



# IBM 2216/Network Utility Channel-Attach Examples

## Package Description

This packet provides parameter relationship diagrams and definitions for use in planning, defining, and troubleshooting ESCON<sup>®</sup> and parallel channel-attach connections between the IBM S/390<sup>®</sup> host running MVS and the IBM 2216 Nways Multiaccess Connector or Network Utility.

This packet gives generic examples for establishing ESCON channel connectivity and parallel channel connectivity with the following protocols:

### Channel Protocols

- LAN Channel Station (LCS)
- Link Services Architecture (LSA)
- Multi-Path Channel+ (MPC+)

### Network Protocols

- TCP/IP
- Data Link Switching (DLSw)
- Subarea
- APPN<sup>®</sup>Intermediate Session Routing (ISR)
- APPN High Performance Routing (HPR)
- User Datagram Protocol+ (UDP+)
- TN3270E

This packet also contains brief definitions and syntax diagrams for the host parameters shown in the examples.

## Software Prerequisites

The examples in this packet assume that your network meets the following prerequisites:

- 2216 code level - V3R2 (Common Code CC4) or higher
- MVS - V3R4 or higher
- TCP/IP for S/390 - V2R5 or higher
- VTAM - V4R4 or higher

## Intended Audience

- Network designers, network planners, and network technicians who work with communications networks that use the IBM S/390<sup>®</sup> and the IBM 2216 Nways Multiaccess Connector or Network Utility as channel-attached gateways.
- System programmers and network technicians who implement the S/390 connectivity definition statements and IBM 2216 Nways Multiaccess Connector and Network Utility configurations.

## Additional Information

- ITSO Redbook - IBM 2216 and Network Utility Host Channel Connectivity, SG24-5303 (<http://www.redbooks.ibm.com>)
- IBM 2216 Nways Multiaccess Connector and Network Utility library (<http://www.networking.ibm.com/did/2216bks.html>)



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# IBM 2216/Network Utility- Parameter Relationships for Establishing ESCON Channel Connectivity



A generic diagram that illustrates the parameter relationships required to establish ESCON channel connectivity is provided for each of the combinations of channel and network protocols shown below. The specific values assigned to parameters in the diagrams are intended *only as examples*; you will have to determine the values appropriate for your network. The *relationships* between parameters on a given diagram do not change as a function of your network. In the examples containing the optional ESCON Director component, the relationships assume that the ESCON Director is present. The \* in those examples indicates that, if the ESCON Director is not present, you must omit both the switch parameter in the PATH Statement of the Channel Path ID Definition Block and the link parameter in the CUNUMBR Statement of the Control Unit Definition Block and that you must set the Link Address on the 2216/ Network Utility to 01.

Brief definitions and syntax diagrams for the host-related parameters used in these diagrams are provided in the "Parameter Definitions for ESCON Channel Configurations" section of this packet.

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### Network Protocols

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(Multi-Path Channel+)

**TCP/IP**  
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**APPN/HPR: TN3270E Server**  
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**LCS**  
(LAN Channel Station)

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**TCP/IP: Bridging**  
**TCP/IP: 3172 Emulation**

**LSA**  
(Link Services Architecture)

**SNA Subarea**  
**APPN/HPR**  
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**Subarea: TN3270E Server**  
**DLSw**

# IBM 2216/Network Utility- Parameter Relationships for Establishing Parallel Channel Connectivity



A generic diagram that illustrates the parameter relationships required to establish parallel channel connectivity is provided for each of the combinations of channel and network protocols shown below. The specific values assigned to parameters in the diagrams are intended *only as examples*; you will have to determine the values appropriate for your network. The *relationships* between parameters on a given diagram do not change as a function of your network.

Brief definitions and syntax diagrams for the host-related parameters used in these diagrams are provided in the "Parameter Definitions for Parallel Channel Configurations" section of this packet.

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### Channel Protocols

### Network Protocols

**MPC+**  
(Multi-Path Channel+)

**TCP/IP**  
**APPN/HPR**  
**APPN/HPR: TN3270E Server**

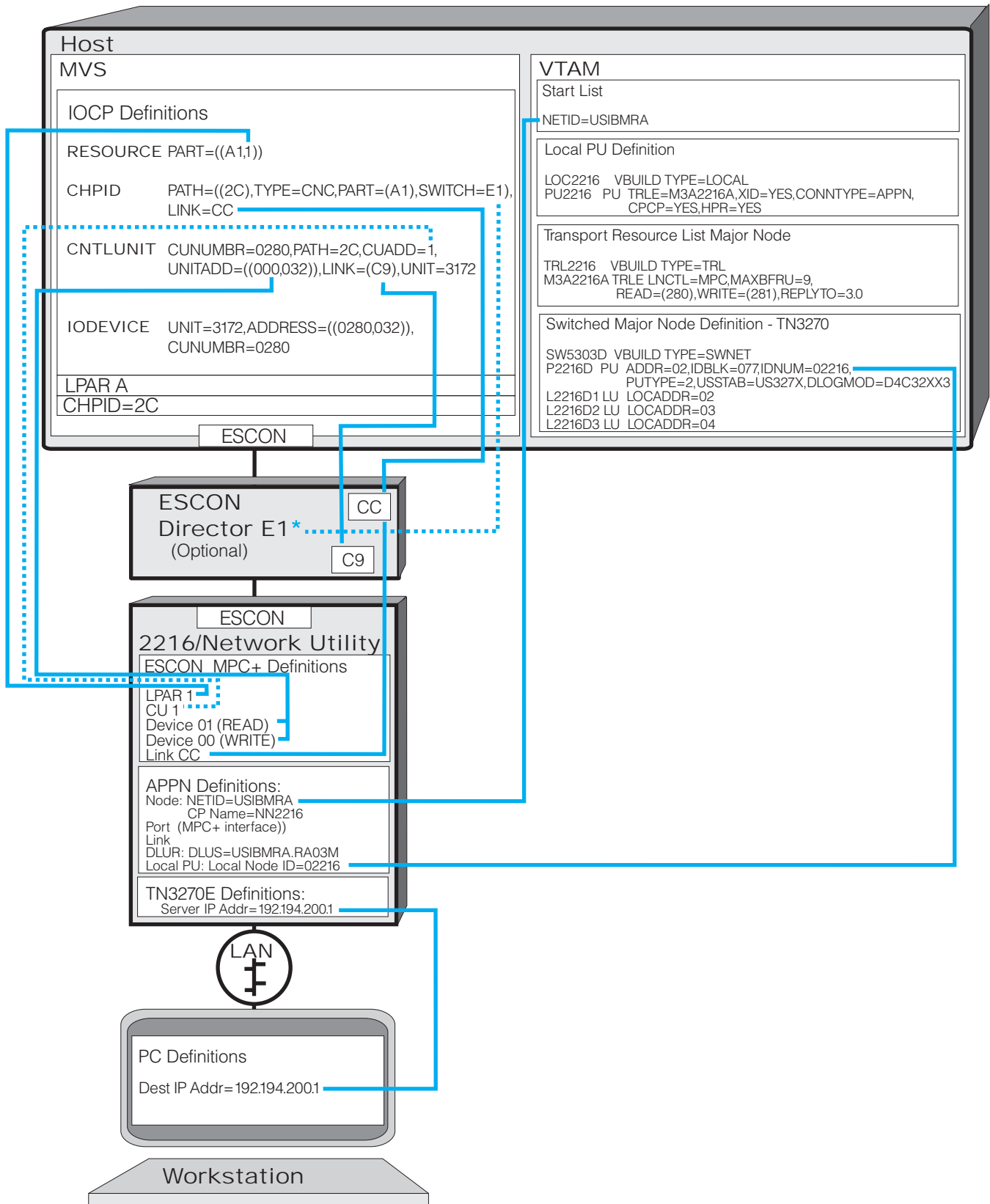
**LCS**  
(LAN Channel Station)

**TCP/IP: Routing**  
**TCP/IP: Bridging**  
**TCP/IP: 3172 Emulation**

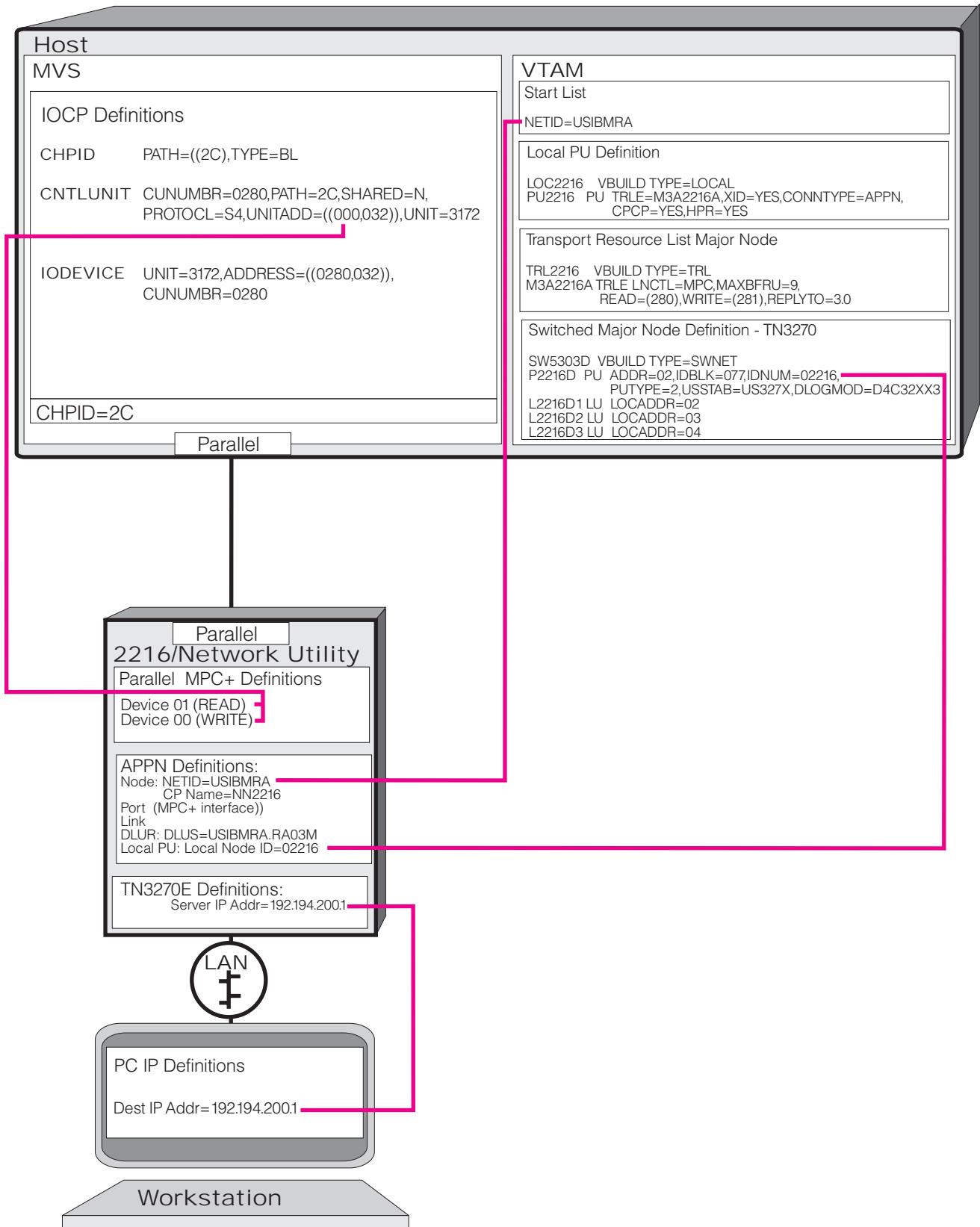
**LSA**  
(Link Services Architecture)

