

Network Installation Guide: ICM7100SE

[This note applies to the ICM7100SE VMS Server]

[28-Jun-17]



Contents

Materials needed	1
Overview	1
Initial System Config.....	2
Troubleshooting	9

Materials needed



IC Realtime
ICM7100SE series VMS Server



Cat5/6 cable



Laptop w/ a RJ-45
NIC port



Compatible Internet Browser

Overview

This document serves as the manual for successful networking and physical installation of the ICM7100SE series VMS Server.

Due to the network deployment nature of this device, a basic understanding of Ethernet and TCP/IP networking is assumed. Users will be expected to be able to assign an IP address to the network interface card of the computer device they're using for setup. For further help or support on this topic please feel free to visit <http://icrealtime.com/support>.

The ICM7100SE has 4 Network interface cards to manage ICRealtime equipment across multiple network segments via Multi Addressing configuration (by default). 'Out of the box' NIC#1 is configured to 192.168.1.108, #2 to 192.168.2.108, #3 to 192.168.3.108, and #4 to 192.168.4.108.

To begin programming the device, assign an IP address to your laptop that matches the network mask of the port you're connecting to (i.e.: set your laptop IP address to 192.168.1.5, and plugin your Cat5/6 cable to NIC#1).

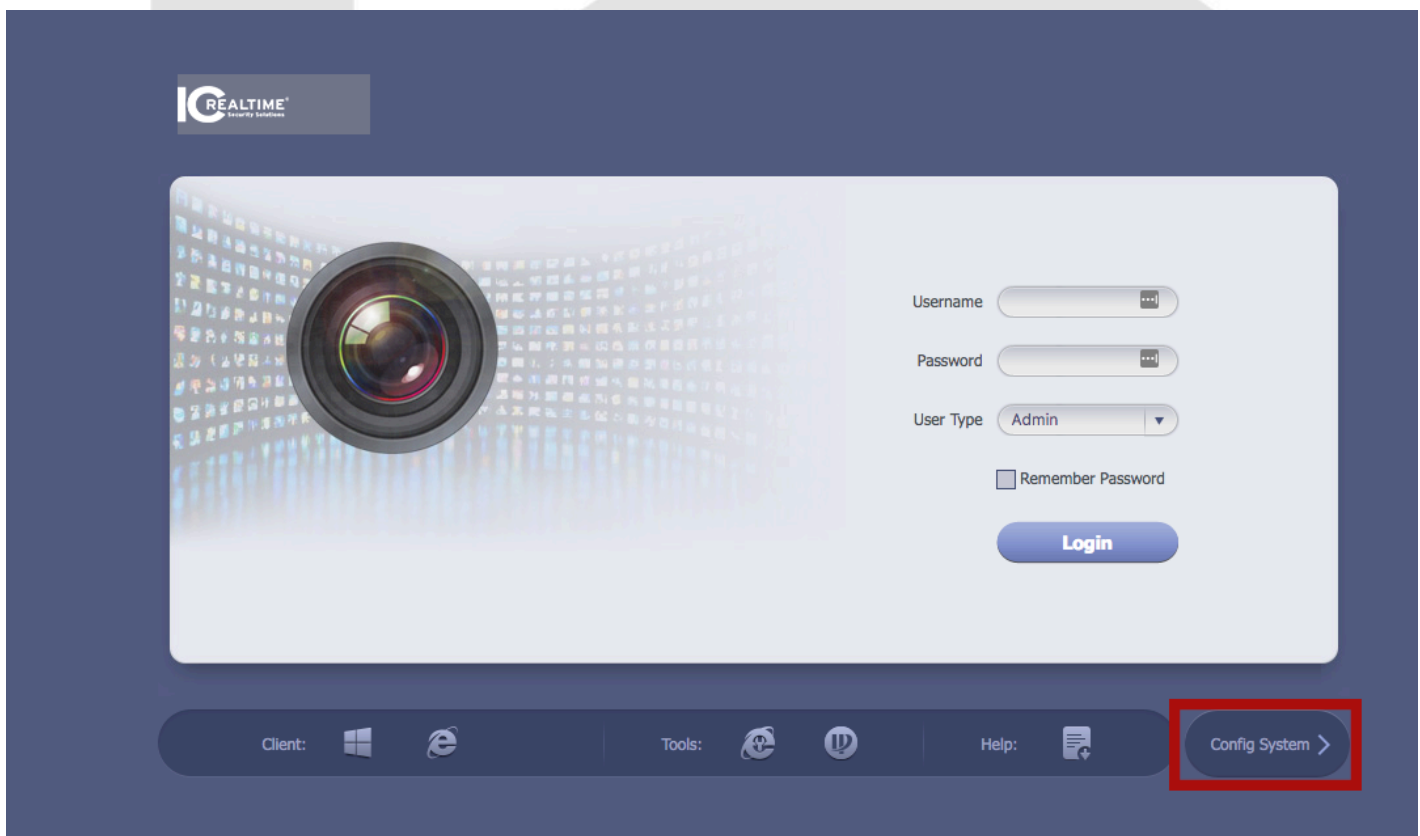
Initial System Config

Step 1: This initial system configuration will be done entirely with a computer and network access. Connecting an HDMI or VGA monitor is not required.

Connect the Black AC power cord to the ICM7100SE and apply power to the device, and flip the power switch at the rear to the 'on' position. Connect a Cat5/6 cable from NIC #1 to your Laptop (assuming you've assigned your computer to the 192.168.1.* network as mentioned).

Once the device has initialized (this takes about 3+ minutes), launch your Web Browser on the Laptop and navigate to the default IP address for the ICM7100SE network port (Port #1 again would be <http://192.168.1.108>).

You should see an interface as below – click on 'Config System' and proceed to Step 2:



The Main Operator page for the ICM7100SE Server. For now, we will not login here but instead click on the 'Config System' button at the lower right.

