TechNote

Microsoft Hyper-V

October 17, 2011

XCAPI
voiceoverIP

TE-SYSTEMS

competence in e-communications.
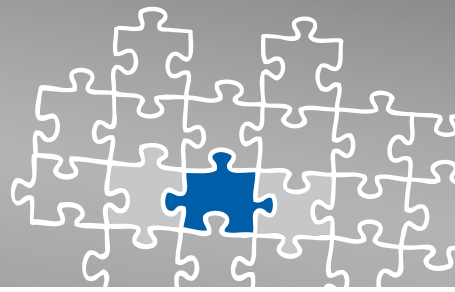
Introduction

This document is intended to support you during the configuration of the XCAPI in a Microsoft Hyper-V environment.

For this we are going to adjust the energy options and the clock source of the Microsoft Hyper-V for sufficient timing behaviour, assuring an operation without disruptions which are commonly based on wrong CPU clocking between several guest operating systems and the host.

Please note that it is essential testing the Microsoft Hyper-V and VoIP environment for sufficient resource and real-time behaviour.

For some extended information on installation procedures regarding the Microsoft Hyper-V and the virtual machines please refer to the respective manuals.

A short installation manual for the XCAPI is available at XCAPI Website.

Improving Real-time Performance

Up to a certain degree, the XCAPI can cope with time shifts in the virtual machine which is a general problem when a virtual machine does not have sufficient CPU time due to other time-consuming processes on the host. Without this adjustment, real-time applications like Softfax are not feasible because of gaps in the audio stream which can lead to aborted fax transmissions.

Query Performance Counter Support inside the XCAPI

For enabling XCAPI **Query Performance Counter (QPC)** support, you need to run the configuration tool **xfinetune.exe**. This executable can be found in the installation folder of the XCAPI. There you have to activate the option **High Resolution Time Source** within the **General Settings**.
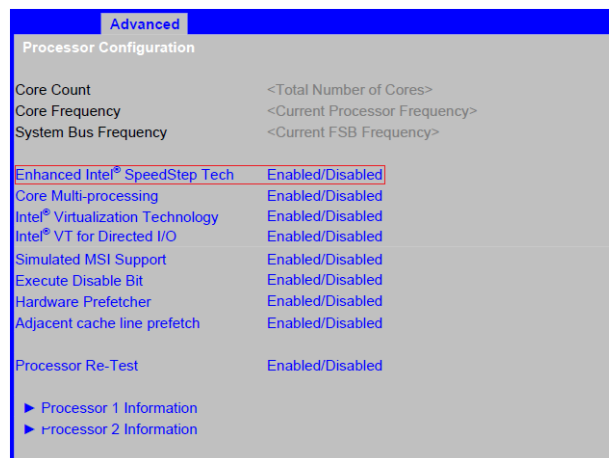
Please select the option **QPC** for the time source parameter. Afterwards, please restart the CAPI application.
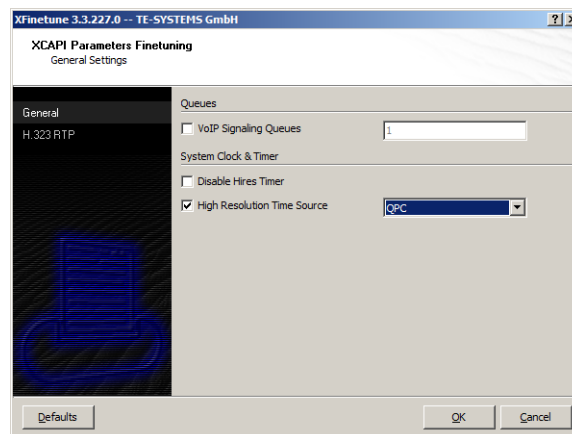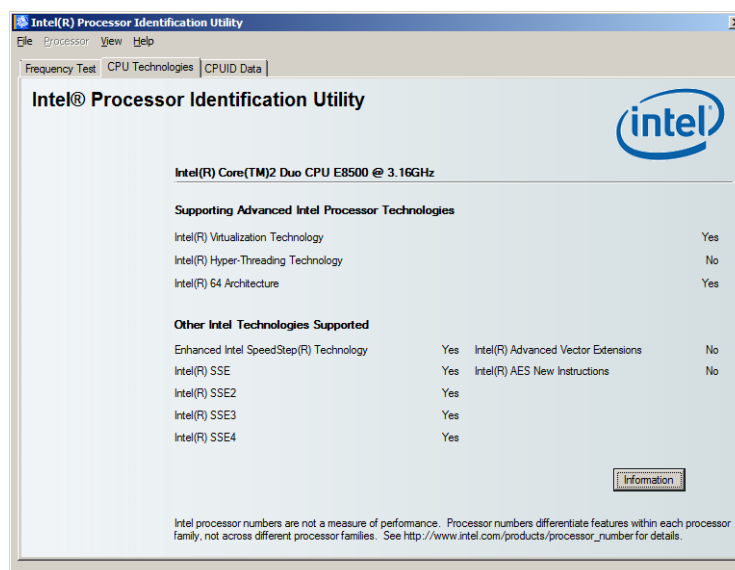
Enhanced Intel SpeedStep(R) Technology

