Intel® Setup and Configuration Software (Intel® SCS)

Discovery Utility

Version 11.1

Document Release Date: December 22, 2016

License

Intel® Setup and Configuration Software (Intel® SCS) is furnished under license and may only be used or copied in accordance with the terms of that license. For more information, refer to the "Exhibit A" section of the "Intel(R) SCS License Agreement.rtf", located in the Licenses folder.

Legal Information

No license (express or implied, by estoppel or otherwise) to any intellectual property rights is granted by this document.

Intel disclaims all express and implied warranties, including without limitation, the implied warranties of merchantability, fitness for a particular purpose, and non-infringement, as well as any warranty arising from course of performance, course of dealing, or usage in trade.

The products described may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Intel technologies may require enabled hardware, specific software, or services activation. Check with your system manufacturer or retailer.

Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration.

No computer system can be absolutely secure. Intel does not assume any liability for lost or stolen data or systems or any damages resulting from such losses.

Intel® AMT should be used by a knowledgeable IT administrator and requires enabled systems, software, activation, and connection to a corporate network. Intel AMT functionality on mobile systems may be limited in some situations. Your results will depend on your specific implementation.
Learn more by visiting Intel® Active Management Technology.

Intel® vPro™ Technology requires setup and activation by a knowledgeable IT administrator. Availability of features and results will depend upon the setup and configuration of your hardware, software and IT environment. Learn more at: http://www.intel.com/technology/vpro.

KVM Remote Control (Keyboard, Video, Mouse) is only available with Intel® Core™ i5 vPro™ and Core™ i7 vPro™ processors with integrated graphics and Intel® Active Management technology activated. Discrete graphics are not supported.

Intel, Intel vPro, and the Intel logo, are trademarks of Intel Corporation in the U.S. and/or other countries.

Microsoft, Windows, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the U.S. and/or other countries.

* Other names and brands may be claimed as the property of others.

© 2016 Intel Corporation

Table of Contents

1 Introduction

This document describes how to use the Discovery Utility.

> 📝 **Note:**
>
> - The Discovery Utility is a component of Intel® Setup and Configuration Software (Intel® SCS). The Configurator component of Intel SCS also includes a `SystemDiscovery` command. The `SystemDiscovery` command includes an option to send the discovery data to the Remote Configuration Service and save it in the database. This option is not available in the Discovery utility. For information about the other components and features of Intel SCS refer to the `Intel(R)_SCS_User_Guide.pdf`.
> - The Configurator and the Discovery Utility return exactly the same data. This document includes descriptions of that data (see Discovery Data Format on page 5).

2 What is the Discovery Utility?

The Discovery Utility is a standalone executable (`SCSDiscovery.exe`) that you can use to get detailed data about Intel AMT. The data is saved in an XML file and/or in the registry of the system. The data can then be collected using third-party hardware and software inventory applications.

The data is saved in the registry of each system at:

- 32-bit and 64-bit operating systems: `HKLM\SOFTWARE\Intel\Setup and Configuration Software\SystemDiscovery`

- In addition, on 64-bit operating systems: `HKLM\SOFTWARE\Wow6432Node\Intel\Setup and Configuration Software\SystemDiscovery`

For information about the data format, see Discovery Data Format on page 5.

For information about how to collect this data from the systems, refer to the documentation of your hardware/software inventory application.

> 📝 **Note:**
>
> - Data is collected from all systems, even systems without Intel AMT. Intel SCS tries to get the data about Intel AMT using the Intel® Manageability Engine Interface (Intel® MEI) driver. If the Intel MEI driver is not installed and enabled, the data about Intel AMT is taken from the BIOS. If the manufacturer has not installed the correct BIOS in the platform, this can cause incorrect values in the data collected about Intel AMT.
> - Some of the data collected during discovery can also be viewed in the Intel® Management Engine BIOS Extension (Intel® MEBX).

3 Using the Discovery Utility

You can run the Discovery Utility (`SCSDiscovery.exe`) manually from a command line prompt. For a larger number of systems, you can include the Discovery Utility in a deployment package and send it to all the systems in your network.

3.1 Required Permissions

The local user account running the Discovery Utility must have administrator permissions on the system. On operating systems with User Account Control (UAC), the Discovery Utility must be "Run as administrator".

3.2 Syntax Conventions

The Discovery Utility CLI is not case-sensitive.

To view the syntax help, type `SCSDiscovery /?` and press <Enter>.

These conventions are used in the command syntax help:

- Optional parameters are enclosed in square brackets [ ]
- User defined variables are enclosed in angled brackets < >
- Mutually exclusive parameters are separated with a pipe |
- Where necessary, braces { } are used to group elements together to eliminate ambiguity in the syntax

3.3 Log Files

The Discovery Utility records errors and other log messages in two locations:

- In the Windows Event Viewer Application log of the Intel AMT system.
- In a log file. By default:
  - A new log file is created each time you run the Discovery Utility. You can use the `/KeepLogFile` global option to change this default.
  - The log file is saved in the folder where the Discovery Utility is located, and has this format:

    `SCSDiscoverylog_HostName_YYYY-MM-DD-HH-MI-SS.Log`

    For example: `SCSDiscoverylog_ComputerX_2013-12-21-11-05-57.log`.