**SNA Subarea**  
**APPN/HPR**  
**APPN/ISR: TN3270E Server**  
**Subarea: TN3270E Server**  
**DLSw**

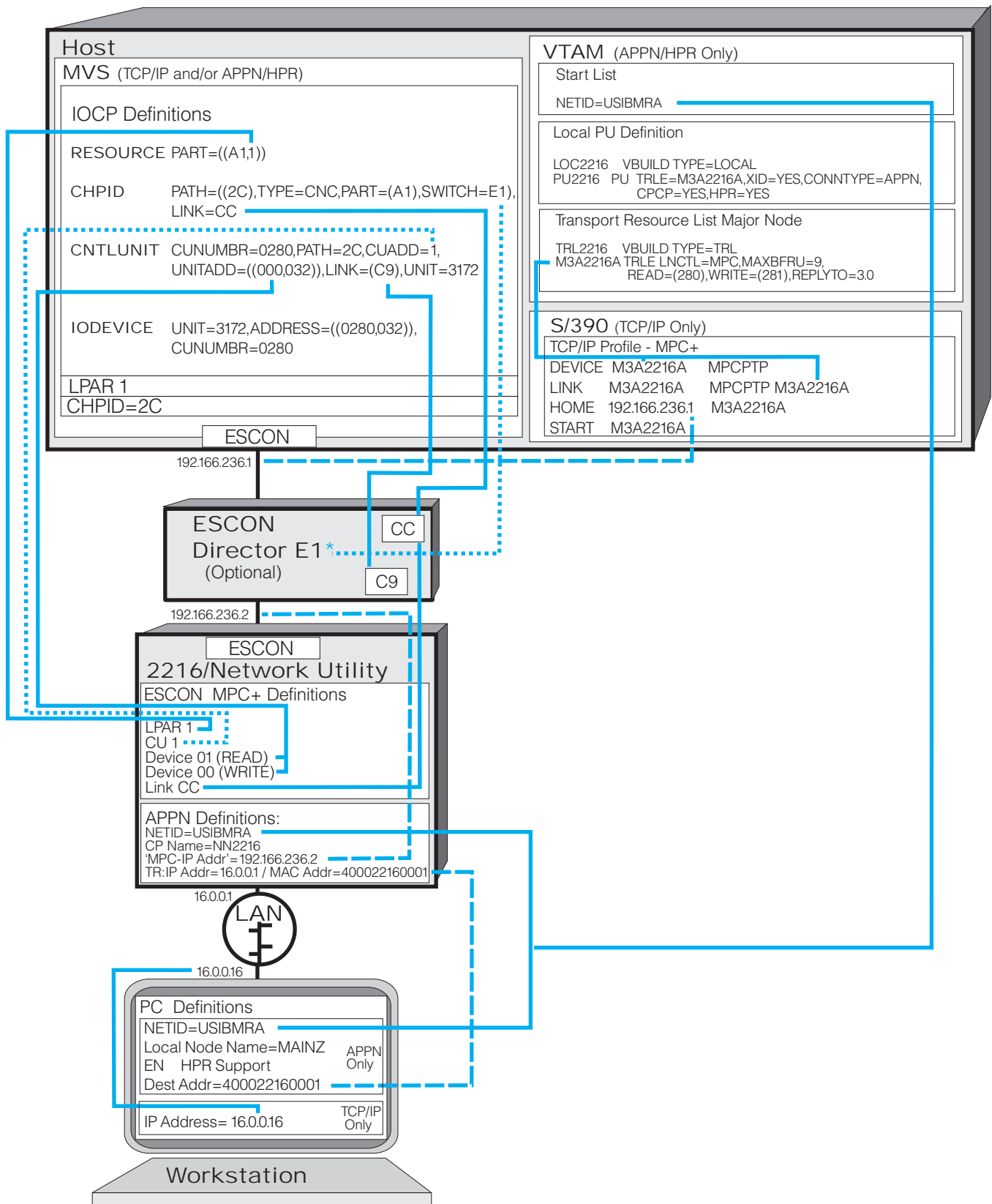
# ESCON MPC+ APPN/HPR and TN3270E Server



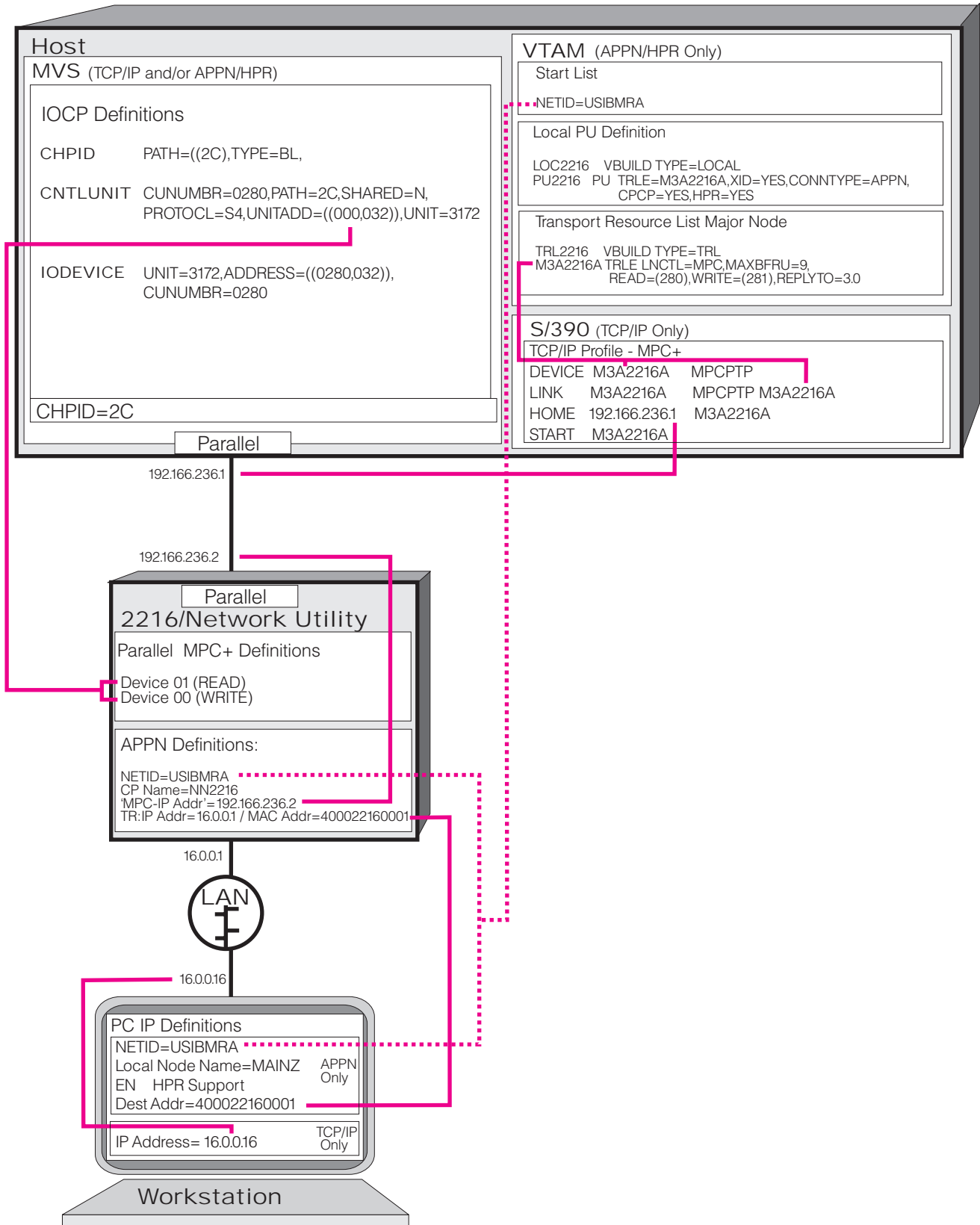
# Parallel MPC+ APPN/HPR and TN3270E Server