Please review the Bios of the Hyper-V host and disable all related **Enhanced Intel SpeedStep(R) Technology** settings.
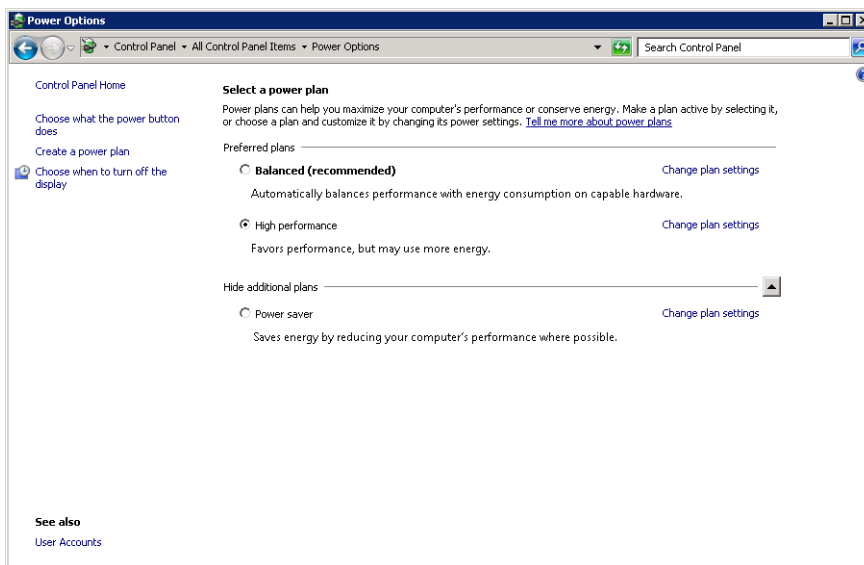

You could use the Intel(R) Processor Identification Utility to verify the SpeedStep(R) technology support of the CPU.

Power Options

Additionally you might have to disable any **Power Options** within the Windows host and client. Referring to this, please review also the BIOS settings.

If necessary, the power scheme can be set via the CLI.

```
C:\Windows\system32>powercfg.exe -L

Existing Power Schemes (* Active)
-----------------------------------
Power Scheme GUID: 381b4222-f694-41f0-9685-ff5bb260df2e  (Balanced) *
Power Scheme GUID: 8c5e7fda-e8bf-4a96-9a85-a6e23a8c635c  (High performance)
Power Scheme GUID: a1841308-3541-4fab-bc81-f71556f20b4a  (Power saver)

C:\Windows\system32>powercfg -setactive 8c5e7fda-e8bf-4a96-9a85-a6e23a8c635c

C:\Windows\system32>powercfg.exe -L

Existing Power Schemes (* Active)
-----------------------------------
Power Scheme GUID: 381b4222-f694-41f0-9685-ff5bb260df2e  (Balanced)
Power Scheme GUID: 8c5e7fda-e8bf-4a96-9a85-a6e23a8c635c  (High performance) *
Power Scheme GUID: a1841308-3541-4fab-bc81-f71556f20b4a  (Power saver)

C:\Windows\system32>_
```

Exclusion of Liability

Copyright © 2011 TE-SYSTEMS GmbH

Trademarks

All names of products or services used are trademarks or registered trademarks (also without specified indication) of the respective private or legal persons and are therefore subject to legal regulations.

Third Party Disclaimer and Limitations

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (http://www.openssl.org/)

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com).

This product includes software written by Tim Hudson (tjh@cryptsoft.com).

This product includes source code derived from the RSA Data Security, Inc. MD2, MD4 and MD5 Message Digest Algorithms.

This product includes source code derived from the RFC 4634 Secure Hash Algorithm software.