

Troubleshooting IPMI connection problems in ITO

IT Optimize (ITO) is using Intel's Data Center Manager (DCM) to discover devices using the IPMI protocol. The IPMI protocol is primarily used on servers with a built in BMC card. ITO is capable of getting power and temperature sensors from most server management cards using DCM.

DCM can be used to discover management cards on newer servers (mostly 2013 and newer) using IPMI protocol. Please see Intel web site for a list for supported servers.

<https://www.intel.com/content/www/us/en/software/dcm-supported-servers.html>

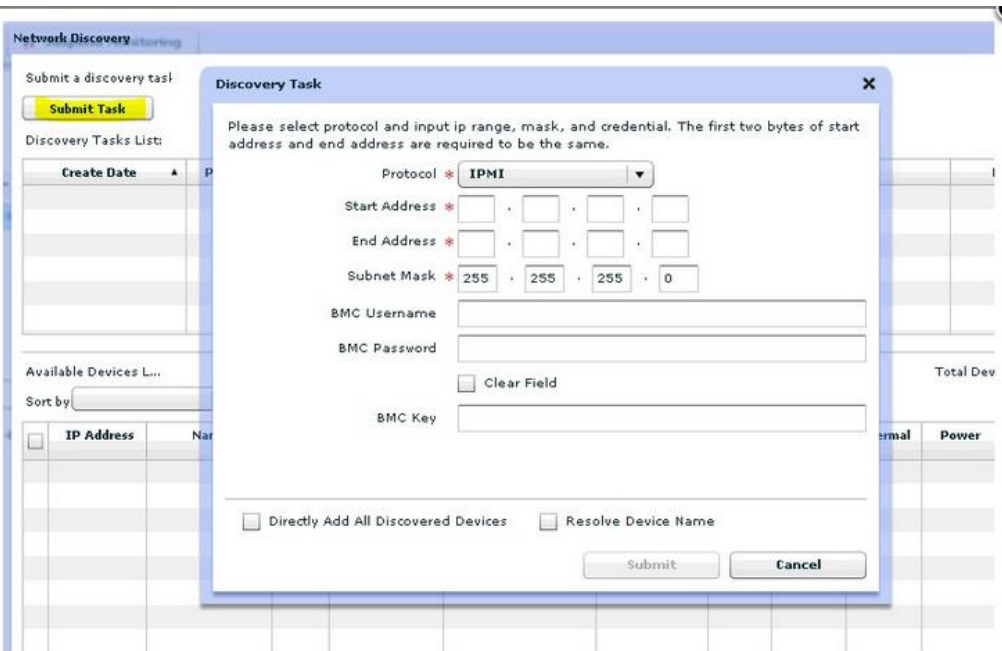
This is a guide to troubleshooting issues where it is not possible to discover a server using IPMI:

1. Verify the firewall settings:
 - a. Please verify this on dcimsupport.apc.com
2. Verify that the server is on the list of supported servers from Intel
3. Verify the firmware on the management (ilo, idrac, ...) cards?

It might be necessary to update the firmware on the internal server card to ensure that it can communicate with Intel's DCM software. Please see Intel's list with supported firmware.
4. What level of account are the discovery credentials on the ILO?

Some ILO's have security mgmt some do not, so some require ILO admin level users, other ILO's support multiple levels of security.
5. Does the ILO have a serial number?

ITO needs a serial number to discover a ILO card.
6. Try discovering the server directly from DCM
 - a. Browse to <http://<ito-server-ip>:8688/DataCenterManager>
 - b. From the network menu, select network discovery
 - c. Click "submit task", protocol should be IPMI,
 - d. Fill in the start and end address which in this case is the IP of the ILO. The BMC username and password are the ILO creds used for discovery, leave the BMC key portion blank if there's no security keys in place
 - e. Click "Submit".



The result:

The bottom section "should" fill in with info like this, preferably with the Power Monitoring check box selected and a value in the "Platform Id" column which is the serial number.

If no serial number is returned the asset will not be discoverable as ITO needs a S/N value.

If a S/N is returned and at least the power monitoring flag is checked then discovery should work.

