

CMM Advanced Failover - CMM が冗長構成時の拡張フ

ェイルオーバー設定について

ヒント集

CMM Advanced Failover - CMM が冗長構成時の拡張フェイルオーバー設定について

CMM が 2 台で冗長構成となっている場合は、通常ひとつの IP アドレスを割り当てそれぞれプライマリとスタンバイの冗長構成になります。
これに拡張フェイルオーバー設定を行い、スタンバイ CMM にも IP アドレスを割り当てることにより拡張性のある冗長構成とすることが可能になります。

CMM の拡張フェイルオーバーの設定は以下の 3 種類あります。

- off - スタンバイ CMM のネットワーク・インターフェースを使用不可にする
- swap - スタンバイ CMM のネットワーク・インターフェースを使用可能にし、フェイルオーバー中に 2 つの CMM 間で IP アドレスをスワップする
- noswap - スタンバイ CMM のネットワーク・インターフェースを使用可能にし、フェイルオーバー中に 2 つの CMM 間で IP アドレスをスワップしない

当ガイドでは CMM の IP アドレスはデフォルトの IP アドレス、ユーザ ID の前提でご説明します。

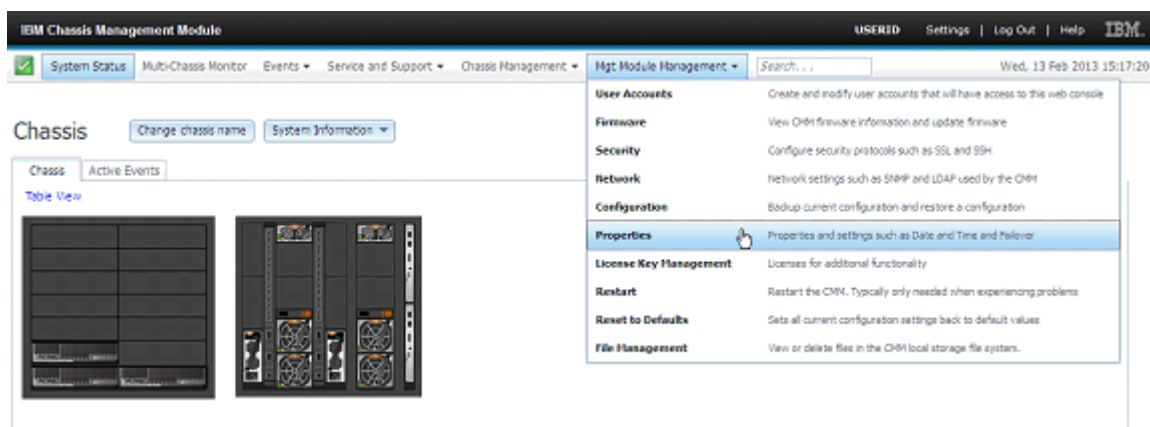
(1)CMM の拡張フェイルオーバー off

通常の設定です。

デフォルトは拡張フェイルオーバーの設定は「off」であり、ひとつの IP アドレスを割り、それぞれプライマリ、セカンダリの構成になります。

(2)CMM の拡張フェイルオーバー swap

CMM にログイン後、メニューから[Mgt Module Management]-[Properties]を選択し、[Advanced Failover]タブで拡張フェイルオーバーの設定を行います。



[Use Advanced Failover]にチェックを入れると「swap」、「noswap」が選択できるようになります。

Management Module Properties

General Date and Time Advanced Failover

Normally, when a primary management module fails, the standby module assumes control automatically, takes the IP address of the primary module, and causes no downtime.

In some situations, however, control might not fail over to the standby management module when it is in fact should. This includes, for example, situations in which the primary module is running but not reliably responding. To protect against these situations, you can configure additional network settings for failovers that will allow you to manually access the standby module when automatic failover does not happen. Specifically, this means you will assign a distinct IP address to the standby module, instead of just specifying a single IP address to be used for both.

Indicate below whether or not you wish to use advanced failover.

Advanced failover current setting is Off

☐ Use Advanced Failover

Apply

[Swap]を選択し[Apply]ボタンを押下して構成を保存します。

Management Module Properties

General Date and Time Advanced Failover

Normally, when a primary management module fails, the standby module assumes control automatically, takes the IP address of the primary module, and causes no downtime.

In some situations, however, control might not fail over to the standby management module when it is in fact should. This includes, for example, situations in which the primary module is running but not reliably responding. To protect against these situations, you can configure additional network settings for failovers that will allow you to manually access the standby module when automatic failover does not happen. Specifically, this means you will assign a distinct IP address to the standby module, instead of just specifying a single IP address to be used for both.

Indicate below whether or not you wish to use advanced failover.

Advanced failover current setting is Off

☒ Use Advanced Failover

☐ Do not swap Management Module IP addresses - In a failover situation, you will need to log on to the management module using the IP address that you have specified below for the standby module.

☒ Swap Management Module IP addresses - In a failover situation, the IP address that you use for the management module will remain the same. The IP address of the failed management module will be transferred to the standby module, and back from the standby module to the primary module.

Apply

Management Module Properties

General Date and Time Advanced Failover

Normally, when a primary management module fails, the standby module assumes control automatically, takes the IP address of the primary module, and causes no downtime.

In some situations, however, control might not fail over to the standby management module when it is in fact should. This includes, for example, situations in which the primary module is running but not reliably responding. To protect against these situations, you can configure additional network settings for failovers that will allow you to manually access the standby module when automatic failover does not happen. Specifically, this means you will assign a distinct IP address to the standby module, instead of just specifying a single IP address to be used for both.

Indicate below whether or not you wish to use advanced failover.

Advanced failover current setting is Off

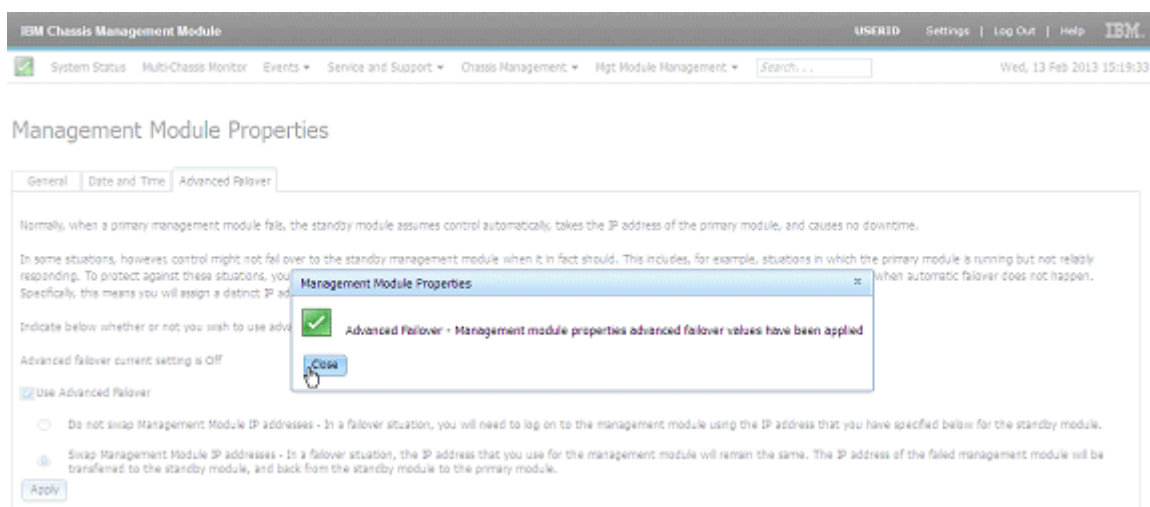
☒ Use Advanced Failover

☐ Do not swap Management Module IP addresses - In a failover situation, you will need to log on to the management module using the IP address that you have specified below for the standby module.