    You can use the `/Output File` global option to change the default name and location of the log file.

> 📝 **Note:**
>
> The log file is NOT the XML output file. You can change the default name and location of the XML file using the `<filename>` parameter (see Syntax and Parameters on the next page).

3.4 Global Options

You can use any of these global options with the Discovery Utility:

- `/Verbose` – Creates a detailed log

- `/KeepLogFile` – Appends the current log to the existing log file

- `/Output {Console | File <logfile> | Silent}` – Defines where errors and other log messages will be recorded:

    - `Console` – Shows log messages only on the Console screen

    - `File <logfile>` – Lets you change the default name and location of the log file. Supply the full path and name for the log file in the `<logfile>` parameter.

    - `Silent` – Do not record any log messages (Console or log file)

> 📝 **Note**
>
> To save log messages to a file and also display them on the Console screen, use the `/Output` parameter twice. For example: `/Output File <logfile> /Output Console`.

3.5 Syntax and Parameters

Syntax	`SCSDiscovery.exe [global options] SystemDiscovery {[<filename>]|[/NoFile]}[/NoRegistry] [/AdminPassword <password>] [/SourceForAMTName <source>] [/NetworkSettingsFile <file>]`
Parameters	
`[global options]`	See Global Options above
`<filename>`	By default, the name of the XML file is the FQDN of the system and it is saved in the same folder as the Discovery Utility. You can change this default name and location by supplying the `<filename>` parameter. **Example:** `SCSDiscovery.exe SystemDiscovery C:\MyXMLFile.xml` This example creates an XML file named `MyXMLFile` in the root of C. In addition, a log file is created (see Log Files on the previous page).
`/NoFile`	Do not save data in an XML file. If you use this parameter, do not use the `<filename>` parameter.
`/NoRegistry`	Do not save data in the registry of the system

`/AdminPassword` `<password>`	The current password of the default Digest admin user defined in the Intel AMT device. The `SystemDiscovery` command gets some of the data about Intel AMT using the WS-Man interface. To use this interface, administrator permissions in Intel AMT are necessary. Without administrator permissions, this data cannot be retrieved and a warning message will be recorded in the log. This parameter is NOT necessary if one of these are true: • The device is in an unconfigured state • The user account running the Discovery Utility is a Kerberos account that is configured in the Intel AMT device with administrator permissions
`/SourceForAMTName` `<source>`	Defines how the FQDN (hostname.suffix) for the Intel AMT device is constructed. Valid values: • `DNS` — The hostname part of the FQDN is the hostname from the host operating system. The suffix is the "Primary DNS Suffix" from the host operating system. This is the default setting, and is correct for most network environments. • `SpecificDNS` — The hostname part of the FQDN is the hostname from the host operating system. The suffix is the "Connection-specific DNS Suffix" of the on-board wired LAN interface. • `AD` — The hostname part of the FQDN is the hostname from the host operating system. The suffix is the AD domain of which the host operating system is a member. • `DNSLOOKUP` — Takes the FQDN returned by an "nslookup" on the IP address of the on-board wired LAN interface. To use this option, the DNS must be configured correctly with Reverse Lookup Zones. • `HOST` — Takes the hostname from the host operating system. The suffix is blank. **Note:** When this parameter is not supplied, the default source for the FQDN is "DNS". But if the `/NetworkSettingsFile` parameter is supplied (and FQDN data is included in the file), the FQDN is taken from the file.
`/NetworkSettingsFile` `<file>`	This parameter tells Intel SCS to get the IP and/or the FQDN from a dedicated network settings file. For information about the required XML format, see the `NetworkSettings.xml` example file located in the `sample_files` folder.

4 Discovery Data Format

The names of the XML elements and the registry keys are identical. If some data cannot be retrieved, the elements/keys for that specific data are not saved in the XML file or the registry.

The data is stored in a hierarchical format.

4.1 Data Hierarchy

The Intel AMT discovery data is stored in a hierarchy, divided into groups of data. In the registry, this hierarchy is in alphabetical order, as shown in this table. In the XML file, these groups and elements are created in a logical order.

1	**AntiTheftInfo**				Table 1 on the next page
2	**ConfigurationInfo**				Table 2 on page 7
		ADIntegration			Table 3 on page 7
		AMTNetworkSettings			Table 4 on page 8
			AMTWiredNetworkAdapter		Table 5 on page 8
				IPv4IPSettings	Table 6 on page 9
			AMTWirelessNetworkAdapter		Table 7 on page 9
				IPv4IPSettings	Table 8 on page 10
		Certificates			Table 9 on page 10
			Certificate		Table 10 on page 10
				CertificateRequestProperties	Table 11 on page 11
					CNs	Table 12 on page 11
		EnabledInterfaces			Table 13 on page 12
		KVMOptions			Table 14 on page 12
		RootCertificates			Table 15 on page 12
			Certificate		
		TLS Settings			Table 16 on page 13
			CRLs		
				CRL	Table 17 on page 13

