

## SPC Card Group

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The Service Platform Card (SPC) provides the service resources element of the three critical system elements of the VCO/4K product line—system control, port interfaces, and service resources.

The SPC combines the capabilities of existing individual service resource cards in the VCO/4K product line into a single card, which contains all of the functions previously provided by the separate cards.

The hardware design of the SPC allows the software operating within the SPC and the SPC's mezzanine card (the Service Resource Module, or SRM) the ability to exceed the older service resource function's feature set, while providing a much higher level of integration both logically and physically.

The SPC architecture allows any service resource function of the VCO/4K product family to be performed with this card as a base platform, given a minimum of one SRM mezzanine card on the board to perform the service function(s). Mezzanine cards have the capability to perform more than one service function, and to perform these functions simultaneously.

The SPC supports a variety of service facilities implemented via software. This application software executes on the SRM's DSPs. This allows the SPC to support multiple tone plans and easily updated algorithm changes.

The following services are provided:

- DTMF detection
- Call progress analysis
- MF reception
- MFCR2 reception and transmission
- Tone generation
- DTMF and MF outpulsing
- Call conferencing

For additional information concerning the SPC, refer to the *Cisco VCO/4K Card Technical Descriptions*.

## SPC Card Group

The following objects are included in the SPC Card group.

## spcTable

{ spc 1 }

### Description

A list of Service Platform Cards.

### Object Identifier

1.3.6.1.4.1.886.1.13

### Data Type

Sequence of SpcEntry

### Access Policy

Not accessible

### Status

Mandatory

## spcEntry

{ spcTable 1 }

### Description

An entry in the spcTable.

### Object Identifier

1.3.6.1.4.1.886.1.13.1.1

### Data Type

SpcEntry

### Access Policy

Not accessible

### Status

Mandatory

## spcIndex

{ spcEntry 1 }

### Description

The value of this object uniquely identifies an entry in the spcTable. It corresponds to the physical location of the card and is a function of the rack (R), level (L) and the slot (S) that the card occupies.

### Object Identifier

1.3.6.1.4.1.886.1.13.1.1.1

### Data Type

CardIndex

### Access Policy

Read only

**Status**

Mandatory

**spcRack**

{spcEntry 2}

**Description**

The rack (R) that the card occupies.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.2

**Data Type**

Integer

**Access Policy**

Read only

**Status**

Mandatory

**spcLevel**

{spcEntry 3}

**Description**

The level (L) that the card occupies.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.3

**Data Type**

Integer

**Access Policy**

Read only

**Status**

Mandatory

**spcSlot**

{spcEntry 4}

**Description**

The slot (S) that the card occupies.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.4

**Data Type**

Integer

**Access Policy**

Read only

**Status**

Mandatory

**spcRevVer**

{spcEntry 5}

**Description**

Indicates the version and the revision level of the firmware installed on the card. Object can be used to verify that firmware revisions for all network SE and service circuit cards are at the current level.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.5

**Data Type**

DisplayString (size 1..5)

**Access Policy**

Read only

**Status**

Mandatory

**spcAlarm**

{spcEntry 6}

**Description**

The value tracks which alarms are active on this SE. Card alarms are internally represented as a bit map. There are 32 bits in all, a bit is set to 1 for each active alarm. The following is the representation:

| Bit   | Alarm Description                           |
|-------|---|
| 0     | Card failure—minor                          |
| 1     | Port failure—minor                          |
| 2     | T1/E1/PRI carrier failure—major             |
| 3     | T1/E1/PRI remote carrier failure—major      |
| 4     | T1/E1/PRI card failure—major                |
| 5     | T1/E1 Signaling Bit—minor                   |
| 6     | PRI Bipolar Violations MLimit reached       |
| 7     | T1/E1/PRI Out of Frame MLimit reached—minor |
| 8     | T1/E1 Slip Maint Limit reached—minor        |
| 9     | T1/E1/PRI OOF condition—minor               |
| 10    | PRI D-channel failure—major                 |
| 11-32 | Unsigned filler (set to zero)               |

The NMS application needs to interpret the alarm status from the integer value returned by this object.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.6

**Data Type**

CardIndex

**Access Policy**

Read only

**Status**

Mandatory

## spcGroupNum

{spcEntry 7}

**Description**

Specifies the group number of an interface.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.7

**Data Type**

Integer

**Access Policy**

Read only

**Status**

Mandatory

## spcIntfNum

{spcEntry 8}

**Description**

Specifies the interface number of an interface.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.8

**Data Type**

Integer

**Access Policy**

Read only

**Status**

Mandatory

## spcType

{spcEntry 9}

### Description

The service type configured for this SE.