Step 2: You should be brought to the 'Config System' page where you can rapidly configure the ICM7100SE. Out of the box, the default 'Configuration' credentials are 'admin/123456'. Type these credentials in and click Login.

Important: When you login for the first time to either the 'Operator' or 'Config' interfaces, the system will force you to set a permanent password and security questions. Write these down for safe keeping

Once you set your permanent password and security questions, you should see an interface as below:

Config System

[about](#)
[admin](#)
[Exit](#)

Quick Guide

Segment Setup

Server Config

Basic

Security Setup

Email Server

Storage Config

Self-check

System Upgrade

Advanced Setting

TCP/IP

LAN/WAN Mapping

Master/Slave

Hot Spare Config

N+M

Time Setup

Email Server

Select network mode, and configure IP address info.

Network Mode: Multi-address

Default Network Card: Network card 1[eth0] [1000Mbps]

Select network card: Network card 1[eth0] [1000Mbps]

MAC Address: 4C:11:BF:25:2F:25

IP Address: 10.0.1.108

Subnet Mask: 255.255.255.0

Default Gateway: 10.0.1.1

Preferred DNS: 8.8.8.8

Alternate DNS: 8.8.4.4

Save and Reboot

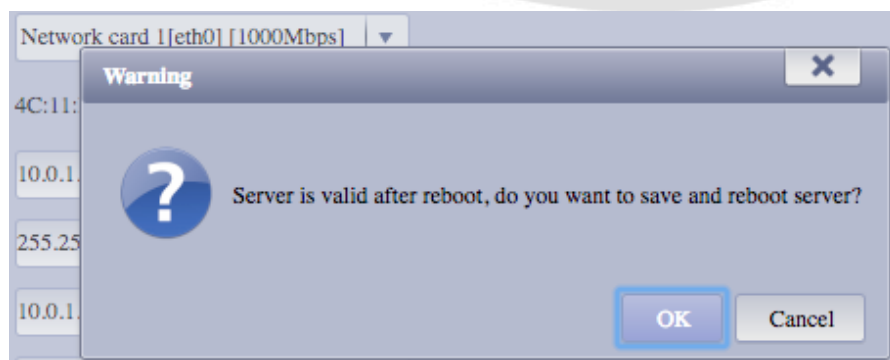
Skip

Step 3: TCP/IP Tab:

Here you will configure the permanent IP address information for your ICM7100SE device. By default the 'Network Mode' is set to Multi address, allowing each NIC port to connect to a unique network segment and access devices. You also have the option to set the 'Network Mode' to **Load Balance** if you would like all 4 ports to join a bond group. Select your desired network card from the 'Select Network Card' and assign a permanent static IP address for that interface. Once finished, click '**Save and Reboot**' and allow the device time to restart. You will see an interface as seen below:

Important: If you change the IP address of the interface that your laptop is connected to physically, you will need to use the newly set IP address to login to the 'Config' menu once it has finished restarting.

Once finished rebooting, you can return to this page and click '**Skip**' to access the **LAN/WAN Mapping** setup.



Step 4: LAN/WAN Mapping:

This menu lists all of the ports that the various services run on for the ICM7100SE. You can see the default port values listed for each service, and change them if needed. You will see an interface as below.