			SerialNumbers	Table 18 on page 14
3	**GeneralInfo**			Table 19 on page 15
4	**ManageabilityInfo**			Table 20 on page 16
		Capabilities		Table 21 on page 16
			SupportedCertificatesKeyLengths	Table 22 on page 17
		ManagementSettings		Table 23 on page 18
5	**NetworkInfo**			
		OSNetwork		Table 24 on page 20
			OSWired	Table 25 on page 21
6	**OSInfo**			Table 26 on page 22
7	**SBAServiceInfo**			SBAServiceInfo

4.2 Intel Anti-Theft Data (AntiTheftInfo)

The `AntiTheftInfo` section includes data that is related to Intel® Anti-Theft Technology (Intel® AT).

For more information, see: http://www.intel.com/go/imss-antitheft.

Table 1: AntiTheftInfo

Key/Element	Key Type	Max Size	Description
IsATEnabledInBIOS	Binary	1	True if Intel Anti-Theft Technology is enabled in the BIOS
IsS3ResumeAllowed	Binary	1	Returns the setting of the hardware-based S3 timer, included in Intel AT: • **True** — The timer is enabled. When the platform transitions from S3 sleep state to S0, the Intel ME starts a (configurable) countdown timer. If the user does not login to the system successfully before the timer expires, the system is forced into the S4 sleep state (hibernate). • **False** — The timer is not enabled. System behavior is not altered when it transitions from the S3 sleep state to S0.

4.3 Configuration Data (ConfigurationInfo)

The `ConfigurationInfo` section includes data about the configuration settings that are configured in the Intel AMT device.

Table 2: ConfigurationInfo

Registry Key/XML Element	Key Type	Max Size	Description
ADOU	String	256	The Active Directory Organizational Unit (ADOU) where the AD object representing the Intel AMT device is stored
AMTClock	String	32	The current time of the clock in the Intel AMT device
IsAMTClockSyncEnabled	Binary	1	True if the Intel AMT clock is set to automatically synchronize with the operating system clock. **Note:** This Registry Key/XML Element is only relevant for Intel AMT 9.0 and higher.
LastConfigurationTime	String	32	The last time that Intel AMT was configured
LastRenewAdminPassword	String	32	The last time that the password of the default Digest admin user was configured in the Intel AMT device
LastRenewADPassword	String	32	The last time that the password was configured in the Active Directory object representing the Intel AMT system
LastSyncClock	String	32	The last time that the clock of the Intel AMT device was synchronized
SCSProfile	String	32	The name of the configuration profile in RCS. This Registry Key/XML Element is always shown but will only contain a value if the profile used to configure the system was exported from the RCS.

Table 3: ConfigurationInfo > ADIntegration

Registry Key/XML Element	Key Type	Max Size	Description
EnableADIntegration	Binary	1	True if Intel AMT was configured to use the security features of Active Directory
RealmName	String	256	The Kerberos Realm Name defined in the device. This is the Domain where the Active Directory object representing the Intel AMT system is located.

Table 4: ConfigurationInfo > AMTNetworkSettings

Registry Key/XML Element	Key Type	Max Size	Description
AMTDomainName	String	192	The value of the Domain Name field in the Intel MEBX
AMTFQDN	String	256	The FQDN of the Intel AMT device is stored in two separate fields in the Intel MEBX: Domain Name and Host Name. These values are then joined to create the FQDN for the device.
AMTHostName	String	64	The value of the Host Name field in the Intel MEBX
DHCPOption81Enabled	Binary	1	True if Intel AMT can use the DHCP option 81 to request that the DHCP server update the DNS on its behalf
DynamicDNSUpdate	Binary	1	True if the Intel AMT Dynamic DNS Update (DDNS Update) Client is enabled. This client is available only on Intel AMT 6.0 and higher. When enabled, this client can periodically update the DNS with the FQDN and IP address configured in the Intel AMT device. Intel AMT will send DDNS Updates based on the policy configured in the DHCP server returned in the DHCP option 81 flags.
IPSyncEnabled	Binary	1	True if IP synchronization between the host and the Intel AMT device is enabled
SharedFQDN	Binary	1	True if the Shared FQDN feature is enabled (Intel AMT 6.x and higher). This setting can change the behavior of the Intel AMT device when using option 81 of the DHCP server to update DNS. When this setting is true, the Intel AMT device will send broadcast queries only when the operating system is not running. This is the default behavior of all Intel AMT versions that do not support the Shared FQDN setting. When false, the device will always send its own broadcast queries, even when the operating system is running.
SharedStaticIP	Binary	1	True if the Intel AMT device is using the static IP settings of the host operating system

Table 5: ConfigurationInfo > AMTNetworkSettings > AMTWiredNetworkAdapter

Registry Key/XML Element	Key Type	Max Size	Description
DHCPEnabled	Binary	1	True if DHCP is enabled for the IPv4 address of the wired LAN interface in the Intel AMT device
IsLinkStatusUp	Binary	1	True if the link status of the wired LAN interface in the Intel AMT device is "Up" (false if "Down")