# ESCON MPC+ TCP/IP and APPN/HRP

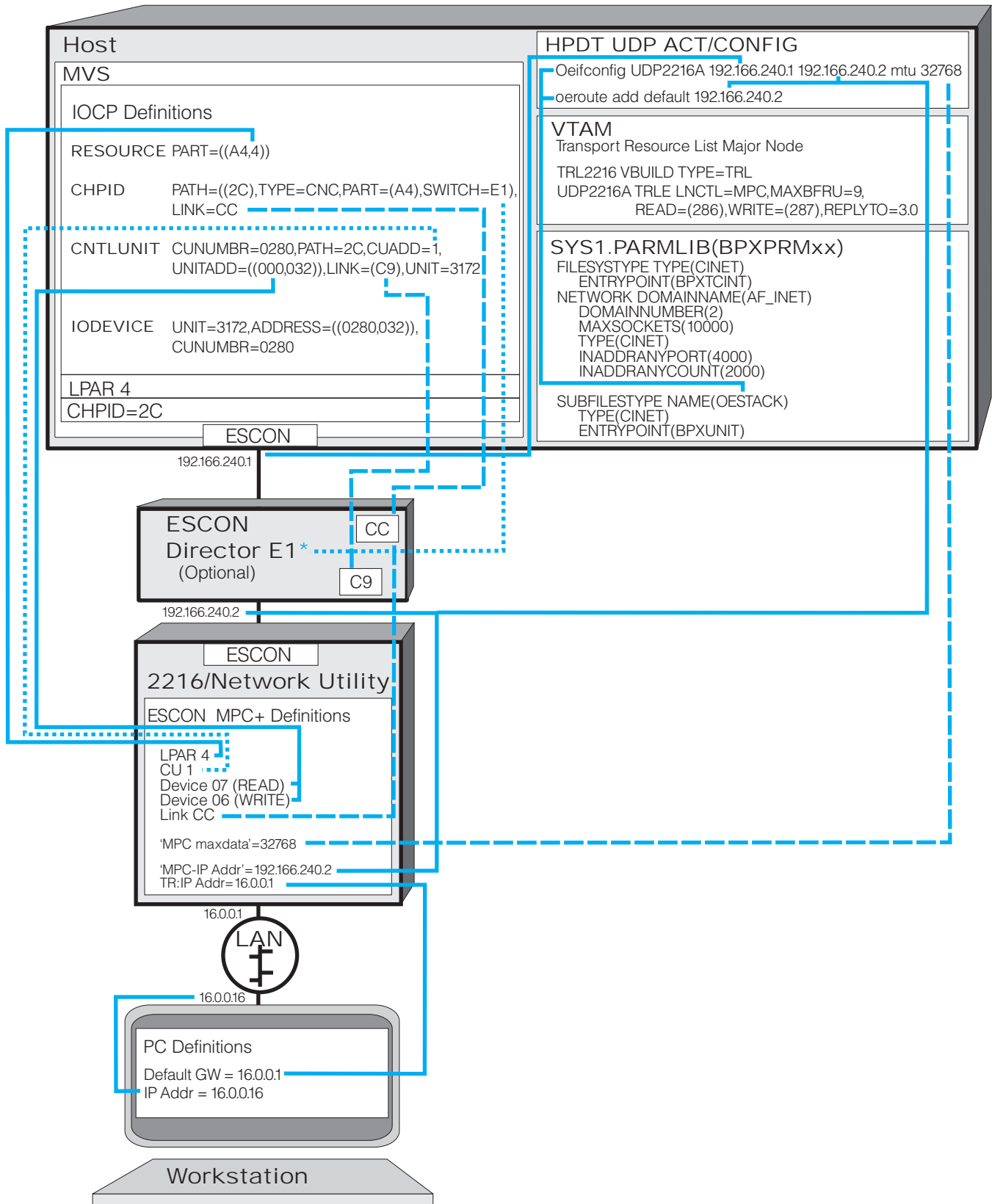


# Parallel MPC+ TCP/IP and APPN/HPR





# ESCON MPC+ UDP+ (HPDT - UDP)

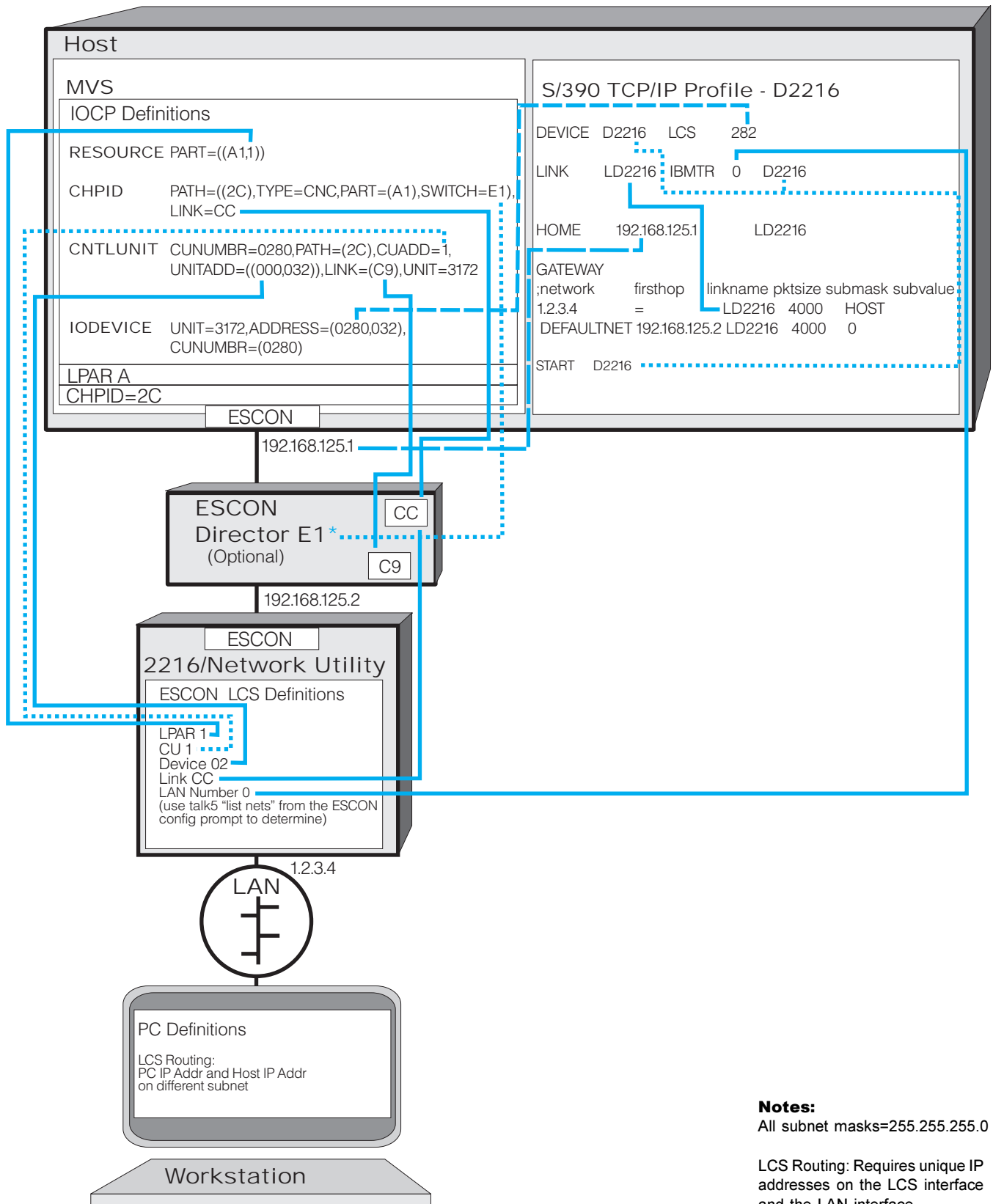


**Parallel MPC+**  
**UDP+ (HPDT - UDP)**



**Not Supported**

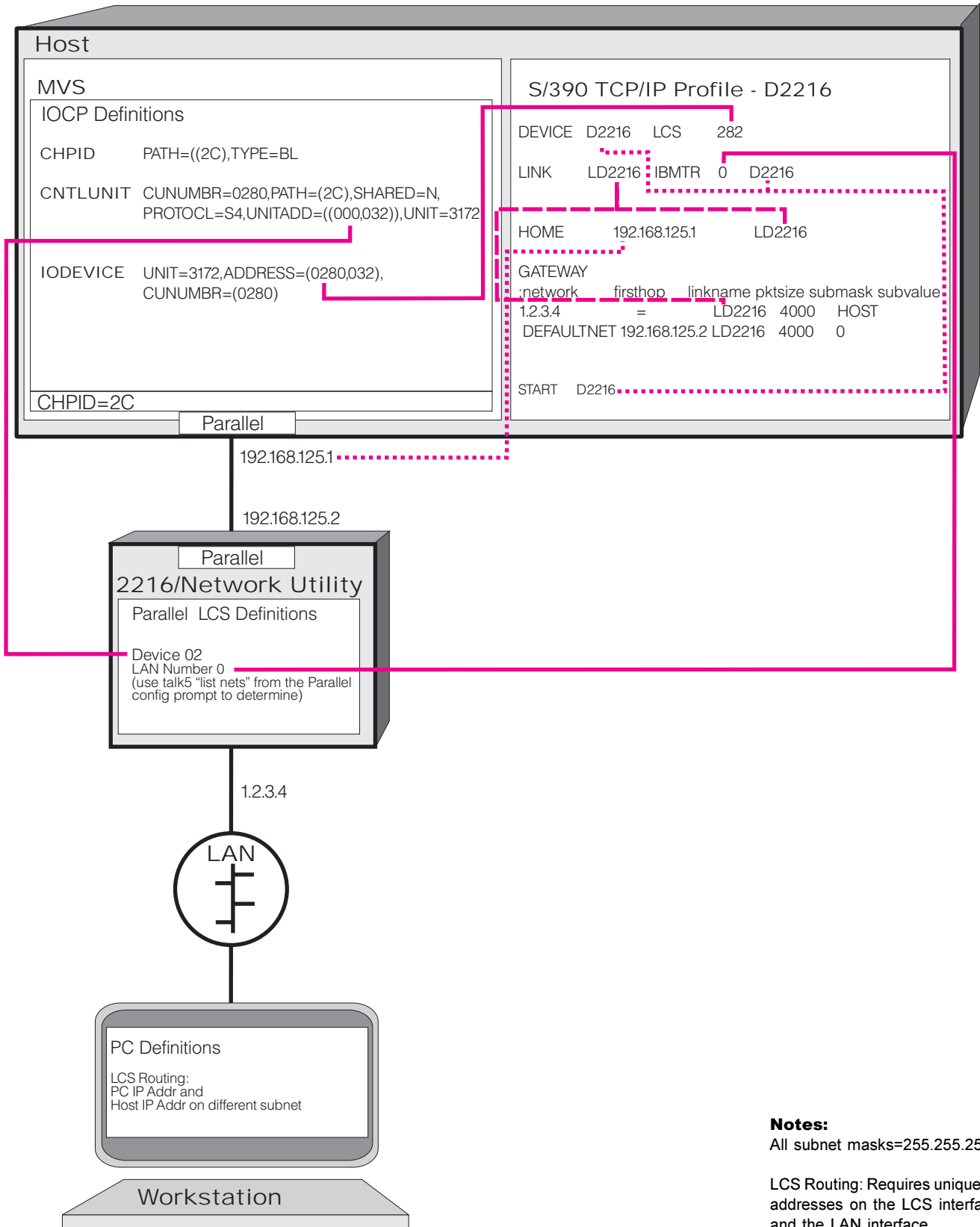
# ESCON LCS TCP/IP: Routing



**Notes:**  
All subnet masks=255.255.255.0

LCS Routing: Requires unique IP addresses on the LCS interface and the LAN interface.

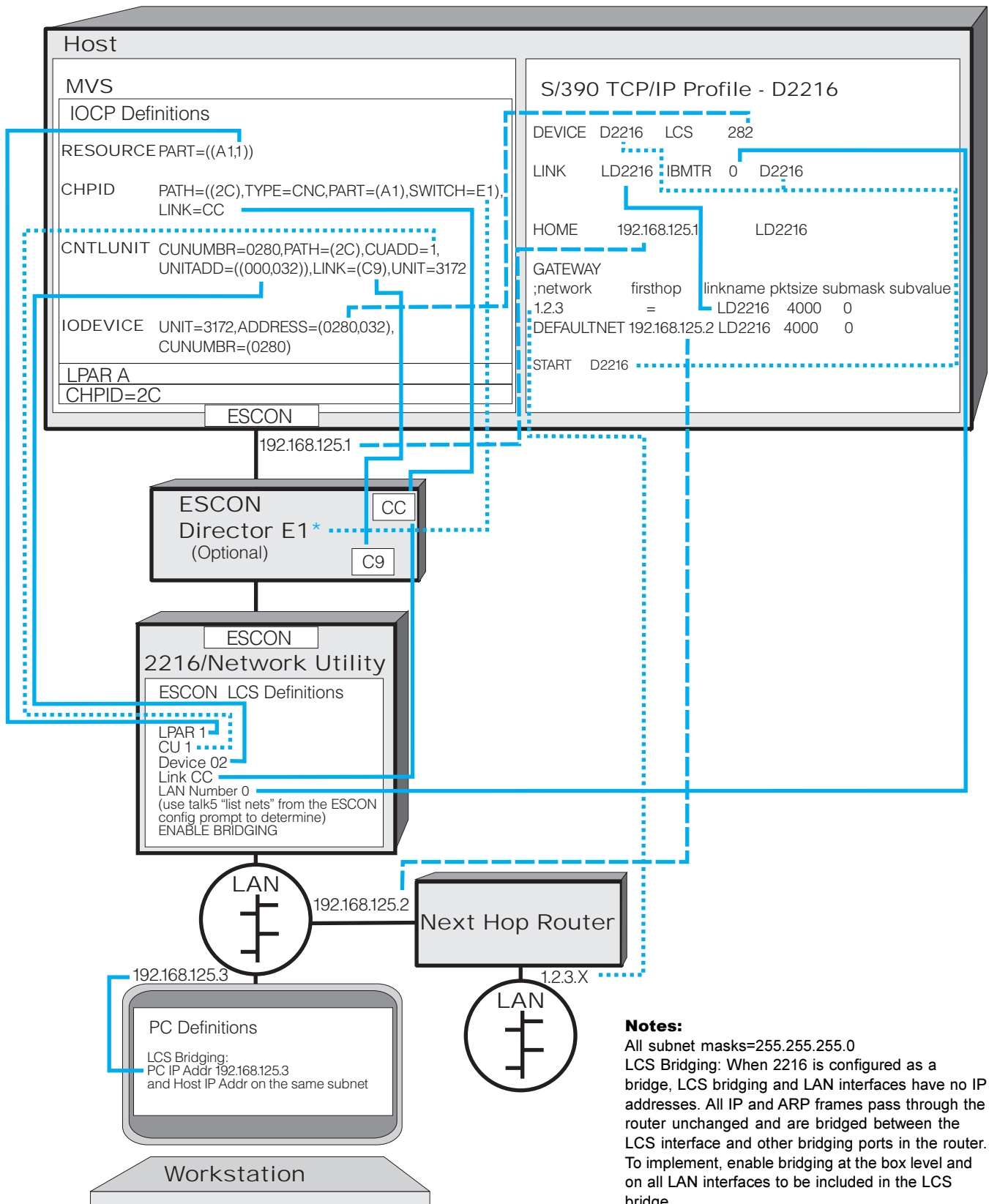
# Parallel LCS TCP/IP: Routing



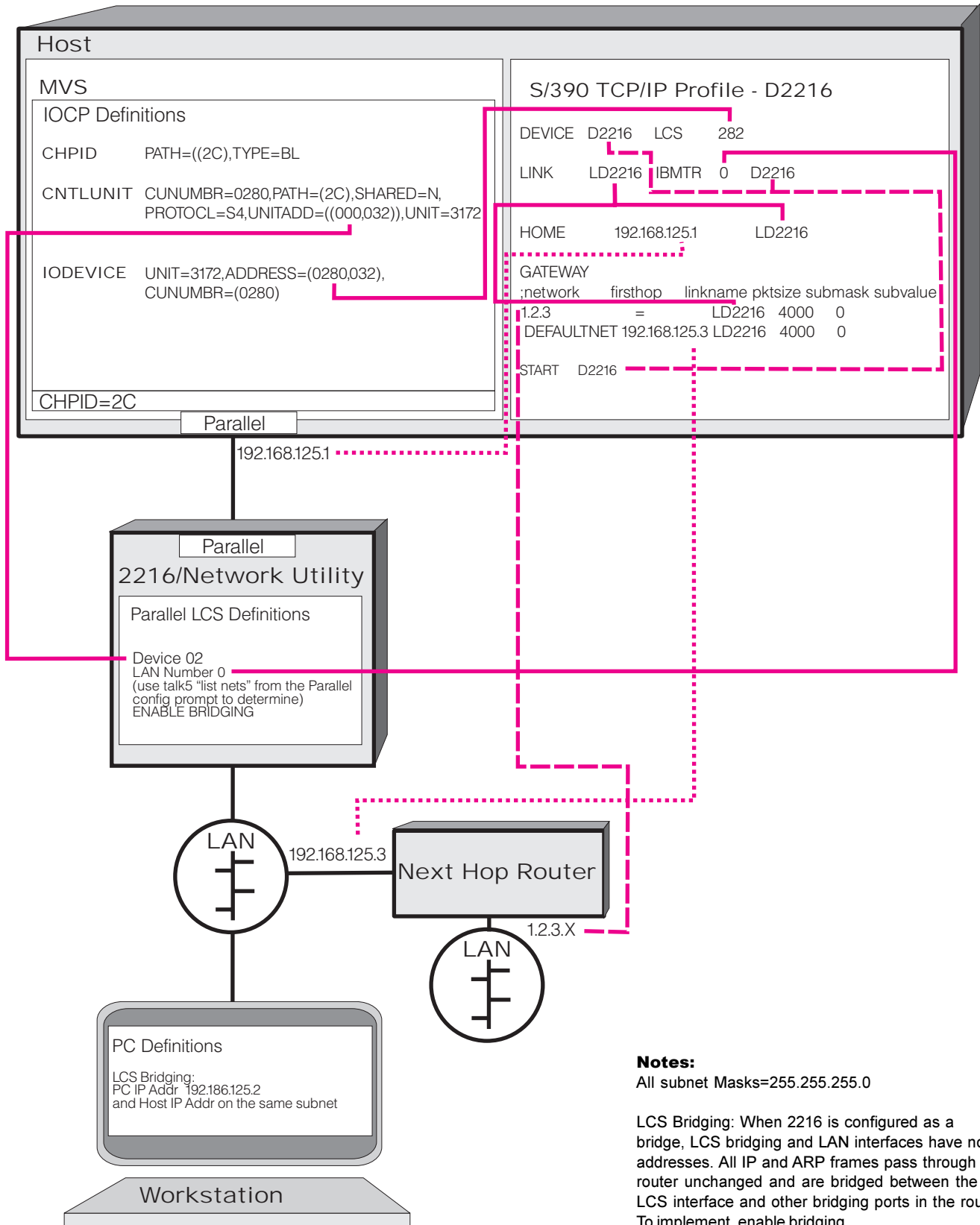
**Notes:**  
All subnet masks=255.255.255.0

LCS Routing: Requires unique IP addresses on the LCS interface and the LAN interface.