Important: If you are installing your ICM7100SE behind a Router or Firewall, you will need to fill in the 'Router Address' parameter with your Static Public IP Address. It does not accept DDNS names at this time. You will also need to 'Port Forward' each separate port listed in the table below in your firewall. With this type of configuration, you will need to set the 'Local Address Web Port' to the same value as the 'Router Address Web Port'.

Once completed, click 'Save and Next'.

The screenshot shows the 'LAN/WAN Mapping' configuration page. At the top, there is a navigation bar with tabs: TCP/IP, LAN/WAN Mapping (selected), Master/Slave, Hot Spare Config, N+M, Time Setup, and Email Server. Below the navigation bar, a note states: 'If the system visits WAN via internal and external mapping of router, then you need to fill in WAN address and port information. If no port mapping, then you do not need to change port setup. If this server is the router's DMZ server, the 'WEB Port' should be the same with the 'Web' port.' The configuration fields are as follows:

Local Address:	10.0.1.108			
WEB:	50080			
Router Address:	10.0.1.108			
Restore Default				
CMS: 9000	DMS: 9200	MTS: 9100	SS: 9320	ADS: 9600
PCS: 9001	PES: 9400	ASC: 9700	ARS: 9500	MGW: 9090
WEB: 80	PTS: 8081	SC: 5080	SOCKS: 31080	

At the bottom right, there are three buttons: 'Previous Step', 'Save and Next', and 'Skip'.

Step 5: Master/Slave:

This menu is used to configure whether this ICM7100SE is working as a 'Master' ICM7100SE or is working as a 'Slave' to another ICM7100SE. Master/Slave is used to expand the DSS system across multiple, different networks, or to increase the total size and scale of the system itself. One 'Master' can manage 20 'Slave' servers.

Once a device is configured as a 'slave', there is no further configuration done from the slave server itself. All System configuration and device management is done from the Master server which handles the Database, Web Server, CMS and all other services.

You should see a figure as below. Click 'Skip' to proceed to the next step, unless you are configuring this device as a Slave.

Important: Setting an ICM7100SE as 'Slave' removes the Hot Spare, N+M, Time Setup and Email

options.

The screenshot shows a configuration wizard with a progress bar at the top containing tabs: TCP/IP, LAN/WAN Mapping, Master/Slave (selected), Hot Spare Config, N+M, Time Setup, and Email Server. Below the progress bar, a message states: "Default server is main server, if you want to config this server to slave server, select 'Slave'". There are two buttons: "Master" (with a server icon) and "Slave" (with a server icon). At the bottom right, there are three buttons: "Previous Step", "Save and Reboot", and "Skip".

Step 6:

Hot Spare Config Tab:

This menu is used to configure a Spare ICM7100SE device in the event of a failure or disaster. If you have a redundant ICM7100SE device, These values are filled in as follows:

Virtual IP: One available IP address not currently used in the LAN segment.

Mask: The Subnet mask of your local network.

Spare IP: The IP address (NIC#1) of the redundant (Hot Spare) ICM7100SE server.

Spare Beat IP: The second IP address (NIC #2) of the redundant (Hot Spare) ICM7100SE server.

Spare config username: The admin account username for the Hot Spare.

Spare config password: The admin account password for the Hot Spare.

The screenshot shows the "Hot Spare Config" tab selected in the progress bar. A message at the top reads: "If you want another server to replaces this main server and maintain system operation after main server finish downtime, please configure a hot spare service for this main server, fill in the following info and save." Below this, there are several input fields with red error messages: "Virtual IP:" (Please input Virtual IP!), "Mask:" (Please input Mask!), "Spare IP:" (Please input Spare IP1!), and "Spare beat IP:" (Please input Spare IP2!). There are also fields for "Spare config username:" (filled with "admin") and "Spare config password:" (filled with "*****"). A "One-key Check" button is next to the password field. At the bottom, there is a checkbox labeled "Clear Alarm Data" which is checked, with a note: "To shorten preparation time for basic data, all alarm data will be cleared." At the bottom right, there are three buttons: "Previous Step", "Save and Reboot", and "Skip".

Step 7: **N+M Tab:**

N+M configuration is for mission critical applications where redundancy is required on multiple slave servers. ‘N’ is the Slave device and ‘M’ are the redundant ICM7100SE servers of the slave devices configured.

