**Windows server Virtualization**

**Hyper-V**

**About Hyper-V**

Microsoft Hyper-V is a native hypervisor. It can create virtual machine on windows running system.

To utilize this tool, install windows as operating system to the machine and then on top of that install and configure Hyper-V. Now The platform is ready to create several virtual machine on this.

**Requirement**

1. Need information about the Hyper-V running on windows system

HYPER-V : Disabled / Enabled

1. If Hyper-H is present then following is the output

VM-HOSTNAME: <hostname> | <Enabled / Disabled >

Otherwise the information is not present.

<ip>,<hostname><OS><Hyper-V Present><Hyper-VM-Hostname : xxxxx|Enabled , yyyyyy|Enbled, zzzzzz|Disabled>

So, with the information, we can be sure that the windows server is ruuning Hyper-V and on top of it there are three VM created whole hostname are listed. But only two VMs are active and one is not running, although configured.

**Installation of Hyper-V at Jio**

Most of the Hyper-V for windows at jio is running for lower environment. Very few (less than 40) are in production environment.

All installation of Hyper-v is running on top of Windows. At present in HPAM, the information about windows Hyper-V and its virtual machine running on it is not available.

It is possible to get the information about the Hyper-V running on windows and all virtual machines created on top. This information can be gathered by reading the window registry specific commands and this can be achieved power shell scripts.

Windows server

Virtual server

Running

Hyper-V running

**Methods of discovery Hyper-V information and its virtual Machine relation**

There is OS-HW discovery script for windows Operating System written in power shell. We are using the same power shell script to get the Hyper-V information and its relation with all the virtual machine created on top of it, through the registry command.

At the end of the script run, the output, apart from OS and Hardware information, the information about the Hyper-V and its Virtual Machine is also present in JSON format (if the server has Hyper-V running).

**Sample Output <in JSON>:**

Server with No: Hyper-V

{

"DESCRIPTOR":"OS\_HW\_DISCOVERY",

"IPADDRESS":"10.144.100.222",

"VALUES":[

"DEVICETYPE|Virtual Machine",

"ADDITIONALIP|",

"SUBNETMASK|255.255.255.0",

"SUBNET|10.144.100.222/24",

"MACADDRESS|00:50:56:A6:A9:93 ",

"HOSTNAME|JMNGD1BWN110V22",

"SERIALNUMBER|VMware-56 4d b7 48 5f 06 c6 b7-52 2f 0d f4 cd d1 e3 aa",

"OPERATINGSYSTEM|Microsoft Windows Server 2012 R2 Standard",

"OSSHORTNAME|WINDOWS",

"OSVERSION|2012 R2 Standard",

"MAKE|Windows User",

"MODEL|VMware Virtual Platform",

"RAM|3",

"NUMBEROFCPU|2",

"HARDDISKSIZEGB|747.55",

"CPUVENDOR|GenuineIntel",

"CPUCOREPERSOCKET|2",

"CPUSPEEDMHZ|2297",

"CPUTHREADPERCORE|4",

"COREPERSOCKET|2",

"NUMBEROFCPUSOCKET|8",

"NUMBEROFHDD|1",

"UUID|48B74D56-065F-B7C6-522F-0DF4CDD1E3AA",

"BIOSMANUFACTURER|Phoenix Technologies LTD",

"BIOSPRODUCTNAME|PhoenixBIOS 4.0 Release 6.0 ",

"BIOSRELEASEDATE|05-30-2016",

"BIOSVERSION|6.00",

"HYPERVISOR|Disabled"

]

}

Server with No: Hyper-V

{

"DESCRIPTOR":"OS\_HW\_DISCOVERY",

"IPADDRESS":"10.144.100.222",

"VALUES":[

"DEVICETYPE|Virtual Machine",

"ADDITIONALIP|",

"SUBNETMASK|255.255.255.0",

"SUBNET|10.144.100.222/24",

"MACADDRESS|00:50:56:A6:A9:93 ",

"HOSTNAME|JMNGD1BWN110V22",

"SERIALNUMBER|VMware-56 4d b7 48 5f 06 c6 b7-52 2f 0d f4 cd d1 e3 aa",

"OPERATINGSYSTEM|Microsoft Windows Server 2012 R2 Standard",

"OSSHORTNAME|WINDOWS",

"OSVERSION|2012 R2 Standard",

"MAKE|Windows User",

"MODEL|VMware Virtual Platform",

"RAM|3",

"NUMBEROFCPU|2",

"HARDDISKSIZEGB|747.55",

"CPUVENDOR|GenuineIntel",

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"COREPERSOCKET|2",

"NUMBEROFCPUSOCKET|8",

"NUMBEROFHDD|1",

"UUID|48B74D56-065F-B7C6-522F-0DF4CDD1E3AA",

"BIOSMANUFACTURER|Phoenix Technologies LTD",

"BIOSPRODUCTNAME|PhoenixBIOS 4.0 Release 6.0 ",

"BIOSRELEASEDATE|05-30-2016",

"BIOSVERSION|6.00",

"HYPERVISOR|Enabled",

“HYPERV\_VMHOST:”Hostname1|Enabled,Hostname2|Disbled,Hostname3|Enabled”

]

}

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