Registry Key/XML Element	Key Type	Max Size	Description
LinkPolicy	Binary	1	The link policy of the wired LAN interface. Possible values: • On S0 in AC • On Sx in AC
MACAddress	String	32	The MAC address of the wired LAN interface in the Intel AMT device

Table 6: ConfigurationInfo > AMTNetworkSettings > AMTWiredNetworkAdapter > IPv4IPSettings

Registry Key/XML Element	Key Type	Max Size	Description
DNS	String	16	The IPv4 address of the Domain Names Server
Gateway	String	16	The IPv4 address of the gateway
IP	String	16	The IPv4 address of the wired LAN interface in the Intel AMT device. **Note:** • A value of "0.0.0.0" means that Intel AMT has not updated the IP address from the DHCP server. • In Intel AMT versions from 2.x to 3.x, access tothis data is blocked if the Local Manageability Service (LMS) is running. If the LMS is stopped before running a Discovery operation, this data can be collected. The LMS can be stopped and started using Microsoft CLI commands. These commands can be included in a script/batch file sent in the deployment package (and run with local administrator permissions on the computer system). For example: 1. Stop the LMS using this command: `SC Stop LMS`. 2. Run the Discovery command again. 3. Start the LMS using this command: `SC Start LMS`.
SecondaryDNS	String	16	The IPv4 address of the secondary Domain Names Server
Subnet	String	16	The subnet mask

Table 7: ConfigurationInfo > AMTNetworkSettings > AMTWirelessNetworkAdapter

Registry Key/XML Element	Key Type	Max Size	Description
IsLinkStatusUp	Binary	1	True if the link status of the wireless LAN interface in the Intel AMT device is "Up" (false if "Down")

Registry Key/XML Element	Key Type	Max Size	Description
LinkPolicy	Binary	1	The link policy of the wireless LAN interface. Possible values: • On S0 in AC • On Sx in AC
MACAddress	String	32	The MAC address of the wireless LAN interface in the Intel AMT device

Table 8: ConfigurationInfo > AMTNetworkSettings > AMTWirelessNetworkAdapter > IPv4IPSettings

Registry Key/XML Element	Key Type	Max Size	Description
DNS	String	16	The IPv4 address of the Domain Names Server
Gateway	String	16	The IPv4 address of the gateway
IP	String	16	The IPv4 address of the wireless LAN interface in the Intel AMT device. **Note:** A value of "0.0.0.0" means that Intel AMT has not updated the IP address from the DHCP server.
SecondaryDNS	String	16	The IPv4 address of the secondary Domain Names Server
Subnet	String	16	The subnet mask

Table 9: ConfigurationInfo > Certificates

Registry Key/XML Element	Key Type	Max Size	Description
NextCertExpiryDate	String	32	The nearest date on which a certificate in the Intel AMT device will expire. If the device does not contain any certificates, this key will exist with a value of zero (the XML element will be empty).

Table 10: ConfigurationInfo > Certificates > Certificate

Registry Key/XML Element	Key Type	Max Size	Description
A Certificate entry will exist for each Certificate. In the registry, if multiple Certificates exist, a numerical suffix is added to each element. For example: • Certificate_1 • Certificate_2			
CertificateExpirationDate	String	32	The expiry date of the certificate
CertificateHandle	Dword	N/A	The handle of the certificate
CertificateId	Dword	N/A	The ID number of the certificate

Registry Key/XML Element	Key Type	Max Size	Description
CertificateUsage	String	64	The functionality that the certificate supports
CertificateValidFromDate	String	32	The date from which the certificate is valid

Table 11: ConfigurationInfo > Certificates > Certificate > CertificateRequestProperties

Registry Key/XML Element	Key Type	Max Size	Description
CertificateBase64	String	65535	The certificate (without the private key) in base64 format
CertificateHash	String	64	The certificate hash
CertificateIssuer	String	256	The issuer of the certificate
CertificateSubject	String	256	The Common Name value defined in the Subject Name field of the certificate
CertificateTemplate	String	256	The name of the certificate template
CertificateTemplateMajorVersion	Dword	N/A	The major version number of the template
CertificateTemplateMinorVersion	Dword	N/A	The minor version number of the template
CertificateTemplateOID	String	256	The value defined in the Object Identifier (OID) field of the certificate
CertificationAuthorityAddress	String	256	The address of the Certification Authority
CertificationAuthorityTarget	String	256	The full name of the Certification Authority
CertificationAuthorityType	String	32	The type of the Certification Authority. Possible values: • 0 — Enterprise • 1 — Standalone

Table 12: ConfigurationInfo > Certificates > Certificate > CertificateRequestProperties > CNs

Registry Key/XML Element	Key Type	Max Size	Description
CN	String	256	The Common Names defined in the certificate. A CN entry will exist for each Common Name defined in the certificate. In the registry, if multiple CNs exist, a numerical suffix is added to each element. For example: • CN_1 • CN_2

