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UC Suite quality issues and data loss on a network with high traffic volumes

Applies to:

This document applies to Imagicle on-prem UC Suite VMs, connected to a network with high traffic load.

Description:

Certain real-time applications in a very loaded server can perform badly if the Microsoft Windows operating system is not correctly setup. For example, Advanced Queuing voice transactions might experience distortions or Call Recording audio files might be lost.

To avoid such issues, please follow the suggested recommendations for server provisioning in a VMware environment.

How-to:

The problem is triggered when the system loses or delays UDP packets.
It occurs when the virtual LAN card is loaded: the greater the load, the greater amount of lost packets.
The problem can also be observed through a normal "ping" to and from the involved VM.
With a 50% by-directional network bandwidth load, you can start observing some problems; with 80% bandwidth load, packets loss rate is around 10%.

To fix this issue, you should adjust some network parameters on the server's network interface.

Parameters values are depending on several factors, so the following table is the best match for Imagicle instances. To learn more about correct methods and values please refer to Microsoft and VMware technical support:

Parameter	Value
Receive Side Scaling	enabled
Receive Window Auto-Tuning level	normal
Maximum number of RSS processors	8
RSS base processor number	empty
Task offload	enabled
Small Rx Buffers	8192 Byte
Large Rx buffers	8192 Byte
Rx ring #1	4096 Byte
Rx ring #2	4096 Byte
Tx ring size:	4096 Byte
Max Tx queues	8

Always remember to install VMware tools and keep them updated.

From Command Line Interface (CMD), you can leverage below commands to view more details:

How to	Command
View IP parameters	netsh int ip show global
View TCP and CSS parameters	netsh int tcp show global
Enable task offload	netsh int ip set global taskoffload=enabled
Enable RSS	netsh int tcp set global RSS=enabled
Set Auto-Tuning level	netsh int tcp set global autotuninglevel=normal

Please also refer to the following web pages:
WMware Troubleshooting hints

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