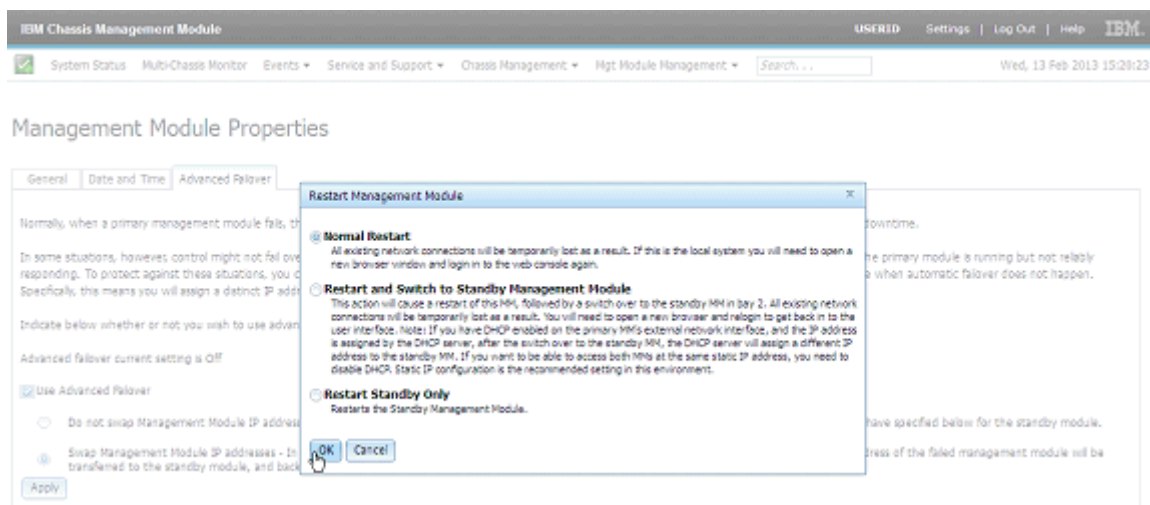
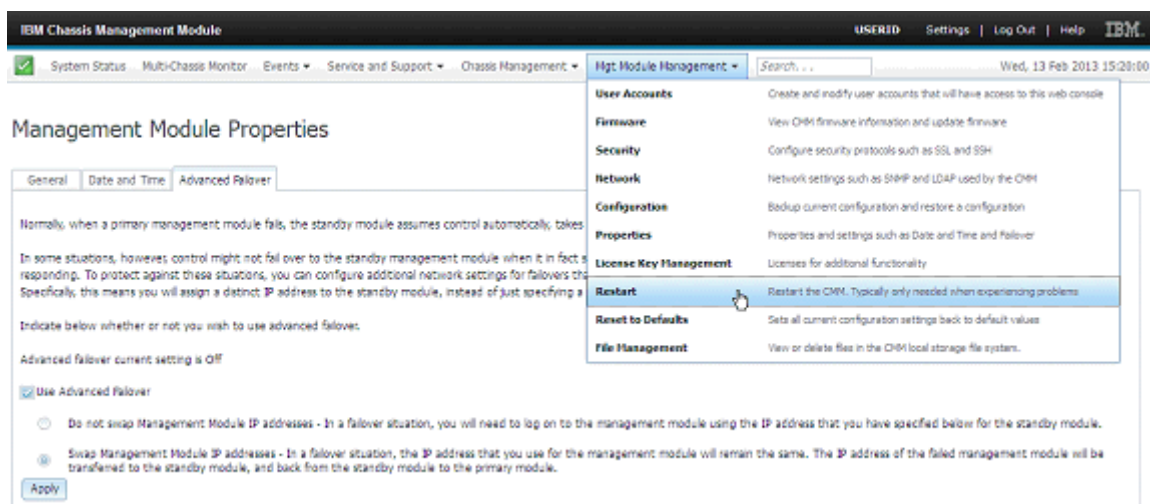
☒ Swap Management Module IP addresses - In a failover situation, the IP address that you use for the management module will remain the same. The IP address of the failed management module will be transferred to the standby module, and back from the standby module to the primary module.

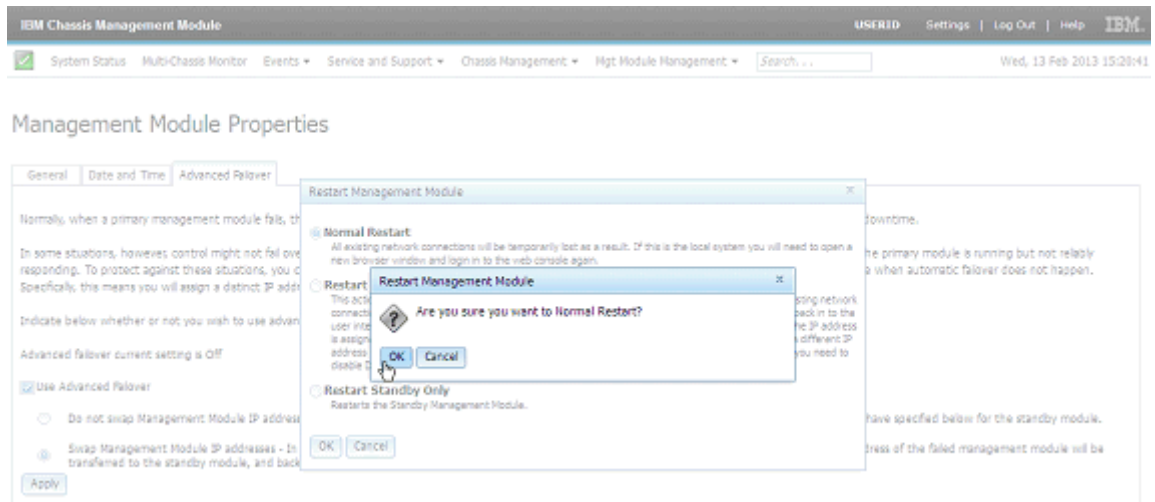
Apply

Advanced failover settings
 Save advanced failover settings?
 Advanced failover settings have been changed. These configuration changes will become active after the next reset of the CMM.
 OK Cancel

