Device Tested: Symbol Handheld MC7090

Model Tested: Symbol MC7090

Operating System: Microsoft Windows Mobile Version 5.00
Wireless Card: Photon 802.11abg

The Symbol MC7090 provides everything the mobile task workers need to achieve a new level of enterprise productivity — whether they are in the warehouse, on the delivery route, on the retail floor taking inventory, or in a hospital.

This Interop Note describes the scope of the tests that have been conducted for Interoperability purposes and describes several test cases that were performed recently at Meru Networks. This note also includes recommended security settings for the Symbol MC7090 while operating with the Meru Networks infrastructure.

Test Environment:
The testing for the Interoperability of the Symbol MC7090 was conducted in a Meru Networks corporate Wi-Fi network environment. The following APs and controllers were used for interop testing:

4 – AP1000i
1 – MC5000
System Director: 4.1-34
Virtual Port disabled

Testing Scope and Assumptions:

The testing for Interoperability of the Symbol MC7090 with Meru Networks infrastructure is limited in scope due to equipment availability. Any backend servers or any other devices associated with the wireless handheld scanners have not been tested. It is assumed that there are no known network issues with the Backend components required for scanner functionality. Only the Wireless LAN related functionality of the scanners have been tested and documented in this interop note.

Configuring Client Wireless:

The Symbol MC7090 is a Windows Mobile based device. In order to configure the device's wireless settings, a client utility called Wireless Configuration editor should be used. This can be accessed by going:

 Start Menu > Wireless Configuration editor

Under the Config Editor, there are options to find WLANs by scanning and configuring the WLANs manually. Testing was done by scanning for WLANs and configuring, as well as manually configuring the WLAN SSIDs.

Test Cases:

The following test cases were executed to test the Interop functionality of the Symbol MC7090 with Meru Networks infrastructure:

Test 1: Stationary client - authentication/association followed by data transfers (e.g. web browsing) and continuous PING tests.

This test was performed using the following security profiles: Clear, WPA-PEAP, WPA2-PSK and WPA2-PEAP. Any other security profiles outside of these profiles were not performed.

Results: The stationary Symbol MC7090 was able to do authentication/association; send/receive data with no difficulty for all security profiles.

Test 2: Roaming client - authentication/association followed by data transfers (e.g. web browsing) and continuous PING tests.

This test was performed using the following security profiles: Clear, WPA-PEAP, WPA2-PSK and WPA2-PEAP. Any other security profiles outside of these profiles were not performed.

Results: The Symbol MC7090 was able to do authentication/association, send/receive data with no difficulty for all security profiles and was able perform hard hand-off between the different access points within the infrastructure with minimal impact in connectivity.

Test 3: Stationary client - authentication/association when client is completely rebooted

This test was performed using the following security profiles: Clear, WPA-PEAP, WPA2-PSK and WPA2-PEAP. Any other security profiles outside of these profiles were not performed.

Results:
Symbol MC7090 was able to authenticate/associate with not connectivity issues.

Report and Recommendation:
Symbol MC7090 has been tested for successful Interoperability in Meru Networks infrastructure under certain assumptions. With these assumptions and test setup, the performance of the device has been found to be acceptable. Any other combination outside of the aforementioned settings has not been tested and cannot be guaranteed by the Meru Interop team.

The recommendation in general for all enterprise class Wireless LAN devices would be to use WPA2 Enterprise where supported with 802.1x authentication as this would offer the best security. The same recommendation holds true for the Symbol MC7090 as this device supports WPA2 Enterprise.

For More Information

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