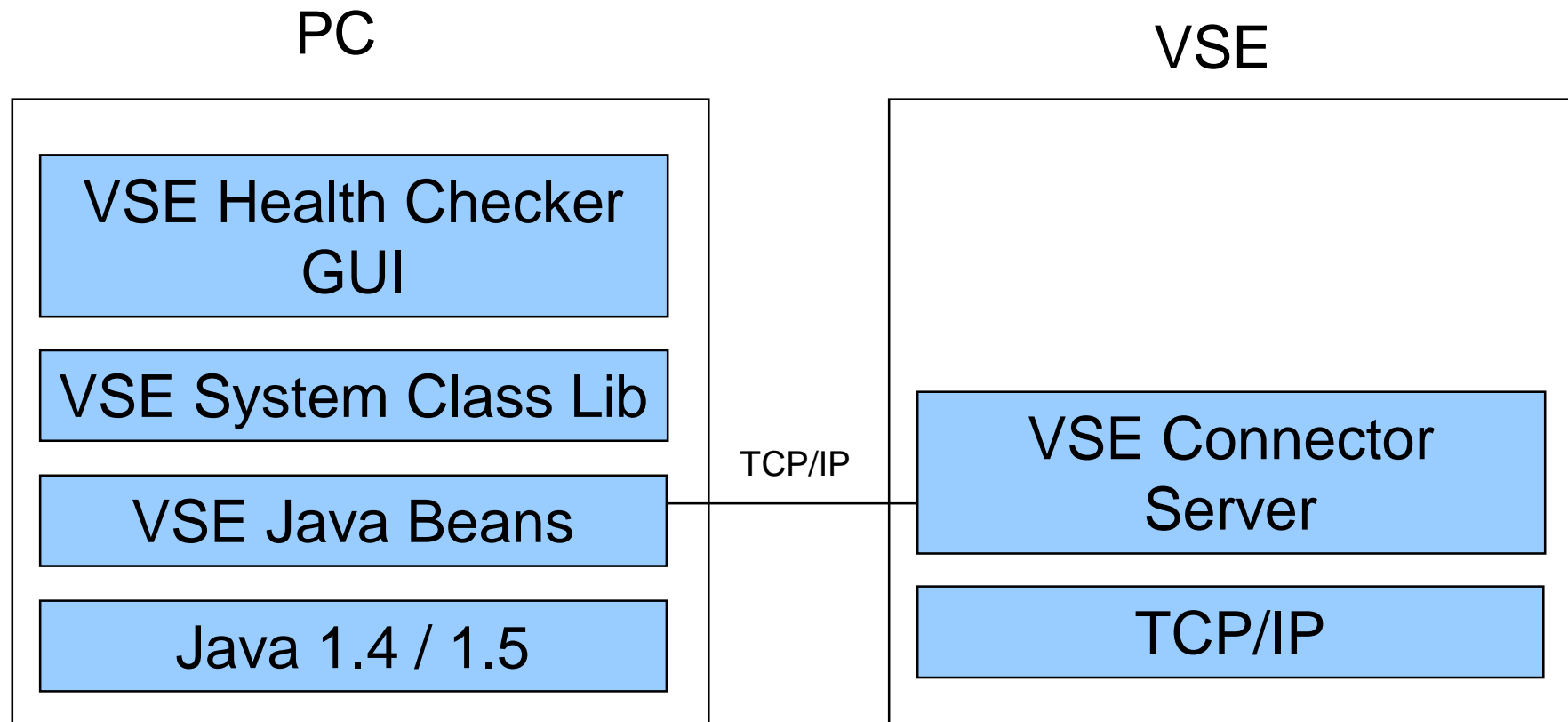
§ 3. Step:

- Modify parameters that may cause problems

§ Practical use:

- Preventive use, run about 4 times a year
- Comparison of parameters with previous run

Overview



Requirements

- § **VSE/ESA 2.6 (PQ88809 / UQ88864)**
- § **VSE/ESA 2.7 (PQ88809 / UQ88865)**
- § **z/VSE 3.1 GA System or higher**
- § **TCP/IP for VSE**
- § **VSE Connector Server must be running**
- § **VSE Connector Client installed on PC**
- § **Java Version 1.4 or higher on PC**
- § **No other (priced) products on VSE or PC**
- § **STAT transaction defined in order to get CICS TS statistics**
- § **CHKT transaction defined in order to get TS Queues list**

Latest news

§ List of CICS Transactions (from CICS Statistics)