# ESCON LCS TCP/IP: Bridging



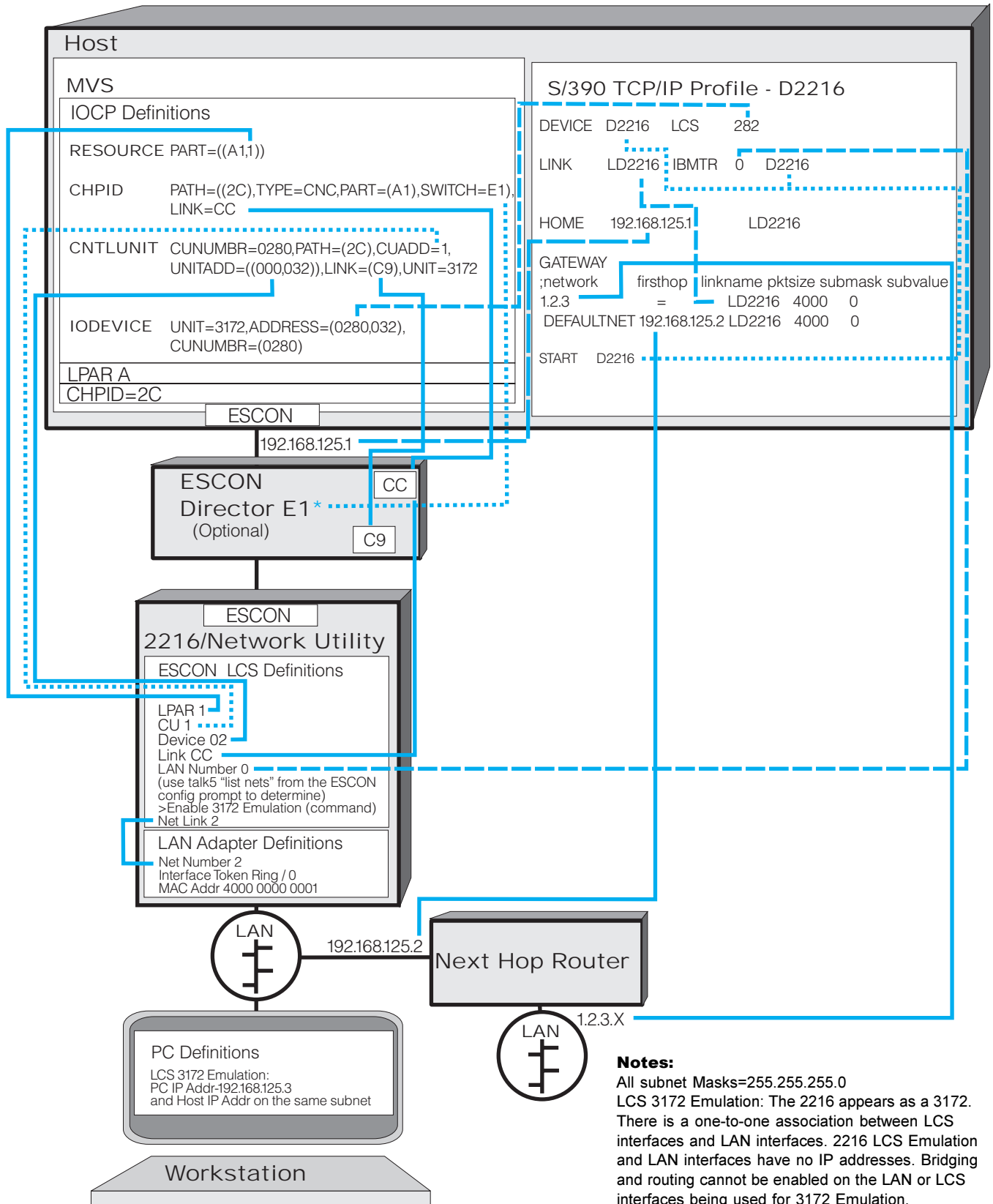
# Parallel LCS TCP/IP: Bridging



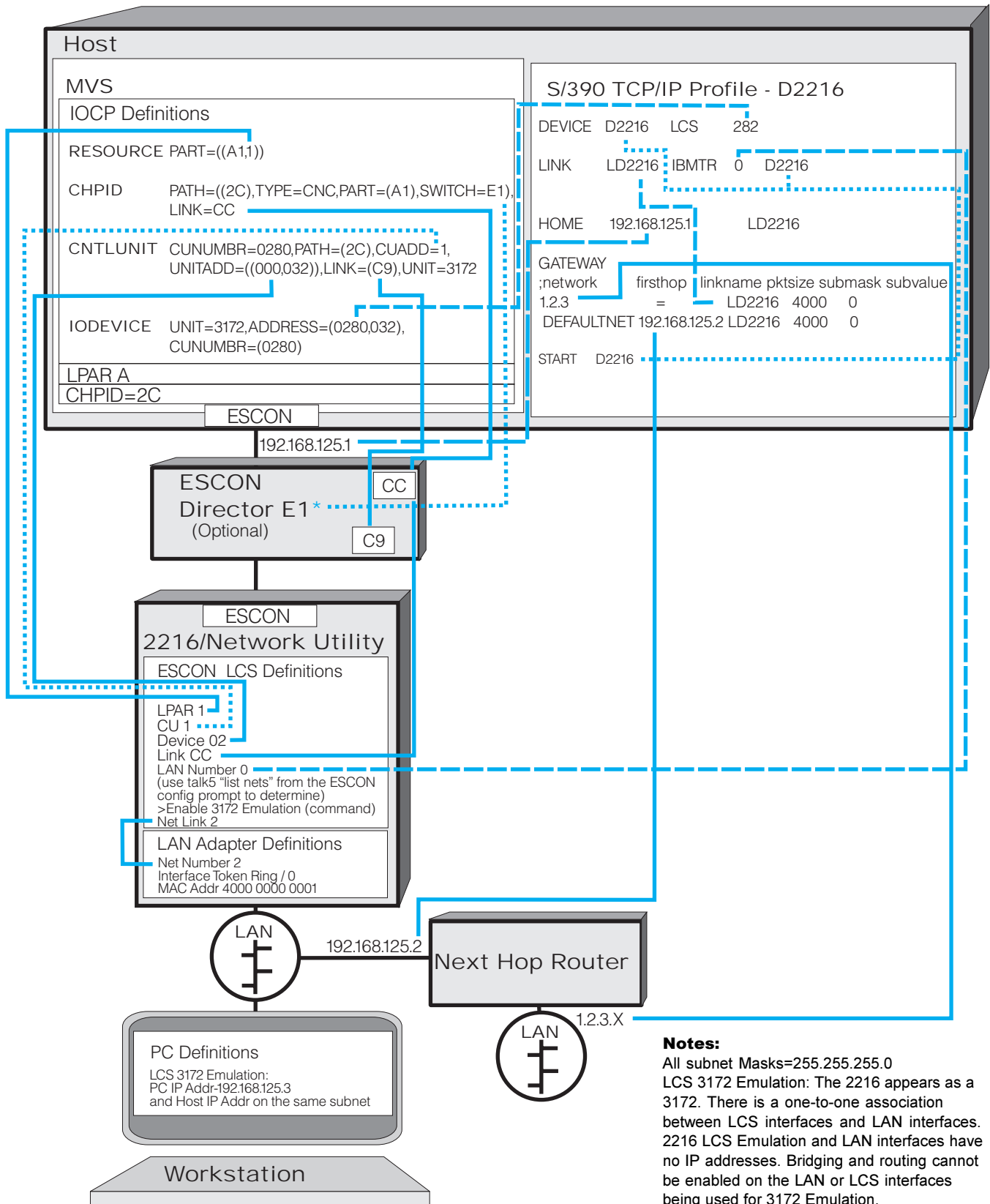
**Notes:**  
All subnet Masks=255.255.255.0

LCS Bridging: When 2216 is configured as a bridge, LCS bridging and LAN interfaces have no IP addresses. All IP and ARP frames pass through the router unchanged and are bridged between the LCS interface and other bridging ports in the router. To implement, enable bridging.

# ESCON LCS TCP/IP: 3172 Emulation



# Parallel LCS TCP/IP: 3172 Emulation

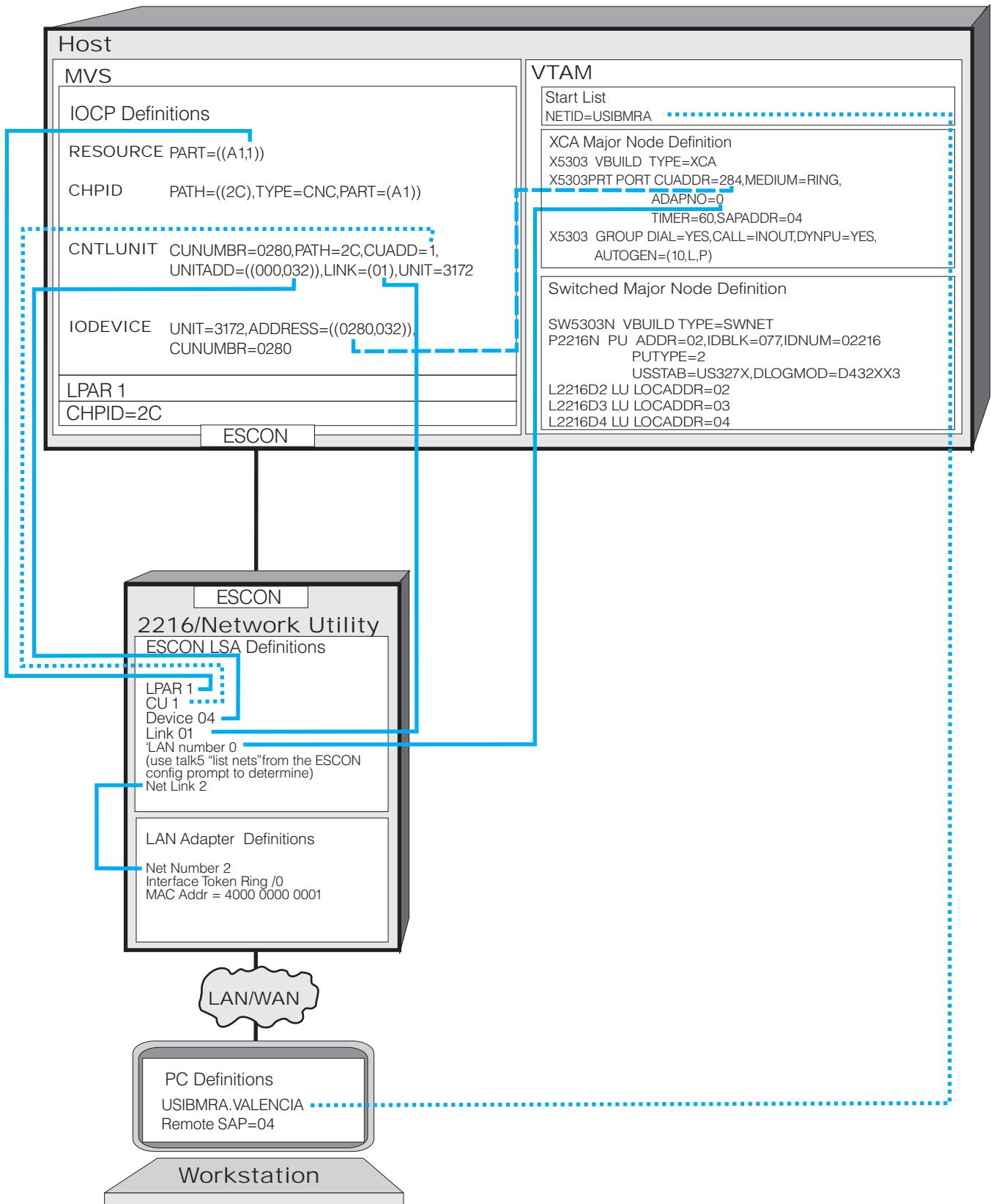


**Notes:**  
All subnet Masks=255.255.255.0  
LCS 3172 Emulation: The 2216 appears as a 3172. There is a one-to-one association between LCS interfaces and LAN interfaces. 2216 LCS Emulation and LAN interfaces have no IP addresses. Bridging and routing cannot be enabled on the LAN or LCS interfaces being used for 3172 Emulation.