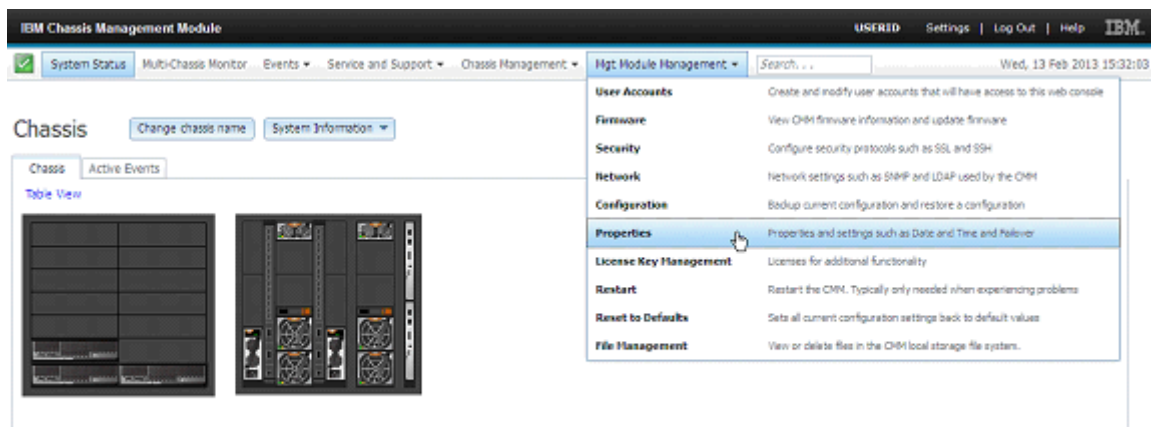


[Close]ボタンを押下した後、CMM をリスタートします。
[Mgt Module Management]-[Restart]を選択、[Nomal Restart]を選択して[OK]ボタンを押下してリスタートします。





リスタート後、CMM にログインしたら再度メニューから[Mgt Module Management]-[Properties]を選択し、[Advanced Failover]タブで拡張フェイルオーバーの設定を確認します。



スタンバイ CMM の IP アドレス設定項目が表示され、スタンバイ側の IP アドレス情報を設定します。

デフォルトではスタンバイ CMM の IP アドレスは「192.168.70.99」が設定されます。

IBM Chassis Management Module

USERID Settings Log Out Help IBM

System Status Multi-Chassis Monitor Events Service and Support Chassis Management Mgt Module Management Search... Wed, 13 Feb 2013 15:33:16

Advanced failover current setting is Swap

☒ Use Advanced Failover

☐ Do not swap Management Module IP addresses - In a failover situation, you will need to log on to the management module using the IP address that you have specified below for the standby module.

☒ Swap Management Module IP addresses - In a failover situation, the IP address that you use for the management module will remain the same. The IP address of the failed management module will be transferred to the standby module, and back from the standby module to the primary module.

Host name: MM3440E0CF00E9-2

Domain name:

IPv4

DHCP: Disabled - Use static IP configuration

IPv4 Static IP Configuration

IP address: 192.168.70.99

Subnet mask: 255.255.255.0

Gateway address: 0.0.0.0

IPv6

Link local address: fe80::200:ff:fe00:0

IPv6 static IP configuration: Disabled

IP address: 0::0

Address prefix length: 0

Gateway address: 0::0

DHCPv6: Enabled

Stateless Auto Configuration: Enabled

Apply

ブラウザの新しいウインドウ URL に「<https://192.168.70.99/>」を入力しアクセスして CMM にログインすると以下の画面が表示されます。

IBM Chassis Management Module

USERID Log Out IBM

Standby Management Module

This is the standby management module for your chassis, and is not currently active.

You cannot access the functionality of this management module unless you make it active. You may want to do this, for example, if you are unable to connect to the primary management module.

In order to make this management module the active one now:

1. Click the "Switch Over" button
2. The primary management module will then be rebooted as the non-active module, followed by a switch over to the standby management module. All existing network connections will be temporarily lost as a result.
3. Wait until your browser detects that this management module is ready to be used. It will automatically refresh the page when it's ready. You will have to login again to get back in to the management module web console. You can then interact with the management module functionality as you normally would.

Switch Over

ここで「Switch Over」ボタンを押下しフェイルオーバーさせます。

IBM Chassis Management Module

USERID Log Out IBM

Standby Management Module

This is the standby management module for your chassis, and is not currently active.

You cannot access the functionality of this management module unless you make it active. You may want to do this, for example, if you are unable to connect to the primary management module.

In order to make this management module the active one now:

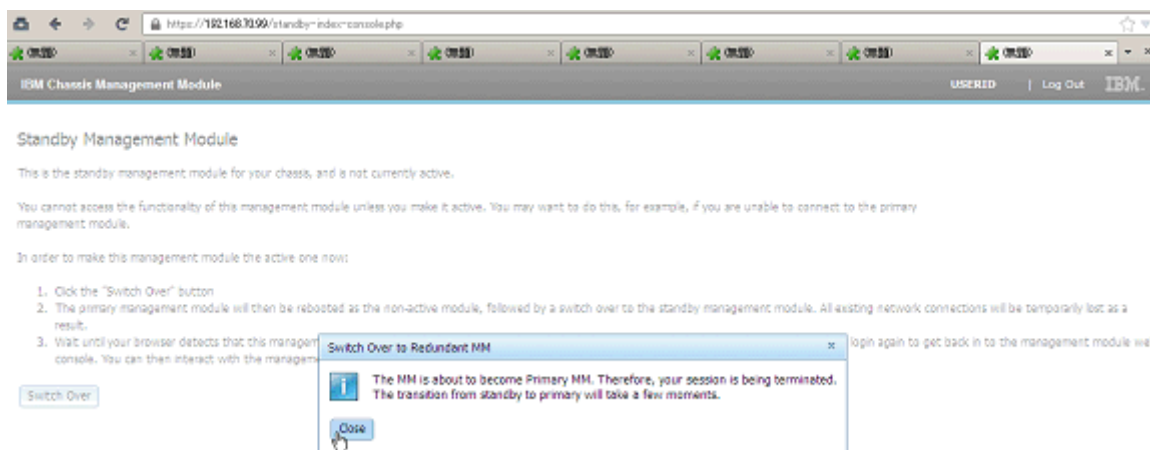
1. Click the "Switch Over" button
2. The primary management module will then be rebooted as the non-active module, followed by a switch over to the standby management module. All existing network connections will be temporarily lost as a result.
3. Wait until your browser detects that this management module is ready to be used. It will automatically refresh the page when it's ready. You will have to login again to get back in to the management module web console. You can then interact with the management module functionality as you normally would.

Switch Over

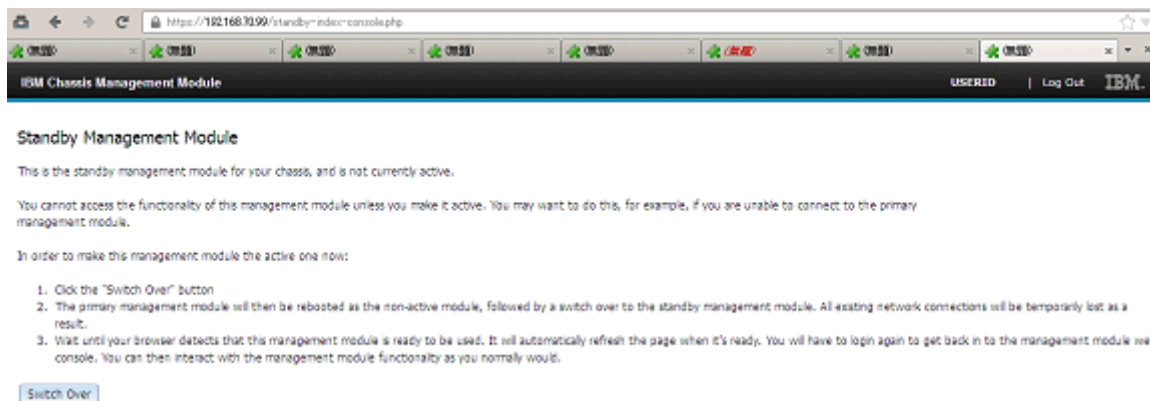
Confirm Switch Over

Are you sure you want to switch over to the standby MM?