§ Prefix and postfix for console commands

- E.g. to disable MLOG

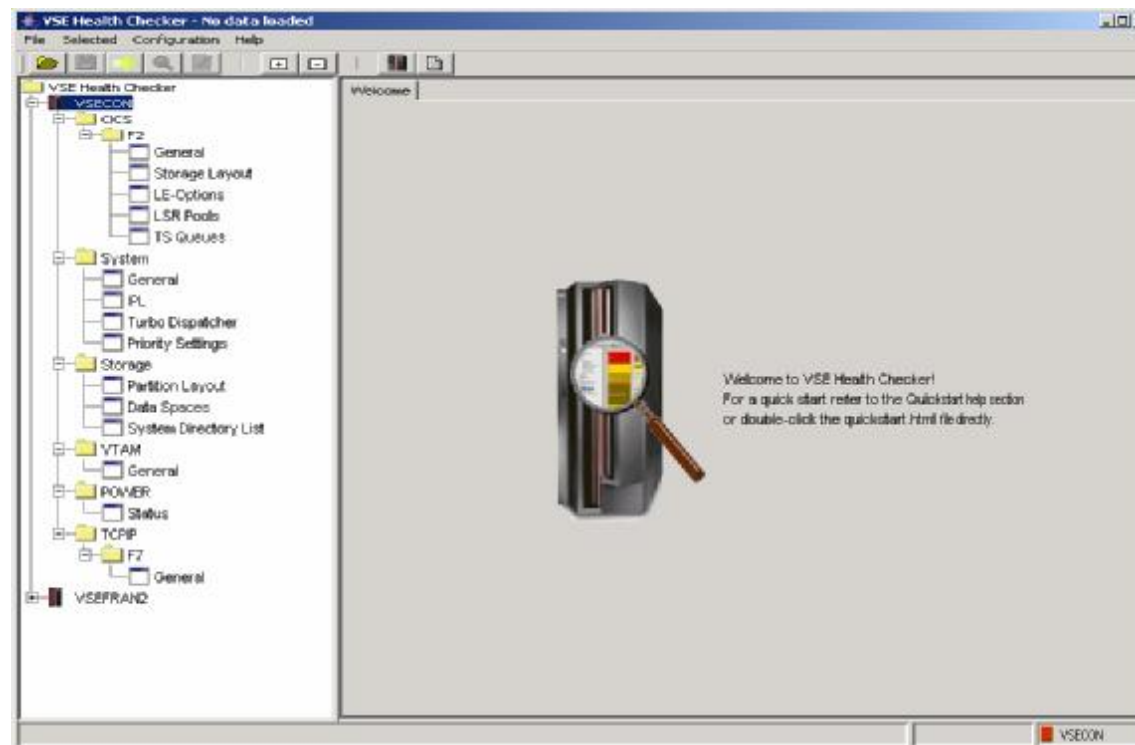
§ All submitted jobs can be adapted

- Jobs are created using skeletons
- See skeletons directory
- Variables in job skeletons are replaced with values when the job is submitted
- Example:

```
* $$ JOB JNM=%JOBNAME(1,8,"LSDSL"% ,CLASS=%JOBCLASS(1,1,"0"% ,DISP=%JOBDISP(1,1,"D"% )%
* $$ LST LST=%LST(1,6,"SYSLST"% ,CLASS=%LSTCLASS(1,1,"0"% ,DISP=%LSTDISP(1,1,"H"% )%
// JOB %JOBNAME(1,8,"LSDSL"% ) - VSE HEALTH CHECK
// EXEC LIBR
  LD SDL,OUTPUT=%OUTPUT( ,,"ST"% )%
/*
/&
* $$ EOJ
```

Live Demo – Part 1

- § Configure a host
- § Get the data (takes about 5 min)



VSE Health Checker - No data loaded

File Selected Configuration Help

VSE Health Checker

- VSECON
 - CICS
 - F2
 - General
 - Storage Layout
 - LE-Options
 - LSR Pools
 - TS Queues
 - System
 - General
 - IPL
 - Turbo Dispatcher
 - Priority Settings
 - Storage
 - Partition Layout
 - Data Spaces
 - System Directory List
 - VTAM
 - General
 - POWER
 - Status
 - TCPIP
 - F7
 - General
- VSEFRAN2

Welcome

Welcome to VSE Health Checker!
 For a quick start refer to the Quickstart help section
 or double-click the quickstart.html file directly.