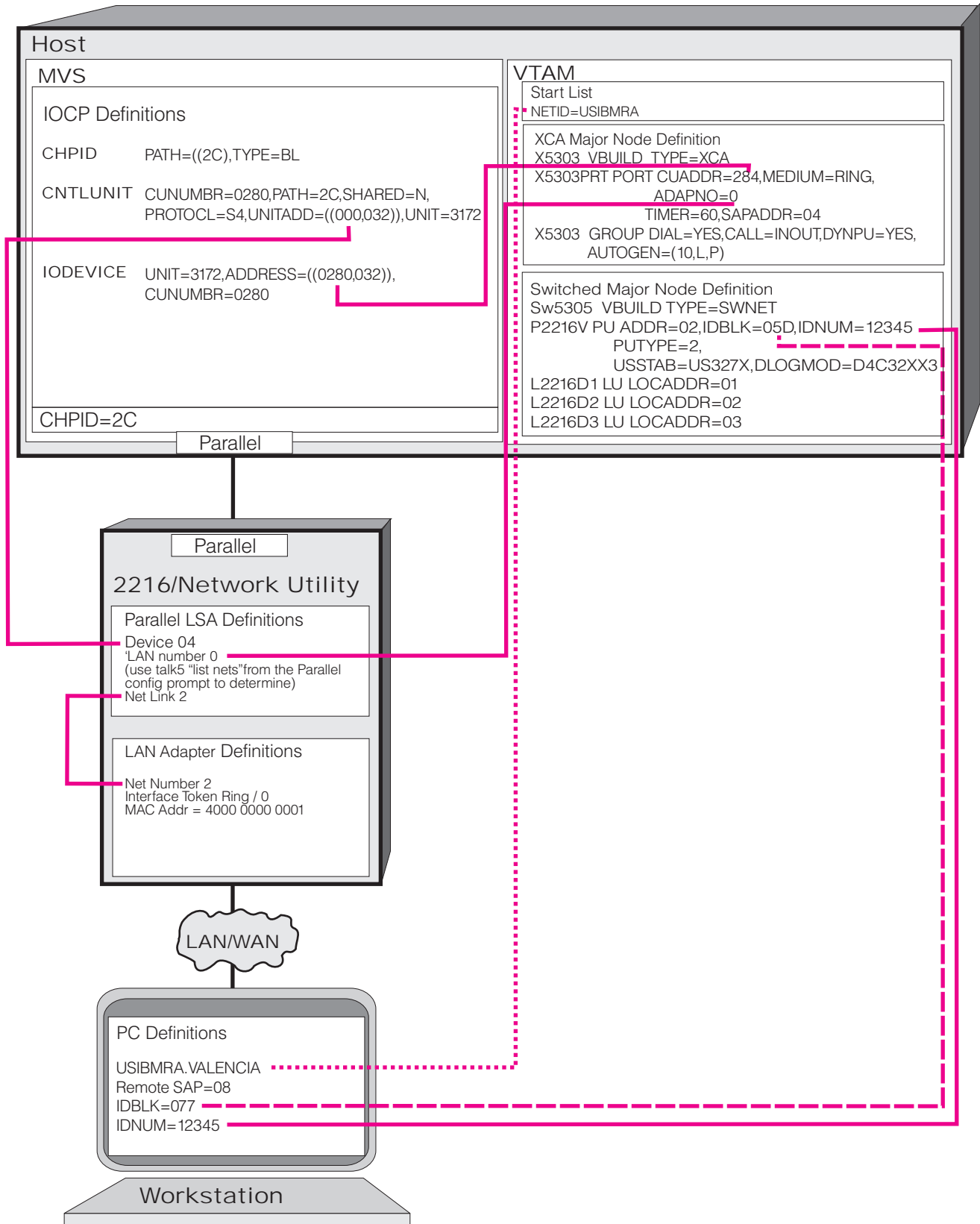
# ESCON LSA

## Direct SNA Subarea

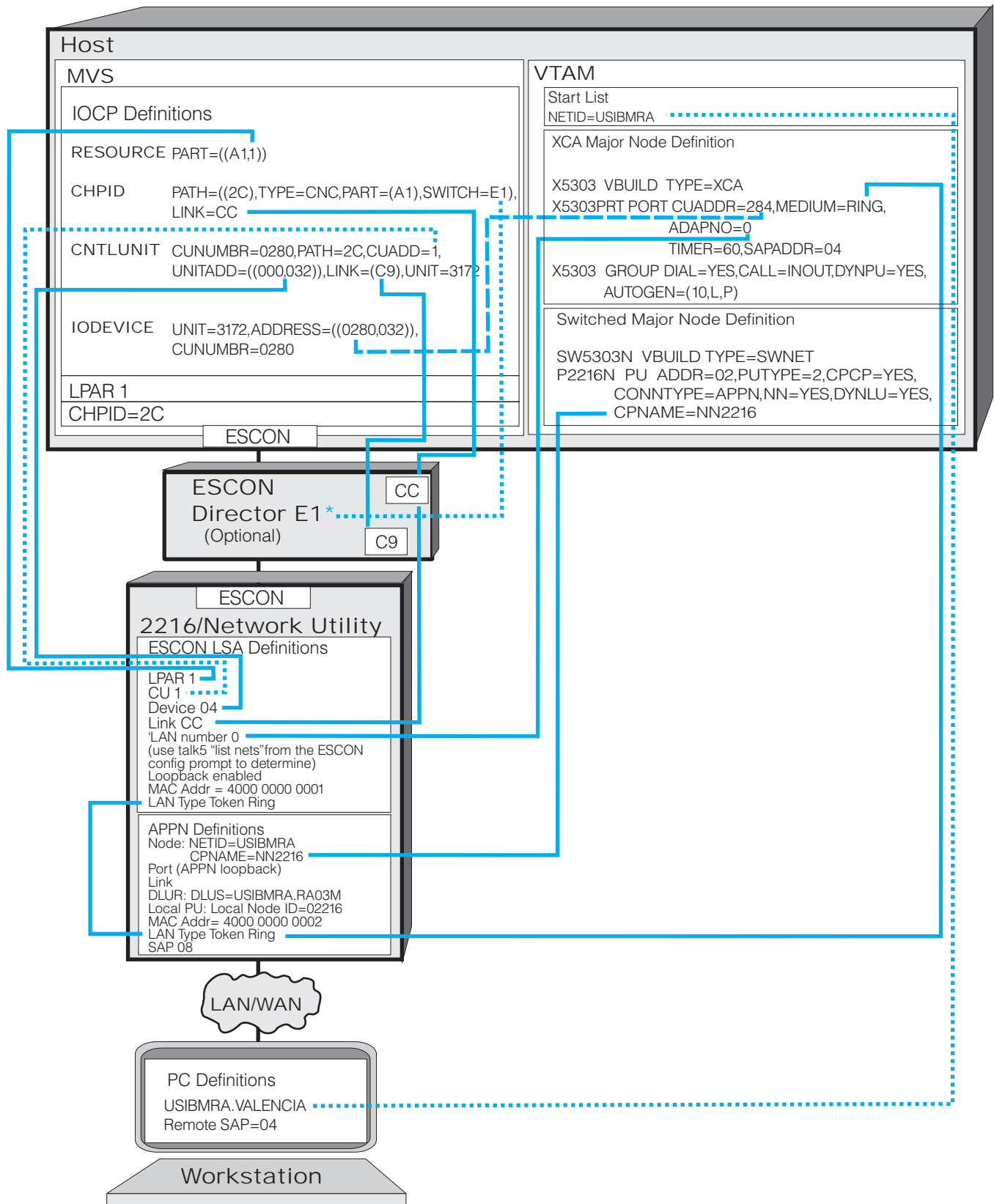


# Parallel LSA

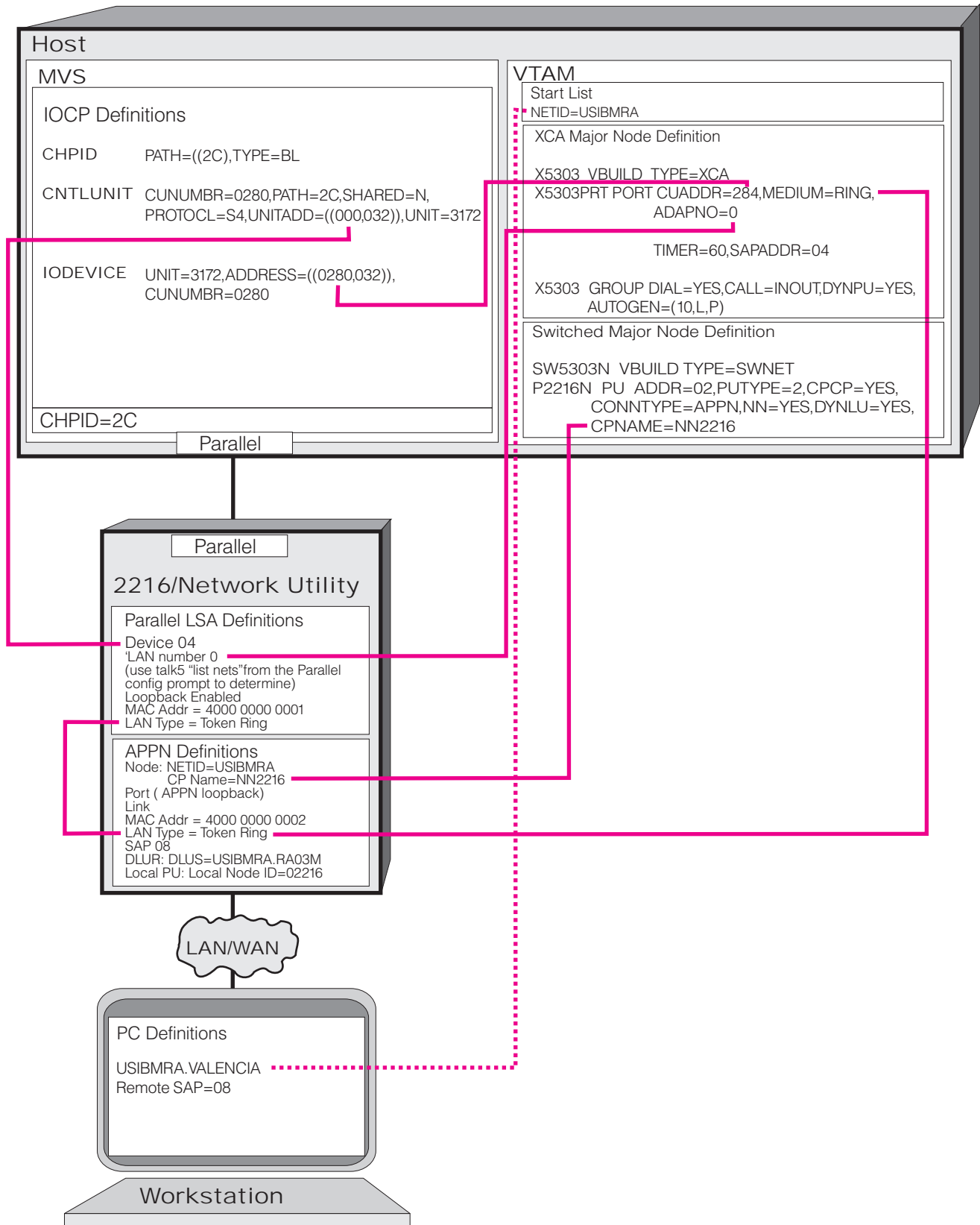
## Direct SNA Subarea



# ESCON LSA APPN/HPR

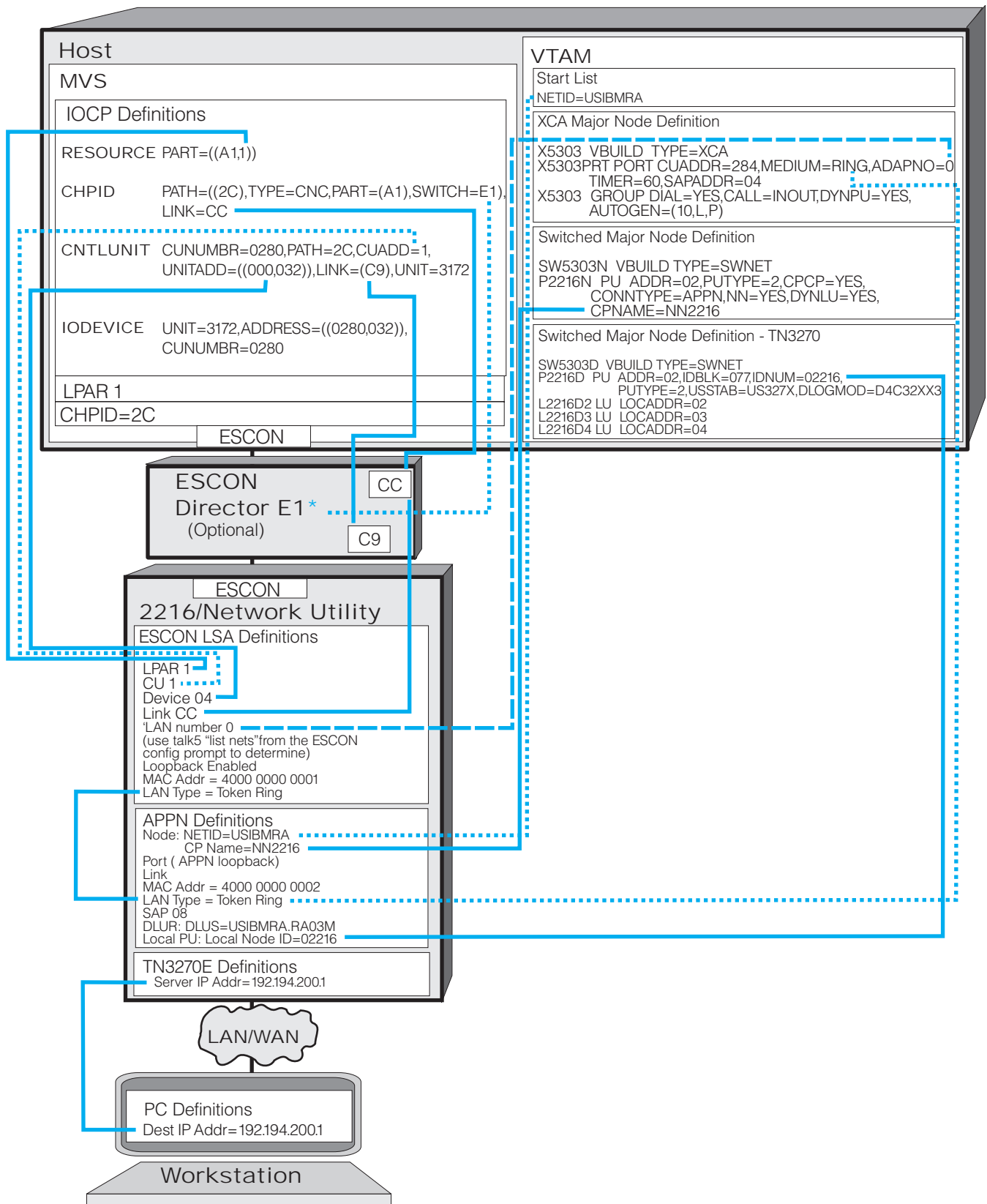


# Parallel LSA APPN/HRP



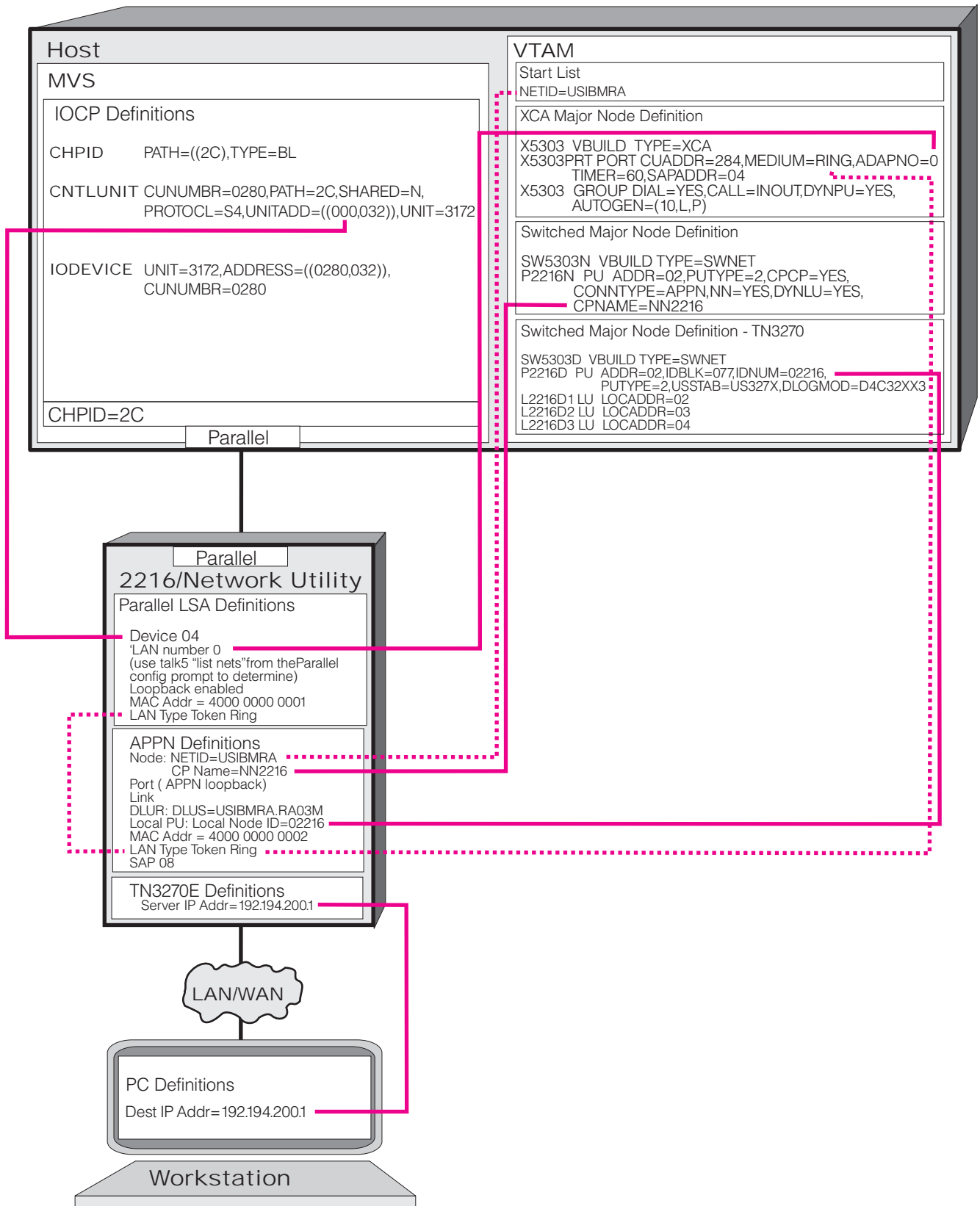
# ESCON LSA

## APPN/ISR: TN3270E Server



# Parallel LSA

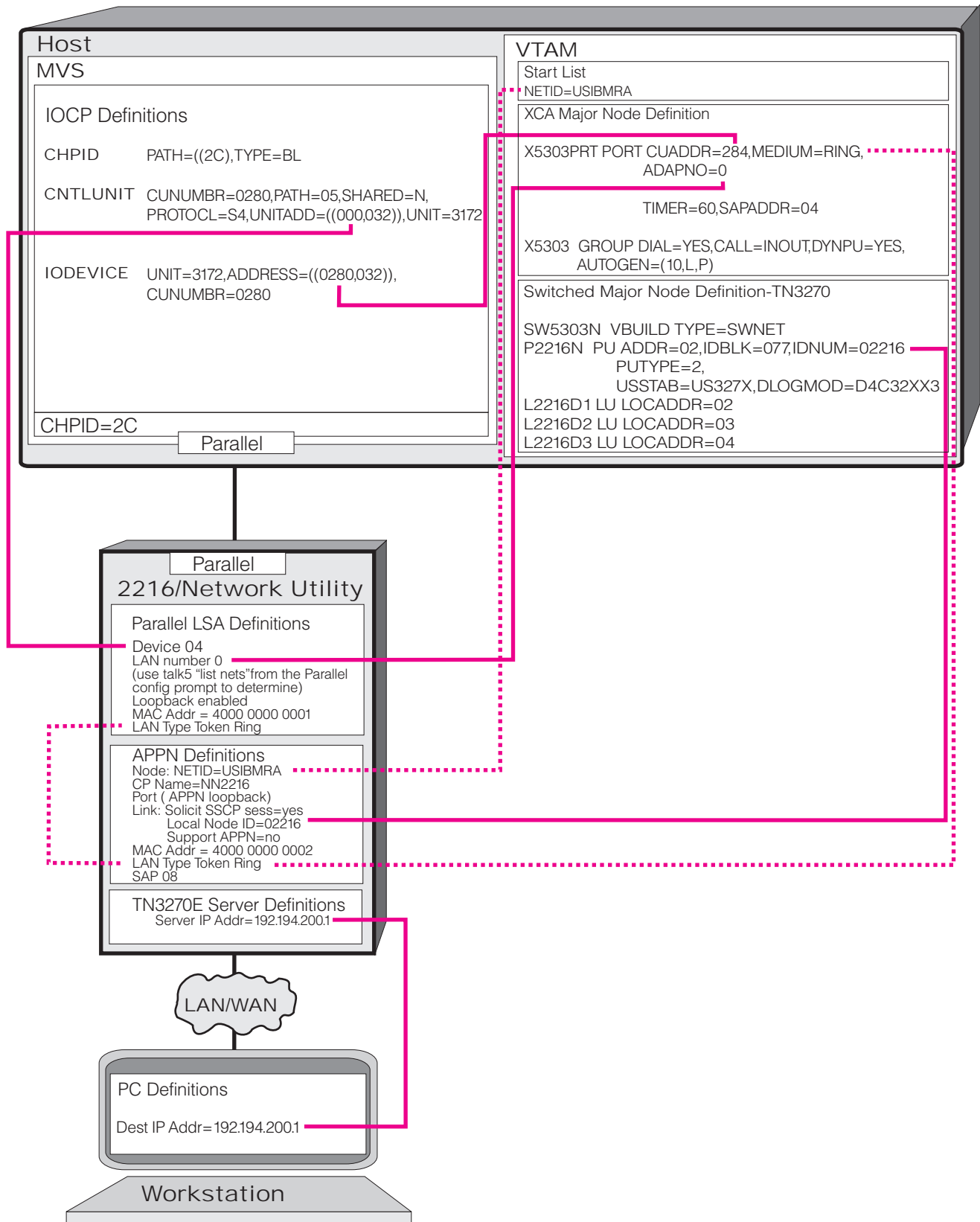
## APPN/ISR: TN3270E Server



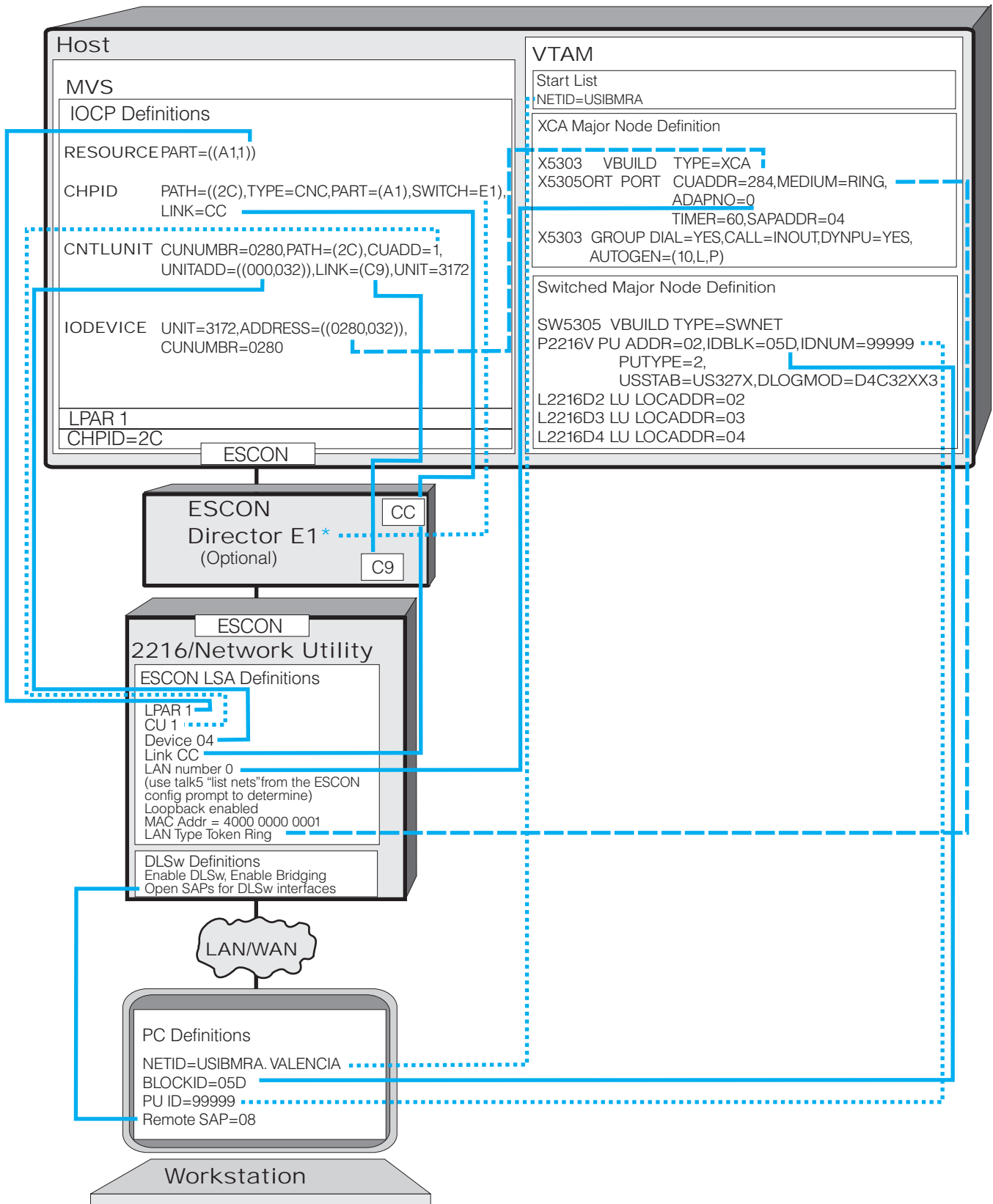


# Parallel LSA

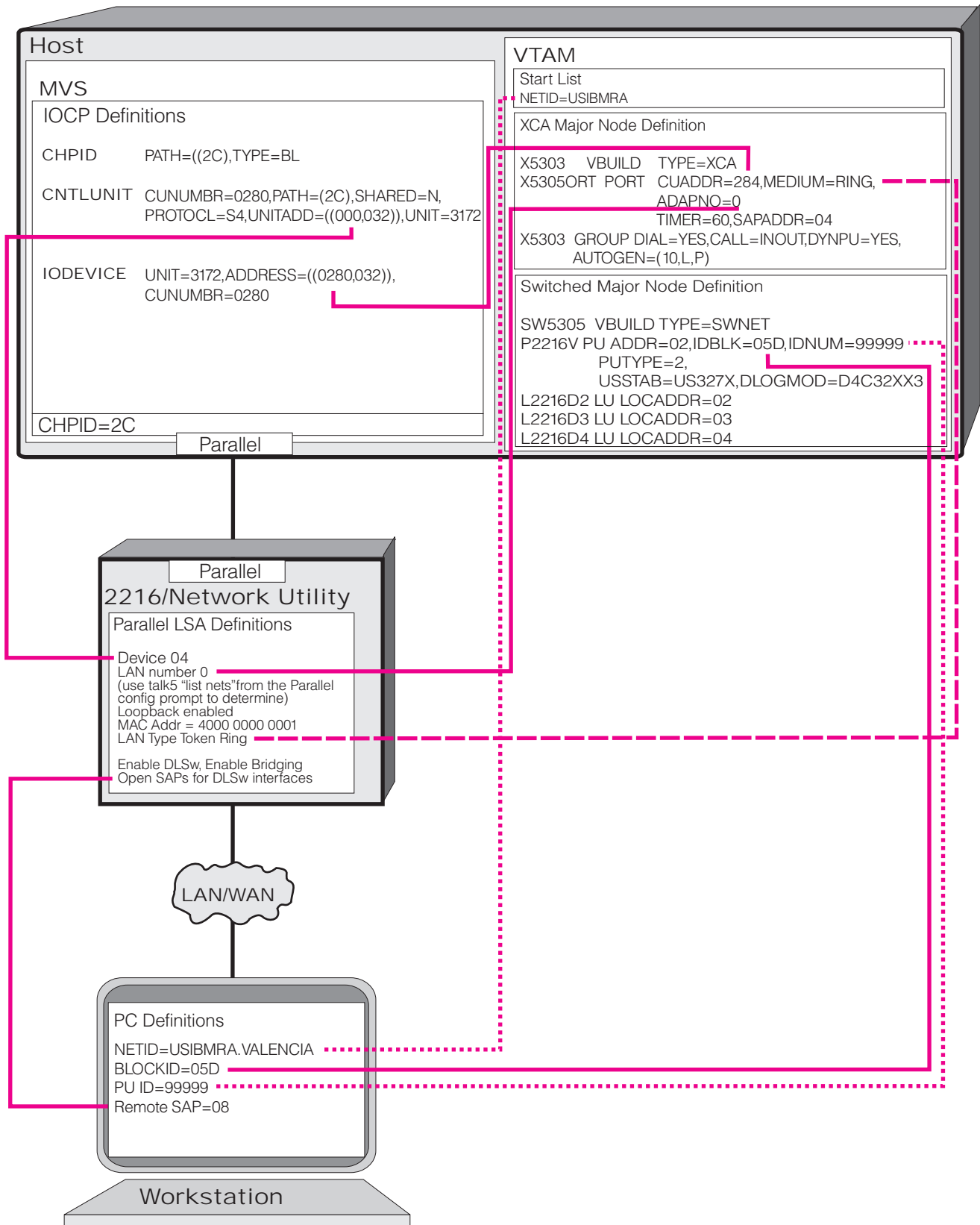
## Subarea: TN3270E Server







# Parallel LSA DLSw





## Parameter Definitions for ESCON Channel Configurations

### HOST MVS IOCP Definition

#### RESOURCE Definition Block

Identifies S/390 logical partitions (LPARs) by name and number. This block is present only if the S/390 is partitioned.

The general syntax is:

**PART = ((name1,x),(name2,y),..., (nameN,z))**

where:

**name** identifies the LPAR (and is referenced in the channel path statement)

**number** equals the number of the LPAR. This number is referenced in the subchannel definition on the 2216 (it is 0 if the S/390 is not partitioned)

#### Channel Path ID (CHPID) Definition Block

Identifies a channel path, defines the type of channel connection, and defines which LPARs can use the channel.

The general syntax is:

**PATH = ((x),TYPE=y,PART=(name1,name2,...,nameN),SWITCH=z, SHARED)**

where:

**x** is a unique identifier for the channel path. Often called the "CHPID" number.

**y** indicates the mode of I/O operation for the channel path. For an ESCON channel, set **y** to CNC.

**name** indicates which LPARs have access to this channel. The LPAR names must match those defined in the resource statement.

**z** identifies which ESCON Director is in this path. \* Omit this parameter if an ESCON Director is not present.

**SHARED** indicates that EMIF is used to allow LPARs to share a CHPID simultaneously.

#### Control Unit (CNTLUNIT) Definition Block

This definition block, together with the IODEVICE block, defines the path from the S/390 to the 2216/Network Utility. CNTLUNIT and IODEVICE definitions must occur in pairs. If multiple LPARs are being defined to use a single CHPID, there must be a CNTLUNIT and IODEVICE pair for each LPAR.

The general syntax is:

