TCP/IP ports on the XCC, IMM2 and CMM management processors
Reference Information

The systems management processors (also known as service processors) integrated in ThinkSystem, System x, Flex System, and BladeCenter servers use a variety of TCP/IP ports for communication. This document lists them and indicates which ones the administrator can and cannot change. You need to ensure that your network (firewalls and routers) allows communications through these ports for the management processor to function properly.

The management processors covered are:

- XClarity Controller (XCC)
- Chassis Management Module (CMM and CMM2)
- Integrated Management Module II (IMM2 and IMM2.1)
- Integrated Management Module (IMM)
- BladeCenter Advanced Management Module (AMM)
- BladeCenter Management Module (MM)
- Remote Supervisor Adapter II (RSA II)
- Baseboard Management Controller (BMC)

XClarity Controller (XCC)

The following ports are used by XCC. Ports are either fixed or configurable as noted. For configurable ports, the default port is listed.

Table 1. XCC ports

Port name	Port number	Fixed or configurable	Description
http	80	Fixed	Web server HTTP connection (TCP)
https	443 (default)	Configurable	SSL connection (TCP)
REST over SSL	443	Fixed	REST over HTTPS
CIM/XML HTTPS	5989 (default)	Configurable	CIM/XML HTTPS
Remote presence	3900 (default)	Configurable	Remote presence (TCP)
IPMI	623	Fixed	IPMI over LAN
SLP	427	Fixed	SLP connection (TCP/UDP)
SSDP	1900	Fixed	Simple Service Discovery Protocol (UDP), required by Redfish DMTF
SSH	22 (default)	Configurable	Secure Shell (SSH) command-line interface (TCP)
SNMP agent	161 (default)	Configurable	SNMP get/set commands (UDP)
SNMP traps	162 (default)	Configurable	SNMP traps (UDP)
HTTP	81	Fixed	HTTP (TCP). Used for LXCM, only open in the front panel USB interface.
SFTP	115	Fixed	SFTP File transfer (TCP)
RDP	3389	Fixed	Remote Desktop Protocol USB-to-Ethernet interface (TCP). XCC acts as traffic forwarding between the external network and the host.
VNC	5900	Fixed	Virtual Network Computing remote desktop protocol (TCP). XCC acts as traffic forwarding between the external network and the host.

Chassis Management Module (CMM)

The Chassis Management Module (CMM and CMM2) is the service processor used in the Flex System Enterprise Chassis. The following ports are user configurable. The default port numbers used are indicated.

Table 2. CMM ports -- user configurable

Port name	Port number	Description
http	80 (default)	Web server HTTP connection - TCP
https	443 (default)	SSL connection for HTTP-TCP
telnet	23 (default)	Telnet command-line interface connection -TCP
SSH	22 (default)	Secure Shell (SSH) command-line interface - TCP
SNMP agent	161 (default)	SNMP get/set commands - UDP
SNMP traps	162 (default)	SNMP traps
FTP	21 (default)	FTP
FTP Data	20 (default)	FTP Data
TFTP	69 (default)	TFTP
CIM/XML HTTPS	5989 (default)	CIM/XML HTTPS – used by mgmt. apps
TCP Command Mode	6090 (default)	TCP Command Mode
Secure TCP Command Mode	6091 (default)	Secure TCP Command Mode – used by mgmt. apps
SLP	427 (default)	Service location protocol - UDP

The following TCP/IP ports are fixed and cannot be changed.

Table 3. CMM ports - fixed

Port number	Description
25	E-mail alerts - TCP
53	DNS resolver - UDP
67 and 68	DHCP - UDP
547	DHCP (IPv6) - UDP
623	RMCP (Remote Management and Control Protocol)
50990	SNMPv3 traps
123	NTP
389	LDAP
636	LDAPS (secure LDAP)

Integrated Management Module and Integrated Management Module II (IMM2)

The following ports are user configurable. The default port numbers used are indicated.

Table 4. IMM and IMM2 ports -- user configurable

Port name	Port number	Description
http	80 (default)	Web server HTTP connection - TCP
https	443 (default)	SSL connection -TCP
telnet	23 (default)	Telnet command-line interface connection -TCP
SSH	22 (default)	Secure Shell (SSH) command-line interface - TCP
SNMP agent	161 (default)	SNMP get/set commands - UDP
SNMP traps	162 (default)	SNMP traps - UDP
Remote presence	3900 (default)	Remote presence - TCP
CIM/XML HTTP	5988 (default)	CIM/XML HTTP
CIM/XML HTTPS	5989 (default)	CIM/XML HTTPS
NTP	123 (default)	Network Time Protocol

The following TCP/IP ports are fixed and cannot be changed.