Table 13: ConfigurationInfo > EnabledInterfaces

Registry Key/XML Element	Key Type	Max Size	Description
EnableIDER	Binary	1	True if the IDE Redirection (IDE-R) interface is enabled in Intel AMT
EnablePingResponse	Binary	1	True if the Intel AMT device is set to respond to a ping if the host platform does not respond
EnableSOL	Binary	1	True if the Serial over LAN (SOL) interface is enabled in Intel AMT
EnableWebUI	Binary	1	True if the WebUI interface is enabled in Intel AMT

Table 14: ConfigurationInfo > KVMOptions

Registry Key/XML Element	Key Type	Max Size	Description
EnableKVM	Binary	1	True if the Keyboard Video Mouse (KVM) redirection interface is enabled in Intel AMT
EnableUserConsent	Binary	1	True if the user of the Intel AMT system must consent to KVM connection requests to his computer (User Consent)
UserConsentTimeout	Dword	N/A	The maximum time (in seconds) allocated for the user consent process. If the user consent process is not completed in this time, a new KVM connection request must be sent.

Table 15: ConfigurationInfo > RootCertificates > Certificate

Registry Key/XML Element	Key Type	Max Size	Description
CertificateBase64	String	65535	The certificate (without the private key) in base64 format
CertificateExpirationDate	String	32	The expiry date of the certificate
CertificateHandle	Dword	N/A	The handle of the certificate
CertificateHash	String	64	The certificate hash
CertificateId	Dword	N/A	The ID number of the certificate
CertificateIssuer	String	256	The issuer of the certificate
CertificateSubject	String	256	The Common Name value defined in the Subject Name field of the certificate
CertificateValidFromDate	String	32	The date from which the certificate is valid
CertificationAuthorityAddress	String	256	The address of the Certification Authority
CertificationAuthorityTarget	String	256	The full name of the Certification Authority

Table 16: ConfigurationInfo > TLSSettings

Registry Key/XML Element	Key Type	Max Size	Description
LocalTLSAuthentication	String	32	The type of authentication defined for local communication with the Intel AMT device using Transport Layer Security. Possible values: • No Authentication • Server Authentication
NetworkTLSAuthentication	String	32	The type of authentication defined for remote communication with the Intel AMT device using Transport Layer Security. Possible values: • No Authentication • Server Authentication • Mutual Authentication
TLSServerCertificateHandle	Dword	N/A	The handle ID of the certificate in Intel AMT
TrustedFqdnSuffix	String	256	The FQDN of a trusted domain. The Intel AMT device will validate that any client certificates presented to it include one of these suffixes in the certificate subject. A TrustedFqdnSuffix entry will exist for each trusted domain. In the registry, if multiple trusted domains exist, a numerical suffix is added to each element. For example: • TrustedFqdnSuffix_1 • TrustedFqdnSuffix_2 If no FQDN suffixes are defined, the Intel AMT system will not validate client certificate subject names.

Table 17: ConfigurationInfo > TLSSettings > CRLs> CRL

Registry Key/XML Element	Key Type	Max Size	Description
Optionally, when using mutual TLS, you can define a Certificate Revocation List (CRL) of revoked certificates. A CRL entry will exist for each Certification Authority for which a CRL was defined. In the registry, if multiple CRLs exist, a numerical suffix is added to each element. For example: • CRL_1 • CRL_2			
CRLUri	String	256	The URI of the CRL

Table 18: ConfigurationInfo > TLSSettings > CRLs> CRL > SerialNumbers

Registry Key/XML Element	Key Type	Max Size	Description
SerialNumber	String	256	The serial number of a revoked certificate. A SerialNumber entry will exist for each revoked certificate. In the registry, if multiple SerialNumbers exist, a numerical suffix is added to each element. For example: • SerialNumber_1 • SerialNumber_2

4.4 General Data (GeneralInfo)

The `GeneralInfo` section includes other general data about the system.

Table 19: GeneralInfo

Registry Key/XML Element	Key Type	Max Size	Description
BIOSVersion	String	32	The BIOS version of the host platform
Chassis	String	256	The type of chassis (for example: mobile \ desktop \ tower)
LastTimeUpdated	String	32	The date and time when the Discovery operation was last run. Format: YYYY-MM-DD HH:MM:SS Example: 2013-12-21 11:10:14 **Note:** Each time that the Discovery operation runs, existing data in the `SystemDiscovery` registry key is deleted. Existing XML files with the same name are overwritten.
MachineSerialNumber	String	256	The serial number of the system
Manufacturer	String	256	The manufacturer of the system
MEPlatformSKUs	String	64	The type (SKU) of Intel Manageability Engine: - Consumer | Corporate - Desktop | Mobile - Work Station | Server | Super SKU This key/element is a string of three values, each separated by a semi-colon (;) and a space. **Example:** Consumer; Desktop; Mobile
Model	String	256	The model of the system
SCSVersion	String	32	The version number of the Intel SCS component that did the last discovery operation
SMBIOSAssetTagData	String	256	Asset Tag Data (entered by the manufacturer)
SystemDataVersion	String	32	The version number of the data format used to store the discovery data
UUID	String	64	The Universally Unique Identifier (UUID) of the system

4.5 Manageability Data (ManageabilityInfo)

The `ManageabilityInfo` section includes data that is related to Intel AMT, and includes two subsections:

- `Capabilities` — Each version of Intel AMT has different capabilities. The data in this subsection includes settings that show the capabilities available on the system.