### Object Identifier

1.3.6.1.4.1.886.1.13.1.1.9

### Data Type

Integer. The following table lists the possible values:

| Value | Type     |
|-------|----------|
| 1     | dtmf     |
| 2     | cpa      |
| 3     | mfrc     |
| 4     | mfc2     |
| 5     | tone     |
| 6     | outpulse |
| 7     | conf     |

### Access Policy

Read only

### Status

Mandatory

## spcStatus

{spcEntry 10}

### Description

Indicates the current status of the SE. Possible values and their meanings are listed in the following table:

| Value           | Meaning  |
|-----------------|--|
| active          | Ports on this card can be involved in active calls and can be allocated to new calls. The agent may take up to 10 seconds to set a card to active.                     |
| maintenance     | One or more ports on this card may be involved in active calls; no ports are allocated to new calls. The agent may take up to 10 seconds to set a card to maintenance. |
| diagnostics     | No ports on this card are involved in calls or allocated to new calls.   |
| outOfService    | No ports on this card can be involved in active calls; no ports are allocated to new calls.  |
| remote-Loopback | Diagnostic state.  |

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.10

**Data Type**

Integer. Possible values are as follows:

| Value | String         |
|-------|----------------|
| 1     | active         |
| 2     | maintenance    |
| 3     | diagnostics    |
| 4     | outOfService   |
| 5     | remoteLoopback |

**Access Policy**

Read-write

**Status**

Mandatory

**spcPhyAdd**

{spcEntry 11}

**Description**

The physical address of this SE. This is the port address of the first port on the SE.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.11

**Data Type**

Integer

**Access Policy**

Read only

**Status**

Mandatory

**spcErrorStatus**

{spcEntry 12}

**Description**

Registers the last error that occurred on this card entry. For a complete list of errors, refer to the “Card Error Messages” section on page A-1.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.12

**Data Type**

Integer

**Access Policy**

Read only

**Status**

Mandatory

## spcOwnerString

{spcEntry 13}

**Description**

The entity that configured this card entry and is therefore using the resources assigned to it.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.13

**Data Type**

Integer

**Access Policy**

Read-write

**Status**

Mandatory

## spcEntryStatus

{spcEntry 14}

**Description**

The status of this service platform card entry. This object is used to add/delete/modify a SE. A createRequest of any SE creates the specific SE. Setting any SE to invalid deletes the specific SE.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.14

**Data Type**

EntryStatus

**Access Policy**

Read-write

**Status**

Mandatory

## spcDwnldVersion

{spcEntry 15}

**Description**

Version/revision of the card download file.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.15

**Data Type**

DisplayString (size 1..4)

**Access Policy**

Read only

**Status**

Mandatory

## spcUpgradeState

{spcEntry 16}

**Description**

The upgrade state of this trunk card.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.16

**Data Type**

UpgradeState

**Access Policy**

Read only

**Status**

Mandatory

## spcTableLastModified

{spcEntry 17}

**Description**

The time (in hundredths of a second) since the epoch that the spcTable was last modified.

**Object Identifier**

1.3.6.1.4.1.886.1.13.1.1.17

**Data Type**

TimeTicks

**Access Policy**

Read only

**Status**

Mandatory

## SPC Port Table

Use the SPC port table section to retrieve states and addresses, and to assign names and resource groups for individual ports on an SPC card.

### spcPortTable

{ spc 3 }

**Description**

A list of port entries on each service platform card.

**Object Identifier**

1.3.6.1.4.1.886.1.13.3

**Data Type**

Sequence of SpcPortEntry

**Access Policy**

Not accessible

**Status**

Mandatory

### spcPortEntry

{ spcPortTable 1 }

**Description**

A table entry containing objects belonging to a particular SPC port.