OK Cancel



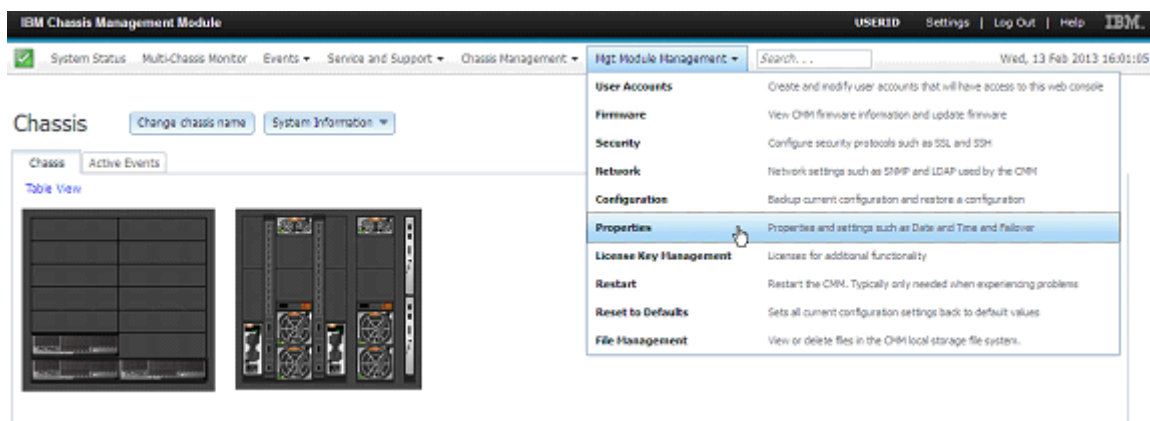
フェイルオーバー後、再度ブラウザで「<https://192.168.70.99/>」にアクセスして CMM にログインするとスタンバイ CMM の表示となりますが、先ほどのフェイルオーバーした CMM とは違う CMM がスタンバイ CMM となります。



(3)CMM の拡張フェイルオーバー noswap

ブラウザの URL にプライマリ CMM のアドレス「<https://192.168.70.100/>」を入力し接続します。

「noswap」の設定は「swap」設定と同様に、メニューから[Mgt Module Management]-[Properties]を選択し、[Advanced Failover]タブで拡張フェイルオーバーの設定をします。



Management Module Properties

General Date and Time **Advanced Failover**

Management module name SHFY0148G27B04W

Serial baud rate 115200

Serial parity None

Serial stop bits 1

Apply

[Use Advanced Failover]にチェックを入れると「swap」、「noswap」を選択できるようになります。

Management Module Properties

General Date and Time **Advanced Failover**

Normally, when a primary management module fails, the standby module assumes control automatically, takes the IP address of the primary module, and causes no downtime.

In some situations, however, control might not fail over to the standby management module when it in fact should. This includes, for example, situations in which the primary module is running but not reliably responding. To protect against these situations, you can configure additional network settings for failovers that will allow you to manually access the standby module when automatic failover does not happen. Specifically, this means you will assign a distinct IP address to the standby module, instead of just specifying a single IP address to be used for both.

Indicate below whether or not you wish to use advanced failover:

Advanced failover current setting is Off

☐ Use Advanced Failover

Apply

[Do not swap]を選択し[Apply]ボタンを押下して構成を保存します。

Management Module Properties

General Date and Time **Advanced Failover**

Normally, when a primary management module fails, the standby module assumes control automatically, takes the IP address of the primary module, and causes no downtime.

In some situations, however, control might not fail over to the standby management module when it in fact should. This includes, for example, situations in which the primary module is running but not reliably responding. To protect against these situations, you can configure additional network settings for failovers that will allow you to manually access the standby module when automatic failover does not happen. Specifically, this means you will assign a distinct IP address to the standby module, instead of just specifying a single IP address to be used for both.

Indicate below whether or not you wish to use advanced failover:

Advanced failover current setting is Off

☒ Use Advanced Failover

☒ Do not swap Management Module IP addresses - In a failover situation, you will need to log on to the management module using the IP address that you have specified below for the standby module.

☐ Swap Management Module IP addresses - In a failover situation, the IP address that you use for the management module will remain the same. The IP address of the failed management module will be transferred to the standby module, and back from the standby module to the primary module.

Apply

IBM Chassis Management Module

USERID Settings | Log Out | Help IBM

System Status Multi-Chassis Monitor Events Service and Support Chassis Management Mgt Module Management Search...

Wed, 13 Feb 2013 16:02:26

Management Module Properties

General Date and Time Advanced Failover

Normally, when a primary management module fails, the standby module assumes control automatically, takes the IP address of the primary module, and causes no downtime.

In some situations, however, control might not fail over to the standby management module when it is in fact should. This includes, for example, situations in which the primary module is running but not reliably responding. To protect against these situations, you can configure additional network settings for failovers that will allow you to manually access the standby module when automatic failover does not happen. Specifically, this means you will assign a distinct IP address to the standby module.

Indicate below whether or not you wish to use advanced failover.

Advanced failover current setting is Off

☒ Use Advanced Failover

☐ Do not swap Management Module IP addresses - In a failover situation, you will need to log on to the management module using the IP address that you have specified below for the standby module.

☐ Swap Management Module IP addresses - In a failover situation, the IP address that you use for the management module will remain the same. The IP address of the failed management module will be transferred to the standby module, and back from the standby module to the primary module.

Apply

Advanced failover settings

Save advanced failover settings? Advanced failover settings have been changed. These configuration changes will become active after the next reset of the CMM.

OK Cancel

IBM Chassis Management Module

USERID Settings | Log Out | Help IBM

System Status Multi-Chassis Monitor Events Service and Support Chassis Management Mgt Module Management Search...

Wed, 13 Feb 2013 16:02:45

Management Module Properties

General Date and Time Advanced Failover

Normally, when a primary management module fails, the standby module assumes control automatically, takes the IP address of the primary module, and causes no downtime.

In some situations, however, control might not fail over to the standby management module when it is in fact should. This includes, for example, situations in which the primary module is running but not reliably responding. To protect against these situations, you can configure additional network settings for failovers that will allow you to manually access the standby module when automatic failover does not happen. Specifically, this means you will assign a distinct IP address to the standby module.

Indicate below whether or not you wish to use advanced failover.

Advanced failover current setting is Off

☒ Use Advanced Failover

☐ Do not swap Management Module IP addresses - In a failover situation, you will need to log on to the management module using the IP address that you have specified below for the standby module.

☐ Swap Management Module IP addresses - In a failover situation, the IP address that you use for the management module will remain the same. The IP address of the failed management module will be transferred to the standby module, and back from the standby module to the primary module.

Apply

Management Module Properties

Advanced Failover - Management module properties advanced failover values have been applied

Close

[Close]ボタンを押下した後、CMM をリスタートします。
[Mgt Module Management]-[Restart]を選択、[Nomal Restart]を選択して[OK]ボタンを押下してリスタートします。

IBM Chassis Management Module

USERID Settings | Log Out | Help IBM

System Status Multi-Chassis Monitor Events Service and Support Chassis Management Mgt Module Management Search...