TCP/IP

LAN/WAN Mapping

Maste/Slave

Hot Spare Config

N+M

Time Setup

Email Server

If you want to maintain system normal operation when server is abnormal , please configure a redundant server. But firstly you must set one or some slave servers in the system to redundant servers.

Server Status: Green means that this distribute server is running. When you add device, you can mount it on current distribute server; Gray means that this distribute server is not in server list;Blue means that this server is redundant server.

Enable: highlight means to enable this server, grey means to disable it.Blue means that this server is redundant server.

Server Type: highlight means that current server is distribute; grey means that current server is redundant.

Refresh

IP	Name	Server Status	Enable	Server Type	Operation
----	------	---------------	--------	-------------	-----------

Previous Step

Skip

Step 8: **Time Setup Tab:**

This section of the Quick Setup allows you to configure the basic time options for the ICM7100SE device.

Select ‘**DST**’ if you wish to enroll your server in Daylight Savings Time. Set your ‘**Time Zone**’ and ‘**Date / Time**’ settings based on your local regional timecode.

AT the bottom, you can enroll your server with a Network Time server if you wish by enabling ‘**NTP Setup**’.

TCP/IP LAN/WAN Mapping Master/Slave Hot Spare Config N+M **Time Setup** Email Server

Configure time zone and time, you also can sync time via NTP server. When the servers or devices of different time zones sync time, it will only sync time, and original time zones of the servers and devices will not be changed.

DST: ☒

Time Zone: (UTC-07:00)Arizona ▼

Date/ Time: 2017-06-12 16:36:24 Sync PC

NTP Setup: ☐ Manual Update

NTP Server: 8.8.8.8

Update Period: 60 Minute(1~65535)

Previous Step Save and Reboot Skip

Step 9:

Email Server Tab:

The ICM7100SE series server has a powerful email reporting function. It is capable to send email alerts and notifications by listening to any system event from device that it manages, such as Motion Detection and Alarm Triggers from IP Cameras, Encoders, and NVR systems.

It is also more commonly used to monitor a devices network connectivity and HDD working state to ensure that edge devices are reachable via the network, and that their HDD status is working properly.

The screenshot below shows a sample **Gmail** configuration with the ICM device.

Important:Gmail requires the use of 'TLS' encryption on port 587. If you are still receiving a 'Test Failed', please login to your Gmail account and check to see if the Google Service has blocked any Mail connection attempts. Most recently, it has been noted that you must enable 'Allow Less Secured Apps' for Gmail Email integration with the ICM7100SE, or generate specific App Codes from Google Security for use with the ICM7100SE.

TCP/IP

LAN/WAN Mapping

Master/Slave

Hot Spare Config

N+M

Time Setup

Email Server

Configure email service, so when alarm occurs, this email service will send mail to specified receiver. Yahoo only supports SSL encryption, hotmail and gmail only supports TLS encryption.

☒ Enable

SMTP Address: smtp.gmail.com

Encryption Type: TLS Encrypt

Port: 587

Username: icrealtime@icrealtime.com

Password: *****

Sender Mail Address: icrealtime@icrealtime.com

Test Recipient:

Mail Test

Previous Step

OK

Troubleshooting

- If you are unable to access the ICM7100SE series device from your laptop, please ensure your computers network adapter has a static IP address assigned to it. It must match the range of the port you are connecting to:

NIC #1 is 192.168.1.108, so set your PC to 192.168.1.* (where * is 1-254, but not 108)
NIC #1 is 192.168.2.108, so set your PC to 192.168.2.* (where * is 1-254, but not 108)
NIC #1 is 192.168.3.108, so set your PC to 192.168.3.* (where * is 1-254, but not 108)
NIC #1 is 192.168.4.108, so set your PC to 192.168.4.* (where * is 1-254, but not 108)
- If you are having issues using the ICM7100SE Client software to connect to specific features, please check that all of your Ports in the **LAN/WAN Mapping** menu are exposed and reachable from the internet. Useful sites for this include <http://portchecker.co> and <http://canyouseeme.org>
- For Email configuration issues, please utilize the 'Mail Test' function at the bottom of the **Email Server** menu to help troubleshoot. If issues still persist, login to the email account itself and ensure that it is able to send email notifications from the same network segment.

For a more detailed guide relating to the System / Software configuration and deployment, please refer to the QsG_ICM7100SE_System.pdf file.

IC Realtime LLC

www.icrealtime.com

3050 N Andrews Avenue Extension | Pompano Beach, FL 33064 | (866) 997-9009
Designs and specifications subject to change without notice. Copyright © 2017 IC Realtime, LLC. All rights reserved.