**Object Identifier**

1.3.6.1.4.1.886.1.13.3.1

**Data Type**

SpcPortEntry

**Access Policy**

Not accessible

**Status**

Mandatory

## spcPortIndex

{ spcPortEntry 1 }

### Description

Indicates the port number on the SPC SE. The number of ports on a SE depends on the service configured for the SE.

### Object Identifier

1.3.6.1.4.1.886.1.13.3.1.1

### Data Type

Integer

### Access Policy

Read only

### Status

Mandatory

## spcPortName

{ spcPortEntry 2 }

### Description

Optional database entry used to identify individual circuits. When a port name is used, each one should be unique and descriptive of port usage. This object accepts up to 8 upper or lowercase alphanumeric characters.

### Object Identifier

1.3.6.1.4.1.886.1.13.3.1.2

### Data Type

DisplayString (size 0..8)

### Access Policy

Read-write

### Status

Mandatory

## spcPortState

{ spcPortEntry 3 }

### Description

The state of port can be changed to active or inactive. State changes on ports should only be performed one at a time.

### Object Identifier

1.3.6.1.4.1.886.1.13.3.1.3

### Data Type

Integer (1 = active; 2=inactive)

**Access Policy**

Read-write

**Status**

Mandatory

**spcPortMajorState**

{spcPortEntry 4}

**Description**

The major state of the port.

**Object Identifier**

1.3.6.1.4.1.886.1.13.3.1.4

**Data Type**

PortMajorState

**Access Policy**

Read only

**Status**

Mandatory

**spcPortSuppState**

{spcPortEntry 5}

**Description**

The supplementary state of the port.

**Object Identifier**

1.3.6.1.4.1.886.1.13.3.1.5

**Data Type**

PortSuppState

**Access Policy**

Read only

**Status**

Mandatory

**spcPortAddress**

{spcPortEntry 6}

**Description**

Specifies the software address of the port for which data is displayed. The port can also be specified by the hardware address.

**Object Identifier**

1.3.6.1.4.1.886.1.13.3.1.6

**Data Type**

Integer

**Access Policy**

Read only

**Status**

Mandatory

**spcPortResGroupIndex**

{spcPortEntry 7}

**Description**

This is a foreign key corresponding to the resGroupIndex in the resGroupTable. Indicates the number of the resource group to which this port belongs. If no resource group assignment is made, this object is 0. Possible values range between 0 and 63 for 2K mode operation, and from 0 to 244 for 4K mode.

To change this attribute, set this EntryStatus and the one in the resGroupTable to underModification.

**Object Identifier**

1.3.6.1.4.1.886.1.13.3.1.7

**Data Type**

Integer (0..63)

**Access Policy**

Read-write

**Status**

Mandatory

**spcPortResGroupPosition**

{spcPortEntry 8}

**Description**

Specifies the position of the port in the assigned resource group.

**Object Identifier**

1.3.6.1.4.1.886.1.13.3.1.8

**Data Type**

Integer

**Access Policy**

Read only

**Status**

Mandatory

## spcPortErrorStatus

{spcPortEntry 9}

### Description

Registers the last error that occurred on this port entry.

### Object Identifier

1.3.6.1.4.1.886.1.13.3.1.9

### Data Type

Integer {invalidValue = 6400}

### Access Policy

Read only

### Status

Mandatory

## spcPortOwnerString

{spcPortEntry 10}

### Description

The entity that configured this entry and is therefore using the resources assigned to it.

### Object Identifier

1.3.6.1.4.1.886.1.13.3.1.10

### Data Type

OwnerString

### Access Policy

Read-write

### Status

Mandatory

## spcPortEntryStatus

{spcPortEntry 11}

### Description

The status of this table entry.

### Object Identifier

1.3.6.1.4.1.886.1.13.3.1.11

### Data Type

PortEntryStatus

### Access Policy

Read-write

**Status**

Mandatory

**spcPortTableLastModified**

{ spc 4 }

**Description**

The time (in hundredths of a second) since the epoch that the spcPortTable was last modified.

**Object Identifier**

1.3.6.1.4.1.886.1.13.3.1.4

**Data Type**

TimeTicks

**Access Policy**

Read only

**Status**

Mandatory