Wed, 13 Feb 2013 16:03:05

Management Module Properties

General Date and Time Advanced Failover

Normally, when a primary management module fails, the standby module assumes control automatically, takes the IP address of the primary module, and causes no downtime.

In some situations, however, control might not fail over to the standby management module when it is in fact should. This includes, for example, situations in which the primary module is running but not reliably responding. To protect against these situations, you can configure additional network settings for failovers that will allow you to manually access the standby module when automatic failover does not happen. Specifically, this means you will assign a distinct IP address to the standby module, instead of just specifying a single IP address.

Indicate below whether or not you wish to use advanced failover.

Advanced failover current setting is Off

☒ Use Advanced Failover

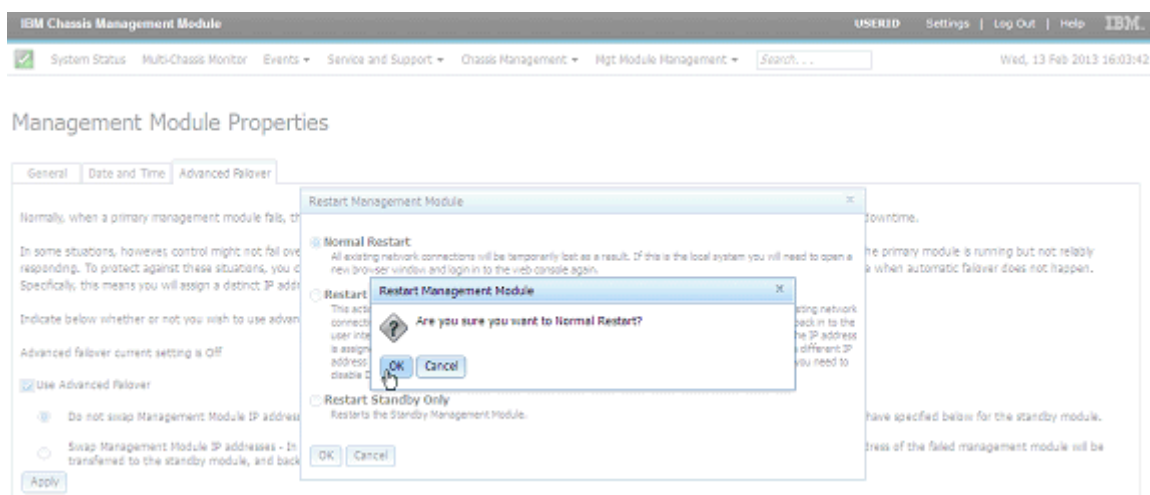
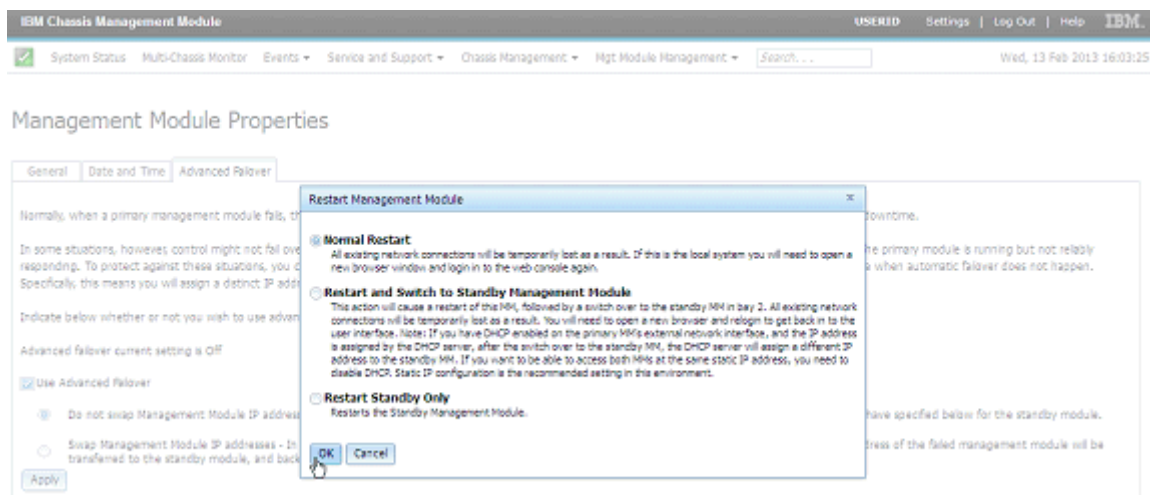
☐ Do not swap Management Module IP addresses - In a failover situation, you will need to log on to the management module using the IP address that you have specified below for the standby module.

☐ Swap Management Module IP addresses - In a failover situation, the IP address that you use for the management module will remain the same. The IP address of the failed management module will be transferred to the standby module, and back from the standby module to the primary module.