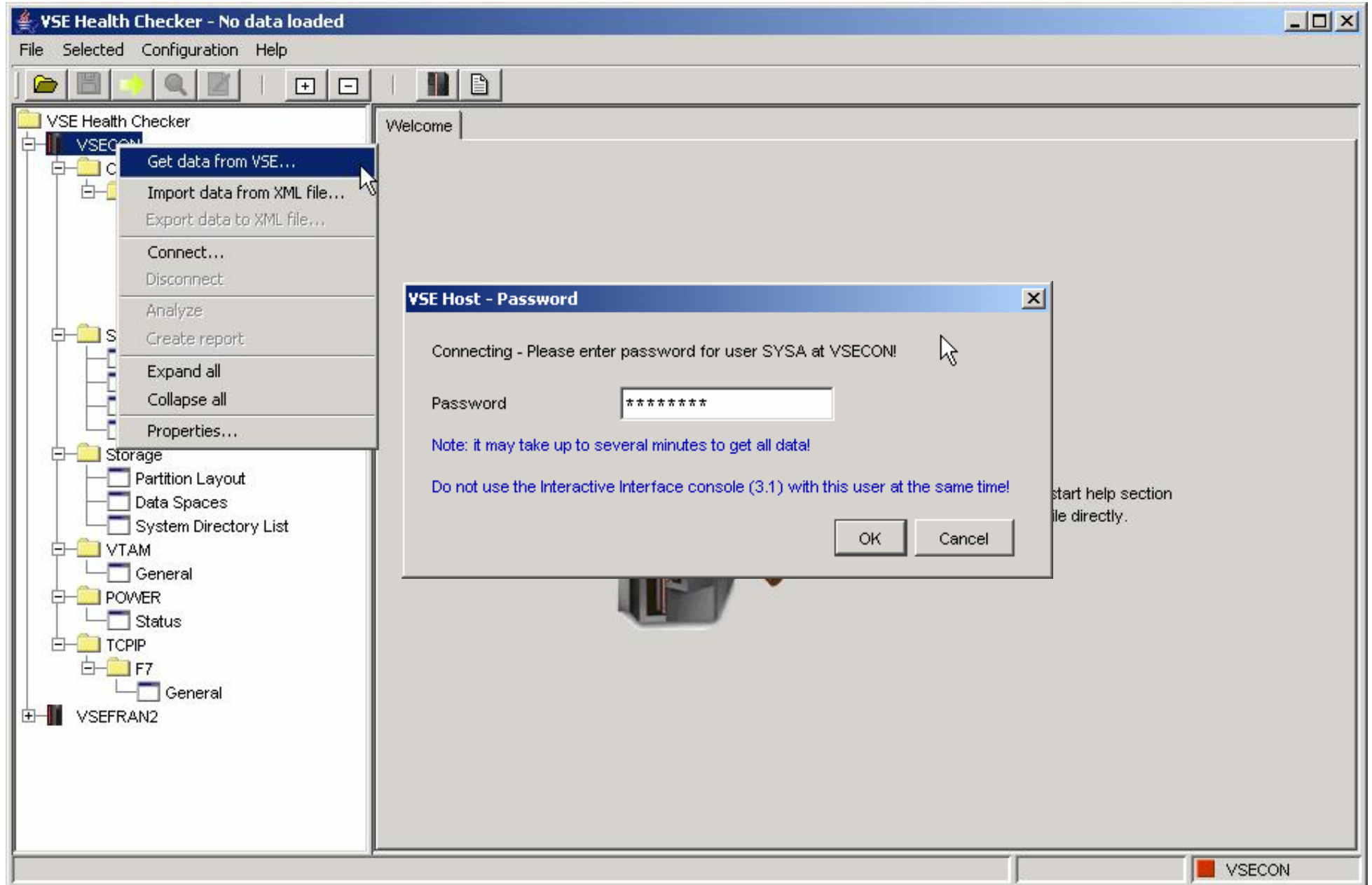
VSECON

VSE Host - Properties

Hostname	VSECON	New
IP Address	vsecon.boeblingen.de.ibm.com	Add
Port	2893	Cancel
VSE User	SYSA	Delete
VSE Job Class	A	Change
CICS TS Partition(s)	F2 like: F2 F5 D1	
TCP/IP Partition(s)	F7	
Power Password (Optional)		
Machine Group	<input type="radio"/> Slow <input checked="" type="radio"/> Medium <input type="radio"/> Fast	
Memo		

Close Help

VSECON



VSE Health Checker vs. native VSE commands

§ Data displayed can be combined from different commands

§ Example: Priority

Priority Settings				
	Priority	Share	Partition	Application
20	0		F1	NN1POWER
19	100		R	
19	100		R1	TCPIP00
19	100		F3	NN1VTAM
18	0		F2	NN1CICF2
17	0		Z	
16	0		W	
16	0		W1	STARTVCS
15	0		X	
14	0		U	
13	0		F4	
12	0		F5	NN1CICF5
11	0		F6	

MAP nn

PRTY

D DYNC

VSE Health Checker vs. native VSE commands

- § Data displayed can be calculated from different values
- § Example: POWER storage above

Partition Storage	
Total	18432 KB
Above	7168 KB

ESA270, Munich

Partition Storage	
Total	5120 KB
Above	0 KB

VSEDEMO, Boeblingen

§ Formula:

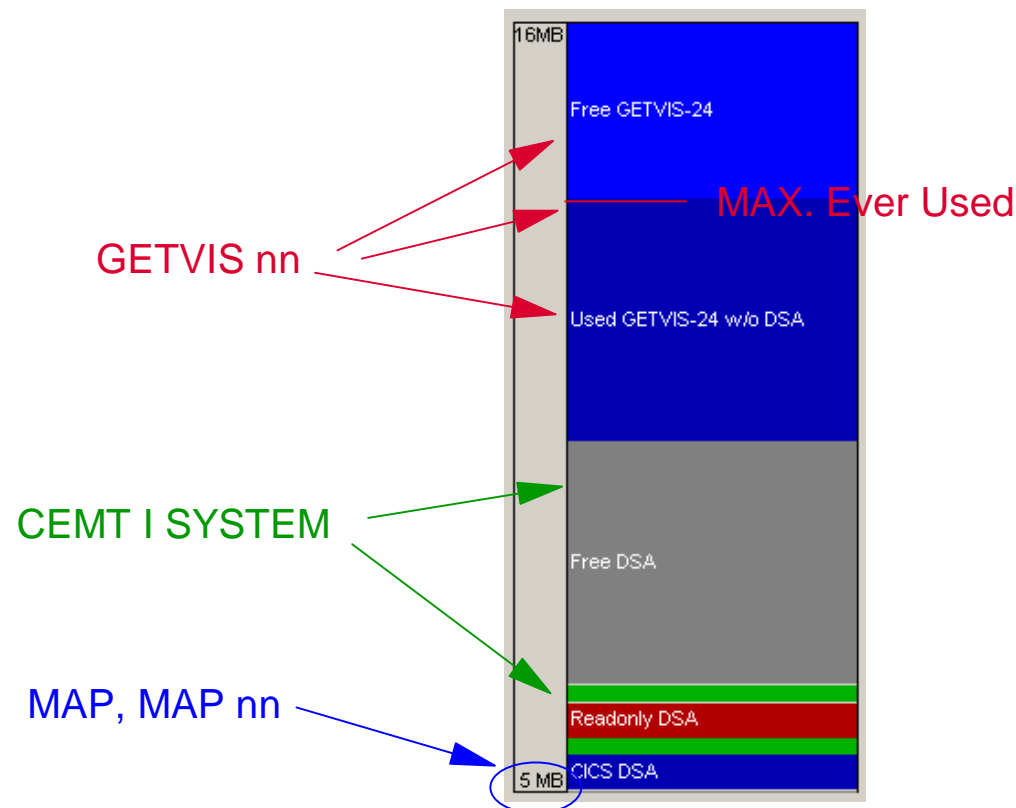
- $\text{part_size} = 16384 - (\text{VADDR} / 100000) * 1024$;
- $\text{stor_above} = \text{ALLOC-VIRTUAL} - \text{part_size}$

§ Important for POWER Queue File in memory

VSE Health Checker vs. native VSE commands

§ Data can be displayed as charts or diagrams

§ Example: CICS Storage Layout



VSE Health Checker vs. native VSE commands

§ Hide unimportant data

§ Example: VTAM Buffer Usage

SGA		SGA 24	
Limit	No Limit	Limit	No Limit
Current	736 KB	Current	94 KB
Max	737 KB	Max	94 KB
Max Used	753 KB	Max Used	95 KB