- `ManagementSettings` — The data in this subsection includes management settings of Intel AMT. Configuration of Intel AMT by Intel SCS causes the value of some of these settings to change. Some of the settings can also be changed directly in the Intel MEBX.

Table 20: ManageabilityInfo

Registry Key/XML Element	Key Type	Max Size	Description
AMTSKU	String	32	The Stock Keeping Unit (SKU): • Full AMT Manageability • Standard Manageability
AMTSKUNumber	String	32	An number representing the SKU (for internal use only)
AMTversion	String	32	The Intel AMT version
FWVersion	String	32	The version of Firmware in the Intel AMT device
PingConfigurationServer	Binary	1	True if a ping was successfully sent to the configuration server defined in the Intel MEBX

Table 21: ManageabilityInfo > Capabilities

Registry Key/XML Element	Key Type	Max Size	Description
CertificateChainMaxSize	Dword	N/A	The maximum size (in bytes) supported for the entire certificate chain
CRLStoreSize	Dword	N/A	The current size (in bytes) of the Certificate Revocation List store
FQDNSuffixMaxEntries	Dword	N/A	The maximum number of Home Domains
FQDNSuffixMaxLength	Dword	N/A	The maximum length for a Home Domain FQDN
IsAMTEnabledInBIOS	Binary	1	True if Intel AMT is enabled in the Intel MEBX
IsAMTKVMSupported	Binary	1	True if the KVM redirection interface is supported in the Intel AMT firmware
IsAMTSupported	Binary	1	True if Intel AMT is supported

Registry Key/XML Element	Key Type	Max Size	Description
IsAntiTheftSupported	Binary	1	True if the Intel® Anti-Theft feature is supported
IsCCMSupported	Binary	1	True if the system supports Client Control Mode. **Note:** This value will also be false on Intel AMT 6.2 and higher devices if Client Control Mode has been disabled.
IsCILASupported	Binary	1	True if the Client Initiated Local Access (CILA) feature is supported. CILA enables a user connected to the internal corporate network to send a support request to the IT administrator.
IsHBPSupported	Binary	1	True if the system supports host-based configuration. **Note:** The value of this element might also be False if the Configurator could not determine if the device supports host-based configuration. This can occur if the Local Manageability Service (LMS) is not running.
IsIDEREnabledInBIOS	Binary	1	True if IDE-R is enabled in the Intel MEBX
IsIDERSupportedInBIOS	Binary	1	True if the BIOS of the platform supports IDE Redirection
IsKVMEnabledInBIOS	Binary	1	True if KVM redirection is enabled in the Intel MEBX
IsKVMSupportedInBIOS	Binary	1	True if the BIOS of the platform supports KVM redirection
IsSOLEnabledInBIOS	Binary	1	True if SOL redirection is enabled in the Intel MEBX
IsSOLSupportedInBIOS	Binary	1	True if the BIOS of the platform supports SOL redirection
IsTLSSupported	Binary	1	True if TLS is supported on the platform
IsWirelessLANSupported	Binary	1	True if Wireless LAN is supported on the platform
RootCertificatesMaxInstances	Dword	N/A	The maximum number of Root Certificates
RootCertificatesMaxSize	Dword	N/A	The maximum size of a Root Certificate
WiredLANExists	Binary	1	True if an on-board Wired LAN exists on the platform

Table 22: ManageabilityInfo > Capabilities> SupportedCertificatesKeyLengths

Registry Key/XML Element	Key Type	Max Size	Description
SupportedCertificateKeyLength	Dword	N/A	The maximum supported length of the private key in a certificate. An entry will exist for each supported key length. In the registry, if multiple entries exist, a numerical suffix is added to each element. For example: • SupportedCertificateKeyLength_1 • SupportedCertificateKeyLength_2

Table 23: ManageabilityInfo > ManagementSettings

Registry Key/XML Element	Key Type	Max Size	Description
AMTConfigurationMode	String	32	The current configuration mode of the Intel AMT device: • SMB Mode • Enterprise Mode • None
AMTConfigurationState	String	32	The TLS-PSK option that will be used during the next remote configuration of the Intel AMT device: • PKI – At least one of the Root Certificate Hashes embedded in the Intel AMT firmware that can be used for Remote Configuration (PKI) is defined as "active" • PSK – A Pre-Shared Key (PSK) has been put in the Intel AMT device • Not Ready – The system is not ready for remote configuration
AMTControlMode	String	64	The current Control Mode of the Intel AMT device: • Client Control Mode • Admin Control Mode • None
AMTDigestRealm	String	64	The realm value generated by the Intel AMT device when an application attempts to connect to the device. This value is system-specific and is included in the digest challenge message that Intel AMT returns to the application.
AMTPKIDNSSuffix	String	256	A predefined value for the PKI DNS Suffix, set in the Firmware. The value is compared to the Common Name (CN) field in the Certificate Subject of the remote configuration certificate as part of the authentication process.
AMTState	String	64	The current state of the Intel AMT device: • Post Provisioning – Intel AMT is configured • In Provisioning – The interfaces are open and Intel AMT is ready for configuration to start • Pre Provisioning – Intel AMT is not configured and the interfaces are closed