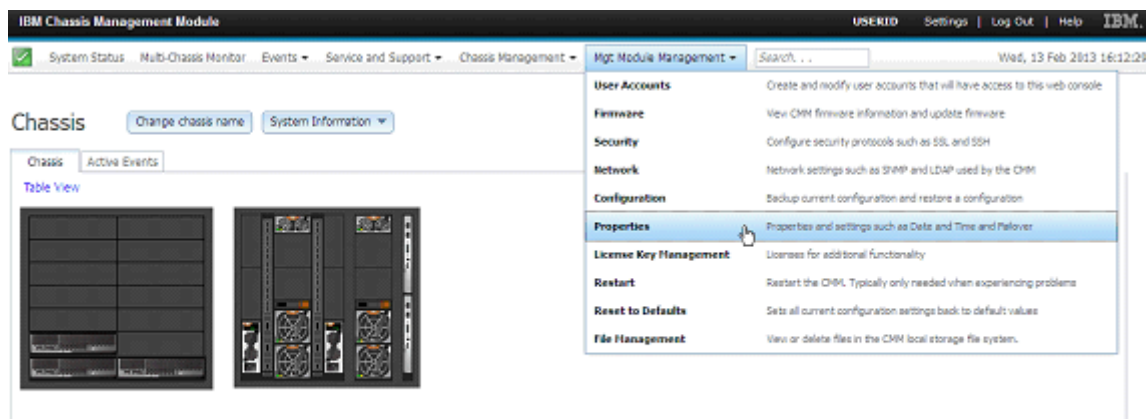
Apply

Mgt Module Management

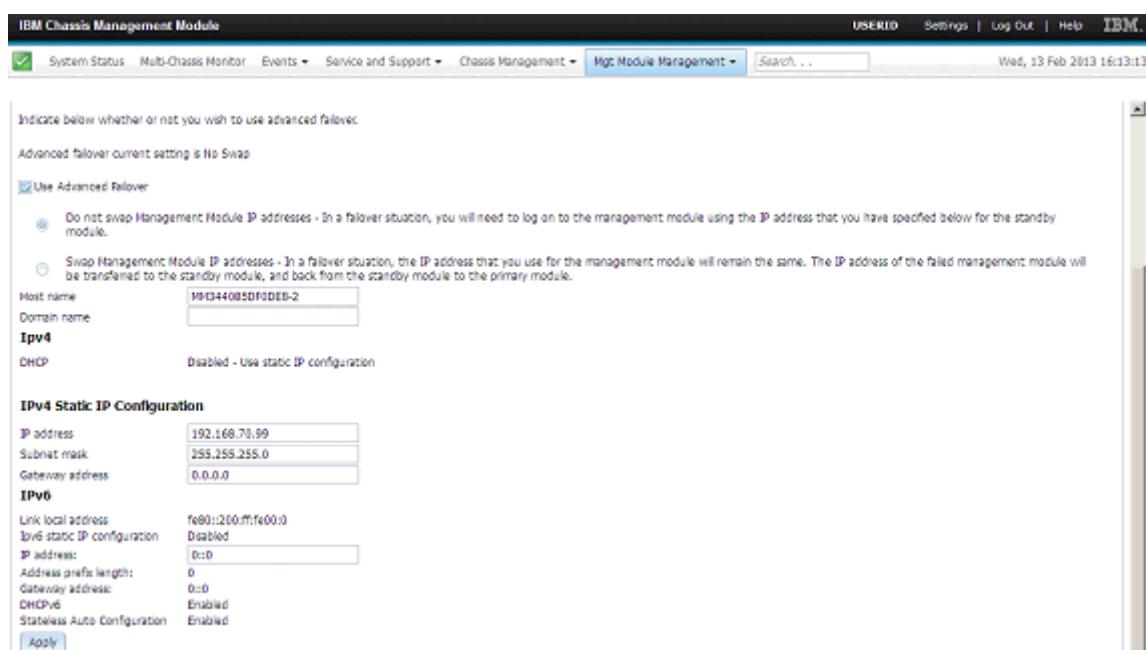
- User Accounts: Create and modify user accounts that will have access to this web console
- Firmware: View CMM firmware information and update firmware
- Security: Configure security protocols such as SSL and SSH
- Network: Network settings such as SNMP and LDAP used by the CMM
- Configuration: Backup current configuration and restore a configuration
- Properties: Properties and settings such as Date and Time and Failover
- License Key Management: Licenses for additional functionality
- Restart**: Restart the CMM. Typically only needed when experiencing problems
- Reset to Defaults: Sets all current configuration settings back to default values
- File Management: View or delete files in the CMM local storage file system.



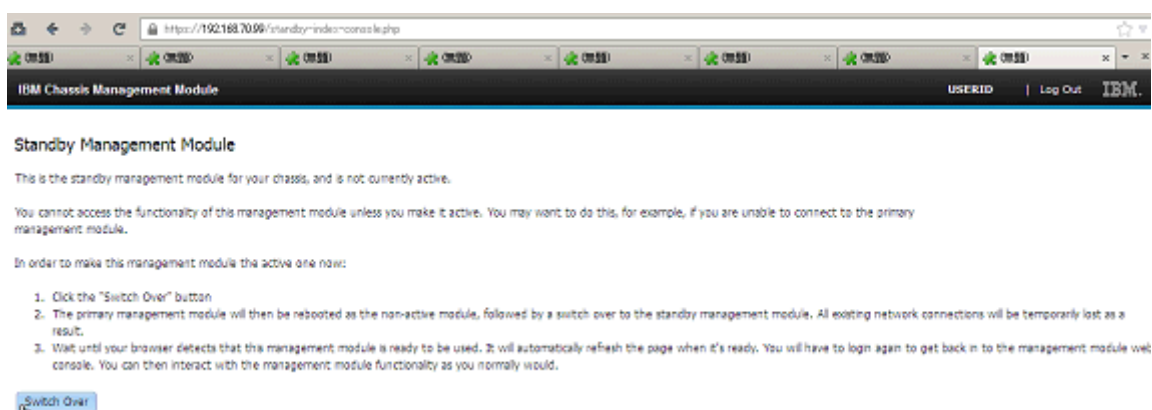
リスタート後、CMM にログインしたら再度メニューから[Mgt Module Management]-[Properties]を選択し、[Advanced Failover]タブで拡張フェイルオーバーの設定を確認します。



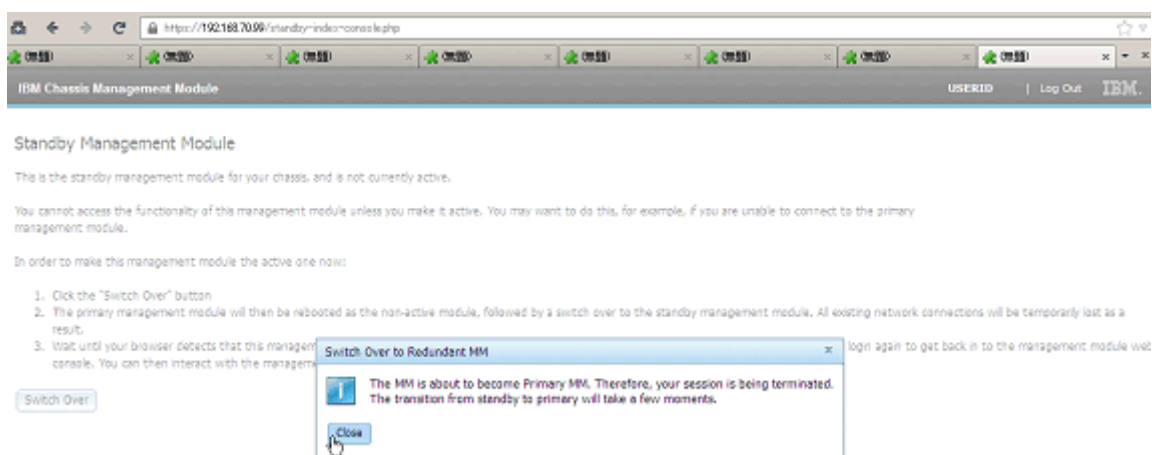
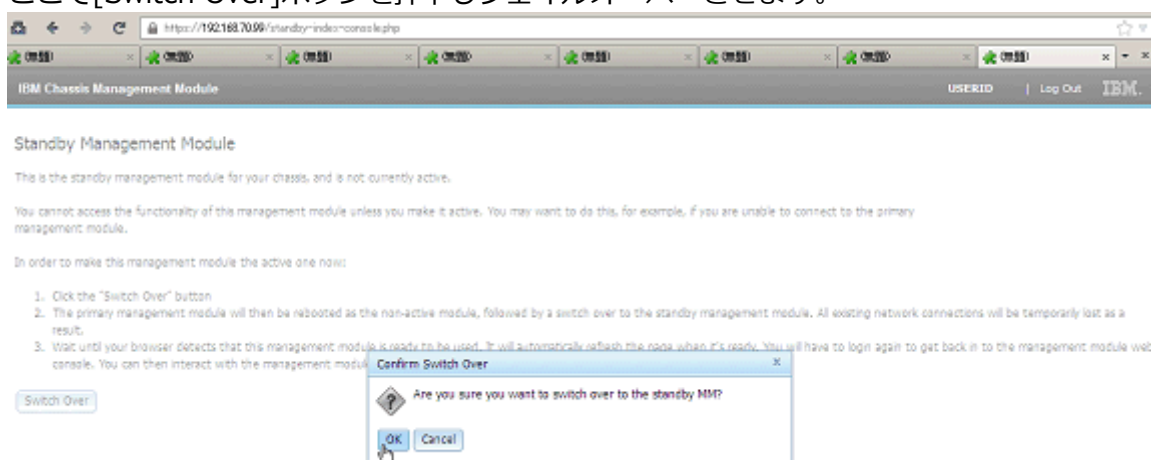
スタンバイ CMM の IP アドレス設定項目が表示され、スタンバイ側の IP アドレス情報を設定します。
デフォルトではスタンバイ CMM の IP アドレスは「192.168.70.99」が設定されます。