Table 5. IMM and IMM2 ports - fixed

Port number	Description
25	E-mail alerts - TCP
53	DNS resolver - UDP
68	DHCP client connection - UDP
427	SLP connection - UDP
623	RMCP (Remote Management and Control Protocol)
3389	USB-to-Ethernet interface - TCP
5985	Web Services Management (WS-MAN) HTTP
5986	Web Services Management (WS-MAN) HTTPS
7070-7077	Partition management for multi-node servers

BladeCenter Advanced Management Module

The following ports are user configurable. The default port numbers used are indicated.

Table 6. AMM ports -- user configurable

Port name	Port number	Description
http	80 (default)	Web server HTTP connection - TCP
https	443 (default)	SSL connection -TCP
telnet	23 (default)	Telnet command-line interface connection -TCP
SSH	22 (default)	Secure Shell (SSH) command-line interface - TCP
SNMP agent	161 (default)	SNMP get/set commands - UDP
SNMP traps	162 (default)	SNMP traps - UDP
FTP	21	Listen port for the FTP server - TCP
FTP data	20	FTP data port - TCP
TFTP	69	TFTP server - TCP
Remote disk	1044	Remote disk function - TCP
Remote disk on-card	1045	Persistent remote disk (disk on card) - TCP
Remote KVM	3900	Remote Console - TCP

The following TCP/IP ports are fixed and cannot be changed.

Table 7. AMM ports -- fixed

Port number	Description
25	E-mail alerts - TCP
53	DNS resolver - UDP
68	DHCP client connection - UDP
427	SLP connection - UDP
6090	IBM Director commands - TCP
13991	IBM Director alerts - UDP

BladeCenter Management Module

The following ports are user configurable. The default port numbers used are indicated.

Table 8. MM ports -- user configurable

Port name	Port number	Description
http	80 (default)	Web server HTTP connection - TCP
https	443 (default)	SSL connection -TCP
telnet	23 (default)	Telnet command-line interface connection -TCP
SSH	22 (default)	Secure Shell (SSH) command-line interface - TCP
SNMP agent	161 (default)	SNMP get/set commands - UDP
SNMP traps	162 (default)	SNMP traps - UDP

The following TCP/IP ports are fixed and cannot be changed.

Table 9. MM ports -- fixed

Port number	Description
25	E-mail alerts - TCP
53	DNS resolver - UDP
68	DHCP client connection - UDP
427	SLP connection - UDP
1044	Remote disk function - TCP
1045	Persistent remote disk (disk on card) - TCP
5900	Remote Console video redirect - TCP
6090	IBM Director commands - TCP
13991	IBM Director alerts - UDP

Remote Supervisor Adapter II (RSA II)

The following ports are user configurable. The default port numbers used are indicated.

Table 10. RSA II ports -- user configurable

Port name	Port number	Description
http	80 (default)	Web server HTTP connection - TCP
https	443 (default)	SSL connection -TCP
telnet	23 (default)	Telnet command-line interface connection -TCP
SSH	22 (default)	Secure Shell (SSH) command-line interface - TCP
SNMP agent	161 (default)	SNMP get/set commands - UDP
SNMP traps	162 (default)	SNMP traps - UDP

The following TCP/IP ports are fixed and cannot be changed.

Table 11. RSA II ports -- fixed

Port number	Description
427	SLP connection - UDP
1044	Remote disk function - TCP
1045	Persistent remote disk (disk on card) - TCP
2000	Remote Console video redirect - TCP and UDP
6090	IBM Director commands - TCP
7070-7073	Scalable Partition management (x445) - TCP
7070-7077	Scalable Partition management (x460 and x3950) - TCP

Baseboard Management Controller (BMC)

The following TCP/IP ports are fixed and cannot be changed.

Table 12. BMC ports

Port number	Description
623	IPMI communications to SMBridge and IBM Director
664	IPMI communications (secondary)
161	SNMP get/set commands
162	SNMP traps and PET alerts to Director

Related product families

Product families related to this document are the following:

- 1-Socket Rack Servers
- 1-Socket Tower Servers
- 2-Socket Rack Servers
- 2-Socket Tower Servers
- 4-Socket Rack Servers
- 8-Socket Rack Servers
- Blade Servers
- System Utilities

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