Registry Key/XML Element	Key Type	Max Size	Description
CertificateHashes	String	2048	The thumbprints of the Root Certificate Hashes embedded in the Intel AMT firmware that can be used for Remote Configuration (PKI). This key/element is a string of thumbprints, each separated by a semi-colon (;). Each of the thumbprint values is separated by a space. **Format:** CA Name, hash in hexadecimal (base16) format, enabled|disabled{, default}; **Example:** VeriSign Class 3 Primary CA-G1, 742c3192e607e424eb4549542be1bbc53e6174e2, Enabled, Default; **Note:** If the hash is not defined as default, the "default" value is not included.
ConfigurationServerFQDN	String	256	This value is taken from the Intel AMT audit log. It contains the FQDN of the RCS that moved the system from the unconfigured state (PRE) to the configured state (POST). This value will only exist if the computer was configured remotely using PKI.
ConfigurationServerIP	String	46	The IP of the RCS that moved the system from the unconfigured state (PRE) to the configured state (POST). This value will only exist if the computer was configured remotely using PKI or PSK.
EmbeddedHBCEnabled	Binary	1	True if the system supports the Embedded Host Based Configuration (EHBC) option. The EHBC option is only available on Intel AMT systems that were prepared by the manufacturer/supplier to include the EHBC option. For more information about the EHBC option, contact your computer manufacturer or supplier.
IsAMTConfigured	Binary	1	True if Intel AMT is configured
IsAMTEACEnabled	Binary	1	True if End-Point Access Control (EAC) is enabled in Intel AMT
IsAMTFWUpdateEnabled	Binary	1	True if the Intel AMT Firmware can be updated remotely
IsHWCryptoEnabled	Binary	1	True if the system supports hardware cryptography. If this value is false, the system also does not support Transport Layer Security.
IsMoveToInProvisionPossible	Binary	1	True if the system supports Intel AMT, but Intel AMT is not configured
IsNetworkInterfaceEnabled	Binary	1	True if the network interface of the Intel AMT device is enabled
IsTLSEnabled	Binary	1	True if Transport Layer Security (TLS) is enabled in Intel AMT

Registry Key/XML Element	Key Type	Max Size	Description
IsZTCEnabled	Binary	1	True if remote configuration (PKI) is enabled in the Intel MEBX. Remote configuration is also known as Zero Touch Configuration (ZTC).
PskPID	String	16	The Provisioning ID (PID) of the TLS-PSK pair that was installed in the Intel MEBX

4.6 Network Data (NetworkInfo)

The `NetworkInfo` section includes data is related to the network configuration of the host system.

This example output shows how some of that data is shown by the `ipconfig /all` command when run on the system:

```
>ipconfig /all

Windows IP Configuration

    Host Name . . . . . . . . . . . . : IntelAMT-7      -> OSDNSHostName
    Primary Dns Suffix. . . . . . . : example.com     -> OSPrimaryDNSSuffix
    Node Type . . . . . . . . . . . . : Hybrid
    IP Routing Enabled . . . . . . : No
    WINS Proxy Enabled . . . . . . : No
    DNS Suffix Search List . . . . : example.com
                                      Vprodemo.com

Ethernet adapter Local Area Connection 2:  (The onboard wired LAN interface)

    Connection-specific DNS Suffix . . . : vprodemo.com    -> OSSpecificDNSSuffix
    Description . . . . . . . . . . . . . : Intel(R) 82578DM Gigabit Network Connection
    Physical Address . . . . . . . . . . : 88-88-88-88-87-88
    Dhcp Enabled . . . . . . . . . . . . : Yes              -> OSDHCPEnabled
    Autoconfiguration enabled . . . . . . : Yes
    IP Address . . . . . . . . . . . . . : 192.168.1.11     -> OSIP
    Subnet Mask . . . . . . . . . . . . . : 255.255.255.0   -> OSSubnet
    Default Gateway . . . . . . . . . . . : 192.168.1.1      -> OSGateway
    DHCP Server . . . . . . . . . . . . . : 192.168.1.8      -> OSDHCP
    DNS Servers . . . . . . . . . . . . . : 192.168.1.8      -> OSDNS
    Primary WINS Server. . . . . . . . . : 192.168.1.8
```