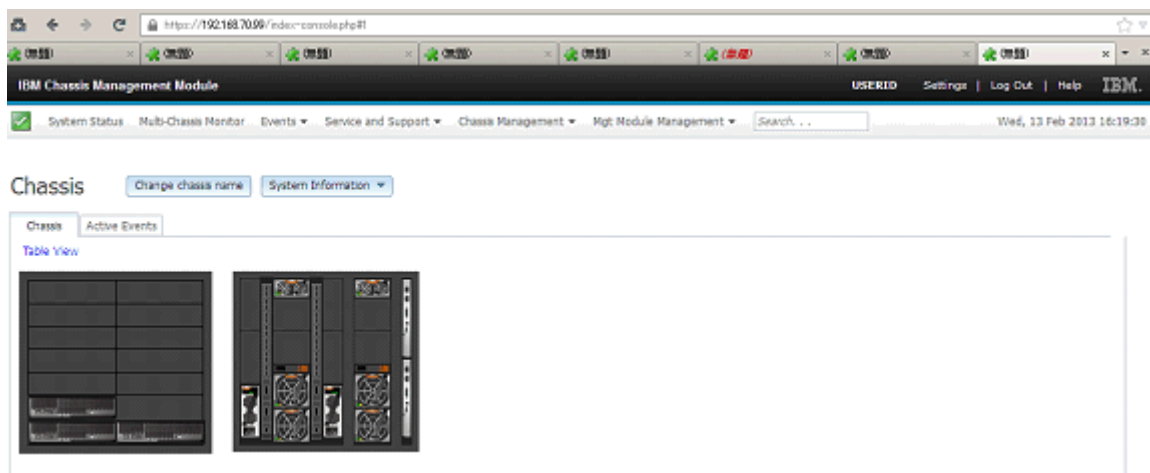
ブラウザの新しいウインドウ URL に「<https://192.168.70.99/>」を入力しアクセスして CMM にログインすると以下の画面が表示されます。



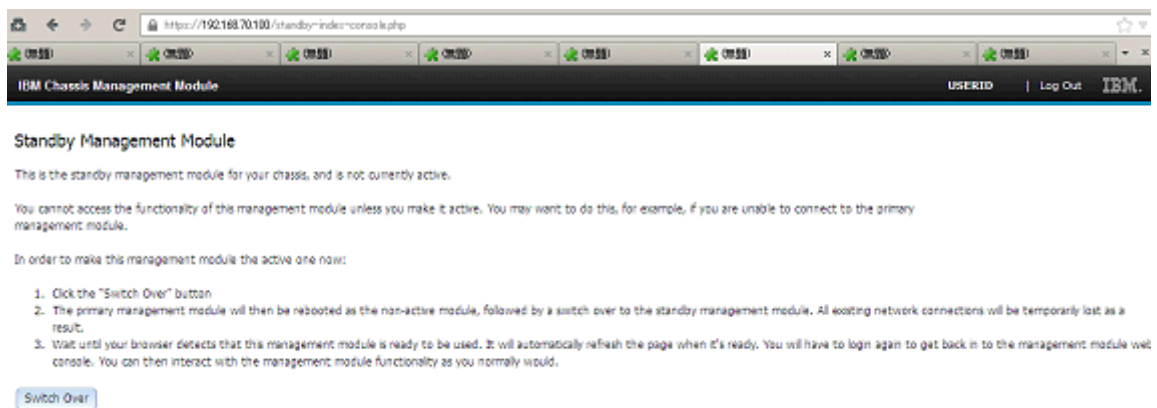
ここで[Switch Over]ボタンを押下しフェイルオーバーさせます。



フェイルオーバー後、再度ブラウザで「<https://192.168.70.99/>」にアクセスして CMM にログインすると今度は通常のプライマリ CMM の表示となります。フェイルオーバーしましたが、IP アドレスの「swap」は起こりません。

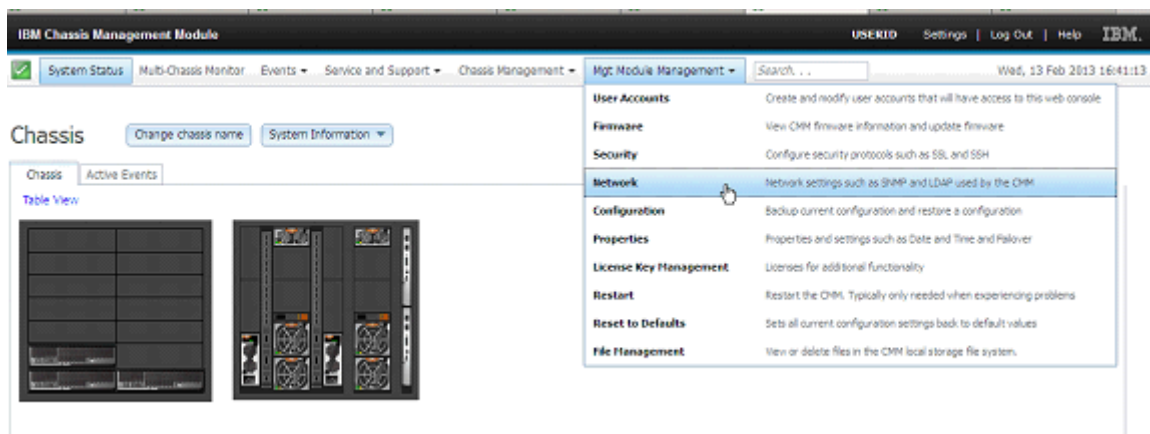


「<https://192.168.70.100/>」にアクセスして CMM にログインするとスタンバイ CMM の表示となります。



補足 CMM の仮想 IP アドレス

仮想 IP アドレス・オプションを使用可能にすると、プライマリおよびスタンバイ CMM の IP アドレス設定に関わらず、常にプライマリ CMM にアクセスできるようになります。CMM にログイン後、メニューから[Mgt Module Management]-[Network]を選択します。