**CUNUMBR=a,PATH=b,CUADD=c,UNITADD=((d,e)),LINK=f,UNIT g**

where:

**a** maps the control unit to an IODEVICE macro.

**b** identifies which channel path ID is being used.

**c** specifies the control unit address of the 2216/Network Utility. Each LPAR requires a unique control unit address. The default is 0. For the 2216, each LPAR on a given CHPID must have a unique CUADD value (this restriction was removed with MAS V3R2.1). Usually, the CUADD value is chosen to match the LPAR number.

**d,e** defines the range of subchannel addresses reserved for the control unit. **d** is the first device number of the 2216. **e** is the range of reserved addresses (in decimal and no greater than 32).

**f** specifies the ESCON Director port of the 2216/Network Utility. \* If no ESCON Director is present, this parameter is omitted and the link address on the 2216/Network Utility must be set to 01.

**g** specifies the type of control unit across the channel. 3172 indicates a 2216/Network Utility is the control unit.



## Parameter Definitions for ESCON Channel Configurations (cont'd)

### IODEVICE Definition Block

This definition block, together with the CNTLUNIT block, defines the path from the S/390 to the 2216/Network Utility. The general syntax is:

**UNIT=*a*,ADDRESS=((*b,c*)),CUNUMBR=*d*, PARTITION=*e***

where:

***a*** identifies the type of downstream device. 3172 indicates a 2216/Network Utility.

***b,c*** defines the first subchannel address (in hexadecimal) and the range of reserved addresses (in decimal).

The address must be different from those assigned in the UNITADD parameter of the CNTLUNIT definition block. This address range is used in the TCP/IP profile, the VTAM Major Node definition, and VTAM TRL definition.

***d*** identifies the corresponding CNTLUNIT definition block

***e*** identifies the partition associated with this definition. This parameter is present only if the S/390 is partitioned.

### HOST TCP/IP Definition

#### DEVICE Statement

Defines the subchannel pair being used by TCP/IP. A TCP/IP profile must contain one DEVICE statement for each subchannel pair being used.

The general syntax is:

**DEVICE *name* LCS *subchannel***

where:

***name*** identifies the subchannel path being used. It has local significance only and can be any combination of alphanumeric characters.

***subchannel*** identifies the even subchannel being used for this connection. The value comes from the IODEVICE definition in the HOST MVS IOCP definition. When specified, that subchannel and the next one are both being used.

#### LINK Statement

Identifies which LCS interfaces on the 2216 are being used on a given subchannel pair. There may be multiple LINK statements associated with a single DEVICE statement. There must be an LCS interface on the 2216 for each LINK statement.

The general syntax is:

**LINK *name* *lantype* *lannumber* *devicename***

where:

***name*** identifies the LCS interface. It has local significance only and can be any combination of alphanumeric characters.

***lantype*** identifies the type of LAN interface that the 2216 LCS interface is emulating.

Allowed values are:

IBMTR = Token-Ring

ETHERNET = Ethernet V2

802.3 = Ethernet (IEEE 802.3)

ETHERor802.3 = either Ethernet format

FDDI = FDDI (supported on 2216 MAS V2R2 or later)



## Parameter Definitions for ESCON Channel Configurations (cont'd)

**lanumber** identifies which LCS interface on the 2216 is being used. The lanumber is generated sequentially for each lantype on the 2216 when the user adds an LCS interface. The lanumber can be found by entering "list nets" from the ESCON console in Talk 5 on the 2216. The lanumber is NOT the net number.

**devicename** matches an LCS interface to a subchannel pair. It must match a previously defined DEVICE statement.

### HOME Statement

Specifies the IP address(es) of the S/390 TCP/IP stack.

The general syntax is:

**HOME** *ipaddress1 link1 ipaddress2 link2*

where:

**ipaddress** specifies an IP address on the S/390

**link** specifies which link is associated with the IP address ("name" Parameter in the LINK statement.)

### GATEWAY Statement

Used only if ROUTED is not running. Defines an IP route to the LAN. Three types of routes can be defined - direct, indirect, and default. A direct route is one that is directly connected to the S/390 (for example, the subnet containing the LCS interface). An indirect route is one that is accessible through a router (for example, the subnets of the LANs on the 2216). A default route is used when neither a direct nor an indirect route to an IP address is available to the S/390.