Table 24: NetworkInfo > OS Network

Registry Key/XML Element	Key Type	Max Size	Description
OSDNSHostName	String	64	The hostname of the computer used by the Domain Name System (DNS)
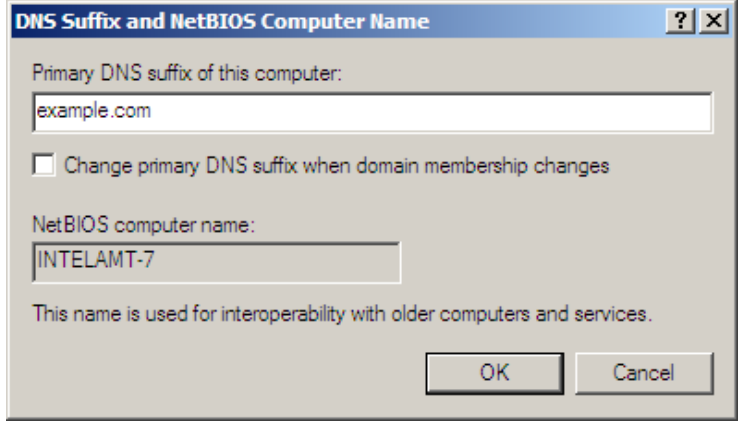
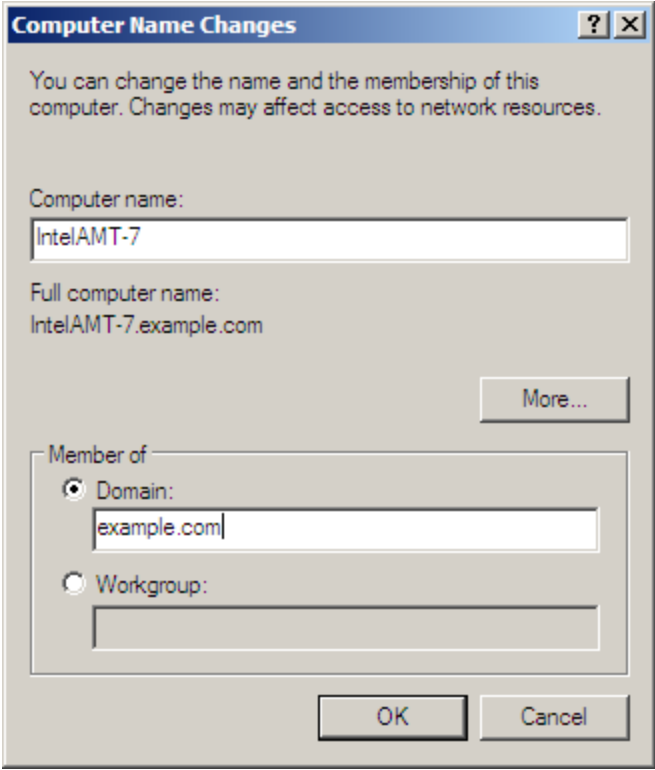| Registry Key/XML Element	Key Type	Max Size	Description
OSPrimaryDNSSuffix	String	56	The Primary DNS Suffix defined in the host operating system

Table 25: NetworkInfo > OS Network > OSWired

Registry Key/XML Element	Key Type	Max Size	Description
OSDHCP	String	16	The IP address of the DHCP Server for the onboard wired LAN interface
OSDHCPEnabled	Binary	1	True if DHCP is enabled for the onboard wired LAN interface
OSDNS	String	256	The IP addresses of the Domain Name Servers for the onboard wired LAN interface
OSDNSLookupName	String	256	Contains the FQDN returned by an "nslookup" on the IP address of the onboard wired LAN interface. If the DNS is not configured correctly with Reverse Lookup Zones, the "nslookup" will fail and this key/element will be empty.
OSGateway	String	256	The IP address of the gateway of the onboard wired LAN interface
OSIP	String	16	The IP address of the onboard wired LAN interface
OSSpecificDNSSuffix	String	256	The "Connection-specific DNS Suffix" of the onboard wired LAN interface
OSSubnet	String	16	The Subnet Mask of the onboard wired LAN interface

4.7 Operating System Data (OSInfo)

The `OSInfo` section includes data that is related to the host operating system.

Table 26: OSInfo

Registry Key/XML Element	Key Type	Max Size	Description
IsMEIEnabled	Binary	1	True if the Intel® MEI driver is installed and working
LMSVersion	String	32	The version of the Local Manageability Service (LMS) installed on the system (as recorded in the registry). The LMS is a service that runs locally in an Intel AMT device and enables local applications to send requests and receive responses to and from the device. The LMS listens for and intercepts requests directed to the Intel AMT local host and routes them to the Management Engine via the Intel Management Engine Interface driver.
MEIVersion	String	32	The version of the Intel® MEI driver. This driver is also known as the HECI driver.
OperatingSystem	String	256	The operating system
OSDomainName	String	256	The domain defined in the host operating system (usually the "Domain" field in the System Properties > Computer Name tab)

Registry Key/XML Element	Key Type	Max Size	Description
OSHostName	String	64	The hostname defined in the operating system (usually in the "Computer name" field in the System Properties > Computer Name tab). In most conditions, this value is the same as OSDNSHostname.
UNSVersion	String	32	The version of the User Notification Service (UNS) installed on the system (as recorded in the registry). The UNS is a service that periodically requests the NAC/NAP posture from the Intel AMT device and saves it in the registry. **Note:** This key/element is only relevant for Intel AMT 8.x and lower. On Intel AMT 9.0 and higher, the UNS is part of the Local Manageability Service (LMS).