VTAM Private	
Current	4851 KB
Max	4866 KB

VTAM Buffers					
Buffer	Size	Times Exp.	Curr. Total	Max. Total	Max. Used
SF	112	0	32	32	21
IO	359	0	70	70	16
SP	144	0	210	210	0
LP	2032	0	12	12	8
LF	120	0	90	90	2
BS	216	0	34	34	0
XD	681	0	10	10	0
CR	164	1	60	82	32

```
d net,bfruse
AR 0015 1C39I COMMAND PASSED TO ACF/VTAM
F3 0003 IST097I DISPLAY ACCEPTED
F3 0003 IST350I DISPLAY TYPE = BUFFER POOL DATA
F3 0003 IST920I SF          BUFF SIZE 112          EXP INCREMENT 32
F3 0003 IST921I          TIMES EXP 0              EXP/CONT THRESH 1 / *NA*
F3 0003 IST922I          CURR TOTAL 32            CURR AVAILABLE 30
F3 0003 IST923I          MAX TOTAL 32            MAX USED 2
F3 0003 IST924I -----
F3 0003 IST920I IO          BUFF SIZE 359          EXP INCREMENT 20
F3 0003 IST921I          TIMES EXP 0              EXP/CONT THRESH 6 / *NA*
F3 0003 IST922I          CURR TOTAL 70            CURR AVAILABLE 70
F3 0003 IST923I          MAX TOTAL 70            MAX USED 13
F3 0003 IST989I          EXP LIMIT 2147483647    BUFFS REQUESTED 0
F3 0003 IST924I -----
F3 0003 IST920I SP          BUFF SIZE 144          EXP INCREMENT 51
...
...
...
F3 0003 IST449I SGALIMIT = NO LIMIT, CURRENT = 625K, MAXIMUM = 625K
F3 0003 IST790I MAXIMUM SGA USED = 625K
F3 0003 IST449I SGA24 LIMIT = NO LIMIT, CURRENT = 77K, MAXIMUM = 78K
F3 0003 IST790I MAXIMUM SGA24 USED = 78K
F3 0003 IST595I IRNLIMIT = NO LIMIT, CURRENT = 0K, MAXIMUM = 0K
F3 0003 IST981I VTAM PRIVATE: CURRENT = 3583K, MAXIMUM USED = 3583K
F3 0003 IST921I END
```

VSE Health Checker vs. native VSE commands

§ Support of “undocumented” or “unknown” parameters

§ Example: TCP/IP:

– SET CLOSE_DEPTH = { nn | 10 }

Important when sending big files via FTP.

See Q SET command: “Close Connection Depth”.

– SET CONNECT_QUEUE = { ON | OFF }

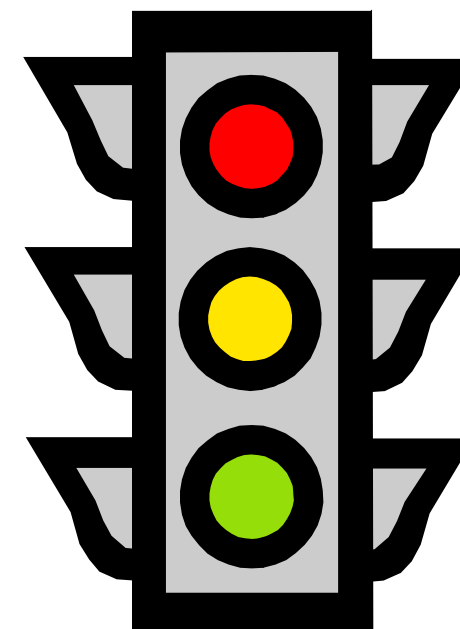
Solves “listen backlog” problem. When turned ON, up to 10 simultaneous connections can be accepted.

See Q SET command: “Connection queuing”.

Analysis

§ Analysis is based on a knowledgebase

- Stored in an XML file
- Contains rules (traffic-light analogy)
 - Green (OK):
 - E.g. `$TIMES_AT_MXT == 0`
 - Yellow (Warning):
 - E.g. `$TIMES_AT_MXT > 0 && $TIMES_AT_MXT < 9`
 - Red (Severe):
 - E.g. `$TIMES_AT_MXT > 8`
 - Description:
 - E.g. With CICS TS this value must not be equal to zero, but it should not be higher than 8.



§ Results are displayed in the GUI

- By marking the values with the appropriate color

§ Detailed report can be generated (HTML)

Live Demo – Part 2

§ Data has been received

§ Analyze the data

- There are some values to check (red or yellow)
 - DEBUG=ON
 - CICS LE Runtime Options:
 - DEBUG=ON
 - ALL31=ON
 - TCP/IP:
 - CLOSE_DEPTH = 10
 - CONNECT_QUEUE = OFF

§ Generate report

§ Fix the problems

§ Get the data again (takes about 5 minutes)

VSE Health Checker - Data loaded from: VSECON(vsecon.boeblingen.de.ibm.com)

File Selected Configuration Help

Storage Below | Storage Above | CDSA / SDSA | RDSA / UDSA | ECDSA / ESDSA | ERDSA / EUDSA

16MB

Area	Size (KB)	Size (MB)
Free GETVIS-24	2376	2.32
Used GETVIS-24...	3768	3.67
Free DSA	3840	3.75
User DSA (UDSA)	256	0.25
Readonly DSA (...)	256	0.25
Shared DSA (SD...)	256	0.25
CICS DSA (CDSA)	512	0.50
Partition Program...	4	0.00

5 MB

Public Key (90)
Partition Key (B0)
Readonly Key (00)

Job Name	CICSICCF	Peak DSA Size	1280 KB
Phase Name	DFHSIP	Peak DSA Used	784 KB
Part. Begin Addr.	500000	DSA Limit	5120 KB
Storage Prot.	Active	Max. Ever Used GETVIS-24	11260 KB —

Note: issue a GETVIS nn,RESET after CICS startup to get a correct max_ever_used_24 value.

