

Easily Managing Devices for the Internet of Things with MeshCentral



Open source device management solution running on Intel gateways makes it easier to connect legacy devices to the cloud.

Managing Devices in a Connected World

Managing a variety of devices – each with different capabilities, operating systems, and mobility – can be difficult because of divergent requirements around protocols, APIs, and other design factors. With more and more devices joining the Internet of Things (IoT), simplifying device management is critical to lowering infrastructure cost and facilitating data sharing.

This is possible with MeshCentral, a free and open source solution for managing all types of devices across a wide range of operating systems and processor types. The solution is secure, customizable, and easy to install, and allows users to own all of their data. This device management system is also interoperable with Intel® Gateway Solutions for the Internet of Things (Intel® Gateway Solutions for the IoT), thus making it easier to get legacy devices connected to the cloud.

MeshCentral and Intel Gateways – Better Together

MeshCentral is available as either a free MeshCentral.com server or via the downloadable Mesh server installer, which creates a Mesh server instance on a user's server. Next, the Mesh agent is installed on Intel gateway solutions, which enables them to communicate with the Mesh server, as shown Figure 1. To get started, there is an installation guide and demonstration video at info.meshcentral.com, as well as documentation on setting up a Mesh server.



Figure 1. Web-based MeshCentral Server Connects to Various Devices

Intel Gateways

The primary functions of Intel Gateway Solutions for the IoT are to aggregate sensor network data, manipulate the aggregated data, and distribute the post processed data to a data center network or cloud service – all while maintaining a high level of security. This typically involves protocol translation between the sensor network and the data center or cloud service.

MeshCentral Solution

MeshCentral turns an assortment of silo'd devices into a secure and scalable peer-to-peer network. It uses this infrastructure, shown in Figure 2, to connect devices to the cloud and allows for web-based remote management of any device on the network. For Intel gateways, users can take advantage of the terminal connection, file access, status information, and data repository features, which provide connections to any device (regardless of NAT or proxy) from any browser. MeshCentral provides developers a rich set of APIs and sample code for building web applications that automate tasks, such as data collection and the management of services, applications, and interactions with Intel gateways. Mesh server administrators can be assured their services are always up to date because the simple-to-set-up web site is self-updating and allows for easy remote updating of the Mesh agents.



Figure 2. Key Features of MeshCentral

Flexibility for a Diverse IT Environment

Since MeshCentral is open source software distributed under the Apache* 2.0 license, users can set up their own MeshCentral server and have full control over their data and server operations. The license allows for commercial and non-commercial use without restrictions and also allows for full customization of both the server and client software without having to release code changes. The Mesh agent is written in C, so it is very portable, running on Windows*, Linux*, OS/X*, and Android* in addition to Intel Gateway Solutions for the IoT.

Getting Started

The fastest way to start using MeshCentral with Intel gateway solutions is as follows:

1. Go to MeshCentral.com and create an account and a Mesh. A video tutorial on how to do this is located at <http://bit.ly/UhVyhS>.
2. Navigate to the My Account tab, select a Mesh to add the Intel gateway, and click the install link.
3. For Device Architecture with the Intel gateway, select Linux/x86-32 (Ubuntu*) from the drop down list.
4. Make sure the Intel gateway can access the Internet and then copy and paste the installation script shown in step 3 to the root command prompt of the Intel gateway.

In a couple of minutes, the device will appear on the web page. Once it is displayed, it will be possible to remotely access the terminal console, perform file transfers, and monitor device state, all from the Meshcentral.com web page.

Visit info.meshcentral.com for more information, documents, downloads, and tutorial videos.

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