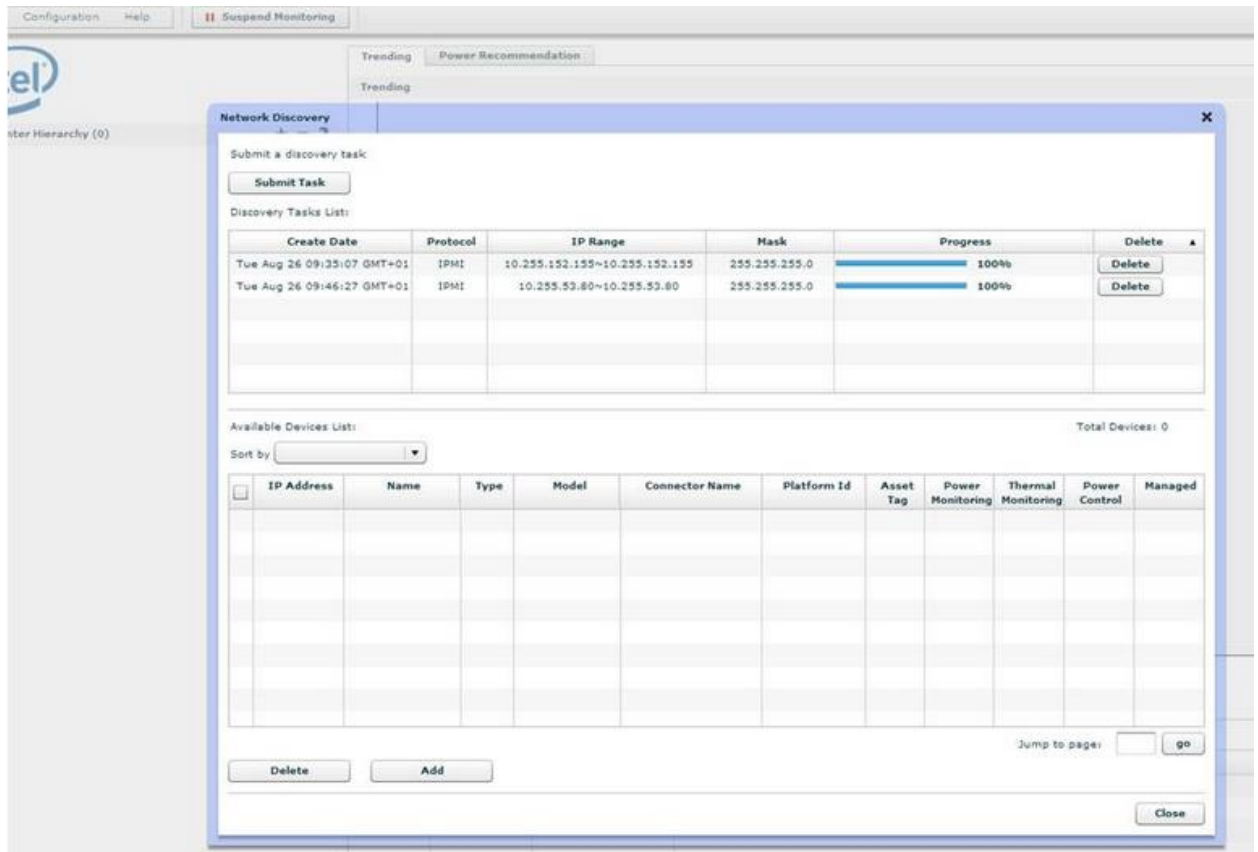
	IP Address	Name	Type	Model	Connector Name	Platform Id	Asset Tag	Power Monitoring	Thermal Monit	Power Control	Managed
<input type="checkbox"/>											
<input type="checkbox"/>	10.169.115.220		Server	IPMI HP - HP ProLiant BL460c G1	com.intel.dcm.pl	34343737	GB88	✓			true
<input type="checkbox"/>	10.169.115.229		Server	Dell iDRAC 11G monolithic PowerEd	com.intel.dcm.pl	2ZHL3K1	2ZHL	✓	✓	✓	true

Important:

If this interface is used, please make sure to click "CLOSE" at the bottom and not "Add" or "Delete".

ITO does not expect customers to manually discover assets and "add" or "delete" them from the discovered ILO list.

ITO manages that list itself, so manually adding or removing the entries can lead to unexpected results. Clicking "Close" simply closes the network discovery and doesn't change what ITO can see.



7. Devices not discovered in DCM
 - a. The connection using the DCM DataCenterManager interface should take several seconds at least to complete. If the progress jumps to 100% immediately, then something is likely wrong with either the credentials, the connectivity (i.e the IP or subnet mask was not specified correctly), or the ILO firmware may not be compatible.
8. Verify the ILO's audit logs.
 - a. Almost all ILOS's has a audit log.
 - b. If available does the log then show if the connection using IPMI is being completed?
9. Check the DCM logs
 - a. Verify the DCM logs on the ITO server.
The default location:
C:\Program Files\Intel\DataCenterManager\logs