VSECON

VSE Health Checker - Data loaded from: VSECON(vsecon.boeblingen.de.ibm.com)

File Selected Configuration Help

VSE Health Checker

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 - POWER
 - Status
 - TCPIP
 - F7
 - General
- VSEFRAN2

General High Water Marks CPU Addr Standard Options

System		CPU	
System	z/VSE 3.1.0 DR_8 11/18/2004	CPU ID VM	0051981420640000
AF Level	7.1.0 DY46233 04/06/2005	VM System	VM/ESA (LPAR) 4.4.0
POWER	7.1.0 7.1 DR8 09/30/2004	CPU ID VSE	FF08200020640000
Turbo Disp.	ACTIVE	Processor	IBM 2064-109 02 / ESA (64-BIT)
Int. TD Level	45: z/VSE 3.1		IBM eServer zSeries 900
JCL Proc.	\$\$\$JCL		
Security		Other	
Security Mgr.	BASIC	Debug	ON
Security	ONLINE	MSECS	976
Page In		Page Out	
Total	404	Total	881
Pages/sec.	7	Pages/sec.	2

VSECON

VSE Health Checker - Data loaded from: VSECON(vsecon.boeblingen.de.ibm.com)

File Selected Configuration Help

Runtime Options for CICS Runtime Options for Batch

General

Enclave EDCYCROP

Environment VSE/ESA V1 R4.4

Options

AbTermEnc	ABEND	CLER CICS Override
All31	ON	Installation default
Debug		CLER CICS Override
Heap	4096,4080,ANYWHERE,KEEP,4096,4080	Installation default
Stack	4096,4080,ANYWHERE,KEEP	Installation default
Storage	00,NONE,NONE,0	Installation default
NO Test	ALL,"*", "PROMPT", ""	Installation default
Trace	OFF,4096,DUMP,LE=0	Installation default
TermThdAct	TRACE,MSGFL,0	Installation default
Trap	ON,MAX	Installation default

VSECON

VSE Health Checker - Data loaded from: VSECON(vsecon.boeblingen.de.ibm.com)

File Selected Configuration Help

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 - TCPIP
 - F7
 - General
 - VSEFRAN2

General DNS Discover best MTU Fixes Applied

General		Performance		Events	
Service Pack	01.05 D	Window Size	85535	Event Pause Interval	9000 (30 Seconds)
IBM APAR	PQ79563	FTP Max. Buffers	0	Max. Events	-
IP Address	9.152.80.24	Fixed Retransmission	OFF	Current Events	-
Subnet Mask	255.255.248.0	Dynamic Routing	ON	Max. LPR Events	5
Max. Segment	32684	Debug	OFF	Current LPR Events	0
System ID	00	Memory Verification	OFF	Max. FTP Events	1
Security		Record	OFF	Current FTP Events	0
Security	ON	Gateway	ON	Max. Email Events	1
ARP Security	OFF	Checksum Calculation	Software	Current Email Events	0
IP Security	OFF	Pulse Time	18000		
Connection Handling		Uppercase (DBCS)	OFF		
Close Connection Depth	10				
Connection Queuing	ON				
Connect Sequence	OFF				

VSECON


VSE Health Checker - Generated Report - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address D:\Performance\Ppresentations\Wavv 2005\VSECON_report.html

Report for Host VSECON

Generated at: Fr, 29 Apr 2005 16:10:01

 **DEBUG**

Debug should always be OFF in a production system.

How to display this parameter on VSE

```
debug
AR 0015 DEBUG OFF
AR 0015 TRACE=PCK,TEST,REGS,TASK,INT,SIO,EXT,DISP,SVC,TERM,SWCH,DATA,USER
AR 0015 TRACE=TDTR
```

How to change this parameter

DEBUG (ON | OFF)

More information

[IBM Online Bookshelf](#)

Calculation: (\$DEBUG = true);

Partition: -

Analysis Result: **Severe**

Done My Computer

```

Session A - [32 x 80]
File Edit View Communication Actions Window Help
[Icons]
CLER 04/29/05
14:16:06

Language Environment for VSE/ESA V1 R4.4
Dynamic CICS Runtime Option Modification Facility

ABPERC: ( NONE ) STORAGE: ( 00 , NONE , NONE , 0 )
ABTERMENC: ( ABEND ) TERMTHD: ( TRACE , MSGFL , 0 )
ALL31: ( ON ) TRAP: ( ON , MAX )
CBLPSHPOP: ( ON ) USRHDLR: ( )
CHECK: ( OFF ) TERMTHDACT LSTQ OPTIONS :
DEBUG: ( ON ) CLASS: ( L ) DISPOSITION: ( D )
DEPTHCOND: ( 10 ) NODE-ID: ( )
ERRCOUNT: ( 20 ) USER-ID: ( )
HEAP: ( 4096 , 4080 , ANYWHERE , KEEP , 4096 , 4080 )
LIBSTACK: ( 4096 , 4080 , FREE )
MSGFILE: ( CESE )
RPTOPTS: ( OFF )
RPTSTG: ( OFF )
STACK: ( 4096 , 4080 , ANYWHERE , KEEP )

Please change the runtime option to the setting required.

<PF3> Exit <PF4> Restore Defaults <PF5> Update <PF12> Exit(No Change)

MA a 11/016
Connected to remote server/host boevmct1 using port 23 Print to Disk - Append