The general syntax is:

**GATEWAY** *network firsthop linkname pktsize submask subvalue*

where:

**network** for a direct route definition is the non-subnetted part of the IP address. For an indirect route, set this parameter to the full address of the IP subnet. For a default route, set this parameter to DEFAULTNET.

**firsthop** indicates the IP address of the next hop in the IP network. For a direct route, set this parameter to an equal sign (=). For an indirect route accessible via the 2216 or a default route, set this parameter to the IP address of the net hop router.

**linkname** identifies which link the S/390 will use to reach addresses on this route. For routes accessible via the 2216, set this parameter to the name from the LINK statement associated with the LCS interface on this subnet.

**pktsize** is the maximum frame size to be used on this interface. It should be less than or equal to the packet size defined in the LCS configuration on the 2216.

**submask** specifies the subnet mask used on this route. For direct routes, set this parameter to the subnet mask defined for the LCS interface in the IP configuration of the 2216. For a direct point-to-point connection, set this parameter to HOST and set the *network* parameter to the full IP address of the LCS interface. For indirect and default routes, this parameter should be left blank.

**subvalue** for direct routes specifies the subnetted part of the IP address and, together with the *network* parameter, fully specifies the IP subnet associated with this LCS interface. For indirect and default routes, this parameter should be left blank.



## Parameter Definitions for ESCON Channel Configurations (cont'd)

### START Statement

Starts the specified subchannels. There must be a START statement for every DEVICE statement to activate the devices when TCP/IP is started. If the START statement is not present, the device can be started using an OBEY file. The 2216 LCS interface will remain DOWN until START has been issued from TCP/IP.

The general syntax is:

**START *devicename***

where:

***devicename*** matches the name value in a previously defined DEVICE statement (it is not the "name" value from the LINK statement.)

### VTAM XCA Major Node Definition

Defines the connection between VTAM and an LSA interface on the 2216. A brief description of the statements related to 2216/Network Utility channel connectivity follows:

### VBUILD TYPE Statement

The general syntax is:

**VBUILD TYPE=*nodetype***

where:

***nodetype***=XCA

### PORT Statement

Defines the LSA connection. Ethernet V2 is not supported by VTAM.

The general syntax is:

**PORT CUADDR=*a*,MEDIUM=*b*,ADAPNO=*c***

where:

***a*** specifies the subchannel to be used to communicate with the 2216. This value must match the value specified in the IODEVICE statement in the MVS IOCP definition.

***b*** specifies the lantype to be used on the 2216. Acceptable values are:

RING = Token-Ring

CSMACD = IEEE 802.3 (Ethernet)

FDDI = FDDI

***c*** specifies the LAN number on the 2216. This value is generated when the 2216 customer adds an LSA interface. The LAN number can be found by entering "list nets" from the ESCON console in Talk 5 on the 2216. The LAN number is NOT the net number.



## Parameter Definitions for **ESCON** Channel Configurations (cont'd)

### Transport Resource List (TRL) Definition

Defines an MPC+ channel connection. A brief description of the statements related to 2216/Network Utility channel connectivity follows:

#### **VBUILD TYPE Statement**

The general syntax is:

**VBUILD TYPE=***nodetype*

where:

*nodetype*=TRL

#### **TRLE Statement**

Defines the MPC+ channel interface.

The general syntax is:

**name TRLE LCNTL=***a***, MAXBFRU=***b***, READ=***c***, WRITE=***d***, REPLYTO=***e*

where:

*name* is a unique identifier for the TRL

*a* identifies the connection type. *a* must be set to MPC

*b* sets the maximum number of buffers available to VTAM

*c, d* specify the subchannels that belong to the MPC+ group, and identify their direction. The subchannel numbers come from the IODEVICE statement in the MVS IOCP definition. Also note that the designations READ and WRITE in the TRLE statement are from the HOST perspective whereas the corresponding MPC+ definition in the 2216/Network Utility is from the perspective of the 2216/Network Utility. Therefore, subchannels designated as READ on the host must be designated WRITE on the 2216, and vice-versa.

There can be multiple READ WRITE parameters in the TRLE statement, but there must be at least one of each.

*e* specifies the reply timeout value in seconds







## Parameter Definitions for **Parallel** Channel Configurations

### HOST MVS IOCP Definition

#### Channel Path ID (CHPID) Definition Block

Identifies a channel path and defines the type of channel connection.

The general syntax is:

**PATH = ((*x*),TYPE=*y*)**

where:

*x* is a unique identifier for the channel path. Often called the "CHPID" number.

*y* indicates the type of channel. For an parallel channel, set *y* to BL.

#### Control Unit (CNTLUNIT) Definition Block

This definition block, together with the IODEVICE block, defines the path from the S/390 to the 2216/Network Utility. CNTLUNIT and IODEVICE definitions must occur in pairs.

The general syntax is:

**CUNUMBR=*a*,PATH=*b*,UNITADD=((*c*,*d*)),UNIT=*e*,PROTOCL=*f*,SHARED=*g***

where:

*a* identifies the control unit definition.

*b* identifies which channel path is being used.

*c*,*d* defines the range of subchannel addresses reserved for the control unit. *c* is the first subchannel address (in hexadecimal). *d* is the range of reserved addresses (in decimal and no greater than 32)

*e* specifies the type of control unit across the channel. 3172 indicates a 2216/Network Utility is the control unit.

*f* specifies the interface protocol that the parallel control unit uses. Allowed values are:

D=Direct Coupled Interlock

S=Data Streaming, 3MB

S4=Data Streaming, 4.5MB

*g* indicates that EMIF is used to allow LPARs to share a CHPID simultaneously and specifies the level of concurrency of I/O request that the parallel channel path allows for the control unit. Must be set to N.

#### IODEVICE Definition Block

This definition block, together with the CNTLUNIT block, defines the path from the S/390 to the 2216/Network Utility.

The general syntax is:

**UNIT=*a*,ADDRESS=((*b*,*c*)),CUNUMBR=*d***

where:

*a* identifies the type of downstream device. 3172 indicates a 2216/Network Utility.

*b*,*c* defines the first subchannel address (in hexadecimal) and the range of reserved addresses (in decimal).

This address range is used in the TCP/IP profile, the VTAM Major Node definition, and VTAM TRL definition.

*d* identifies the corresponding CNTLUNIT definition block.



## Parameter Definitions for **Parallel Channel Configurations (Cont'd)**

### HOST TCP/IP Definition

#### DEVICE Statement

Defines the subchannel pair being used by TCP/IP. A TCP/IP profile must contain one DEVICE statement for each subchannel pair being used.

The general syntax is:

**DEVICE *name* LCS *subchannel***

where:

***name*** identifies the subchannel path being used. It has local significance only and can be any combination of alphanumeric characters.

***subchannel*** identifies the even subchannel being used for this connection. The value comes from the IODEVICE definition in the HOST MVS IOCP definition. When specified, that subchannel and the next one are both being used.

#### LINK Statement

Identifies which LCS interfaces on the 2216 are being used on a given subchannel pair. There may be multiple LINK statements associated with a single DEVICE statement. There must be an LCS interface on the 2216 for each LINK statement.

The general syntax is:

**LINK *name* *lantype* *lannumber* *devicename***

where:

***name*** identifies the LCS interface. It has local significance only and can be any combination of alphanumeric characters.

***lantype*** identifies the type of LAN interface that the 2216 LCS interface is emulating. Allowed values are:

IBMTR = Token-Ring

ETHERNET = Ethernet V2

802.3 = Ethernet (IEEE 802.3)

ETHERor802.3 = either Ethernet format FDDI = FDDI (supported on 2216 Release 2.1 or later)

***lannumber*** identifies which LCS interface on the 2216 is being used. The *lannumber* is generated sequentially for each *lantype* on the 2216 when the user adds an LCS interface. The *lannumber* can be found by entering "list nets" from the parallel console in Talk 5 on the 2216. The *lannumber* is NOT the net number

***devicename*** matches an LCS interface to a subchannel pair. It must match a previously defined DEVICE statement.

#### HOME Statement

Specifies the IP address(es) of the S/390 TCP/IP stack.

The general syntax is:

**HOME *ipaddress1* *link1* *ipaddress2* *link2***

where:

***ipaddress*** specifies an IP address on the S/390

***link*** specifies which link is associated with the IP address



## Parameter Definitions for **Parallel Channel Configurations (Cont'd)**

### **GATEWAY Statement**

Used only if ROUTED is not running. Defines an IP route to the LAN. Three types of routes can be defined - direct, indirect, and default. A direct route is one that is directly connected to the S/390 (for example, the subnet containing the LCS interface). An indirect route is one that is accessible through a router (for example, the subnets of the LANs on the 2216). A default route is used when neither a direct nor an indirect route to an IP address is available to the S/390.

The general syntax is:

```
GATEWAY network firsthop linkname pktsize sub mask subvalue
```

where:

**network** for a direct route definition is the non-subnetted part of the IP address. For an indirect route, set this parameter to the full address of the IP subnet. For a default route, set this parameter to DEFAULTNET.

**firsthop** indicates the IP address of the next hop in the IP network. For a direct route, set this parameter to an equal sign (=). For an indirect route accessible via the 2216 or a default route, set this parameter to the IP address of the 2216 LCS interface.

**linkname** identifies which link the S/390 will use to reach addresses on this route. For routes accessible via the 2216, set this parameter to the name from the LINK statement associated with the LCS interface on this subnet.

**pktsize** is the maximum frame size to be used on this interface. It should be less than or equal to the packet size defined in the LCS configuration on the 2216.

**submask** specifies the subnet mask used on this route. For direct routes, set this parameter to the subnet mask defined for the LCS interface in the IP configuration of the 2216. For a direct point-to-point connection, set this parameter to HOST and set the *network* parameter to the full IP address of the LCS interface. For indirect and default routes, this parameter should be left blank.

**subvalue** for direct routes specifies the subnetted part of the IP address and, together with the *network* parameter, fully specifies the IP subnet associated with this LCS interface. For indirect and default routes, this parameter should be left blank.

### **START Statement**

Starts the specified subchannels. There must be a START statement for every DEVICE statement to activate the devices when TCP/IP is started. If the START statement is not present, the deviec can be started using an OBEY file. The 2216 PCS interface will remain DOWN until START has been issued from TCP/IP.

The general syntax is:

```
START devicename
```

where:

**devicename** matches the name value in a previously defined DEVICE statement (it is not the name value from the LINK statement)

### **VTAM XCA Major Node Definition**

Defines the connection between VTAM and an LSA interface on the 2216. A brief description of the statements related to 2216/Network Utility channel connectivity follows:

### **VBUILD TYPE Statement**

The general syntax is:

```
VBUILD TYPE= nodetype
```

where:

**nodetype** =TRL



## Parameter Definitions for Parallel Channel Configurations (Cont'd)

### PORT Statement

Defines the LSA connection. Ethernet V2 is not supported by VTAM.

The general syntax is:

**PORT CUADDR=*a*,MEDIUM=*b*,ADAPNO=*c***

where:

- a** specifies the subchannel to be used to communicate with the 2216. This value must match the value specified in the IODEVICE statement in the MVS IOCP definition.
- b** specifies the lantype to be used on the 2216. Acceptable values are:
  - RING = Token-Ring
  - CSMACD = Ethernet (IEEE 802.3)
  - FDDI = FDDI
- c** specifies the LAN number on the 2216. This value is generated when the 2216 customer adds an LSA interface. The LAN number can be found by entering "list nets" from the parallel console in Talk 5 on the 2216. The LAN number is NOT the net number

### Transport Resource List (TRL) Definition

Defines an MPC+ channel connection. A brief description of the statements related to 2216/Network Utility channel connectivity follows:

#### VBUILD TYPE Statement

The general syntax is:

**VBUILD TYPE=*nodetype***

where:

***nodetype*** =TRL

#### TRLE Statement

Defines the MPC+ channel interface.

The general syntax is:

***name* TRLE LCNTL=*a*, MAXBFRU=*b*, READ=*c*, WRITE=*d*, REPLYTO=*e***

where:

- name*** is a unique identifier for the TRL.
- a** identifies the connection type. **a** must be set to MPC.
- b** sets the maximum number of buffers available to VTAM.
- c, d** specify the subchannels that belong to the MPC+ group, and identify their direction. The subchannel numbers come from the IODEVICE statement in the MVS IOCP definition. Also note that the designations READ and WRITE in the TRLE statement are from the HOST perspective whereas the corresponding MPC+ definition in the 2216/Network Utility is from the perspective of the 2216/Network Utility. Therefore, subchannels designated as READ on the host must be designated WRITE on the 2216, and vice-versa. There can be multiple READ WRITE parameters in the TRLE statement, but there must be at least one of each.
- e** specifies the reply timeout value in seconds