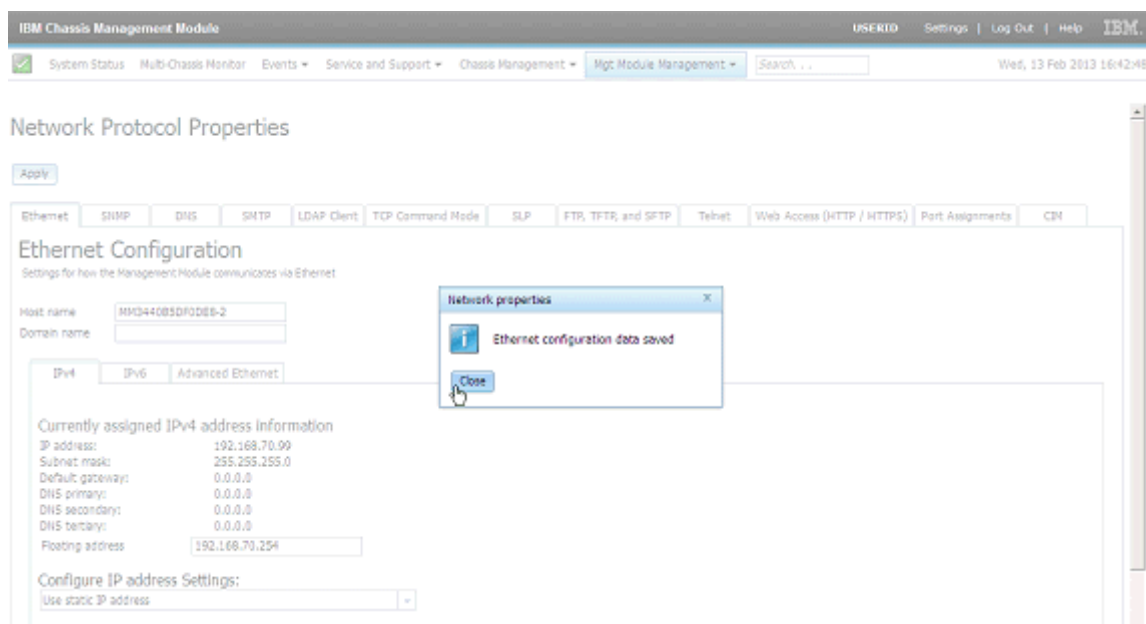
[Ethernet]タブの[IPv4]または[IPv6]タブで[Floating address]項目に仮想 IP アドレスを設定します。

ここでは、例として「192.168.70.254」を設定します。

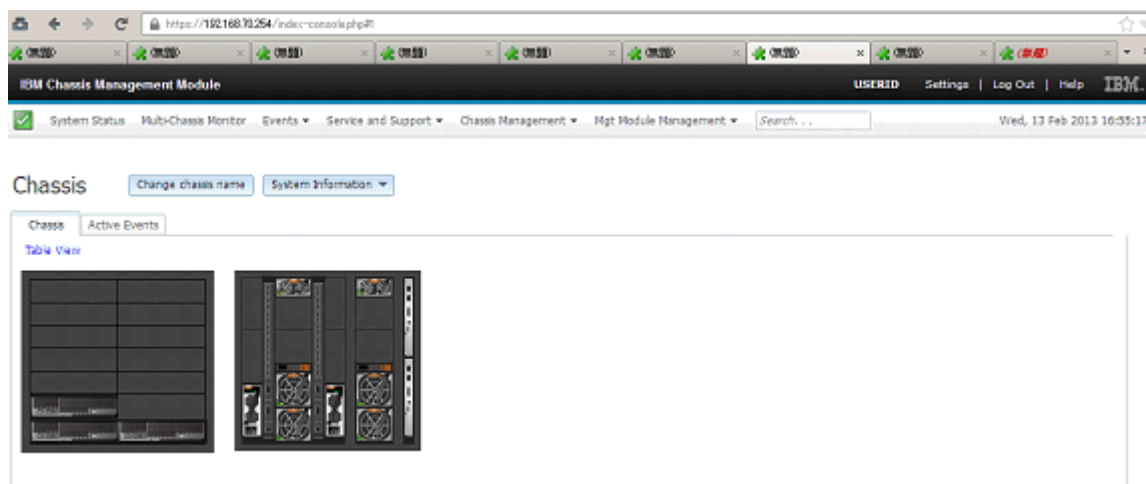
The screenshot shows the IBM Chassis Management Module (CMM) interface. The top navigation bar includes 'System Status', 'Multi-Chassis Monitor', 'Events', 'Service and Support', 'Chassis Management', and 'Mgt. Module Management'. The 'Mgt. Module Management' tab is selected. The main content area is titled 'Network Protocol Properties' and contains an 'Apply' button. Below this is the 'Ethernet Configuration' section, which is currently set to the 'IPv4' tab. The 'Host name' is 'MM3440B5DF0DES-2' and the 'Domain name' is empty. The 'Currently assigned IPv4 address information' section shows the following values: IP address: 192.168.70.99, Subnet mask: 255.255.255.0, Default gateway: 0.0.0.0, DNS primary: 0.0.0.0, DNS secondary: 0.0.0.0, and DNS tertiary: 0.0.0.0. The 'Floating address' field is set to '192.168.70.254'. The 'Configure IP address Settings' dropdown is set to 'Use static IP address'.

[Apply]ボタンを押下後、[OK]ボタンを押下して設定を保存します。

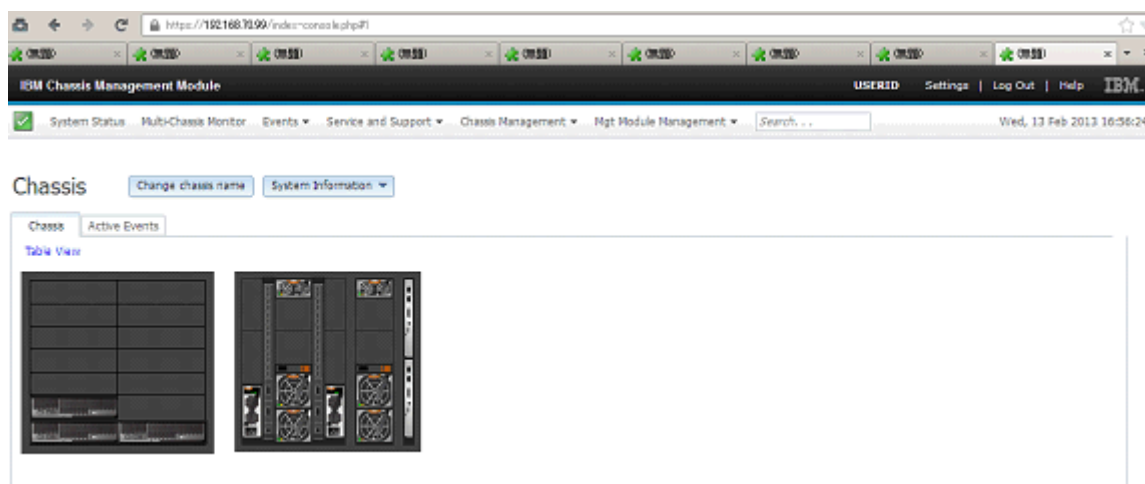
This screenshot shows the same IBM Chassis Management Module (CMM) interface as the previous one, but with a confirmation dialog box overlaid. The dialog box is titled 'Ethernet configuration / Network settings' and contains the following text: 'The "Save" operation may take a few moments. Are you sure you want to proceed?' and 'IPv4 address settings have been changed. These configuration changes will become active after the next reset of the CMM.' The dialog box has 'OK' and 'Cancel' buttons. The background settings remain the same as in the previous screenshot.



ブラウザでそれぞれ「<https://192.168.70.254>」、「<https://192.168.70.99>」、「<https://192.168.70.100>」にアクセスしてCMMにログインすると以下の画面が表示されます。
仮想 IP アドレス-「<https://192.168.70.254>」



プライマリ CMM アドレス-「<https://192.168.70.99>」 仮想 IP アドレスで表示したのと同様に操作できます。



スタンバイ CMM アドレス-「<https://192.168.70.100>」 スタンバイ CMM の操作画面になります。