```

```
Session A - [32 x 80]
File Edit View Communication Actions Window Help
[Icons]
SYSTEM: z/VSE z/VSE 3.1 TURBO (01) USER: FRAN
VM USER ID: VSECON TIME: 14:18:15
F7-0100 IPN000I Enter TCP/IP Command
100 set close_depth=20
F7 0097 IPN020I Close Connection Depth is set to 20
F7-0100 IPN200I Enter TCP/IP Command
100 set connect_queue=on
F7 0097 IPN003I Connection queuing set to on
F7-0100 IPN300I Enter TCP/IP Command
debug off
AR 0015 II40I READY
debug
AR 0015 DEBUG OFF
AR 0015 TRACE=PCK,TEST,REGS,TASK,INT,SIO,EXT,DISP,SVC,TERM,SWCH,DATA,USER

AR 0015 TRACE=TDTR

==> _

1=HLP 2=CPY 3=END 4=RTN 5=DEL 6=DELS 7=RED 8=CONT 9=EXPL 10=HLD 12=RTRV

ACT_MSG: HOLDRUN PAUSE: 01 SCROLL: 1 MODE: CONSOLE
MA a 28/006
Connected to remote server/host boevmct1 using port 23 Print to Disk - Append
```

VSE Health Checker - Data loaded from: VSECON(ysecon.boeblingen.de.ibm.com)

File Selected Configuration Help

Get data from VSE...
 Import data from XML file...
 Export data to XML file...
 Connect...
 Disconnect
 Analyze
 Create report
 Expand all
 Collapse all
 Properties...

Welcome

Welcome to VSE Health Checker!
 For a quick start refer to the Quickstart help section
 or double-click the quickstart.html file directly.

VSECON

Analysis - extended

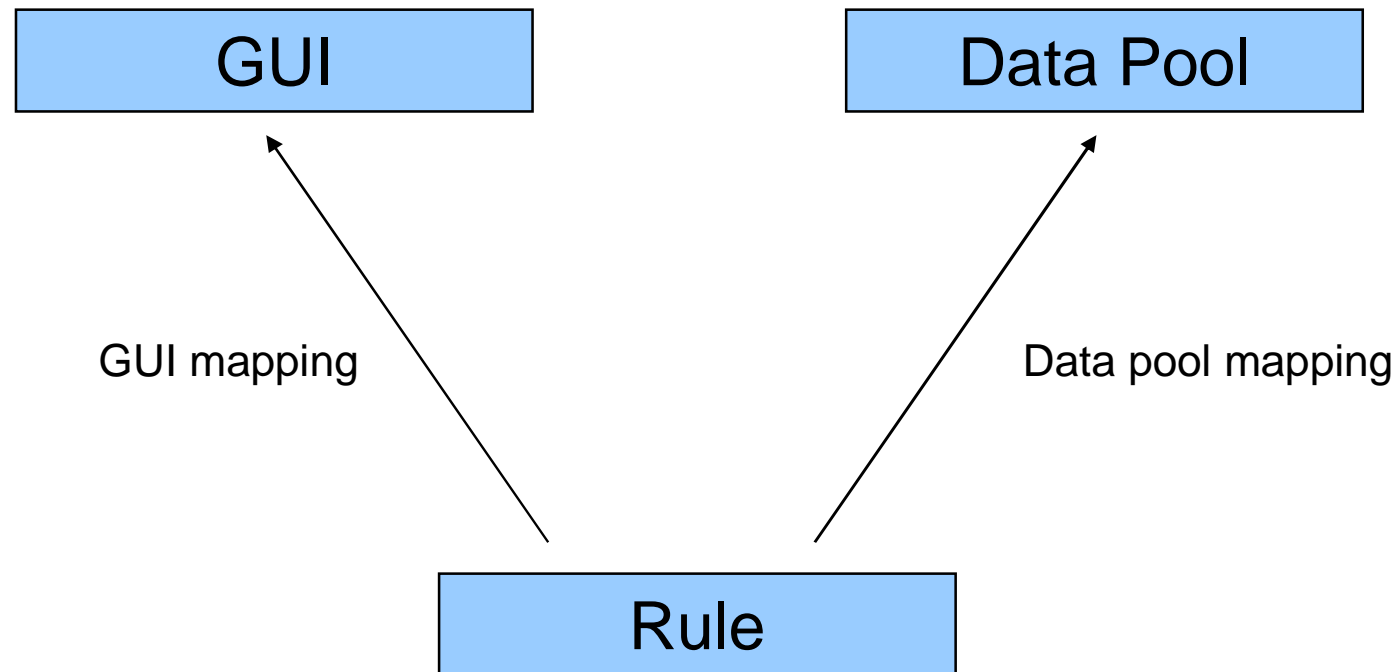
§ Rules can be valid for

- All partitions
- All dynamic partitions
- All static partitions
- Specific partitions
 - E.g. special applications
- Special applications
 - CICS
 - VTAM
 - TCP/IP

§ Some values may be dependent on the speed of the processor

- Machine group limits
 - slow, medium, fast
- e.g. PRTY aging

Mappings

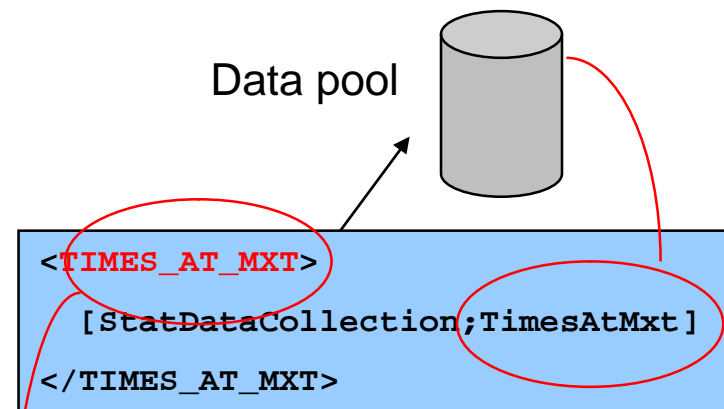


Example – Times at MXT

Transactions	
Total Transactions	1224
Max. Tasks	20
Times at MXT	0
Peak Active User transactions	4

```
<TIMES_AT_MXT>
  [CICS:General;Times at MXT]
</TIMES_AT_MXT>
```

```
<TIMES_AT_MXT>
<rule>
  <green> ($TIMES_AT_MXT == 0); </green>
  <yellow> ($TIMES_AT_MXT > 0) && ($TIMES_AT_MXT < 9); </yellow>
  <red> ($TIMES_AT_MXT > 8); </red>
</rule>
</TIMES_AT_MXT>
```



Known problems

- § **Dependencies to OEM products, e.g. console managers, like MLOG**
- § **Parsing errors caused by**
 - Different console output
 - Different contents of IPLPROC
 - Prefix and postfix for commands may help
 - Adapting the JCL of submitted jobs may help
- § **If you encounter a problem**
 - Contact zvse@de.ibm.com
 - Send debug info (see next foil)

Debugging

- § Write console output to local text file
- § Internal debug trace (mainly analysis)

General Options

General | TS Queues Setup | Customize processor descriptions | TCP/IP Fixes

Timeout: 5 sec.

Analysis Report
Level: Yellow and red
Filename: \$HOSTNAME_report.html

Raw Output Trace
 Activate Trace

Setup Console Commands
Prefix:
Suffix:

Internal debug trace
 Write debug trace to STDOUT

Wait Time Interval for CICS STAT Output
Interval (sec.): 10

OK Cancel Help

Live Demo – Part 3

§ **Data has been received (second time)**

§ **Analyze the data once more**

– The problems no longer exists

§ **Save the data**

– For archiving it

– For sending it to IBM support people

VSE Health Checker - Data loaded from: VSECON-no-problems.xml - Timestamp: 29.04.2005 16:29:35

File Selected Configuration Help

Runtime Options for CICS Runtime Options for Batch

General

Enclave EDCYCROP

Environment VSE/ESA V1 R4.4

Options

AbTermEnc	ABEND	CLER CICS Override
All31	ON	Installation default
<input checked="" type="checkbox"/> Debug		CLER CICS Override
Heap	4096,4080,ANYWHERE,KEEP,4096,4080	Installation default
Stack	4096,4080,ANYWHERE,KEEP	Installation default
Storage	00,NONE,NONE,0	Installation default
<input checked="" type="checkbox"/> Test	ALL,"*", "PROMPT", ""	Installation default
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TermThdAct	TRACE,MSGFL,0	Installation default
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VSECON

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- VSEFRAN2

General High Water Marks CPU Addr Standard Options

System		CPU	
System	z/VSE 3.1.0 DR_8 11/18/2004	CPU ID VM	0011981420640000
AF Level	7.1.0 DY46233 04/06/2005	VM System	VM/ESA (LPAR) 4.4.0
POWER	7.1.0 7.1 DR8 09/30/2004	CPU ID VSE	FF08200020640000
Turbo Disp.	ACTIVE	Processor	IBM 2064-109 02 / ESA (64-BIT)
Int. TD Level	45: z/VSE 3.1		IBM eServer zSeries 900
JCL Proc.	\$\$\$JCL		
Security		Other	
Security Mgr.	BASIC	Debug	OFF
Security	ONLINE	MSECS	976
Page In		Page Out	
Total	409	Total	884
Pages/sec.	7	Pages/sec.	2

VSECON

VSE Health Checker - Data loaded from: VSECON-no-problems.xml - Timestamp: 29.04.2005 16:29:35

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Max. Segment	32684	Debug	OFF	Current LPR Events	0
System ID	00	Memory Verification	OFF	Max. FTP Events	1
Security		Record	OFF	Current FTP Events	0
Security	ON	Gateway	ON	Max. Email Events	1
ARP Security	OFF	Checksum Calculation	Software	Current Email Events	0
IP Security	OFF	Pulse Time	18000		
Connection Handling		Uppercase (DBCS)	OFF		
Close Connection Depth	20				
Connection Queuing	ON				
Connect Sequence	OFF				

VSECON

VSE Health Checker - Data loaded from: VSECON-no-problems.xml - Timestamp: 29.04.2005 16:29:35

File Selected Configuration Help

Import data from XML file...
Export data to XML file...
 Exit

+ - | [Icons]

General DNS Discover best MTU Fixes Applied

General	Performance	Events
Service Pack 01.05 D	Window Size 85535	Event Pause Interval 9000 (30 Seconds)
IBM APAR PQ79563	FTP Max. Buffers 0	Max. Events -
		Event Pause Interval -
		Event LPR Events 5
		Event LPR Events 0
		Event FTP Events 1
		Event FTP Events 0
		Event Email Events 1
		Event Email Events 0

Save data to XML file ...

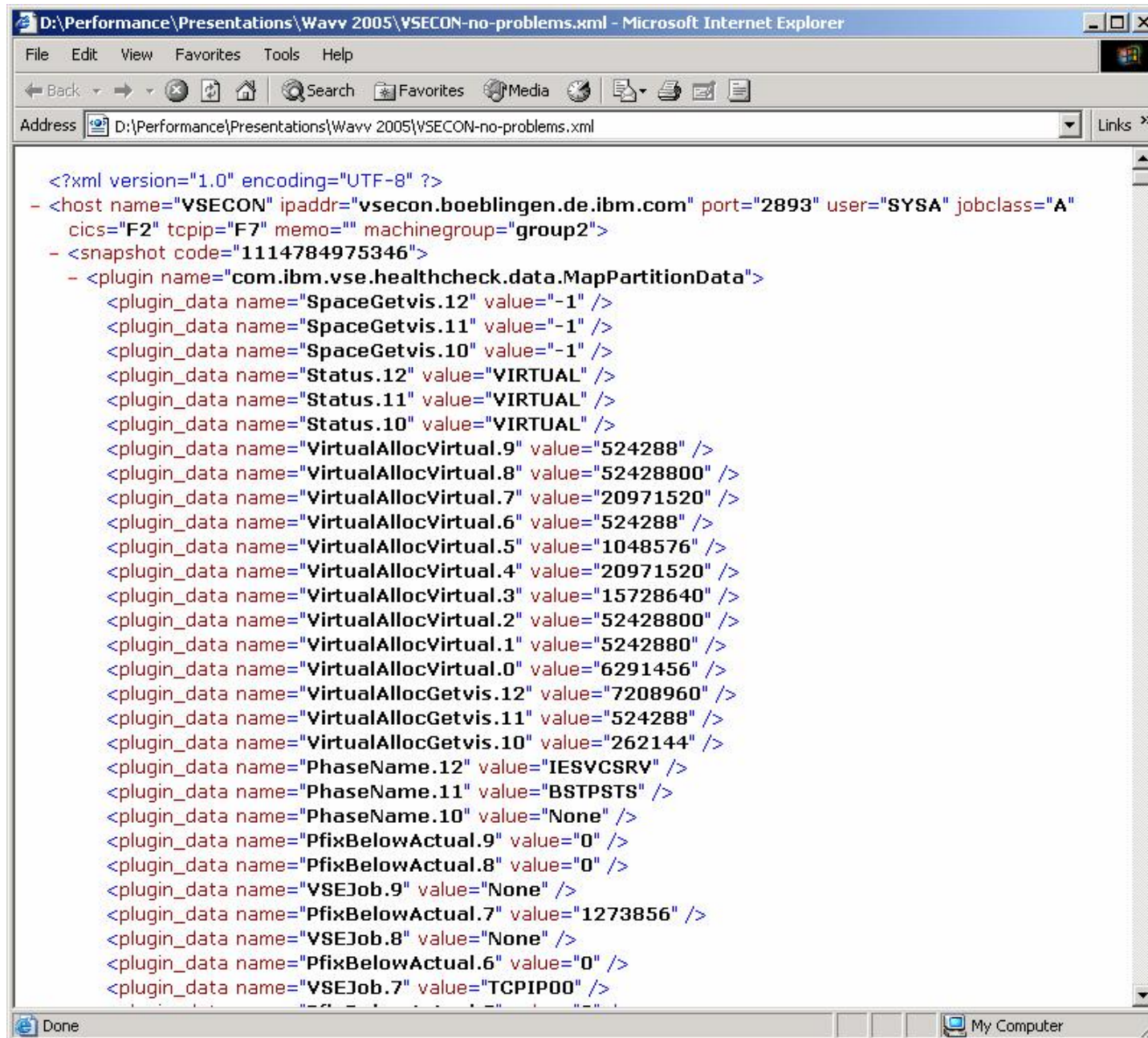
Save in: System (C:)

CallCenter	NVIDIA	Seti
DataArmour	odbcsdk	swd
Documents and Settings	Program Files	Temp
Lotus	PSM	WINNT
MSOffice	RKA	zeta
Notes	Sdwork	NTNetDBPart.TLB

File name: VSECON_2005_04_29_16.32.53.xml Save Cancel

Save as type: Alle Dateien (*.*)

VSEFRAN2 VSECON



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<?xml version="1.0" encoding="UTF-8" ?>
- <host name="VSECON" ipaddr="vsecon.boeblingen.de.ibm.com" port="2893" user="SYSA" jobclass="A"
  cics="F2" tcpip="F7" memo="" machinegroup="group2">
- <snapshot code="1114784975346">
- <plugin name="com.ibm.vse.healthcheck.data.MapPartitionData">
  <plugin_data name="SpaceGetvis.12" value="-1" />
  <plugin_data name="SpaceGetvis.11" value="-1" />
  <plugin_data name="SpaceGetvis.10" value="-1" />
  <plugin_data name="Status.12" value="VIRTUAL" />
  <plugin_data name="Status.11" value="VIRTUAL" />
  <plugin_data name="Status.10" value="VIRTUAL" />
  <plugin_data name="VirtualAllocVirtual.9" value="524288" />
  <plugin_data name="VirtualAllocVirtual.8" value="52428800" />
  <plugin_data name="VirtualAllocVirtual.7" value="20971520" />
  <plugin_data name="VirtualAllocVirtual.6" value="524288" />
  <plugin_data name="VirtualAllocVirtual.5" value="1048576" />
  <plugin_data name="VirtualAllocVirtual.4" value="20971520" />
  <plugin_data name="VirtualAllocVirtual.3" value="15728640" />
  <plugin_data name="VirtualAllocVirtual.2" value="52428800" />
  <plugin_data name="VirtualAllocVirtual.1" value="5242880" />
  <plugin_data name="VirtualAllocVirtual.0" value="6291456" />
  <plugin_data name="VirtualAllocGetvis.12" value="7208960" />
  <plugin_data name="VirtualAllocGetvis.11" value="524288" />
  <plugin_data name="VirtualAllocGetvis.10" value="262144" />
  <plugin_data name="PhaseName.12" value="IESVCSRV" />
  <plugin_data name="PhaseName.11" value="BSTPSTS" />
  <plugin_data name="PhaseName.10" value="None" />
  <plugin_data name="PfixBelowActual.9" value="0" />
  <plugin_data name="PfixBelowActual.8" value="0" />
  <plugin_data name="VSEJob.9" value="None" />
  <plugin_data name="PfixBelowActual.7" value="1273856" />
  <plugin_data name="VSEJob.8" value="None" />
  <plugin_data name="PfixBelowActual.6" value="0" />
  <plugin_data name="VSEJob.7" value="TCPIP00" />

```

Download and documentation

§ VSE Health Checker

- <http://www.ibm.com/servers/eserver/zseries/zvse/downloads/#healthchecker>

§ VSE Connector Client

- <http://www.ibm.com/servers/eserver/zseries/zvse/downloads/#vsecon>

§ z/VSE V3.1 Administration, SC33-8224

§ z/VSE V3.1 Operation, SC33-8239

§ z/VSE V3.1 System Control Statements, SC33-8225

Questions ?

